

RIGHT OF THE LINE
A HISTORY OF
THE AMERICAN FIELD ARTILLERY
US ARMY
FIELD ARTILLERY SCHOOL
FORT SILL, OKLAHOMA
APRIL 1984

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RIGHT OF THE LINE

This is the Field Artillery, United States Army--the senior arm in the senior service--its position unchallenged, aptly merited by its continuous history of superiority, support, and excellence throughout the American military tradition.

Formed officially in 1775, the American Field Artillery, the King of Battle, has been the kingpin in the decisiveness of every key battle in which our country has participated.

The Field Artilleryman accepts with pride and reverence his place within the select fraternity and continues to be dedicated to its traditions.

This booklet is published to provide its readers with some of the history and lore that inspire American Field Artillerymen. We are deeply grateful to LTC Fairfax D. Downey (Ret) for allowing us to use selections from his book *The Sound of the Guns* (New York: D. McKay & Co., 1955).

INTRODUCTION

Man's history can be traced Biblically and scientifically. The Bible records the slaying of Abel by Cain. From that point on we are able to trace the progress of our warring ancestors by studying their artifacts and the written record of the Bible.

As man became more and more proficient in making war, he also became wiser in means of defense. The defenders built walls and eventually fortified towns, requiring the aggressors to expend the best of their troops in attempts to overcome these fortifications. As a result, siege warfare--the art of quickly reducing a fortified town--was begun and siege engines--the beginnings of what we call artillery--were formed. The purpose of these siege engines was simply to knock things down.

Scriptures record that as early as 800 BC siege engines were used on the walls of Jerusalem in the function of artillery (which may be loosely defined as a means of hurling objects too heavy to be thrown by hand) . With these crude weapons, the basic principles of artillery were laid down. Alexander the Great used siege engines in 332 BC at Tyre (an ancient seaport of Phoenicia on the Mediterranean Sea) during the 7-month attack on that city. The siege of Tyre is considered by many to be Alexander's greatest military achievement.

Defenders soon learned the advantages of war machines, as was evidenced during the siege of Syracuse in 212 BC. With the aid of Archimedes, the Greek mathematician and inventor, the defenders of Syracuse reversed the usual procedure and used war machines against the Roman besiegers.

The main siege engines included the ballista, a weapon resembling a large bow, which fired arrows, darts, and stones in a low trajectory; the catapult, which could hurl a 100-pound stone 600 yards in a high arc; and the trebuchet, essentially a seesaw in that the weighted short arm swung the long throwing arm. Caesar covered his landing in Britain with catapults and ballistas.

The Chinese are credited with the application of gunpowder to weapons of war earlier than the 12th century; however, western philosophers had knowledge of Chinese "thunder of the earth" as early as AD 300 and a 9th-century Latin manuscript contains a gunpowder formula.

The first show of firearms in western Europe was by the Moors at Saragossa (a city in northeast Spain) in AD 1118. The Moors also brought the original cannon, the Arabian madfaa, to western civilization. This was a small mortar-like weapon made of wood. The projectile rested on the muzzle end until firing of the charge tossed it in the general direction of the enemy.

Cannons came into general use during the Hundred Years War (1337-1453). The weapons then in use were small, were made of iron or cast bronze, and fired lead or iron balls. They were used in direct fire only and played little part in battle; however, for siege they were quite useful.

In a short time, these small and ineffective weapons developed into massive bombardiers. In 1382 a cannon that had a 25-inch caliber and fired a 200-pound granite ball was built in Ghent (a city in northwest Belgium). In 1451 Edinburgh castle was mounted with a weapon that fired a 191/2-inch iron ball 1,400 yards or a stone ball twice that far. Scottish kings used this cannon to level the castles

of rebellious nobles. With the advent of these early cannons, the towering and majestic castles gave way to lower profile renaissance fortifications much like the fortifications of Saint Augustine, Florida, built by the Spanish in the 16th century.

In those times the cannoneers, or artillerists as they were referred to, were not soldiers but were craftsmen who built their own pieces, made their own ammunition, and hired out as needed. Normally, a part of their compensation was captured metal, such as tools and town bells. This metal would be recast into additional cannon. The art of gunnery was a jealously guarded trade secret, and the trade was a closed guild. The public thought these artillerists to be magicians and sorcerers. Captured artillerists were subjected to brutal torture, and at one time the Pope saw fit to excommunicate all gunners. In addition, the weapons were dangerous--misfires, muzzle bursts, and exploding weapons were not uncommon. As a result of these hazards, the artillerists of these early days were quite religious. For their patron, they chose Saint Barbara, a martyr whose executioner was struck down by a bolt of lightning. Her protection was invoked before every firing. Saint Barbara remains the patron saint of artillerymen today and every year artillerymen throughout the world celebrate Saint Barbara's Day on December 4th.

Modern artillery and engineers, now separate branches, can trace their beginning to a common source: the King's Ingeniator, a high official mentioned in English history as far back as William the Conqueror in 1066. The Ingeniator had charge of all engines (Latin ingenia) of war.

About 1300 this official became known as atillator. This change came about when "engines of war" was added to the equipment of war.

During the 16th century, lighter cannons began to replace the massive bombards. Improvements in projectile weight, methods of artillery transport, and artillery tactics had progressed sufficiently by 1556 to enable Emperor Ferdinand to march against the Turks with 57 heavy and 127 light pieces of ordnance.

In the meantime, the first cannon had come to the New World with Columbus in 1492.

During the 17th century, artillery began to take its true place on the battlefield when it became a separate arm and no longer just a part of the field trains that 'accompanied the army. The Swedish King Gustavus Adolphus and his artillery chief, Lennart Torstensson, initiated an innovative battle plan. Their new tactic depended a great deal on mobility; consequently, heavy pieces of artillery were divorced from the field artillery. The plan called for his artillery to destroy the opposing infantry while his cavalry neutralized the huge and ponderous enemy artillery. This tactic proved sound when Sweden smashed the Spanish at Buitenveld in 1631, ending the Catholic military supremacy in Europe. Because of the Spanish defeat, due primarily to mobile artillery, massed infantry formations were suddenly obsolete and a mad rush for light artillery by the kings and generals of au Europe followed.

Artillery units were first organized as military establishments in 1671 by Louis XIV of France, who also initiated schools of instruction for his artillerists. However, necessary changes were slow in coming--French artillery officers did not receive military rank until 1732 and, as late as the American Revolutionary War, the British felt that general officers with artillery background should not be allowed to command troops of all arms.

Frederick the Great of Prussia introduced the first real horse artillery, which followed closely and matched the speed of his highly efficient cavalry. In 1757 during the Seven Years War, Frederick

soundly defeated a combined French and German force three times the size of his own army. Feinting retreat, he drew the combined armies into a trap, where he attacked them with his cavalry and then with volley upon volley from his horse artillery units, which had moved into range and prepared for fire during the cavalry charge.

Since 1492 the British, French and Spanish had been shipping artillery pieces to the New World, primarily for port protection. These cannons were generally too cumbersome for Indian fighting.

In 1637 the Ancient and Honorable Artillery Company of Boston was organized by colonists from the London Company. This company, under the leadership of Lieutenant Colonel Richard Gridly, served with the British Royal Artillery in 1745, when a combined colonial and British force defeated the French at Louisburg, Nova Scotia. After the initial skirmishes of the battle, the French withdrew to their massive citadel. With 200 men to a gun, the Americans hauled the heavy artillery pieces from the British ships to the heights over the French fort. After a lengthy artillery siege lasting several months the French surrendered and were transported back to France.

REVOLUTIONARY WAR

In 1763 the British Government decided to station 10,000 troops in the American Colonies to protect the frontiers. Through a series of taxes,, starting with the Stamp and Sugar Acts, the Americans were to pay a part of the cost. This imperial defense plan and the taxation measures enacted to support it infuriated a faction of the Americans, who felt that the taxes imposed by the British Parliament were unjust, since the colonists were not represented in that governmental body. Additionally, some Americans felt that the British troops were being billeted in the colonies to suppress the American liberation movement. In December 1773 a group of Bostonians disguised as Indians unceremoniously dumped a cargo of British tea into the city harbor in protest against the latest of the tax acts imposed by the Parliament upon the colonists. The Parliament, enraged by the Boston Tea Party, responded by passing five laws, which American patriots called the Intolerable Acts. Three acts resulted in closing the Port of Boston, placing Massachusetts under the British military rule of Major General Sir Thomas Gage, and otherwise infringing on what the colonists deemed to be their rights and interests.

By this time the towns and settlements across Massachusetts were forming militia and minuteman organizations. A main depot for supplies to support these organizations was located at Concord. When General Gage made his plan, with secrecy, to attack the supplies at Concord, the alert patriots anticipated his action and two messengers, Paul Revere and William Dawes, preceded the redcoats and spread the alarm.

At dawn on the 19th of April when the British reached Lexington, the halfway point to Concord, they confronted a body of militia opposing them on the Village Green. Someone with a nervous finger (it is not known whether he was British or American) pulled a trigger. The British regulars fired a volley and charged the colonists, who dispersed and gave way. The British column proceeded to Concord and destroyed the stores that had not been moved. By the time the British began their return to Boston, the alarm had spread far and wide and minuteman assembled along the British route. From behind wags, trees, and houses, they poured fire into the British ranks. General Gage dispatched Lord Percy's Brigade to the relief of the hard-pressed British regulars. He took with him two 6-pounders of the Royal Artillery. When Percy reached Lexington, he posted his two cannons to cover the retreat of the British from Concord. As the routed British regulars reeled back through his lines, the cannons fired to cover their retreat. The effect of this first volley of the Revolutionary War was to terrify the raw American militia. Nevertheless, the patriots rallied and attacked fiercely at the heels and flanks of the British. several times during the retreat, the British cannons were used to prevent the minuteman from overrunning the rear elements of the redcoat column. The artillery saved the day for the British. From this first battle of the American Revolution, the Americans realized that they, too, must have a trained artillery.

The Continental Congress, forced by the battles of Lexington and Concord, created the Continental Army on June 14, 1775. On the next day, Congress chose George Washington to be its commander in chief. He accepted the honor with expressions of his unworthiness, refused a salary, and set out for Cambridge (Massachusetts) to meet his command and attempt to bring about order and discipline in the Continental Army.

Just prior to Washington's assumption of command on July 3, 1775, the American Artillery under elderly Colonel Richard Gridly, one of the heroes of the Battle of Louisburg, was disgraced and shamed by abandoning the four pieces they had stolen from the British and quitting the battlefield during the Battle of Breed's (Bunker) Hill.

When Washington learned of the debacle, he removed Colonel Gridly from command and offered the assignment to two other elderly artillery officers. Both declined but recommended Henry Knox, a 26-year old Boston book salesman, who was a self-taught artilleryman. Henry Knox was appointed Chief of the Continental Artillery on November 17, 1775. Thus was born the American Field Artillery.

The command assumed by Knox was far from impressive. There were 10 assorted companies of artillery from Massachusetts, 2 from New York and 1 from Rhode Island. Some of these companies had two cannons and some had six--all of odd mixtures and sizes. To add to the problems, there was an acute shortage of gunpowder--a problem that was to plague the Continental Artillery throughout the war.

The colonists' search for cannons was constant. In August 1775, the New York militia company raided a battery on Manhattan Island and succeeded in confiscating 21 9-pounders. Private Alexander Hamilton participated in this raid.

Upon assuming command of the Continental Artillery, Knox organized an expedition to proceed to Fort Ticonderoga and bring back to Boston the cannons that had been captured with the fort by Ethan Allen and his Green Mountain Boys. General Washington ordered that "no trouble or expense must be spared to obtain them" (the cannons) . Knox selected 59 of the cannons at Fort Ticonderoga and, by boats and by sleds pulled by oxen and men, transported the cannons to Cambridge in 50 days. By March 2, 1776, the cannons had been located in position on Dorchester Heights and Nook's Hill overlooking Boston. Washington ordered bombardment of the city. Thus, the traditions of the American Field Artillery began. On March 17, 1776, the British loaded their troops on the men-of-war in the harbor and, with Washington's guarantee of safe passage under the guns, set sail for Halifax.

As the war progressed, the colonists took up cannon founding, since their previous source, England, had been cut off. The mobile guns of Washington's Army ranged from 3- to 24-pounders, with 5 1/2-inch and 8-inch howitzers. Most of them were bronze--a few iron siege guns of 18-, 24-, and 32-pound calibers were on hand. The guns fired round, shot, grape, and case shot; the mortars and howitzers fired bombs and carcasses (perforated shells filled with combustibles). on the battlefield, the guns were drawn by horses and oxen driven by hired civilians and the cannoners manned drag ropes to maneuver the guns into position.

After a series of defeats in the fall, General Washington held a staff conference on Christmas Day to plan an attack against the German mercenaries (Hessians) at Trenton. Colonel Knox suggested that the artillery move in the column with the infantry so that it could be put into action quickly--a unique strategy that was to be utilized to its fullest advantage -by Napoleon at a later date.

By 3 a.m. on December 26 the force, including 18 pieces of artillery, had crossed the Delaware and landed in New Jersey. Alexander Hamilton, just previously commissioned, marched with his New York artillery company that had been organized on January 6, 1776 by Hamilton as the Provincial Company of Artillery of the Colony of New York.

The American column was well into Trenton before it was noticed by a Hessian guard. The artillery pieces were quickly maneuvered to cover an avenues of retreat from the small settlement. As the Hessians were aroused from their Christmas slumber and formed into ranks, the American artillery greeted them with canister shot and cannonball.

Some of the Hessians, in a desperate attempt to elude the aggressive attackers, retreated to a small bridge, over which they had to cross to escape. The bridge was covered by the American artillery. Three times the Germans formed and tried to cross the bridge. Each time the artillery raked devastation in their ranks and the Hessians finally gave up that avenue of retreat. Another force of Hessians escaped to a nearby apple orchard, only to surrender when they found themselves surrounded by the Americans.

In the course of 11/2 hours, 40 Hessians were killed and 1,000 captured. The patriots also confiscated six brass cannons, which were added to Colonel Knox's growing artillery corps. The American losses were four dead and four wounded.

On December 28 Colonel Knox was promoted to brigadier general.

Alexander Hamilton saw further action with his artillery company at Princeton, where he personally fired two cannon balls through Nassau Hall of Princeton--a school that had previously refused his application for enrollment. Later, Hamilton became aide-de-camp-to General Washington.

Washington's forces left Trenton after this victory but later returned to reoccupy it. General Charles Cornwallis, smarting from the first American victory since Boston, marched with 8,000 men to meet the colonists. With 5,000 men and 40 guns, the Continentals fought the Royal regulars to a standstill.

That night, while his campfires burned high, Washington slipped away. The following morning Cornwallis awoke to find an empty field. Washington had skirted his left flank and was marching hard on Cornwallis' reserve at Princeton and his supply base at New Brunswick.

South of Princeton, artillerymen from New Jersey died at their guns after having inflicted heavy casualties on the charging enemy. Meanwhile, on the right flank, artillerymen from Pennsylvania stood their ground, "making their guns defend themselves." When this battery was all but destroyed after having fought with grape, canister, and ramming staff, 22 mounted cavalrymen from the Philadelphia Light Horse Cavalry provided cover and allowed the Pennsylvania artillerymen to reorganize to eliminate the enemy by the row.

After these battles the British and American armies went into winter quarters.

In the fall of 1777, General William Howe captured the Continental Capital at Philadelphia after the battle of Brandywine. Yet Knox praised his artillerymen by saying, "You stood t-o your guns even after our infantry supports were gone, even when you were surrounded by the enemy. And still you fought on. This day my corps did me great honor."

The ragged and dispirited Americans made camp at Valley Forge. Additional bad news came from the north where the Bri-tish.had retaken Fort Ticonderoga by emplacing an artillery battery on Mount Defiance overlooking the fort.

The winter at Valley Forge was bitter and discouraging. The service branches of the Continental Army had collapsed and supplies were nonexistent. General Washington did not waste this precious

time. He reorganized his quartermaster corps and commissary department; he appointed Friedrich Wilhelm von Steuben, a Prussian officer, as inspector general in charge of training. Von Steuben brought discipline and pride to the troops as well as a sense of responsibility to the officer corps. It was during this dark year that Washington received word that the French were joining in the battle against their old rivals, the English. With the entry of the French into the war, Britain had to look to the security of their long shipping lanes and the protection of her other possessions throughout the world. The British pulled out of Philadelphia, sending 5,000 men to the West Indies, 3,000 to Florida, and the remainder to New York. In 1779 and 1780, France's allies, Spain and Holland, also declared war on England. Britain found herself fighting on all fronts as well as guarding the shores of her homeland against invasion.

In June of 1778 at the Battle of Monmouth, General Knox massed his guns in concentrations of 8 to 10 pieces. The Americans' aim was accurate and their courage kept them at their guns while the enemy was within musket range. The manner in which the Americans conducted themselves reflected the long hours of training under von Steuben. In tribute to his artillery, General Washington published in his general orders, "The American Artillerist proved himself a match for the batteries of Britain; the enemy had done them the justice to acknowledge that no artillery could be better served." This was the last general engagement in the north since the British were too strong for Washington to take the offensive again.

The remaining major artillery action of the Revolutionary War was the final confrontation at Yorktown. In this final battle Cornwallis found himself between the French fleet in the Chesapeake Bay and the combined American and French armies under the command of General Washington to his front. On October 9, 1781, the allies opened the bombardment. During the artillery siege General Marquis de Lafayette, who had come to regard himself as an American, enthusiastically shouted about the roar of cannon, "We fire faster than the French. Upon my honor I speak the truth. American Artillery--one of the wonders of the Revolution." The infantry moved forward to within 400 yards and secured an advance position, into which the artillery moved. At this range the combined artillery poured a devastating stream of iron into the cramped and crowded enemy. Finally, on the 17th of October, Cornwallis surrendered.

Cornwallis' defeat at Yorktown caused the overthrow of the British cabinet. The new government decided that the war in America was lost, and eventually the remainder of the British troops were pulled from the American colonies. The last to leave were the British forces under Sir Guy, who left New York on November 25, 1783.

In 1784, the American Army numbered 700 officers and men. On June 2, 1784, the economy-conscious and money-strapped Continental Congress, citing that a peace-loving democracy did not need, nor should have, a standing army, disbanded the Continental Army except for an 80-man detail retained to guard Revolutionary War supplies at Fort Pitt and West Point. An Army unit lineage between the Continental Army and the present-day Army was thus broken except for Alexander Hamilton's Provincial Company of Artillery of the Colony of New York (later known as Battery D, Fifth Field Artillery Battalion, a unit of the 1st Infantry Division) This unit was retained as part of the 80-man guard detail and stationed at West Point as part of the 55-man guard detachment under command of Captain John Doughty, the senior ranking officer remaining in the Army. This field artillery unit is the oldest organization in the Regular Army and the only unit in the United States Army that can trace its history back to the Revolutionary War.

WAR OF 1812

The War of 1812 was entered with confused objectives and divided loyalties. Had there been an Atlantic cable in 1812, war probably would have been averted. On June 16 the British Parliament, under pressure from an American embargo imposed because of the sinking of American ships and impressing of American sailors by the Royal Navy, eased their blockade and harassment of American shipping. Unaware of the action by the Parliament, the Americans declared war against Britain on June 18, 1812.

At the outbreak of the War of 1812, the Field Artillery was in a sad state of neglect--artillerymen were on the frontier serving as infantry.

The bulk of the war was fought at sea; however, the Americans used artillery in several ground engagements. At the Battle of Chippewa on July 5, 1814, the American artillery supporting the charge of General Winfield Scott's brigade, was faster and more accurate in their fire than was the Royal Artillery. In honor of the victory of Chippewa, the West Point cad'ets were uniformed in the gray they wear today. On July 25, 1814, the American artillery, supporting Scott's brigade at the Battle of Lundy's Lane, again dueled with the Royal Artillery. This battle, near Niagara Falls, was the hardest fought, most stubbornly contested battle of the war--both sides claimed victory but neither gained its objective.

The British burned Washington, D. C., but failed to take Baltimore, since they lost an artillery battle to subdue Fort McHenry, a post guarding the harbor. Francis Scott Key penned the words to our National Anthem while observing the British bombardment of the fort.

Meanwhile, at the peace table in Ghent, the tides of negotiation had turned in favor of the Americans. The British made no territorial claims and offered to abandon their alleged right to search, seize, and imprison American seamen. Before this news could reach America, the war had shifted south to New Orleans. If the British had taken New Orleans, they would have been able to join up with the British from Canada, using the Mississippi River as an avenue of transportation, and the westward expansion of our Nation would have halted at the Mississippi River.

General Andrew Jackson had been entrusted with the defense of New Orleans. In recruiting troops for the battle, he declared that those who were not for the cause were against it; accordingly, many were compelled to join the ranks. In the course of the battle, the American artillery outfought and defeated the British artillery. The rolling volleys of ranks of infantry marksmen and artillery inflicted 2,036 casualties on the attacking Britishers while sustaining only 76 American casualties.

The artillery used by the US forces during the War of 1812 consisted mostly of 6-pounders.

In 1824 the first of the service schools, the Artillery School of Practice, was established at Fortress Monroe, Virginia. It was during this time that the numerous sizes of artillery were reduced to 12-, 18-, and 24-pound guns; 6-pound howitzers; and 8- and 10-inch mortars. European artillery manuals were translated and US forces began to use the single or stock trail gun carriage, which they used throughout the Civil War. Major Sam Ringgold initiated innovation in artillery transport when he mounted his cannoneers on the teams of horses pulling the guns. Mounted thusly, his "flying"

batteries could move with the cavalry or be directed about the battlefield to provide the firepower advantage that comes with mobility.

The crossed cannon insignia for the field artillery was officially authorized and adopted in 1836 when the artillery was separated from the ordnance branch. Between 1901 and 1907, the field artillery insignia included a wheel on an oval in the center of the crossed cannons.

MEXICAN WAR

Texas won her independence from Mexico and asked to be annexed by the United States. The Mexican Government warned the United States that the annexation of Texas would be tantamount to a declaration of war.

James Polk was elected President on a platform advocating the annexation of Texas. The incumbent President, John Tyler, considered Polk's election as a mandate from the American people to admit Texas to the Union. Mexico promptly broke off diplomatic relations with the United States and President Tyler ordered General Zachary Taylor to move his forces to the Rio Grande to intercept and repel any invasion from Mexico.

During the Battle of Palo Alto, the American Army, facing a Mexican Army twice its size, won the day through the use of its superior artillery. The Mexican artillery was outranged by that of the Americans and the superb Mexican cavalry found itself exposed to grape and canister shot and cannonball, with no support from the Mexican guns.

During this battle.- the brilliant artilleryman Major Ringgold (for whom Ringgold Road on Fort Sill, Oklahoma was named) was killed.

On May 9, 1846 President Polk received news of the hostilities in Texas and asked Congress for a declaration of war, which he promptly received.

Artillery played a vital role in the Battle of Monterey on September 20, 1846. After the walls had been breached, Captain Braxton Bragg's guns entered into the street fighting, firing pointblank at the Mexican snipers. After a long, bitter fight, the Mexicans were forced from the buildings to the plaza. Concentrated there, they were bombarded through the night by mortar and artillery fire. At dawn the Mexicans surrendered.

Meanwhile, Santa Anna, who had assumed control of Mexico as Dictator General, marched to meet Taylor at Buena Vista.

The battle of Buena Vista on February 23, 1847, hung in the balance for hours, but Bragg's artillery galloped into action at the crucial point on the battlefield and swung the momentum to the Americans, who finally repelled the Mexicans, inflicting 2,000 casualties. "Without our artillery, 11 General John Wool declared, "We could not have maintained our position a single hour. 11 Fort Bragg was named in honor of the actions of Captain (later General) Bragg's "flying" battery at this battle.

Vera Cruz surrendered on the 26th of March after 3 days and nights of artillery bombardment and the Americans moved on toward the Mexican capital. Major General Winfield Scott flanked and defeated the Mexicans at Cerro Gordo and the road to Mexico City seemed open.

General Scott approached Mexico City from the east, bypassed the city on the southern side, and attacked from the west. On September 14 after days of hard fighting and many casualties, the Americans marched into the city.

The weapons used by the American artillery were the 6- and 12-pound guns, the 12-pound mountain howitzer, and the 12-pound field howitzer, the 24- and 32-pound howitzers and the 8- and 10-inch mortars.

The "red leg" nickname for field artillerymen had its beginning during the Mexican War when "red-legged" artillerymen were still used as infantrymen when needed. The Army blue uniform for artillerymen had a 2-inch red stripe on the trousers and horse artillerymen wore red canvas leggings, hence the nickname "red legs." Artillerymen continued to substitute in emergencies as infantry, rivaling the infantryman at his own trade,, until the reorganization of 1898.

CIVIL WAR

The relations between the Northern and Southern States steadily worsened during the 1850's. After the election of Abraham Lincoln in 1860, seven Southern States seceded from the Union and confiscated all US Government property within their borders. President Lincoln resupplied the garrison at Fort Sumpter off the South Carolina coast, an act that was considered aggressive by General Pierre G. T. Beauregard, the local Confederate commander. - The Confederation demanded the garrison at Fort Sumpter to surrender and was politely but firmly rejected. On April 9, 1861, with the shelling of Fort Sumpter the American Civil War began. Lincoln declared the seven Southern States in insurrection against the laws of the United States and blockaded the entire coast, from South Carolina to Texas,, with naval vessels. These actions prompted four more of the slave States to leave the Union and join the Confederacy.

The Civil War was basically an infantry conflict; however, the artillery was the deciding factor in some battles. At the first Battle of Manassas (Bull Run), the artillerymen learned two hard lessons. First, the advent of rifled shoulder arms provided the infantrymen with greater and more accurate range than that of the artillery and allowed the infantry sharpshooters to pick off the cannoners one by one as they manned their pieces. (Artillery was employed on line with the infantry.) Secondly, the rifled cannons were found to be ineffective unless they scored a direct hit, since the shells would burrow deep into the ground prior to detonating, preventing any damage to personnel.

During the Civil War, artillery technology took a step backward. The number of smooth-bore cannons used as artillery increased steadily. The effective use of rifled artillery against troops in the field had to wait for the development of fuzes that would cause the shells to burst on contact.

Artillery had an important role in the Battle of Shiloh. Toward the end of the first day of the battle, the Rebels overran the Federal lines and were on the verge of victory. The 10 Union batteries were hastily collected and put into position. Their massed fires aided by fires of the heavy pieces of two gunboats in the Tennessee River beat down the attacking Southerners. General Ulysses Grant was the commander of the Union forces, and Shiloh was a milestone for him toward command of the Army of the Potomac and his rendezvous with Lee at Appomattox.

In a classic artillery battle of the war on July 1, 1862, during General George McClellan's drive against Richmond, Colonel Henry Hunt, McClellan's brilliant young chief of artillery, emplaced an arc of 340 guns on the summit of Malvern Hill. As General Robert E. Lee ordered a charge against the hill, Hunt, in a masterly display of fire coordination, controlled a group of 60 cannons as if they were one battery and leveled the charging divisions brigade by brigade, causing 5,000 casualties. Simultaneously, he had his heavy artillery firing on the Confederate batteries. The Union was victorious, but the next day McClellan retreated as he had after au preceding engagements.

At the second Battle of Bull Run, Southern artillery brought 175 guns into action against the Federal troops. Colonel Hunt was not present to direct the efforts of the artillery of the North. In this action the Rebel batteries were at the right place at the right time. General Thomas "Stonewall" Jackson's divisional artillery supported him ably until he closed with the Union troops. Jackson's column bent at the counterattack of the northern soldiers. Suddenly, two Rebel batteries flanked the attacking

Union troops and opened fire upon their exposed rear flank. These artillery volleys hamstrung the surge of the Blue, and Jackson's slashing charges drove the Union troops from Bull Run for the second time.

In the Battle of Antietam on September 17, 1862, vicious pointblank artillery fire resulted in 12,400 Union casualties and 8,000 Confederate casualties.

In a battle near Fredricksburg two Federal divisions attempted a river crossing. A Southern artillery captain, John Pelham, with one section, held the divisions at bay for almost an hour.

At Chancellorsville on May 2, 1863, Stonewall Jackson's division skirted the Union right flank but was prevented from completely destroying the Union forces by an Ohio battery under the command of Hubert Dilger. The Ohio cannoners checked Jackson's charge long enough to allow the Union troops to fall back and regroup. The commander of the Union army, General Joe Hooker, a former artilleryman, grossly mismanaged his artillery during this battle--one of the reasons why a Confederate force half the size of the Union force was able to secure victory at Chancellorsville. However, the South was dealt a severe setback when General Stonewall Jackson was cut down, by mistake, by southern snipers.

As an aftermath of Chancellorsville, the Union chief of artillery was given authority to reorganize his artillery. Batteries were grouped in battalions; battalions in brigades. Horse artillery was increased. Efforts were made to make up the shortages of officers and noncommissioned officers.

By 1863 the war had entered into the professional phase. The troops were well trained and had ample combat experience. Officers generally mastered their job and were able to deploy their forces skillfully in accordance with the tactical principles of the day.

Encouraged by their victory at Chancellorsville, General Lee and President Jefferson Davis were anxious to invade the North. Meanwhile, President Lincoln had placed a priority on the destruction of the Army of Northern Virginia--Lee's Army. The stage was set for the Battle of Gettysburg--a 3-day holocaust, largely unplanned and uncontrolled.

Outposts of both armies clashed during the afternoon of June 30 near the quiet town of Gettysburg, Pennsylvania. The terrain in the area included rolling hills and broad, shallow valleys. Roads leading to Harrisburg, Philadelphia, Baltimore, Washington, and the mountain passes to the west converged at Gettysburg. The local commanders sent reports and recommendations to their superiors, who relayed them upward, so that both armies, still widely dispersed, started moving toward Gettysburg.

Unlike Hooker, General George Meade, the commander of Union troops, understood the value of artillery. General Meade placed in General Hunt, his artillery commander, the confidence he deserved. Hunt directed 370 guns to Gettysburg. He established guards for his artillery trains and directed that a liaison orderly be sent from each battery to brigade headquarters. For this battle the artillery chief established a basic load of 270 rounds per weapon; about 100 rounds per weapon (or 32,781) were expended. The Army of Northern Virginia had 272 guns of various calibers with unreliable ammunition.

The Battle of Gettysburg reached its climax with Confederate General Pickett's charge. Fifteen thousand men emerged from the woods and, as if on parade, began the march toward Cemetery Ridge. The assault force--47 regiments--moved at a walk until it neared the Union lines and then broke into a run. Federal artillery opened fire, enfilading the Gray ranks. Despite heavy casualties,

the Confederates kept their formation until they were intermingled with the northerners. Rebel riflemen flung themselves on smoking union cannons firing pointblank, bayonets stabbing, taking vengeance on the cannoneers. Battery commanders and their crews died at their guns. The Blue infantry closed in and pushed the Confederates back. As the Confederates retreated, the Federal artillery beat at their backs, taking a deadly toll.

Lee started his army moving back toward the Potomac. He must have known that the best he could do was to delay the inevitable. The armies had suffered a total of 51,000 casualties in the 3 days at Gettysburg, with the preponderance on the Southern side. The bulk of the Confederate casualties had been caused by the old muzzle-loading smoothbore cannon; however, flanking fire from rifled batteries had been used very effectively. The rifled batteries' advantage of range, and the new fuzes that caused the projectiles to detonate on contact, demonstrated the great potential of rifled field artillery.

Mr. Lincoln was elated over General Meade's victory. He thought the war could be ended in 1863 if Meade would launch a resolute pursuit and destroy Lee's army before it could cross the Potomac and get back into Virginia. However, Meade's army was too mangled for aggressive pursuit and Lee slipped away.

General Ulysses S. Grant took Vicksburg, Mississippi on July 4, 1863, after a long artillery siege. These two victories, Gettysburg and Vicksburg, sounded the death bell of the Confederacy.

At the end of the Civil War, the Army was quickly reduced to a small force of Regulars. The small force was faced with occupation duty in the South, a French threat in Mexico, domestic disturbances, and Indian troubles.

After the Civil War, most artillery units were disbanded or reorganized. Artillery played a very small part in the Indian wars; the guns were usually used to deliver covering fire from forts. Mortars were used against Indians entrenched in the California lava beds during the Modoc outbreak of 1872-73. The only major use of cannon was against Chief Joseph and his Nez Perces during their fighting retreat to Canada in 1877.

Fort Sill was established in January, 1869 by General Phillip Sheridan, commander of the Department of Missouri, as a base for Indian operations. The post was named after Brigadier General Joshua W. Sill, a West Point classmate of General Sheridan, who was killed at the Battle of Stones River, Tennessee, on December 31, 1862. Later, Fort Sill was to be used as a prison for recalcitrant Indian war chiefs.

In the meantime, the Prussian Army had developed a smokeless powder for artillery pieces, but for economic reasons the United States Army continued to use black powder until its stock was exhausted.

Artillery materiel commenced to advance. Elevating, traversing, and sighting mechanisms were invaluable innovations; rifled cannons replaced the smoothbores; and breech loading superseded muzzle loading. Fixed or semifixed ammunition was used for the light pieces. Time and impact fuzes were improved. With the new sighting mechanism came indirect laying, which had been employed in a few instances in the Civil War. Indirect laying replaced, except on rare occasions, the old direct, or pointblank, method of engagement.

The French 75-mm gun was invented in 1897. Its hydropneumatic recoil system made all other cannons obsolete and forced other nations to redesign their ordnance as soon as they could penetrate the closely guarded secret. The US Army, however, retained the 3.5-inch gun and later the 3-inch gun as the standard field piece until 1917.

At the turn of the 20th century, the United States became involved in two minor skirmishes, both shows of power rather than actual wars. One was the Boxer Rebellion and the other was the Spanish-American War.

The Boxer Rebellion was a police action in that the United States was trying to protect American citizens and to keep China open for trade. The goal of the Boxers, or nationalistic Chinese, was to rid the country of foreigners, thus eliminating foreign intervention and exploitation of China. One American artilleryman, Captain Henry Reilly, distinguished himself in this engagement. Under heavy fire, his artillery blasted through the nine gates of Peking and managed to lead the American forces into the city.

The Spanish-American War, which was fought in Cuba, the Philippines, and Puerto Rico, was mainly a naval engagement. An important battle on land was Teddy Roosevelt's charge up San Juan Hill. The charge was successful due to the deployment of the artillery's most rapid firing weapon-- the Gatling gun.

From 1900 to 1916, the political atmosphere prevented any investment of monies for updating the Army's weapons.

On January 9, 1902, the 29th Field Artillery Battery was stationed at Fort Sill. The destiny of the post was to change from an isolated western post garrisoned by cavalry to a training post for artillery. In 1905, the chief of staff of the Army reported that the reservation at Fort Sill was suitable for the station of a full regiment of field artillery because of its size, the varied terrain, and the availability of adjoining ground belonging to the Government that could be used for maneuvers. orders were issued to organize at Fort Sill a provisional regiment of field artillery consisting of the 2d, 8th, 13th, 14th, 15th, and 21st batteries of field artillery under the command of Colonel Walter Howe.

The Artillery Reorganization Act of 1907 finally established the field artillery as a separate branch when it was separated from the coast artillery. The Field Artillery consisted of six regiments, each with six 4-gun batteries, plus three regiments of light artillery, two of mountain artillery, and one of horse.

In 1908, Lieutenant Edmund Gruber, assigned to the 5th FA Regiment stationed in the Philippines, wrote "The Caissons Go Rolling Along" as a regimental song to be used in a unit review. It was quickly adopted as a marching song for the field artillery.

Upon separation of the field artillery from the coast artillery in 1907, the artillery school at Fortress Monroe eliminated all courses that pertained to field artillery, leaving that branch without a school for any specific field artillery instruction. Field artillery units were so scattered throughout different military posts that little or no opportunity was afforded officers to learn uniform artillery procedures in handling mass fires and higher command and staff duties . Field Artillery officers became extremely inefficient and it was apparent that a great need existed for a field artillery school to teach officers their duties and how to conduct fires. In 1911, the School of Fire for Field Artillery was established at Fort Sill, Oklahoma, with Captain Dan T. Moore as its first commandant. A

succession of commandants slowly overcame grave shortages in personnel, quarters, and classrooms and developed the school into an efficient and extensive artillery school.

The US. Army Field Artillery had finally come into its own domain.

In May 1915 a German U-boat sunk the Lusitania, with the loss of 1, 198 lives, including 128 Americans. This act invoked the wrath of the American public against the Germans. Patriotic organizations advocating military preparedness found new listeners.

Spurred to action by these groups and by Pancho Villa's border harassment, Congress passed the National Defense Act of 1916, which authorized an increase in the peacetime strength of the Regular Army to 175,000 men and a wartime strength of about 300,000. The National Guard was to be increased to about 400,000. The Act established officer and enlisted Reserve corps and a volunteer Army. Additional officers were to be trained in colleges and universities under the Reserve Officer Training Corps (ROTC) program.

WORLD WAR I

In January 1917 the Germans, counting heavily on their submarine fleet to starve their enemies into submission, informed the United States and other neutral nations that LT-boats would sink all vessels, neutral and Allied alike, without warning. President Woodrow Wilson announced the breaking of diplomatic relations between the United States and Germany. About the same time, British intelligence agents intercepted the Zimmerman Message sent from the German foreign secretary to the German Ambassador to Mexico. The message proposed that, in the event of war between the United States and Germany, Mexico declare war on the United States. In exchange, Germany would provide generous financial assistance and, in the event of victory, Mexico would regain her lost territories of Texas, New Mexico, and Arizona. Congress and the Nation were shocked when they learned of this proposal. In the next few weeks, four more American ships were sunk by the Germans. At last, convinced that war was inevitable, President Wilson asked Congress for a declaration of war, which was approved on April 6, 1917.

World War I raised artillery to a new level of importance on the battlefield. When the United States entered the war in 1917, the condition, the equipment, the training, and the discipline of the American field artillery were nothing short of chaotic.

Unprecedented American production and ample Allied support provided the weapons with which the American artillery had to fight. Materiel used by the Americans was mostly French, and during the war only 100 American weapons saw action. The French alone contributed 3,834 field pieces and mortars, as well as 10 million rounds of ammunition. The old 3-inch gun--the Army possessed only 600 at the beginning of the war--was replaced by the French 75-mm gun. The French 75-mm gun was the best of its type. Its recoil system worked on glycerin and air, it was easy to aim, and it could be fired more rapidly than other artillery pieces. It was able to shred infantry columns to pieces but was unable to penetrate reinforced earthworks. Germany had about 3,500 105-mm and 155-mm howitzers; France, about 300.

In late 1917, American troops moved into quiet sectors of the Western Front. The honor of firing the first American artillery round in World War I went to Battery C, 6th FA Battalion (later the 2d Battalion, 6th Artillery, 3d Armored Division), on October 23, 1917. Although the war seemed to have settled down to stabilized trench fighting, General John J. Pershing wisely insisted that American troops be trained in open warfare.

The years before the American entry into the war had seen several developments in the art of warfare on the Western Front; trench warfare had brought about the reintroduction of the mortar. old-fashioned shrapnel had been replaced by high-explosive shells. Gas shells had been used in action by the Germans in 1915 and the Allies had followed their example. Although light artillery was still horse drawn, trucks were coming into use to draw heavier pieces.

In the spring of 1918, American troops were thrown in at Chateau-Thierry to halt General Erich Ludendorff's massive offensive. Counterattacking under a heavy artillery barrage, they cleared the Germans out of Belleau Wood in 2 weeks of hard fighting.

The capture of plans for a reopening of the German attack in the Champagne region on the eve of July 4 enabled Allied artillery to lay down a devastating barrage 1 hour before the enemy's guns were scheduled to commence their preparation for the attack. The 75-mm guns of the 42d Division, standing hub to hub, joined the artillery of the Allies in shredding the German assault. The 38th and 3d Divisions stood firm on the Marne despite the ferocity of Germany's last desperate gamble for victory. Finally, the enemy fell back and a massive Allied attack was launched in the direction of Soissons, while the Saint Mihiel salient, which the Germans had held for years, was sealed off by Pershing's First Army.

Again, artillery played a key role. About 3,010 guns of 26 calibers and 46 models poured 74 types of ammunition into the salient in the 4 hours and 45 minutes prior to the attack. Altogether, 838,019 rounds of ammunition--high-explosive, smoke, and nonpersistent gas--were expended in a single battle. The careful preparation of the attack and the air superiority that had been achieved paid off in terms of 16,000 German prisoners and 443 artillery weapons captured.

In the final Allied offensive of the war, the First and Second US Armies, operating between the Meuse and the Argonne, were thrown forward against the Hindenburg line. An unprecedented artillery bombardment supported the advancing infantry. French and American artillery averaged one gun per 8 yards of front, whereas the enemy could muster only one gun per 25 yards. In the American sector over a quarter of a million rounds rained down on the enemy in the first day of the attack, alone.

Stunned, but taking a heavy toll of American troops, the enemy pulled back. By the end of October, the last German defensive stronghold, the Kriemhilde Stellung, had been reached. Blasted by the massed firepower of divisional, corps, and army artillery directed by careful aerial observation, the enemy offered little resistance to the infantry attack that followed the 2-hour barrage of October 31, 1918. The Allied forces rushed for Sedan and the German border. On November 11, 1918, the German Government capitulated.

World War I saw the development of a variety of new techniques and devices of destruction. Tactics during this war included preparation fires, which lasted anywhere from 4 hours to 16 days. The introduction of the chemical shell, the appearance of massive and effectively controlled artillery barrages, and the new dimension added to combat by aerial observation were among the most significant advances relevant to artillery. Most important of all, the artillery established itself as the greatest killer on the battlefield, inflicting over 75 percent of the total number of casualties suffered by the enemy.

In this first involvement by the United States in European affairs, many mistakes were made. On the other hand, many things were accomplished quite effectively. The Nation handled conscription with minimum friction and without disrupting the economy. The Army expanded with incredible speed while still maintaining efficiency. The Navy showed its strength by defeating the submarines and transporting the Army safely overseas.

Soon after the armistice of November 1918, the War Department urged Congress to authorize the establishment of a permanent regular army of nearly 600,000 and a 3-month universal training program, which would facilitate a quick expansion of this force to meet the requirements of a new major war. The Congress and the American public rejected these proposals. They believed that the defeat of Germany and the exhaustion of the other European powers guaranteed that there would be no major land war for years to come. The possibility of war with Japan was recognized, but the

American powers assumed that such a war would be primarily a naval conflict. Therefore, the fundamental factor in the military policy of the United States during the next two decades was reliance on the US Navy as the first line of national defense.

WORLD WAR II

Japan seized Manchuria in 1931. Adolf Hitler came to power in Germany in 1933 and denounced the Treaty of Versailles in 1936. Benito Mussolini attacked Ethiopia in 1935. Revolution in Spain in 1936 produced a third dictatorship and an extended conflict that became a proving ground for World War II.

Beginning in 1935, the Armed Forces received substantially larger appropriations, which permitted them to improve their readiness for action. Army improvements during the next 3 years reflected not only the increasingly critical international situation but also the careful planning of the War Department during General Douglas MacArthur's tour of duty as Chief of Staff from 1930 to 1935.

During this time horses were replaced by vehicles as the means of transport for the artillery. Mortars and howitzer companies were assigned to the infantry to provide close support. A growing Army Air Corps was learning to support the ground forces with firepower. Methods of parachuting equipment, to include disassembled packhowitzers, were devised. The 105-mm howitzer was developed to replace the French 75-mm but it was not in the hands of Army troops until just before America entered World War II.

Japan invaded China in 1937. Germany annexed Austria in 1938 and seized Czechoslovakia in 1939. War in Europe was inevitable.

On September 1, 1939, Germany invaded Poland and France and England declared war on Germany. Even after these events the vast majority of American people desired to stay out of this war. Realizing the dangers, President Franklin Roosevelt declared a limited national emergency and authorized increases in the Regular Army and National Guard to 227,000 and 235,000, respectively. He also proclaimed neutrality but indirectly helped the Western democracies. In 1940 Germany quickly defeated Norway, Denmark, France, and the Low Countries. The grave threat to England forced the United States to adopt new and enlarged programs for defense, since it looked as if the Americans would be facing the Axis Powers alone.

Part of the United States' preparation for the coming conflict was the establishment of the Artillery Officer Candidate School (OCS) at Fort Sill, Oklahoma, on July 10, 1941. Originally the Artillery OCS consisted of a 13-week training program administered to warrant officers and enlisted men desiring to become second lieutenants in the Artillery. In 1943 the course was lengthened to 17 weeks.

On December 7, 1941, the Japanese attacked US forces at Pearl Harbor and smashed the US Pacific Fleet. On December 8 the Japanese attacked the US forces stationed in the Philippines and destroyed the bulk of the US Far East Army Air Corps lined up on Clark and Iba Fields. Thus, Americans found themselves fully involved in a global conflict for survival.

Weapon developments in the years during World War II (1941-1945) were to dwarf earlier advances. Some improvements were based on the experience in World War I, whereas others were the natural outcome of scientific progress.

The German use of armor in blitzkrieg tactics stimulated the development of 76-mm and eventually 90-mm antitank weapons. The improved split trail 155-mm howitzer reached the troops in 1942, replacing the old Schneider single trail howitzer. The 8-inch howitzer was in action, and the 240-mm howitzer and 155-mm gun soon followed. The introduction of self-propelled pieces increased the mobility of the artillery, in line with the markedly higher speed of warfare. The development of the variable time (VT) fuze proved to be a significant factor in increasing the effectiveness of both field and antiaircraft artillery.

The age-old tactics of artillery--mobility, massing of fires, flexibility of control, and accuracy of delivery--had not changed; the advent of the fire direction center resulted in increasingly devastating concentrations of fire. Swift and murderous accuracy was achieved through the use of forward and aerial observers.

The first American encounter with the Germans in Africa pointed out lessons already learned by the British in their desert war with Field Marshal Erwin Rommel. The German 88-mm gun first appeared in the Spanish Civil War as an antiaircraft weapon. In Africa, Rommel successfully employed it against tanks and personnel. As a result, the heavy British "Matilda" tanks were nicknamed "rolling coffins." American tanks, reaching the British Eighth Army in time for the Battle of El Alemein, cut down the German advantage. Soon the US 90-mm rifle was able to match the German 88. German development of flashless, as well as smokeless, powder also increased the hazards of the African conflict.

Yet, the American artillerymen, trained at Fort Sill, were prepared to meet the enemy. When the German tanks broke through the Faid and Kasserine Passes in Tunisia, threatening to encircle the British First Army, the US 9th Infantry Division Artillery was rushed 735 miles in 100 hours from the Algerian port city of Oran into position near Thale in southern Tunisia. At pointblank range American 105s and 155s fought it out with vicious Mark IV tanks operating with Stuka dive-bomber support. With the assistance of the British Eighth Army, advancing up from Libya, the Americans halted the attack and Africa at last was cleared of the invader.

The Sicilian and Italian campaigns saw no slackening in the artillery's contribution. During the amphibious assault on the Salerno beachhead in Italy, trails of the howitzers of the 158th Field Artillery Battalion were set in the water and crews fired low charge rounds as fast as possible to help secure the beachhead. Gun crews of the 45th Infantry Division Artillery were stripped to a minimum while artillerymen fought German attacks with rifles and machine guns. Headquarters battery personnel, bandsmen, mechanics, and truck drivers reinforced the most threatened sectors, while artillery fire support continued uninterrupted. The beachhead was held.

Anzio beachhead in Italy further proved that field artillery was truly the King of Battle. During the 4 months that American and British troops were pinned down on the beachhead, Allied artillery fired more rounds than in any previous 4-month period. During April, 1944, the 240-mm howitzers arrived at Anzio and their greater range made it possible to reach out and pulverize enemy rear area positions and attack German artillery that heretofore could not be reached with our lighter artillery. When the breakout from the beachhead began in late May, Anzio contained one of the largest concentrations of artillery in military history for such a small, constricted area. Antiaircraft artillery, 40-mm and 90-mm, were moved to forward positions and used in ground support, firing waist high air bursts. The 45-minute artillery barrage that began at 0545 on 23 May, 1944, in preparation for the breakout was awesome in its power. Every artillery weapon on the beachhead fired thousands of rounds upon the enemy as fast as the gunners could load and shoot.

On June 5, 1944, General Dwight Eisenhower ordered the Allied invasion fleet of 5,000 vessels against a 50-mile sector on the coast of Normandy. The role of artillery in that invasion was vital and extremely difficult. The problem of getting artillery pieces ashore was not easily solved. The 111th Field Artillery Battalion at Omaha Beach lost all but one gun in the landing, and the advance group of the battalion died fighting beside the infantry on the beach and in the shallows. The 7th Field Artillery Battalion lost six pieces. (The 111th and 7th Field Artillery Battalions were only two of many field artillery units involved in the Normandy landings.) Nonetheless, the formidable fortifications of Hitler's Fortress Europe were pierced before the end of D-Day. A beachhead, within which the essential buildup of men, weapons, and supplies could take place, was established. Then General George Patton broke through the German lines and began his epic swing across France toward the German homeland.

Once the Allies were on German territory, enemy resistance stiffened. In taking Aachen, American artillery had to fire pointblank at German troops in fierce house-to-house fighting. "When the Americans start using 155's as sniper weapons," said the German commander, "it's time to give up." He surrendered the city.

On December 16, 1944, Hitler launched his last offensive. Armored columns broke through the Ardennes, aiming for the Belgian North Sea port of Antwerp. Crack German SS troops in American uniforms infiltrated American lines. Cold weather and snow aided the Germans in bringing the Allied advance to a grinding halt. Allied vehicles bearing ammunition and supplies bogged down in the snow. Sled dogs were flown in from Greenland and Labrador.

But when the SS tanks attempted to force their way through at Monshau, they were met by the massed fire of four battalions of 105-mm howitzers, six of 155-mm howitzers, one of 4.5-inch guns, and two of 155-mm guns. Three times the German armor attempted to break through, but, as more battalions of American artillery joined the cannonade, the enemy at last gave way. The single battalion of German infantry that managed to reach American lines was quickly crushed.

Spurred by such atrocities as the slaughter of the men of Battery B, 285th Field Artillery Observation Battalion, at Malmedy, the Allies blunted the German penetration and finally resumed the march to victory. Lieutenant Colonel William R. Jesse of the 6th Armored Division Artillery wrote, "While the Battle of the Bulge could never have been won by artillery alone, it was the super-human effort of the artillery that prevented it from being lost on repeated occasions."

It was not only in Europe that artillery displayed its importance in modern combat. The amphibious operations and jungle fighting in the Pacific presented the artillery with new tasks and responsibilities. Heavy casualties at Tarawa showed the necessity for close artillery support of landing and newly landed infantry. As a result, battalions of 105's and 155's were landed and sent into action on unoccupied islands within range of Kwajalein, raining explosives on the Japanese fortifications against which an amphibious assault was about to take place. Army and Marine landings were unopposed, and within 6 days all resistance on the Kwajalein Islands was at an end.

At Angaur, since no neighboring islands were available, two artillery battalions, following their own infantry regiments ashore, fired in support of the adjoining regiments, gaining range and clearance by crisscrossing the battlefield.

In the conquest of the Philippines, artillery was brought to bear on strongly fortified Manila. Semicircles of 155-mm and 8-inch howitzers blasted Japanese strong points in the buildings of the

University of the Philippines. The enemy retreated into cellars and had to be driven out or destroyed by direct fire.

On May 7, 1945, with the Allies bearing down on them from all angles, German Government emissaries surrendered at General Eisenhower's headquarters in Reims, France. May 8, 1945, was declared V-E Day.

The German forces had suffered the greatest defeat in the history of warfare. Their army, air force, and navy had been almost completely destroyed or captured. The German armed forces had lost over three million men.

On August 6, 1945, a lone B-29 bomber from the Marianas dropped an atom bomb on Hiroshima. On August 9 another B-29 dropped an atom bomb on Nagasaki; on August 10, the Japanese sued for peace. With the signing of the surrender terms aboard the USS Missouri in Tokyo Bay on September 2, 1945, the bitter global war came to an end.

In 1945 First Lieutenant James E. Robinson, Jr., a 1943 graduate of the Artillery OCS, was posthumously awarded the Medal of Honor for his actions in an attack near Untergriesheim, Germany. The OCS area is named Robinson Barracks in his honor.

In 1946 as a part of the general demobilization, the Artillery OCS was discontinued. The School had commissioned 26,209 second lieutenants since its opening in 1941.

Shortly after the end of World War II, the Russians lowered the Iron Curtain across the European continent and successfully and quickly drew Eastern Germany, Poland, Hungary, Rumania, Bulgaria, Yugoslavia, and Albania behind that curtain. In the Near East the Russians were intimidating Iran and Turkey into giving them special privileges in connection with the strategic Dardanelles Strait. In Asia, the Russians insisted on full control of North Korea and it appeared that they had turned Manchuria over to the Chinese communists under Mao Tse-tung and were encouraging Mao in his renewed effort to wrest power from Chiang Kai-shek and the Kuomintang Government. In response to this USSR strategy of expansion, the US Government formulated a policy of containment.

KOREAN CONFLICT

In 1948 the division dispute between North and South Korea was referred to the United Nations. The United Nations sent a commission to supervise free elections throughout the country. The Russian authorities, declaring the UN project illegal, refused the commission entry above the 38th parallel. The United Nations then sponsored an elected government in the southern half of the peninsula, which in August 1948 became the Republic of Korea. The Russians countered by forming the Democratic People's Republic of Korea above the 38th parallel. Shortly thereafter, both the Russians and Americans withdrew their occupation forces except for advisory personnel. The North Korean Government promoted and supported an insurgency in South Korea. When this failed, the North Koreans attacked in force, sending their army across the 38th parallel on Sunday, June 25, 1950. In -a narrow sense, this was the beginning of a civil war between the people of a divided country. In a larger sense, the cold war between the world power blocs had erupted in open hostilities.

The North Koreans quickly crushed the southern defenders on the 38th parallel and marched on Seoul. After capturing Seoul, they regrouped and crossed the Han River, pursuing the South Koreans southward toward Pusan.

President Harry Truman authorized General MacArthur to supply the South Korean forces with ammunition and supplies and to survey conditions on the peninsula to determine how best the United States could assist South Korea. Two days later the President authorized General MacArthur to use air and naval strength against North Korean targets below the 38th parallel. The next day the President increased this authority to include North Korea and authorized the use of US troops to protect Pusan, Korea's major port at - the southeastern tip of the peninsula. Meanwhile, MacArthur had surveyed the situation and recommended that a US regiment be committed in Seoul at once and that this force be built up to two divisions. In response to the request, President Truman authorized MacArthur to use all 'forces available to him. The understrength 25th Infantry and First Cavalry Divisions were committed from occupation duty in Japan.

As a result of the general mobilization that followed, the Artillery OCS was reactivated at Fort Sill. The course now consisted of 23 weeks of demanding training.

In the period between 1945 and the Communist invasion of South Korea on June 25, 1950, improvements in artillery techniques and materiel had continued. The first American troops that were thrust into Korea fell back to Pusan, the port city in southern Korea. They formed a protective perimeter around this city and port, and fought for time to allow troops and supplies to arrive. The US artillery was subjected to attack from the front, flank and rear by North Korean infiltrators. The North Korean artillery was composed of Russian and Chinese pieces that were simple in design and maintenance but still very effective -

The disappearance of the classical front line required that artillery batteries fight as infantry in the defense of their guns. The 63d Field Artillery Battalion was overrun near Chonan and lost all of its guns but was back on line with new equipment within 24 hours.

Artillery units, spread thin along the front, received valuable assistance from naval gunfire, but the enemy pressed the American perimeter hard. In the first 10 days of September, 15 artillery forward observation posts were overrun or surrounded.

The Inchon landings and the breakout from the Pusan perimeter caught the North Korean Army between two fires, and it was promptly driven from South Korea. The war had not yet ended, however, for the UN troops advancing across North Korea were struck by Chinese Communist forces that had been secretly assembled in Manchuria. Again, the artillery was caged upon to play many roles.

The division artillery of the 2d US Division formed the rear guard in the difficult withdrawal of that division through the Kunu Ri Pass. The 8-inch howitzers of the 17th Field Artillery Battalion were attacked by the Chinese from flanking ridges as the battalion moved along the single traffic-clogged highway to the South. The attacking Communists were beaten off by fire from .50 and .30-caliber machine guns mounted on prime movers and by direct fire from the howitzers themselves. The 17th lost only one howitzer and one 40-mm in the retreat.

Not all artillery units fared so well. Battery B of the 503d Field Artillery Battalion was overrun while battling with clubbed rifles and carbines in the effort to save their 155's. Yet, eventually the front stabilized. In 1951 the Communists launched two more offensives, both of which were driven back with heavy losses. The front stabilized and the fighting lapsed into patrolling and small-caliber clashes. Communist infiltration tactics continued and the necessity for efficient perimeter defense remained imperative. Finally, on July 27, 1953, a truce was signed at Panmunjom.

American artillerymen had pressure put upon them from their first shot to their last. The Chinese, in order to make up for their lack of artillery, made American battery positions their prime targets. Batteries had to fight off invaders between rounds. One cannoneer of the 159th Field Artillery Battalion suggested that the crossed cannon of the artillery be changed to one cannon and one rifle. Guns were lost in attacks and recovered in counterattack. Artillerymen were determined to save their guns. The weapons used by the American artillery during the Korean conflict were basically the same as those used during World War II.

The impact of the Korean conflict reached far beyond the peninsula on which it took place. The peace-keeping machinery of the United Nations was tested and found to be operable. The conflict caused the Western Powers to strengthen the NATO Alliance. It was a proving ground for Red China's emergence as a major power.

In May 1953, a 280-mm gun nicknamed "Atomic Annie" fired the first atomic shell, which burst on target 7 miles away. The artillery now had a nuclear capability. This atomic artillery piece is now on display at the Field Artillery Museum, Fort Sill, Oklahoma.

During the 1950's advances were made in the air mode -of transporting artillery. Both rotary and fixed-wing aircraft were used to transport as well as parachute artillery pieces previously considered too heavy for this means of deployment.

The Honest John and Little John rockets were developed and were employed by units in the field. The Corporal and Redstone missiles added range and payload to the Army's nuclear delivery system and were deployed to the field. Later these weapons were replaced by the more sophisticated and increasingly more effective Sergeant and Pershing missiles.

VIETNAM

In an effort to prevent French Indochina from falling into Communist hands, the US Government began granting military aid to French forces in Southeast Asia, including those in Vietnam, early in the 1950's. Before US commitments in Vietnam increased, the conflict lost the complexion of a colonial war and emerged as a struggle for survival against a Communist "war of national liberation." Beset by opposition in France to a colonial war and lacking the necessary air and ground power to dominate a people with strong nationalistic ambitions while at the same time meeting Communist insurrections in Laos and Cambodia, the French in 1954 agreed to an international conference to be convened at Geneva to negotiate a settlement for all of Indochina. From this conference came the Geneva Accords. As applied to Vietnam, these accords directed a military disengagement based on a temporary demarcation line across the narrow waist of the country at the 17th parallel. The territory north of the line was to be administered by the Viet Minh (under the direction of Ho Chi Minh); that south of the line, by the French. The civilians were to be free to choose between the two zones. To reunite the country, general elections were to be held in 2 years. The United States declined to endorse these accords (as did the southern faction of Vietnam) but agreed to abide by them so long as others did the same. The two countries of South and North Vietnam evolved from these accords, and 800,000 North Vietnamese moved south and 100,000 South Vietnamese moved north. Ho Chi Minh called the Viet Minh cadre to remain in the south in preparation for the expected Communist victory in the elections. Early in 1956, shortly before the time designated for the elections, the French pulled their last forces out of South Vietnam. South Vietnamese President Nhu Diem objected to the elections, declaring that freedom of expression was impossible in the north, and the election were not held. The Viet Minh began to rebuild and strengthen their resources. As they gradually gained strength, they broadened their base of terror, propaganda, and coercion. In 1958 North Vietnam decided to destroy the South Vietnamese Government by aggression and began infiltrating political cadres and military reinforcements. Terror, assassinations, sabotage, abductions, and attacks on civil guard and local defense units increased. The Army of the Republic of Vietnam (ARVN), due to a lack of training and equipment, was unable to cope with these acts of insurgency. Meanwhile, President Diem had alienated many of the South Vietnamese by his autocratic manner and his failure to involve the people in government at the local level.

By the fall of 1961, the Viet Cong (formerly Viet Minh) had achieved enough power to threaten the existence of the Diem regime. President John Kennedy, seriously perturbed by these developments, decided to increase the US commitment (previously, a few hundred military assistance advisory personnel) to more than 11,000 advisors.

In November 1963 a military junta staged a coup d'etat and killed President Diem. Following the coup a year and a half of political instability, uncertainty, and disintegration was exploited to the fullest by the Viet Cong. By this time the US advisory strength was 23,000 and the Viet Cong had increased their strength to about 100,000. The presence of North Vietnamese Army regulars intermingled with the Viet Cong was becoming more and more evident.

In early 1965, the Viet Cong, reinforced by North Vietnamese, opened a savage offensive that crumbled the South Vietnamese Army at the rate of a battalion a week. A Communist push from the

highlands to the sea to cut South Vietnam in half and isolate Saigon appeared in the offing. Many observers gave the nation 6 months before capitulation.

In the fall of 1965, after a Communist attack on a US compound and helicopter base, President Johnson ordered retaliatory air strikes against selected targets in North Vietnam.

As the situation continued to deteriorate, President Johnson concluded that only by introducing US combat troops could Communist domination of the Republic of Vietnam be prevented. At the specific request of the South Vietnamese Government, increased US commitments began on March 6, 1965, as two battalions of US Marines went ashore.

Every day of the war in Vietnam brought new tactics. Vietnam, a jungle sequel to the Korean War, made the field artillery diversify and change to unconventional warfare. Gone were the FEBA (forward edge of the battle area, or fixed lines) and adjacent battery positions of World Wars I and II. In Vietnam, up to 50 percent of the missions were fired in close support of friendly troops or in areas virtually surrounded by converging forces.

Accuracy was imperative, the slightest error could result in injury to friendly troops or noncombatants. Other factors peculiar to Vietnam were the necessity for a 6,400-mil firing capability, ever-present friendly aircraft, and use of improved conventional munitions.

Yet with the ever-changing situation, the American artillery was repeatedly successful in adapting. An example was the Battle of Loc Ninh.

Just after 0100 hours one day in November 1967, swarms of Viet Cong attacked a US Special Forces camp and a neighboring Vietnamese post at Loc Ninh, a tiny district capital 72 miles north of Saigon. The enemy quickly overran most of the South Vietnamese position, but not even a furious 5-hour assault could dislodge the Americans. At dawn, South Vietnamese and American reinforcements began to pour in, and gradually the Viet Cong were pushed back into the rubber plantation outside town. By midafternoon, Loc Ninh bristled with Allied guns and the enemy had left 160 corpses sprawled on the battlefield.

According to past experience, the Viet Cong should have melted back into the jungle. But-as they pulled out of Loc Ninh, enemy soldiers warned the terrified inhabitants that they would be back and would take the town no matter what it cost them.

Just how seriously the Viet Cong meant their threat became apparent the following night, when the Viet Cong charged banzai-style across a wide airstrip runway. Sighting down the bores of their 105-mm howitzers, US Captain Harry Downing and his gun crews fired 575 rounds at pointblank range in 5 hours. By then, the paint on the howitzers' barrels had blistered and bumed off, but the enemy had been chopped to pieces. In the second day's action, the Americans killed 238 Viet Cong.

As the Viet Cong were dying by the score on the Loc Ninh runway, other enemy units were engaging American infantry and artillery outside town at a cost of another 225 dead. And they came back for more on Thursday and Friday. By Saturday when the fighting had at least temporarily waned, more than 800 Viet Cong had died. The Americans, meantime, had lost 11 men.

Vietnam didn't have the general support of the American people. Throughout the 1960's and into the 1970's peace demonstrations were frequent. On January 27, 1973 a Vietnam cease fire agreement was signed in Paris as the result of months of diplomatic meetings. Under

provisions of this agreement the last US troops were withdrawn from Vietnam on March 30, 1973.

The common field artillery weapon in Vietnam was the 105-mm, howitzer used in World War II and Korea; however, several carriages were used--a low profile lightweight carriage for airborne units, the standard carriage used during World War II and Korea for infantry divisions, and the improved self-propelled carriage for mechanized units. Three batteries of self-propelled 155-mm howitzers and one battery of self-propelled 8-inch howitzers were assigned at division level and additional 155-mm and 8-inch howitzers and self-propelled 175-mm guns at corps level.

Since Vietnam great advancements have been made in artillery weapons and ammunition. The Lance missile replaced the Sergeant. The 105-mm self-propelled howitzer was deleted from the inventory, but the 155-mm self-propelled howitzer was improved. The long tube 8-inch howitzer replaced the 8-inch and the 175-mm self-propelled. The M198, 155-mm towed howitzer was developed. The Multiple Launch Rocket System (MLRS) has been developed and fielded, giving the field artillery a potent rocket system to help - control the battlefield. TACFIRE and the Battery Computer System (BCS) are replacing the FADAC for fire planning and fire control.

Field Artillery doctrine and tactics have also undergone drastic revisions.

All through the evolution of the artillery, from catapult to missile, its purpose has remained the same: to be the most responsive maneuver element of a commander, and, thereby, to assist the other arms, especially the infantry, upon the field of battle. The field-artillery mission is to destroy, neutralize, or suppress the enemy by cannon, rocket, and missile fires and to integrate all supporting fires into combined arms operation. It must continue to fulfill this mission if our Army is to be successful in protecting our national interests.

QUOTATIONS

"The greatest killer on the battlefield

Anonymous

"Confidence in artillery is assurance that it is in the best possible condition...

Anonymous

"The Field Artillery lends dignity to what otherwise would be nothing but a vulgar brawl.

Anonymous

"The artillery accomplished a great deal in the war, a very great deal. In certain cases it did, perhaps by itself, resolve a situation thus tributing toward the common victory."

Marshal Pietro Badoglio in a speech quoted in The Field Artillery Journal January 1940

"There is nothing the artillery won't or can't do; no place the artillery won't or can't go."

**Major General David G. Barr
CG 7th Inf Division Korea, 1950**

"Artillery conquers and infantry occupies."

Fuller Army Ordnance January-February 1931

"The Artillery is the most important of our arms.

**President Dwight D. Eisenhower
As quoted by Lieutenant General Chiang Ching-Kuo**

"To insure success it is of vital importance that the army should have an overwhelming force of field artillery - "

**General William F. Barry
as quoted in "Historical Sketch of the Artillery--United States Army" 23 August 1951**

"From the very beginning of its existence artillery was a thing apart"

**Major General H. G. Bishop
"Field Artillery" 1935**

" Fire must never cease.... "

**Major General H. G. Bishop
"Field Artillery" 1935**

*An Infantryman's best friend is not his mother, It's the Artillery, Brother!"

Anonymous, A range sign, Fort Benning, Georgia 1953

"The King of Battles!"

**Major General H. G. Bishop
Subtitle for "Field Artillery" 1935**

"The infantry must never be deprived of powerful artillery support."

Ludendorff

"Formerly to win a victory the fighting force needed only courage and strength; today it must have artillery."

Frederick The Great

"The first duty of artillery is to hit, the second duty is to hit, and the third is to hit.

Hohenlohe

"Letters on Artillery", Ltr XVII

"The Artillery, as a branch of service, stands second to none."

Major General Charles E. Hart.

An address to officers of the Artillery Center, 4 January 1954

"No matter how highly trained the infantry and other branches may be, there is no action until the artillery is ready."

Major General William J. Snow

Letter in "The Shrapnel-192411, The Field Artillery School 1 March 1924

There is no other arm of the service whose efficiency is so directly dependent upon its officers as is the field artillery."

Major General William J. Snow

Letter in "The Shrapnel-1924"

The Field Artillery School 1 March 1924

"The ultimate unit is not the man ... but the gun...."

Captain Oliver L. Spaulding, Jr.

Letter in "The Shrapnel-1924"

The Field Artillery School, 1 March 1924

"No army is efficient unless its field artillery is efficient."

Major General William J. -Snow

Letter in "The Shrapnel-192411

The Field Artillery School, 1 March 1924

"Renown awaits the commander who first in this war restores artillery to prime importance on the battlefield."

Winston Churchill, 1941

"God fights on the side of the best artillery - "

Napoleon

The Field Artillery Journal, July-August 1948

"Artillerymen have a love for their guns which is perhaps stronger than the feeling of any soldier for his weapon or any part of his equipment."

S. L. A. Marshall

"They Fought to Save Their Guns"

in Combat Forces Journal, May 1953

"If, -after the battle is over, your infantry don't like you, you are a poor artilleryman."

Captain Henry Reilly

The Field Artillery Journal, September-October 1940

"The World War demonstrated the importance of the Field Artillery.
The loority of casualties were inflicted by this arm."

General John J. Pershing
Letter in "The Shrapnel-1924"
The Field Artillery School, 1924

"In many situations that seemed desperate, the artillery has been a most vital factor."

General Douglas MacArthur
The Field Artillery Journal, June 1942

"The strong effect of massing artillery fire. . . has been proven beyond question."

General Douglas MacArthur
The Field Artillery Journal, June 1942

"The best generals are those who have served in the artillery."

Napoleon
Saint Helena

"It is the artillery of my guard that decided most of my battles."

Napoleon

"Nothing is more destructive than the charge of artillery on a crowd."

Napoleon
"Maxims of War"

"Our artillery . . . The Germans feared it almost more than anything we had."

Ernie Pyle
"Brave Men", 1944

"Artillery increases the destructive principle of fire; it is the most redoubtable of arms...."

General Carl Von Clausewitz
"On War" (Vol II), 1911

"Now, more than ever, the artillery is the indispensable companion of the infantry."

General Colmar Von Der Goltz
The Nation in Arms 1883

".....Not having prepared their attack by artillery fire, it came to nothing...."

Field Marshal Count Von Moltke
The Franco-German War 1891

"Again the artillery opened the attack."

Field Marshal Count Von Moltke
The Franco-German War 1891

"The best and steadiest troops can seldom be made to advance
under the fire of even a few well-served pieces of artillery."

US General Quincy Gillmore
American Civil War

"Artillery captures the terrain, which the infantry has only to occupy."

French General Petain
World War I

"In addition to bravery, the factors that gave us our artillery superiority were sound doctrine, thorough training, and powerful weapons"

Honorable Robert P. Patterson
Secretary of War

The Field Artillery Journal, July 1946

"The artillery was my strongest tool. Often it was my only reserve I repeatedly said it was more a matter of the infantry supporting the artillery than the artillery supporting the infantry.... I wish I knew the countless times that positions were taken or held due solely to TOT's"

Major General R. O. Barton
Commanding US 4th Infantry Division World War II
(Reminiscing with his division artillery commander.)

"No branch of the army stood so high, professionally, at the end of that war as did the artillery."

William Birkhimer
Artilleryman in the Revolutionary War

"The last argument of kings."

Inscription on French Cannon Engraved by order of Louis XIV (circa) 1700

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