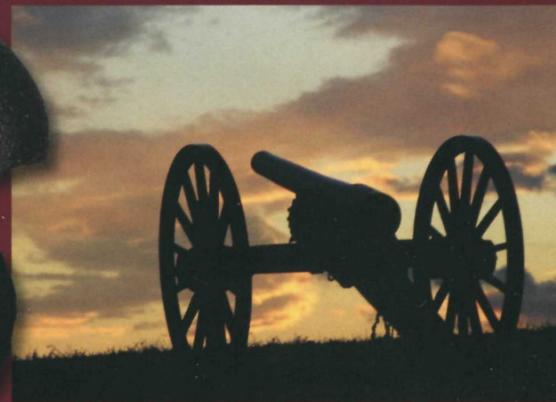


*It was a grand and inspiring sight to witness batteries going headlong into action—the neighing of horses, the rumbling of caissons, the halt, the furious cannonade, the officers on their charges with swords gleaming in the sunlight, with buglers clanging out the orders, the passing of ammunition, the ramming, the sighting, the firing, and the swabbing, the guns booming in chorus like heaven-rendering thunder.*

Pvt Edward Spangler,  
130th Pennsylvania Infantry

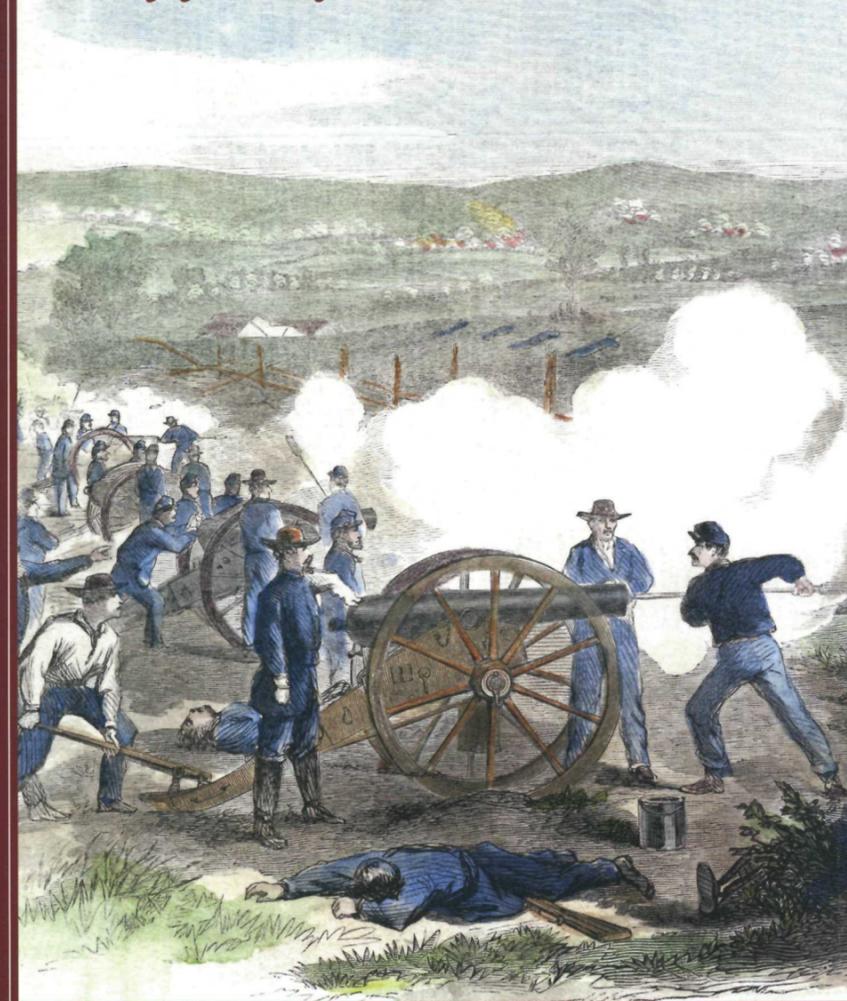


Shell fragments, cannon on the battlefield, and Knapp's Pennsylvania Battery at Antietam



## Artillery at Antietam

*“The destructive shot and shell were falling, it would appear, on every foot of land.”*



### INTRODUCTION

There were over 500 cannons engaged during the Battle of Antietam. The open, rolling terrain around Sharpsburg was perfect for the use of artillery. Over 3,000 rounds an hour were fired during the twelve hours of combat on September 17, 1862. The firing was so intense that soldiers described the day as a “savage continual thunder” and a “tumultuous chorus.” Gen. Alpheus Williams wrote that “if all the stone and brick buildings on Broadway should tumble at once the roar and rattle could hardly be greater.”

The artillery was a separate branch of the army, along with the infantry and cavalry. The basic organizational unit for cannons was called a battery, made up of four to six guns with approximately 70-100 men. Field artillery was mobile, pulled by

four or six horse teams that could quickly roll into position, providing offensive firepower where it was needed most. Groups of cannons, combining the awesome power of 15, 20, or 24 guns provided a powerful defense against attacking infantry and helped anchor an army's position.

At Antietam, Gen. George McClellan's Union Army of the Potomac had more cannons (about 300 Union to 230 Confederate), more long range guns, and generally better ammunition. Gen. Robert E. Lee's Army of Northern Virginia effectively moved its guns back and forth within their line of battle in response to the Union attacks and began the innovation of massing cannons into larger groups called battallions.



An artillery battery ready to move.



*“A great tumbling together of all heaven and earth”*

## Types of Artillery

Cannons were made in different sizes and by different manufacturers, but there were only two types—smoothbore and rifled. Smoothbore guns were mostly bronze and smooth on the inside like a pipe. They fired round ammunition that tumbled in flight. Most rifled guns are made of

### SMOOTHBORE CANNON



### 1857 Model Napoleon

- Fires 12 lb. projectiles
- Named for Emperor Napoleon III
- Weight -2,355 pounds
- Range - up to 1,600 yards
- Approximate number at Antietam: Confederate- 27, Union-108



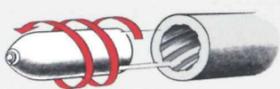
### 1841 Model Gun

- Fires 6 lb. projectiles
- Workhorse of Mexican War, but considered obsolete by Civil War
- Weight - 1,784 pounds
- Range - up to 1,500 yards
- Approximate number at Antietam: Confederate- 45, Union- 0



iron and had grooves cut inside the barrel that force the conical rounds they fire to spiral like a football, traveling farther and more accurately. There were fifteen different models of cannons at Antietam. However, the four guns below represent about 80% of the cannons used.

### RIFLED CANNON



### 3 Inch Ordnance Rifle

- Fires 10 lb. projectiles
- Weight 1,726 pounds
- Lightest and strongest rifled tube
- Range - up to 1,800 yards
- Approximate number at Antietam: Confederate- 40, Union- 94



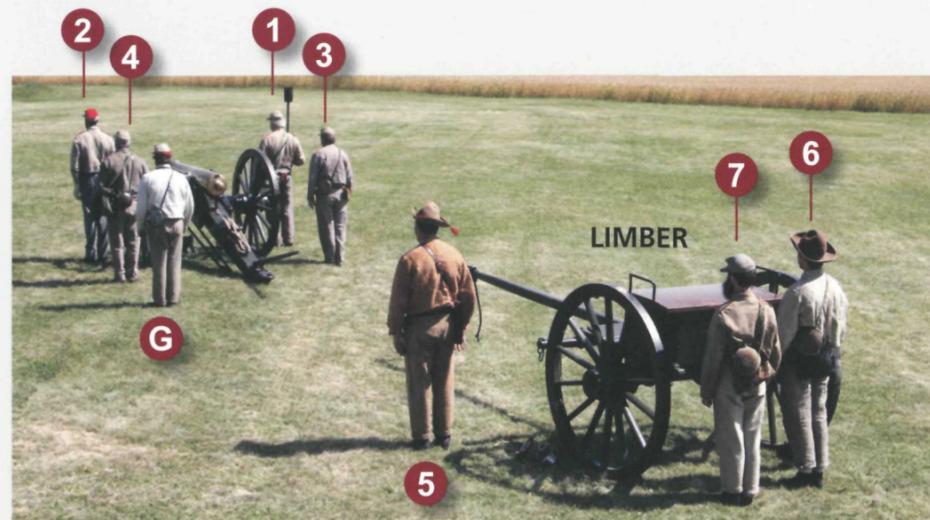
### 10 Lb. Parrott Rifle

- Fires 10 lb. projectiles
- Named for designer Robert Parker Parrott
- Weight - 1,799 pounds
- Range - up to 1,900 yards
- Approximate number at Antietam: Confederate- 36, Union-42



½ mile = 880 yards    ¾ mile = 1320 yards    1 mile = 1760 yards

## The Gun Crew



Eight cannoneers are needed to fire a cannon. Five work the gun—the gunner and cannoneers 1, 2, 3, 4.

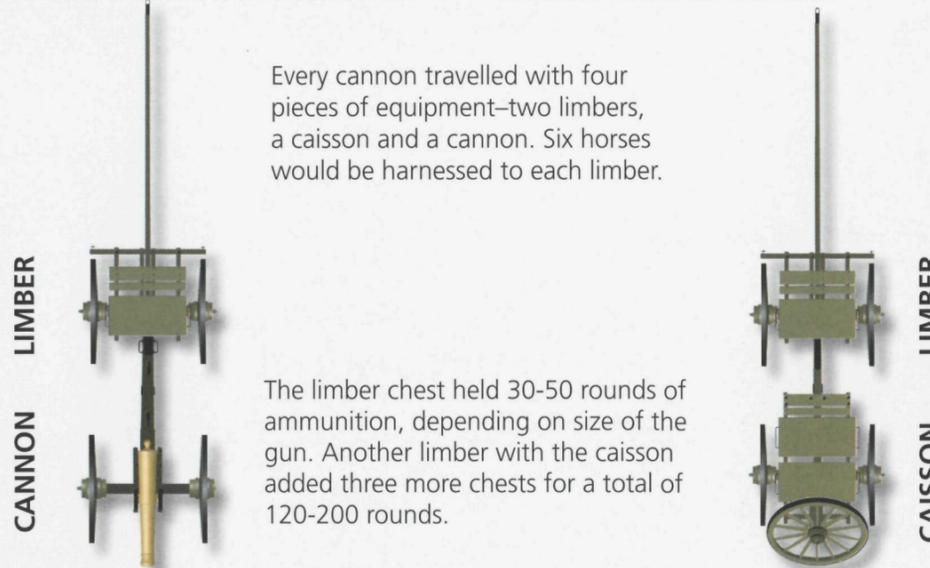
The **Gunner** is in charge of the piece, gives the commands and does the aiming. Cannoneer 1 handles the sponge-rammer, pushing the ammunition down the barrel and washing the bore after every shot. Number 2 loads the ammunition and

uses the worm to clear debris. Number 3 thumbs the vent and uses the priming wire to puncture the powder bag. Number 4 places the friction primer and pulls the lanyard to fire the gun.

Cannoneer 5 runs the ammunition from the limber to the gun. Cannoneers 6 and 7 prepare ammunition and cut the fuses.

Every cannon travelled with four pieces of equipment—two limbers, a caisson and a cannon. Six horses would be harnessed to each limber.

The limber chest held 30-50 rounds of ammunition, depending on size of the gun. Another limber with the caisson added three more chests for a total of 120-200 rounds.



## Ammunition

There were four types of ammunition: **Solid Shot**—cast iron with no explosives. **Shell**—a hollow projectile filled with powder that exploded by an impact or timed fuze. **Case**—hollow shell filled with powder and a number of round balls that exploded in all

directions. **Canister**—artillery round containing 27 golf ball sized iron shot packed into a tin can that ripped open at the muzzle, showering approaching troops. Canister was used at close range—100 to 300 yards.

### SMOOTHBORE AMMO



Shot with powder bag attached. Powder bags were attached to all smoothbore rounds. Powder bags for rifled cannons were loaded separately.



Shell



Case



Canister

### RIFLED AMMO



## Tools of the Trade



sponge rammer



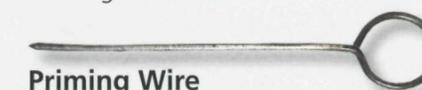
worm



handspike

### Sponge Rammer, Worm, Handspike

Sponge rammer and worm were used to load ammunition and clean the barrel. The handspike slips into rings on the back of the cannon and is used to move the gun from side to side when aiming.



### Priming Wire

After the ammunition is loaded, the priming wire is pushed into the vent at the back of the gun which punctures the powder bag.



### Friction Primer

When pulled, creates a flame that ignites the ammunition charge.



### Lanyard

Hooks to the friction primer, then is stretched out by Number 4 so that he can be a safe distance from the gun when he pulls the lanyard to fire the cannon.



### Pendulum Hausse

Aiming device placed on the back of the gun by the Gunner.



### Haversack

Used to safely carry every round from the limber to the gun.



### Thumbstall

Protects the thumb of Number 3 when he covers the vent with his thumb during loading.

Note: Items are not to scale

This artillery locator map shows where the park has cannons on display. During the battle there were over 100 batteries on the field. Today the park has sixteen positions marked with cannons. Union positions are marked in blue, Confederate in red. The historic woodlots and topographic shading have been added to this modern map to show the terrain as it was in 1862. The approximate time that the artillery were at each location is listed with information about their role in the battle. Other key locations where the park does not have cannons on display are also marked on the map.

## Artillery Locations at Antietam National Battlefield

**1 Battery D, 1st Rhode Island Artillery**  
 Capt. J. Albert Monroe  
 (6) 12-lb. Smoothbore Napoleons  
 Dawn to 8:30 a.m. – Exchanged counter-battery with Nicodemus Heights then moved south with the Union advance to within 70 yards of the Dunker Church.



John Pelham

Confederate artillery commanded by Major John Pelham fired some of the first shots of the battle. Pelham blasted his guns at the 1st Corps and duelled with Monroe's Battery, and the other Union guns that were massed on the Poffenberger Farm, until he was forced to reposition on Hauser Ridge.

**2 Independent Battery C, Pennsylvania Light Artillery**  
 Capt. James Thompson  
 (4) 3-inch Ordnance Rifles  
 Dawn to 7:30 a.m. – Fired point blank into the Cornfield at dawn and then continued firing south toward Confederate infantry and artillery.

**3 Battery B, 4th U.S. Artillery**  
 Capt. Joseph B. Campbell (wounded)  
 (6) 12-lb. Smoothbore Napoleons  
 Dawn to 7:30 a.m. – Desperate fighting took place around these guns. Capt. Campbell and 34 cannoners were wounded and two Medals of Honor were awarded to members of the battery.

**4 Brockenbrough's (2nd Baltimore) Maryland Battery**  
 Capt. Bowyer Brockenbrough  
 (1) 3-inch Ordnance Rifle  
 (1) Rifled Blakely, (1) 10-lb. Parrott Rifle,  
 (1) 12-lb. Smoothbore Howitzer  
 Dawn to 7:30 a.m. – Supported "Stonewall" Jackson's infantry from here, then moved west to Hauser Ridge.

Most of the Confederate artillery that retreated from the east side of the Hagerstown Turnpike pulled back to the high ground on the Reel Farm. Some of these guns moved south to reinforce Lee's right flank in the afternoon.

**5 Woolfolk's (Ashland) Virginia Battery**  
 Capt. Pichegru Woolfolk, Jr.  
 (2) 10-lb. Parrott Rifles  
 (1) 12-lb. Smoothbore Howitzer  
 (1) 6-lb. Smoothbore  
 At about 8:30 a.m., Woolfolk moved two guns here where they were captured by the 28th Pennsylvania. Twelve other Union and Confederate batteries took this high ground at different times during the day.

**6 Col. Stephen D. Lee's Artillery Battalion**  
 19 Guns of all types in four Batteries  
 Dawn to 8:45 a.m. – Lee's Battalion of four batteries had approximately 300 men. 86 soldiers and 60 horses were killed and wounded at one of the most important artillery locations anywhere on the battlefield, a position that Col. Lee described as "artillery hell."

**7 Battery A, 1st Rhode Island Light Artillery**  
 Capt. John A. Tompkins  
 (6) 10-lb. Parrott Rifles  
 9:30 a.m. to 1:00 p.m. – This battery fired over 1,000 rounds supporting the Union attack on the Sunken Road.

**8 Battery K, 1st U.S. Artillery**  
 Capt. William M. Graham  
 (6) 12-lb. Smoothbore Napoleons  
 12:30 p.m. until dark – Graham's battery also supported the fighting at the Sunken Road. Gen. Israel Richardson was mortally wounded by artillery when he was at this battery.



7. John Tompkins



**9 Miller's Battery, 3rd Company, Washington Artillery of New Orleans**  
 Capt. M.B. Miller  
 (4) 12-lb. Smoothbore Napoleons  
 10:30 a.m. to 1:30 p.m. – Miller started the day defending the Middle Bridge, then moved here where Gen. Longstreet and his staff manned one of the guns in a desperate attempt to hold the line after the Confederate position in the Sunken Road collapsed.

**10 Battery A, 2nd U.S. Artillery**  
 Capt. John C. Tidball  
 (6) 3-inch Ordnance Rifles  
 12:00 noon to dark – Tidball's battery fought on September 16th and 17th, firing over 1,000 rounds supporting the Federal attacks across the Middle Bridge.



10. John Tidball

**11 Squires' Battery, 1st Company Washington Artillery of New Orleans**  
 Capt. Charles W. Squires  
 (2) 3-inch Ordnance Rifles  
 (2) 10 lb. Parrott Rifles  
 Dawn to 4:00 p.m. – Squires defended the critical Boonsboro Turnpike against Union attacks in the center. Late in the day these guns helped turn back Burnside's 9th Corps advance.

**12 Garden's (Palmetto) South Carolina Battery**  
 Capt. Hugh R. Garden  
 (2) 12-lb. Smoothbore Howitzers  
 (2) 6-lb. Smoothbores  
 1:00 p.m. to 4:00 p.m. – From this dominant high ground Garden's guns defended the Confederate center and right flank.

**13 Brown's (Wise Artillery) Virginia Battery**  
 Capt. James S. Brown (wounded)  
 (4) unidentified guns  
 1:00 p.m. to 4:00 p.m. – Brown's battery took three or four positions until they arrived here, firing against the Union 9th Corps infantry and artillery.

When the Union army arrived, Brig. Gen. Henry Hunt, Chief of Artillery, placed his long range 20-lb rifled Parrott guns all along the high ground on the east side of Antietam Creek. He called them the "guns of position." These cannons pounded the Confederates on the other side of the Antietam.

**14 McIntosh's (Pee Dee) South Carolina Battery**  
 Capt. David Gregg McIntosh  
 (1) 10-lb. Parrott Rifle, (1) 3-inch Ordnance Rifle,  
 (1) 12-lb. Smoothbore Napoleon, (1) 12-lb. Smoothbore Howitzer  
 4:00 p.m. to dark – McIntosh's Battery was the first of Confederate Gen. A.P. Hill's Division to arrive after leaving Harpers Ferry that morning. The battery was captured by the 8th Connecticut Infantry, then taken back by Gen. Toombs' men.



Henry Hunt

**15 Battery E, 4th U.S. Artillery**  
 Capt. Joseph C. Clark, Jr. (wounded)  
 (4) 10-lb. Parrott Rifles  
**Independent Battery D, Pennsylvania Light Artillery**  
 Capt. George W. Durell  
 (6) 10-lb. Parrott Rifles  
 3:00 p.m. to 5:00 p.m. – These two batteries provided critical artillery support for Burnside's 9th Corps as it made its final attack toward Sharpsburg.

**16 Pegram's Purcell, Richmond. Virginia Battery**  
 Capt. William J. Pegram  
 (2) 10-lb. Parrott Rifles, (2) 12-lb. Smoothbore Napoleon  
 4:00 p.m. to dark – Pegram's Battery was assigned to Gen. A. P. Hill's Division. They left Harpers Ferry that morning and arrived here late in the day, helping to drive back Gen. Burnside's Union 9th Corps.



14. David McIntosh



15. Joseph Clark, Jr.



15. George W. Durell



16. William J. Pegram

Confederate battery showing general direction of fire  
 Union battery  
 Auto Tour Stop  
 Auto Tour Route