

New Innovations in Weaponry During the Civil War

The Civil War was a time of great innovation in the area of implements of destruction, the weapons of war. A great many of these innovations, the revolver and rifling weapons, for example, revolutionized the way war was fought. But there were a great many other innovations that, whether by flaw in design or bad timing, didn't quite catch on. Some of these weapons disappeared into the hallowed halls of history, while others later matured and became major players in later years, whenever men raised arms against one another.

Artillery was one area where many innovations were tried, and few succeeded. The majority of cannons used during the war were of the same simple design. Although sturdy, these designs were slow firing, a flaw which many an inventor tried to remedy. Many types of exploding charges were tried, some with incendiary charges like the ancient "Greek Fire", which was meant to set fortifications ablaze. Several others tried to join two solid shots together with a length of chain, with the intention that the balls would stretch the chain out and begin spinning, mowing through approaching artillery. Even double-barreled artillery pieces were considered, which was supposed to fire two shots simultaneously. None of these ideas ever materialized as practical weapons, and several people died testing these devices.

Attempts at making repeating cannons also did not materialize. The repeating cannon, attempted by H.C. Pate, was based on the revolver technique, with a crank operating a revolving cylinder. Only two of these devices were ever built, and when the first exploded, killing half its crew, the other was retired. The idea of repeating weaponry didn't die with Pate's crew, though. While the idea of making a repeating cannon quickly were passed over, the idea was used on rifles, in an attempt to make what were the precursors of machine guns, the great killers of World War I. Some of these repeating rifle ideas were almost crude in their simplicity. The "Billingshurst Requa Battery" (pictured) was perhaps the simplest. It consisted of 25 .58 caliber rifle barrels mounted parallel to one another on a horizontal bed mount. A "clip" holding the 25 rounds for the device was fitted into a sliding breech, and when a lever was pulled, the bullets slid into

place. The problem was that the gunner then had to pour powder behind the breech and light it with a percussion cap. Getting the powder to ignite and launch all 25 rounds at once was quite a problem. Also, the gun was difficult to reload, while the inventor claimed it was capable of seven volleys every minute, in reality it was capable of far less. This weapon, while it saw little use, was occasionally put into service to defend narrow openings or confined spaces, which led to it being known as the "covered bridge gun".

Another attempt at the repeating rifle was even less successful, the "Vandenburg Volley Gun". It was made up of anywhere from 85 to 451 barrels clustered, row by row, in a cylindrical casing. When the breechblock was opened a container with all the charges was loaded, and a single percussion hammer set off the whole thing. This device was very slow to load, and was only effective if several magazines were pre-loaded and ready for insertion. Worse, the weapon had no "spread" to its firing pattern. While accurate to 100 yards, over 90% of its bullets hit a target within a six foot area at that distance. In battle, this meant that only one or two soldiers would be hit at once with this weapon, and although those two would be most certainly dead, it was deemed a waste of ammunition to use 400 bullets to kill two men.

The Confederates worked on a rapid fire cannon called the "Williams Machine Gun", which was supposed to fire more than sixty 1.57 caliber balls in a minute. It operated on a crank system that, when turned by the gunner, opened the breechlock and cocked the hammer. Another man would then load the paper wrapped charges and capped a nipple. Closing the crank closed the block and tripped the hammer. Few of these guns were ever built, and those that did tended to be very temperamental and unreliable. Far better designed was the "Agar Machine Gun", which resembled a crank operated coffee mill but could shoot of 120 .58 caliber bullets in a minute. It worked also on a crank system, this one feeding bullets from a hopper into the gun, then dispelling the spent cartridge after firing.

The most deadly of the repeating rifles, which did not come along until the end of the war and therefore saw very limited use during the Civil War was the Gatling Gun. It was made up of six barrels mounted to make a hollow cylinder. Turning a crank rotated the barrels, and when each barrel came into line, a bullet from a hopper was loaded into the breech of the barrel and fired. The Gatling gun, when running at full efficiency, could fire its .58 caliber rounds as quickly as a man could turn the crank. The gun was originally patented in 1862, but the government rejected the idea and used only a few during the war, at Peterburg in 1864. The new model of 1865, which corrected some problems from earlier versions, was truly devastating. Luckily, the war was over by the implication of these implements of mass destruction, or else the death counts from the war would have soared to even greater heights.

Several other deadly innovations were still not fully developed until after the war, but were being actively developed during the war between the states. The hand grenade was one such device. Several different styles were tried, some with vanes and throws like large darts, others that were simply shells with lit fuses. Another, less traditional, type called for the thrower to wear a leather strap around his arm, which was attached to a friction primer in the shell. When the shell was thrown, the strap set off the friction primer, and the shell was to blow up several seconds after being thrown. Another idea called for a powder filled ball with 14 capped nipples protruding from it, all enclosed in a larger screw-capped iron ball. When thrown, the theory went that when the ball hit the ground one of the caps would ignite the charge, causing an explosion. The problem was that it could just as easily go off while being thrown, or if accidentally dropped.

Landmines were also experimented with, especially by the Confederacy, often with deadly efficiency. Even exploding bullets, which would explode after entering a man's body, were attempted. The amount and degree of carnage created by the weapons of the Civil War was on a far grander scale than ever before, and the innovations of engineers promised to make the future of warfare even bleaker.

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