

Chapter 24

Ten Weapons That Made a Difference

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- Checking out the good stuff
 - Incorporating new technology
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From the rifleman to the atomic bomb, the issues of World War II were decided in the end by superior weapons. Whoever had the most of the best came out on top. Although the Germans produced superior weaponry, for example, they didn't produce sufficient quantities to make a difference. This chapter presents a list of World War II weapons that represent the best in quality and innovation at the time.

The German MG-42 Machine Gun



Germany was unmatched in light weapons design. In World War II, the finest light machine gun in the world was the MG-42. It was capable of firing 1,200 rounds per minute at a range of about 4,000 yards, which amounted to significant firepower for a squad or platoon. The MG-42 was lightweight (a big plus for the soldiers carrying it day after day) and, best of all, was easily mass-produced.



The MG-42 machine gun was so good that the United States later copied the design for its own machine gun, the M-60. In fact, the MG-42 design was copied by arms manufacturers around the world. These variations of the MG-42 basic design continue to serve modern armies today.

The German Tiger Tank



The Tiger tanks had no equal on the battlefield of World War II. Originally designed for use in Russia, this 60-ton monster tank fought throughout Europe. The Tiger tank had the best combination of protection and firepower of any tank in World War II:

- ✓ Massive armor on the hull and on the turret
- ✓ An 88-millimeter main gun
- ✓ Wide treads for cross-country travel
- ✓ The capability to cross through water up to 16 feet deep

Unfortunately, the Tiger's engine was underpowered, and it was not as effective as expected in moving over muddy or snow-covered ground (in Russia, the ground is either one or the other most of the time). Likewise, the tank was not successful in Italy because of the hilly terrain and lack of bridges strong enough to hold it. In Normandy, however, and in the battlefields in France and Germany, the Tiger performed at its best.

The Americans, Canadians, and British found that virtually none of their weapons was powerful enough to stop a Tiger Tank. The best hope the Allies had was either to knock off a tread and immobilize it or to literally mass the firepower of several tanks at once and try to hit it in the rear, where the Tiger's armor protection was lightest.

As effective as the Tiger was, production numbers were low because they were produced late in the war. The last version of the Tiger was the 80-ton King Tiger, which Americans met in the Battle of the Bulge. The Tiger influenced tank design around the world for many years after the war.

The M-1 Garand Rifle



American General George Patton called the M-1 Garand rifle "the greatest battle implement ever devised." The M-1 rifle was the basic American infantryman's weapon in World War II. Its accuracy, volume of fire, and reliability were exceptional.



The Germans and Japanese used *bolt action rifles*, which meant that soldiers had to load a new round of ammunition manually before they could fire the weapon again. The M-1 was *semi-automatic*, meaning that soldiers could fire round after round by simply squeezing the trigger. Trained soldiers could deliver eight aimed rounds in 20 seconds. (Anybody can shoot bullets out of a weapon in a few seconds; what matters is being able to take aim and hit what you intend to hit.) Aimed fire from the M-1 meant that American soldiers

were able to send more bullets in the enemy's direction than the enemy could return. With the enemy ducking for cover, American troops maneuvered against enemy positions and destroyed them. The M-1 weighed 9½ pounds and was ruggedly built to withstand abuse and rough handling. The M-1's combat range was 50 yards, but it was capable of firing out to 3,500 yards.



No war has ever been won (and it's safe to say that no war will ever be won) until infantrymen are standing on the ground that the enemy wants to defend. American infantrymen won the ground (and therefore World War II) with the M-1 rifle.

The V-2 Rocket



The first V-2 rocket hit England in September 1944, moving at a speed of 3,500 miles per hour. It was the world's first medium-range ballistic missile, the granddaddy of the infamous SCUD missiles of the Gulf War and the intercontinental ballistic missiles (ICBM) that make up the strategic arsenals of the United States and Russia.

The V-2 was one of Hitler's "wonder weapons," intended to turn the tide of the war. Launched from the coast of Europe, the missile with a one-ton warhead could travel a maximum range of 225 miles. It was undetectable until it hit. The V-2 didn't change the course of the war, mostly because it wasn't very accurate, but its effect on the future of military technology and warfare, as well as the space program, was far reaching.

The basic design of the V-2, although highly modified by modern technology, is essentially the starting point for all rocket and ballistic missile technology. You can see a real V-2 at the Smithsonian Air and Space museum in Washington, D.C.

The P-51 Mustang



The P-51 Mustang was one of the miracles of American military production. Developing from a British suggestion for a new fighter in 1940 to full-scale production in 1942, the Mustang first appeared over German skies with American pilots in 1943.

With its speed and maneuverability, the P-51 Mustang had no equal in air combat. Most importantly, the Mustang's extended range and fuel tanks enabled the Allies to provide protection for the B-17s from their bases in Britain to their targets in Germany and then back to Britain again. The Mustang was also able to fly at the same high altitudes that the B-17 bombers flew. When Mustangs began escorting the B-17 bombers to targets in Germany,

the *Luftwaffe* (see Chapter 2) got a nasty surprise: They found that the big bombers were no longer easy targets. The Mustang kept the enemy at bay and therefore contributed significantly to the success of the Allied strategic bombing campaign.

With the Mustang flying alongside the B-17s, the effectiveness of the Allied strategic bombing offensive improved, and bomber losses declined. The P-51 Mustang also effectively supported ground troops by firing rockets mounted on the wings or dropping 1,000-pound bombs with devastating effect on German tanks and infantry.

The Mustang dominated the skies, assuring the success of Eisenhower's ground campaign and giving the strategic bombing campaign the capability to inflict increasing damage on German war industries.

The Me-262 Jet Aircraft



The Me-262 (Me is the abbreviation for *Messerschmidt*, the German manufacturer) is one of the most beautiful aircraft ever built (in my opinion anyway). It was also the first military jet aircraft whose advanced capabilities were not matched by any nation until 1949. The design was actually on paper as early as 1938, and an experimental model was built and flown in 1941, but the Nazi bureaucracy had no interest. Overconfident after a series of too-easy victories, no one believed such an aircraft was necessary. It wasn't until Allies began regular bombing raids on German cities that Hitler decided to take an interest.

The Me-262 was intended for use as a fighter, and in that role, no Allied aircraft could've matched it. However, Hitler ordered it built as a fighter-bomber — a request akin to asking that all-terrain tires be put on a sports car! Hitler's change in design slowed this Me-262 down to speeds where the Allies' agile P-51 Mustang (see the preceding section) could challenge it. Although the Germans eventually redesigned it as a fighter, this change came too late to turn the tide of the war back in Germany's favor.

Although the Me-262 had no effect on the outcome of the war, it did have an extraordinary effect on the future of combat aircraft design for nearly a generation.

The B-17 Bomber: The Flying Fortress



The B-17 was the workhorse and symbol of the United States strategic bombing offensive in Europe. It represented the raw power of high explosive bombs delivered by aircraft and it became the centerpiece of United States Air Force doctrine.

First built in 1935, the B-17 was one of the few advanced weapon designs that the U.S. produced prior to the war. The bomber's greatest asset was its capability to fly long distances — nearly 2,000 miles. The B-17 was heavily modified in the first years of the war with additional machine gun mounts and became known as the *Flying Fortress*.

The Americans put the B-17 to use in the daylight raids against Germany, relying on the B-17's armament and toughness to overcome *Luftwaffe* (see Chapter 2) air attack and antiaircraft fire from the ground. By 1944, the B-17 was the dominant bomber used in Europe, with as many as 1,000 planes at a time hitting targets. The B-17 proved its worth many times over in contributing to the defeat of Germany.

The 88 mm Gun



The most famous artillery piece of the war was the German 88 mm (millimeter) gun, known as the 88. Originally designed as an antiaircraft gun, the 88 was quite effective in that role. However, German General (later Field Marshal) Irwin Rommel, a bright student of war, pointed it at a tank rather than an airplane. The results were extraordinary! In 1941, the British lost more than 40 tanks to Rommel's 88s used as anti-tank guns.



The 88 forced the Allies to change their tank designs after 1941. The American Sherman tank was designed with the capabilities of the 88 in mind. The Germans incorporated the 88 into the main armament of its Tiger Tanks, and the 88 was mounted on tank destroyers as well. Although British, Soviet, and American weapon designs tried to match the capabilities of the 88, they never could. The German 88, as a separate anti-tank gun or incorporated into a tank or tank destroyer, ruled the armored battlefield of World War II.

The Yorktown and Essex Class Carriers



The future of America in 1941 and 1942 rested on the flat tops of six aircraft carriers in the Pacific (*Wasp*, *Hornet*, *Yorktown*, *Enterprise*, *Saratoga*, and *Lexington*). By 1942, only the *Enterprise* and *Saratoga* hadn't been sunk in combat with the Imperial Japanese Navy. Without its carriers, the United States was powerless. As these original carriers succumbed to the Japanese fleet, America's industrial might produced replacements, called the *Essex* class aircraft carriers. Larger and faster than the carriers they replaced, this class of carrier could carry more aircraft. Altogether, the U.S. produced 11 of these carriers, some of which took the names of the original six aircraft carriers.

By 1943, the *Essex* class carriers turned the tide of battle, controlling the air and sea in the Pacific, isolating Japanese defenders, and allowing American ground forces to engage and destroy the enemy. If naval power won victory in the Pacific, the *Yorktown* and *Essex* class carriers were the source of that power. The Japanese couldn't match these carriers in quality or quantity, which guaranteed Japan's military defeat.

The Atomic Bomb



A weapon of enormous power, the atomic bomb ended World War II in a way that no other weapon could have. The destructive power of the two bombs that blasted Hiroshima and Nagasaki convinced the Emperor and the leadership in Japan to accept Allied conditions for surrender. As such, the bombs may have saved hundreds of thousands of American lives, and they may have spared the Japanese people the larger agony of a war of annihilation. No one will ever know for sure. What is known is that the atomic bomb ushered in a new age, one with the frightening potential of seeing a general war fought with atomic weapons. And it became the main weapon in the U.S. and Soviet arsenals of the Cold War, reminding each country of the other's ability to destroy it (see Chapter 22).

The United States developed the atomic bomb technology first. Who knows what would have happened if Stalin or Hitler had developed the bomb first? One thing is certain, the atomic bomb used in World War II ushered in the atomic age, and the world has not been the same since.