



## American and German Machine Guns Used in WWI

The machine gun changed the face of warfare in WWI. The devastating effects of well-emplaced machine guns against infantry and cavalry became brutally evident in the 1st World War. It changed infantry tactics forever.

The US Marines and Army had several machine guns available during the war. This brief will discuss crew-served machine guns only. Man-portable automatic rifles are discussed in another article.

The Lewis gun is mentioned here for completeness. The Marine 1st Machine Gun Battalion, commanded by Maj. Edward Cole trained with the Lewis gun before shipping overseas. The gun had been used by the British with good effect. Cole's men trained with at the Lewis facility in New York. At that point, the plan was for each company to have an eight-gun machine gun platoon. A critical shortage in the aviation community stripped the Marines of their Lewis guns before they shipped to France.

The Lewis Gun weighed 28 pounds and was chambered in the .303 British, .30.06 Springfield, and 7.92x57 mm Mauser. They were fed by a top-mounted magazine that could hold 47 or 96 rounds. Rate of fire was 500-600 rounds per minute with a muzzle velocity of 2,440 feet per second and an effective range of 880 yards and a maximum of 3,500 yards. The infantry model is shown below.

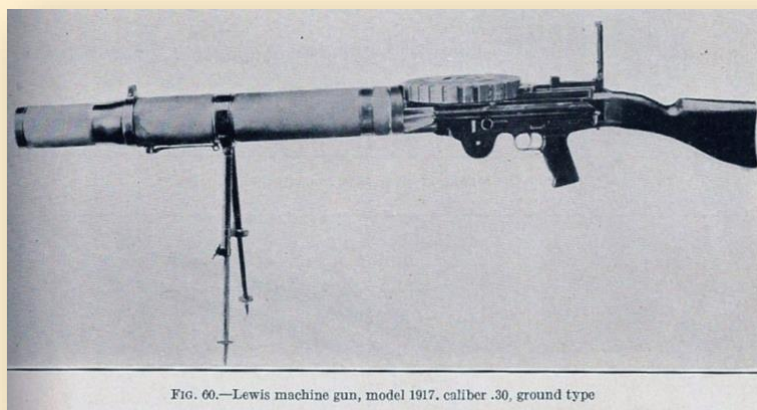


FIG. 60.—Lewis machine gun, model 1917, caliber .30, ground type

When the Lewis guns were taken away, the Hotchkiss Model 1914 was issued in its place. Attempts to make the Hotchkiss man-portable failed, but the gun was used both for anti-aircraft and battlefield purposes. This air-cooled piston-driven machine gun weighed 54 pounds. The gun with tripod weighed 110 lbs. It delivered 450-500 rounds per minute of French 8x50 mm Lebel ammunition with a muzzle velocity of about 2,375 ft/s (724 m/s) from either 30-round strips or metal belts. It was served by a three-man crew. The initial feed mechanism was to use 24-round strips, but later a 250-round articulated metal belt was used. Its maximum effective range was 4,150 yards (3,800 meters). The barrel had to be changed about every 1000 rounds with continuous fire. The US purchased about 7,000 Hotchkiss guns from France during the war.

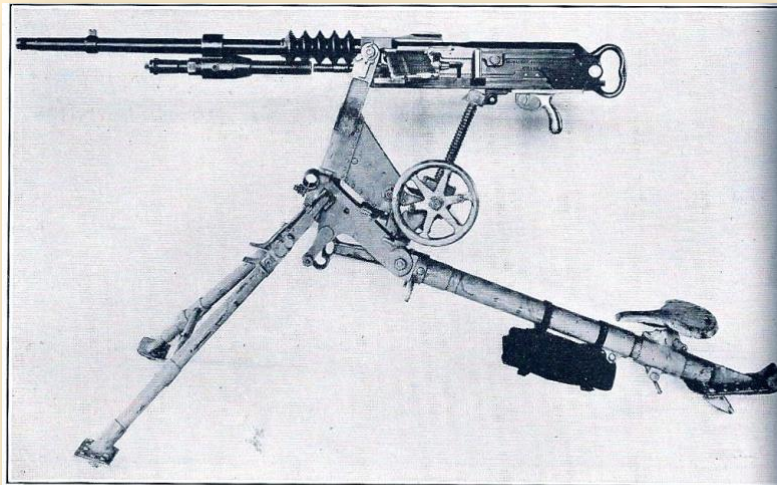


FIG. 57.—Hotchkiss machine gun, model 1914, 8-mm. This is the machine gun adopted by the French Army. It is of heavy type, air cooled, and gas operated. Its rate of fire is about 500 rounds per minute

The Browning M1917 machine gun is listed here only for completeness. It was not available to the US Marines during WWI. It was issued to the last-arriving troops only. It was recoil-operated and air cooled, firing 400-rounds per minute in its first version, using M1906 (Springfield) .30-06 ammunition, fed from a fabric 250-round belt contained in an ammunition box with a muzzle velocity of 2,800 ft/s. The gun weighed 32 pounds, but the full system with tripod and water canister weighed 103 pounds. It had a maximum range of 5,500 yards.



FIG. 56.—Browning heavy machine gun, model 1917

The Germans used two types of light machine guns. The Bergmann weighed 30 lbs with a bipod mount; its use was discontinued toward the end of the war. The main light machine gun toward the end of the war, and the one most likely facing the Americans was the MG 08-15 which was manned by a four-man crew. It weighed 39 lb. and was less bulky than the larger MG 08, but was cumbersome due to its water cooling system. It had a stock and a pistol grip. Each regiment had 72 of these in 1918. Its performance was similar to the MG 08.

The German Maschinengewehr 08 (MG 08) was based on the Maxim machine gun, and was typically referred to as a Maxim by Americans. Hiram Maxim was born in Maine but spent his career in Britain. He invented the Maxim gun in 1884. This was the first true machine gun. The British used it extensively. Vickers made modifications in the design and the British Expeditionary Force fielded the Vickers gun in WWI. The Germans made their own modifications. The MG 08 was Germany's heavy machine gun through the war. It weighed 69 kg (152 lbs) with water, 143 lbs dry. The gun body was 58 lbs, with 8.8 lb water and an 85 lb tripod. It shot the German 7.92x57 Mauser cartridge at a rate of 400-600 rounds per minute with a muzzle velocity of 900 m/s (2,953 ft/s) with an effective range of 2,000 m (2,187 yd.) and a maximum range of 3,500 m (3,828 yd.). The ammunition was fed by 250-round fabric belts. A crew of 4 manned it.

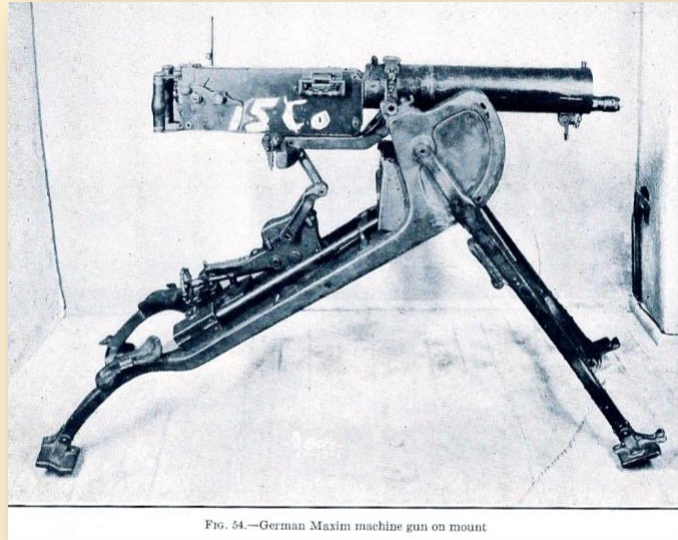


FIG. 54.—German Maxim machine gun on mount

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John Frederick Andrews  
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The following websites have extensive information about the arms and other systems used in World War I. The machine gun section is: <http://www.militaryfactory.com>  
<http://world.guns.ru/index-e.html>