

New Weapons, WWI:

Key words: Tanks, Zeppelins, Submarines, Poison gas, other equipment

Tanks¹: The development of **tanks in World War I** began as a solution to the stalemate which trench warfare had brought to the western front. The first prototype of the **Mark I tank** was tested for the **British Army in September 1915**.

The British Mark I was a tracked vehicle developed by the British Army during World War I and the world's first combat tank. **A first offensive** using 31 Mark I tanks took place in September 1916, during the **Battle of the Somme**. Not until November **1917, at Cambrai**, did the British Tank Corps get the conditions it needed for success. Around 400 tanks penetrated almost six miles on a 7-mile front. This was their **first large-scale deployment in combat**.

Tank was developed to be able to cross trenches, resist small-arms fire, travel over difficult terrain, carry supplies, and be able to capture fortified enemy positions. It is regarded as successful in many respects, but suffered from many problems due to its primitive nature. The early tanks, like the **British Mark I of 1916**, moved at about 6 kilometres per hour. They carried a crew of 8 to work the machinery and the guns.

While the British took the lead in tank development, the **French** were not far behind and fielded their first tanks in 1917. The **Germans**, on the other hand, were slower to develop tanks, concentrating on anti-tank weapons.

Working and fighting inside one of the early tanks was a pretty nerve-wracking experience. They clattered along on un-sprung tracks and the noise of the machinery inside was deafening. They were also full of engine fumes as well as fumes from the guns and 3 hours was as long as a man could spend inside. Any longer and he was liable to have a heart attack.

British Mark I:



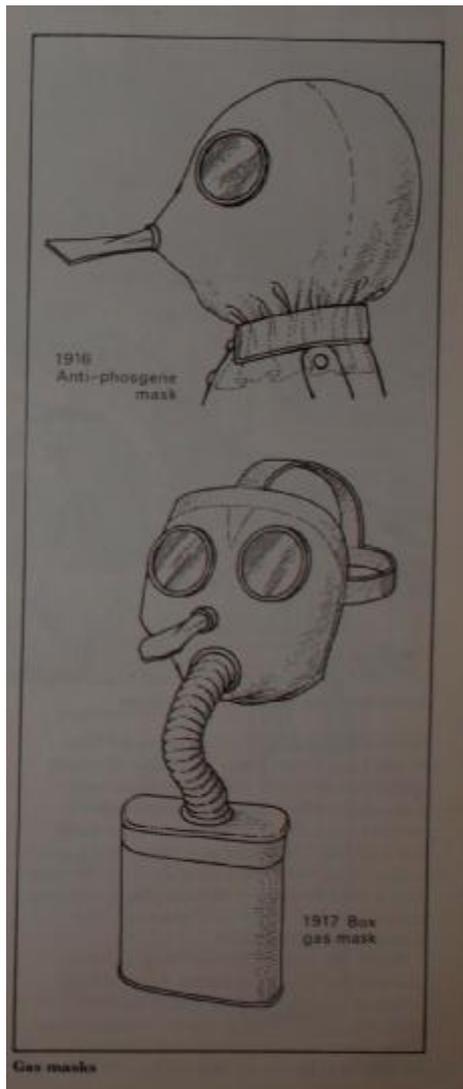
¹ Term „tank“: Mark I was a vehicle named "tank", as an expedient to **maintain secrecy and to disguise its true purpose**. The “tank” was initially termed "land ships" by the British Army, initial vehicles were referred to as "water-carriers" (then shortened to "tanks") to preserve secrecy.

Aircrafts: As the stalemate developed on the ground, with both sides unable to advance even a few miles without a major battle and thousands of casualties, planes became greatly valued for their role **gathering intelligence on enemy positions** and **bombing the enemy's supplies behind the trench lines**. **Large planes with a pilot and an observer** were used to **survey enemy positions and bomb their supply bases**. Because they were large and slow, these planes made easy targets for enemy fighter planes. As a result, both sides used fighter aircraft to both attack the enemy's observer planes and protect their own.

Zeppelins: See the worksheet “War in the Air”

Submarines: See the worksheet “War at Sea”

Poison Gas:



Poison gases in World War I ranged from disabling chemicals, such as *tear gas* (slzotvorný plyn) and the severe *mustard gas* (yperit), to lethal agents like phosgene and chlorine.

The first ever gas attack on the **Western Front** was mounted by the Germans in April **1915 (Ypres, The Second Battle of Ypres)** and it caused absolute panic among the French troops who were the first to feel its painful, choking effects.

The killing capacity of gas, however, was limited – only four percent of combat deaths were due to gas. Because it was possible to develop effective countermeasures against attacks, gas was unlike most other weapons of the period. **In the later stages of the war, as the use of gas increased, its overall effectiveness diminished.**

Later the gas was largely ineffective because it was an easy weapon to counter. The **anti-phosgene masks** of 1916 looked like the ones in the photo of the machine gunners below. These were replaced in 1917 by box gas masks like the one in the drawing (see left). In the box mask the troops breathed through chemical filters in a box attached to the respirator by a flexible tube.

Later, relatively effective gas masks were developed, and these greatly reduced the effectiveness of gas as a weapon. Although it sometimes resulted in brief tactical advantages and probably caused over 1,000,000 casualties, gas seemed to have had no significant effect on the course of the war.

Mustard gas = Yperite: The name Yperite comes from its usage by the German army near the city of Ypres. The Allies did not use the gas until November 1917 at Cambrai, after they captured a large stock of German mustard-filled shells. It took the British

over a year to develop their own mustard gas weapon, first using it in September 1918 during the breaking of the Hindenburg Line.

Other equipment: machine guns, hand grenade, bayonet, heavy artillery,

Machine guns:

The machine gun **ruled the battlefield in the First World War** and did more to stop the infantry breaking through the trench lines than any other weapon. The automatic gun was developed in the late 19th

century by American inventors Hiram Maxim and Benjamin Hotchkiss and in 1914 it was still a new and untried weapon.

Germans used machine guns in front of their forward trenches to cut down the attacking infantry with a hail of a deadly fire. Gradually the lesson were learned, and the **British forces** came to depend increasingly on the fire power of the three main types of machine gun issued to British troops during the war, the Lewis Gun, the Hotchkiss and the Vickers medium Machine Gun.



British Vickers machine gun in action near Ovillers during the Battle of the Somme in 1916

The **Vickers machine gun** or **Vickers gun** is a name primarily used to refer to the water-cooled 7,7 mm machine gun produced by Vickers Limited, originally for the British Army. The machine gun typically required a **six- to eight-man team to operate**: one to fire, one to feed the ammunition, and the rest

to help carry the weapon, its ammunition and spare parts. It served from before the First World War until after the end of the Second World War.

Flamethrower (plameňomet): is a mechanical device designed to project a long controllable stream of fire. Some flamethrowers project a stream of flammable liquid; some project a long gas flame.

Hand grenade: is an anti-personnel weapon that explodes a short time after release. “Hand grenades” were not the only attempt at projectile explosives, but a “Rifle grenade” was brought into the trenches in order to attack the enemy from a **greater distance**. The Rifle grenade was invented by an Englishman before the war began.



Bayonet: is a knife-, dagger-, sword-, or spike-shaped weapon designed to fit on, over or underneath the muzzle of a rifle barrel or similar weapon, effectively turning the gun into a spear. It is a close quarter battle combat or last-resort weapon.

Heavy Artillery:

Heavy artillery played a big part in the WWI. In the static conditions of trench warfare it was easy to turn the guns on fixed positions, and both sides shelled each other’s trenches regularly, even when no major battle was going on.



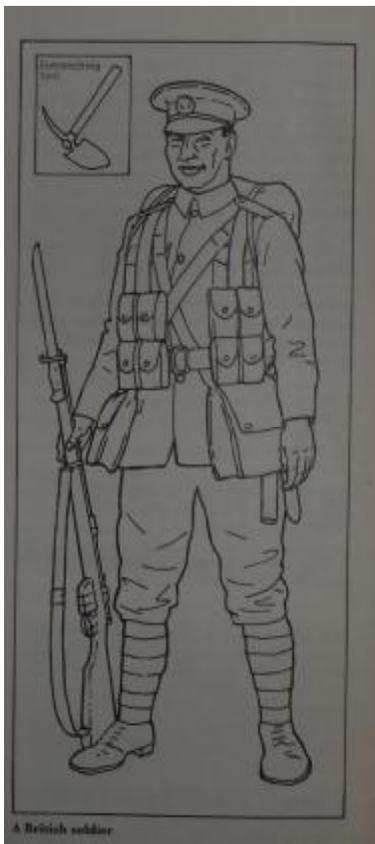
Before the major offensives huge artillery bombardments were mounted. British General Haig collected 1300 heavy guns and more than 2 millions shells for his 7-day bombardment of the German trenches before the Somme offensive was launched, and similar artillery gunfire took place at Verdun and later at Passchendaele. Surprisingly, all this shell-fire often achieved very little. It did not always cut the enemy barbed wire, and the Germans became expert at pulling their front line troops back when a bombardment began, and then sending them forward again as soon as the shell-fire lifted and the Allied infantry began to advance. Indeed, all

too often the only result of shelling on such a massive scale was the churning up (rozbrázdit') of ground, which made things more difficult for the attackers.

Curiosity → **Communication problems:** In the early days of the war, generals tried to direct tactics from headquarters many miles from the front, with messages being carried back and forth by couriers on motorcycles. It was soon realized that more immediate methods of communication were needed.

Radio sets of the period were too heavy to carry into battle, and phone lines laid were quickly broken. Runners, flashing lights, and mirrors were often used instead; dogs were also used, though they were only used occasionally as troops tended to adopt them as pets and men would volunteer to go as runners in the dog's place.

There were also aircraft (called "contact patrols") that could carry messages between headquarters and forward positions, sometimes dropping their messages without landing.



British soldier: is wearing a regulation brass-buttoned khaki jacket, khaki trousers below the knee and bound with puttees, and a peaked cap. His webbing equipment consists of a belt, braces, cartridge pouches, a haversack and large pack.

The large pack contained his greatcoat, mess-tin, towel and a woolen cap and muffler, as well as a spare pair of socks.

The soldier had a rifle and steel bayonet. He also carries spare ammunition in his pouches and 2 hand grenades and he had to carry a small spade or entrenching tool to dig in.

