

Development of tanks from ww1 to ww2 essay sample

War



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WW1 - World War I

Prior to World War I, power-driven vehicles were still fairly unusual, and their exploit on the combat zone was limited, particularly the heavier motor vehicle. The first mechanical AFVs (Armored Fighting Vehicles) were tractors with basic metal plates secured on, to give some shield to the driver and travelers. Lighter shatterproof cars soon became popular with all the combatants.

The British was the leader in the innovation of the tank, even though the name " tank" was not coined as yet. In February 1915 the Land ship commission was set up, the reason behind forming the committee was that in early 1915, the combating on the Western Front had stalemated into stagnant trench combat. The number of deaths were rising in such big proportions that neither Germans, French or the British could go with the tactic to send their troops in no mans land only to be killed in a huge number by the machine gun fire, bombs or die in tangling into barb wires or even drowning in mud. A war with no fighting was not the generals wanted, so in the Allied Headquarters in France, a solution for this was being thought of. (Battlefield debut of the tanks, 2007)

A talented writer for the British Army, Lieutenant Colonel Ernest Swinton, saw first hand the initial battles and told the generals his opinion which was a Petrol tractor on a Caterpillar principal with hard steel plates be made with machine guns on top. The British army rejected his opinion of such a vehicle to be made. Luckily Winston Churchill, the First Sea Lord who had a little more imagination than his colleagues, had read Swinton's report. He loved what Swinton had come up with and in February 1915; a committee was set <https://assignbuster.com/development-of-tanks-from-ww1-to-ww2-essay-sample/>

up known as the Land ship committee to look into the idea which Swinton had come up with. The committee put in charge Lieutenant W. E. Wilson of the Naval Air Service and William Tritton of William Foster and Company of Lincoln to construct a little land ship. All the work was done secretly and the new battle automobile was name Water tank based on the size and shape of fresh water tanks on the battlefield but than was shortened by the troops on the battlement to Tank. Jointly with the big development Committee (a committee which was given the task of Developing a committee) a condition was created for an armored automobile capable of maneuvering at 4 mph, climbing a five feet high stockade, cross an eight feet wide gap, and equipped with machine guns and light cannon. A comparable plan was being pondered on by the Army General Head Quarters in France and in June the Land ship commission made a combined check project between the War Office and the Joint forces and the plan commenced.

The premature work on shielding gun tractors showed promise. Earlier on 'big wheel' plan seemed to be easy but putting the caterpillar plan into a combating machine was complicated. While armor and weapon systems were simple to obtain, existing caterpillar and suspension units were too fragile and accessible engines were particularly underpowered for the armored monster in the maker's opinion. In spite of these troubles an agreement was positioned with Foster (Tank Building company) in July to create a proof-of-concept automobile and manufacturing work commenced three weeks later. (Tank history, 2007)

Foster builds the 14-ton "Little Willie" which was the first tank ever to be made. Motorized by a 105-horse power Daimler engine, the ten-foot high armored box was fixed with a short Bullock caterpillar. A revolving top battlement was designed with a 57 mm gun but abandoned due to load problems, making the last vehicle unprotected and little more than a test-vehicle. The subsequent plan collectively had few common features with "Little Willie", to achieve the required gap a rhomboidal figure was chosen to widen the shape and retain a low center of gravity; the turning steeple design was dismissed in favor of the hull sides being fixed with Naval 57 mm guns. A concluding requirement was settled in late September for test in early 1916, during manufacturing the automobile was named "tank", a name that seems to have stuck. (Wikipedia, 2007)

The first use of tanks on the battleground was the utilization of 49 British Mk. I tanks at the Battle of the Somme on September 15, 1916, but most of the tanks engines broke down and the efforts proved null. A total number of forty-nine tanks were shipped to Somme but out of those only thirty-two were able to function properly.

Engine power was the main constraint; at most the one hundred horsepower gave a power-to-weight ratio of 3.3 hp/ton. Roaming at walking pace and fixed with only 10 mm of low eminence steel armor they were tremendously susceptible to weaponry fire.

The French used tanks for the first time on 16 April 1917, throughout the battle of Nivelle (Battleground). It was foremost a letdown; the St. Chamond

tanks, did not have the capability to cross ditches as the British tanks could, and were propelled to the adversary's front lines without infantry support.

The Tanks became more capable as improvements were made based on lessons learned from the successes and failures of the earlier models. In 1917 the British created the Mark IV tank. It was manufactured structurally to be more of a dependable machine. It was outfitted with long-barreled Naval guns and armor which was amplified just enough to withstand the German armor piercing bullet. The need for a four man operational team was one of the downfalls of this tank. This was resolved by the production of the Mark V in 1918. This tank needed four men to operate it.

Also in 1918, the French created the Renault FT-17. At just 14 tons, it was undersized and light compared to its predecessors, operated by two men only, and equipped with a rotating turret with only a solitary heavy machine gun. Envisioned for mass production, it was easy and inexpensive. At this point in time all the warring countries used the FT-17.

The very first tank battle took place on April 24th, 1918 between the German's A7V and the British Mk 1V.

Between the Wars

The last tank plan of 1918 demonstrated a quantity of trends. The British created the Mark VIII with the help of the Americans. This tank was the apex of the rhomboidal designs. It was 34 ft long, weighed 37-tons, motorized by a 300 hp V-12 engine, and was capable of 7 mph cross-country. It was obvious however by the plans of the other nations that the rhomboidal design was

not going to rule the battlefield. The French, Italian and the Germans formed tanks with more solid hulls and battlement. In the U. S., J. Walter Christie created a series of fast tanks, based on his innovative Christie suspension chassis. His prototypes were capable of high speeds, and in some cases intended to be transportable, disagreement with the higher Authorities and a high price intended they were never created. Later his prototypes were obtained by the Soviet Union, and were to be created into the splendid T-34. (History of the Tank, 2007)

World War II

The tanks in WW2 reached new pinnacle of potential and complexity. The early German tanks were technically substandard in armor and weaponry when compared to their adversary's. However, the Germans were able to utilize their tanks most expertly to attain astonishing tactical victories early in the war. They were astute enough to provide their tanks with radios, which presented supreme command control on the battleground. In 1942 under direct order from Adolph Hitler, Ferdinand Porsche created the Maus, the world largest tank ever built. The Maus was equipped with a 128mm cannon and a coaxial 75mm gun, and covered with 180-240mm of armor. Only two models were constructed, and both were lost while still enduring testing.

The German Army at the start of the war in 1939 was not particularly remarkable. Guderian (Army General) had intended for two main tanks, the PzKpfw III, which was in manufacturing but the second support tank the PzKpfw IV, with a 75 mm gun was not. In 1935 the PzKpfw IV plan had begun and testing was undertaken in 1937, however, only a few "troop models"

were available at the time of the assault on Poland in 1939. The PzKpfw III was recognized during its development as being under-gunned and as a result, its design incorporated a large tower ring capable of fitting a 2250 fps 50 mm KwK L42 gun on for future upgrades. In June 1940 the first of these improvements were being made, and these upgraded tanks saw action in the final weeks of the Battle of France.

The Afrika Korps (A German army unit under the leadership of General Erwin Rommel) in 1940-41 replaced the Ausf F as their chief tank with the Ausf G, which was employed during battles in Yugoslavia and Greece. These tanks were still under-gunned, badly armored and overly complex in contrast to the all of the British Tanks. The Ausf H was put into manufacture with simpler mechanics, wider tracks and enhanced armor. In April 1941 there was a universal recall of the PzKpfw III to improve the main gun to the new 50 mm L60, with the new Panzergranate 40 shell, suppress velocity was pressed to 3875 fps. New tanks stocked with this gun were elected Ausf J. In November 1941 these tanks first stumble upon the Russian T-34 and they were completely surpassed in every feature. The Americans built M3 (Production started in 1941 and ended to 1943) and then the M4 tanks (production started in 1944 and ended in 1945), which were being used in the Western Desert (Middle East battle), surpass German Armour in that theatre too. These tanks were made by the Americans to go into the European forces, the Americans made these tanks as their older tanks were becoming of no use and they wanted to help the British to win the War.

After serious assessment of the PzKpfw III's armor, it was improved to 70 mm by adding extra plates and to defend against numerous attacks spaced Armour was established. But the PzKpfw III was evidently outshined and manufacturing finished in August 1943. The PzKpfw III chassis did persist to be made until the end of the war as the base of a variety of particular purpose vehicles. The PzKpfw IV had as its main benefit its short 75 mm gun. Buy its load and armor was close to that of the PzKpfw III. The PzKpfw IV became the most frequently utilized tank of the Panzer divisions, it was easy to maintain and simpler to produce than other German tanks. Many other variations of German tanks were on the market examples include the Ausf E with a long high velocity gun was the most imposing player. First introduced in 1940 the 22-ton machine was enhanced, with the L43 gun the most important change that could penetrate 80 mm of armor at 1800m, the PzKpfw V also known as the Panther, introduced in 1937 and had experimental samples available in 1941.

Its interior was fitted for a crew of five, weighed 43 tons, motorized by a 700 hp 12-liter Maybach petrol engine driving eight double-leaved bogie wheels on each side, and homogenous steel plates as armor that were later augmented to 120mm thick. Later variants further enhanced the gun but were mainly differentiate by raising the main armor to protect against anti-tank weapons. The appearance of the Soviet T-34 lead to the Panthers hurried production. At the persistence of Guderian a team was sent to Russia in November 1941 to evaluate the T-34 and report back. Three features of the Russian tank were considerably enhanced. First there was increased armor all around the vehicle which gave enhanced shot deflection,

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augmentation of the armor thickness giving rise to protection against infiltration; secondly, the implementation of broader tracks and large based wheels which enhanced stability; and third, there was the long over-hanging gun, a feature German's had avoided up to then.

Germany immediately tasked Daimler-Benz and with the construction of a new 30-35 ton tank by the following spring. At the same time the obtainable prototype tanks were up-gunned to 88mm and were into production as the PzKpfw VI, the Tiger. The design was formally accepted in September 1942, and was placed into construction with top precedence of a manufacturing target goal of 600 vehicles per month. Numerous tanks were being produced just two months later and they experienced significant reliability problems as a result of hasty manufacturing. The work had to be prolonged to comprise Daimler-Benz and in 1943 the firms of Maschinenfabrik Niedersachsen and Henschel. Due to poor performance and reviews the target goal was never accomplished and in 1944 production was at 330 per month, by the end February 1945, 4814 tanks were built. The Tiger first saw action around Kursk (soviets ground where they had placed mine fields, disguise large forces) on July 5, 1943. (History of the Tank, 2007)

Post-WWII

Since WWII most of the modifications in tank design have been altered to meet the objectives of the battlefield. Armor has developed to keep pace with the development in artillery, and guns have gotten bigger, but in most cases have not basically changed. The range and the velocity of the guns have increased a lot. The budgeting and finances of tanks has known severe

ups and downs since the end of World War II. Soon after the tank budgets were cut and manufacturing staff often scattered. Many war planners proposed that the tank era was outdated, now that nuclear weapons were on the horizon. It was felt that a nuclear weapon would obliterate a regimental group, whether it was armored or not (History of the Tank, 2007). Today tanks are employed on the battlegrounds of Afghanistan and Iraq and play a major role in combat power. In some parts of Afghanistan, tanks cannot be deployed, as there are mountainous regions but both places being a place where guerilla fighting is major combat technique, Tanks play an important role as they provide a little shelter for the troops and also they do more damage than troops fighting on foot. They also help the ground troops and damage most of the buildings where militants are hiding.

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