

Chapter 1 : World War 1 Aircraft ()

Page 1 of 1 Start over Page 1 of 1 This shopping feature will continue to load items. In order to navigate out of this carousel please use your heading shortcut key to navigate to the next or previous heading.

Great advances have been made in the technology of all three of the main elements of the defence system: This book gives an abbreviated history of the development of UK Air Defence and will summarise pictorially the various threats and defence systems of the past nine decades. The seaplane was a Friedrichshafen FF29 with a speed of 50 knots. Its primary purpose was reconnaissance and it was observing the Naval dockyard and the Castle. The pilot saw an opportunity to attack and he dropped a 22lb bomb over the side of the plane from 5,ft aiming at Dover Castle. It missed and landed in the vicarage garden where it blew a large hole in the lawn. A seaplane returned four days later to drop two bombs near Cliffe railway station, Kent. There were no fatalities and the plane was chased away by defending aircraft. This first bomb served notice on England that the war, hitherto fought in France, could be brought to the homeland. The first raid was by Zeppelins on Yarmouth and Kings Lynn. These raids killed four people. By May the Airships were attacking London. Nine British fighters attempted to attack the Zeppelin but it was too high. Great damage was caused by a Zeppelin raid on London on the 8th of September, almost all of it from the one Zeppelin, the L13, which managed to bomb central London. During the war raids continued at the rate of about 20 each year causing many deaths and injuries and having a severe effect on civilian morale. The airships would attack at dusk and night time when they were less visible to defences and they could use factory and street lighting, before blackout was enforced, to decide the target. The defending aircraft initially found them difficult to attack even when alerted to an attack because they flew high. The Zeppelin was also heavily defended with five machine guns so it was dangerous to be too near. Raids continued until by which time this threat was largely defeated due to heavy losses of airships caused by improved defence planning and tactics by gunnery and by our defending aircraft. The final raid of the campaign was on 19 Oct when 11 Zeppelins carried out the last airship raid on Britain. During the course of the war airships made 51 raids resulting in deaths and 1, injured. Twenty nine airships were destroyed on the ground or in the air. The main military benefit of the raids to the Germans was the fact that the raids caused several squadrons of aircraft and other forces to be retained in Britain rather than being sent to the front. Some 17, men were involved with the air defence of Britain in Count Von Zeppelin invented the Zeppelin airship. He flew his first machine on 2 July It was novel in two important respects. Firstly an internal combustion engine powered it. These had only been invented four years earlier in Secondly it had a strong internal metallic framework inside which there were the hydrogen gas bags. This framework enables it to travel at speed without distorting as had previous air balloons. The Zeppelin was a huge aircraft. The gasbag could hold 12, cubic meters of Hydrogen. It was powered by two Later military models had over 30, cu meters of hydrogen, travelled at speed of up to 80mph and could operate at over 14, ft. The airships could carry 2,Kg of bombs and defended themselves with machine guns operated from the two Gondolas. Later models could operate at heights of up to 20, ft to escape attack but this caused great difficulties for the crew due to cold and oxygen deprivation. This was the first heavier than air bomber to be used for strategic bombing. It carried a maximum bomb load of 1,lbs, two machine guns and a crew of three. The first Gotha raid against England was in May when a raid of 22 planes bombed Folkstone causing 95 deaths. On 13 June fourteen Gothas carried out the first daylight raid on London killing people, including 16 children in their classroom, and injuring over Although over home defence aircraft responded to the attack the Gothas returned home relatively unscathed. The Gothas, which attacked at between 10, and 16,ft and with a speed of 85mph, were initially relatively invulnerable because they were too high to enable the defences, using aircraft that climbed slowly, to intercept them as they flew up the Thames estuary towards London. As defences against daylight attacks improved night raids began in August using both Gothas and Giants. Raids continued until May, with increasing success by the defenders as a result of improvements firstly in early warning from sound sensors, secondly in gunnery success arising from better deployment and thirdly in improved tactics by the Royal Flying Club RFC and the deployment of the Sopwith Camel aircraft with a much better rate of climb

than the earlier B. Fortunately after this date the Germans were retreating and their forces were withdrawn from attacks on Britain to fight elsewhere. It was powered by two Benz engines of hp, had a top speed of 90 mph and could fly at 10,000 ft. It carried a crew of three; a pilot, a rear gunner and a forward gunner. It also could carry 20 bombs of 50 lbs each. By the end of the war it had undertaken 63 raids resulting in deaths and approximately 20 injuries. Sixty two had been shot down, lost in crashes or had gone missing. Count Von Zeppelin did not confine himself to airships. Although only 30 of these were made they took part in night raids on London from September onwards. It could carry 4,000 lbs of bombs and defended itself with seven machine guns. None were shot down during their attacks on London. The Royal Flying Corps had been established in but it was very weak militarily. A few anti-aircraft guns and searchlights were available to defend London. However by gun defences had been considerably strengthened and a number of Home Defence Squadrons had been formed. He saw the aircraft lit up by searchlights and attacked by firing his machine gun into the underside of the airship until it caught fire. Be2c 5 Despite carrying an inflammable gas, hydrogen, Zeppelins had proved hard to shoot down because, even if the bullets penetrated the gas balloon, there was no oxygen to support combustion. This was seldom the case because the airships flew high. The development of a gun using incendiary bullets by mid played a part in improving the effectiveness of aircraft defences. Green of the Royal Aircraft Factory. It had a 70hp Renault engine giving it a speed of 70 mph and a peak altitude of 10,000 ft. In total some 3,000 aircraft of this type were built. This began on May and they saw first action in July. However it was the highest scoring fighter in the first world war shooting down more German aircraft 1, than any other Allied plane. It was the first British fighter to have two propeller synchronised machine guns mounted side by side in front of the cockpit. It had a far better performance than the B. In anti-aircraft gunnery was in its infancy and most of the deployed guns were field guns configured to fire upwards. It was a very limited force with only four batteries each of which was armed with four Vickers naval guns each mounted on an armoured vehicle. The Vickers gun could only fire four rounds a minute. In the first design it had a limited range of 3,000 yards but improvements in ammunition progressively improved the distance the shells could travel. Three gun Batteries were used to defend central London. However, in a response to air attacks on London and elsewhere, the gunnery capability was greatly expanded and by June Britain had anti-aircraft guns, and searchlights in position to defend targets against possible German attack. Initially gunnery was so inaccurate that Londoners did not have much confidence in it. It was estimated that it took 15,000 shots to down an aircraft at the start of the war but, despite the lack of kills, the gunfire forced the enemy to fly higher and, eventually, as gunnery and aircraft defences improved, to fly at night. This was an optical coincident range finder 2 metres long on a tripod. It measured the distance to the target and the elevation angle, which together gave height. This greatly improved gunnery effectiveness. It was clear that a purpose built anti-aircraft gun was urgently needed. After trying a modification to a 3. It was the first equipment designed specifically for the anti-aircraft AA role. This 3 inch gun mounted on a 20cwt vehicle was introduced in March It was a very effective gun and continued in service until the s. At 45 degrees it had a range of almost 11,000 yds with a rate of fire of 25 per minute and an effective AA ceiling of 23,000 ft. This was sufficient to attack the Gothas that operated up to 16,000 ft. Early designers of AA equipments mounted their guns on lorries that were easily available but because they were difficult to stabilise they were soon replaced by towed platforms. This had the effect of causing the Gotha to change tactics and concentrate on night time attacks. The Gotha and Giant night raids continued throughout , almost unscathed, until December when the defences began to have success with guns and the RFC, now equipped with the Camel, were increasingly successful in intercepting the Gothas at night. They were deployed during and and they became an important element in the air defence system by constraining the freedom of attackers to use all the airspace. Each Apron consisted of three balloons yards apart joined together by a heavy steel cable. Furthermore the Gothas were forced into flying high thus reducing the accuracy of their bombing. This led to a reduction in the frequency of raids. The London Metropolitan Observation Service was established with about outposts. The service was staffed by policemen who used instruments to measure the bearing of the approaching aircraft and the angle of its course and report them to the Observation Service HQ at Horseguards, London. This enabled the defences to be prepared. Guns could be ready and aircraft could be directed to intercept enemy aircraft. Of course, at night, it was difficult to see the aircraft and direct gunfire to

them.

Air War over Great Britain, (Vintage Warbirds No. 7) by Raymond L. Rimell () Paperback - Be the first to review this item See all 2 formats and editions Hide other formats and editions.

Visit Website London home damaged by World War I German zeppelin raids Germany hoped that the bombing of Britain would spark such fear that it would force the country out of the war. A quarter-million cows were needed to build one zeppelin. After the initial strike on London in May , zeppelins continued to hit the city with impunity, timing raids to coincide with good weather and moonless nights. On September 8, , the shadow of a sleek cigar-shaped zeppelin passed over the dome of St. The attack caused massive damage and killed 22 civilians, including six children. The zeppelin raid would be the worst of the war on London. Anti-aircraft defenses were diverted from the front lines in France and positioned around the capital. Authorities drained the lake in St. Zeppelin shot down near Colchester, England in The new defenses were in place on September 2, , when the Germans launched their largest raid of the war with a fleet of 16 airships heading to London. The searchlights scouring the skies caught one of the silver zeppelins sparkling in their beams, and Royal Flying Corps pilot William Leefe Robinson soared over 11, feet and closed in upon his prey. He raked the zeppelin with bullets that punctured the leviathan like harpoons. Suddenly, the mighty airship ignited like a torch, and the fireball fell from the sky like a shooting star that could be seen for miles around. Londoners cheered and sang patriotic tunes as the incinerated zeppelin plummeted to earth. The tide had been turned. Other British pilots achieved similar successes in shooting down airships. Strasser ordered his fleet to fly at higher altitudes, but crews began to suffer from the frigid temperatures and became incapacitated from oxygen deprivation. The zeppelin raids on London continued, but far less frequently, and by Germany began to deploy heavy biplane bombers in their stead. Over the course of the war, German zeppelins staged more than 50 attacks on Britain, but at a heavy price with 77 of their craft either shot down or disabled. The German zeppelin raids on London killed nearly and seriously injured almost 2,, but the casualties did not include the ultimate German aim of breaking British morale. The waging of total war against civilian populations, however, did not fade with the zeppelin era.

Chapter 3 : Aviation in World War I - Wikipedia

Air War Over Great Britain Vintage Warbirds No calendriredelascience.com Sopwith 1½ Strutter - Wikipedia Thu, 25 Oct GMT The Sopwith 1 1 ½, 2 Strutter was a.

Haythornthwaite What a red rag is to a bull - the Red Cross is to the Hun. To the already long list of outrages by the Huns on the Red Cross both on land and sea, there was added on January the 4th this year, the sinking without warning in the Bristol Channel of the hospital ship "Rewa". Fortunately owing to the splendid discipline and the unselfish heroic conduct of the officers, crew, and the medical staff, all the wounded of whom there were over on board were saved. But three poor Lascar fireman went down with the ship. Pure fabrication, but effective propaganda none the less. Anti-submarine Warfare Combating the menace of the U-boat was high priority for the island nation of Great Britain. The sea was her supply line and the ships that brought the supplies must be allowed safe passage if she were to stay in the war. The Q-ship was an early attempt to solve the problem of battling a hidden enemy. These ships were converted merchant vessels concealing large deck guns. The practice of allowing the crew to disembark before sinking would lure the U-boat to the surface at which point it would be sunk before it could retaliate against its target. While this may have been effective, it only worked when the U-boat was willing to play fair, that is to say before the Germans caught on. These decoy tactics are largely responsible for the German orders to sink without warning. The next advancement was the hydrophone. This device allowed destroyers to locate submerged U-boats by detecting the sound of its engines and propeller. While it worked to some degree, it did not work as well as hoped. There are many engines and many propellers in a convoy and it can be difficult to determine which is friendly and which is enemy. They were much more effective, sort of an underwater form of RADAR, but introduced too late to have much impact. Next came the depth-charge which was introduced in This is an industrial drum filled with explosives and fitted with a pressure sensitive fuse that causes the device to detonate at a predetermined depth. Its appearance gave it the nickname ashcan. This device also had pros and cons. A major con was that you had to have a fairly good idea of the depth at which your foe was hiding. A pro was that sometimes "close enough" counted. A nearby detonation would collapse the hull of the U-boat due to water pressure and thin hull. By the end of the war the depth-charge accounted for 29 kills - second only to the mine. The mine was a very effective weapon for use both by and against U-boats. U-boats, such as the UC 44 class pictured above, were capable of deploying up to 18 mines while out on patrol. Mines were employed against U-boats in confined areas such as the English Channel. They kept entire harbor areas off limits to U-boats - a very good preventative weapon. The final two tactics were effectively combined in the later years of the war - the convoy and air coverage. Allied shipping losses were cut by a fifth in mid when the convoy system was adopted by the British Navy at the urging of Prime Minister Lloyd George. Merchant ships would be massed together for the crossing and given a destroyer escort. While it did not eliminate losses, it certainly brought them down to a manageable and replaceable level. The entire American Expeditionary Force was delivered to Great Britain with the loss of 1 ship, troops - an amazing fact considering the distances and number of men involved. Only the stragglers became suceptable. Air coverage was added to the convoy system in and results were dramatic: The ship departed New York on 1-May at The warning from the German Embassy that appeared directly under the sailing notice. It reads as follows: Travellers intending to embark on the Atlantic voyage are reminded that a state of war exists between Germany and her allies and Great Britain and her allies; that the zone of war includes the waters adjacent to the British Isles; that, in accordance with formal notice given by the Imperial German Government, vessels flying the flag of Great Britain, or any of her allies, are liable to destruction in those waters and that travellers sailing in the war zone on ships of Great Britain or her allies do so at their own risk. Imperial German Embassy Washington, D. The story is an interesting one. The Lusitania was launched 7-Jun The luxurious liner was feet long with a beam of It had a cruising speed of One of its design innovations was to store 6, tons of coal required for a crossing, in longitudinal bulkheads between the inner and outer hulls. It was originally thought that this would provide protection should the ship ever come under attack, a concept that would later prove to be very wrong. In the

Lusitania was drydocked and outfitted with twelve 6-in guns. This was done as a precaution should there be a war with Germany. When it sailed in Sep it was registered as an auxiliary cruiser. In addition to this it also violated international law by carrying munitions on all but its first wartime crossing. When it embarked for England on 1-May its cargo included: It also picked up some tons of additional ammunition from the Queen Margaret who was undergoing mechanical difficulties. Despite a printed warning from the German Embassy, only one passenger changed his travel plans. The G-type torpedo hit just forward of the bridge on the starboard side. The initial explosion of the torpedo warhead was followed by a much larger one that shook the entire ship. Eighteen minutes later the giant liner was gone. The Germans justified this action by claiming that the Lusitania was far from an unarmed merchant ship, and while deploring the loss of life, claimed the U 20 was acting in self-defense. In an attempt to placate the United States government the Germans accepted liability for the incident in Feb and agreed to pay reparations. The sinking of the Lusitania was a propaganda bonanza for the allies. Posters such as the one at left , exploit the disaster to the fullest. This incident, coupled with the German atrocities in Belgium, would bring the United States in on the allied side in

Chapter 4 : British War Medal - Wikipedia

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German strategic bombing during World War I The first strategic bombing in history was also the first instance of bombs being dropped on a city from the air. Within the first month of the war, Germany had formed the "Ostend Carrier Pigeon Detachment", actually an airplane unit to be used for the bombing of English port cities. Before the stabilisation of the Western Front , the German aircraft dropped fifty bombs on Paris, slightly damaging Notre Dame Cathedral. These restrictions were lifted in May, after British attacks on German cities. The Imperial German Navy Kaiserliche Marine , whose airships were primarily used for reconnaissance over the North Sea, continued to bomb the United Kingdom until In all, fifty-one raids on Great Britain were carried out, the last by the Navy in May IV and later supplementing these with Riesenflugzeuge "giant aircraft" , mostly from the Zeppelin-Staaken firm. The targets of these raids were industrial and port facilities and government buildings, but few of the bombs hit military targets, most falling on private property and killing civilians. Although the German strategic bombing campaign against Britain was the most extensive of the war, it was largely ineffective, in terms of actual damage done. The airplanes carried twenty-pound bombs, and at least one airship was destroyed. When William Weir , the President of the Air Council in , told Hugh Trenchard that it was not necessary to worry about accuracy during strategic bombing raids, the general replied that "all the pilots drop their eggs into the centre of town generally. On 6 June the British formed the Independent Force under Major General Hugh Trenchard to engage in long-range bombing directed at industrial targets deep in German territory. Ultimately, retaliatory bombings on German cities provoked German retaliation against not British but French cities, which led to disagreement between British and French leadership concerning the strategy of such bombing and allocation of resources away from the Western Front. The French were reluctant to bomb targets on their own soil, even if occupied by the Germans, and were more wary of German retaliation than the British,[citation needed] because French cities were within range of German bombers. Nevertheless, GB1 raided far behind the front, concentrating on the German supply network and troop concentrations, a strategy designed to directly aid the French Army on the Western Front. The French favoured light bombers, often modifying reconnaissance craft for the purpose. The Breguet 14 of remained in production until During World War I Italy, like France, did not wish to bomb centres of civilian population, because many of the obvious targets had a high number of Italian residents or were in territories Italy had plans to annexe after the war. Like Russia, Italy possessed heavy bombers before its entry into the war, Giovanni Caproni having built the multi-engine Caproni Ca. In Octoberâ€”November , the Ca. In August the Russians grouped their four Sikorskys in a unit dedicated to strategic bombing and based them near Warsaw in December. Cities were not the main targets on the Eastern Front: Austriaâ€”Hungary[edit] Strategic bombing by Austriaâ€”Hungary was limited, mostly confined to Italian targets on the Adriatic. Nonetheless, Austro-Hungarian pilots based at Pula flew forty-two bombing missions over Venice after the Italian Front had advanced to within a few miles of the city. A particularly severe raid was carried out on 27 February , hitting central Venice and sending many Venetians to take refuge in Giudecca and the Lido. The mosquitos from Pula come buzzing over nearly every fine night, and drop bombs for half an hour or so. Venice is like a lovely prima donna in deep mourning. All the gilded angels wear sack-cloth painted dirty grey. Anything that shines is covered. At night all is as black as in the dark ages. But when danger is signalled the elec[tric] light is cut off, sirens blow, cannon firebombs explode and the whole city shakes on its piles.

Chapter 5 : Trenches on the Web - Armory: U-boats

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Early Years Europeans were fighting heavily on two fronts before the U. This assurance was confirmed in the week following the assassination, before William, on July 6, set off upon his annual cruise to the North Cape , off Norway. Archduke Franz Ferdinand and his wife Sophie Austrian Archduke Franz Ferdinand and his wife, Sophie, riding in an open carriage at Sarajevo shortly before their assassination, June 28, When the delivery was announced, on July 24, Russia declared that Austria-Hungary must not be allowed to crush Serbia. Though Serbia offered to submit the issue to international arbitration, Austria-Hungary promptly severed diplomatic relations and ordered partial mobilization. Home from his cruise on July 27, William learned on July 28 how Serbia had replied to the ultimatum. At once he instructed the German Foreign Office to tell Austria-Hungary that there was no longer any justification for war and that it should content itself with a temporary occupation of Belgrade. But, meanwhile, the German Foreign Office had been giving such encouragement to Berchtold that already on July 27 he had persuaded Franz Joseph to authorize war against Serbia. War was in fact declared on July 28, and Austro-Hungarian artillery began to bombard Belgrade the next day. Russia then ordered partial mobilization against Austria-Hungary, and on July 30, when Austria-Hungary was riposting conventionally with an order of mobilization on its Russian frontier, Russia ordered general mobilization. On July 31 Germany sent a hour ultimatum requiring Russia to halt its mobilization and an hour ultimatum requiring France to promise neutrality in the event of war between Russia and Germany. Both Russia and France predictably ignored these demands. On August 1 Germany ordered general mobilization and declared war against Russia, and France likewise ordered general mobilization. The next day Germany sent troops into Luxembourg and demanded from Belgium free passage for German troops across its neutral territory. On August 3 Germany declared war against France. In the night of August 3â€”4 German forces invaded Belgium. Thereupon, Great Britain , which had no concern with Serbia and no express obligation to fight either for Russia or for France but was expressly committed to defend Belgium, on August 4 declared war against Germany. Romania had renewed its secret anti-Russian alliance of with the Central Powers on February 26, , but now chose to remain neutral. Italy had confirmed the Triple Alliance on December 7, , but could now propound formal arguments for disregarding it: Thenceforth, they could be called the Allied , or Entente, powers, or simply the Allies. The outbreak of war in August was generally greeted with confidence and jubilation by the peoples of Europe, among whom it inspired a wave of patriotic feeling and celebration. The war was welcomed either patriotically, as a defensive one imposed by national necessity, or idealistically, as one for upholding right against might, the sanctity of treaties, and international morality.

Page 1 of

Chapter 6 : Gott Strafe England: The German Air Assault against Great Britain – Volume 2

Air War over Great Britain RIMELL, Raymond L. (Poole): Arms and Armour Press, (), First Edition. quarto, printed heavy paper wrappers. 64pp. Arms and Armour Press, Item # Profusely illustrated.

August Battle of Tannenberg Germans decimate Russian forces in a maneuver aided by intercepted radio communications and discord among Russian generals. Some 92, Russian fighters are taken as prisoners of war. September First Battle of the Marne Germany invades France, sparking a week-long Franco-British counterattack, including a rush of soldiers to the frontlines in taxis and buses. Strategic offensives by Allies result in a German retreat. Dec First Zeppelin Raids on England In the middle of the night, the Norfolk Coast explodes with terrifying noise as enormous German airships drop bombs on Great Britain for the first time. December Christmas Truce Around Christmas Day in December , the bloody struggle of the Great War is paused as both the Allies and the Central Powers celebrate a temporary and unofficial ceasefire. January Bombing Raids on Britain Starting in January , Germany attacks Britain from above, carrying out 50 zeppelin raids in three years. Though the death toll never passes 1,, the bombings cause panic and hurt morale. March Churchill Resigns In the fallout of the failed Battle of Gallipoli, Winston Churchill resigns from his governmental post and joins the army, commanding a battalion in the trenches of France. April Second Battle of Ypres Germans unleash poison gas on the Allied forces, the first use of a chemical weapons in a major military offensive. Flooding the trenches, the toxic fumes result in high casualties. Though Kaiser Wilhelm forbade attacks on royal palaces and residential areas, many civilians lost their lives in the bombings. The tragedy rouses anti-German sentiment and helps bring the U. The August offensive thus ended in failure. The evacuation proved the most successful operation of the Gallipoli campaign. It turns into the longest battle of the war; fighting continues for nine months and resulted in approximately one million casualties. After a day of fighting, both sides claim victory. July Battle of the Somme In July , French and British troops challenge Germany in the Battle of the Somme—a five-month confrontation that includes the bloodiest day in British history when almost 60, soldiers fall. The 5th Australian Division suffered 5, casualties; the 61st British Division suffered 1, July Battle of Pozieres For two weeks in July and August of , Australian troops battle with Germans in their first fight along the Western Front, losing more than 5, men in the short conflict. The division suffers casualties, including more than killed. January German U-boat Campaign Desperate for victory, in early the German Kaiser signs an order resuming unrestricted submarine warfare targeting British and Allied vessels in hopes of disrupting shipments of food and munitions. Declares War on Germany After years of neutrality, the United States officially enters the war on 6 April , providing much needed manpower and financial aid to the Allied cause. Once again, Ypres, Belgium, is turned into a battlefield of mud, mustard gas, and mass casualties. November Battle of Cambrai In November and December of , tanks became a staple of war during the Battle of Cambrai, when the British deploy almost equipped with machine guns and artillery. December Treaty of Brest-Litovsk After suffering more than 1. Almost a million Germans are lost in their quest for victory. March Battle of Villers-Bretonneux Along the Western Front in the spring of , Australian forces are shipped in to reinforce Allied lines, propelling them toward a groundbreaking victory over the Germans in northern France. This decisive battle marks the Allied advance to victory. August Days Offensive Starting in August , and lasting through the fall, the Allies launch a series of attacks, hoping to force the Germans out of France, eventually bringing the war to a close. November Armistice Ends the War In , at 11 a.

Chapter 7 : - Air War Over Great Britain, (Vintage Warbirds No. 7) by Raymond L Rimell

The accompanying arguments over British strategy, whether the country could endure the casualties, and even whether the war could be won, were interpreted by Lloyd George by early as a military threat to Great Britain's democracy.

You Know Where to Look for a Bargain! Thanks for Looking and Best of Luck with the Bidding!! Ultimately more than 70 million military personnel, including 60 million Europeans, were mobilised in one of the largest wars in history. It was the sixth-deadliest conflict in world history, subsequently paving the way for various political changes such as revolutions in many of the nations involved. The assassination on 28 June of Archduke Franz Ferdinand of Austria, the heir to the throne of Austria-Hungary, by a Yugoslav nationalist in Sarajevo, Bosnia and Herzegovina was the proximate trigger of the war. It resulted in a Habsburg ultimatum against the Kingdom of Serbia. On 28 July, the conflict opened with the Austro-Hungarian invasion of Serbia,[12][13] followed by the German invasion of Belgium, Luxembourg and France; and a Russian attack against Germany. After the German march on Paris was brought to a halt, the Western Front settled into a static battle of attrition with a trench line that changed little until In the East, the Russian army successfully fought against the Austro-Hungarian forces but was forced back from East Prussia and Poland by the German army. Additional fronts opened after the Ottoman Empire joined the war in , Italy and Bulgaria in and Romania in After a German offensive along the western front, the Allies drove back the German armies in a series of successful offensives and United States forces began entering the trenches. Germany, which had its own trouble with revolutionaries at this point, agreed to a cease-fire on 11 November , later known as Armistice Day. The war had ended in victory for the Allies. Events on the home fronts were as tumultuous as on the battle fronts, as the participants tried to mobilize their manpower and economic resources to fight a total war. By the end of the war, four major imperial powersâ€”the German, Russian, Austro-Hungarian and Ottoman empiresâ€”ceased to exist. The successor states of the former two lost a great amount of territory, while the latter two were dismantled entirely. The map of central Europe was redrawn into several smaller states. This coin is 24Kt Gold Plated Condition: In Excellent Condition, Year of Issue: High amount of views. Good amount of bids.

Chapter 8 : Search objects | Imperial War Museums

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But partly because of its size and evolution, this has been mostly separated into studies of British politics and the grand strategy of the war; the social, economic and cultural history of Great Britain; or the military and naval history of the British war effort. Even for such a well-documented country, there are also genuine problems with the survival and interpretation of evidence. Due to recent historical discoveries and changes in methodology, it is now possible to summarise these previously largely separated themes of the British war experience in relation to each other, which is how they were actually experienced at the time. After an introduction, this article follows a broadly chronological framework, describing the interaction of the political, social, economic and military events that made up the British experience of the war. In terms of landmass, Great Britain excluding Ireland, which had its own and rather different experience was smaller than any other major power; even Italy was larger. In terms of population, the national census recorded just over 43 million people, with just under 36 million in England, 4. Great Britain also dominated world trade, with ownership of at least 45 percent of all merchant shipping. Access to the resources and manpower of the British Empire and to global markets was among the many critical advantages that Great Britain held during the war. British financial power, including its extensive financial credit, was another formidable potential weapon: London was the centre of a global financial system that had developed in complexity in the decades before the war. Politically, the British considered their country to be a democracy, and it was called one by its enemies. As a constitutional monarchy under George V, King of Great Britain, it had a largely unwritten constitution made up of precedents and compromises, the most recent only in Effective political power resided in the House of Commons, which was directly elected; approximately 60 percent of men although no women had the vote, and by convention the leader of the majority party in the Commons formed a government as prime minister, heading the Cabinet, the main executive body; in the prime minister was Herbert Henry Asquith of the Liberal Party. The House of Lords, an unelected second chamber, was dominated by the opposition party, the Unionists or Conservatives, who still largely represented a traditional aristocracy and upper class. Political power and representation for the lower classes came increasingly from organised labour and trade unions, represented in Parliament by a small but growing Labour Party. A pattern of serious and sometimes violent political disputes just before the war suggested a politically divided country, with the underprivileged asserting their demands for recognition. But increasingly the legitimacy of these demands was being recognised, and the war accelerated this process. Despite these disputes, socially and culturally Great Britain was more homogeneous than any other major power, and better placed to withstand the strains of the war. English was almost universal as a sole or first language, as was literacy, although ports and industrial cities had pockets of diversity. Christianity was almost universal, and most people professed some religious belief without necessarily being regular churchgoers. This included the Church of England and Church of Scotland as state churches, a much smaller but growing Roman Catholic population, and numerous forms of non-conformism. Discrimination against other religions was mild in comparison with mainland Europe, notably as regards Judaism. Religious convictions were seldom overtly political, although religious beliefs did influence politics, including strains of nonconformist pacifism in much of the British labour movement and British forms of socialism. This homogeneity was strengthened rather than weakened by a marked parochialism and regionalism, of which the Scots and Welsh identities were only the most prominent, with most people looking to their local rather than national leaders, including local business, religious, and trade union representatives. The most marked differentiations were of social class. Of a workforce of just over Great Britain had no recent experience of peacetime military conscription, and had to create and equip a mass army of millions during the course of the war, with consequent significant social and economic dislocation, and cultural impact. In geo-strategic terms, the United Kingdom formed an kilometre-long breakwater lying across the sea communications of northwestern Europe, giving the Allies another critical advantage,

particularly in the distant naval blockade of Germany that was one of their main weapons. By , the British had decisively won a peacetime naval arms race with Germany prompted by a battleship-building programme, with twenty-two battleships in service and thirteen under construction, plus a strength in depth of about warships of various kinds, and an advantage over Germany of almost 2: Although British naval power was strained and challenged throughout the war, it never experienced a critical shortage. In contrast, the British army before was tiny in comparison with other powers, with about , men serving. Since the later 19th century the army had been structured primarily to provide garrisons for the British Empire rather than to fight a European war. An all-volunteer force, the British army had little connection with British society, with officers being drawn mostly from a small section of the upper class, while the working-class regarded military service as a last resort or a disgrace. Attempts since to create a volunteer reserve for home defence known as the Territorial Force an exact translation of the German Landwehr achieved little success, and even including the Territorials at full mobilisation the British army was on paper barely , men. This reflected a general attitude among the population as supportive of the British Empire and defensively patriotic, but not militaristic. Much the same attitude prevailed in many parts of the Empire. In the First World War the British were able to draw substantially on soldiers many of them British-born from Canada , Australia , New Zealand and South Africa in particular, and on their Indian army, an all-volunteer force with British officers recruited chiefly from the northern part of India. The shock of this attack swung doubters in the British Cabinet, in Parliament, and as far as can be judged in the wider country, in favour of war. There are significant problems of evidence and methodology in evaluating British working-class attitudes towards the war. It seems fair to say that for most British people the war was about the German occupation of Belgium , and all that it represented. The British people saw this as a defensive war, despite the fact that Great Britain had not itself been attacked: Germany was considered to be by far the principal enemy, and the British public saw the war as won when German forces were ejected from France and Belgium in August-November As part of the British declaration of war, Prime Minister Asquith assembled a small inner War Council, which developed by the end of into a War Cabinet. In August , Great Britain immediately imposed trade sanctions and a naval blockade on the Central Powers, although the effectiveness of this blockade, and the extent to which it contributed to crippling their domestic economies, is a matter of considerable historical dispute. After some debate, the British Expeditionary Force or BEF as it came to be known was also sent to fight alongside the French army, rather than being used as the basis for training a larger army. The London Stock Exchange also stayed closed until January By then, British sea power had cleared the oceans of German warships, largely confining the conflict to Europe and its surrounding waters. The British government did not expect a short war, and felt that the country had survived the possibility of an early defeat. The post of Secretary of State for War political head of the army was vacant at the start of the war, and Asquith appointed Field Marshal Lord Kitchener, a famous and respected military hero who was also a member of the House of Lords. Kitchener was notoriously taciturn and secretive, and he made little or no distinction between his political appointment and military rank. His domination of his cabinet colleagues for the first months of the war marked the start of important questions about political-military relationships in a democracy at war. It is speculated that he hoped that the French and Russians could hold out against the Germans until this army was properly trained and equipped so that he could use it as the instrument of a British-led victory, probably not before Instead, the circumstances of the war led to the new British army being used piecemeal from onwards, while still undertrained and underequipped. The number of volunteers peaked in the first week of September with , coming forward, probably in response to news of the first BEF defeats at the Battles of Mons and Le Cateau. While each individual had his own reasons for volunteering, the great majority appear to have volunteered as a grimly reasoned response to their country being in danger of defeat, rather than any light-hearted war enthusiasm; economic as well as patriotic factors and a sense of duty also played a role. Overt propaganda had little part at first in British military volunteerism. Over the next two years, the British army expanded more than tenfold from the original six infantry divisions and one cavalry division of the BEF to over sixty fully equipped infantry divisions and their supporting troops. The Regular, Territorial and Kitchener formations retained a distinctiveness reflecting their origins at least up to the end of Just over 1 million men volunteered by the end

of , part of a total of just under 2. In round figures, 5. Almost from the start, this army also had a British Empire component, including Indian army troops from onwards, Canadian troops from early , and Australians, South Africans, New Zealanders and Newfoundlanders by . But despite the centrality of the Western Front to the British experience and memory of the war, many British army and British Empire soldiers served in other theatres of war, including about 3 million who served in the war against the Ottoman Empire , over 1 million of them British rather than from the Empire. At any time after there were also about 1 million British troops in Great Britain itself, including those in training, as well as numerous garrisons for India and the Empire around the world. While this mass army, which was unprecedented in British experience, was being recruited, trained and equipped, the British relied on sea power and blockade although in strict legal terms a formal blockade was not declared. Great Britain financed its war effort at first chiefly by borrowing on the international markets, particularly from the United States , using the funds as loans to its Empire and Allies, or to purchase military equipment, also chiefly from the United States. This included large subsidies to Russia , and to Italy which entered the war on the Allied side in May . The extent of this borrowing tied the United States into financial support of an Allied victory long before its entry into the war in April , augmenting British diplomacy and a well-organised British propaganda campaign aimed mostly at American elite public opinion. The British also relied on diplomacy to isolate their enemies, to win sympathy in other neutral countries, and to encourage others to enter the war on their side. The big difference from all previous wars that the British had fought using the same strategy was the immense financial cost and dislocation the longer the war lasted, coupled with its exceptionally heavy casualties as the product of mass industrialised warfare and trench deadlock. While their own soldiers were being trained and rushed into battle, the British relied for land power chiefly on the forces of France and Russia. The entry of the Ottoman Empire into the war on the side of the Central Powers in late October severed British strategic communications with Russia through the Black Sea, and potentially threatened both the Suez Canal and India. The British along with all other great powers on both sides wrongly assumed that the Ottoman army would collapse with the first attacks, and that the chief problems would be the political ones of how to partition the Ottoman Empire between the victorious Allies. As well as defending the Suez Canal and mounting an offensive into Mesopotamia , chiefly with Indian army troops, the British made an innovative use of sea power, the brainchild of Winston Spencer Churchill , First Lord of the Admiralty political head of the Royal Navy , to force the Dardanelles with warships in February and reach Constantinople. When this failed, a British-led force of British Empire and French troops landed on the Gallipoli peninsula in April in the hope of clearing the Dardanelles. This landing was expected to prompt naval and military support from Russia, and bring the Balkan countries into the war on the Allied side, but in this, British diplomacy failed. After an additional landing in August had also failed to achieve victory, the British evacuated Gallipoli in January . The British attempt to win a cheap success in Mesopotamia also ended in failure in April , with the surrender of British Empire forces at Kut-el-Amara. The year had been disastrous for the British; they did not win a single decisive battle on land or sea, and mostly suffered heavy defeats. This was a reflection of British political and military ambitions and weaknesses at the start of the war. They had tried to mount two substantial land campaigns, one on the Western Front in support of much larger French attacks, and one against the Ottoman Empire, without the trained troops or resources to do either properly. At the same time the Royal Navy was under pressure from the first of two German unrestricted submarine warfare campaigns, in February to September , and British industry was not yet geared up for the war. Together with the continuing failure at Gallipoli, increasing dissatisfaction with Kitchener among his colleagues, and a sense that the war effort lacked political direction, this provoked a change of government. On 25 May, Asquith formed a coalition government with the Unionists, including senior Unionists in his Cabinet. After the failure at Gallipoli the British largely went onto the defensive against the Ottoman Empire until . On the Western Front the key to overcoming the defensive deadlock was artillery firepower and shells on a previously unimagined scale, augmented by technological innovations, such as the development of air warfare almost from nothing in the course of the war; the invention and first use of tanks in September ; increases in infantry firepower; and the training to employ all these innovations in a unified manner. By the British army on the Western Front had nearly 6, artillery pieces of all calibres: They represented the

mobilisation of the British home front for war on a massive scale. The creation of the Ministry of Munitions under Lloyd George greatly increased government involvement in British industry, including securing the co-operation of the trades unions and imposing controls on businesses, but in practice the bulk of the orders for arms and equipment had already been placed before the end of . This government intrusion into business also meant virtually full employment, but was contrary to pre-war Liberal political ideology. To pay for the war, the Asquith Coalition also supplemented its overseas borrowing with increased domestic taxation and war loans, which would increase in importance during the rest of the war. By the middle of , the balance of manpower between the army and production on the home front became a serious problem, as volunteering began to decline. The introduction of conscription came from a complex mixture of political rivalries and arguments, the need to balance military needs with those of industry and the national economy, and a belief that greater government intervention and control was needed to win the war. The government had believed that there was a pool of about 1 million suitable men who had failed to volunteer, but this turned out to be untrue. Discounting those men needed on the home front to maintain the war economy, conscription provided the army only with just enough men to keep it up to strength. Given that the proportions of men taken from different regions and social groups were broadly similar, the army was predominantly English and working class, but there were many variations; up to the start of conscription at least, the officer corps was drawn overwhelmingly from the upper-middle class, who suffered disproportionate losses, especially of young men. The British-led Allied domination of the seas continued, but showed no prospect of winning the war quickly. A Controller of Shipping was appointed in January , followed by a Ministry of Shipping at the end of the year and a Ministry of Blockade created in February , intensifying the blockade and helping keep the country supplied from overseas. Although British public opinion was disappointed by the lack of an overwhelming victory, the German failure to defeat the British meant that the blockade and British domination of global trade both continued. On 5 June, Kitchener was drowned when the British warship on which he was travelling sank in the North Sea.

Chapter 9 : Rare charts show WW1 German air raids on Britain - Telegraph

If searched for the book by Raymond L. Rimell Air War over Great Britain, (Vintage Warbirds No. 7) in pdf form, then you've come to the right website.

At the meeting of the Institute of International Law in Madrid, legislation was proposed to limit the use of airplanes to reconnaissance missions and banning them from being used as platforms for weapons. Many senior officers, in particular, remained sceptical. However the initial campaigns of proved that cavalry could no longer provide the reconnaissance expected by their generals, in the face of the greatly increased firepower of twentieth century armies, and it was quickly realised that aircraft could at least locate the enemy, even if early air reconnaissance was hampered by the newness of the techniques involved. Early skepticism and low expectations quickly turned to unrealistic demands beyond the capabilities of the primitive aircraft available. On 22 August , British Captain L. Charlton and Lieutenant V. The British High Command took note of the report and started to withdraw toward Mons, saving the lives of , soldiers. Later, during the First Battle of the Marne , observation aircraft discovered weak points and exposed flanks in the German lines, allowing the allies to take advantage of them. Out of a paper strength of about aircraft belonging to the army in August only or so were of any use. The initial British contribution to the total allied airwar effort in August of about aircraft was three squadrons with about 30 serviceable machines. The initial "war of movement" largely ceased, and the front became static. Three main functions of short range reconnaissance squadrons had emerged by March The first was photographic reconnaissance: The first air cameras used glass plates. Kodak cellulose film had been invented, but did not at this stage have sufficient resolution. Radio telephony was not yet practical from an aircraft, so communication was a problem. By March , a two-seater on "artillery observation" duties was typically equipped with a primitive radio transmitter transmitting using Morse code , but had no receiver. The artillery battery signalled to the aircraft by laying strips of white cloth on the ground in prearranged patterns. Observation duties were shared with the tethered balloons , which could communicate directly with their batteries by field telephone, but were far less flexible in locating targets and reporting the fall of shot. The technology of the period did not permit radio contact, while methods of signalling were necessarily crude, including dropping messages from the aircraft. Soldiers were initially reluctant to reveal their positions to aircraft, as they the soldiers found distinguishing between friend and foe problematic. Reconnaissance flying, like all kinds, was a hazardous business. In April , the worst month for the entire war for the RFC, the average life expectancy of a British pilot on the Western Front was 69 flying hours. Nonetheless the beginnings of strategic and tactical bombing date from the earliest days of the war. The dawn of air combat[edit] As Dickson had predicted, initially air combat was extremely rare, and definitely subordinate to reconnaissance. There are even stories of the crew of rival reconnaissance aircraft exchanging nothing more belligerent than smiles and waves. Both planes crashed as the result of the attack killing all occupants. Eventually pilots began firing handheld firearms at enemy aircraft, [10] however pistols were too inaccurate and the single shot rifles too unlikely to score a hit. On October 5, , French pilot Louis Quenault opened fire on a German aircraft with a machine gun for the first time and the era of air combat was under way as more and more aircraft were fitted with machine guns. Evolution of fighter aircraft[edit] Early attempt on a French Morane-Saulnier L to mount a forward-firing gun The pusher solution[edit] As early as , designers at the British firm Vickers were experimenting with machine gun carrying aircraft. This pioneering fighter , like the Royal Aircraft Factory F. These had the engine and propeller behind the pilot, facing backward, rather than at the front of the aircraft, as in a tractor configuration design. This provided an optimal machine gun position, from which the gun could be fired directly forward without an obstructing propeller, and reloaded and cleared in flight. An important drawback was that pusher designs tended to have an inferior performance to tractor types with the same engine power because of the extra drag created by the struts and rigging necessary to carry the tail unit. They were simply too slow to catch their quarry. Machine gun synchronisation[edit] Main article: Pulling the green handle drops the red cam follower onto the propeller shaft cam wheel. Twice during each rotation of the propeller the cam lifts the follower which depresses the

blue rod against the spring, connecting the yellow trigger plate to the purple firing button allowing a round to be fired. The forward firing gun of a pusher "gun carrier" provided some offensive capability – the mounting of a machine gun firing to the rear from a two-seater tractor aircraft gave defensive capability. There was an obvious need for some means to fire a machine gun forward from a tractor aircraft, especially from one of the small, light, "scout" aircraft, adapted from pre-war racers, that were to perform most air combat duties for the rest of the war. It would seem most natural to place the gun between the pilot and the propeller, firing in the direct line of flight, so that the gun could be aimed by "aiming the aircraft". It was also important that the breech of the weapon be readily accessible to the pilot, so that he could clear the jams and stoppages to which early machine guns were prone. However, this presented an obvious problem: Early experiments with synchronised machine guns had been carried out in several countries before the war. Franz Schneider, then working for Nieuport in France but later working for L. An early Russian gear was designed by a Lieutenant Poplavko: All these early experiments failed to attract official attention, partly due to official inertia and partly due to the terrifying results of failures of these early synchronising gears, which included dangerously ricocheting bullets as well as disintegrating propellers. In an open bolt firing cycle, it is impossible to predict the exact time any given round will fire, a problematic characteristic in a weapon one is attempting to fire between the spinning blades of a propeller. Photographs of fuselage-mounted Lewis guns aimed directly ahead on RNAS aircraft, and looking as if they "should" be synchronised – as with some of their Bristol Scouts – were probably in fact free firing, hardly a satisfactory solution. The Maxim guns used by both the Allies as the Vickers and Germany as the Parabellum MG 14 and Spandau IMG 08 had a closed bolt firing cycle that started with a bullet already in the breech and the breech closed, so the firing of the bullet was the next step in the cycle. This meant that the exact instant the round would be fired could be predicted, making these weapons considerably easier to synchronise. The standard French light machine gun, the Hotchkiss, was also most unamenable to synchronisation due to rounds "hanging fire". The Morane-Saulnier company designed a "safety backup" in the form of "deflector blades" metal wedges, complete with metal tiebars extending outwards from the propeller hub for bracing, fitted to the rear surfaces of a propeller at the radial point where they would be struck by a bullet. He managed to score several kills, although it proved to be an inadequate and dangerous solution. Crude as these little monoplanes were, they produced a period of German air superiority, known as the "Fokker Scourge" by the Allies. The psychological effect exceeded the material – the Allies had up to now been more or less unchallenged in the air, and the vulnerability of their older reconnaissance aircraft, especially the British B. Another method used at this time to fire a machine gun forward from a tractor design was to mount the gun to fire above the propeller arc. This required the gun to be mounted on the top wing of biplanes and be mounted on complicated drag-inducing structures in monoplanes. Reaching the gun so that drums or belts could be changed, or jams cleared, presented problems even when the gun could be mounted relatively close to the pilot. Eventually the excellent Foster mounting became more or less the standard way of mounting a Lewis gun in this position in the R. The earliest versions of the Bristol Scout to see aerial combat duty in, the Scout C, had Lewis gun mounts in RNAS service that sometimes were elevated above the propeller arc, and sometimes in an apparently reckless manner firing directly through the propeller arc without synchronisation. On 25 July Captain Hawker flew his Scout C, bearing RFC serial number against several two-seat German observation aircraft of the Fliegertruppe, and managed to defeat three of them in aerial engagements to earn the first Victoria Cross awarded to a British fighter pilot, while engaged against enemy fixed-wing aircraft. The Fokker Scourge[edit] Main article: The first purpose-designed fighter aircraft included the British Vickers F. Initially the German Air Service lagged behind the Allies in this respect, but this was soon to change dramatically. In July the Fokker E. I, the first aircraft to enter service with a "synchronisation gear" which enabled a machine gun to fire through the arc of the propeller without striking its blades, became operational. This gave an important advantage over other contemporary fighter aircraft. This aircraft and its immediate successors, collectively known as the Eindecker German for "monoplane" – for the first time supplied an effective equivalent to Allied fighters. Two German military aviators, Leutnants Otto Parschau and Kurt Wintgens, worked for the Fokker firm during the spring of, demonstrating the revolutionary feature of the forward-firing synchronised machine gun to the embryonic force of Fliegertruppe

pilots of the German Empire. In particular the defencelessness of Allied reconnaissance types was exposed. The first German "ace" pilots, notably Max Immelmann, had begun their careers. The number of actual Allied casualties involved was for various reasons very small compared with the intensive air fighting of the war. The deployment of the Eindeckers was less than overwhelming: The Eindecker was also, in spite of its advanced armament, by no means an outstanding aircraft, being closely based on the pre-war Morane-Saulnier H, although it did feature a steel tubing fuselage framework a characteristic of all Fokker wartime aircraft designs instead of the wooden fuselage components of the French aircraft. Nonetheless, the impact on morale of the fact that the Germans were effectively fighting back in the air created a major scandal in the British parliament and press. The ascendancy of the Eindecker also contributed to the surprise the Germans were able to achieve at the start of the Battle of Verdun because the French reconnaissance aircraft failed to provide their usual cover of the German positions. Fortunately for the Allies, two new British fighters that were a match for the Fokker, the two-seat F. These were both pushers, and could fire forwards without gun synchronisation. On the French front, the tiny Nieuport 11, a tractor biplane with a forward firing gun mounted on the top wing outside the arc of the propeller, also proved more than a match for the German fighter when it entered service in January. With these new types the Allies re-established air superiority in time for the Battle of the Somme, and the "Fokker Scourge" was over. III, Airco DH-2 and Nieuport 11 were the very first in a long line of single seat fighter aircraft used by both sides during the war. Very quickly it became clear the primary role of fighters would be attacking enemy two-seaters, which were becoming increasingly important as sources of reconnaissance and artillery observation, while also escorting and defending friendly two-seaters from enemy fighters. Fighters were also used to attack enemy observation balloons, strafe enemy ground targets, and defend friendly airspace from enemy bombers. However, the first practical all-metal aircraft was produced by Hugo Junkers, who also used a cantilever wing structure with a metal covering. The first flight tests of the initial flight demonstrator of this technology, the Junkers J 1 monoplane, took place at the end of heralding the future of aircraft structural design. Verdun and the Somme[edit] Main articles: When the battle of Verdun began on 21 February, air superiority initially enabled the Germans to establish a blockade luftsperr on the French air squadrons. However the French were already arming their specialist fighter squadrons, the Escadrilles de chasse, with the Nieuport 11, and with a new offensive strategy they quickly overcame the luftsperr, establishing air superiority over the battle by April. In the short term, creating new units was easier than producing aircraft to equip them, and training pilots to man them. Even more seriously, replacement pilots were being sent to France with pitifully few flying hours. Nonetheless, air superiority and an "offensive" strategy facilitated the greatly increased involvement of the RFC in the battle itself, in what was known at the time as "trench strafing" or in modern terms, close support. For the rest of the war, this became a regular routine, with both attacking and defending infantry in a land battle being constantly liable to attack by machine guns and light bombs from the air. At this time, counter fire from the ground was far less effective than it became later, when the necessary techniques of deflection shooting had been mastered. The first step towards specialist fighter-only aviation units within the German military was the establishment of the so-called Kampfeinsitzer Kommando single-seat battle unit, abbreviated as "KEK" formations by Inspektor-Major Friedrich Stempel in February. These were based around Eindeckers and other new fighter designs emerging, like the Pfalz E-series monoplanes, that were being detached from their former Feldflieger Abteilung units during the winter of 1916 and brought together in pairs and quartets at particularly strategic locations, as "KEK" units were formed at Habsheim, Vaux, Avillers, Jametz, and Cunel, as well as other strategic locations along the Western Front to act as Luftwacht dienst aerial guard force units, consisting only of fighters. By April, the air superiority established by the Eindecker pilots and maintained by their use within the KEK formations had long evaporated as the Halberstadt D. The small numbers of questionably built Fokker D. Is were well on the way to establishing the German air superiority marking the first half of