

Chapter 1 : in aviation - Wikipedia

The Vintage Aviator Ltd's replica Fokker racedaydvl.com is shown here during a display at the Tauranga City Classics Of The Sky airshow held at Tauranga Airport, Tauranga, New Zealand in January

Aviation in World War I The word "fighter" was first used to describe a two-seater aircraft with sufficient lift to carry a machine gun and its operator as well as the pilot. Some of the first such "fighters" belonged to the "gunbus" series of experimental gun carriers of the British Vickers company that culminated in the Vickers F. The main drawback of this type of aircraft was its lack of speed. Planners quickly realized that an aircraft intended to destroy its kind in the air had to be fast enough to catch its quarry. Another type of military aircraft was to form the basis for an effective "fighter" in the modern sense of the word. It was based on the small fast aircraft developed before the war for such air races as the Gordon Bennett Cup and Schneider Trophy. British scout aircraft, in this sense, included the Sopwith Tabloid and Bristol Scout. French equivalents included the Morane-Saulnier N. Many of these proved ineffective as the pilot had to fly his airplane while attempting to aim a handheld weapon and make a difficult deflection shot. The first step in finding a real solution was to mount the weapon on the aircraft, but the propeller remained a problem since the best direction to shoot is straight ahead. Numerous solutions were tried. This option was chiefly employed as a defensive measure on two-seater reconnaissance aircraft from on. A and the Royal Aircraft Factory B. Billy Bishop sitting in his Nieuport 23 with the machine gun just visible at the top of the picture mounted to fire over the propeller. An alternative was to build a "pusher" scout such as the Airco DH. A better solution for a single seat scout was to mount the machine gun rifles and pistols having been dispensed with to fire forwards but outside the propeller arc. Wing guns were tried but the unreliable weapons available required frequent clearing of jammed rounds and misfires and remained impractical until after the war. Mounting the machine gun over the top wing worked well and was used long after the ideal solution was found. The British Foster mounting was specifically designed for this kind of application, fitted with the Lewis Machine gun , which due to its design was unsuitable for synchronizing. The actual aircraft used by Wintgens in his pioneering aerial engagement, his Fokker M. The need to arm a tractor scout with a forward-firing gun whose bullets passed through the propeller arc was evident even before the outbreak of war and inventors in both France and Germany devised mechanisms that could time the firing of the individual rounds to avoid hitting the propeller blades. Franz Schneider , a Swiss engineer, had patented such a device in Germany in , but his original work was not followed up. French aircraft designer Raymond Saulnier patented a practical device in April , but trials were unsuccessful because of the propensity of the machine gun employed to hang fire due to unreliable ammunition. Unfortunately the gas-operated Hotchkiss machine gun he was provided had an erratic rate of fire and it was impossible to synchronize it with a spinning propeller. As an interim measure, the propeller blades were armored and fitted with metal wedges to protect the pilot from ricochets. Garros scored three victories in three weeks before he himself was downed on 18 April and his airplane, along with its synchronization gear and propeller was captured by the Germans. A Sopwith Camel at the RAF Museum The success of the Eindecker kicked off a competitive cycle of improvement among the combatants, both sides striving to build ever more capable single-seat fighters. I and Sopwith Pup of set the classic pattern followed by fighters for about twenty years. Most were biplanes and only rarely monoplanes or triplanes. The strong box structure of the biplane provided a rigid wing that allowed the accurate lateral control essential for dogfighting. They had a single operator, who flew the aircraft and also controlled its armament. They were armed with one or two Maxim or Vickers machine guns, which were easier to synchronize than other types, firing through the propeller arc. Gun breeches were directly in front of the pilot, with obvious implications in case of accidents, but jams could be cleared in flight, while aiming was simplified. The use of metal aircraft structures was pioneered before World War I by Breguet but would find its biggest proponent in Anthony Fokker, who used chrome-molybdenum steel tubing for the fuselage structure of all his fighter designs, while the innovative German engineer Hugo Junkers developed two all-metal, single-seat fighter monoplane designs with cantilever wings: While Fokker would pursue steel tube fuselages with wooden wings until the late s, and

Junkers would focus on corrugated sheet metal, Dornier was the first to build a fighter The Dornier-Zeppelin D. I made with pre-stressed sheet aluminium and having cantilevered wings, a form that would replace all others in the s. Parachutes were well-developed by having previously been used by balloonists, and were adopted by the German flying services during the course of that year. The well known and feared Manfred von Richthofen "Red Baron" was wearing one when he was killed, but the allied command continued to oppose their use on various grounds. In France, Italy and Russia, where large budgets continued to allow major development, both monoplanes and all metal structures were common. Hawker Fury of 43 Squadron, RAF , a typical late inter-war biplane Given limited defense budgets, air forces tended to be conservative in their aircraft purchases, and biplanes remained popular with pilots because of their agility, and remained in service long after they had ceased to be competitive. Up until the mids, the majority of fighters in the US, the UK, Italy and Russia remained fabric-covered biplanes. Fighter armament eventually began to be mounted inside the wings, outside the arc of the propeller, though most designs retained two synchronized machine guns directly ahead of the pilot, where they were more accurate than being the strongest part of the structure, reducing the vibration to which the guns were subjected to. It was not considered unreasonable to use World War I-style armament to counter enemy fighters as there was insufficient air-to-air combat during most of the period to disprove this notion. The rotary engine , popular during World War I, quickly disappeared, its development having reached the point where rotational forces prevented more fuel and air from being delivered to the cylinders, which limited horsepower. The debate between the sleek in-line engines versus the more reliable radial models continued, with naval air forces preferring the radial engines, and land-based forces often choosing in-line units. Radial designs did not require a separate and vulnerable cooling system, but had increased drag. In-line engines often had a better power-to-weight ratio , but there were radial engines that kept working even after having suffered significant battle damage. An early monoplane fighter: These were larger, usually twin-engined aircraft, sometimes adaptations of light or medium bomber types. Such designs typically had greater internal fuel capacity thus longer range and heavier armament than their single-engine counterparts. In combat, they proved vulnerable to more agile single-engine fighters. The primary driver of fighter innovation, right up to the period of rapid re-armament in the late s, were not military budgets, but civilian aircraft racing. Aircraft designed for these races introduced innovations like streamlining and more powerful engines that would find their way into the fighters of World War II. The most significant of these was the Schneider Trophy races, where competition grew so fierce, only national governments could afford to enter. Parasol monoplanes were popular in many European countries, and paved the way for cantilever low-wing monoplanes. Each party sent numerous aircraft types to support their sides in the conflict. The German design had considerably more room for development however and the lessons learned led to greatly improved models in World War II. The Russians, whose side lost, failed to keep up and despite newer models coming into service, Is were outfought by the improved Bf s in World War II, while remaining the most common Soviet front-line fighter into For their part, the Italians developed several monoplanes such as the Fiat G. From the early s the Japanese had been at war against both the Chinese Nationalists and the Russians in China, and used the experience to improve both training and aircraft, replacing biplanes with modern cantilever monoplanes and creating a cadre of exceptional pilots for use in the Pacific War. The period of improving the same biplane design over and over was now coming to an end, and the Hawker Hurricane and Supermarine Spitfire finally started to supplant the Gloster Gladiator and Hawker Fury biplanes but many of the former remained in front-line service well past the start of World War II. While not a combatant themselves in Spain, they absorbed many of the lessons learned in time to use them. The Spanish Civil War also provided an opportunity for updating fighter tactics. Each fighter squadron German: Each Schwarm was divided into two Rotten, which was a pair of aircraft. Each Rotte was composed of a leader and a wingman. This flexible formation allowed the pilots to maintain greater situational awareness, and the two Rotten could split up at any time and attack on their own. The finger-four would become widely adopted as the fundamental tactical formation over the course of World War. German Field Marshal Erwin Rommel noted the effect of airpower: The long-range Mitsubishi A6M Zero typified the highly maneuverable, but lightly armored, fighter design. Regia Aeronautica Fighter design varied widely among combatants. In contrast, designers in the

United Kingdom, Germany, the Soviet Union, and the United States believed that the increased speed of fighter aircraft would create g-forces unbearable to pilots who attempted maneuvering dogfights typical of the First World War, and their fighters were instead optimized for speed and firepower. In practice, while light, highly maneuverable aircraft did possess some advantages in fighter-versus-fighter combat, those could usually be overcome by sound tactical doctrine, and the design approach of the Italians and Japanese made their fighters ill-suited as interceptors or attack aircraft. European theater[edit] The Yakovlev Yak-9 was the most mass-produced Soviet fighter of all time. It remained in production from to , with 16, built 14, during the war. This was a result of the tactical surprise at the outset of the campaign, the leadership vacuum within the Soviet military left by the Great Purge , and the general inferiority of Soviet designs at the time, such as the obsolescent I biplane and the I As a result, during the early months of these campaigns, Axis air forces destroyed large numbers of Red Air Force aircraft on the ground and in one-sided dogfights. In the later stages on the Eastern Front, Soviet training and leadership improved, as did their equipment. Also, significant numbers of British, and later U. The Soviets were also helped indirectly by the American and British bombing campaigns, which forced the Luftwaffe to shift many of its fighters away from the Eastern Front in defense against these raids. A modern reproduction of the Messerschmitt Me in flight in The first two operational turbojet aircraft, the Me and then the Gloster Meteor entered service in Meanwhile, air combat on the Western Front had a much different character. The RAF raided German cities at night, and both sides developed radar-equipped night fighters for these battles. The Americans, in contrast, flew daylight bombing raids into Germany. With the later arrival of long range fighters, particularly the North American P Mustang , American fighters were able to escort far into Germany on daylight raids and established control of the skies over Western Europe. By the time of Operation Overlord in June , the Allies had gained near complete air superiority over the Western Front. This cleared the way both for intensified strategic bombing of German cities and industries, and for the tactical bombing of battlefield targets. With the Luftwaffe largely cleared from the skies, Allied fighters increasingly served as attack aircraft. They quickly gained air superiority over the Allies, who at this stage of the war were often disorganized, under-trained and poorly equipped, and Japanese air power contributed significantly to their successes in the Philippines , Malaysia and Singapore , the Dutch East Indies and Burma. These changes soon paid dividends, as the Allied ability to deny Japan air superiority was critical to their victories at Coral Sea , Midway , Guadalcanal and New Guinea. In China, the Flying Tigers also used the same tactics with some success, although they were unable to stem the tide of Japanese advances there. Several factors contributed to this shift. First, second-generation Allied fighters such as the Hellcat and the P , and later the Corsair , the P and the P , began arriving in numbers. These fighters outperformed Japanese fighters in all respects except maneuverability. In contrast, the Allies improved both the quantity and quality of pilots graduating from their training programs. Lockheed P Lightnings in formation By mid, Allied fighters had gained air superiority throughout the theater, which would not be contested again during the war. The extent of Allied quantitative and qualitative superiority by this point in the war was demonstrated during the Battle of the Philippine Sea , a lopsided Allied victory in which Japanese fliers were downed in such numbers and with such ease that American fighter pilots likened it to a great turkey shoot. Grumman F6F-3 Hellcats, May Late in the war, Japan did begin to produce new fighters such as the Nakajima Ki and the Kawanishi N1K to replace the venerable Zero, but these were produced only in small numbers, and in any case by that time Japan lacked trained pilots or sufficient fuel to mount a sustained challenge to Allied fighters.

Chapter 2 : World War 1 History: Fokker Tells Germans to Do Their Own Dirty Work | Owlcation

Regarded as Germany's finest fighter of World War 1 (), the Fokker racedaydvl.com actually had a short wartime career as a late-war development introduced in Pilots praised the aircraft's handling and ease-of-operation when compared to other types available.

The company operated under several different names, starting out in in Schwerin , Germany , moving to the Netherlands in During its most successful period in the s and s, it dominated the civil aviation market. Fokker went into bankruptcy in , and its operations were sold to competitors. His first new design for the Germans to be produced in any numbers was the Fokker M. As this partnership proved to be troublesome, it was eventually dissolved again. Some of the noteworthy types produced by Fokker during the second half of the war, all designed primarily by Herr Platz, included the Fokker D. VI biplane, Fokker Dr. VII biplane the only aircraft ever referred to directly in a treaty: Return to the Netherlands In , Fokker, owing large sums in back taxes including 14,, marks of income-tax ,[5] returned to the Netherlands and founded a new company near Amsterdam with the support of Steenkolen Handels Vereniging, now known as SHV Holdings. Despite the strict disarmament conditions in the Treaty of Versailles , Fokker did not return home empty-handed. In , he arranged an export permit and brought six entire trains of parts, and types of aircraft across the Dutch-German border, among them Fokker C. This initial stock enabled him to set up shop quickly. IV military airplanes were delivered to Russia, Romania, and the still clandestine German air force. Success came on the commercial market, too, with the development of the Fokker F. VII, a high-winged aircraft capable of taking on various types of engines. Fokker continued to design and build military aircraft, delivering planes to the Royal Netherlands Air Force. These countries bought substantial numbers of the Fokker C. Its greatest success was the F. It shared the European market with the Junkers all-metal aircraft, but dominated the American market until the arrival of the Ford Trimotor which copied the aerodynamic features of the Fokker F. VII, and Junkers structural concepts. Notre Dame legendary football coach Knute Rockne was among the fatalities, prompting extensive media coverage and technical investigation. In , discontented at being totally subordinate to GM management, Fokker resigned. On December 23, , he died in New York City. XXIIs of the Dutch Air Force were able to score a respectable number of victories against the Luftwaffe, but many were destroyed on the ground before they could be used. At the end of the war, the factories were completely stripped by the Germans and destroyed by Allied bombing. The market was flooded with cheap surplus planes from the war. The company cautiously started building gliders and autobuses and converting Dakota transport planes to civilian versions. A few F25s were built. Nevertheless, the S trainer was a success, being purchased by several air forces. The S Machtrainer became one of the first jet trainers , and although not an export success, it served for over a decade with the Royal Netherlands Air Force. A new factory was built next to Schiphol Airport near Amsterdam in A second production and maintenance facility was established at Woensdrecht. The Dutch government contributed 27 million guilders to its development. Also, a military version of the F, the F Troopship, was built. In , the F was followed by the jet-powered F Fellowship. Until production stopped in , a total of were built in various versions. In , Fokker agreed to an alliance with Bremen -based Vereinigte Flugtechnische Werke under control of a transnational holding company. They collaborated on an unsuccessful regional jetliner , the VFW , of which only 19 were sold. This collaboration ended in early It consisted of companies and government agencies from these four countries and the United States. The song talks about Fokker "knows how to build aircraft", "builds you wings to sail the sky", and "on our way to new horizons". The song was famous and was used in many Fokker promotions and advertisements. It was sung by Toon Vieijra. Aerospace In , Fokker started a modest space division building parts for European satellites. A major advance came in when Fokker developed the first Dutch satellite the Astronomical Netherlands Satellite together with Philips and Dutch universities. This was followed by a second major satellite project, IRAS , successfully launched in Subsequently, Fokker contributed to many European satellite projects, as well as to the Ariane rocket in its various models. Together with a Russian contractor, they developed the huge parachute system for the Ariane 5 rocket boosters which would allow the boosters to return to Earth safely and

be reused. The Fokker 50 was to be a completely modernised version of the F, and the Fokker a new airliner based on the F. Yet development costs were allowed to spiral out of control, almost forcing Fokker out of business in . The Dutch government bailed the company out with million guilders, but demanded Fokker look for a "strategic partner", British Aerospace and DASA being named most likely candidates. Initial sales of the Fokker were good, leading Fokker to begin development of the Fokker 70 , a smaller version of the F, in , but sales of the F70 were below expectations and the F had strong competition from Boeing and Airbus by then.

Bankruptcy On 22 January , the board of directors of Daimler-Benz decided to focus on its core automobile business and cut ties with Fokker. The next day, an Amsterdam court extended temporary creditor protection. Discussions were initiated with Bombardier on 5 February . After having reviewed and evaluated the opportunities and challenges Fokker represented at the time, Bombardier renounced its acquisition on 27 February. Special projects included the development of an F50 maritime patrol variant and an F executive jet. Other divisions of the company that were profitable continued as separate companies: The five individual business units within Fokker Technologies all carry the Fokker name:

Chapter 3 : Fokker racedaydvl.com Biplane Fighter - Imperial Germany

"Designing new planes is challenging, but building and testing them in wartime is even more difficult. Playing a major role in the American victory during World War II, the Grumman Aircraft Engineering Corporation designed and built aircraft known for their durability and maneuverability."

Wingnut Wings Fokker D. Our thanks to Wingnut Wings for supplying our review sample. Get this and all the other superb kits in the WW range here now at: Here are some photos of our completed Wingnut Wings builds to date: History The Fokker D. VII aircraft in the summer and autumn of In service, the D. VII quickly proved itself to be a formidable aircraft. The Armistice ending the war specifically required Germany to surrender all D. VII aircraft to the Allies at the conclusion of hostilities. VII entered squadron service with Jasta 10 in early May The type quickly proved to have many important advantages over the Albatross and Pfalz scouts. Unlike the Albatross scouts, the D. VII could dive without any fear of structural failure. VII was also noted for its high manoeuvrability and ability to climb at high angles of attack, its remarkably docile stall, and its reluctance to spin. These handling characteristics contrasted with contemporary scouts such as the Camel and SPAD, which stalled sharply and spun vigorously. VII also had problems. Several aircraft suffered rib failures and fabric shedding on the upper wing. Heat from the engine sometimes ignited phosphorus ammunition until cooling vents were installed in the engine cowling, and fuel tanks sometimes broke at the seams. Aircraft built by the Fokker factory at Schwerin were noted for their lower standard of workmanship and materials. VII proved to be a remarkably successful design, leading to the familiar aphorism that it could turn a mediocre pilot into a good one, and a good pilot into an ace. Manfred von Richthofen died only days before the D. VII began to reach the Jagdstaffeln and never flew it in combat. Aircraft availability was limited at first, but by July there were on charge. Larger numbers became available by August, when D. VII aircraft achieved victories. VII eventually equipped 46 Jagdstaffeln. When the war ended in November, D. VII aircraft were in service. Some truly breathtaking examples that make you want to just get on with your build so that you can get to the painting and markings! Everything about this package oozes quality: Instructions Now these are a sight to behold, absolutely gorgeous and packed with historic photos and reference shots of actual aircraft and close ups of the power plant and cockpit. These should be made standard in all model kits, as they really are from the top drawer.

The Fokker racedaydvl.com was a German World War I fighter aircraft designed by Reinhold Platz of the Fokker-Flugzeugwerke. Germany produced around 3, racedaydvl.com aircraft in the second half of

Design and development V. Initial tests revealed that the V. The most notable changes were the introduction of horn-balanced ailerons and elevators, as well as longer-span wings. I designation[8] and could be distinguished from subsequent aircraft by a slight curve to the tailplane leading edge. They were sent to Jastas 10 and 11 for combat evaluation, arriving at Markebeeke, Belgium on 28 August I was superior to the Sopwith Triplane. The remaining pre-production aircraft, designated Dr. I, were delivered to Jasta The primary distinguishing feature was the addition of wingtip skids, which proved necessary because the aircraft was tricky to land and prone to ground looping. Compared to the Albatros and Pfalz fighters, the Dr. I offered exceptional maneuverability. Though the ailerons were not very effective, the rudder and elevator controls were light and powerful. I could let myself stunt " looping and rolling " and could avoid an enemy by diving with perfect safety. The triplane had to be given up because although it was very maneuverable, it was no longer fast enough. I was considerably slower than contemporary Allied fighters in level flight and in a dive. While initial rate of climb was excellent, performance fell off dramatically at higher altitudes because of the low compression of the Oberursel Ur. The poor quality of German ersatz lubricant resulted in many engine failures, particularly during the summer of I suffered other deficiencies. Examination of other high-time triplanes confirmed these findings. On 2 November, Idflieg grounded all remaining triplanes pending an inquiry. Idflieg convened a Sturzkommission crash commission which concluded that poor construction and lack of waterproofing had allowed moisture to damage the wing structure. Fokker also strengthened the rib structures and the attachment of the auxiliary spars to the ribs. By January , Jastas 6 and 11 were fully equipped with the triplane. Only 14 squadrons used the Dr. I as their primary equipment. I continued to suffer from wing failures. On 3 February , Leutnant Hans Joachim Wolff of Jasta 11 successfully landed after suffering a failure of the upper wing leading edge and ribs. In , National Advisory Committee for Aeronautics NACA investigations found that the upper wing carried a higher lift coefficient than the lower wing " at high speeds it could be 2. I was withdrawn from frontline service as the Fokker D. VII entered widespread service in June and July. Jasta 19 was the last squadron to be fully equipped with the Dr. Is were used as testbeds for experimental engines. One aircraft, designated V. In , Fokker assembled a Dr. I from existing components. It was displayed in the Deutsche Luftfahrt-Sammlung in Berlin. In , the aircraft was destroyed in an Allied bombing raid. Today, only a few original Dr. I artifacts survive in museums. I replica taking off near Kirchheim unter Teck Replica and reproduction aircraft Large numbers of replica and reproduction aircraft have been built for both individuals and museums. Bitz Flugzeugbau GmbH built two Dr. Because of the expense and scarcity of authentic rotary engines, most airworthy replicas are powered by a Warner Scarab or Continental R radial engine.

Chapter 5 : Fokker racedaydvl.com Archives - This Day in Aviation

Weighing only an ounce, the Fokker racedaydvl.com is ideal for indoor flight or outdoor flight in calm conditions. Features: Ready to Fly: Technically advanced, the Fokker racedaydvl.com incorporates a Hitec Red GHZ radio system that's compatible with all current GHZ Hitec aircraft transmitters.

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 luftsperré 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 luftsperré, 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" — 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 Luftwachtdienst 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

Chapter 6 : Fokker V.8 | Revolv

Twelve manufacturers produced 5, Sopwith Camels between and By the end of World War I, it was becoming outclassed by newer aircraft, however it was the single most successful fighter of the war, shooting down 1, enemy aircraft.

Designed by Reinhold Platz of Fokker-Flugzeugwerke, this World War I aircraft quickly proved its mettle over the skies of Europe until the end of the war. Fitted with a Mercedes D. A max speed of miles per hour meant that it could outrun its competition. A service ceiling just shy of 20, feet gave it plenty of operating room once in the air. Combine that performance with formidable armament of two 7. Based on a modified automobile engine, a Hispano-Suiza 8A, the S. Its maximum speed of miles per hour put it well ahead of most competitors. Furthermore, the range of miles meant it was able to strike the enemy where they would least expect it. And while it only carried one gun, that weapon was a Vickers. VII was a game changer in the aerial dogfights of the Great War. Royal Aircraft Factory S. At the heart of this performance lay a formidable engine, the Hispano-Suiza 8. Initial test flights proved disastrous. A test pilot was killed in one case. However, improved wing design fixed these issues and the S. Volumes have been written about the role the Sopwith Camel played in military history. The unique hump reminded some of the test pilots of a camel, although the moniker was never formally adopted. This allowed its twin Vickers machine guns to shoot through the propeller while in operation. In addition to its main variation, the Camel was also produced in night fighter and aircraft carrier models. It saw active service even after the war, and a few dozen survivors and replicas are flying to this day. XIII is one of the most prolific fighters of the war. Well over 8, are known to have been produced during the conflict. XIII is capable of speeds up to miles per hour, pushing the limits of aircraft design in its day. XIII could climb high, with a max altitude of 21, feet. The stocky design was initially off-putting to many pilots and some glitches in construction led to reliability issues with the engine. However, with that sorted out, the S. This is attested to by the fact that most Allied forces made use of it in some capacity both during and after the conflict. This, in turn, reduces interference drag between the wings and leads to increased maneuverability particularly at high speeds. While not the fastest plane of the war, it certainly could keep pace with any of its competitors. The weapons configurations varied depending on the operator. Nieuport 17 was such a popular design that it was adopted and copied by many armed forces of the war, including the Germans. Ultimately, it stayed in service in limited roles into the s and a few survivors still fly today. They appeared midway through the war, July of , with a conventional wood and fabric construction reinforced by internal flying wires and steel tubes. In fact, they were quite popular as private mounts for ranking officers. Only a small handful remain in tact today, but the memory of the M. This three winged design stood out in an era dominated by biplanes. So much so that the Fokker Dr. I was the aircraft of choice for Manfred von Richthofen, the legendary Red Baron. In this bird he won his last 19 dogfight victories before his death in April of Inspired by the Sopwith Triplane, the engineers at Fokker began work on their own version. It was intended to be more heavily armed with two 7. It was also more powerful than many of its competitors, with a 9 cylinder rotary Oberursel engine providing horsepower. While one of the most iconic World War I aircraft and flown by its most famous pilot, only a few Dr. While less famous in the West than some of their contemporaries, these machines were impressive in their own right. Powered by four Sunbeam Crusader V8 engines, each producing horsepower, the Ilya Muromets had a top speed of only 68 miles per hour but a service flight time of up to 10 hours. Therefore, it was an ideal long-range bomber by the standards of the day. With a payload of up to 1, pounds of bombs, this made the series some of the most dangerous bombers of its war. It got its name due to a peculiarity of its design: The first British aircraft with a synchronized machine gun, allowing it to fire through the path of a moving propeller. Powered by the Clerget 9B rotary engine, the Strutter turned horsepower into a top speed of around miles per hour. Not the fastest World War I aircraft, but not shabby by any means. III made a late appearance in the war, but that delay meant that it took advantage of the innovations offered by years of experience and development. Inspired by the Morane-Saulnier monoplane, the D. III was an attempt to produce a wholly original fighter design that took

advantage of the engineering achievements of earlier aircraft. The purpose-built Mercedes D. IIIa six-cylinder engine provided a then-whopping horsepower, which translated into a top speed of over miles per hour. The time to altitude was also impressive. Just under seven minutes to 5,000 feet gave the D. Despite widespread use by both the German and Ottoman armed forces, no period D. However, a number of replicas have been built for film productions. This was a huge step in the history of aviation, and the XI in that moment cemented its place as a pioneering design. The monoplane construction reinforced with flying wires was also a first, as was the unique tail rudder design. It also was one of the first vehicles to incorporate elasticized cords into the control system, probably the first use of bungees in an aircraft. It ceased production just as the First World War was starting, but it saw action in as a reconnaissance aircraft. This shows in the name. Frustrated by the lack of a suitable fighter aircraft, the Ansaldo company designed one around their SPA 6A six piston engine, a powerhouse delivering horsepower. This gave the A. I a then mind-bending top speed of miles per hour and a range of over miles. Not bad for a first attempt fighter. V was an advanced fighter aircraft for its day, with many features that would later become standard for all fighters. The horsepower Mercedes engine delivered a top speed of miles per hour, with a very impressive range to match. However, by the time production ceased in 1917, the Albatros D. V was moving into obsolescence. Structural and handling problems abounded, and most pilots preferred other aircraft. However, parts of the Albatros were marvelous. The elliptical cross-section wings were game changers in the world of aerodynamics. As was the new ventral fin and tail design. It was also one of the first aircraft to undergo regional variation, with additional radiators added to those serving in hot climates. This innovative design led to some interesting performance traits that were milestones in aviation history. But when pilots got used to its design, they found it highly maneuverable and very easy to fly. So much so that several British aces, including Victoria Cross recipient Laneo Hawker, delivered their best performances in this aircraft. But in truth, bombers were making an appearance and played important roles in the course of the conflict. Among them was the Caproni Ca. First appearing in 1915, the Ca. They were able to fly an impressive miles without refueling. The payload was also impressive. While only three remain today in museums, this World War I aircraft certainly played a big role in history. This plane has two impressive monikers: And it earned every inch of them. The concept was of a flying armed biplane built to destroy other World War I aircraft. At the time, most planes were reconnaissance vehicles, so this was a huge step forward in military thinking. After several test runs, the result was a two-bay biplane with a nine cylinder rotary engine. The Gunbus was a staple of the British air forces throughout the war and saw limited service in other countries as well. There are no period F. It appeared relatively early, December of 1915, and remained in service until the end of the conflict. Based on the E. II, this World War I aircraft featured larger and more carefully designed wings with a slightly more narrow profile. It maintained the same engine as its predecessor, but had a larger fuel tank in order to extend its operational range and air time. While not as heavily armed as some other World War I aircraft, the offset Spandau machine gun packed enough of a punch to make the E.

Chapter 7 : Fokker Dr.I - Military papercraft

Right: The Fokker racedaydvl.com has the distinction of recording the last air kill in the First World War and was often referred to as 'The Flying Razor' by the Allies. Anthony Fokker ended the War as he started, with a monoplane design.

It was during the testing of his invention that Fokker told the German generals to do their own dirty work. When he was four, the family moved back to the Netherlands. Although he never completed high school, Anthony enjoyed mechanical devices and became fascinated with airplanes when Wilbur Wright flew at exhibitions in France in 1903. In 1904, his father sent him to Germany to become an auto mechanic, but he soon started building his first airplane and also learned to fly. In 1908, at the age of 22, Fokker started his first airplane company near Berlin. By the outbreak of the Great War, he was supplying the German military with his first airplane, the Fokker Spin. Source Planes as Observers When war broke out, airplanes fulfilled the role of observer for the various armies. They almost immediately proved their worth when, during the Battle of Mons on August 23, 1914, a British observation team saw that the Germans were moving to surround the small British Army. Thus alerted, the British managed an orderly, if embarrassing, retreat, which saved them to fight another day. The First French Forward-mounted Machine Gun In order to prevent the enemy from observing their movements and to ensure their own advantage, pilots and observers on both sides started shooting at each other with rifles and pistols, but this was not very effective. It was months before French pilot Roland Garros took to the air in an airplane that had a machine gun capable of firing through its propeller. Within two weeks, he had shot down five German observation planes, becoming the first ace of the war. Unfortunately, on April 18, 1915, Garros was forced down and the Germans were able to discover his secret: Instead, he returned to his factory and finished a project his company had been working on for months: Source To Fire the gun, the pilot Pulled the crank on the breech block to load it. Pulled the crank again to cock it. Pulled the green handle. This lowered the red cam follower onto the cam wheel. When the cam raised the follower, the blue rod pushed against the spring. Pressed the purple firing button. Inside the breech block, the cable lowered the blue bridge piece, so that when the blue rod was activated by the cam, the yellow trigger bar is pushed and the gun fires. Released the purple firing button, the blue bridge piece is raised and the cam no longer presses against the yellow trigger bar. The standard German MG 08 machine gun modified for use on fighter planes. Note the air-cooled slotted jacket, the synchronization gear and triggering assembly included below the gun. Note the engine in the rear "pusher" and lack of armament. They demanded that the true test would be for him, personally, to actually shoot down an enemy plane with it. So, Fokker, an accomplished pilot in his own right, agreed and was soon in the air looking for enemy planes. Finally, he came across a French Farman two-seater with a pilot and an observer on board. He swung into position behind the Farman and closed on it. From that position, the French could not fire without hitting their own propeller. The two Frenchmen watched him, curious about his intentions. Fokker had his finger on the trigger, prepared to fire a stream of bullets into the unsuspecting plane and send it crashing to the ground. I had no stomach for the whole business, nor any wish to kill Frenchmen for Germans. Let them do their own killing! After training the pilot, Fokker left for Berlin. One of the first German Fokker Eindecker airplanes to have a forward-firing synchronised machine gun. Anthony Fokker went on to develop, among other things, the very successful Fokker Dr. I Triplane and the Fokker D. VII was so feared it was singled out in the Versailles Treaty: Article IV specifically stated that all existing D. VIIs had to be turned over to the Allies. He returned to the Netherlands in 1918 and started a new aircraft factory where he soon shifted to civil aircraft. His most successful model was the Fokker F. VII trimotor, which enjoyed enormous world-wide success. In 1920, he moved to the US, established the North American branch of his company and, eventually, became an American citizen. In 1932, he went into hospital for minor surgery and died of a minor infection. He was 49 years old.

Chapter 8 : Fighter aircraft - Wikipedia

The Fokker D VII aircraft may have made a rather late entry into the war (January) but that doesn't mean this bird didn't make its mark. Designed by Reinhold Platz of Fokker-Flugzeugwerke, this World War I aircraft quickly proved its mettle over the skies of Europe until the end of the war.

June[edit] From the basis of VIII Brigade , the Royal Air Force forms the Independent Force , tasked to mount a strategic bombing campaign against Germany "independently" of the ground and sea campaigns the Allies have been waging since . Composed of four squadrons , the force will deploy to France for combat. Vectis reaches nearly 20 knots with N. VI bombers lost to enemy action in World War I is shot down by anti-aircraft guns over the French lines. It becomes the first R. VI to be examined by the Allies. I , takes place. Badly wounded during the flight, he sees no further combat. VII is the aircraft of Jagdstaffel 26 commanding officer Fritz Loerzer, an victory ace, who is captured. Phillipps will receive the Distinguished Flying Cross for the patrol. He had claimed 34 victories. Shot down and taken prisoner by Austria-Hungary, Lieutenant Clarence Young becomes the first of three American aircrew casualties suffered while flying with the Italians during World War I. He received his commission a week earlier and was due shortly to leave for France. His body was shipped back to Toronto and buried at Mt. Pleasant cemetery, August 14, He still is in training there when the World War I ends, after which he returns to the United States. He has 57 victories at the time of his death; enough to make him the seventh-highest-scoring ace of World War I. July 14 â€” Flying a Nieuport 28 , the youngest son of former U. One bomb strikes the submarine, but is a dud. He traditionally is credited with 73 victories as the highest-scoring British ace of World War I, but he never claimed that many and his actual score may have been . July 30 Lieutenant Frank Linke-Crawford , the fourth-highest-scoring Austro-Hungarian ace, is shot down and killed in aerial combat. He had scored 27 victories. Marine Corps aviation force to serve in combat. Delays in transportation and the arrival of equipment will prevent it from operating until mid-October. Named Kommuna and towed by a sidewheel paddle tug , she and her aircraft actively support operations of the Bolshevik Volga River Flotilla during the Russian Civil War. The appearance of one of the Campanias over Arkhangelsk induces the Bolshevik leaders there to panic and flee. During their bombing campaign, German airships have made raids against England, dropped 5, bombs, killed people, and injured 1, VII crashes into a house, injuring him; although he survives, he never flies another combat mission. It is the first successful interception of an enemy aircraft by a shipborne fighter. German airships never conduct another scouting mission. The first use of a parachute from an airplane in combat occurs when a German pilot escapes his burning Pfalz D. Lothar von Richthofen, an ace with 40 confirmed air-to-air victories, suffers serious wounds and never flies in combat again. All three crash within meters feet of one another near Roye , France. In the ensuing dogfight, the M. Charles Hammann lands his own M. Hammann will die in a crash in June , but will receive the Medal of Honor posthumously in , retroactively becoming the first U. He is the first person to survive a combat parachute jump. He dies in a German field hospital in Wavrin , France , shortly after he is pulled from the wreckage. Nine of his victories have been balloons, and at the end of the war he will stand as the second most successful U. VII fighter â€” before being shot down himself and wounded in the foot. August 27 â€” The first Director of the U. Army Air Service is appointed. The Royal Air Force begins to issue parachutes to its squadrons for the first time. September 7 â€” The U. At the time, it is the largest force of aircraft assembled for a single operation. September 14 â€” The British aircraft carrier Argus is completed. VI bomber over Beugny , France, one of the only two R. Navy Curtiss T-1 triplane piloted by Roland Rholf sets a world altitude record of 34, feet 10, m. Navy ace in history and the only one of World War I. Rumeys parachutes from his D. VII at 1, feet meters but falls to his death when his parachute fails. His 45 kills will make him the fifth-highest-scoring German ace of World War I. Brewer pilot and Gunnery Sergeant Harry B. Wershiner observer become the first U. Marine Corps personnel to shoot down an enemy plane in aerial combat. They both are badly wounded during the engagement. Second Lieutenant Chapin Barr becomes the first U. Marine Corps pilot to die in aerial combat.

Chapter 9 : Wingnut Wings Fokker racedaydvl.com (ALB) - Scale Modelling Now

Yes, it served alongside other transport aircraft and, yes, fighters and bombers prosecuted the war at the 'sharp end'. But no aeroplane made such a great contribution to the war in the aerial logistic role and World War Two was as much about logistics as it was about bombing.

Ingalls, USN, France, Navy 20 September While assigned to No. On the homeward journey he shot down a two-seater enemy aeroplane in flames. He further participated in two other low bombing raids and upon still another occasion shot down an enemy kite balloon in flames near Ostend. The airplane was constructed of a wooden framework, with the forward fuselage being covered with aluminum panels and plywood, while the aft fuselage, wings and tail surfaces were covered with fabric. The length of the Camel F. I varied from 18 feet, 6 inches 5. Both upper and lower wings had a span of 28 feet, 0 inches 8. They were separated vertically by 5 feet 1. The single-bay wings were braced with airfoil-shaped streamline wires. The overall height of the Camel also varied with the engine, from 8 feet, 6 inches 2. The heaviest Camel F. It had an empty weight of 1, pounds kilograms. Its gross weight of 1, pounds kilograms. Front view of a Sopwith Camel F. I The first Camel was powered by an air-cooled The best performance came with the Bentley B. This variant had a maximum speed of miles per hour kilometers per hour at 10, feet 3, meters , and It could climb to 6, feet 1, meters in 4 minutes, 35 seconds; to 10, feet 3, meters in 8 minutes, 10 seconds; and 15, feet 4, meters in 15 minutes, 55 seconds. It had a service ceiling of 22, feet 6, meters. Two other Camel variants could reach 24, feet 7, meters. It used aluminum cylinders shrunk on to steel liners, with aluminum pistons. It was rated at horsepower at 1, r. The engine was manufactured by Humber, Ltd. He would later found Bentley Motors, Ltd. These guns were modified for air cooling. Some night fighter variants substituted Lewis machine guns mounted above the upper wing for the Vickers guns. Four 25 pound The instruments and armament of a Sopwith Camel from No. Most of its weight was concentrated far forward, making it unstable, but, at the same time making the fighter highly maneuverable. The rotary engine, with so much of its mass in rotation, caused a torque effect that rolled the airplane to the right to a much greater degree than in airplanes equipped with radial or V-type engines. A skilled pilot could use this to his advantage, but many Camels ended upside down while taking off. By the end of World War I, it was becoming outclassed by newer aircraft, however it was the single most successful fighter of the war, shooting down 1, enemy aircraft. One single fighter, flown by Major William Barker, shot down 46 enemy aircraft, more than any other fighter in history. It is believed that only seven Sopwith Camels still exist. He was Naval Aviator Number Ensign Ingalls was sent to France for duty, 12 September In December , he was detached and sent to the Royal Flying Corps air station at Turnberry, South Ayrshire, Scotland, for training in aerial gunnery. He then underwent squadron formation training at nearby Ayr, Scotland. On 23 March , Ingalls was promoted to the rank of Lieutenant junior grade. On 21 May , Lieutenant j. Ingalls was assigned to the U. On 27 June , Lieutenant j. Ingalls was assigned to the Naval Air Station Dunkerque. He flew combat missions with No. While flying with the th, he was reported to have shot down an observation balloon and a biplane. The records were lost and these claims are considered unconfirmed. While flying with No. His second confirmed victory was a two-place Luftverkehrsgesellschaft m. He shot down a Rumpler C over Ostend, 15 September. VII that he shot down on 20 September was his fifth. Other than the Fokker D. VII, Ingalls shared credit with other pilots for the shoot-downs. Ingalls flew his final combat mission, his sixty-third, on 3 October He was released from active duty 23 December He practiced law for several years before being elected to the state legislature of Ohio in Later, he ran for governor and United States senator. They would have five children: Edith, Jane, Anne, Louise, and David. Going to work in the business sector, Ingalls became vice president and general manager of Pan American Air Ferries, a commercial transport service from the United States to Egypt, and which also transported newly-built military aircraft from the United States via South America, across the South Atlantic Ocean to Africa, and then on to the Middle East. Lieutenant Commander Ingalls was promoted to Commander, U. He was promoted to Captain, 10 June Captain Ingalls took command of U. Naval Air Station 29 now, Daniel K. Captain Ingalls was released from active duty 8 November , but he remained an officer in the Naval Reserve.

Ingalls returned to Pan American World Airways as vice president, and remained in that position until Later, he was president and publisher of the Cincinnati Times-Star newspaper, and a vice president of Taft Broadcasting Company. David Sinton Ingalls, April He retired from the Naval Reserve in February Historic Images Louise Harkness Ingalls died in David Ingalls married his second wife, Frances W. Wragg, 16 February Ingalls is the author of Hero of the Angry Sky: