THE PLANES OF THE

ALBATROS FLUGZERUG WERK

ALBATROS FIGHTERS WERE THE MOST WIDELY USED GERMAN AIRCRAFT OF WWI

BY NORM GOYER

EDITOR'S NOTE:

For those of our readers who may not be familiar with these famous German fighter planes of WWI, the German spelling of its name, "Albatros" is indeed correct, as opposed to the spelling of our American Albatross, Grumman's HU-16.

Model builders have always loved the looks of the Albatros but very few have ever attempted to build one, and that may be because they are quite difficult to finish in a very scale-like configuration. Its exposed Mercedes engine and plywood-covered oval fuselage makes the aircraft much harder to build than the average slab-sided WWI aircraft.

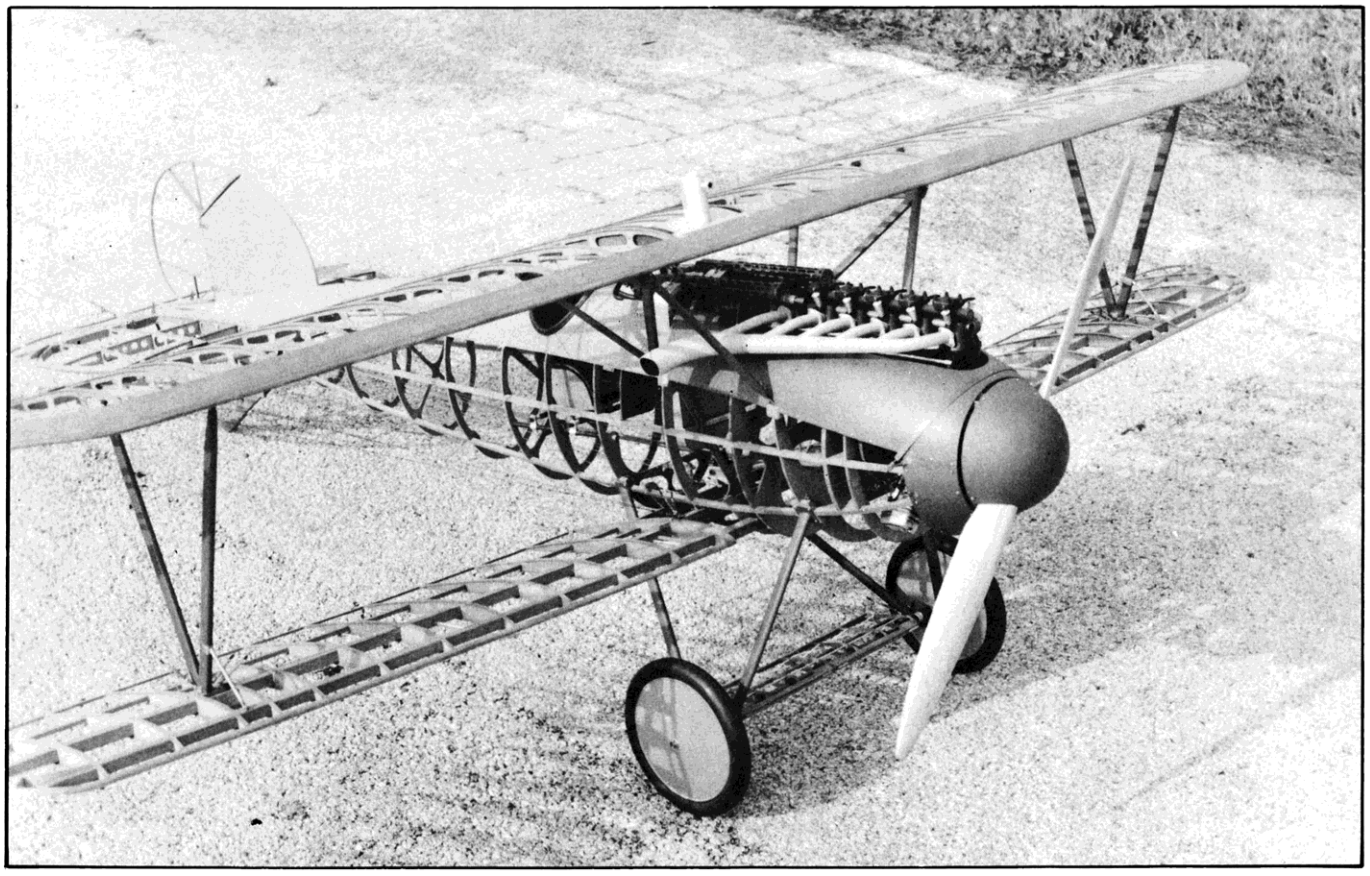
However, this year at the Scale Masters Championships, we were all amazed when the men from Proctor Enterprises brought out their yet-to-be-covered, yet un-tested Albatros D.V and put it on display. Everyone flocked around to admire it, and I do believe that this unusual model was one of the most photographed aircraft at the meet.

The Proctor Albatros is a 1/4 scale, and I mean *really scale* model — even the Mercedes engine comes complete with all visible parts. Every part of its construction is scale, including the fuselage, wings, ribs and operational radiator shutters in the wing; in fact, custom scale wheels were even designed for the aircraft.

Experienced modelers everywhere agree that every Proctor Kit is prepared with great care and professionalism, and their Albatros is no exception. The folks at Proctor say it should be ready for shipping in 1990.

Price of the Proctor Albatros has not yet been fully determined, but will probably be somewhere in the $500 to $700 range. If this seems dear to you, you should remember that a great many man-hours have gone into the designing of this kit, and that there are hundreds of hand-formed parts for which molds were made, in order to manufacture production models in numbers.

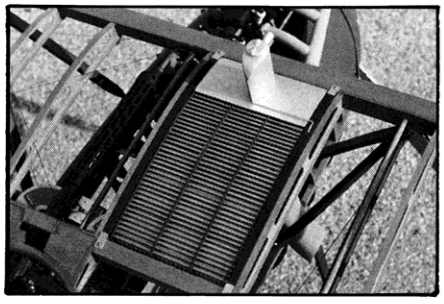
Because the people at Proctor insist on the thorough testing and proving of all



The new Proctor Kit of the Albatros D.Va should be released sometime this year and promises to be an excellent kit.

Included in the kit is a scale Mercedes engine.

Operational radiator shutters are built into the top wing.



its kits, you won't see any advertisements for the Albatros until this has been done to their complete satisfaction, and the aircraft is ready for shipment.

I believe that, during the major scale contest season of 1991, we can look forward to seeing the flights of a large number of the new Proctor Albatros. And it's quite likely we'll see them win some of the top places in those contests.

If you're a scratch builder, Dr. Jim Pepino's great plans for a large scale Albatros can be found in this issue of *Scale R/C Modeler*. You may contact Jim at:

Scale Plans and Photo Service, 3209 Madison Avenue, Greensboro, NC 27403, (919) 292-5239.

Some years ago, Bob Holman designed a schoolyard scale version of the Albatros which would make a nice display model, or might even become a flying R/C scale, what with the new lightweight radio and engines now available. I'm not sure if these plans are available any longer, but you may contact Bob at:

Bob Holman Plans, P.O. Box 741, San Bernardino, CA 92402.

I've had my set of Albatros plans for many years because I've always believed that the Albatros is one of the best-looking aircraft to come out of WWI. I think you'll agree.

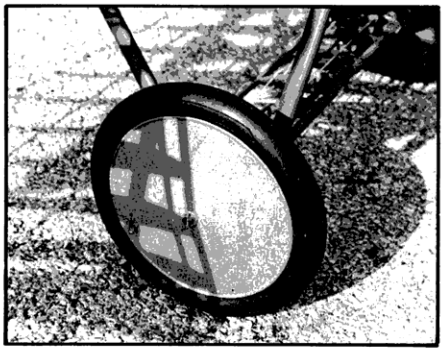
In Europe, as in the United States and many other countries around the world, the development of superior aircraft is owed in great part to a mere handful of aviation pioneers. It was in Germany in 1910, that one of them, Dr. Walter Huth, an aviation enthusiast who personally

owned and flew a French Farman biplane, formed a company and began building airplanes in a factory located in Johannisthal, just outside Berlin.

Because of Dr. Huth's experience with his Farman, it's not surprising that the first airplane built by the Albatros company, the Albatros-Sommer, resembled and followed the Farman format. Then, in 1913, with Ernst Heinkel serving as head of the design team, Albatros began to produce their own original designs. However, Heinkel, who would later go on to bigger and better projects before and during WWII, ran into problems with the owners of Albatros, and was fired by them for alleged aircraft design espionage.

Only two of Heinkel's designs ever saw service in WWI. These first Albatrosen — the early B.I and the B.II — were used in front-line service during the early part of WWI, and later as trainers and observation aircraft, because for the spring of 1915, they were not the best designs.

Previous to this time, the Germans' Fokker Eindekkers, with their outstanding performance and their synchronized machine guns had dominated the fighting over the Western Front. Working valiantly to catch up, France and England



Scale tires and wheels will be available for this and other models of this same era.

hurried feverishly to design a new generation of fighters to compete with the Eindekkers.

Finally, in 1916, the Nieuport 11 and de Havilland D.H.2 fighters appeared and immediately put an end to the superiority of the Eindekkers. Although these Allied aircraft still lacked the synchronized guns of the Fokkers, with their speed and maneuverability, Allied pilots out-fought the Fokkers successfully.

When the famous German Ace, Max Immelmann, proponent of the Eindekker, was killed, it heralded the end of the Fokker "scourge." In their new Nieuport "Bebes," Allied pilots downed almost every German fighter which dared venture into the skies to do battle.

Painfully aware that they were in danger of losing control of the air over the Western Front, Germany realized that changes would have to be made. Aircraft designers quickly attempted to produce more modern fighters, and a better organization of fighter units was formulated. These units were called jadgstaffels, meaning "hunting echelons," and consisted of 18 to 20 aircraft which were deployed into strategic positions.

The first new aircraft to reach the front were Fokker D.IIs and D.IIIs which, unfortunately, were nothing more than biplane versions of the Eindekker. The Halberstadt were little better, but still good enough for the Germans to regain air superiority with them.

In 1914, before the war, Robert Thelen had designed a very streamlined single-seat biplane racer which showed remarkable lines for its day. This design would become the basis for the new Albatros D.I. Along with Thelen, his assistants Schubert and Gnaedig began working on the Albatros D.I during the summer of 1916, striving for speed and power in this fighter, rather than maneuverability. Employing the dependable Mercedes water-cooled, six-cylinder in-line engine of 160 horsepower, the D.I became the first fighter plane in history to be equipped with *two* synchronized machine guns firing through the propeller as standard equipment — reliable 7.92 mm 08/15 Maxims — mounted in front of the pilot.

The wings and tail surfaces of the Albatros D.I were of conventional wood-with-fabric-covering construction, but the tail surfaces were then framed in lightweight steel tubing and covered with fabric.

The fuselage had thin plywood strips wrapped around a wooden skeleton, a technique used in the L.F.G. Roland reconnaissance fighters with some success.

Upper and lower vertical fins were also built into the fuselage structure, with the lower fin supporting the ash tailskid.

A very sleek aircraft, with the only protrusions on the fuselage being its radiators, one attached on each side under the top wing, the new Albatros D.I now provided the Germans a formidable fighter with which to combat the Allies. Now it was up to their pilots to prove the superiority of these new German war planes.

The first group of Albatrosen were assigned to Jadgstaffel 2, commanded by the war hero, ace pilot Hauptmann Oswald Boelcke, who'd made a name for himself flying Fokker Eindekkers. Besides being a skilled pilot, Boelcke was also one of the first aerial tacticians, having written several books on aerial combat, drawing on his own personal flying experiences. These "rule" books became known as the "Dicta Boelcke," and the training advice on their pages was heeded with great respect by pilots on both sides during WWI, and even during WWII.

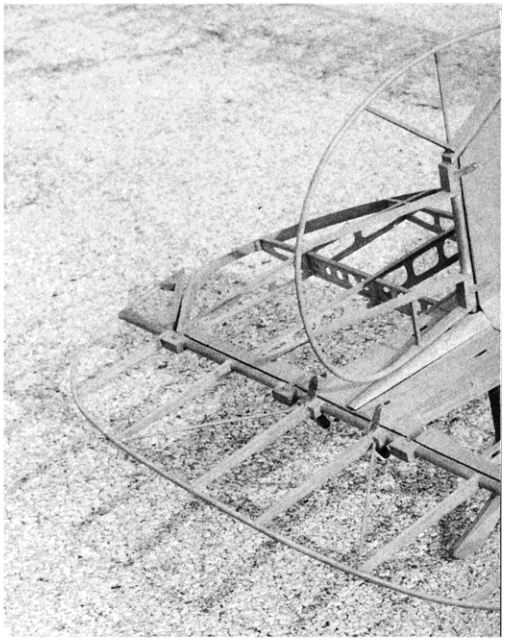
During his illustrious career, Boelcke accumulated a total of 40 victories, but in October of 1916, he was fatally injured while his squadron was engaging in a dogfight with de Havilland D.H. 2s. Pulling up from an unsuccessful attack on one of the English fighters, the landing gear of his wingman's Albatros brushed the upper wing of Boelcke's fighter, and as Boelcke's aircraft spun toward the ground, the damaged wing collapsed and the veteran ace fell to his death. It was rumored by some that the crash occurred because the Albatros' cabane struts hindered the pilot's view of his opponent during evasive maneuvers.

The successor to the D.I was the D.II, and many changes were made in the upper wing mounting position. The cabane struts were changed and lowered, and the fuselage radiators were moved to the center section of the wing. The lowered upper wing allowed the pilot to see aircraft above him.

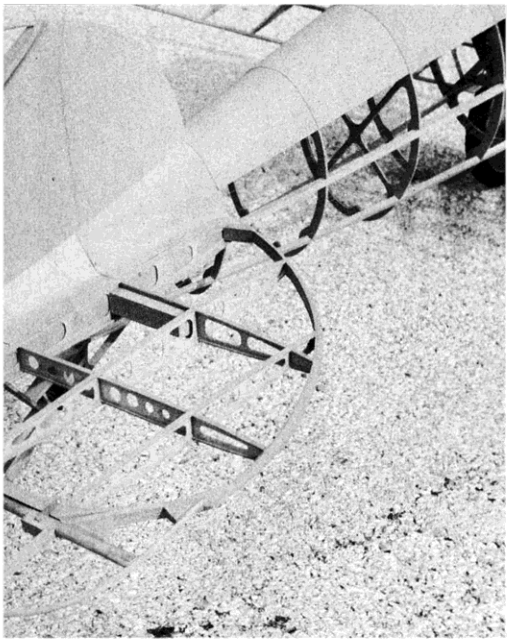
The new D.II was so promising that further production of the D.I was stopped. In January of 1917, there were 214 Albatros D.IIs in service, and air superiority had shifted back to the Germans. Britain's obsolete pusher fighters were no match for the D.IIs and were moved to observation squadrons. Although the D.IIs could not match the maneuverability of the Nieuports, the new German aircraft carried twice the number of guns, and should all else fail, they could easily outrun the Allied fighters.

During one of the most famous dogfights of WWI, Baron Von Richthofen, flying an Albatros D.II came upon Major Lanoe Hawker, the first British ace, in a de Havilland D.H.2. Although Hawker and Richthofen were equally skilled in aerial combat, the D.H. II was no match for the superior D.II and, after a brief clash, Hunter was killed. By the end of January 1917, the Baron had 16 victories to his credit.

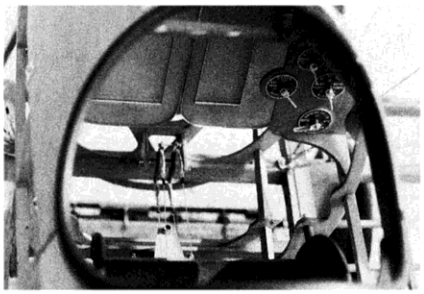
The same month also saw the new Albatros III make its appearance. The design changes had their start with the French Nieuport 17 which was becoming very effective against the German Albatrosen because of its very narrow and short lower wing. This afforded added visibility from the cockpit downward. The Nieuport also had "V" wing struts which were attached to its single lower wing spar.



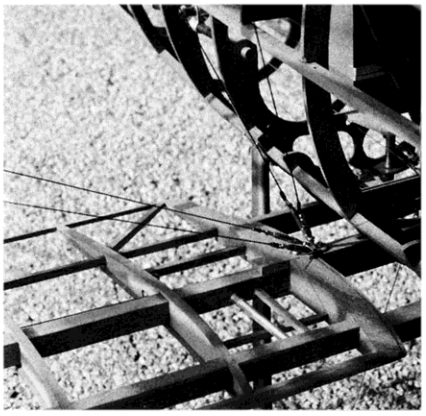
The tail feathers are built-up in a very scale-like manner, including the "sprung" tailskid.

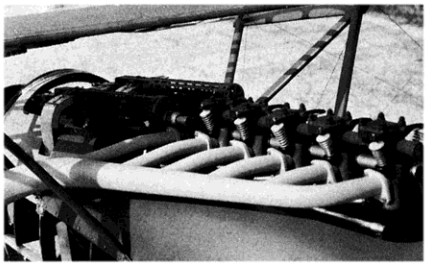


The kit will also feature scale flying wire attach points.



The cockpit features scale instruments and controls.





These are some of the goodies in the kit: Engine, guns, and a really neat scale exhaust system.

Several Nieuport 17s which had been captured by the Germans were quickly turned over to all the major German aircraft manufacturers in order that they might copy the successful wing concept of that French fighter.

So what else is new? Even then, if an adversary couldn't come up with an effective idea, they just copied a rival's design.

Albatros engineers did exactly that, and the D.III was born. Designer Thelen drew completely new lower wings for the Albatros, largely following the style of the Nieuport wing cellule, then married the new wings to the existing Albatros D.II fuselage. To these airframe improvements, a new Mercedes 170-hp engine was installed, and the fighter's maneuverability was also improved.

The resulting very sleek Albatros D.III was an instant success. It weighed only slightly less than the D.I and D.II, and although it was no faster, still having a top speed of 109 mph, time-to-climb was another story: the D.III could reach 3,280 feet in 3.250 minutes, a feat which had taken the D.II over 5.5 minutes to accomplish. The new D.III was truly a great fighter, with these exceptions:

Its top-mounted radiator was an easy target for Allied bullets, and when hit by machine gun fire, the scalding water which sprayed out of the resulting bullet holes would practically blind the pilot in the seat behind it.

The Germans soon learned that when they copied the desirable features of the Nieuport, the new design also carried with it some of its negative characteristics. This included the lower wing flutter which occurred when the Nieuport made a long, high-speed dive, and held it for too long a period. During this maneuver, the wing would first begin to flutter, and then fail completely. Most German fighter pilots were aware of this weakness because when they fought Nieuports, they would try to chase them down as they dove, then would destroy the aircraft as it became uncontrollable.

Well, the new, re-designed Albatros did exactly the same thing, but German pilots loved the newly re-designed Albatros so much, they learned to overcome its weaknesses. Besides, there weren't any other fighters available to them at that time except for the Halberstadt D.II which was far inferior in performance to the Albatros.

In April of 1917, the brutal strength of Germany's new airpower was felt by the British as they experienced a month of severe losses and extremely low morale in their darkest hour of the air war over the Western Front. It came to be known "Bloody April." During this period, the Germans shot down 151 Allied aircraft, with a loss of only 30 of their own planes — a negative ratio of five-to-one.

The tides of war are forever shifting, and so they did then. By the end of April 1917, the first modern Allied fighters appeared, with many of the new SE-5A and the new French Spad VII going to English Squadrons. In addition, the British Navy appeared, flying their Sopwith Triplanes. Captain Raymond Collishow's "Black Flight," Number 10 Naval Squadron, were especially effective against Richthofen's pilots.

When the new Allied fighters appeared, Albatros engineers produced a new fighter, the D.IV, but they had many problems with the prototype. Its design had reverted to a two-spar lower wing and parallel wing struts which solved the lower wing problem. The D.IV was powered with an experimental geared version of the 160-hp Mercedes, completely cowled inside the fuselage. In addition, the tail chord was reduced, the triangular rudder balance was replaced with a rectangular one, and the fuselage underfin was moved aft to the extreme end of the fuselage. The new D.IV was a good-looking airplane but because of the lack of extra performance, plus problems with the geared Mercedes, only one D.IV was ever built.

Next in line was the Albatros D.V, and this new design was even more streamlined than any of the previous models. The fuselage was now perfectly oval, without the slab sides of the previous models. The wings were the same design as the D.III, with the exception of the routing of the aileron cables. For several months, the D.III was built right alongside the new D.V and, by July 1917, there were 303 D.IIIs flying along with the 216 D.Vs.

The last Albatros to see action in WWI was the D.Va. The new aircraft featured a

strengthened airframe and new empty weight of 1515 pounds, about twenty pounds more than the D.V. A new Mercedes of 180 hp had been developed and installed in the D.Va model, along with the wings from the D.VIII model. Wings of the D.III and the D.Va model were completely interchangeable. However, if the pilots expected great things from the new D.Va, they were bound to be disappointed, because its performance was no better than that of the D.III. In fact, the same wing problems which had plagued the earlier model proved to be even more severe in the D.Va because of its extra weight and resulting higher diving speed.

One lucky German pilot, Leutnant Hans Joachim von Hippel, learned about this problem the hard way when he was unexpectedly engaged in a dogfight with a S.E. 5A at 13,000 feet. Von Hippel dove widely to evade his pursuer and, after diving more than 3,500 feet, he felt a sudden, devastating shock. Glancing away from his attacker, von Hippel saw that the fighter's left lower wing had fractured and torn away from the aircraft. Even as he watched, the Leutnant's plane entered a wild spin, but Himmel was able to gain some control and, after shutting the engine down, managed a semblance of a glide to a field where the aircraft flipped on landing. Miraculously, Himmel was uninjured, and he later helped searchers locate his aircraft's lower wing — over 12 miles away from its landing field.

This kind of problem had plagued Nieuports and Albatrosen for some time. Engineers finally determined that it wasn't lack of strength in the wing because it had stood up very well in static load tests; the failure was caused by the erroneous location of the main spar in the wing which, after a prolonged dive, would set up destructive vibrations or flutter which eventually destroyed the aircraft.

In an attempt to remedy the problem, a small auxiliary strut was attached from the front "V" strut to the leading edge of the wing, to control the flexing. Even this drastic fix failed to eliminate the problem, however, and pilots were warned to avoid long, high-speed dives altogether, if they were to survive.

The Albatros D.V and the D.Va were the most numerous of any aircraft produced during WWI — veritable workhorses of the German Air Force. In fact, at one point, every single German jadgstaffel was staffed with Albatrosen. In May of 1918, there were 1,117 Albatros D.VIIIs, D.Vs and D.Vas in service over the Western Front.

In the hands of a skilled pilot, the Albatros was relatively easy to handle and, although it did have a tendency to spin, it could be recovered quite readily. Among the German aces who successfully flew the Albatros during their careers were von Schleich, Loerzer, von Tutschek, both Richthofens and Hermann Goering (of WWII notoriety).

After the Armistice, the Albatros factory continued to design fighter planes with the hope of gaining government contracts. Other countries, including Austria, also built Albatrosen under license from the German factory. Many of these aircraft were sold to foreign countries, becoming part of their small air forces, and serving in peacetime for many years afterward.

The Albatrosses were best known for controlling the skies over the Western Front during the early years of WWI. Although they were eventually overshadowed by Fokker Triplanes and the great Fokker D-VII, the elegantly sculptured Albatrosses were still considered by their pilots to be the best fighters of the Imperial German Air Force of WWI. ●