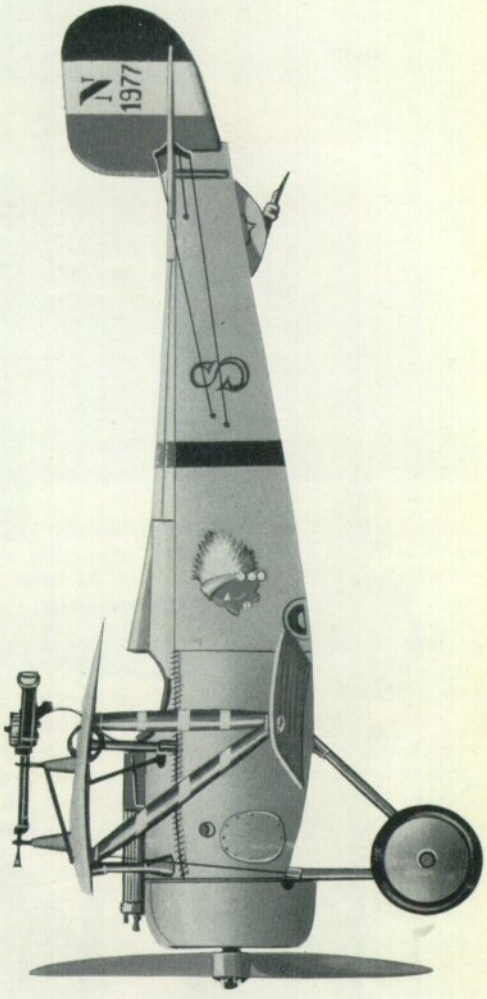
PROFILE
PUBLICATIONS

The Nieuport 17



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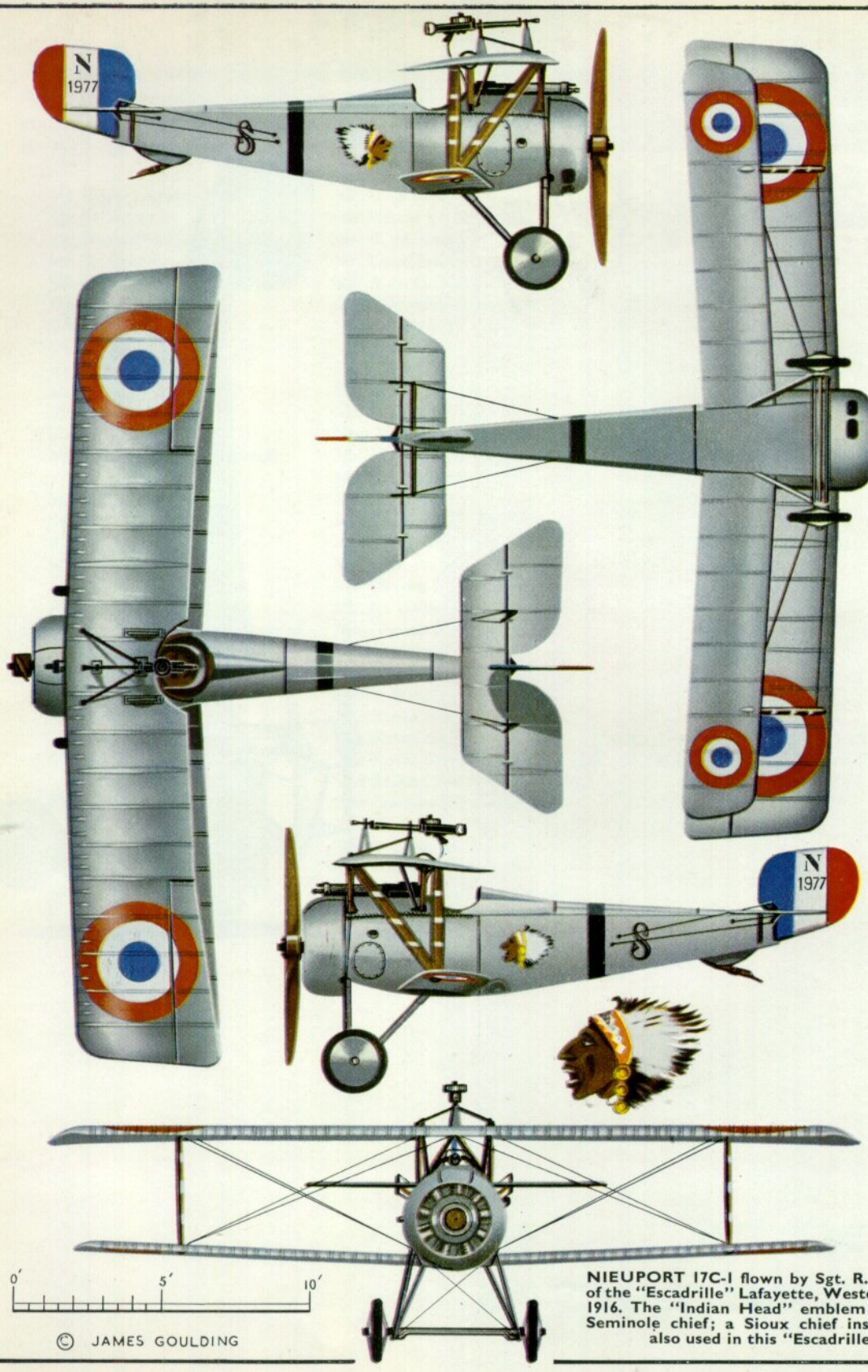
TWO SHILLINGS



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NIEUPORT 17C-1 flown by Sgt. R. Soubiran of the "Escadrille" Lafayette, Western Front, 1916. The "Indian Head" emblem depicts a Seminole chief; a Sioux chief insignia was also used in this "Escadrille."

The Nieuport 17

by C. F. Andrews

Three-quarter front view of French Nieuport 17 (Photo: Musée de l'Air)

Most distinctive of all the single-seat fighters in W.W.I was the sesquiplane (one-and-a-half-plane) Nieuport. Until the design was extensively copied by the Germans, the little French aeroplane was easily recognisable to friend and foe alike. Before the arrival of the SPAD the Nieuport held the stage as the number one French fighter and was a valuable foil in the hands of the Allied airmen in general, for it was used also by the British, Italian, American and Russian air services. Nearly all the French air aces fought in Nieuports before the SPADS arrived and the names of Albert Ball and Billy Bishop were almost synonymous with Nieuport, to highlight only two of the leading British aces.

The conception of the Nieuport sesquiplane design is generally attributed to Franz Schneider (not Jacques Schneider, the seaplane contest originator), who, long before W.W.I, suggested such a layout while he was designer to the Société Anonyme des Establissement Nieuport, a company founded in 1909 by Edouard de Nieuport at Issy-les Moulineaux (Seine) to make monoplanes.* The idea was to effect the best compromise between the monoplane and the biplane configurations, both of which had advantages at that time. Schneider, a Swiss engineer, later went to Germany to design L.V.G. biplanes and is reputed to have taken Nieuport project drawings and calculations with him, which later may have influenced the German air authorities to encourage the production of copies of the Nieuport, such as the Siemens-Schuckert D.1.

However true or false the legend concerning the origin of the sesquiplane idea (the large top wing with the smaller bottom wing of lesser span and chord) the fact was that in January 1914 the Nieuport Company engaged Gustave Delage, a naval engineer, as chief designer and he at once started to develop the one-and-a-half plane conception through a number of variations and types.

** A Nieuport monoplane won the French Military Aircraft Competition of 1911, reaching a speed of 117 km/hr. over a 300 km. course with 300 kilos. payload.*

Until the advent of the Sopwith Tabloid, Farnborough's B.S.1, the Bristol Scout and similar little biplanes, most of the designs in the small single or two-seat class of aeroplane prior to 1914 had been monoplanes. The pattern had been largely determined by the success of the Blériot tractor monoplane, and the fact that such a light and simple airframe structure could be designed to take the lightweight rotary air-cooled engines being produced in France.

Greater powers and weights as development proceeded led to structural failures in the air, largely because of the empirical methods used in aircraft design at that time, and the monoplane became suspect. In Britain an official embargo was imposed on the type for new military aircraft and, as a side issue, the monoplane failures also led to the founding of properly organised aeronautical inspection, which to this day remains one of the corner stones of all aviation, military and civil.

There was no doubt that the biplane had superior strength to that of the monoplane, its structure being designed by using stressing formulae familiar to civil engineers in bridge construction, for example. The monoplane was much more difficult to brace satisfactorily, particularly in regard to the acute angles of the flying, landing and drag wires. Various expedients were employed such as king posts and so on, but the problems were much more easily solved by the adoption of the biplane trussed cellule, as the wing system of that type was named. For a given wing area, the biplane offered a more acceptable wing span of structural advantage.

Therefore the scaled-down tractor biplane appealed to British designers as the best way to produce a speedy aeroplane crewed by a pilot only, for "scouting" purposes, that is, rapid flights for reconnaissance patrols such as those formerly undertaken by the cavalry. When the Sopwith Tabloid burst upon the scene with a top speed of 100 m.p.h. and a landing speed of 40 m.p.h. it was at once evident that the small

Capt. W. A. (Billy) Bishop, V.C., D.S.O., M.C., beside his famous Nieuport 17 B1566 *in which he gained so many victories.*
(Photo: Imperial War Museum)

biplane would oust the monoplane for this purpose, although the practice of arming such a type for offensive duties had not then materialised. Positive proof was forthcoming in the second contest for the Schneider Trophy, held in 1914, when the Sopwith Tabloid seaplane romped home in front of the heavier and more cumbersome French monoplanes.

From then on the respective claims of the monoplane and biplane became a controversial issue. Naturally the French were loath to surrender the initiative they had taken with the Blériot and similar types powered with Gnome rotary engines, both products of French genius. At the outbreak of W.W.I, France was undoubtedly the leading air power, although the Germans were fast making up the leeway and held the world altitude and endurance records with large biplanes, powered with fixed water-cooled engines developed from those used in automobile engineering.

EARLY NIEUPORT SESQUIPLANES

As Nieuport's new designer, Delage adopted the latent sesquiplane configuration as a means of satisfying both the monoplane and the biplane protagonists and his first design to appear, the Type 10 two-seat tractor, presented a neat design of military appeal. The whole body and tail closely resembled those of the pre-War Nieuport monoplanes. There were two versions, reversing the observer's position, and in one sub-type, AV, a light Hotchkiss machine gun was mounted on the front spar of the top wing and operated through a hole in the centre section by the observer from the front seat.

Nieuport 10s were delivered to the French *Escadrilles* in the summer of 1915 and thereafter Nieuports of one type or another were in action throughout the War. Type 10 was somewhat underpowered with the 80 h.p. Gnome or Le Rhône rotary engines and it was superseded by Type 12 with the 110 h.p. or 130 h.p. Clerget rotary. This was also a two-seat fighter and some were built by Beardmores in Scotland for the R.F.C.

Type 11 Nieuport, a diminutive single-seat fighter, followed. This was a latent project, originally intended for the Gordon Bennett speed race, powered with the 80 h.p. Gnome rotary. This attractive little machine with an equally appealing performance for its day, also entered French service in the summer of 1915 and quickly earned for itself the nickname "*Bébé*" (Baby). It was armed with a stripped Lewis gun, on a top wing mounting, firing over the propeller and was used in numbers by the R.N.A.S. in France and the Dardanelles. The Nieuport 16 was of the same overall dimensions but was powered with the 110 h.p. Le Rhône rotary. Both the 11 and the 16 had weaknesses, the former tending to break up in the air and latter being nose heavy.

A Nieuport 17 captured by Jasta *29 and repainted in German markings of 1917.* (Photo: H. J. Nowarra)

A French Nieuport 17 with a pennant insignia, probably of Escadrille N.97, *on an aerodrome on the Somme battlefront in 1916.* (Photo: H. J. Nowarra)

A French Nieuport 17 with fuselage-mounted Vickers gun and experimental pitot "yawmeter". (Photo: Imperial War Museum)

THE TYPE 17*

Then came Type 17, the "15 square metre" Nieuport, most famous of the family. It was larger and stronger and powered with the 110-h.p. Le Rhône or 130-h.p. Clerget. With the latter engine it was designated the Nieuport 17*bis*. Steps were taken to strengthen the single spar of the bottom "half-plane" and its attachments and to stiffen the structure against torsion, sometimes with an auxiliary wing strut. The sesquiplane configuration was originated to compromise between the low drag of the monoplane with the strength characteristics of the trussed biplane, but the high aspect ratio bottom wing with its single spar and one point attachments was prone to twist under heavy flight loads. British-flown Nieuports were in fact strengthened by modifications introduced by No. 2 Aeroplane Supply Depot.

* *Although French official documentation used the Roman numerals XVII, the Arabic 17 has been adopted in this* Profile *as conforming to British practice, the Nieuport 17C-1 being extensively flown by the R.F.C. as related in this* Profile.

The Nieuport 17 N1895 *on which Charles Nungesser scored so many of his victories and bearing his personal "Death's Head" insignia. Note the red, white and blue diagonal stripes on the top wing adopted by Nungesser after he was "jumped" by a British aircraft on 26th June 1917 and was forced to shoot it down. No doubt the "Death's Head" had been responsible.*
(Photo: Musée de l'Air)

Charles Nungesser with his famous N1895 *converted from Type 17 to Type 24*bis. *Note the streamlined fuselage. The engine of this conversion was the British Bentley rotary A.R.1 of 130 h.p., a very rare combination.* (Photo: Musée de l'Air)

Apart from the advantage of the sesquiplane wing system in providing a compromise between monoplane and biplane layouts, the configuration also brought hidden bonuses. The most obvious was the improvement of the pilot's view, downwards and forwards and indeed ahead, as the thin section top wing was in line with the pilot's eye level. Less apparent was aerodynamic gain in the relatively wide gap between upper and lower wings with the consequent improvement of the lift/drag ratio through the reduction of interplane interference.

The conception of the Nieuport was admirable for its duties as a fighting scout. The heaviest components were concentrated around the major axis, the shallow rotary engine contributing much to this feature, with fuel and oil tanks, pilot and armament all close up in the centre of the machine. In consequence the Nieuport was highly manœuvrable and had a good performance especially in the climb. Type 17 appeared on the Western Front in May 1916 and at once made its presence felt, particularly when flown by close action fighter pilots like Ball and Nungesser, as related later on. The accent then was all on manœuvrability in air fighting and when massive "dog fights" arrived with the adoption of large specialist fighter formations on both sides, the Nieuport still held its own, even more against more powerful antagonists with better performance.

There was one other feature of the British Nieuports which proved to have a greater use than at first intended. This was the Lewis machine gun mounted on the top plane, placed there before the introduction of satisfactory synchronising gear to enable guns to fire through a tractor propeller. A sliding rail mounting, devised by Sgt. Foster of No. 11 Squadron, enabled the pilot to pull the gun down to aim it upwards and so fire into the unprotected "belly" of an enemy aircraft flying overhead. This method of execution was

A captured Nieuport 17 of the R.F.C. with German markings. (Photo: Imperial War Museum)

exploited to the full first by Ball and then by Bishop, McCudden and other aces. So deadly was this form of attack that the Foster mounting was incorporated in the S.E.5, in which it proved to be highly successful as that type provided a stable gun platform, superior as such to contemporary rotary engined fighters. In later production Nieuport 17s a single Vickers gun firing through the propeller by synchronising gear replaced the overhead Lewis. In the French and other Allied forces the Vickers was mounted centrally but in those used by the R.F.C. it was located on the starboard side of the front fuselage decking.

NIEUPORT CONSTRUCTION

All the Nieuport sesquiplane designs followed French constructional methods in vogue during the early part of W.W.I. The fuselage was a rectangular section girder, diagonally braced with wire, with steel plate socket joints and wiring plates. Forward, the wooden longerons were of ash changing in the rear fuselage aft of the cockpit to spruce, which was also used for the vertical struts and cross-members. Towards the rear the fuselage section became trapezoidal, the bottom being narrower than the top. The top decking behind the pilot was faired turtle-back fashion with light formers and longitudinal stringers.

The front fuselage comprised an assembly of steel tubes. The engine bearer was a fabricated heavy gauge steel plate, of a shape corresponding to the rectangular cross-section of the fuselage girder and lightened by recesses which left the metal along the lines of maximum load. From this bearer the engine was overhung without the front support which characterised the early Nieuport monoplanes and the Type 10. The engine cowling was of aluminium with strengthening ribs and had two holes in the lower starboard side for ventilation and exhaust discharge. Curved side fairings also of aluminium merged the circular form of the cowling into the slab-sided fuselage. Large oval access panels were fitted into these side fairings. A faired headrest was fitted behind the pilot, a feature also continued in the S.E.5. From the cockpit rearwards the fuselage was fabric covered and, nearing the vertical stern post, carefully-shaped plywood panels reinforced the structure at that point.

The structure of both upper and lower wings was unusual. The spars of the upper wing were widely spaced, the front being set close behind the leading edge, while the rear was set vertically over the single spar of the lower wing. This arrangement gave the

Another captured R.F.C. Nieuport 17 in German hands during the Battle of Arras, April–May 1917. Note wing-mounted pitot. (Photo: Imperial War Museum)

Three-quarter rear view of Nieuport 17 before delivery to a French Escadrille. (Photo: Musée de l'Air)

front interplane struts a good angle for load carrying and dispensed with inter-strut drag wires. The effect was to give a high degree of stagger so reducing interference between top and bottom wings. With a single pivot joint at the apex of the "vee" struts and a ball and socket joint attaching the wing root to the fuselage, the bottom wing on either side was adjustable on the ground for incidence, which accounts for the difference in incidence angle quoted by varying authorities. This feature was useful in rigging the aircraft for varying loads and was a step towards the variable incidence tailplane, as introduced in the S.E.5.

The box wing spars were of spindled spruce channels, glued along their vertical centre line with an "I" section hardwood key. At the points of strut and root attachment and at compression rib stations the spar had internal wooden-filler reinforcing, to avoid crushing by the metal fittings and to compensate for weakening by bolt and screw holes. The steel tube centre-section struts were vertical at the front and an inverted "vee" arrangement at the rear. The interplane struts were of streamline section spruce, bound at equal intervals for added strength as shown in the photographs.

The wing ribs had ash flanges and limewood webs, suitably lightened with cut-outs. The leading and trailing edges of the wings were spruce strips including the trailing edges of the ailerons, the chord of which increased towards the tips to increase their efficiency. They were fitted to the top wing only and were mounted on a shaft of steel tube at their leading edges. The rocking of this shaft on either side actuated the ailerons and was accomplished by a system of push-pull rods and hinges. The peculiar heart-shaped quadrants at the rear of the centre section were the links between the horizontal aileron shafts running right along the back of the rear spar and the vertical rods, operated at their bottom ends through bell cranks and horizontal rods to the control column. Elevator and rudder control was by the conventional cable and pulley.

The tail surfaces were fabricated from light steel tubing with pinned and brazed joints and like the wings and rear fuselage were fabric covered. The tail skid was a flat, slightly curved steel spring mounted on a wooden shoe which was pivoted on a finely streamlined projection, under the fuselage, closely resembling in miniature the "bump" protectors fitted to modern aircraft. The undercarriage cross member between the "vee" legs, made from streamlined drawn-aluminium tube, was an aluminium channel which held a steel tube axle sprung at either end by rubber cord shock absorbers.

This description of Nieuport construction is attributable to the detailed reports and complete drawings prepared by the German air authorities from captured specimens and published in various technical journals. In consequence it has been possible to construct almost perfect replicas of the Type 17. So much attention was paid to the sesquiplane configuration by the Germans, because of its great success in the Nieuport designs, that in addition to the Siemens D.1 copy, which went into production and action (in France and Russia) the Albatros, Euler and Fokker companies also were given captured Nieuports from which to prepare similar designs. The Roland and L.V.G. concerns also exploited the sesquiplane layout in experimental fighters.

The Siemens-Schuckert D.1 and similar designs were not particularly successful but the Albatros

A most interesting example of a French Nieuport 17 mounting two Vickers guns on the front fuselage decking and two Lewis guns on the top centre section. The propeller spinner is similar to that used by Nungesser on his Nieuports. The engine of this variant was probably the more powerful 130 h.p. Clerget.
(Photo: H. J. Nowarra)

Another French Nieuport 17 with a lion's head insignia, later the emblem of Escadrille *SPA 162.* (Photo: P. L. Gray)

D.III and D.V. with fixed water-cooled engines were made and used in large numbers by the Germans. The S.E.6 project design, intended by Farnborough to follow the S.E.5, embodied the sesquiplane layout and this was reflected in the Armstrong-Whitworth Siskin, in the original Siddeley design of which Major F. M. Green, former chief engineer of the Royal Aircraft Factory, played a large part.

Later H. P. Folland and Capt. Frank Barnwell exploited the smaller bottom plane in their fighters, the Gloster Grebe and Gamecock and the Bristol Bulldog respectively, to introduce differential aerofoil sections top and bottom, so improving the stall and high speed characteristics of small high speed biplanes, apart from those desirables already stated in connection with the Nieuport designs.

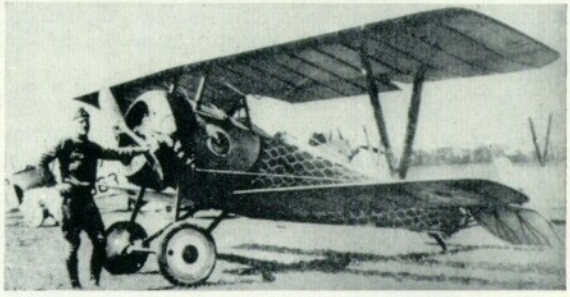
THE NIEUPORT IN ACTION

The Nieuport 17 entered service on 2nd May 1916* with the French *Escadrille* N.57 about the same time as the D.H.2 pusher fighter was being delivered in quantity to the R.F.C. Squadrons. These two single-seaters were between them mainly responsible for the end of the notorious Fokker "scourge", which had caused so much destruction to Allied reconnaissance aircraft in 1915 and so much bitter political controversy in Britain, leading to the drastic reorganisation of the higher command and of the aircraft procurement system. Some Nieuport 17s were supplied at the same time to the British forces and from then on this able little fighter contributed a great deal in the struggle for mastery of the skies over the Western Front, particularly in 1916 before the advent of the SPAD VIIs and the S.E.5s.

This new situation is revealed in H. A. Jones' official history "The War in the Air" in the following terms.

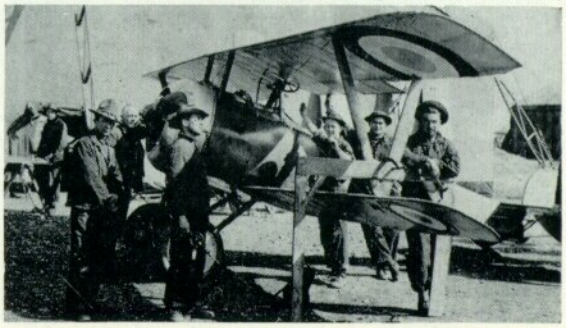
> "While our pushers handled with skill and determination were subduing the Fokkers the French produced a very effective fighting scout. This was the small single-seater Nieuport Scout (110 horse-power Le Rhône engine) armed with a Lewis gun fired over the top plane by means of a Bowden cable. Its performance was superior to that of any contemporary fighting aeroplane. It could reach 10,000 ft. in 10 and a half minutes and was 10 miles an hour faster than the best aeroplane of the R.F.C. The first Nieuports were received by the Flying Corps in France in March 1916* and were attached to Nos. 1 and 11 Squadrons. It was on this type of aeroplane that the first of our great fighting pilots, Albert Ball, had his early successes. His Nieuport came to be feared by enemy pilots and may be said to have been the spearhead of the achievement of the Flying Corps over the Somme . . .
>
> "On May 7th he was transferred to No. 11 Squadron to fly the new Nieuport Scout and on the 29th he had the first of his long list of successes when he shot down two German machines."

At the height of his success with the Nieuport 17, Capt. Ball visited the Royal Aircraft Factory at Farnborough to see the first S.E.5s. He is remembered by the author of this *Profile*, who was there, as a striking personality with a shock of black hair and penetrating eyes. The S.E.5 eventually replaced the



A bizarre American Nieuport 17. In the original photograph the American star can be detected under the bottom wing. (Photo: H. J. Nowarra)

A Nieuport 17 under repair at Field No. 7, American Aviation School at Isseudon in May 1918. (Photo: Imperial War Museum)



** Date given in French official records. Compare date given in British official history, as quoted, which must refer to a Type II.*

A French Type 17 with an unidentified swallow insignia. (Photo: P. L. Gray)

Nieuport in British Squadrons. It was due to Ball's assessment during that visit that the Nieuport top plane gun mounting was in fact firmly established in the S.E.5 and he made other extremely valuable suggestions which resulted (as related by J. M. Bruce in the relevant *Profile* No. 1), in the improved S.E.5a.

The story of Albert Ball's decisive contribution to the restoring of the faith of the R.F.C. and the British aircraft industry after the débâcle of the B.E.2cs is told by R. H. Kiernan in his book "Captain Albert Ball, V.C., D.S.O." This was undoubtedly one of the most crucial moments in the whole history of British air power and one that had permanent effects. The Nieuport played its part in providing the means whereby this great airman, with his opposite number on the French side, Guynemer, countered the tremendous advantage gained by the Germans with their Fokker tractor monoplane and its synchronised machine gun, flown by Immelmann and Boelke, during the harrowing days of 1915.

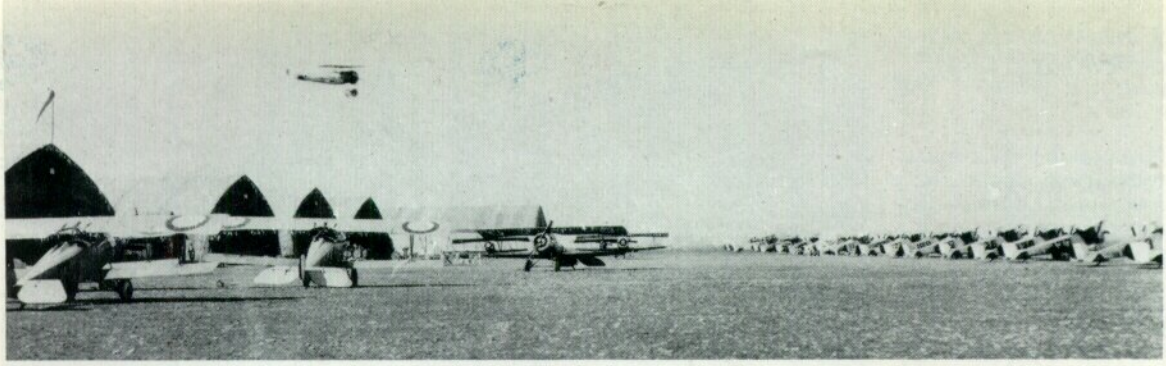
Kiernan says of Ball's service in France: "The Nieuport Scout became Ball's favourite weapon almost up to the time of his death and with it he was to win the great measure of his fame. It was a pleasing sight to the eyes, with its small, neat, compact build and its silvery colour."

A captured French Nieuport 17 with flaming torch insignia being inspected by German soldiers. (Photo: H. J. Nowarra)

A Russian Nieuport 17 at Kiev on the Eastern Front in 1917. Note the prolific marking with Russian type roundels. (Photo: H. J. Nowarra)

From August to October 1916 Albert Ball fought over the Battle of the Somme in his Nieuport 17 and in those few weeks rose from the comparative obscurity of a dashing fighter pilot to the dizzy heights of a famous ace. During this period, in 49 recorded combats, his official record was 10 enemy aircraft destroyed, forced to land 20, out of control 1 and rated as indecisive 18, figures which in their cautious assessment probably meant his victories were in reality greater, as confirmation had to be obtained by independent witnesses, not easy in a battle. In his final tally of 44 victories, Ball no doubt achieved many more on the Nieuport for he was always alternating between that type and the S.E.5 during his last spell of air fighting in 1917, with No. 56 Squadron. Ball was lost in a mysterious action on 7th May 1917 at a time when William Avery Bishop, a Canadian, was just beginning to establish his reputation as an outstanding fighter pilot on Nieuport 17s in No. 60 Squadron, R.F.C. when his tally of victories was already up to 20. Usually flying Nieuport *B1566*, Bishop wrought havoc among enemy aircraft even attacking them on their own airfields, as when early on the morning of 2nd June 1917 he destroyed three as they were attempting to take off and severely damaged another, his own aircraft being riddled with bullet holes from ground defences. This lone feat brought him the Victoria Cross. Bishop continued to fight in his Nieuport until No. 60 were re-equipped with S.E.5as at the end of July, by which time his score had risen to over 40 victories.

The Nieuport 17 was also the mount of other leading British fighter pilots on which they scored their first victories. Until the arrival of the S.E.5as in the late summer of 1917, Nos. 1, 29, 32, 40 and 60 Squadrons of the R.F.C. were equipped solely with the French type during the protracted Battle of Arras and No. 6 Squadron, R.N.A.S. attached to the R.F.C., also had Nieuport 17s. During the battle much use was made of them to make low level attacks on enemy kite balloons used for artillery spotting. It was in one of those sorties, on 2nd May 1917, that the tactics of



The American Aviation School at Isseudon in March 1918, completely equipped with Nieuport 17s. (Photo: Imperial War Museum)

contour chasing and hedge hopping to avoid detection were first introduced by Nieuport 17s of No. 40 Squadron. On 11th May in the same battle, Nieuports of No. 60 with F.E.2bs of No. 11 Squadron carried out a massed ground attack with their machine guns on German infantry entrenched on both sides of the River Scarpe. Nieuport 17s were loaned by French forces in Macedonia to the R.F.C. operating in that theatre of W.W.I.

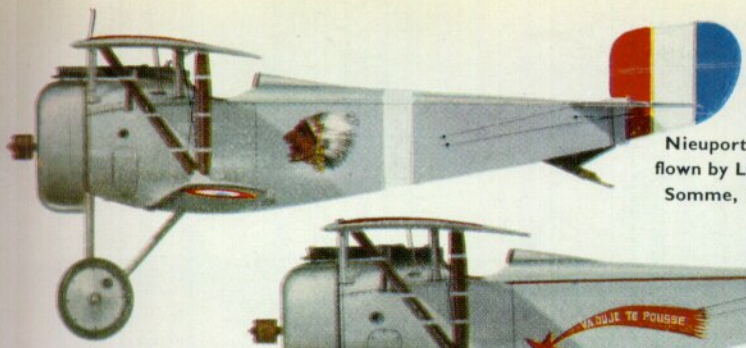
No French fighter pilot achieved quite the distinction on the Nieuport 17 as that achieved by Ball and Bishop. The SPAD replaced the Nieuport in the French *Escadrilles* at least six months before the S.E.5s and S.E.5as took over in the R.F.C. Squadrons and combat reports from official French sources generally referred to Nieuports without any particular Type being isolated. Type 11 Bébés were still in use alongside the Type 17s until the massive introduction of SPADS and only by careful deduction can it be ascertained exactly what victories can be ascribed to the Type 17.

Ball's opposite number on the French side, Georges Guynemer, flew successively the Morane Saulnier "Bullet" monoplane, Nieuport 11 and 17, SPAD VII and the SPAD XIII. It seems fairly clear that when he received his first decoration in June 1917 many of his 40 or so victories up to that date had in fact been scored when flying a Nieuport 17 in *Escadrille* N.3 of the famous *Cigognes* (Stork) fighter group, before that unit became SPA.3 requipped with SPAD VIIs.

Réné Fonck, the highest scoring French ace, joined the SPAD *Cigognes* group direct from Caudron G.IVs and so had no operational service in Nieuports but Charles Nungesser certainly scored most of his 45 victories on the Nieuport 17 and its streamlined variant, Type 24*bis* with the 130 h.p. Le Rhône engine. Other French aces who scored heavily on Nieuports during their early combats included Maurice Boyau, Armand Pinsard, Réné Dorne, Gabriel Guérin, Alfred Duellin and the well-known pre-W.W.I pilot, Jean Navarre.

Extensive use was made of Nieuports by the Belgians and the Italians, along with other French aircraft in the fighter class, namely SPAD and Hanriot. The Belgians had to rely on Allied supplies, their country being in enemy occupation and Italian designs of military aircraft hardly matched up to operational requirements, except perhaps in the Caproni large bombers. Most of the Italian-flown Nieuports were built by Macchi and were the equipment of a number

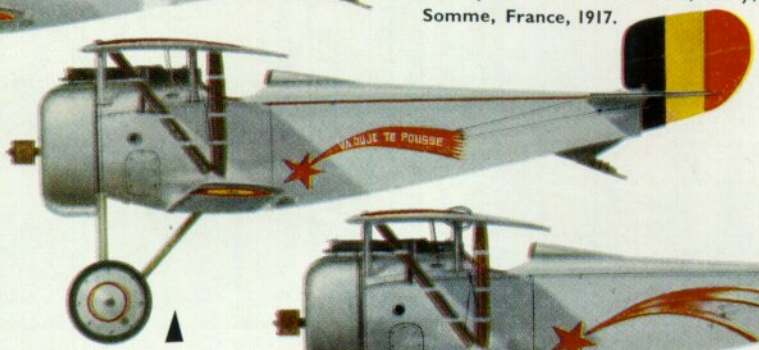
A line-up of Italian Nieuports in 1917 of Types 11 (Bébé) and 17. The latter may be distinguished by the pilot's head fairing, as on the nearest aircraft. (Photo: Imperial War Museum)



Wing marking, 6 positions.

Nieuport N.17, Escadrille Lafayette, flown by Lt. Willis B. Haviland, Sachy, Somme, France, 1917.

Sioux insignia, Escadrille Lafayette. Used from April 1917.

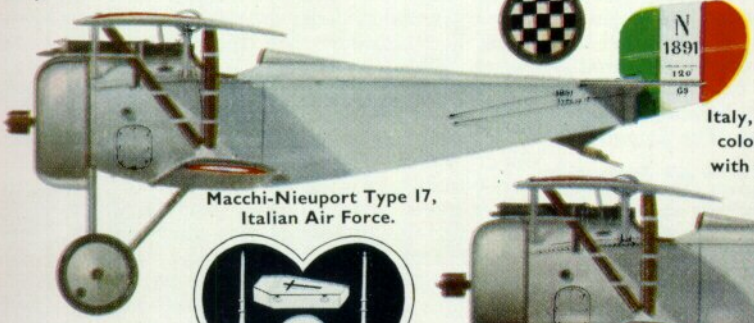


Seminole insignia, Escadrille Lafayette. Used till April 1917.

Nieuport N.17, No. 1 (Comet) Squadron, Belgian Air Force, 1917. Legend on fuselage reads "Va Ouje te Pousse".

Nieuport N.17, No. 1 (Comet) Squadron, Belgian Air Force, 1917.

Belgium, wing marking, 6 positions.



Italy, wing marking, 6 positions. The colours were sometimes reversed with or without a fuselage roundel.

Macchi-Nieuport Type 17, Italian Air Force.

Personal insignia of Lt. Charles Nungesser.

Nieuport N.17, Imperial Russian Air Force.

Upper wing detail.

Imperial Russia, wing marking, 6 positions.

Nieuport N.17, flown by Lt. Georges Guynemer, Escadrille N.3, "Les Cigogenes", French Air Force.

Nieuport N.17, flown by Lt. Charles Nungesser, French Air Force.

R.F.C. wing marking, 6 positions, note large centre red disc.

Escadrille N.3.

Nieuport N.17, Unit unknown, Royal Flying Corps. Shot down by von Tutschek (19th victory), Donai, July 1917.

Upper wing detail, the 2 appeared on the starboard side only.

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A French Nieuport 17 equipped with Le Prieur incendiary rockets for balloon "bursting". (Photo: Imperial War Museum)

of the *Squadriglie*, until replaced by SPAD VIIs or XIIIs and the popular Hanriot HD.1. Leading Italian aces, Francesco Baracca, Silvio Scaroni, Pier Piccio, all scored when flying Nieuport Bébés and 17s, which served with distinction during the dour and bitter fighting on the Italian-Austrian Front in 1916 and 1917.

Belgian aces Andre de Meulemeester, Edmund Thieffry, Francis Jaquet and Jean Olieslagers flew Nieuport 17s in Nos. 1 and 5 Belgian *Escadrilles* and recorded victories when so equipped. The Imperial Russian forces included most of the Nieuport types in their wide assortment of Allied aircraft but the attempt to build them under licence was not entirely successful, largely because of lack of experience and "expertise". Circumstantial evidence indicates that leading fighting pilots like Kazakov flew the Nieuport 17 on the Eastern Front as long as it existed and later this leading Russian ace flew the same type from Archangel with the anti-Bolshevik forces.

Nieuport 17s were used by the American Expeditionary Forces for training at bases in France and 75 were purchased for this purpose. Most of the American fighter pilots flew in the Nieuport 28, which was the first design of equal wings from the Nieuport designer, Delage. This type with the larger 160 h.p. Gnome Monosoupape rotary engine was never as successful as the famous sesquiplanes and indeed was very largely replaced in the American Squadrons in 1918 by the SPAD XIII.

Delage attempted to improve the basic Nieuport 17 design through a number of variants but the only one which was produced in any quantity was the 24*bis*, favourite mount of Nungesser, even in 1918 when the type was also in service with the British forces to supplement shortages of S.E.5as. A batch of 50 Nieuport 24*bis* was built by the British Nieuport Co. at Hendon. A total of 527 Nieuports, mostly Type 17s, was supplied to the R.F.C. and R.A.F. but full French production figures and statistics do not appear to have been properly recorded.

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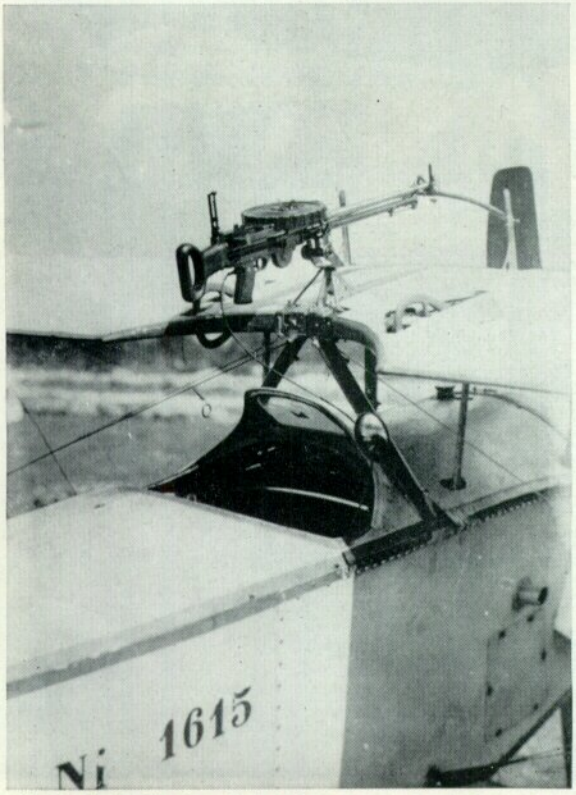
The Nieuport top wing mounted and stripped Lewis gun. Features to note in this picture are the adjustable guide rail to ensure propeller clearance, the aileron control quadrants and vertical operating rods, the rear view mirror on the starboard cabane strut and the typical French aircraft identification on the rear fuselage. (Photo: H. J. Nowarra)



SPECIFICATION

Span: (upper wing) 26 ft. (lower) 25 ft. 7 in.
Length: 19 ft. 7 in. Height (overhead gun) 8 ft.
Wing details: Chord (upper) 3 ft. 8 in. (lower) 2 ft. 4 in.; incidence (upper) 1 deg. 50 min. (lower) 4 deg. (tailplane) 0 deg.; dihedral (upper) 0 deg. (lower) 2 deg. 20 min.; sweepback (upper) 2 deg. 20 min. (lower) 3 deg. 20 min.; stagger (at Vee struts) 2 ft. 1 in.; area 158·8 sq. ft.; loading 7·75 lb./sq. ft.; undercarriage track 5 ft. 3 in.
Power: Le Rhône (113 h.p. at 1,200 r.p.m.); loading 11·6 lb./h.p.
Weights: (empty) 825 lb.; fuel and oil 143 lb.; pilot and military load 264 lb.; loaded 1,232 lb.
Performance (R.F.C. official figures):

Height	Climb	Speed
6,500	5·5 min.	107 m.p.h.
10,000	9·0 min.	101 m.p.h.

Duration 2 hours. Range 155 miles. Service ceiling 17,500 ft.

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