

SILHOUETTES OF ALLIED

CONFIDENTIAL: Do not carry this pamphlet with in the first lines nor over the lines.

Scale : 1 to 200

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N. B. — All the types in this booklet are to the 1/200 scale, with the exception of some perspective views, which are at a more reduced scale. All new types, as soon as they will be known, will be drawn up on leaflets which can be inserted in the present booklet.

IMPORTANT NOTICE. — The German airplanes are often fitted with a device permitting the pilot to destroy his machine in case of a forced landing in the enemy lines.

This apparatus is composed of a box placed in the carlin. A second box containing an explosive, is screwed to the bottom of this box. In order to work this apparatus, a hand lever has only to be pulled. The explosion takes place after 20 seconds. The box bears the f llowing inscription near the hand lever:

Vorsicht: Vorstecker nicht herausziehen. Lebensgefahr. (Beware. Do not pull the hand lever. Deadly danger.)

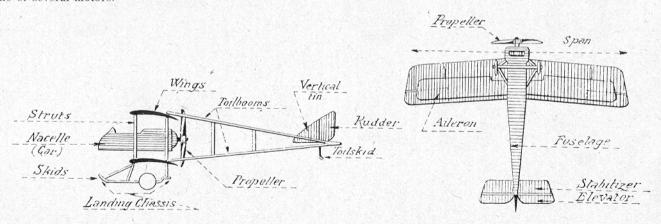
It is of great importance to acquaint the troops with this device, in order to avoid accidents, as well as to prevent if possible, the destruction of the German airplanes by their crew.

COMPONENT PARTS OF AN AIRPLANE

1° Two wings forming one plane (monoplane), or two superposed planes (biplane), or three superposed planes (triplanes), nearly always with ailerons.

2° Empennages to steer upwards and downwards, to the right and left and inversely (elevator and rudder, with or without fixed horizontal or vertical planes).

- 3° A fuselage (fig. 2) seldom two, or tail booms (fig. 1) which connect the wings to the empennage.
- 4° A landing chassis for taking off and for landing.
- 5° One or several propellers.
- 6° One or several motors.



MEANS OF IDENTIFYING AIRPLANES

The visual and auditive means of spotting airplanes will form the subject of special instructions. In order to spot a distant airplane, look in the sky for a point, or a dark or light spot, for it would be perceived with difficulty if it was imagined to be black when it is reflecting light or inversely.

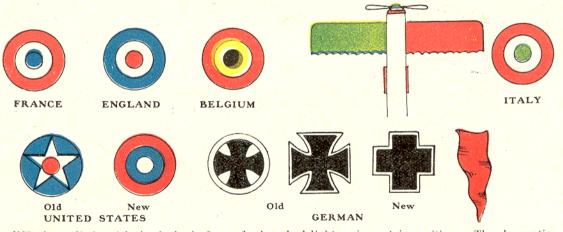
INSIGNIA

On the military and naval airplanes of the allies: three colored cockades on the wings or a star in a circle, and three colored stripes on the rudder.

On the German airplanes : black « Iron Crosses » on a white ground (square or round) or with a white border, are painted above

and below the wings and on the sides of the rudder and fuselage.

On the airplanes and scaplanes of the German navy, in addition to the cross, a red pennant is added to the rear of the lower plane.



It is however difficult to distinguish the insignia from afar in a bad light or in certain positions. The observation of other outer characteristics have therefore to be reverted to.

SHAPES

The outer shapes, the outline, permit the identification of the type of airplane, and from this, its nationality.

CLASSIFICATION OF AIRPLANES BY ANALOGY

This classification is made with special consideration of the way the airplane appears to the men on look out, who in most cases, see it only at very high altitudes and from beneath. This does not show the number of planes.

The lines which do not undergo any perspective deformation in the field of vision of the observer, are the only ones that have been taken as a basis of analogy between the different types of airplanes now in service at the front.

These lines are: the leading edge of the planes and the leading edge of the elevator.

The comparison of these principal airplane characteristics, gives the following great divisions, in which the parallel of the secondary characteristics, developed in plates, A, B, C, pages 5, 6, 7, will suffice in case of doubt, to identify the allied and enemy airplanes.

If however, the observer can ascertain if the airplane is a monoplane or a triplane, he can without the help of these plates, rapidly identify teh machines of these two categories, which are the following:

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Monoplanes: Morane 21 A2, 27 C. l. and 29 C. l., see page 39.

Triplanes: Allied: Sopwith, see page 36.

Enemy, Fokker, see page 44.
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In most cases the observer can classify the airplane in one of the five following divisions :

- Farman 40 A2 and 41 A2. Voisin 8 Bn2 and 10 Bn2. F. E. 2b, 2d and F. E. 8.
- 2º Bi-motor without fuselage : Caudron 4 A2.
- 3° Multimotor with two fuselages : { Caproni 2 BN2 and 3 BN2. Caproni triplans.
- 4 Multimotor witht one fuselage : $\{a\}$ Wings Having straight leading edge. $\{b\}$ Wings Having back-swept leading edge. $\{b\}$ See plate A.
- 5° Monomotor with one fuselage: (a) Wings Having straight leading edge. See plate B. Wings Having back-swept leading edge. See plate C.

PLATE A

WING . OUTER EDGES RUDDER THANDLEY PAGE ELEVATOR 2 IS BIPLANE MOTORS $-\alpha$) FIEVATOR CAUPRON 6A2 ET 11A3 FUSELAGE WITH STRAIGT LETORD 1A3 ET 2A3 WINGS LEADING EDGE WITH ELEVATOR WITH BACK STRAIGT LEADING SWEPT LEADING EDGE EDGE ELEVATOR WITH SEMI ONE CIRCULAR LEADING EDGE ELEVATOR WITH WITH SPADE SHAPE -6) ELEVATOR WITH STRAIGT TIMOTORS WINGS LEADING EDGE WITH FIEVATOR ботна 6. OTORS WITH BACK BACK_SWEPT SWEPT LEADING EDGE LEADING EDGE ELEVATOR A.E.G G. d+. MUL WITH SEMI. CIRCULAR LEADING EDGE GII. 1. FRIEDRICHAPEN G.II. ELEVATOR 8 2 FRIEDRICHAFEN G.III WITH SPADE SHAPE G.II ET G.III

PLATE .

FUSELAGE

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MONOMOTORS



WING DUTER EDGES RADDER BE 12 - BE 2c et 2d - BE 2e - RE 8 - SE 5 DE HAVILAND 4 ET 5 - HANRIOT D1 et 3C2 -A.R. 1 ET 2 - BRISTOL F. 2 a. **FLEVATOR** VICKERS SCOUT . SOPWITH1A2 . WITH SOPWITHTRIPLANE SOPWITH (SEATER PURSUIT) OI BBOWIT TR STRAIGHT-LEADING BRISTOL FIGHTER . SALMSON 2 A2 . AGQ(****)
MORANE - SAULÑIER 2 A2 (MONOPLANE) FDGF 5.1.A MARTINSYDE , SPAD 7 C1, 12 C1 et 13 C1. ARMSTRONG WITHWORTH. ELEVATOR a) FORKER TRIPLANE diament . WITH WINGS WITH BACK-SWEPT D.F.W.CV. STRAIGHT LEADING LEADING EDGE EDGE NIEUPORT 28 C1: ELEVATOR LV.G.CV. WITH SEMI-CIRCULAR LEADING EDGE ALBATROS C.III ELEVATOR MANHOVRAHER (BIPLANE ELEVATOR) HANNOVR WITH CV CV CHIEF ALBATROS . C.V . D.III ET D.V . B.F.W. C.X SPADE SHAPE ALB. DY PFALZ.

- 6 -

PLATE C.

RUDDER OUTER EDGES NIEUPORT 11 à 23 C.1 MORANE 27 C1 et 29 C1 ELEVATOR MIEUPORT NIEUPORT MORANE (MONOPLANE) WITH STRAIGHT AGO (NEW TYPE) LEADING EDGE BREGUET 14 A2 14 B2 16 Bn2 ELEVATOR WITH BACK SWEPT 6) LEADING EDGE WINGS WITH BACK SWEPT NIEUPORT 24 C1, 27 C.1 **S** LEADING EDGE ELEVATOR 0 SPAD 11 A2, 16 A2 WITH SEMI-CIRCULAR RUMPLER CIV LEADING EDGE HALBERSTADT (TWO SEATER PURSUIT) ELEVATOR WITH SPADE SHAPE

WING

FUSELAGE WITH MONOMOTORS

EXAMPLE

OF THE IDENTIFICATION OF AN ENEMY AIRPLANE

Let us suppose an L. V. G. C. V. which bad atmospheric conditions and high altitude may lead to confusion with the Nieuport. A rapid analysis of the characteristics is necessary, and the observer will proceed as follows:

These two machines, being monomotors with one fuselage, are classed in the 5th Division, Subdivision a): Wings with straight leading edge.

1° The examination of the secondary analogies (Plate B) gives:

For the L. V. G. C. V. and Front of the stabilizer, bow shaped (The rear edges are however different: continuous curve for For the Nieuport 28 Cl. : The L. V. G. indented for the Nieuport).

2° The comparison of the rudder gives

For the L. V. G. C. V.: Completely rounded rudder (long oval).

For the Nieuport 28 Cl: Rudder (short oval).

3° If these differences are not clearly defined, the comparison of the wing ends gives:

Unequal wings:

For the L. V. G. C. V: Trapezoidal upper wings, with laterally overlapping ailerons. Trapezoidal rounded lower wings, not quite so wide and shorter: large base of the wing forward.

Equal wings:

For the Nieuport 28 Cl.: Staggered, semi-circular rounded at the ends.

Finally by referring to the detailed characteristics of the two airplanes, on pages 45 and 46, there will no longer be any doubt.

CHAPTER I.

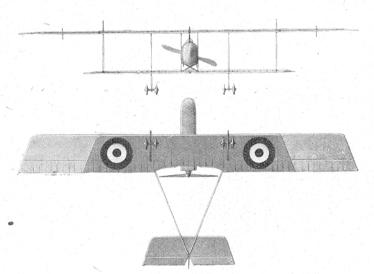
MONOMOTORS WITHOUT FUSELAGE.

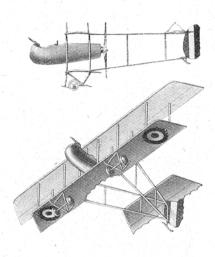
FARMAN 40 A2 AND 41 A2

1º Monomotor without fuselage.

French Belgian







Farman 40 A2: Wings: Span of lower wings equal to 2/3 that of the upper wings, large gap, trapezoidal. Two pair of struts on each side.

Empennage: "T" shaped. Rudder: rectangular, one corner bevelled off the greater part below and to the rear of the trapezoidal elevator.

Tail Booms: Rectangular (seen sideways), "V" shaped assembly.

Nacelle: Protruding and between the wings; two pairs of wheels spaced far apart and in line.

Propeller : Pusher.

Motor : Stationary Renault.

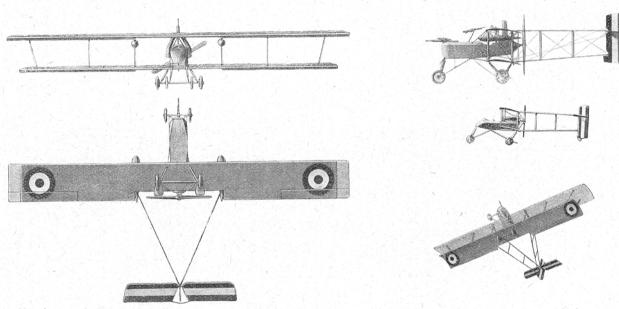
Farman 41 A2. - Similar characteristics, with the exception of the span of the upper plane, which is slightly liss than that of the 40 A2. - 10 -

VOISIN 8 BN2 & 10 BN2

1º Monomotor without fuselage.

French





Wings: Nearly equal, three pair of struts (one pair inclined) and one tank, on each side; rectangular with lower overlapping Wings: Nearly equal, three pair of struts (one pair inclined) and one tank, on each side; rectangular with lower allegons, small gap, non staggered.

Empennage: Placed crosswise and rectangular.

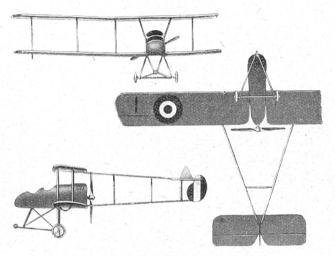
Tail Booms: Rectangular (seen sideways), V shaped assembly.

Nacelle: Very protruding, and on the new types, raised in between the planes. Four wheels, of which two in front.

Propeller: Pusher.

Motor: Stationary Peugeot or Renault. Gun or Machine.





F.E. 2b, 2d

Wings: Equal, Dihedral (except central rounded sections). Three pair of struts on each side.

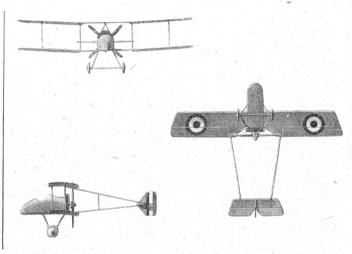
Rudder: Oval, (Kidney shaped) under the Elevator, surmounted by a triangular fin above elevator.

Elevator: (with fixed stabilizer): Rectangular.

Tail Booms: Rectangular (seen sideways), V shaped assembly.

Nacelle: Protruding. Two wheels, and sometimes a small wheel in front.

Propeller: Pusher. Motor: Stationary Beardmore or Rols-Royce.



F.E.8

Wings: Trapezoidal, two pair of struts.

Rudder: Pentagonal (including drift fins) crossed half way up by the elevator.

Elevator: Trapezoidal large base at rear (fixed stabilizer).

Tail Booms: Triangular, converging towards the empennage without cross members. Two wheels.

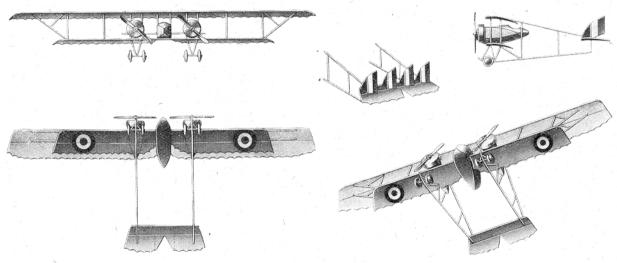
Motor: Rotary Monosoupape.

CHAPTER II.

BI-MOTORS WITHOUT FUSELAGE.

French





Wings: Lower span equal to 3/4 the upper span, small gap, slightly trapezoidal, lower wings of less chord, two pair of struts, and trusses on each side.

Empennage: Rudders: Four triangles resting on a trapezium shaped elevator with cut out section.

Three nacelles: Slightly protruding. Two pair of wheels in line.

Tail Booms: Nearly triangular, parallel.

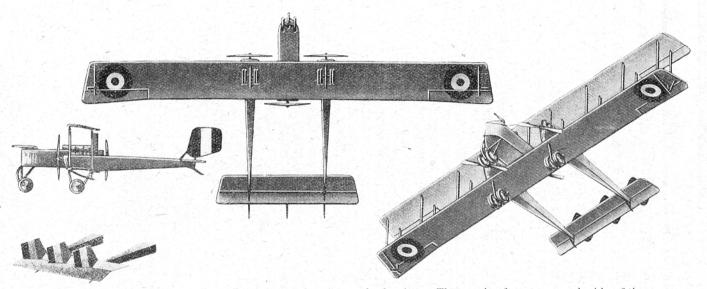
Two motors : Rotary Rhone.
Two propellers : Tractors.

CHAPTER III.

MULTIMOTORS WITH TWO FUSELAGES.

Italian French U. S.





Wings: Equal, trapezoidal, with ailerons slightly overlapping on both wings. Three pair of struts on each side of the motors.

Two fuselages of rectangular section, thinning out vertically towards the rear. One nacelle in the center between the two fuselages.

Empennage: Three pentagonal rudders above a large trapezoidal elevator. Two pair of wheels under each fuselage, two wheels under the front of the nacelle.

Propellers: Two tractors, one pusher.

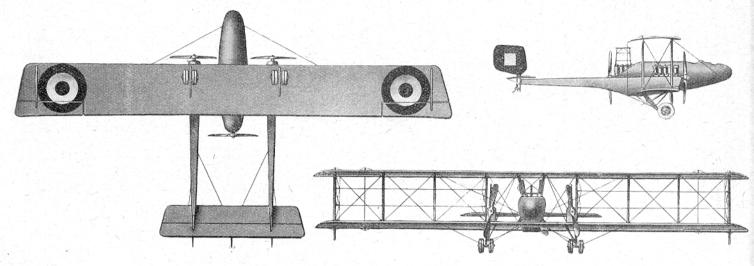
Motors: Three stationary Isotta.

CAPRONI 3 BN2

3° Multimotor with two fuselages

Italian



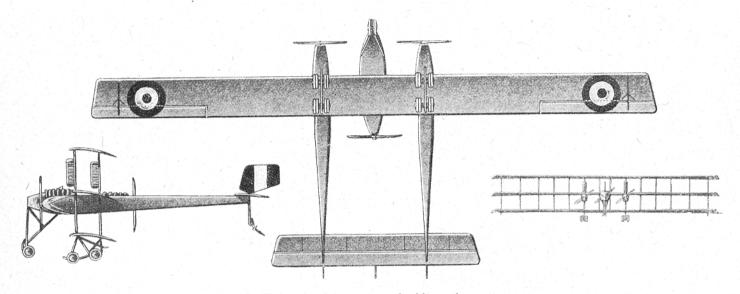


Wings: Equal, trapezoidal, ailerons overlapping on both wings. Four pair of struts on each side of the motors. Fuselages: Of rectangular section, thinning down vertically. One earlin in the center in between the two fuselages. Empennage: Three pentagonal rudders (not so long as on the 2 BN2) above a very large trapezoidal Elevator. Two pair of wheels under each motor. No wheels under the carlin. Propellers: Two tractors and one pusher.

Three Fiat motors.

Italian





Wings: Equal, trapezoidal, non staggered. Five pair of struts on each side or the motors.

Two Fuselages of rectangular section thinning down vertically. One long carlin in the center between the two fuselages. Four pair of wheels under each motor, and two wheels under the carlin.

Empennage: Three pentagonal rudders above a very large trapezoidal Elevator.

Propellers: Two tractors and one pusher.

Three motors.

CHAPTER IV.

MULTIMOTORS WITH ONE FUSELAGE.

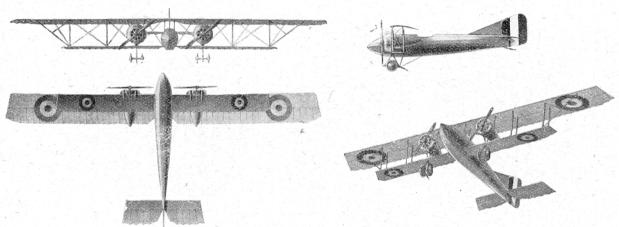
4º Multimotor with one fuselage.

CAUDRON 6 A2

French



A.—Wings with straight leading edge.



Wings: Span of the lower wings equal to 2/3 of the upper span, lower wing chord half that of the upper, which makes these wings appear very small. Upper wings back staggered. Two pair of struts and trusses on each side.

Empennage: Rudder of trapezium shape with triangular vertical fin.

Elevator: Trapezium shaped with cut out section.

Fuselage: Rounded, thinning down vertically to the rear. Two pair of wheels in line.

Propellers: Two tractors.

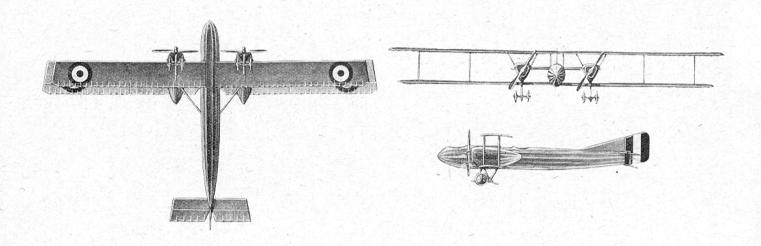
Motors: Two rotary Rhone.

CAUDRON 11 A3

A.—Wings with straight leading edge.

French





Wings: Nearly equal, trapezoidal, with rear ends slightly cut out. Two pair of struts on each side of the motors.

Fuselage: Of circular section with groovings, thinning down vertically.

Empennage: Rudder: Trapezium shaped with triangular vertical fin.

Elevator: Trapezium shaped with cut out section. Two pair of wheels.

Propellers : Two tractors.

Motors: Two stationary Hispano-Suiza.

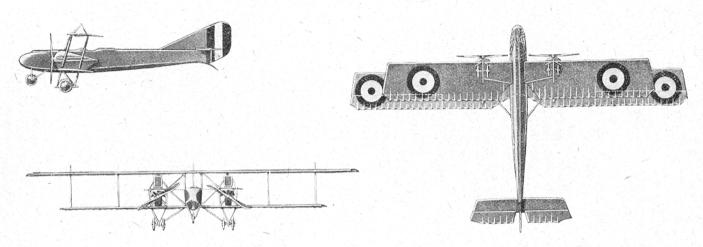
4º Multimotor with one fuselage.

LETORD 1 A3 & 2 A3

A. — Wings with straight leading edge.







Wings: Lower space 5/6 of the span of the upper wings, but same chord. Wings back staggered, slightly trapezoidal. Two pair of struts on each side of the motors, with inverted "V" strut above the outer struts.

Rudder: Trapezoidal, with triangular vertical fin.

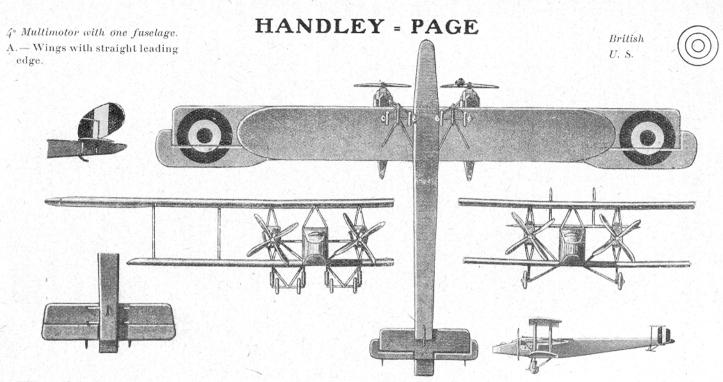
Elevator : Trapezoidal.

Length of the airplane equal to 2/3 of the span.

Two pair of wheels in line and one wheel in front.

Propellers : Two tractors.

Motors: Two stationary Hispano-Suiza.



Wings: Lower span much less than the upper; upper wings with ailerons overlapping the ends, lower wings rounded. Two pair of struts on each side of the motor.

Fuselage: Thinning down horizontally to the rear, and wedge shaped in front. Two pair of wheels under each motor (old type) one wheel under each motor (new type).

Rudders: Two trapezium shaped rudders on each side of the fuselage, oval shaped on a second type.

Elevators: Two elevators of the same shape as the upper wings, trapezium shaped on a second type.

Propellers: Two tractors. Motors: Two stationary Rolls-Royce.

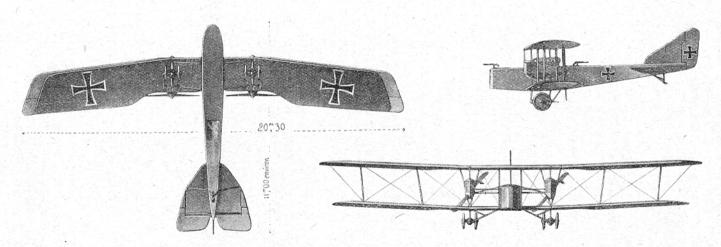
4° Multimotor with one fuselage. A. — Wings with back swept

leading edge.

FRIEDRICHSHAFEN G II

German





Wings: Span of the lower wings slightly less than the upper wing span. Central section without dihedral, movable planes with dihedral and considerably back swept. The wings are trapezoidal and cut out to a great extent for the propeller space. Ailerons protrude to the rear. Two pair of struts on each side of the motor cabanes.

Empennage: Very large, Rudder and vertical fin triangular shaped with rounded edges. Elevator with tail plane, polygonal shaped with rounded angles and cut out section.

Fuselage: Of rectangular shape. Landing chassis with two wheels under each motor.

Propellers: Two pushers.
Motors: Two 225 HP Benz.

Three machine guns, one in front and two at the rear.

4º Multimotor with one fuselage. A. - Wings with back swept

polygonal shaped tail plane.

eading edge.

FRIEDRICHSHAFEN G. III

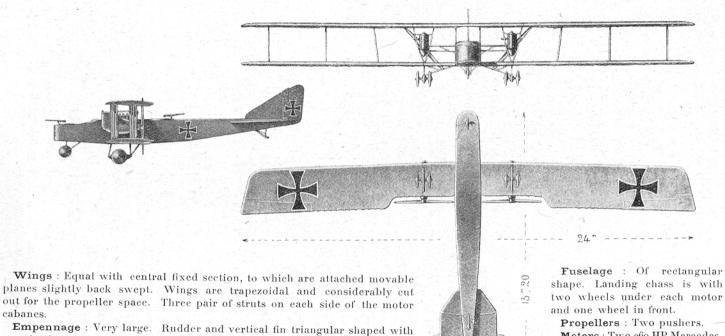
German

Motors: Two 260 HP Mercedes.

Three machine guns, one in

front and two to the rear.





round edges. Trapezoidal elevator with cut out section, oberlapping the

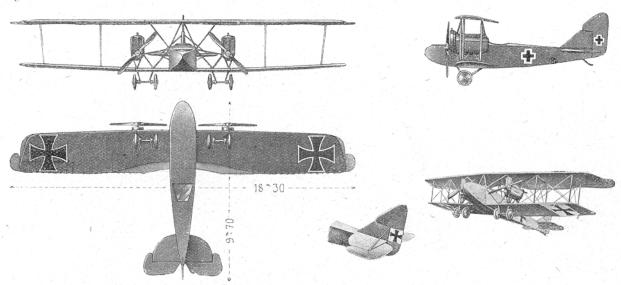
4º Multimotor with one fuselage. A. - Wings with back swept

leading edge.

A. E. G. BI=MOTOR G

German





Wings: Lower wings nearly equal to the upper wings, trapezoidal and back swept; overlapping ailerons on upper wing, rounded off at corners. The wings curve inwards at the central part of the trailing edge.

Fuselage: Of rectangular section, thinning down towards the rear. Two pair of struts on each side of the motors. Landing chassis nearly beneath each motor. Two pair of wheels.

Empennage: Balanced rudder and vertical fin of triangular shape with rounded edges. Elevator in two parts, each formed by an overlapping piece cut out at right angles on a semi-circular tail plane.

Propellers: Two tractors. Motors: Two stationary 260 HP Mercedes.

Three Parabellum machine guns: One in front and two to the rear.

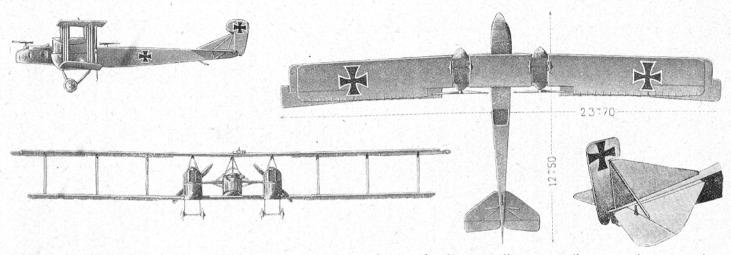
4º Multimotor with one fuselage.

GOTHA G

German.



A. - Wings with back swept leading edge.



Wings: Nearly equal, rectangular, with large cut out section at the rear for the propeeller space; allerons on the upper wings, overlapping the outer edge, wings with dihedral and back sweep. Three pair of struts on ach side of the motors.

Fuselage: Made of laminated wood from the front part to the post of the second gunner, and then fabric covered to the empennage, with a ram shape to the front, rectangular section. A trap door made in the bottom of the fuselage under the seat of the rear gunner permits firing beneath the airplane.

Empennage: Raised rudder, balanced, with triangular vertical fin.

Triangular shaped Elevator. Two wheels under each motor.

Propellers: Two pushers.

Motors: Two stationary 260 HP Mercedes.

Three Parabellum machine guns.

CHAPTER V. MONOMOTORS WITH ONE FUSELAGE.

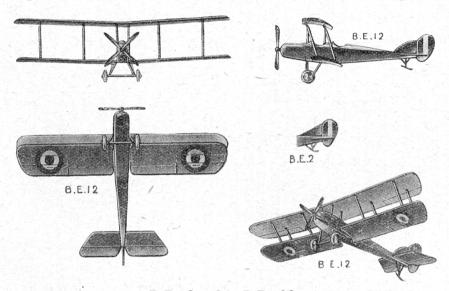
5° Monomotor with one fuselage.

B.E. 2c & 2d B.E. 12 == VICKERS SCOUT

B. - Wings with straight leading edge.

British





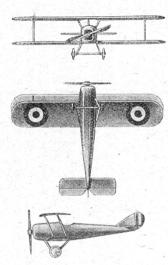
B.E. 25, 2d, B.E. 12

Wings: Equal, with dihedral, staggered, rounded outer edges; two pair of struts.

Empennage: Oval rudder with vertical fin having triangular or convex upper edge, situated for the greater part above the large trapezoidal or rectangular elevator. Two wheels.

Propeller: Four bladed.

Motor: Stationary R. A. F. (Royal Aircraft Factory).



VICKERS SCOUT

Wings: No dihedral; rounded outer edges; close set wings; one pair struts.
Rudder: Semi-oval; with vertical fin, spatula

shaped.

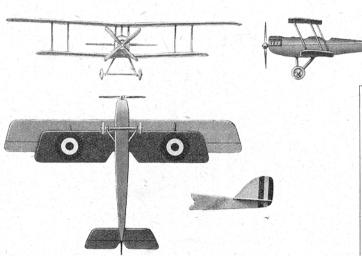
Elevator : Rectangular, Motor : Rotary Clerget. 5° Monomotor with one finselage.

B.E.2e, R.E.8 == BRISTOL and F.2a

British



B. — Wings with straight leading edge.



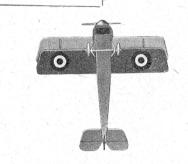
B. E. 2e and R. E. 8.

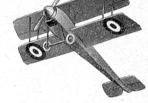
Wings: Span of lower wings equal to 2/3 that of upper wings, with dihedral, staggered. One pair of struts on each side and one for the control of the trapezoidal ailerons.

Empennage: Oval rudder with convex vertical fin (B. E. 2e) or concave (R. E. 8). Large trapezoidal elevator. Two wheels.

Propeller: Tractor.

Motor: Stationary R.A.F. or Hispano-Suiza.





Bristol and F. 2a.

Wings: Equal with dihedral, staggered, trapezoidal, wiht long spar of the wing at the rear. Bristol, one pair of struts on each side. F.2a two pair of struts on each side.

each side. F.2a two pair of struts on each side.

Empennage: Ear shaped rudder with triangular vertical fin.

Trapezoidal Elevator with rounded edges and cut out section.

Two wheels.

Propeller : Tractor.

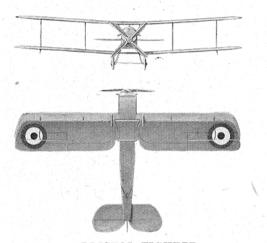
Motor: Rotary Rhone with propeller cap; stationary without propeller cap for F.2a.

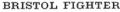
5° Monomotor with one fuselage. BRISTOL FIGHTER and S.E. 5

British U. S.



B. - Wings with straight leading edge.





Wings: Equal, with dihedral, staggered, trapezoidal, with rounted outer edges. Two pair of struts on each side.

Fuselage: Of rectangular section, not resting on the lower plane, thinning down toward the rear. Two wheels.

Rudder: Forms a long oval with the vertical fin.

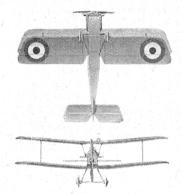
Elevator: Trapezoidal, very rounded outline, with cut out section.

Propeller : Four bladed tractor.

Motor: Rolls-Royce or Hispano-Suiza.







S. E. 5.

Wings: Equal, with dihedral, staggered, trapezoidal, with rounded outer edges. One pair of struts on each side.

Fuselage: Of rectangular section; thinning down towards the rear.

One pair of wheels.

Rudder: Rectangular, with triangular vertical fin, greater part situated above the Elevator.

Elevator : Large, straight leading edge, trapezoidal.

Propeller: Tractor

Motor : Hispano-Suiza.

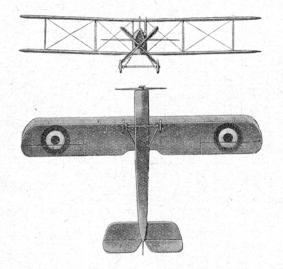
5° Monomotor with one fuselage.

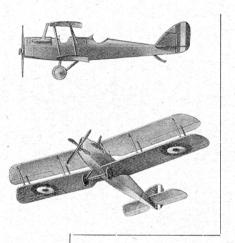
DE HAVILLAND 4 & 5

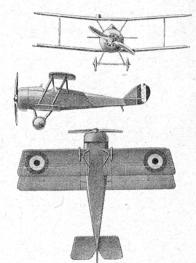
British U. S.



B. - Wings with straight leading edge.







DE HAVILLAND 4

Wings: Equal with rounded outer Edges, diminished in front,

with dihedral, staggered. Two pair of struts on each side.

Fuselage: Protruding considerably in front, thinning down vertically with rounded back part. Two wheels.

Empennage: Raised balanced trapezoidal Rudder with triangular vertical fin. Trapezoidal rounded Elevator cut out section. Propeller : Tractor.

Motor : Rhone or Rolls-Royce.

DE HAVILLAND 5

Wings: Equal, trapezoidal, staggered. One pair of struts on each side.

Fuselage: Much shorter than D. H. 4.

Empennage: Ovoid rudder with triangular vertical fin.

Trapezoidal Elevator with cut out section.

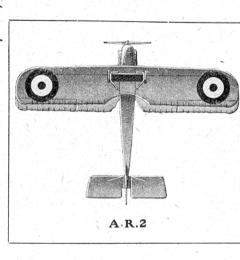
Propeller : Tractor. Motor: Rotary Rhone.

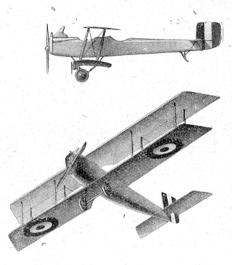
A.R. 1 and A.R. 2

French U. S.









Wings: Equal, trapezoidal on the A.R.1; and with rounded edges on the A.R.2. Dihedral on the lower wings only. Ailerons on the upper wings, back-staggered. Two pair of struts on each side. The span of the A.R.2. is smaller than that of the A.R.1.

Fuselage: Thinning down vertically, with rounded back part, raised above the lower wings, protruding in front, not very wide. Empennage: Rudder of square appearance. Trapezoidal Elevator with cut out section.

Landing chassis: Low.

Motor: Stationary Renault or Lorraine-Dietrich. Exhaust above on the A.R.1 and on the sides on the A.R.2.

Confusions to be avoided : From the front with the A. E. G. but the fuselage of the latter rests on the lower wings.

5º Monomotor with one fuselage.

edge.

HANRIOT D.1 and 3 C.2

e.

B.— Wings with straight leading

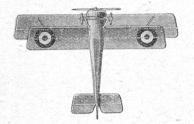
3 C.2. French

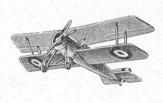
1. $\left\{ egin{array}{ll} Belgian \\ Italian \end{array}
ight.$











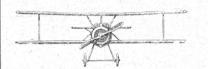
HANRIOT D.1

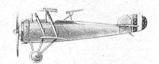
Wings: Unequal, trapezoidal, ailerons on the upper wings—which are very staggered and with dihedral. One pair of inclined struts on each side.

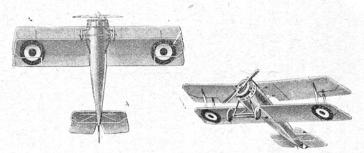
Fuselage: Fabric covered, thinning down vertically, rounded back.

Empennage: Trapezium shaped rudder with triangular vertical fin, trapezium shaped elevator with cut out section.

Propeller : Tractor.
Motor : Rhone.







HANRIOT 3 C.2

Wings: Staggered and nearly rectangular. One pair of inclined struts on each side.

Fuselage: Rounded forward, thinning down vertically to the rear.

Rudder: Oval with quarter circle vertical fin. Elevator: Trapezoidal with cut out section.

Propeller: Tractor. Motor: Salmson.

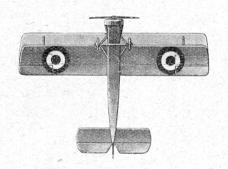
edge.

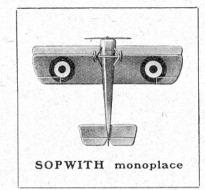
SOPWITH 1 A2 and Single seater

British
(2 seater) French
U. S.

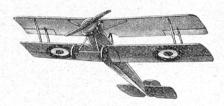












Wings: Equal, trapezoidal, rounded, large base of the wing forward on the single seater. Ailerons en both wings, dihedral staggered. One pair of struts on each side.

Fuselage: Thinning down vertically with rounded back.

Empennage: Rudder and vertical fin of oval aspect, the greater part situated above the rounded trapezoidal Elevator.

Propeller: Tractor.

Motor : Rotary Clerget or Rhone,

5, Monomotor with one fuselage.

SOPWITH TRIPLANE

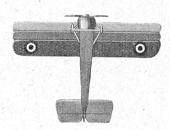
B. — Wings with straight leading edge.













Wings: Equal; staggered with dihedral; rounded trapezoidal shape, with large base of the wings forward. One pair of struts on each side.

Rudder: With vertical fin, giving an oval aspect to the assembly.

Elevator: Rounded trapezoidal, large base forward.

Two wheels.

Propeller : Tractor.

Motor : Rotary Clerget.

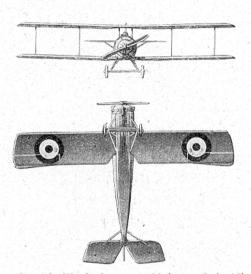
5° Monomotor with one fuselage.

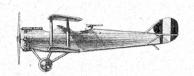
SALMSON 2 A2 and 2 bis A2

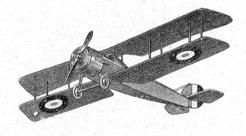
French
U. S.



B. — Wings with straight leading edge.







Wings: Equal, with dihedral, trapezoidal rounded. Ailerons progressively overlapping to the rear of the upper wings. Two pair, of struts on each side.

Rudder: Semi-circular, slightly flattened in front.

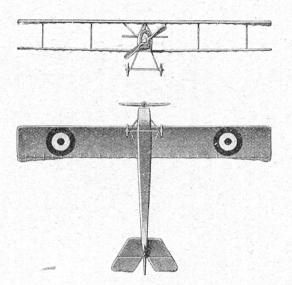
Elevator: Trapezoidal, with large cut out section, appearing to be in two parts. Fuselage: Thinning down vertically, back and sides rounded, under part flat.

Landing chassis: Two wheels, six struts.

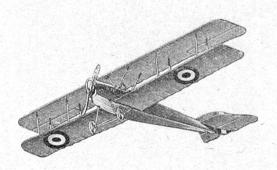
Motor: Stationary Salmson C.U.



B.—Wings with straight leading edge.







Wings: Span of upper wings equal to that of lower wings, rectangular dihedral on lower wings only. Ailerons slightly protruding to the rear. Two pair of struts on each side.

Rudder: Trapezoidal, rounded edges (one edge cut out) vertical fin.

Elevator: Trapezoidal with large cut out section.

Fuselage: Rectangular, thinning out to the rear. Landing chassis with two wheels.

Propeller: Tractor.

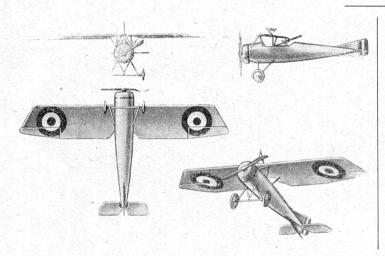
5° Monomotor with one fuselage.

B. - Parasol monoplane.

MORANE = SAULNIER TYPE 21 A2, 27 C1 and 29 C1







TYPE 21 A2

Wings: Trapezoidal, with ailerons and rounded rear central section.

Rudder: Parallelogram with triangular vertical fins.

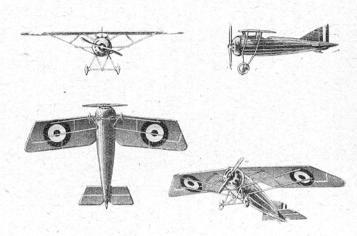
Elevator: Trapezoidal with cut out section.

Fuselage: Rounded, thinning out horizontally to the empennage (scarcely visible).

Two wheels "M" shaped landing chassis (Morane initial letter).

Propeller: Tractor with or without propeller cap.

Motor: Rotary Rhone.



TYPES 27 C1 and 29 C1

Wings: Trapezoidal; back swept. Visible triangular wing supporting bracing.

Rudder: And vertical fins above the fuselage, triangular shaped.

Elevator: Long trapezoidal with cut out section.
Fuselage: Conical, extending beyond stabilizers.

Motor: Rotary Gnome.

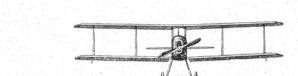
5. Monomotor with one fuselage.B. — Wings with straight leading

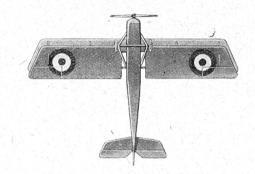
edge.

MARTINSYDE

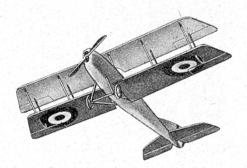
British











Wings: Equal, with dihedral, staggered, trapezoidal, with large base of the wing to the rear. Two pair of struts.

Rudder: Rar shaped, with vertical fin (rounded edge).

Elevator: Nearly trapezoidal, with back swept leading edge.

Motor: Stationary Beardmore.

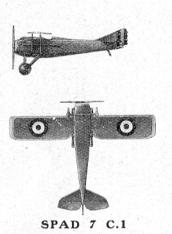
5° Monomotor with one fuselage.
B. — Wings with straight leading

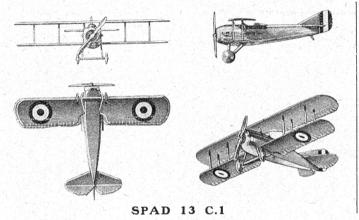
edge.

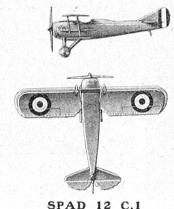
SPAD 7 C.1, 12 C.1 & 13 C.1

French U. S.









Wings: Nearly equal, without dihedral, regular and parallel from the front, rectangular on type 7, rounded outer edges or of trapezoidal shape on types 12 and 13.

Type 12: Lower wings with less chord and slightly staggered.

Rudder: Parallelogram or "D" shaped with vertical fin, the whole assembly for the greater part placed to the rear and above the elevator.

Elevator: Triangular or lozenge shape, rounded with small cut out section.

Propeller: Tractor.

Motor: Stationary Hispano-Suiza. Exhaust on the sides.

Not to be mistaken for Albatros D. 1 and with the Rumpler elevator.

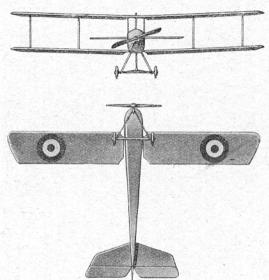
5° Monomotor with one fuselage.

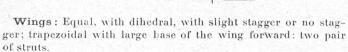
ARMSTRONG-WITHWORTH

British

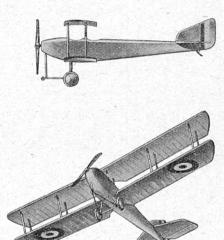


B. — Wings with straight leading edge.





Rudder: Parallelogram, vertical fin with convex edge.



Elevator: Trapezoidal, with considerable back sweep on the leading edge. Two wheels, with small wheel in front.

Propeller: Tractor.

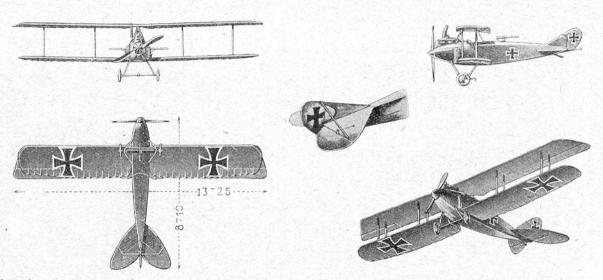
Motor: Stationary Beardmore.

edge.

D.F.W. C.V.

German





Wings: Span lower wings nearly equal to that of upper wings, with dihedral, the outer edge of the lower wings are narrowed and rounded. Two pair of struts on each side.

Elevator: And tail plane, heart shaped.
Rudder: Spatula shaped and slightly raised.

Propeller: Tractor.

Motor: Stationary Benz 225 HP.

Two machine guns: One firing through propeller the other on rear turret.

5° Monomotor with one fuselage. B. — Wings with straight leading

edge.

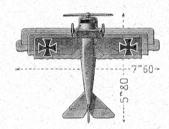
FOKKER TRIPLANE

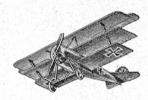
German











Wings: Of different span decreasing from upper plane to lower plane, rectangular, staggered, with ailerons protruding to the rear and overlapping the outer edges, One large strut on each side between each plane.

Fuselage: Thinning down horizontally to the rear. Two wheels.

Rudder: Comma shaped and situated for the greater part above the Elevator.

Elevator: Triangular with cut out section.

Propeller: Tractor.

Motor: Rotary Oberursel 110 HP.

Two Spandau machine guns firing through the propeller.

edge:

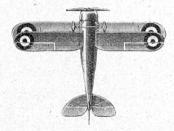
NIEUPORT 28 C1

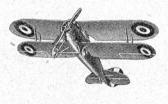
French
U. S.











Wings: Nearly equal, rounded outer edges of semi-circular shape, lower wings with small chord and back staggered, upper wings with dihedral. One pair of parallel struts on each side.

Fuselage: Rounded on the back part and on the sides, thinning down vertically to the empennage, part jutting up behind the piolt's head.

Rudder: Long oval, considerably jutting out above and to the rear of the Elevator.

Elevator: Semi-circular, with cut out section.

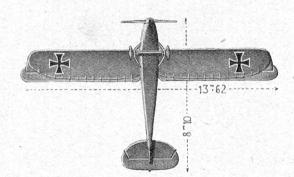
Propeller : Tractor.

Motor: Gnome monosoupape.

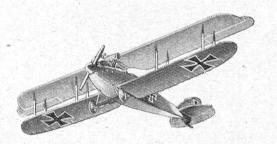
edge.











Same characteristics as the D. F. W. C. V. (Aviatik) constructed by the Deutsche Flugzeug-Verke, the L. V. G. C. V. being constructed by the Luft-Verkehrs-Gesellschaft.

5° Monomotor with one fuselage.

ALBATROS C.III

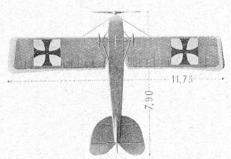
German

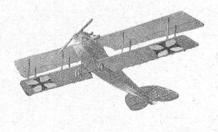


B. — Wings with straight leading edge.









Wings: Span and chord of the lower wings nearly equal to that of the upper wings, two pairs of struts, large dihedral, no back sweep, scarcely trapezoidal, ailerons jutting out sideways.

Fuselage: Thinning down horizontally, but with a keel.

Rudder: Semi-oval, spatula shaped with respect to the fuselage and vertical fin.

Elevator: And fixed stabilizer, rounded with cut out section, rather near the wings. Two wheels.

Propeller : Tractor.

Motor: Stationary Mercedes 175 HP protruding.

One machine gun on rear turret and one firing through the propeller. Four bomb releasing devices.

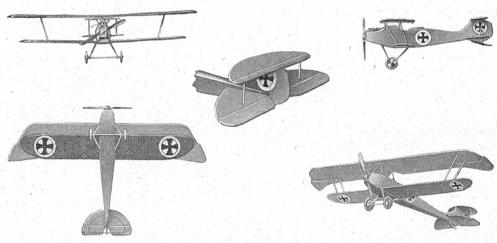
edge.

HANNOVRANER D.

(probably reconstructed)

German





Wings: Unequal, with dihedral, staggered, upper wings trapezoidal with back sweeping ailerons, lower wings shorter, rounded at the outer edges. One pair of staggered struts on each side.

Fuselage: Very high between the wings, thinning out to the front rear. Two wheels.

Rudder: Trapezoidal, rounded, with a vertical fin between the planes of the Elevator wich joins the fuselage with a concave curve.

Elevator; Semi circular and biplane; with two small struts.

Propeller: Tractor.

Motor: Opal, 200 HP.

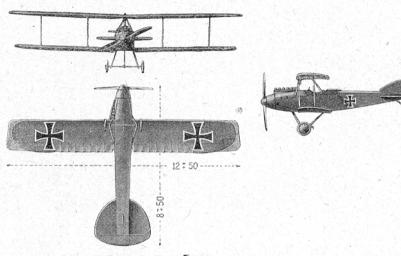
Probable Armament: Two machine guns of which one in the rear turret.

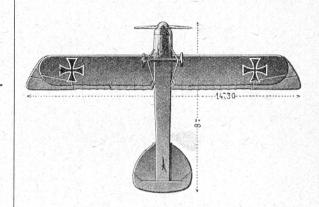
5. Monomotor with one fuselage. ALBATROS B.F.W., C.V. & C.X.

German



B. - Wings with straight leading edge.





ALBATROS B.F.W.C.V.

ALBATROS B.F.W. C.X.

Wings: Nearly equal on the Albatros B. F. W., C. V., less span on the lower wings for the C. X. Non staggered, upper wings trapezoidal, lower wings with rounded edges. Two pair of struts on each side. Ailerons instead of overlapping gradually decrease towards their extremity and are balanced.

Fuselage: Thinning down to the rear, terminating in a horizontal flat edge without keel. Landing chassis with two wheels.

Rudder: Above the fuselage of a triangular set back appearance with rounded edges.

Elevator: Rounded spade shape, without cut out section, balanced.

Propeller: Tractor with streamlined propeller cap.

Motor: Stationary Benz or Mercedes. Two machine guns.

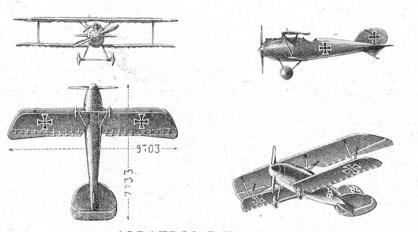
5° Monomotor with one fuselage.

ALBATROS D.III and D.V

German



B. — Wings with straight leading edge.







ALBATROS D.V

ALBATROS D.III

Wings: Nearly equal span, trapezoidal overlapping ailerons on the upper wings, lower wings with dihedral and smaller chord; non staggered (contrary to the Nieuport which is staggered). One pair "V" shaped struts on each side.

Fuselage: Thinning down to the rear horizontally with rounded back and lower part. Two wheels.

Rudder: Ovoid, but the D. V. is deeper with rounded trailing edge.

Elevator: Spade shaped.

Propeller: Tractor with cap.

Motor: Mercedes 175 HP.

Two stationary machine guns firing through the propeller.

5° Monomotor with one fuselage. B.—Wings with straight leading

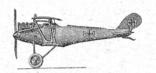
edge.

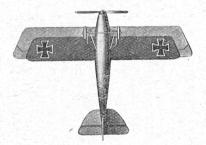
PFALZ D.

German











Wings: Span of the lower wings much less than that of the upper wings, trapezoidal with rounded edges, staggered. Ailerons balanced only on the upper plane.

One pair of struts on each side slanting up and out.

Fuselage: Spindle shaped, thinning down to a great extent to the rear, two pairs of wheels.

Rudder: And vertical fin, spatula shaped, balanced.

Elevator: Trapezoidal, rounded edges, below the rudder.

Propeller: Tractor.

Motor : Mercedes 160 HP.

Two Spandau machine guns firing through the propeller.

5. Monomotor with one fuselage.

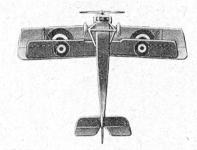
NIEUPORT (Old types)

French

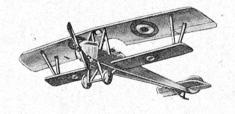


B. — Wings with straight leading edge.









Wings: Span of the lower wings nearly equal to that of the upper wings, upper wings without dihedral, lower wings with small chord and dihedral; staggered back swept, slightly trapezoidal.

Span nearly equal to the length of the airplane.

Rudder: Large comma shape, situated for the greater part above the elevator.

Elevator : Trapezoidal, with cut out section, in flight the tail appears reared up. Two wheels.

Motor: Rotary Rhone or Clerget, or stationary Hispano-Suiza.

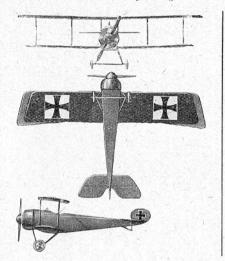
Not to be mistaken for : Pursuit Albatros D/III and Ago.

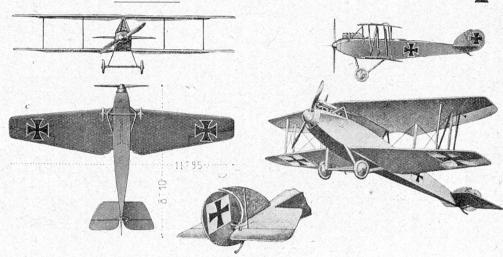
A.G.O.C. (Old and new type)

5° Monomotor with one fuselage.









A.G.O. (Old type)

With straight leading edge.

Wings: Span of lower wings nearly equal to that of the upper wings, dihedral on both upper and lower wings, without stagger with same chord, not back swept, trapezoidal, with ailerons overlapping obliquely; two pairs of struts en each side. (It appears that there are also AGO's with one pair of struts.)

Empennage and fuselage: Similar to the Nieuport, differing only in the chord of the lower wings, the lack of back sweep, and by the struts.

Motor: Rotary Oberursel (Gnome), with cap.

A.G.O (New type)

Wings with back swept leading edges.

Wings: Equal, slightly staggered, narrowing to the outer edges, very wide near the fuselage. Two pairs of struts near the outer edge of the wings on each side of the motor, one strut on each side near the fuselage to the rear of the widest part of the wings.

Fuselage: Rectangular, thinning down vertically to the empen-

Rudder : And vertical fin, oval.

Elevator: Trapezoidal with cut out section. One pair of wheels.

Propeller: Tractor. - Motor: Benz 200 HP.

Armament: Two machine guns; of which one Spandau firing through the propeller and one Parabellum on rear turret.

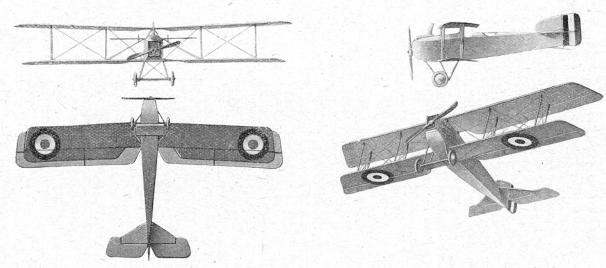
5º Monomotor with one fuselage.

BREGUET 14 A2 and 14 B2

French U. S.



C. - Wings with back swept leading edge.



Wings: Equal span on the 14 B2, lower wing shorter on the 14 A2, Dihedral on upper wings only, slight back sweep, slightly back staggered and slightly trapezoidal; two pair of struts on each side.

Fuselage: Thinning down vertically with rounded back part.

Rudder: Rectangular with large rounded vertical fin.

Elevator: Balanced, trapezoidal with triangular tail plane.

Not to be mistaken with the German empennages.

Landing chassis: With six struts.

Propeller: Tractor.
Motor: Stationary Renault or Fiat.

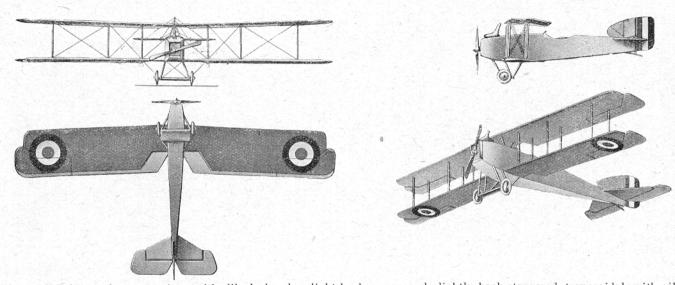
5° Monomotor with one fuselage.

BREGUET 16 Bn2

French



C. — Wings with back swept leading edge.



Wings: Nearly equal, upper wings with dihedral only, slight back sweep and slightly back staggered, trapezoidal, with ailcrons overlapping on upper and lower planes. Three pair of struts on each side of which the two first are close to the fuselage.

Fuselage: Thinning down vertically, with rounded back part but longer than on the Breguet 14 B2. Landing chassis with two wheels.

Rudder: Rectangular, with large rounded vertical fin.

Elevator: Balanced, trapezoidal, triangular tail plane with out section.

Propeller : Tractor.

Motor: Stationary Renault.

5° Monomotor with one fuselage.C. — Wings with back swept

leading edge.

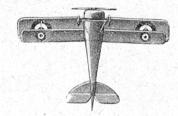
NIEUPORT 24 C.I. and 27 C.I.

French











Wings: Nearly equal, rectangular; lower wings with less chord and with dihedral; upper wings without dihedral but with back swept ailerons, staggered; one pair of "V" struts on each side.

Fuselage: Rounded on the back part and sides, flat beneath, thinning out vertically to the empennage, with protruding part behind the pilot's head.

Rudder: Balanced, long oval shape, extending beyond the Elevator.

Elevator : Semi-circular with cut out section.

Propeller: Tractor.

Motor: Rotary Rhone.

Not to be mistaken for the pursuit Albatros D. III and D. V, or Rumpler (elevator) and the 1916 Nieuport with the Ago and Pfalz-

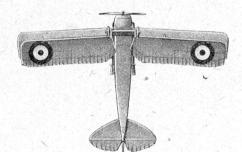
SPAD 11 A2 & 16 A2

French U. S.

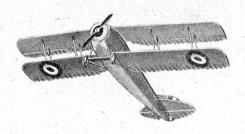


C. — Wings with back swept leading edge.









Wings: Nearly equal, without dihedral, staggered, back swept, rectangular with rounded outer edges. Two pair of struts.

Rudder: "D" shaped, extending beyond the Elevator, triangular vertical fin.

Elevator: Semi-circular with cut out section, triangular tail plane.

Propeller: Tractor.

Motor: Stationary Hispano-Suiza or Lorraine-Dietrich. Exhaust on the sides.

RUMPLER C.IV

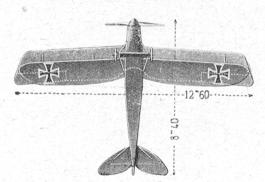
German

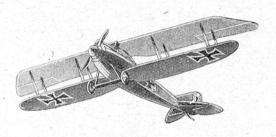


C. — Wings with back swept leading edge.









Wings: Upper wings trapezoidal, lower wings with rounded edges, less chord and staggered back. Two pair of struts on each side.

Rudder: Ear shaped with triangular vertical fin.

Elevator : Heart saped.

Landing chassis: With 2 wheels.

Propeller: Tractor.

Motor: Stationary Mercedes 260 HP with honeycomb radiator, semi truncated, the top part following the curve of the upper front part of the wings.

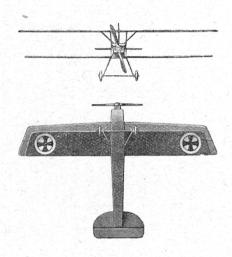
Two machine guns, one firing through the propeller and one on rear turret.

HALBERSTADT D.

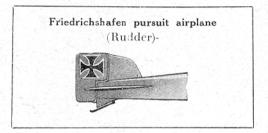
German



C. — Wings with back swept leading edge.







Wings: Trapezoidal, upper wings back swept, lower wings straight, shorter and with less_chord.

Fuselage: Rectangular section, with rounded top part thinning out horizontally towards the empennage.

Rudder: With vertical fin forming long oval shape.

Elevator: Rectangular, tail plane semi-circular leadin; edge.

Propeller : Tractor.

Friedrichshafen pursuit airplane: the information that has been obtained on this plane does not allow us to give a full acount in this booklet. It will be described on a supplementary leaflet at a later period.

CLASSIFICATION BY NATIONALITIES AND BY ALPHABETIC ORDER

FRENCH AIRPLANES

The French airplanes are classified as follows according to their intended use:

A Army corp airplane : A2 two seater.

B2 two seater day bomber.

B Bombing airplane: | Bn2 et BN2 two seater night bomber. | Bn3 three seater night bomber.

(C.1 single seater.

C Pursuit airplane. C.1 single seater.

Pages	Pages
A. R. types 1 and 2	Letord 1 and 2 A3
Bréguet 14 A2 and 14 B 2	Morane Saulnier 21 A2, 27 C1 and 29 C1
Bréguet 16 Bn2	Nieuport (old types)
Caproni 2 BN2	Nieuport 24 C.1 and 27 C.1
Caproni 3 BN2	Nieuport 28 C.1
Caudron 4 A2	Salmson 2A2 and 2 bis A2
Caudron 6 A2	Sopwith 1 A2
Caudron 11 A3	Spad 11 A2 and 16 A2
Farman 40 A2 and following no	Spad 7 C.1, 12 C.1 and 13 C.1
Hanriot 3 C2	Voisin 8 Bn2 and 10 Bn2
	그 사이트 그리고 아내는 아니까지 아니는 아이를 하면 하는데 그 사이를 하고 있다. 그리고 있다면 얼마나는 그리고 살아지는 그리고 있다면 다른데 나를 하는데 되었다. 아이들에게 되었다.

ENGLISH AIRPLANES

Pages	Page
Armstrong-Withworth. 42 B.E. 2c and 2d and B.E. 12 29 B.E. 2e	De Havilland 4 and 5
Bristol Fighter	Scout Sopwith and Pursuit Sopwith
ITALIAN A	IRPLANES
Biplace Caproni.	Hanriot D.I
BELGIUM A	AIRPLANES
Farman 40 and following numbers	Hanriot D.1
AMERICAN	AIRPLANES
A.R.2 33 Bristol Fighter 31 Bréguet 14 A2 and 14 B2 54 Caproni 2 Bn2 16 Handley-Page 23 De Havilland 5 32 Nieuport 28 C.1 45	Salmson 2A2. 3 S.I.A. 3 Spad 13 C.1. 4 Spad-16 A2. 5 Sopwith 1A2. 3 Voisin Bn2. 1

GERMAN AIRPLANES

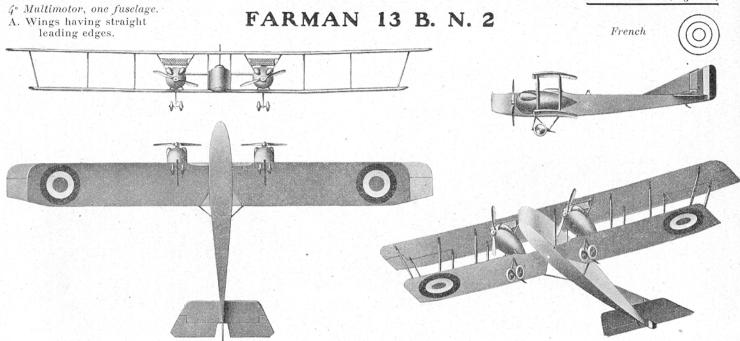
The German airplanes are classified as follows according to their intended use:

- C Pursuit and Artillery Observation Planes.
- D Fighting planes.
- G Bombing Planes.

Pages	Pages
Albatros D3 and D.V	Friedrichshafen D (pursuit)
Albatros C3	Triplace D Fokker
Albatros BFW CV and BFW CX	
A.E.G. bi-motor G	
A.G.O.C. (old and new types)	Hannovraner D
DFW-CV	L.V.G. C.V
Friedrichshafen bi-motor G.H	Pfalz D
Friedrichshafen G.III	Rumpler C.IV

Paris. - Imp. Paul Dupont (Cl.). - 428.7.1918.

1



Wings. — Lower wings shorter than upper, slightly dihedral, rectangular with front corners rounded and rear corners clipped off. Rectangular balanced ailerons on upper wings only. Two pairs of vertical struts and one pair of inclined struts on each side of motors.

Fuselage of rectangular section projecting well in front of the wings and tapering vertically toward the rear. One pair of wheels under each motor.

Rudder. — D shaped, balanced, with a very long triangular vertical fin. Trapezoidal elevator, cut away for rudder, rear corners cut off. Stabilizer trapezoidal shaped, front corners rounded.

Propellors. - Two, tractor. Motors. - Two Lorraine, with rectangular radiators above motors.

3. Wings having straight

leading edges.

5° Monomotor, with one fusclage.

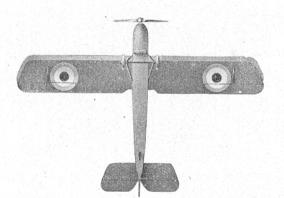
DE HAVILLAND 9

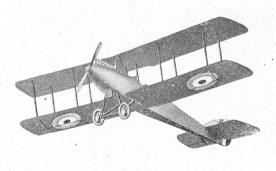
English











Wings. — Both wings same size, trapezoidal shape with rounded corners and cut away in rear at fuselage; pronounced dihedral, positive stagger, rectangular ailcrons. Two pairs of struts on each side of fuselage.

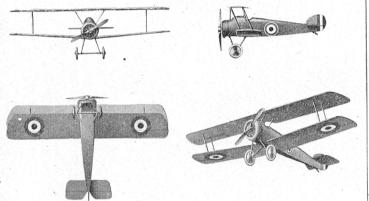
Fuselage very long, with rounded back, tapering vertically toward rear.

Rudder balanced, forming with its rectangular vertical fin a spatula shaped surface. Elevator trapezoidal shaped, cut away for rudder, corners rounded.

Propellor. - Tractor. - Motor B. H. P. and others.

- 5° Monomotor, with one fuselage.
- B. Wings having, straight leading edges.

SOPWITH CAMEL



Wings. — Upper and lower, same size trapezoidal, corners rounded, pronounced positive stagger. Upper wings cut away at center. Lower wings only dihedral. Allerons, rectangular, on both upper and lower wings. One pair of struts on each side of fuselage.

Fuselage. - Rounded back, sides and bottom flat, tapering

vertically toward the rear. Two wheels.

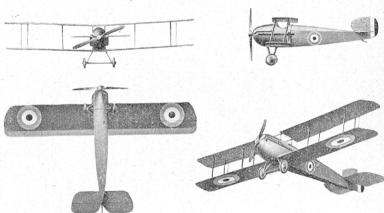
Rudder. — D shaped, with triangular vertical fin which is rounded at the front. Elevator trapezoidal shaped, cut away for rudder, corners rounded.

Propellor. — Tractor. Motor. — Clerget rotary.

English



SOPWITH DOLPHIN



Wings. — Upper and lower same size, trapezoidal, corners rounded, pronounced negative stagger, dihedral. Upper wings are cut out for full width above the fuselage. Rectangular ailerons. Two pairs of struts on each side.

Fuselage tapering vertically toward the rear, back rounded, sides and bottom flat. Radiators on sides of fuselage. Two wheels.

Rudder. — D shaped, balanced, with D shaped fin. Elevator trapezoidal, cut away for rudder, corners rounded.

Propellor. — Tracter.

Motor. - Hispano Suiza.

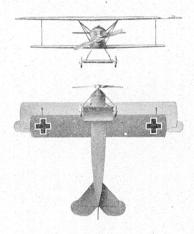
 5° Monomotor, with one fuselage.

FOKKER D VII

German



B. Wings having straight leading edges.







Wings. — Unequal: Lower wings much shorter than upper. Both wings rectangular with ends slightly rounded. No sweepback, Pronounced positive stagger. Wings very thick at leading edge. Ailerons on upper wings only, balanced, and extend beyond ends of wings. Cabane having eight struts. No interplane bracing wires whatever. Three struts forming N shaped combination on each side of fuselage.

Fuselage. — Tapering toward rear and terminated by vertical rudder post. Two wheels betwen which the very wide streamlined exle forms a lifting surface.

Rudder. — Comma shaped, balanced, but higher than that of former Fokkers, and overhanging in front a triangular vertical fin. Elevator balanced, of a rounded shape extending outside the triangular stabilizer. Do not confuse with the elevators of the Bréguet.

Propellor. — Tractor. — Motor fixed Mercedes 160 H. P.

Armament. - Two fixed machine guns firing through the propeller.