THE INTER SERVICES

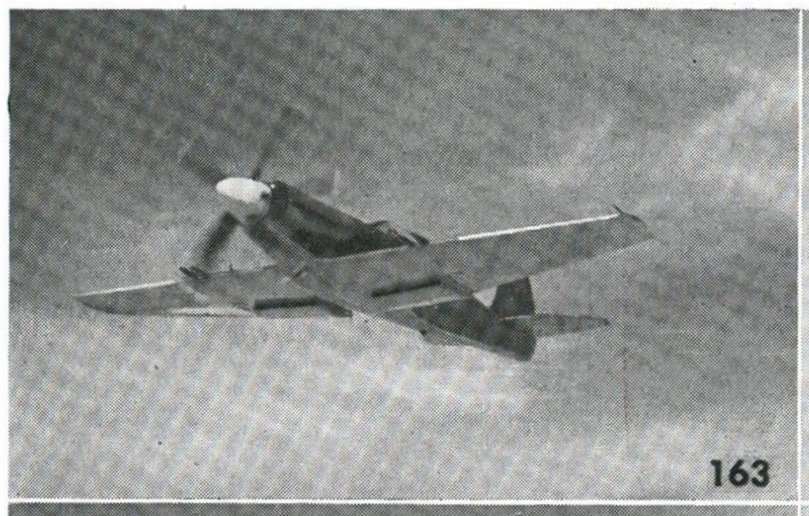
AIRCRAFT RECOGNITION

Journal

New Series

APRIL 1947

Volume I. No. 10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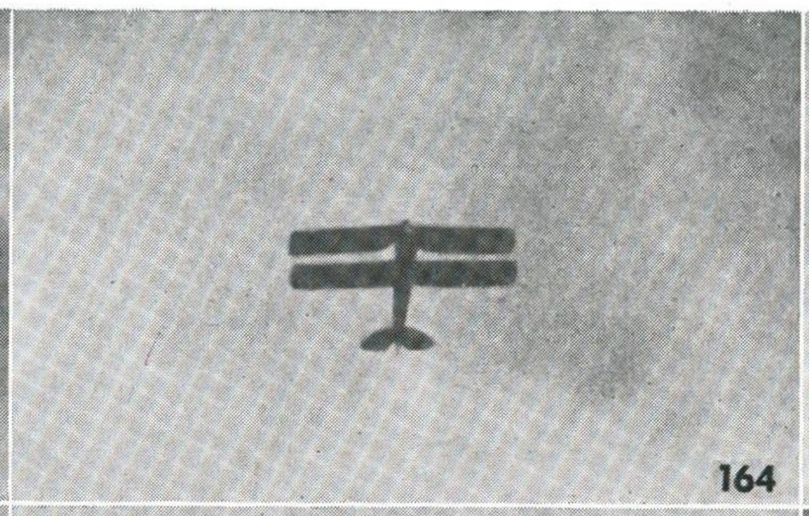
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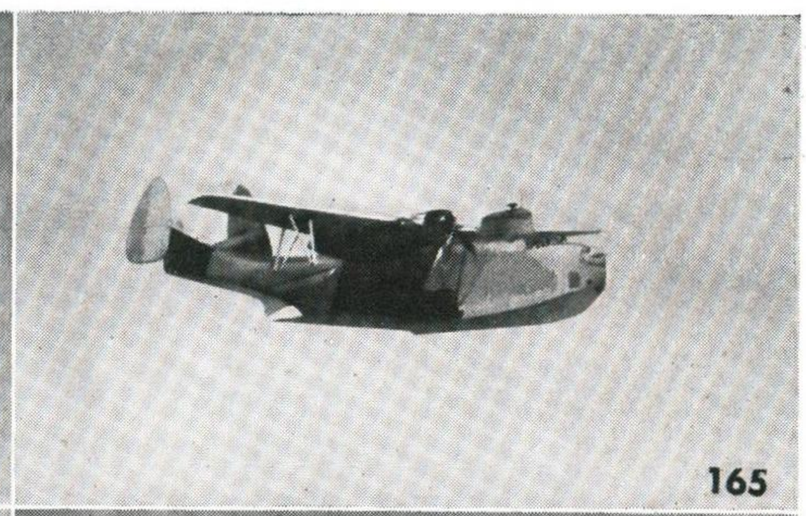
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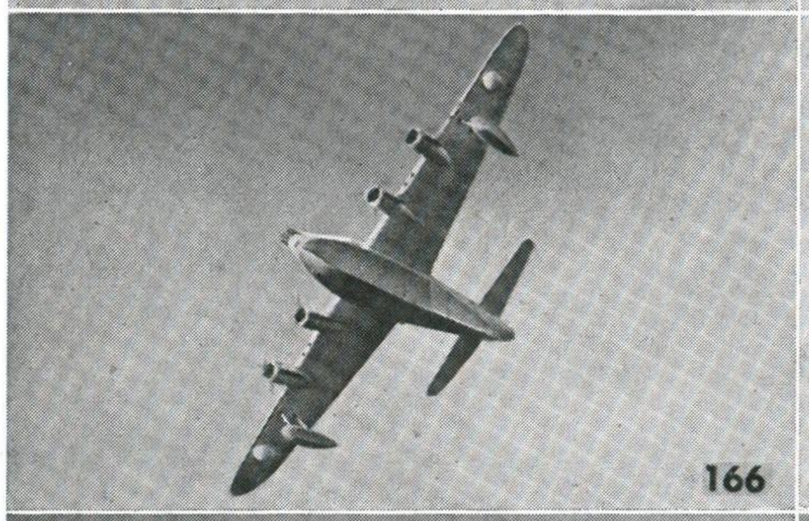
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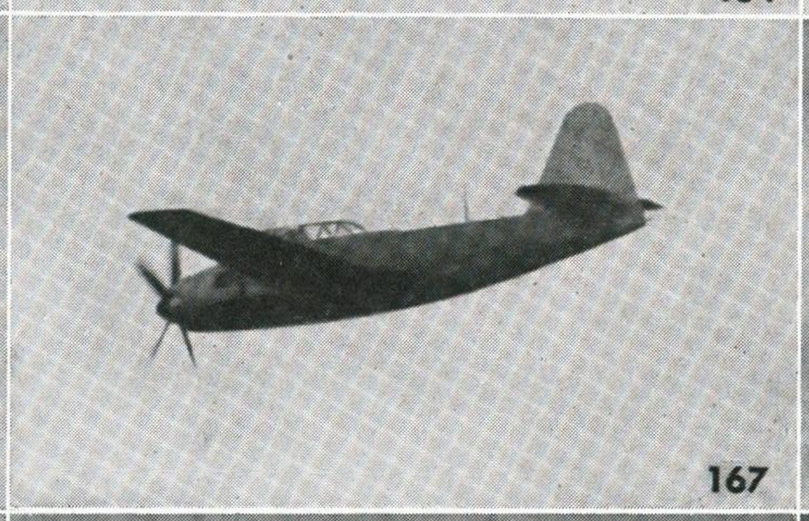
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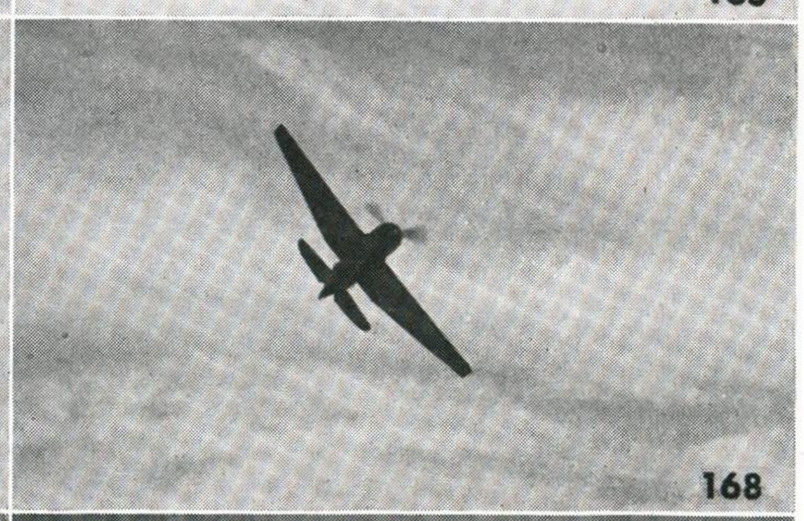
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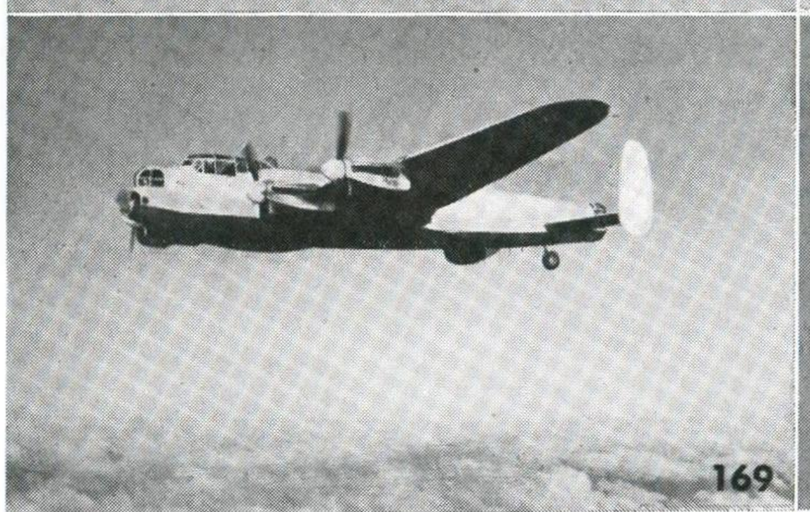
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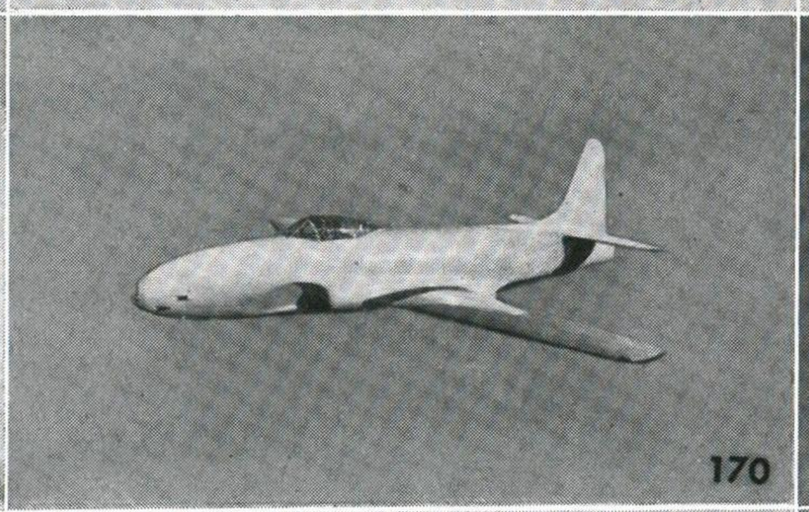
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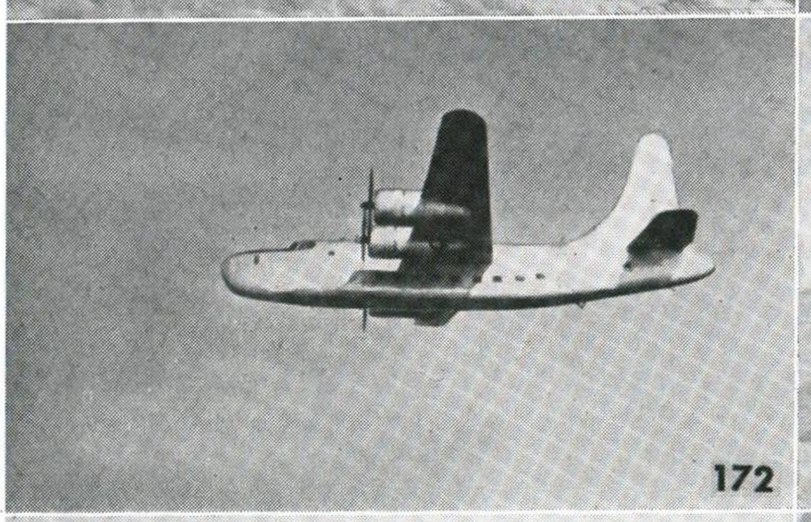
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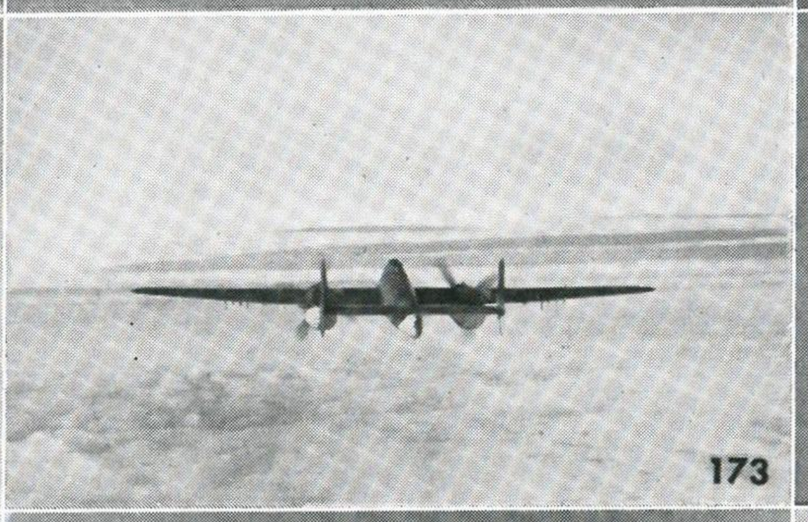
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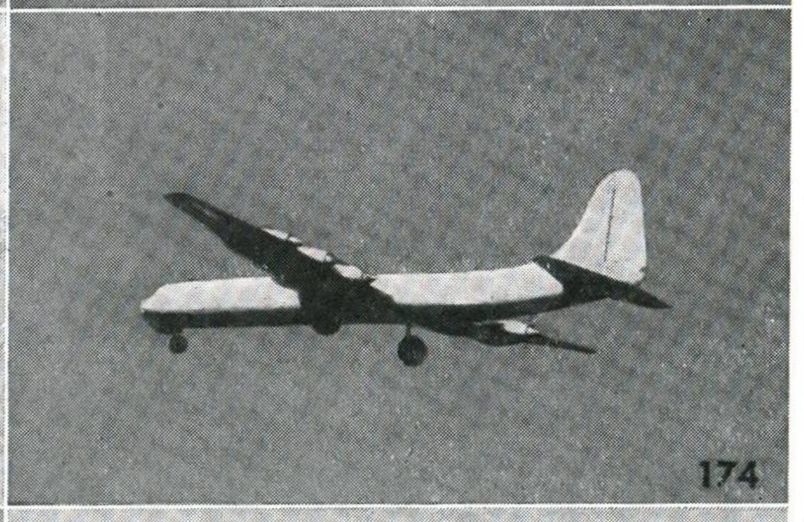
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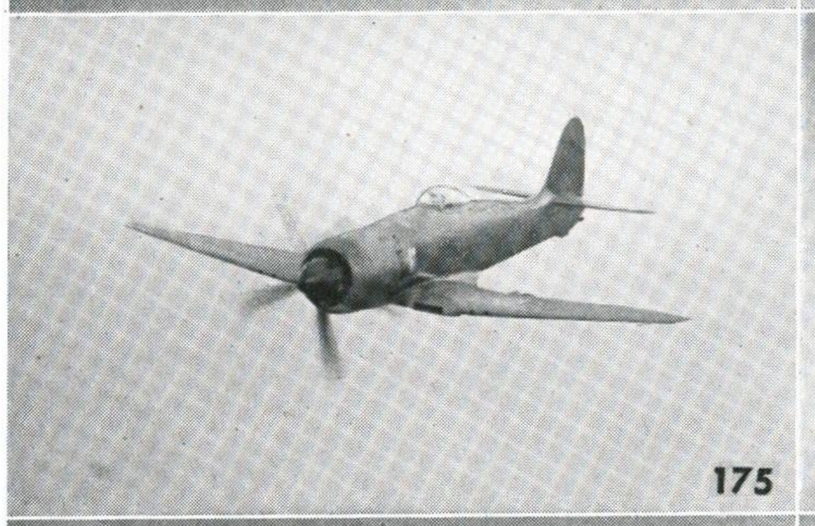
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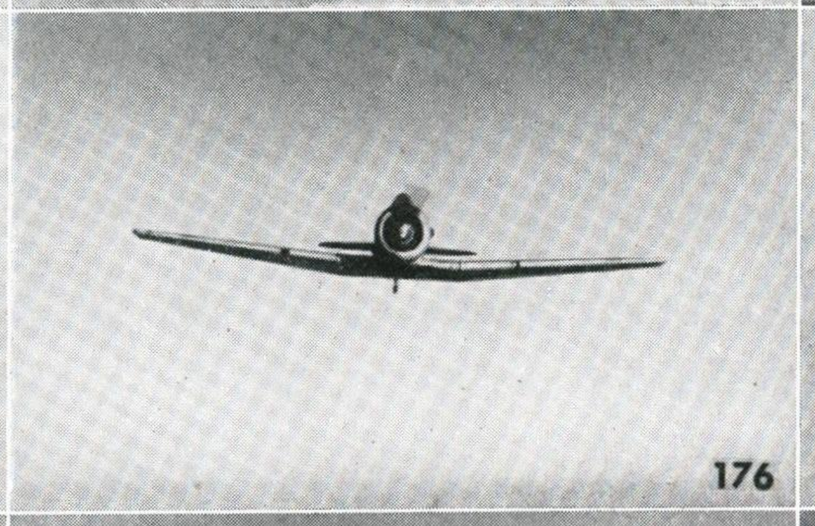
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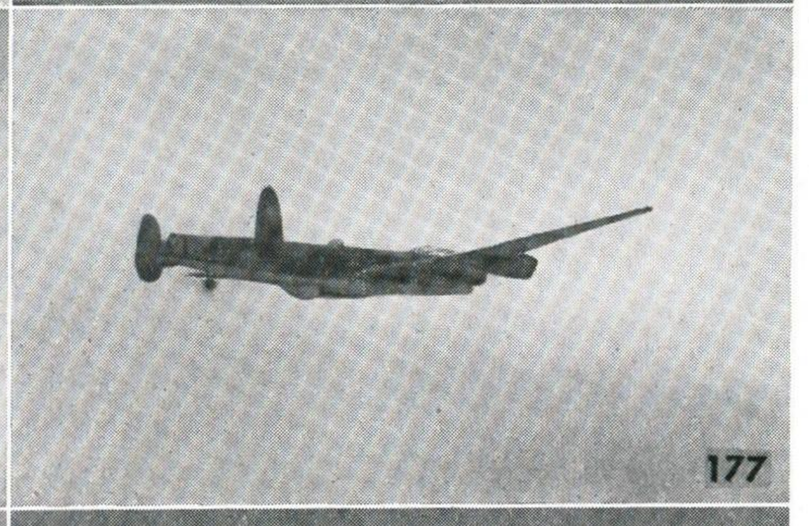
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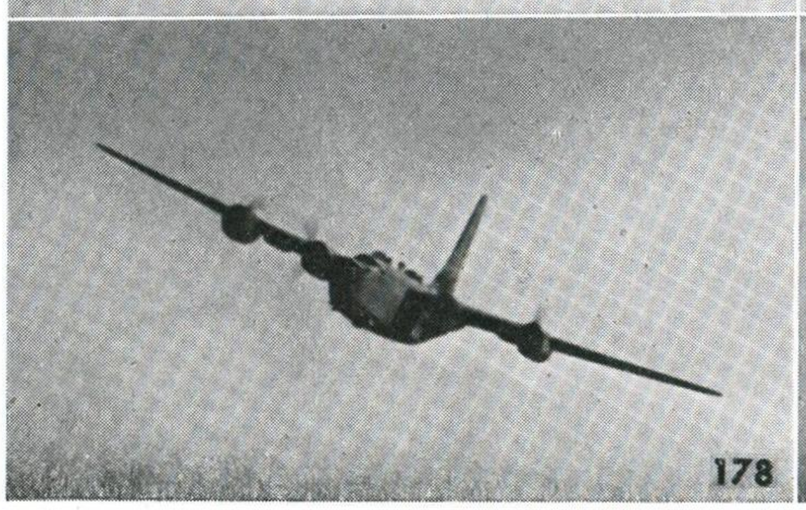
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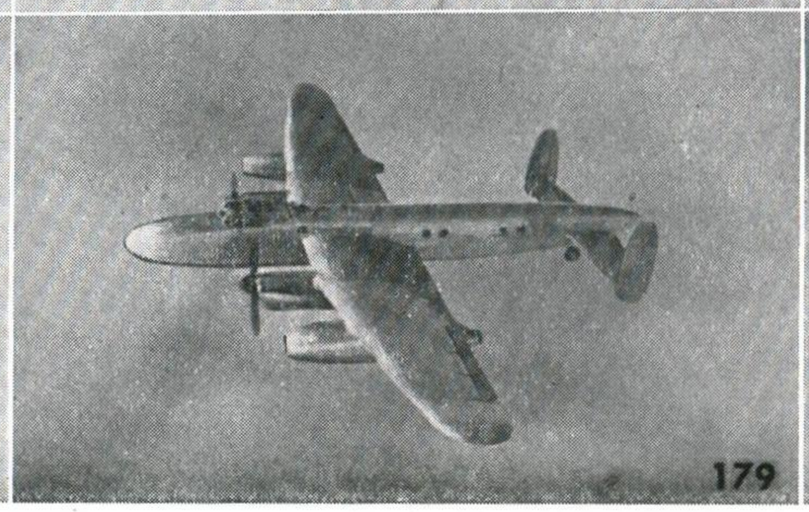
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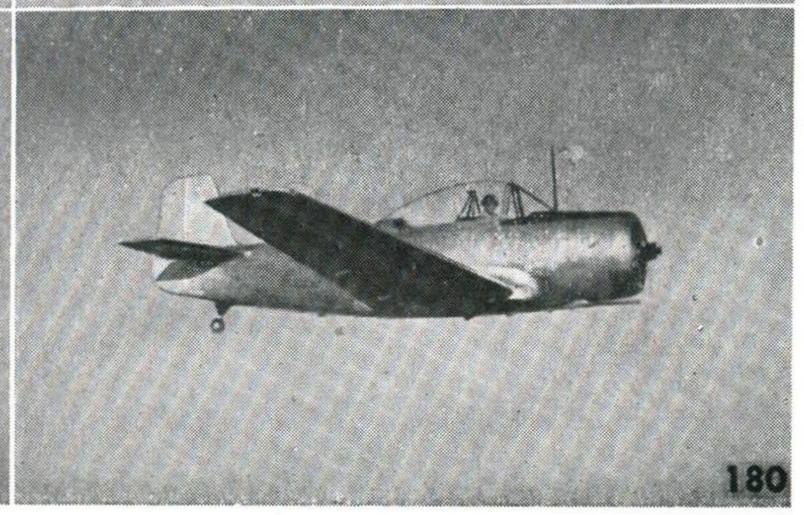
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ELEMENTARY SPOTTING

Recognition Test No. 31

APRIL 1947 Vol. 1. No. 10

THE INTER SERVICES

AIRCRAFT RECOGNITION JOURNAL

(NEW SERIES)

More Gen

Curtiss has produced the **XP-87** twin jet all-weather fighter. It bears some resemblance to our Gloster Meteor except in the tail plane position, which is low down. (Illustration on page 112.)

Bristol Hercules 120 radials are to be tried out in an **Avro Tudor II** airframe. It will be known as the **Tudor VII.**

Consolidated Vultee announce that the prototype **XC-99**, cargo and troop carrier transport version of the XB-36, now being built, has been moved into the open to permit installation of the main chassis and outer wing panels, as they have no hangar large enough to hold the complete aeroplane. We hope it keeps fine for them. The span of the XC-99 is the same as that of the XB-36, 230 ft. (Illustration on page 112.)

The Royal Canadian Navy are to have a number of **Hawker Sea-Fury X** aircraft.

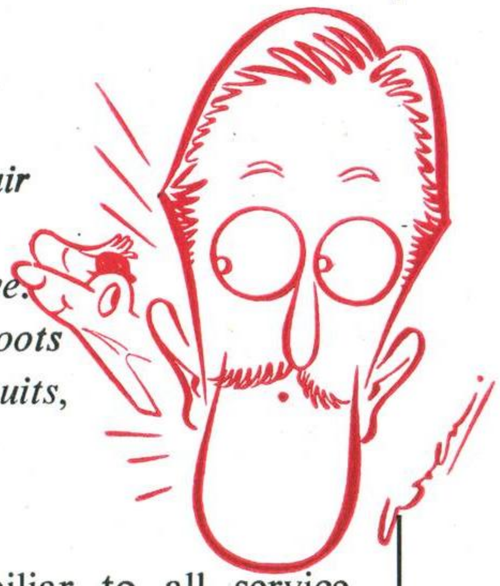
The **Douglas D-558 " Skystreak,"** a new U.S. Navy fighter, is now flying. XS-3 is its probable official designation. An all-metal low (trapezoidal) wing monoplane with a tricycle undercarriage, it has a pressurized cockpit. Its span is 25 ft. (Illustration on page 113.)

Bristol Beauforts are still active in Australia where they are in operation spraying insecticide over swarms of grasshoppers. So far there are no reports of any serious opposition by the grasshoppers.

The **Consolidated XB-46** is shortly to start trial flights. A large aeroplane—its span is 113 feet—it possesses the slenderest structural proportions of any aircraft yet produced. It has four turbo-jets, housed two to a nacelle. Current reports say it will have no defensive armament but will rely upon pure speed for protection. (Illustration on page 113.)

In addition to the U.S. Naval aircraft operating in the Antarctic, as mentioned in our last issue, there are now two **Vickers Armstrong Walrus** aircraft spotting for whales. They belong to the Whaling ship *Balaena.*

SERVICES *WRENDERED*

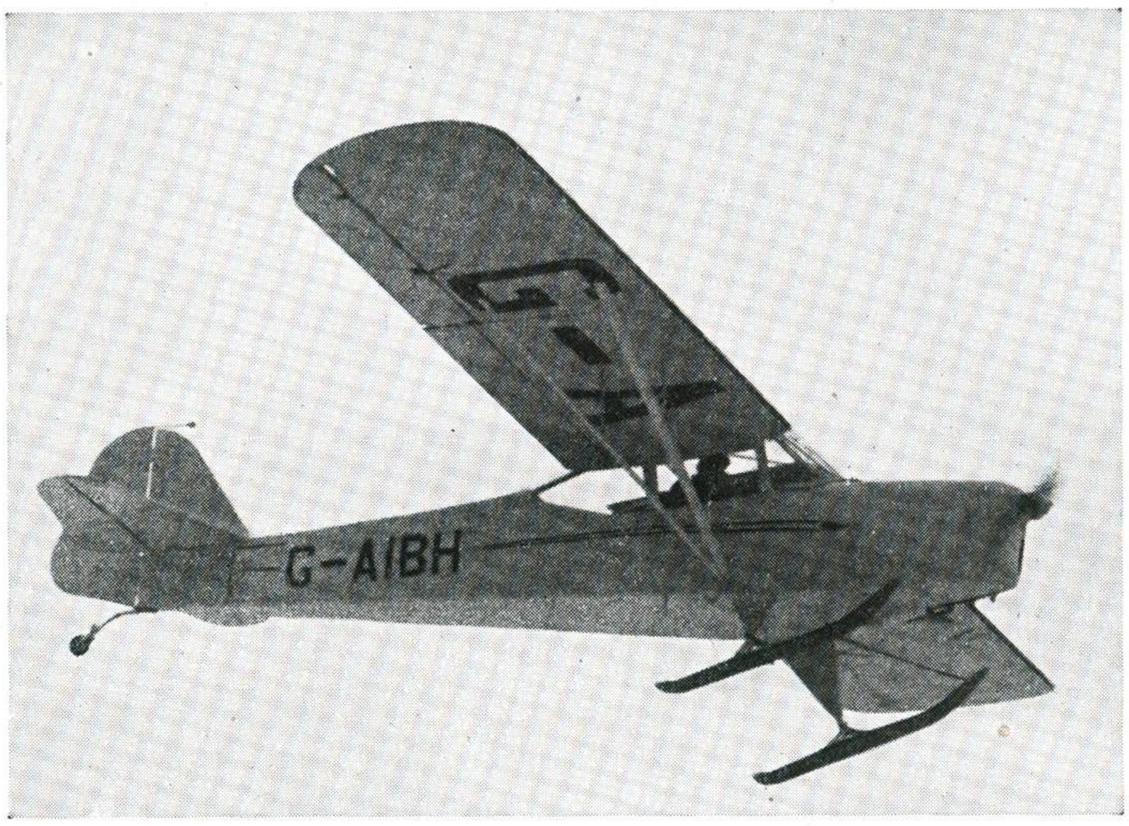


" The tapered head, the ginger hair,
The outrigged ears, and a prominent pair
Of radial specs, mounted medium high
Through which one can see a watery eye.
A moustache, with anhedral from the roots
Which, though you might not think it suits,
Helps to distiguish from other men,
The characteristic sit of Wren."

In these technical terms, so familiar to all service recognition instructors, and recalling for many of his old colleagues and friends in all three Services the " good old days " of aircraft recognition, Wren invariably described and introduced himself to a new class of recognition aspirants.

His unbounded enthusiasm for his subject has led him from strength to strength and with the editorship of the new series of the *Inter-Services Aircraft Recognition Journal* he crowned a long and meritorious service career.

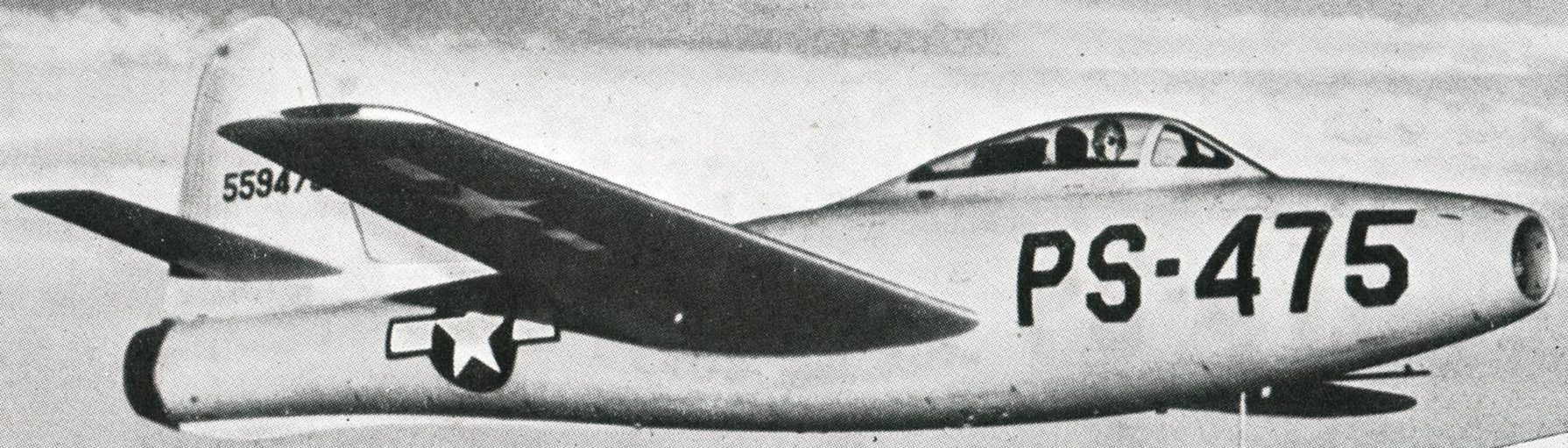
Wren is now demobilized. The Editorial Committee, and all those concerned with the production of the *Journal,* join with its readers in thanking him for invaluable services rendered, and wishing him every success in the future.



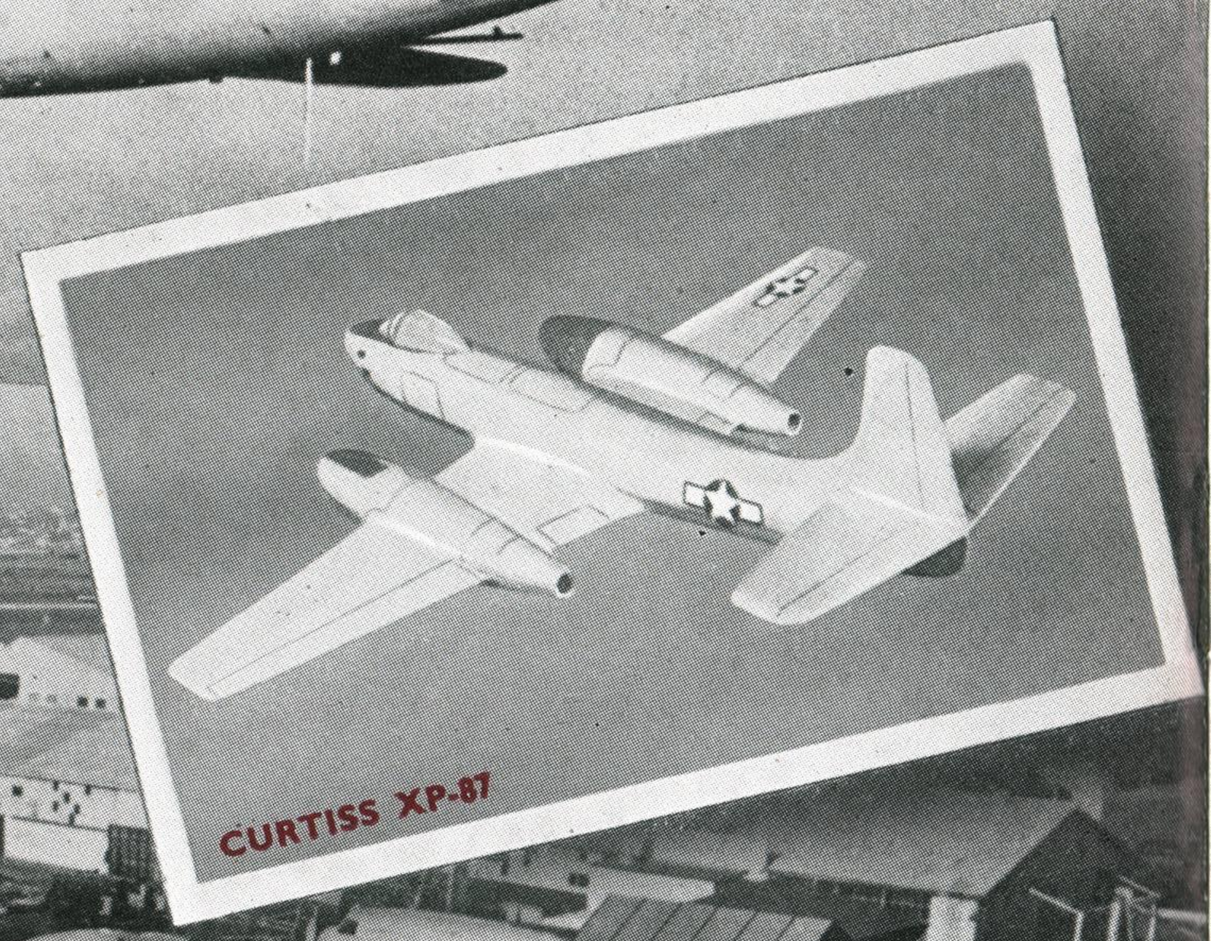
Its toes turn up. An **Auster Autocrat** was fitted with skis and tried out in the recent severe weather in this country. It proved successful, the skis made practically no difference to its performance. Austers built in Scandinavian countries will have them as alternative landing gear.

The Youngest. Very similar to the rest of its family is the new 2-seater **Auster J/4** (190 h.p. Blackburn Cirrus). Designed for use as a club machine, the J/4 has dual control and side-by-side seating. Its maximum speed is 108 m.p.h., it cruises at 90 m.p.h., and stalls at 37 m.p.h.

Star Spangled

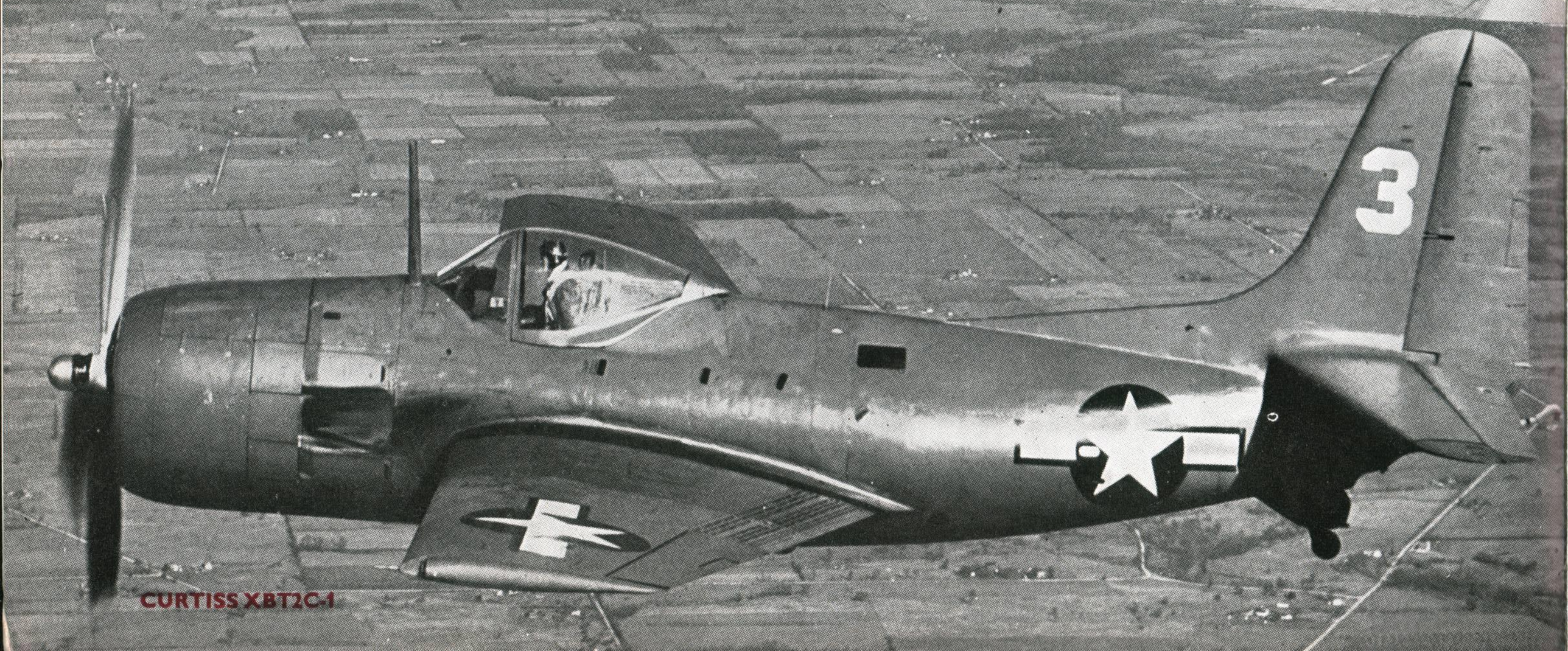


REPUBLIC XP-84 THUNDERJET



CURTISS XP-87

CONSOLIDATED XC-99



CURTISS XBT2C-1

Projects

CONSOLIDATED XB-36

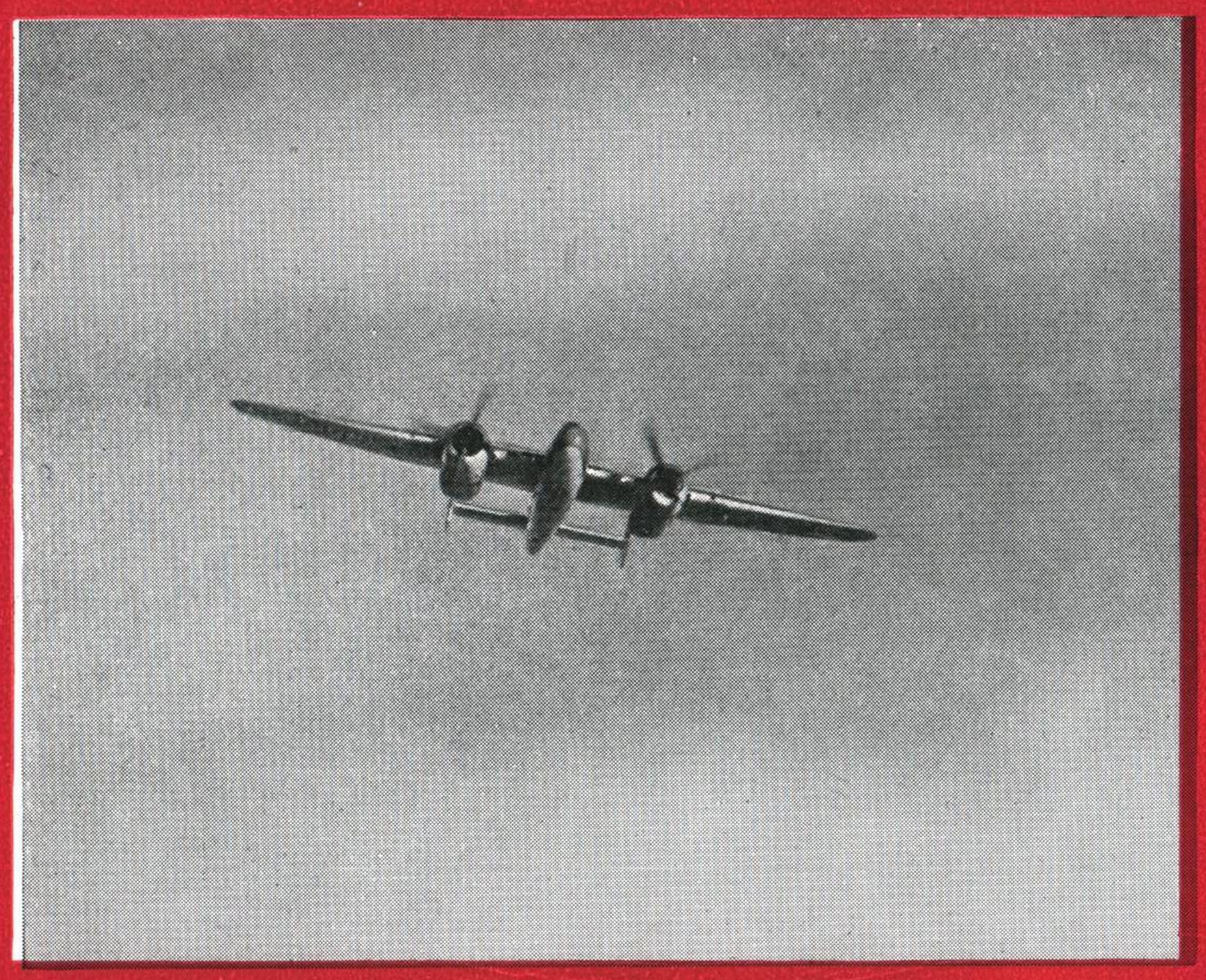
RYAN XF2R-1

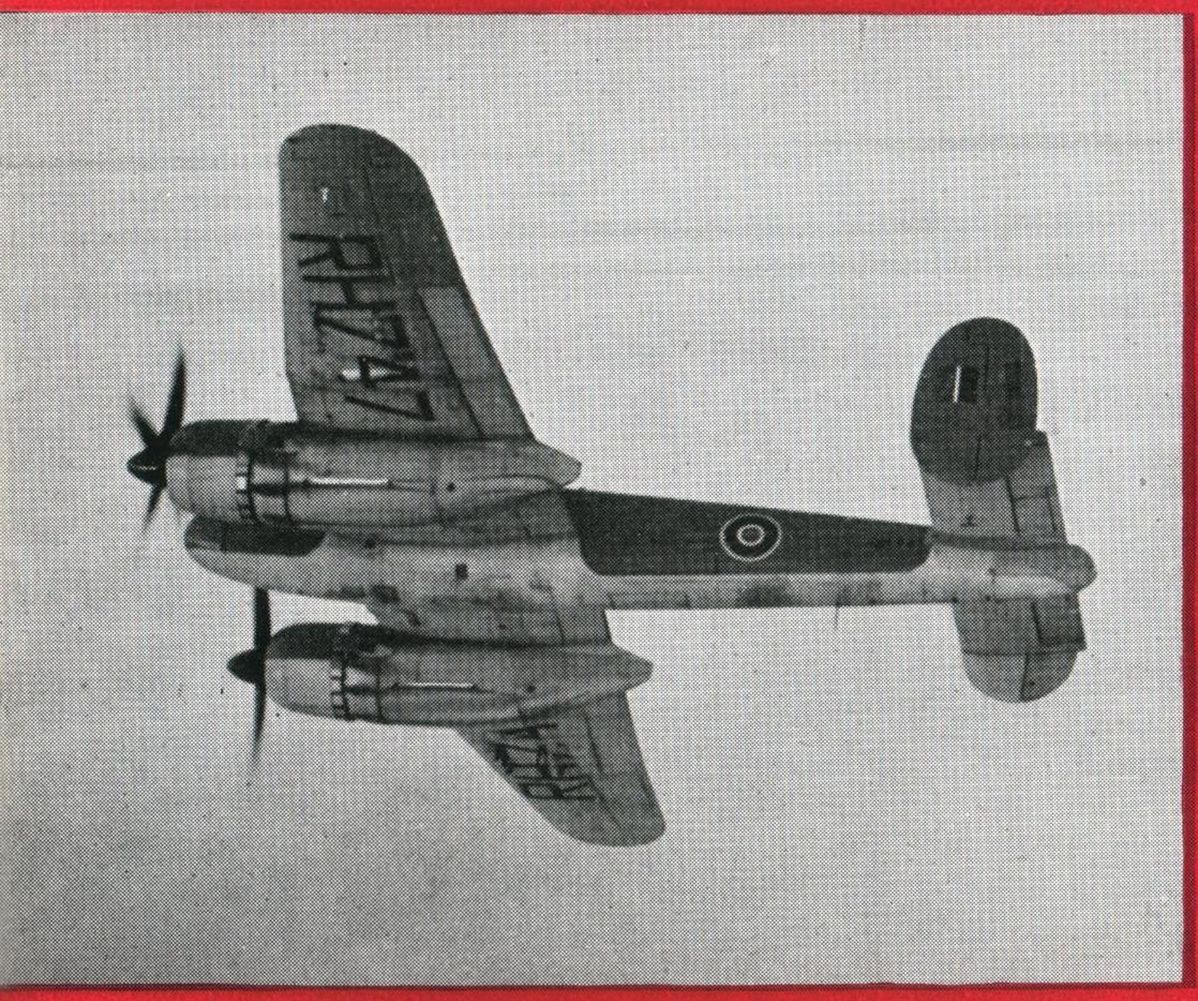
DOUGLAS D-558 "SKYSTREAK"

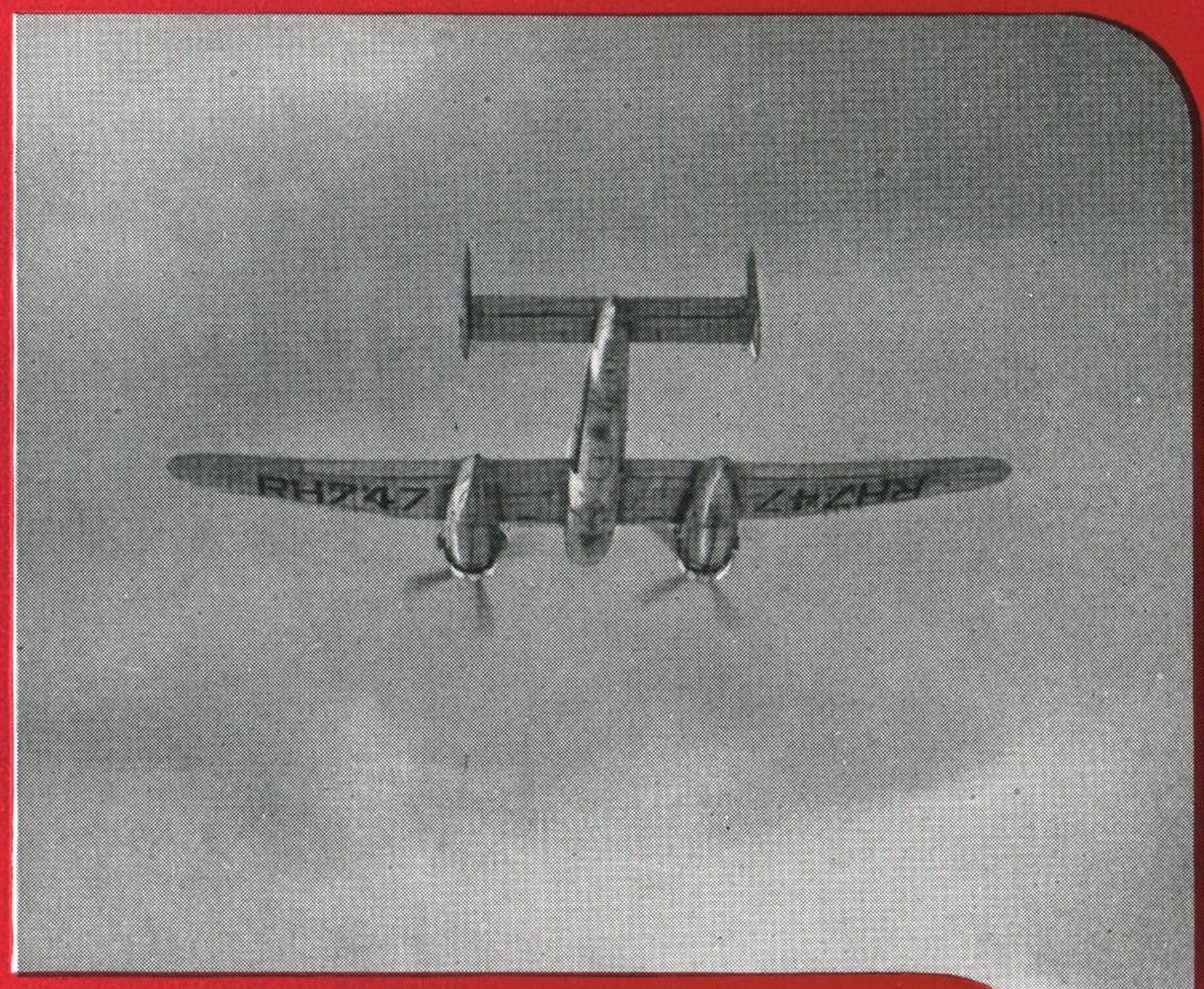
CONSOLIDATED XB-46

the BRIGAND

TORPEDO FIGHTER

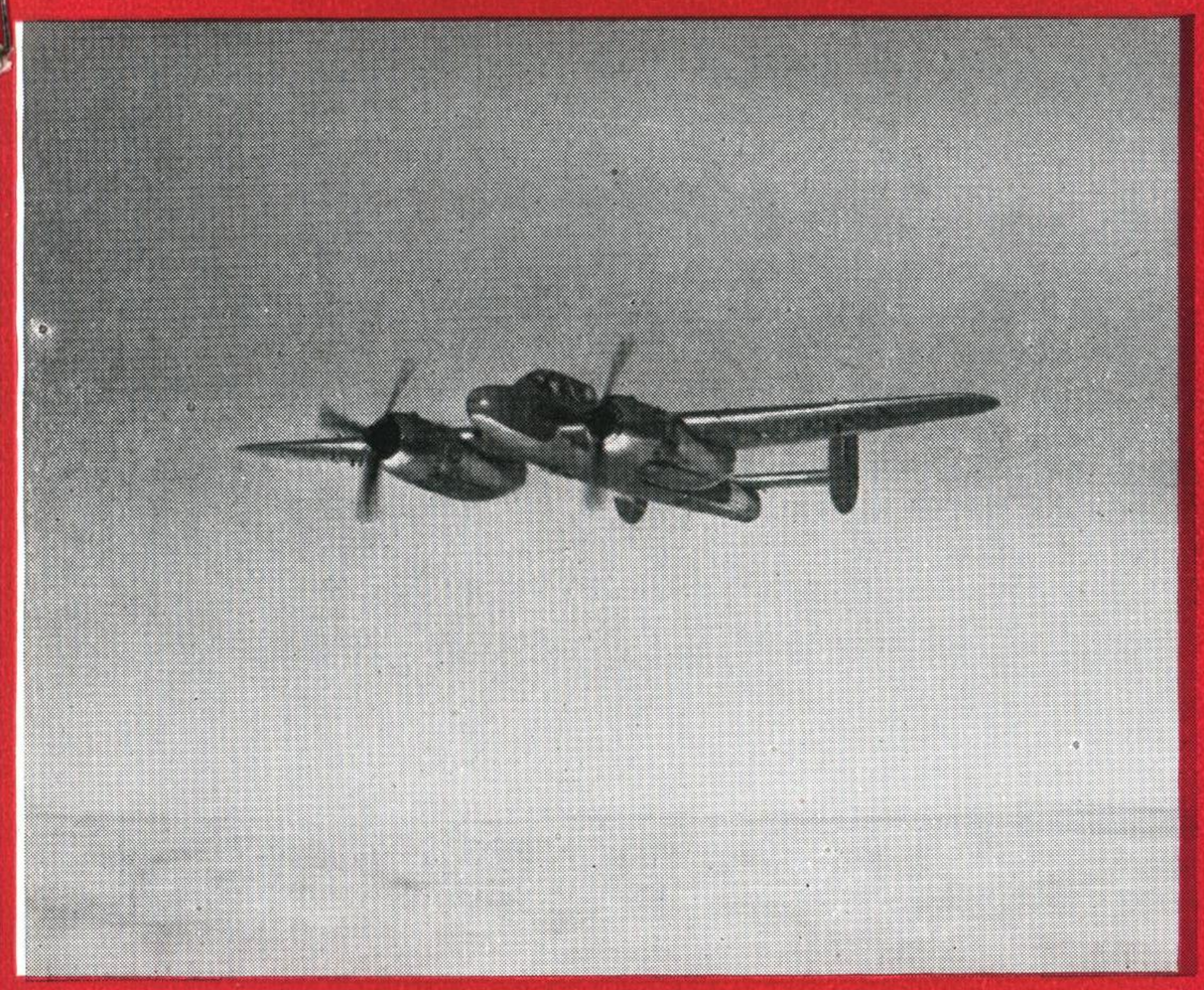






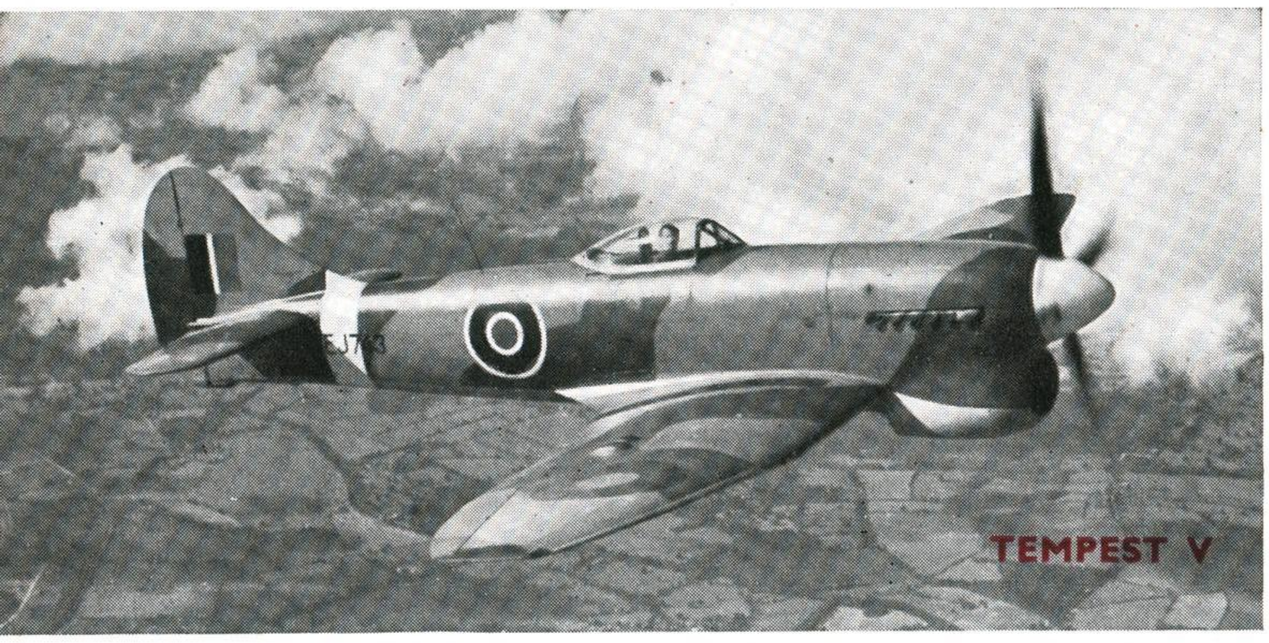
Bristol Brigand T.F. Mk. I

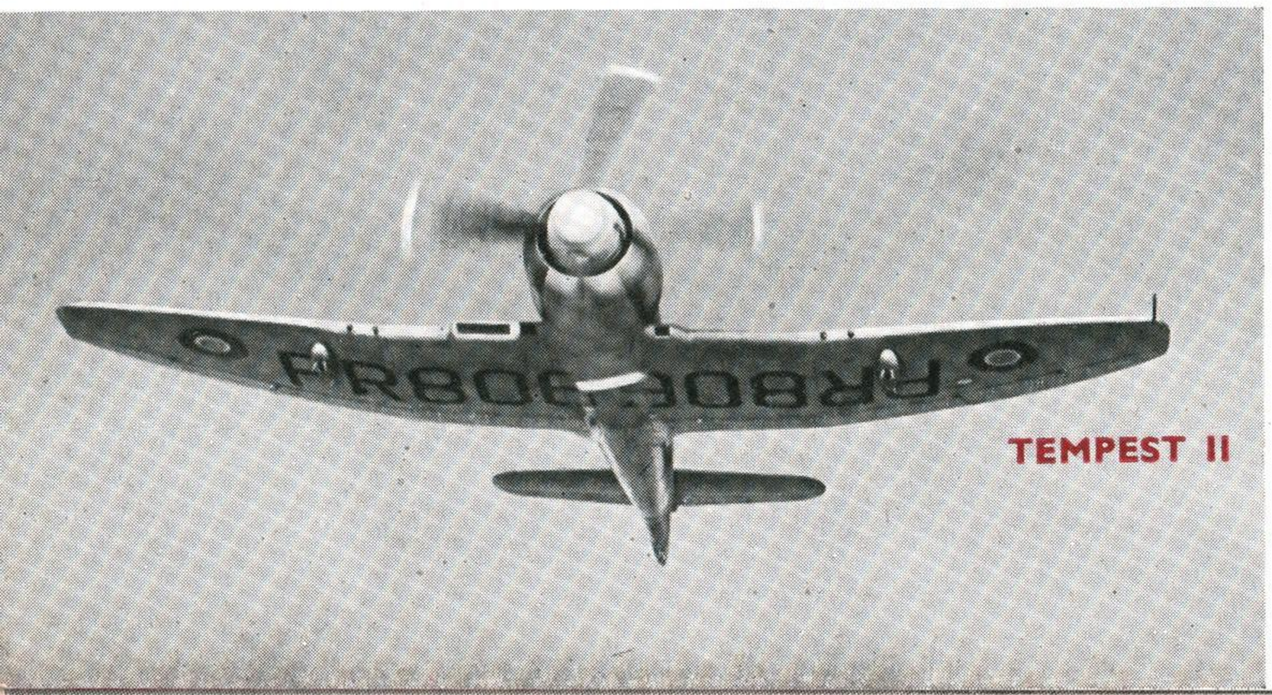
A development of the Buckingham, the Bristol Brigand T.F. Mk.I has wings, engine mountings and undercarriage similar to those of the Buckingham, but the fuselage is a new and more slender design. The wing is unusual, having the appearance of swept back outer sections. Another feature, unusual in Bristol types until recently, is the large twin fins and rudders. The crew are accommodated together in a prominent cockpit. Classified as an attack type, the functions of the Brigand include torpedo work, dive bombing and strafing, to accomplish which it is fitted with a 22-inch torpedo, or alternatively two 1,000 lb. bombs. Four 20 mm. cannons fire forward from beneath its nose, and the rear is covered by a flexible ·50 in. gun mounted in the cabin structure. Its span is 72 ft. 4 ins.



Per HAWKER *Ad Astra*


TYPHOON


TEMPEST V


TEMPEST II

by

DEREK MOORE-HEPPLESTON

THE name Hawker is synonymous with high performance aircraft, and has been for a quarter of a century. Shortly after World War I the Sopwith Company became the Hawker Engineering Company, and, under the management of T.O.M. Sopwith, commenced making the long line of fighter aeroplanes which formed the backbone of the R.A.F. fighter strength for over 20 years. The name Hawker was adopted as a lasting tribute to the late Harry Hawker of transatlantic fame.

The first Hawker fighter aeroplane was the Woodcock of 1922. There followed the Heron, Hedgehog, Hornbill, Danecock, Hawfinch, Hoopoe, Hornet and, the finest of all the biplanes, the Fury. The Fury biplane was a direct descendant of the F.20/27 Hornet, and was regarded as a milestone in the evolution of R.A.F. fighters. In 1933, Mr. Sydney Camm, whose first design was the Hornbill, was appointed chief designer to Hawkers.

Relating Hawker biplanes to monoplanes is reasonable, because a monoplane project evolved in 1933, though never built, was a direct step from the Fury biplane. This project was shelved upon the appearance of a new high-powered Rolls-Royce Merlin engine which demanded a completely new design of airframe to carry it.

This new design was, of course, the famous Hurricane, which was brought out as a private venture and, after successful initial proving flights, was given Air Ministry specification No. F.36/34. With all its superb qualities, however, the Hawker Hurricane was obviously going to have its limitations, and attention was turned to a more advanced design, namely, the Typhoon.

The Typhoon was designed in 1937. It was built round the Napier Sabre " H " type engine. At the same time, Hawkers commenced work on an alternative design to the Typhoon under the same specification, which was F.18/37. The alternative design was to have the then, new Rolls-Royce Vulture " X " type engine and was, in fact, the Tornado. Parallel development of these two machines then proceeded until it was possible to decide whether the Vulture or the Sabre engines were to go into production ; the choice fell upon the Sabre, and the Typhoon with that power plant first flew on 24th February, 1940. Although substantial orders were placed for the production of the Typhoon, tactical developments in air warfare, cut down its production priority in favour of further intensive Hurricane production, though a large number of Typhoons were, in fact, built.

During the flying trials of the Tornado prototype, first contact was made with the not unexpected problem of compressibility. But Sydney Camm and his design team were ready for it, and work was well in hand for the production and fitting of a thin " laminar-flow " elliptical wing to a Typhoon. This Typhoon bore the drawing office designation Typhoon Mark II, but the name did not survive, and in view of the further considerable

structural modifications that had to be made to the airframe, both in fuselage and in tail unit, permission was sought, and obtained, to re-name the aeroplane. It first flew on the 2nd September, 1942, and after successful trials it became the first of the Tempest series, going into production as the Tempest Mark V.

Meantime, the Air Ministry had asked Hawkers for a Tornado so modified as to accommodate an air-cooled radial engine, and despite the difficulties of installing a Bristol Centaurus in the Tornado, this was accomplished and the machine was test flown. Development was rapid, and the upshot was that by June, 1943, another Tempest (Centaurus IV) was flying. This one became the Tempest Mark II and it also went into production, but with a Centaurus V. Thus it was that the Mark V came out before the Mark II.

In all, six different prototype Tempests were projected. The Marks III and IV were intended to have Rolls-Royce Griffon engines, but owing to pressure of production, Hawkers could only undertake to build the Marks I, II and V. Later on, the Mark I dropped out because the projected Sabre engine for it did not come into production. The Mark VI started with a trial installation of the Sabre V, it proved successful, and is now in production.

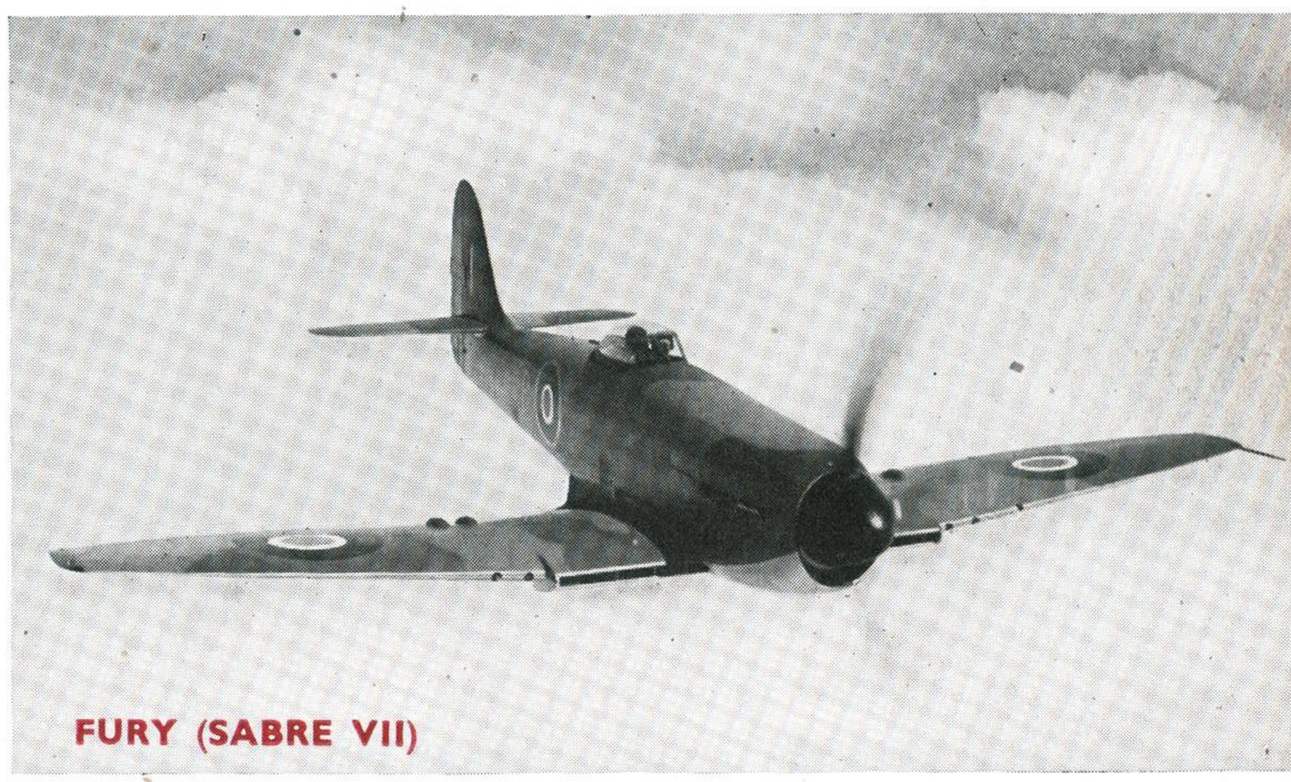
In 1943, the Air Ministry issued Specification F.2/43, for a single-seat fighter, and the Hawker Company designed and produced the new Fury monoplane. Although it bears a superficial resemblance to its predecessor the Tempest Mark II—and actually employs the same wing plan form—basically it is an entirely new design. Two prototypes were built, powered by Centaurus radials. As an experiment, a further model of the Fury was built with a Rolls-Royce Griffon and contra-props. Later this same airframe was fitted with a Sabre VII. A Naval specification, N.7/43, was issued, and in response to this the Fury was developed into the Sea Fury.

The Sea Fury X first took the air on 2nd September, 1944. It had a Bristol Centaurus XII. After successful trials, production was commenced, the only difference between the production models and the prototype being the replacing of the Bristol Centaurus XII by the Bristol Centaurus XVIII of 2,300 h.p. The first Fury actually earmarked for naval duties was, in fact, a standard Fury fighter which has been fitted with an arrester hook ; but it could not fold its wings, and it was this machine which was used largely for deck landing trials. The production Sea Furies, of course, have power-folding wings, and they are the latest Hawker fighter to go into production.

As to recognition, the main types of Hawker aircraft with which we are concerned to-day are the Tempest Mark II, V and VI, and three different Furies. These are the Fury (Centaurus), the Fury (Sabre VII), and the Sea Fury (Centaurus XVIII). Unfortunately, all these aeroplanes have the same wing plan form. The Tempest Mark II, Fury (Centaurus), and Sea Fury all have radials, but differ in tail structure shape and form, and in leading-edge wing-root intake detail. The Tempest Mark V and VI both have the beard-like radiator tunnel beneath the nose, but the Mark VI has root leading-edge intakes, whereas the Mark V has not. The Fury (Sabre VII) has the fairest nose of all ; there is no obvious intake, merely the droop of the lower lip of the cowling, behind and below the spinner, forming an opening. In addition, the leading edges of the wing centre-section on both sides have long slot-like intakes.

Of these aeroplanes, there are in service at the present time, numbers of Tempests Mark II and V, and many Sea Furies Mark X are being built for the Royal Navy and the Royal Netherlands Navy. The Tempest Mark VI is also in production ; the Fury (Centaurus) is being made for Iraq and will be known as the Fury " Baghdad." Production possibilities for the Fury (Sabre VII) are not yet known. There will, therefore, be a large number of Hawker's propellor-driven fighters to be seen throughout the world for the next few years. It is probable that these machines will be the last of this class of fighter that the world will see in first-line service, for, with all the attributes of the propellor-driven fighter, and with the advent of the jet-propelled aircraft, it begins to look as if . . . .

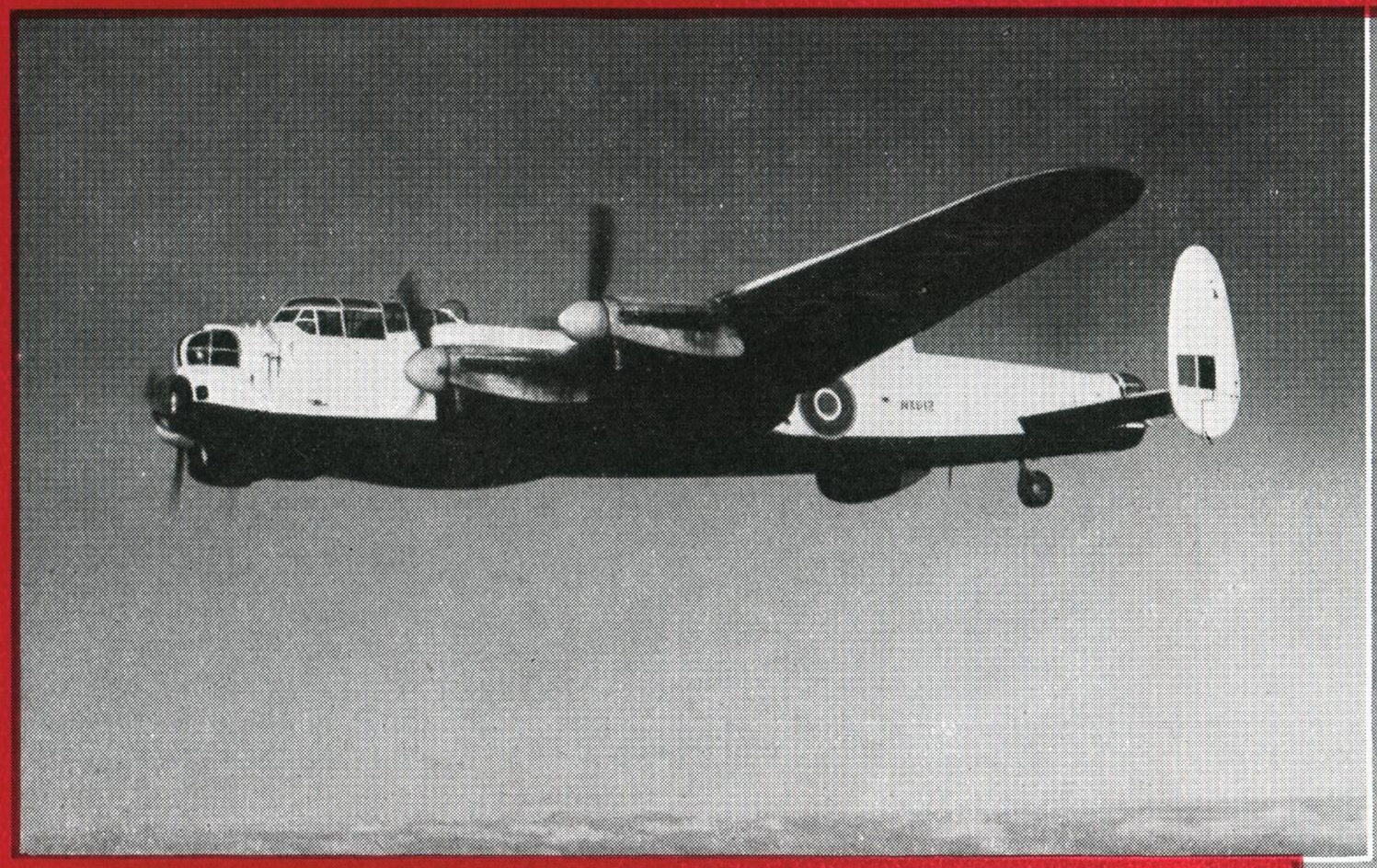
FURY



FURY (SABRE VII)

FURY (GRIFFON)

SEA FURY X



SEVERAL THOUSAND Avro Lancasters were built for war service. A large number of Marks I, III and VII, are still flying. All three are similar in appearance and unless you can see the shape, size and position of the mid-upper turret—which is nearer the wing trailing-edge and carries twin "fifties"—it is difficult to distinguish the Mark VII from the Marks I or III. Both the latter are, recognitionally, the same. The Mark VII was built by Austin Motors.

The Avro Lancaster Mark VII has 4 Rolls-Royce Merlins of 1,640 h.p. each. The top speed is 287 m.p.h. The span is 102 ft.

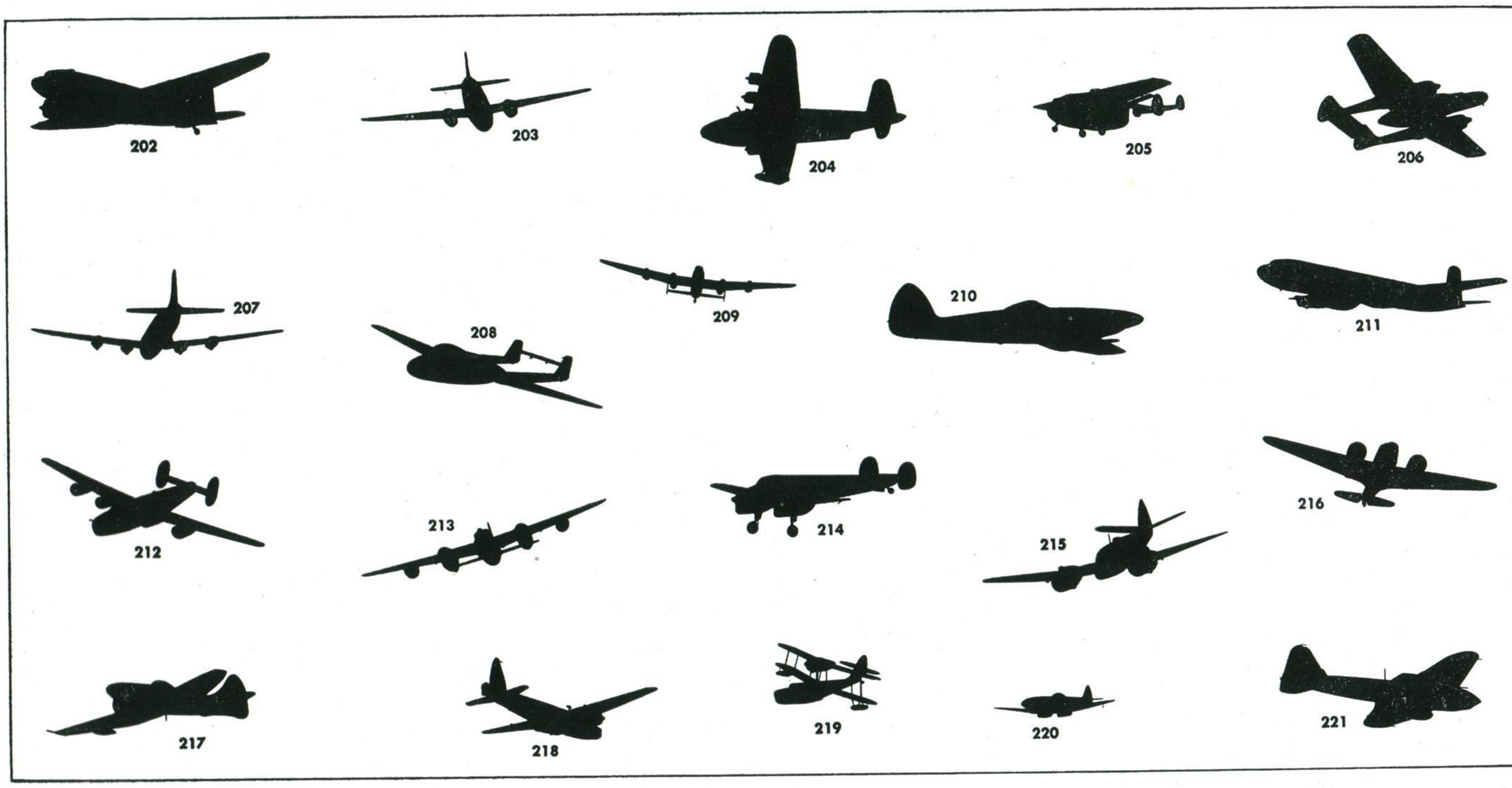
The LANCASTER VII

ADVANCED SPOTTING

Recognition Test No. 32

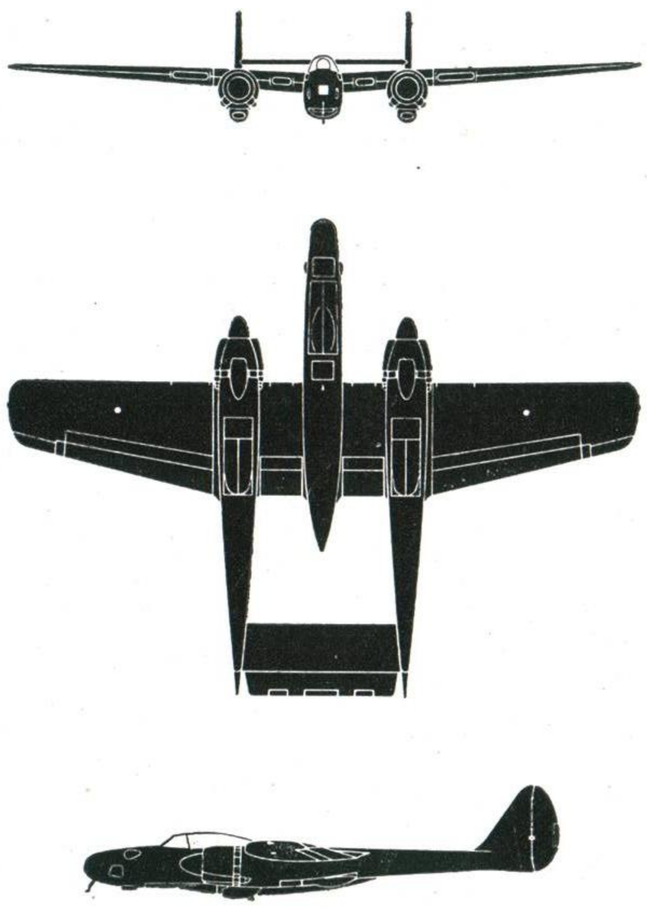
SILLOGRAPHS

Recognition Test No. 33



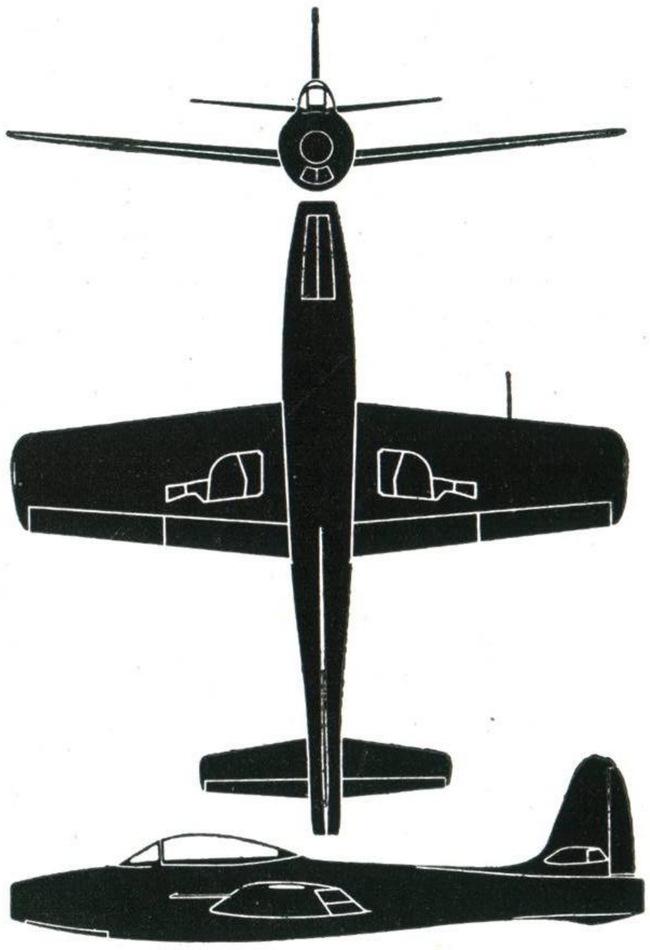
NEW and REVISED SILHOUETTES

NORTHROP F-15 REPORTER



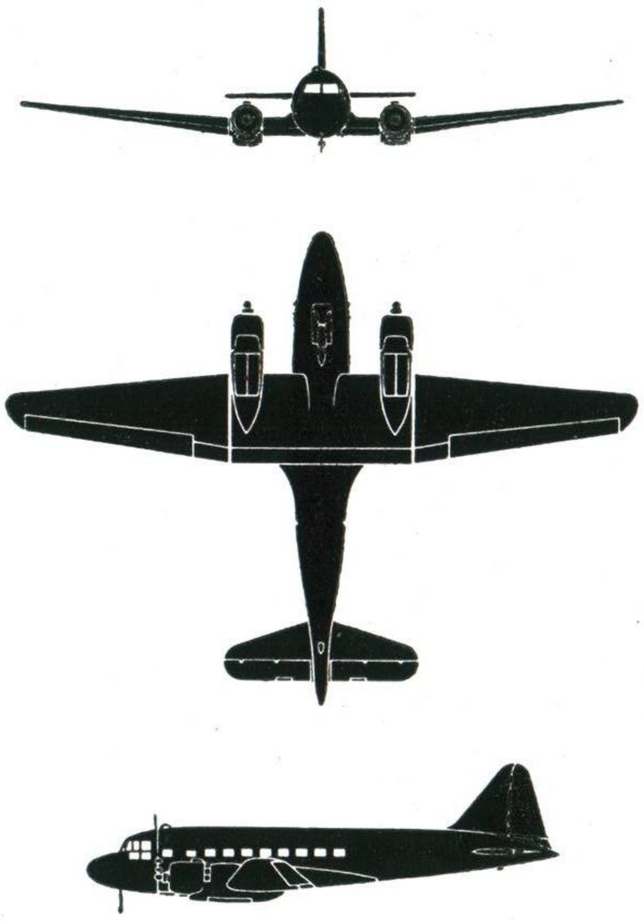
American Photo-Recce Type
(2 Double Wasp) Span 50 ft. 3 ins.
New Silhouette

REPUBLIC P-84 THUNDERJET



American Fighter
(1 General Electric Turbo-jet) Span 37 ft. 2 ins.
New Silhouette

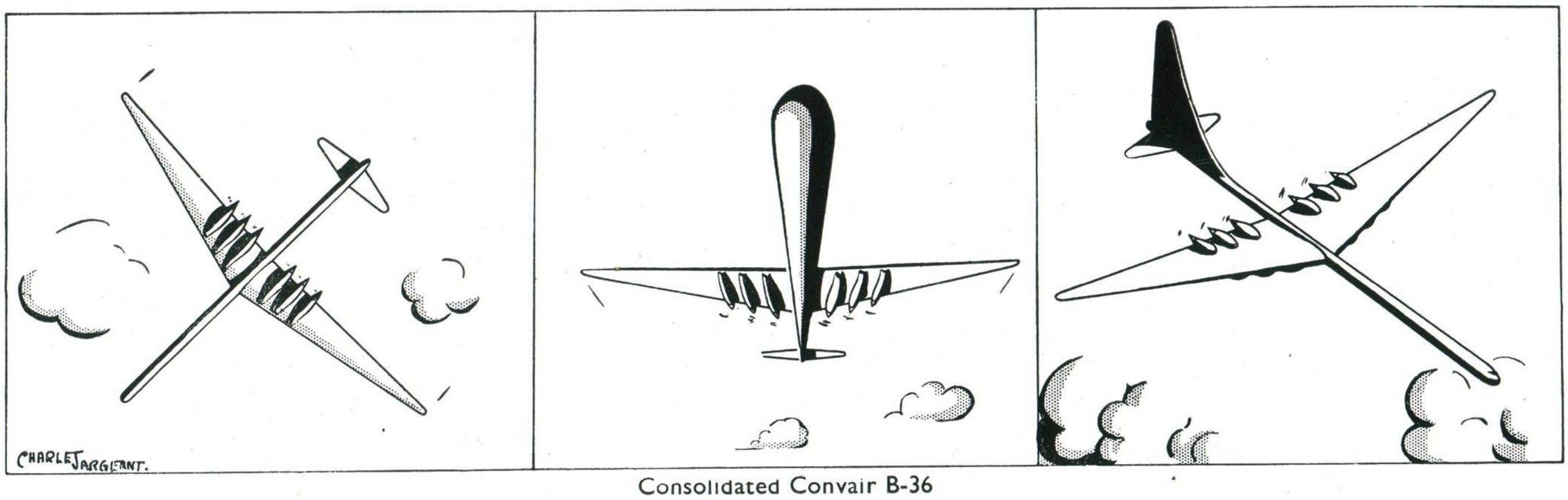
ILIUCHIN Il-12



Russian Civil Transport
(2 Ash/82) Span 100 ft.
Provisional Silhouette

RECCABSURDITY

No. 1



Consolidated Convair B-36

R.O.C. NOTICE. Owing to circumstances beyond Editorial Control, **The Royal Observer Corps Gazette,** which should be included with this issue of the **Journal,** is held over until next month.

SOLUTIONS TO RECOGNITION TESTS IN THIS ISSUE :

FRONT COVER : *H.M. The King's Viking*
(Crown copyright photo)

No. 31 (ELEMENTARY SPOTTING)

163. Spiteful
164. Tiger Moth
165. Mariner PBM-5
166. Seaford
167. Spearfish
168. Avenger
169. Lancaster VII
170. P.80A
171. SB2C-4 Helldiver
172. RY-3 Liberator
173. Brigand I
174. XB-36
175. Sea Fury X
176. Harvard II
177. Lincoln I
178. PB4Y-2 Privateer
179. Lancastrian (Nene)
180. Fairchild XNQ-1

No. 32 (ADVANCED SPOTTING)

197. Spiteful
198. LA-5
199. Shetland
200. RY-3 Liberator
201. Mosquito
202. Tiger Moth
203. Viking I
204. Beaufighter X
205. SB2C-4 Helldiver
206. Sea Fury X
207. Avenger
208. Hornet
209. Yak 7b
210. Stratocruiser
211. Dakota
212. Mosquito
213. Seafang
214. P-61 Black Widow
215. SB2C-4 Helldiver
216. Fortress II
217. Mariner PBM-5
218. Lancaster VII
219. P-80A
220. Brigand I
221. B-50 Superfortress

No. 33 (SILLOGRAPHS)

202. Dakota
203 Viking
204. Sandringham
205. Aerovan
206. P-61 Black Widow
207. DC-4 Skymaster
208. Vampire
209. Lancaster VII
210. Spiteful
211. Tudor II
212. C-87 Liberator
213. Mosquito P.R.34
214. Desford
215. Beaufighter
216. Oxford
217. Tempest
218. Wellington
219. Sea Otter
220. Spitfire 22
221. IL-2

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