THE INTER SERVICES

AIRCRAFT RECOGNITION

Journal

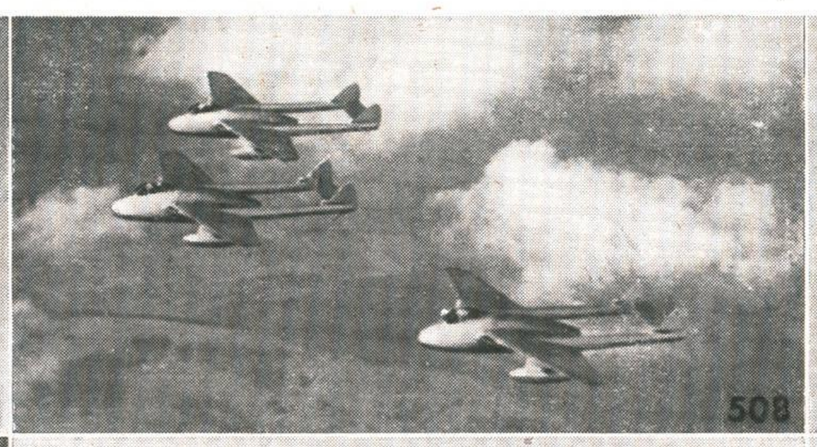
AMBASSADOR.

Volume 3 DECEMBER 1948 No. 5

ELEMENTARY SPOTTING

Recognition Test No. 82


507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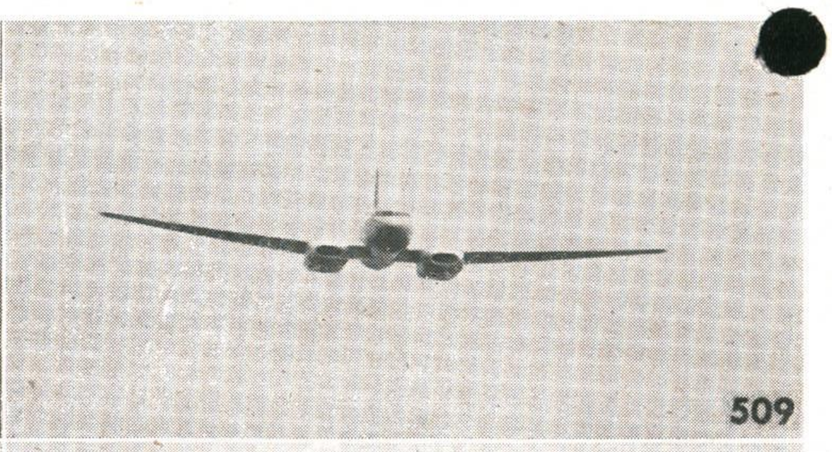
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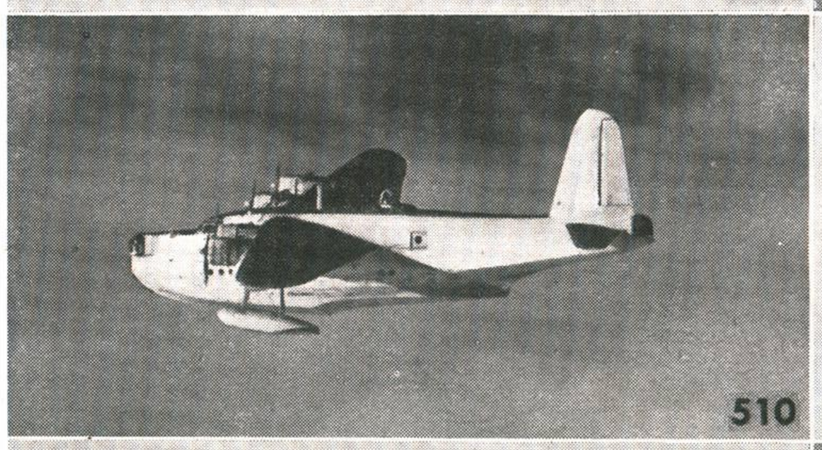
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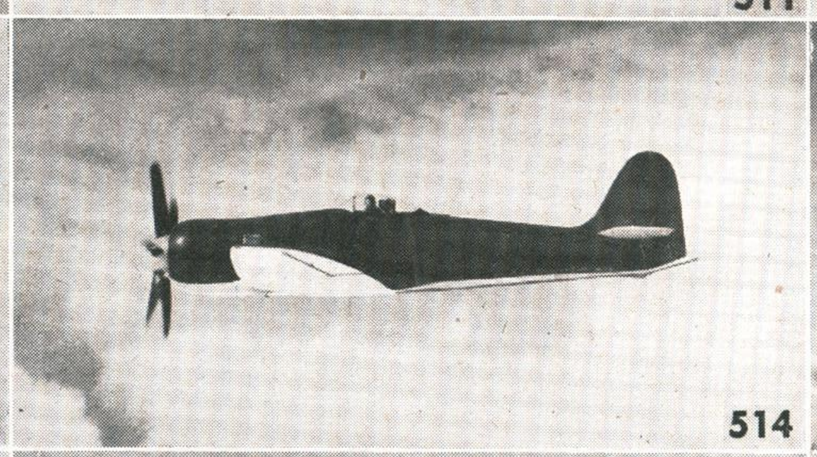
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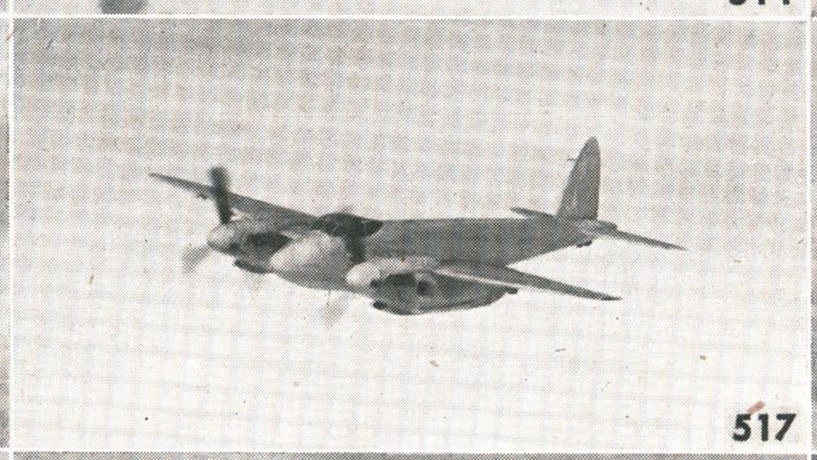
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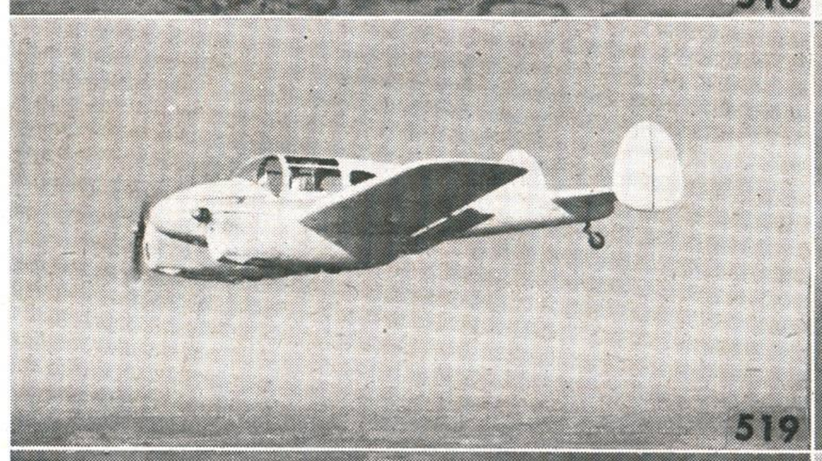
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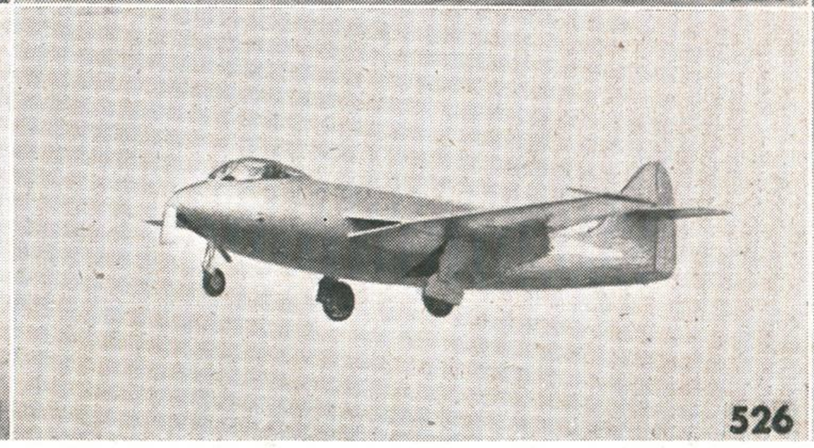
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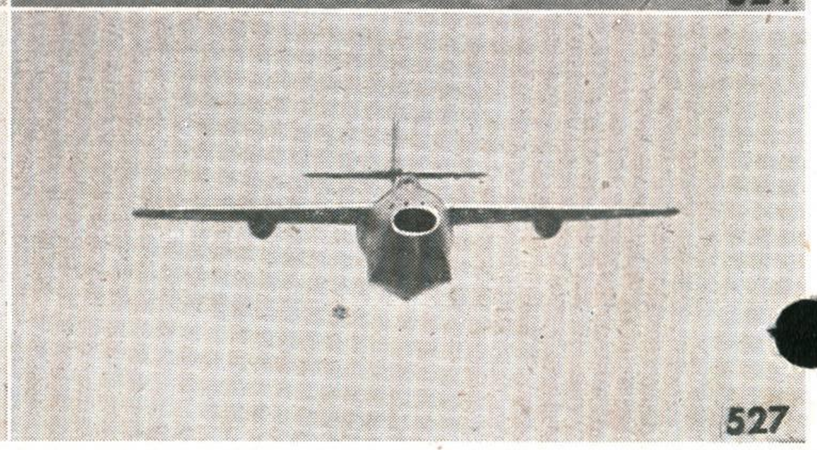

527

DECEMBER 1948

THE INTER SERVICES AIRCRAFT RECOGNITION JOURNAL

Vol. 3 No. 5

BOEING B-29 SUPERFORTRESS

Aircraft in the News

B-29 Biplane

Or sesquiplane Superfortress. This recent picture of a new shape in Britain's skies shows the large number of "gubbinses" (pieces of equipment) which adorn it. Incidentally, the form of its engines and nacelles remind us of nothing so much as perfect formation of tubby P-47s. On the following page are some pictures of the Russian-built B-29. As far as is known at present the American and Russian models are identical externally, but there is one small detail in this picture which is different: can you spot it? (Engines: four Wright Cyclone radials.)

AVRO TUDOR 5

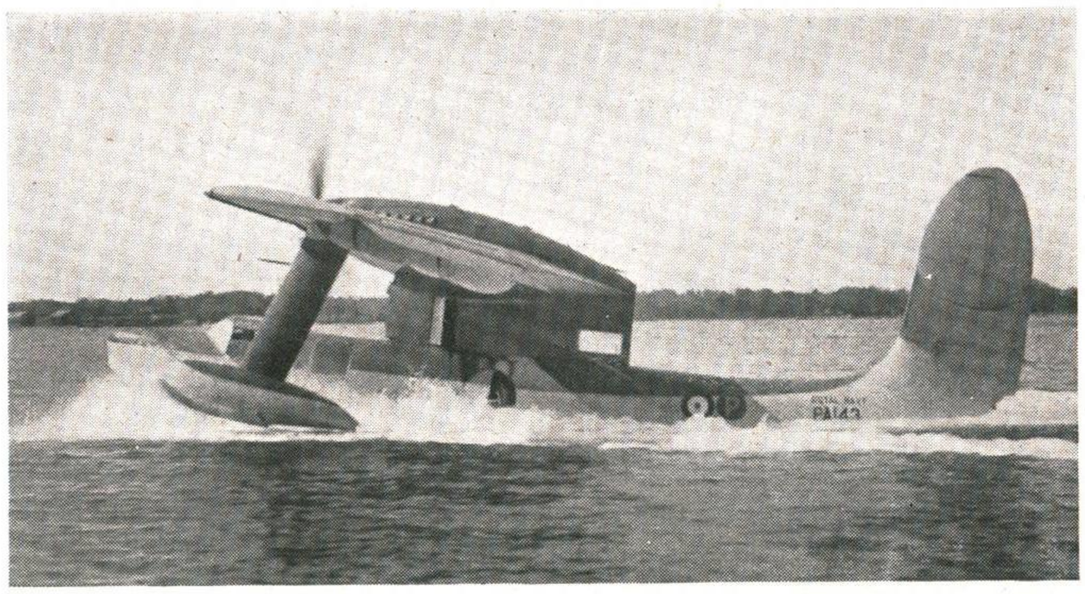
Tudor Tanker

An Avro Tudor 5 in use on the Berlin Airlift carrying supplies of diesel oil. It carries five 500 gallon tanks—ex belly tanks for Lancasters—in cradles in the cabin. The Tudor 5 is externally similar to the Tudor 2; the only difference is in the cabin windows, the "2" has round ones, or scuttles. The Tudor 2s on the Airlift carry up to 10 tons of freight. The tankers carry 8.3 tons of oil. (Engines: four Rolls-Royce Merlin in-lines.)

VICKERS VISCOUNT

Viscount Let-Down

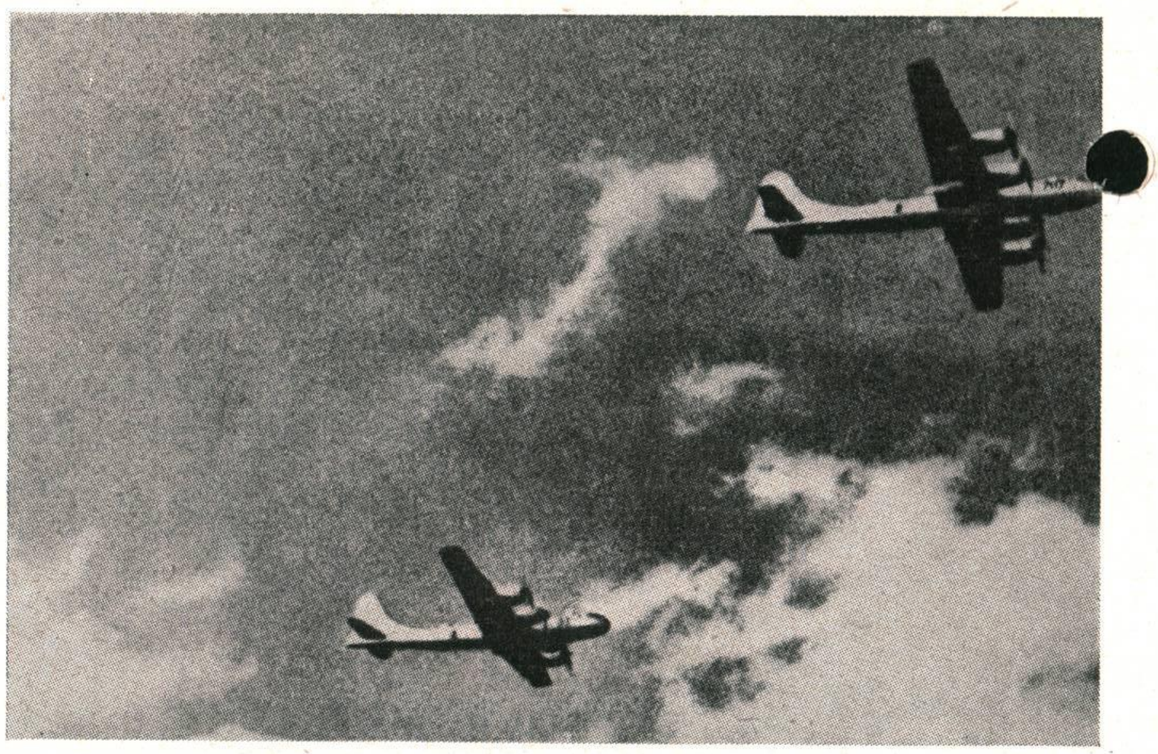
The first civil propeller-turbined air-liner ever built; designed by Vickers Armstrongs the Viscount will carry up to 32 passengers at a high altitude, in an air-conditioned and pressurized cabin. It has a range of 1,725 miles (1,500 nautical miles). Note long turbine-nacelles—swept-up fin and rudder and dihedral in tailplane. Incidentally, for our non-R.A.F. readers, "let-down" is an air traffic control term referring to the procedure of approaching, descending, and alighting at an airfield. (Engines: four Rolls-Royce Dart propeller-turbines.)

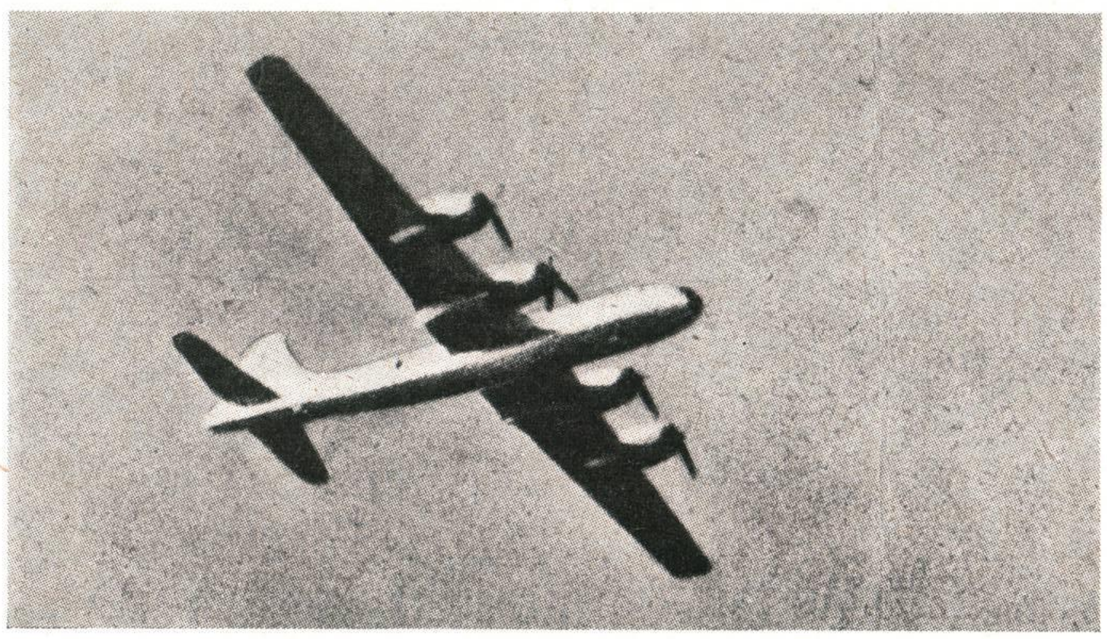


VICKERS SEAGULL

Seagull Seaborne

Variable-incidence wing of this Vickers Armstrong's Amphibian for general duty in the Royal Navy, is pylon-mounted. This view details wing-floats, "wheel-house", pylon, sharp tailplane dihedral and "egg-samples" in fins and rudders (see page 56) and demonstrates non-existent confusability factor. (Engine: Rolls-Royce Griffon in-line.)





"TUPLICATION"

OR

WHAT HAPPENED TO "GENERAL H.H. ARNOLD SPECIAL"

" GENERAL H. H. ARNOLD SPECIAL " was a B-29 ; it was the 175th B-29 to leave Boeing's Wichita Plant during the war : General Arnold chose it off the line and it was christened with elaborate ceremony. It went on operations and became a " lead-ship ", that is, it led its formation in combat. It completed 11 missions, during one of which it made the longest combat flight of history—a round trip of some 3,700 miles, then it disappeared.

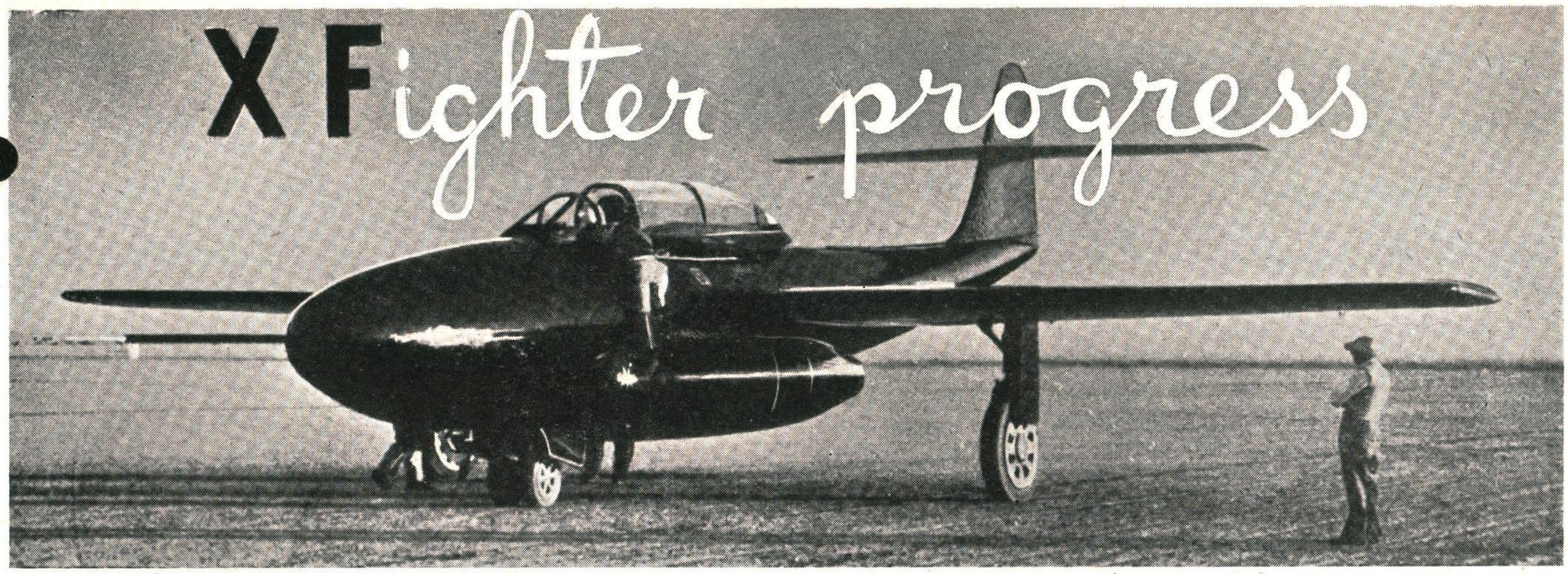
In 1945 the story broke : unable to regain its base after bombing a war plant at Omura, Japan, owing to shortage of fuel, it was headed for the nearest friendly territory, which was Russia, and landed safely at Vladivostok. Its crew was interned and later returned to the U.S.A., but the " Special " remained in Russian hands. Three other B-29s also fell into Russian hands—at least one fell, after its crew had baled out ; the other two alighted and were detained. As far as is known these were the only Boeing-built B-29s which the Russians acquired. In 1946 the Russians tried, unsuccessfully, to buy B-29 alighting-gear assemblies, wheels and tyres in the U.S.

On Russia's Aviation Day, 25th July, 1948, a formation of 15 Tupolev-built B-29s flew over Tushino Airport, Moscow ; so it seems fairly certain that in the vast and mysterious region often referred to as " beyond the Urals ", there exists some sort of Tupolev duplicating plant.

Our formation pictures are reproduced untouched from *Pravda* (Truth) a Russian daily newspaper. They are, allegedly, of the fly-past of the TU B-29s to which we have referred ; but examination discloses unusual points. One is that the spectators seem to be looking very interestedly into the sun whilst the aircraft can be seen clearly behind them. Another point is that the wing-tips have been rounded off. In the bottom right picture the formation does not seem to " sit " naturally in the sky. The two smaller pictures look more genuine.

So far as can be said and seen at present there is, externally, no difference, except as mentioned on page 51, between the Boeing and the Russian-built B29 long-range bomber.

XF fighter progress



NORTHROP XF-89

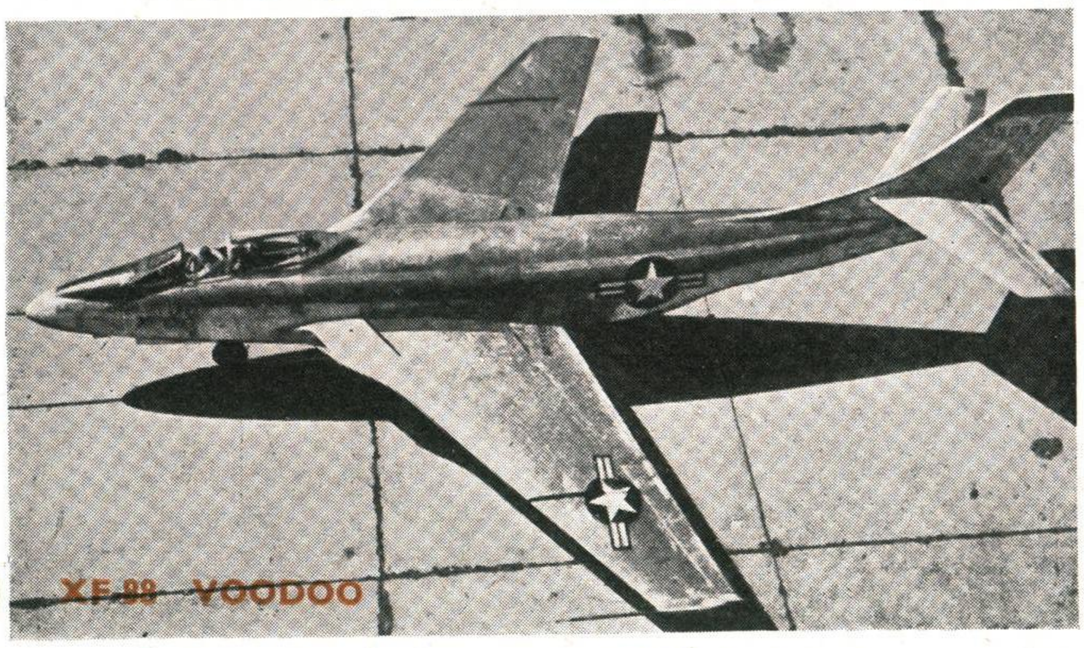
The information given below is compiled from Press reports and is not officially confirmed.

MCDONNELL XF-85 GOBLIN—Single turbojet parasite fighter is undergoing flight tests. Designed to be carried inside a Convair B-36—present tests are being made with a Boeing B-29 Superfortress—it has a folding wing and an X-form tail and a confusability factor too low to give a reading. Our illustration gives a good impression of it. Attempting to re-engage after its first flight from a B-29 at 25,000 ft., bumpy air caused a collision with the trapeze, crushing the Goblin's cockpit canopy, hitting the pilot, and knocking his helmet off. Sticking his oxygen tube in his mouth, the pilot flew down to the Muroc Desert, forced-landing with only slight damage to the aeroplane. The Goblin is designed for the high subsonic speed range.

CURTISS XF-87 BLACK HAWK Prototype—Has four 24C turbojets of 3,000 lbs. s.t. each. Production Black Hawks will use two G.E. J-47 turbojets. The U.S.A.F. has ordered 88 and is now putting one of the

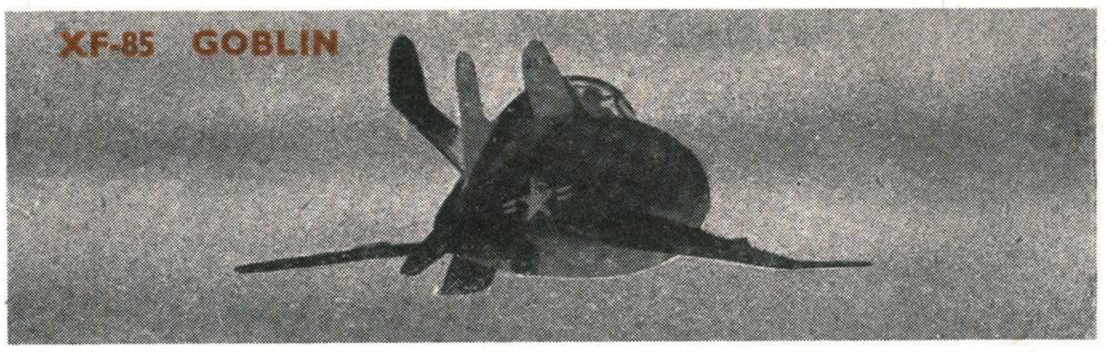
XF-87 BLACKHAWK

prototypes through the Muroc hoops. The Black Hawk is an " all-weather " fighter and perpetuates the Curtiss " Hawk " series of aircraft names which was started in 1936. There will be an RF-87A for photo-recce work. Subsonic speeds up to 600 m.p.h. are anticipated.



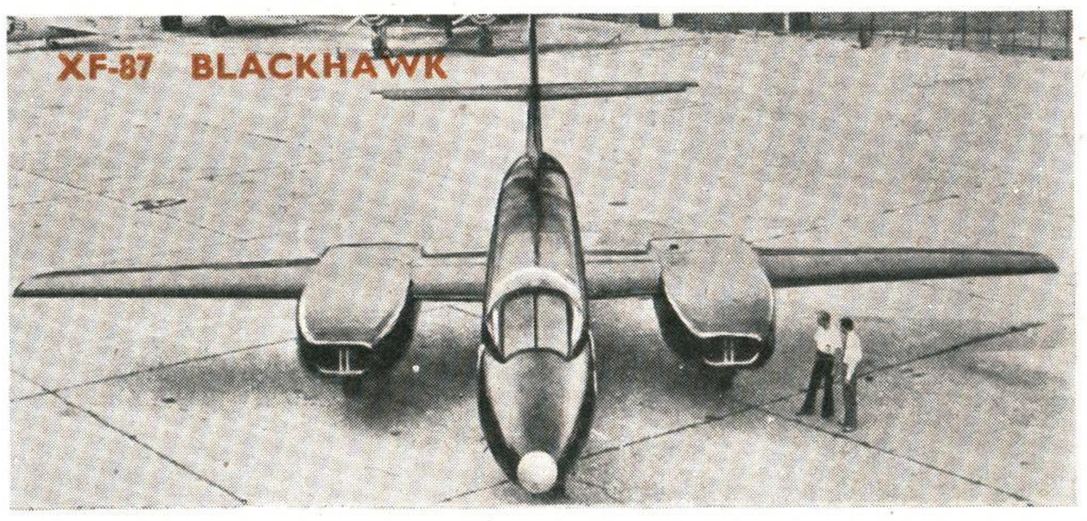
XF-88 VOODOO

MCDONNELL XF-88 VOODOO—Our artist's impression of this penetration fighter (see *Journal* for October, 1947) is not far wrong. All flying surfaces are tapered and swept back 35 degrees : the wing has gadgets called "stall-vanes" located one-third in from wing-tips



XF-85 GOBLIN

to prevent span-wise flow of air-stream. Two Westinghouse 24C turbojets, with slot intakes at wing root leading edges, are contained within the fuselage and exhaust beneath fuselage at " step ". Voodoo is thought capable of supersonic speed, and is reported to carry six 20 mm. cannon and to be able to climb at 15,000 feet per minute.



XF-87 BLACKHAWK

NORTHROP XF-89—Semi-external attachmentof turbojet nacelles to bottom segment of fuselage (viewed from head- or stern-on) lowers confusability factor of this shoulder-wing night and all-weather aircraft. Notice slender tapering of rear fuselage, high set tail-plane and large-size narrow-tread alighting gear wheels. Turbojets are G.E.-Allison J-35s. The XF-89 is now undergoing flight tests by U.S.A.F. and is in the high subsonic speed range. Its span is approximately 50 ft.

LOCKHEED XF-90—A supersonic speed fighter at present under construction and nearing completion.

REPUBLIC XF-91—Specially designed for interception work. Is now under development. It will probably be powered by a J-35 turbojet plus four rocket motors to aid rapid climb. XF-91 is thought capable of supersonic speeds.

CONVAIR XF-92, or model 7002.—Supersonic fighter of delta-wing configuration. Prototype has turbojet, but production models will have rocket motors in addition. The prototype is reported to have got airborne by accident during a taxi-test. The production model is expected to achieve supersonic speed.

F9F-2 *Panther*

Photo by Harold G. Martin.

This article originally appeared in the August, 1943 edition of the *Journal* : its points are as good now as they were then.

Glamour

by C. H. GIBBS-SMITH

Bevy of B.O.A.C. Beauty. (*Photo B.O.A.C.*)

IN the early days of recognition training one serious mistake was made, a mistake which even now is not fully appreciated and corrected. It was the neglect of background interest, or "glamour," as it is so picturesquely called. To teach aircraft recognition without glamour, is to teach it in a vacuum, and every schoolboy knows that nature abhors a vacuum. But before discussing the whys and wherefores of glamour-value it is best to describe briefly its scope.

Glamour is of two kinds, general and particular. General glamour includes the theory of flight, the knowledge of things common to most aircraft such as their structure, instruments, and weapons, the history of aeroplanes in general, and of their various classes and functions. Particular glamour is concerned with the history, achievements and peculiarities of the individual types of aircraft.

MAINLY FOR INSTRUCTORS

Why is this necessary in recognition training ? The business of aircraft recognition is to diagnose accurately the type of any aircraft directly it comes into view. The immediate job is concerned, of course, with the actual appearance of the machine, and if that appearance is sufficiently well known, the recognition will follow. But the retention of shapes and the ability to apply and anticipate them, so to speak, is by no means easy; and the task is made doubly hard if the student has to learn his aircraft in a mental vacuum.

We here come slap up against the word " Interest," and interest is essential to clear the channels of the brain. Now, the trouble with interest (and the embarrassment it causes certain stolid instructors) is that it implies emotion—an emotional rapport between the object and the learner ; and unless that rapport is successfully set up you can teach until the cows come home and get nowhere. Shapes by themselves, facts by themselves, are cold intellectual affairs. The problem in teaching is to erect a bridge between the facts and the learner, and that bridge is one of emotion, interest, glamour, or what you will.

Watch your fellow spotters : the ones who object to glamour are those who cannot make the subject interesting either to themselves or others, who are afraid of any emotional appeal, or who are so dull that they do not know what you are talking about anyway.

To put the matter another way. The older schools of psychology used to describe a group of related ideas as a "constellation" ; that is to say, a focus or centre surrounded by a crowd of contacts all intimately connected with one another, and also throwing out tentacles in various directions to meet yet other " constellations." The more contact-points there are, the richer and better nourished the " constellation " becomes, and the quicker the mind picks up and handles information about any aspect of the subject. Or again, the more contact-points, the more vivid (*i.e.*, emotional) the subject becomes ; and it is this vividness and intimacy which is the hall-mark of all real knowledge.

Applying this to aircraft recognition, the shapes are better remembered and more quickly recalled when they are linked up with interesting facts and ideas, just as facts and ideas are better absorbed when married to shapes and pictures. The mind thrives upon interesting (emotional) associations of ideas, simply because it can tie up the unknown with the known to form new knowledge. Tell a man that the Constellation is a low-wing monoplane with dihedral from the roots and underslung motors, and he will probably fall asleep ; tell him that the fuselage "sits" heavily on the wings, and is on the other side to the motors, which hang down from them, and that a specially fitted model is used by Lana Turner as a travelling dressing-room, you have your man's interest pronto.

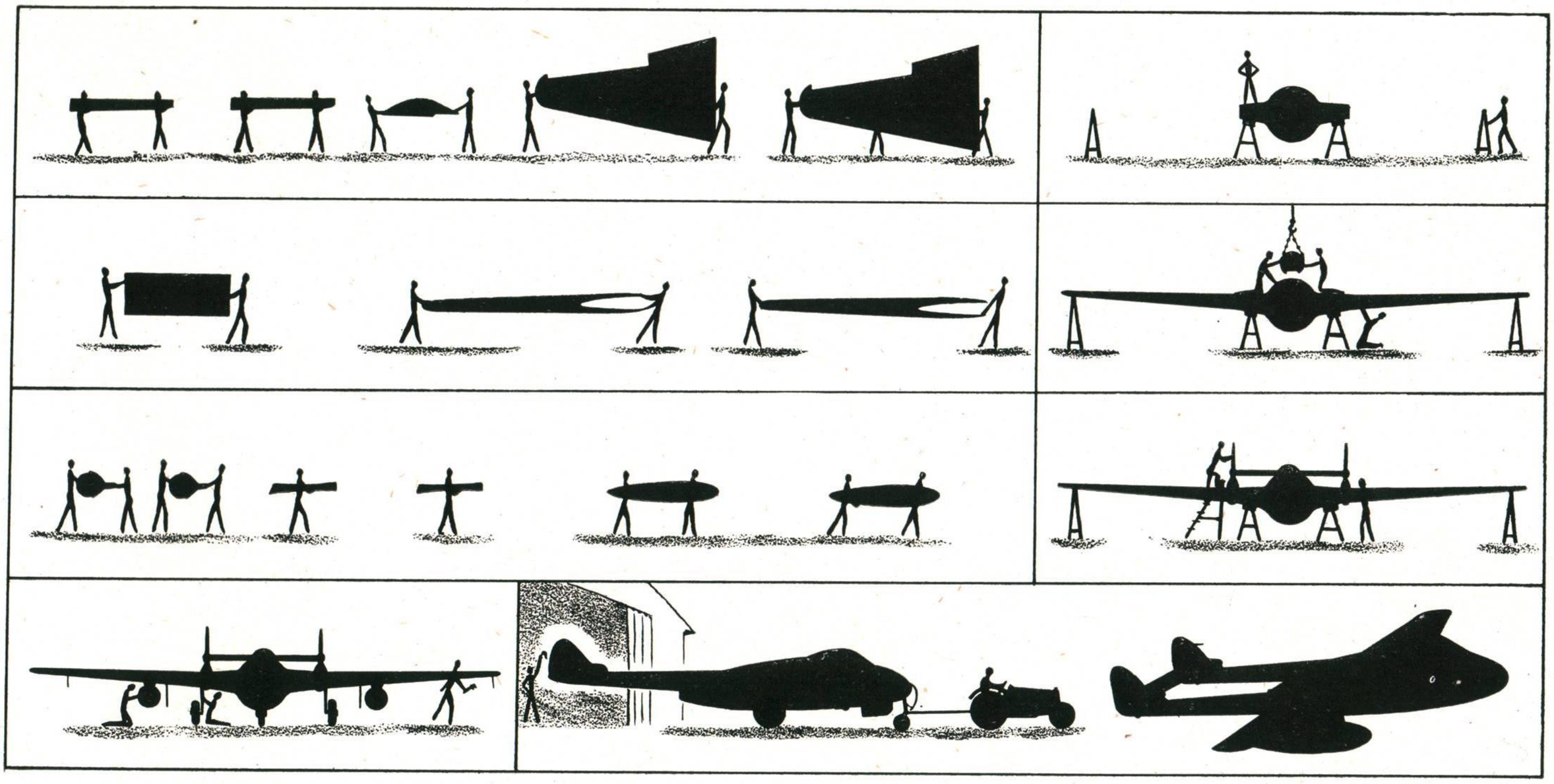
A shape hanging about on its own in the mind with only a few contacts is a sorry affair and tends to be only slowly called to mind. Link that shape to an event, compare it with a bird or your aunt's hat, tie it up with a person, dub it with a name, fill it out with details, clothe it with history, and that shape will stick fast.

Glamour, therefore, is an essential part of recognition and all other teaching. It is the background against which the aircraft can take shape and live, which gives it a habitation and a name. Glamour is the art of making a thing vivid and alive, giving it news value, making it appeal to the emotions, rather than to the reason, of the learner. Glamour is anything interesting and new about an aeroplane, anything that tends to mark it out in the mind and individualise it.

ADVANCED SPOTTING

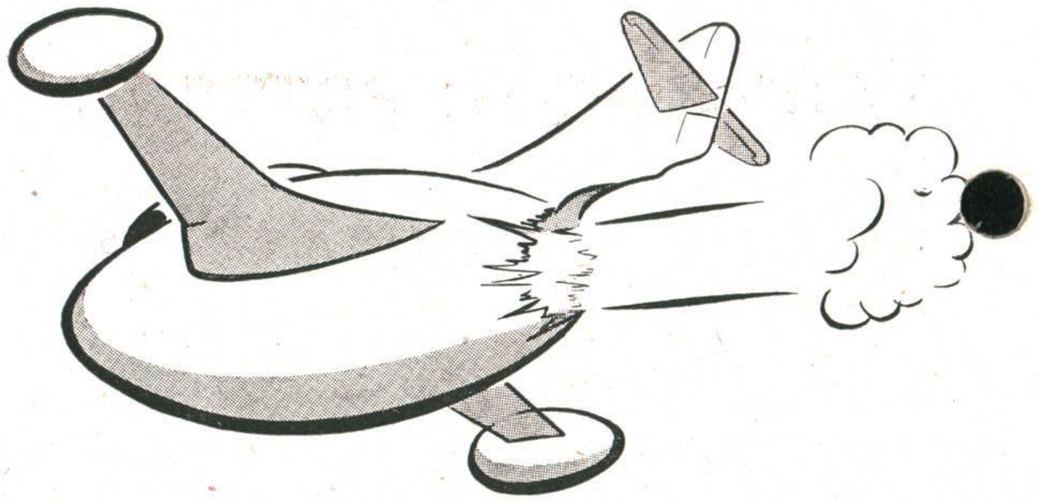
Recognition Test No. 83

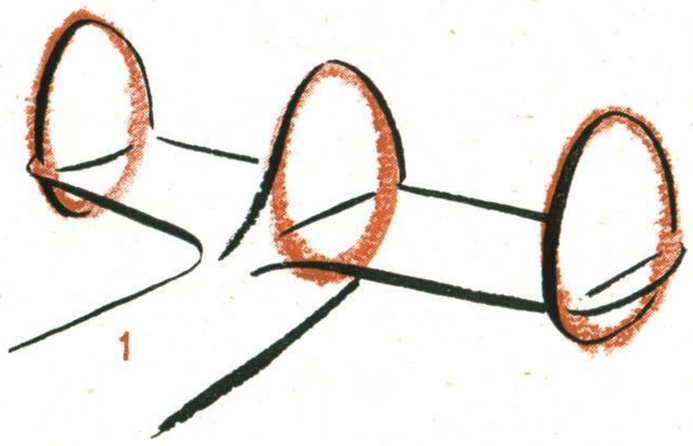
SHADOW FACTORY



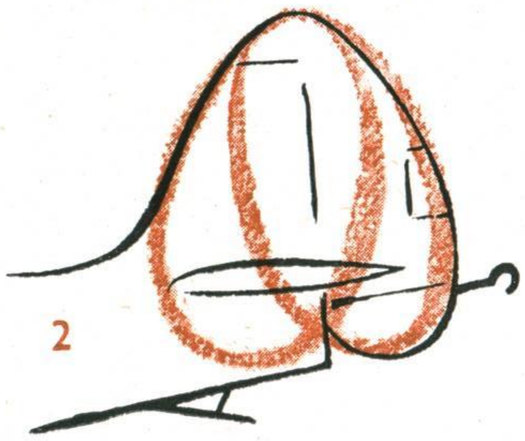
DE HAVILLAND VAMPIRE F. Mk. 3

EGGS -





1



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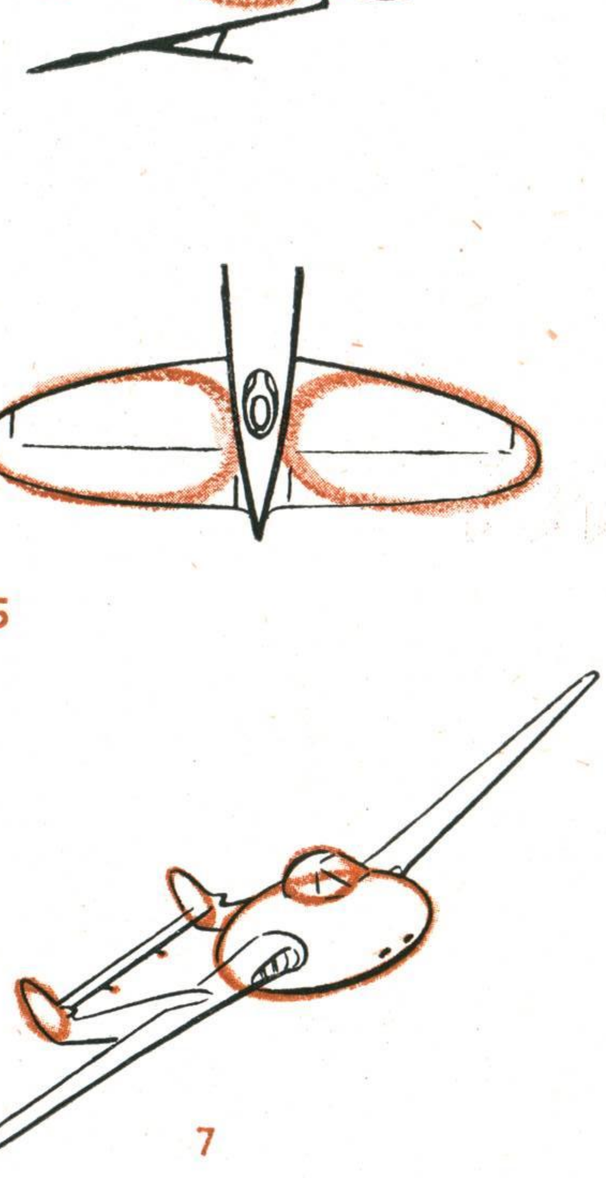

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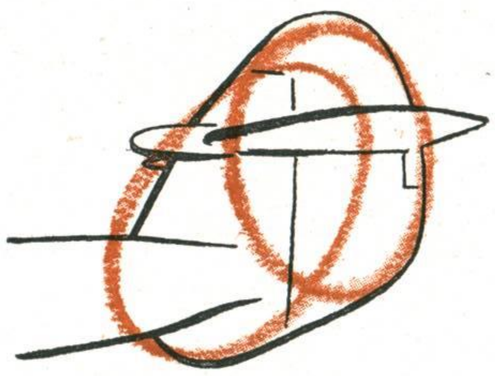
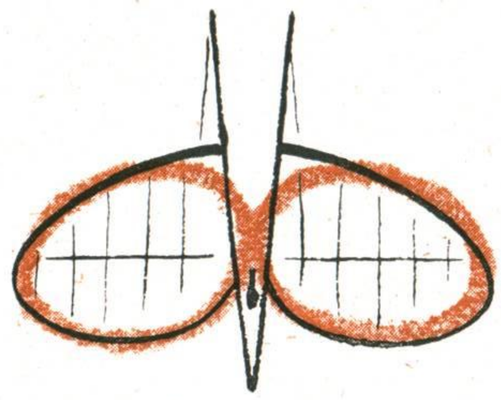


3



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8

THERE is no shortage of eggs either British or foreign in the recognition market. Aeroplane designers don't hesitate to include an egg or two with the other ingredients wherever possible when cooking up a new design. The egg in fact flies pretty well.

It stands out fairly obviously in the fins and rudders of the Constellation (1). It is not perhaps so obvious in the fin and rudder of the Seafire 47 (2), and in that of the Meteor (3) it is quite cunningly hidden.

It duplicates itself in some De Havilland tailplanes: we show the Tiger Moth's (4) and the Mosquitoe's (5). The Spitfire family produces plenty: the Seafire 17 (6) shows a nest of them.

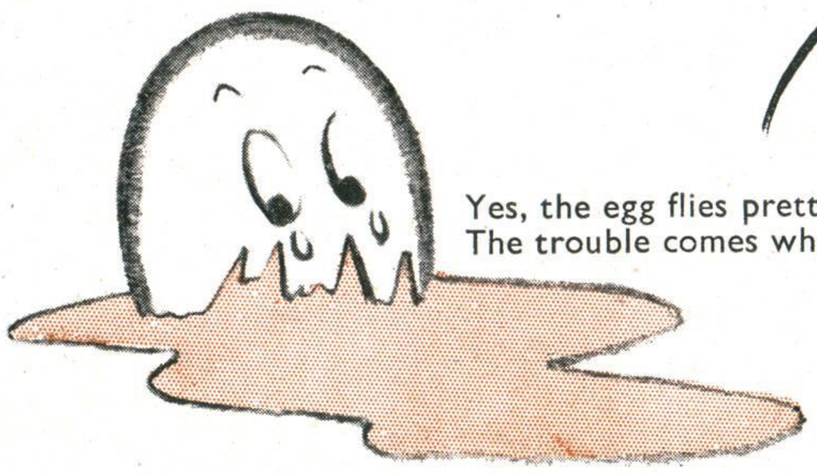
In the third dimension it appears in the body-form of the Vampire (7). Some engine nacelles are called "power-eggs" for just that reason—look at the outer engine nacelle of the B-29 (8).

Looking through the *Journal* we see many eggsamples of this sort of thing, some obvious, some hidden. We suggest you

-Get cracking!

——and find some more.

Your experiences will probably enable you to offer advice to your maternal grand-parent, whose suctorial activities in this connection are well-known. If you discover anything really outrageous, let us know and we'll print it. Any contribution of this nature which is published will render the sender liable to a contributor's copy of the *Journal*.



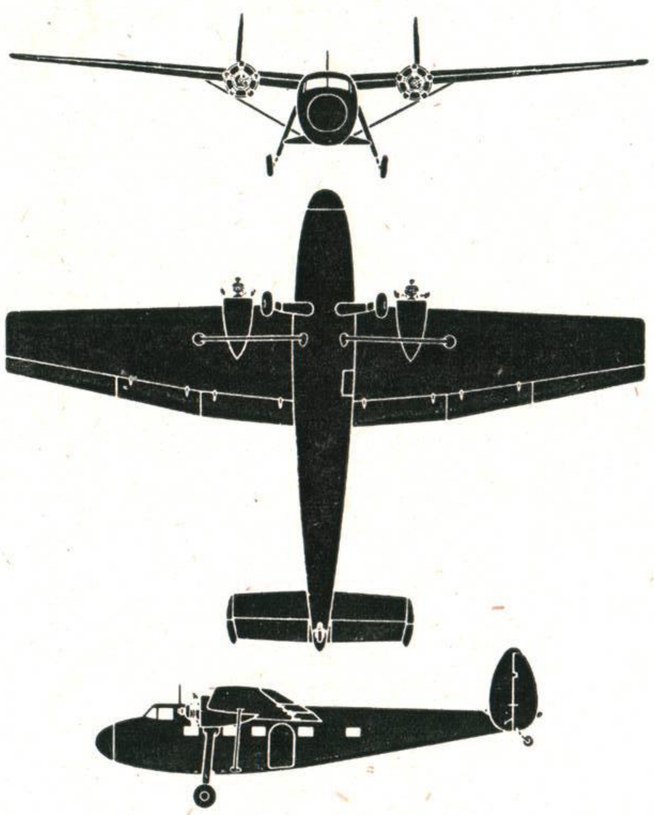
Yes, the egg flies pretty well:
The trouble comes when it lands!

FARNBOROUGH FANTASIA

(*For solution see rear cover.*)

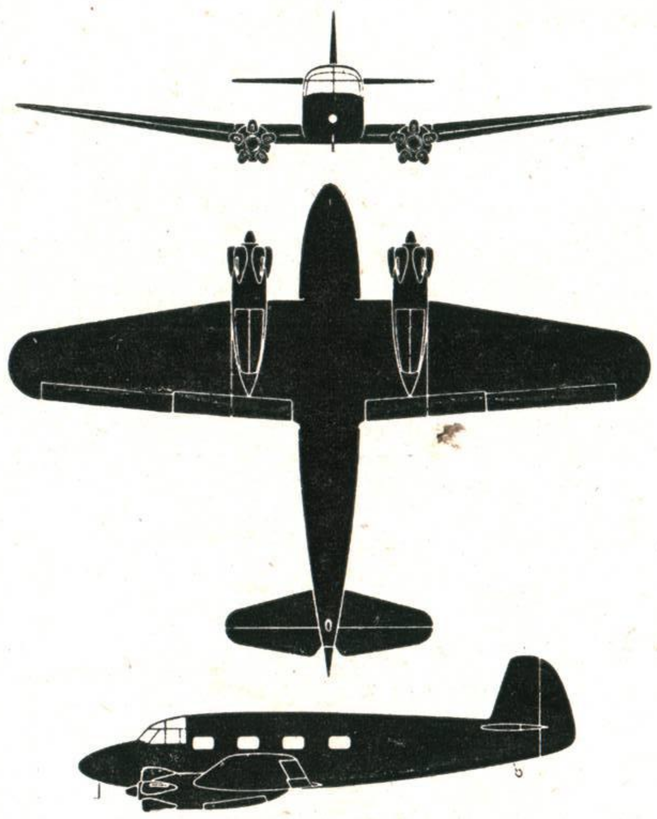
NEW and REVISED SILHOUETTES

SHCHERBAKOV SHCHE-2



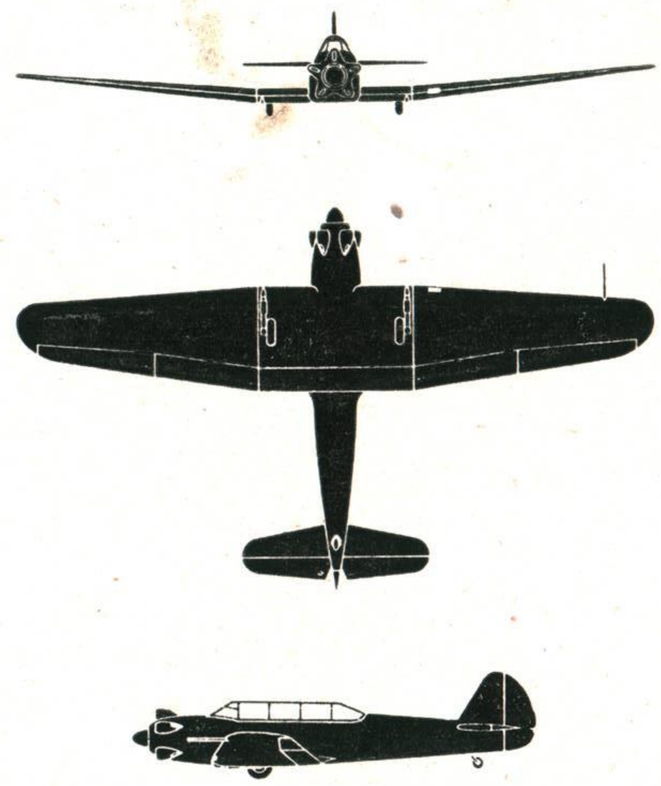
Russian Transport
Two M-11 radials
Span : 72 feet
New Silhouette

YAKOVLEV YAK-8



Russian Transport
Two M-11 radials
Span : 48 ft. 7 ins.
New Silhouette

YAKOVLEV YAK-18



Russian Trainer
One M-11 radial
Span : 37 ft.
New Silhouette

SOLUTIONS TO RECOGNITION TESTS IN THIS EDITION :

FRONT COVER : *Airspeed Ambassador*

No. 82 (ELEMENTARY)

507. Viking 1B
508. Vampire F.3
509. Tudor 8
510. Sunderland G.R.5
511. B-29 Superfortress
512. Freighter II
513. Sea Hornet N.F.21
514. Sea Fury F.10
515. Seafire F.17
516. Prentice T.1
517. Mosquito T.3
518. F6F Hellcat
519. Gemini
520. Sturgeon T.T.2
521. Firebrand T.F.B.5
522. Constellation
523. Chipmunk
524. Barracuda TB/R.5
525. Auster A.O.P.6
526. P.1040
527. SR/A1

No. 83 (ADVANCED)

670. Hermes 4
671. B-17H Fortress
672. Meteor F 4
673. FJ-1 Fury
674. P-51D Mustang
675. Seafire F-46
676. Seagull
677. Sea Hornet P.R.22
678. Bell 47B
679. Spitfire L.F.16
680. Eon
681. Constellation
682. DC 4 M
683. SE 161 Languedoc
684. A.W. 52
685. Auster A.O.P.6
686. Ambassador
687. Dove
688. Meteor T.7
689. FR-1 Fireball
690. Firefly T.2
691. Gemini
692. Tiger Moth
693. B-29 Superfortress
694. Vampire F.B.5

ERRATA

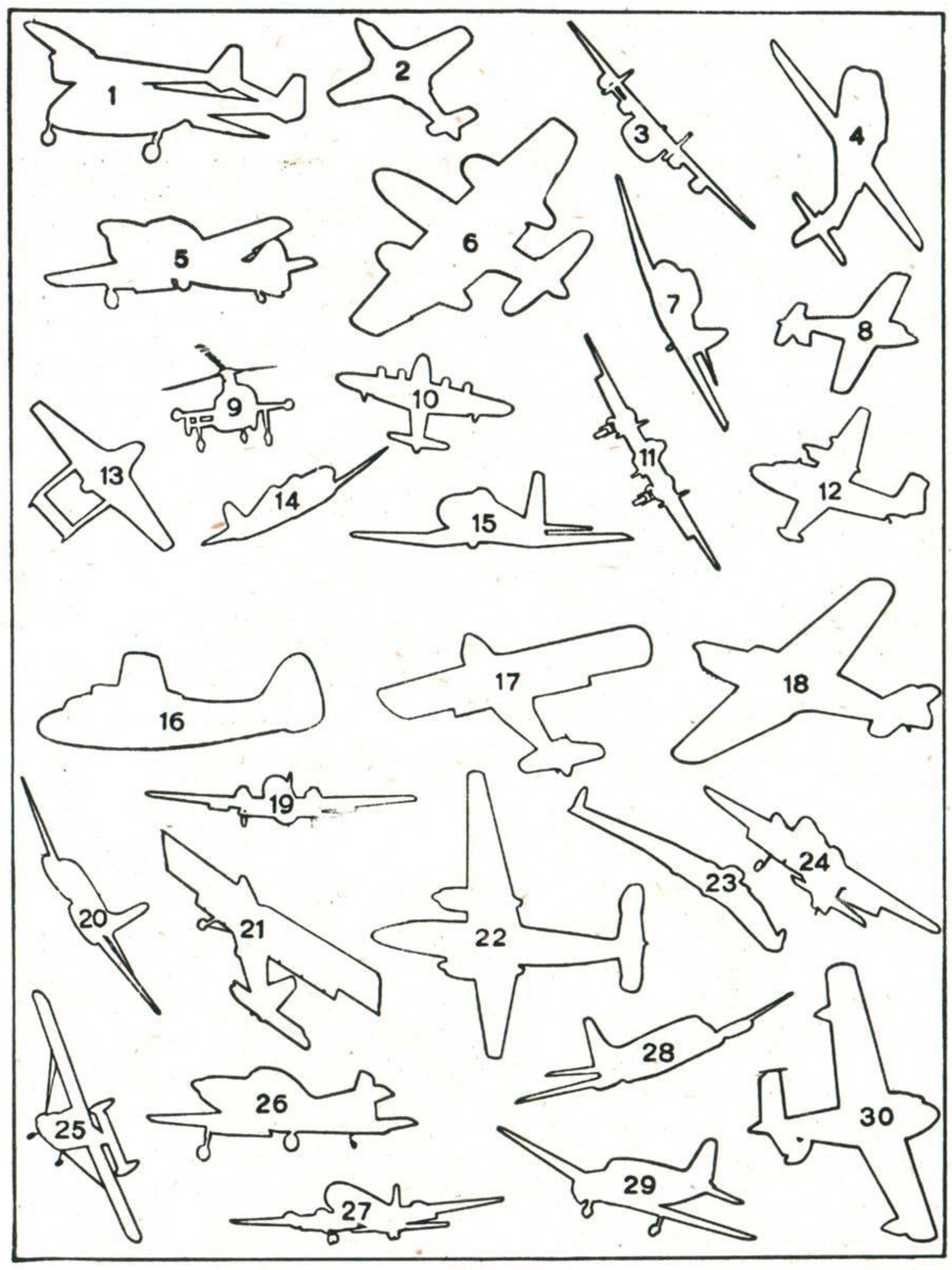
JULY, 1948—No. 428 in the Elementary Spotting Test was called the H/035-1 instead of H03S-1. No. 586 in the Advanced Test is a PO-2 and not 6. In the Sillographs, 398 is a Solent, and not Sunderland, and 415 is a Master 3, not Martinet. On page 137 the S.M.95 visits Northolt not London Airport.

AUGUST—The Vampire Sillograph on page 3 of the August issue is a Mark 3—not a Mark 1. In Tricky Trio, the first aircraft could be either a Hermes or a Hastings.

SEPTEMBER—In test No. 75 No. 478 is a Lancaster 10, not a Mark 7. The aircraft shown in the 3rd photo from the top on page 15 is of B-29 design but is an F-13 and is used for photographic purposes. In the advanced spotting test, the Auster is a Mark 3, not 4, and No. 628 is a Hellcat, not Bearcat.

We couldn't count the F-80 Shooting Stars on the cover of the OCTOBER issue, there are 62, not 64.

FARNBOROUGH FANTASIA



1. Portsmouth Aerocar
2. Hawker P.1040
3. Marathon
4. S.R/A.1
5. Athena 2
6. Meteor T.7
7. Athena 1
8. Balliol 2
9. Gyrodyne
10. Solent
11. Brigand B.1
12. Sealand 1
13. Vampire 5
14. Firefly Trainer
15. Blackburn S.28/43
16. Prince
17. Auster Avis
18. Fairey Primer
19. Valetta
20. Tudor 8
21. Prestwick Pioneer
22. Ambassador
23. A.W.52
24. Sturgeon T.T.2
25. Chrislea Super-Ace
26. Balliol T.1
27. Hermes 4
28. Viscount
29. Eon
30. Seagull

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