

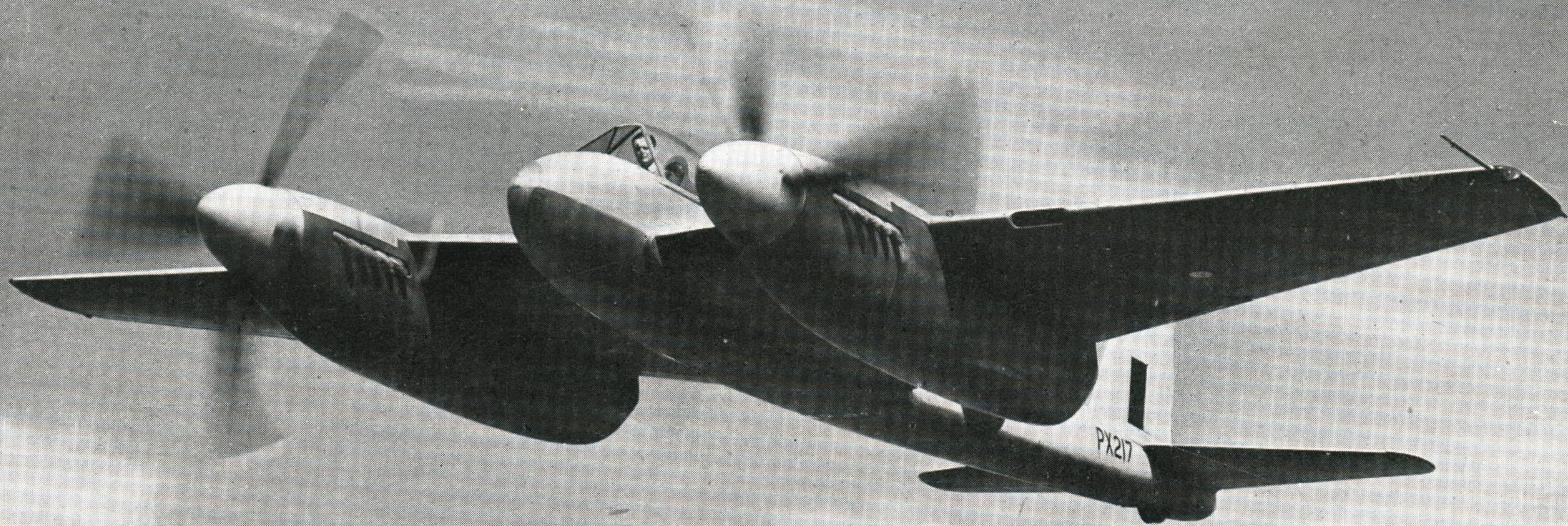
THE INTER



SERVICES

AIRCRAFT RECOGNITION

Journal

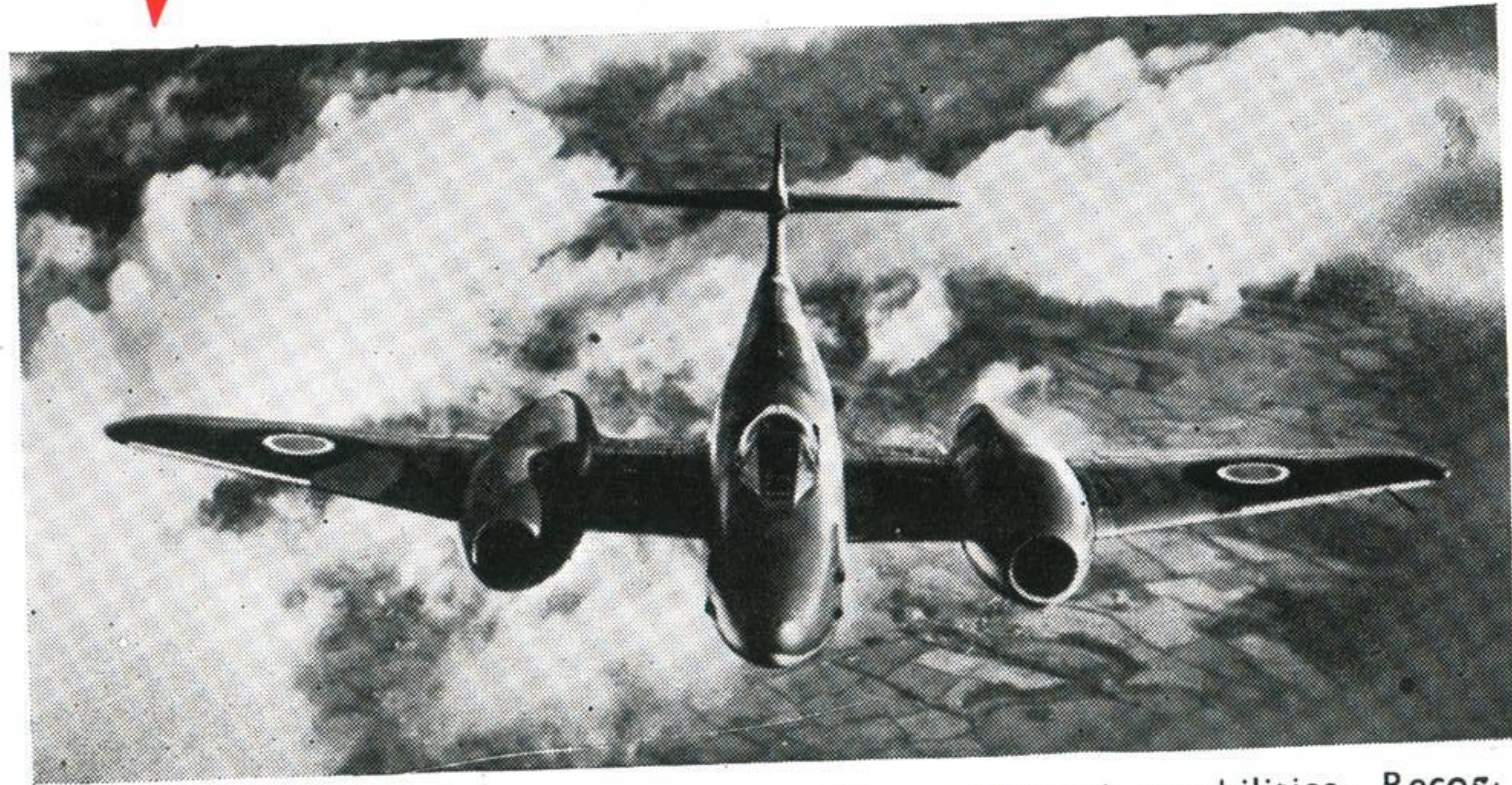


New Series

JULY 1946

Volume I. No. 1

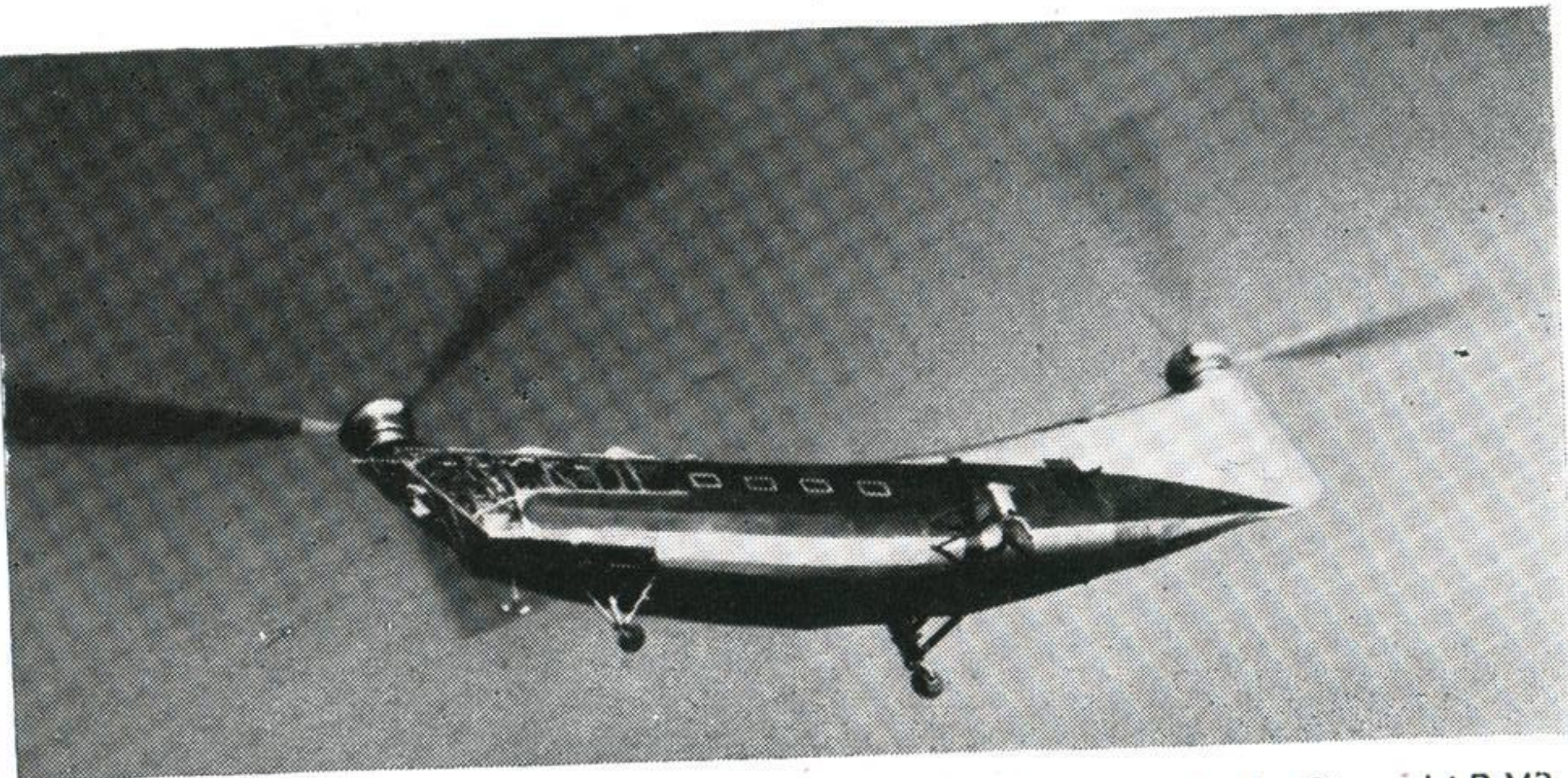
Variety!



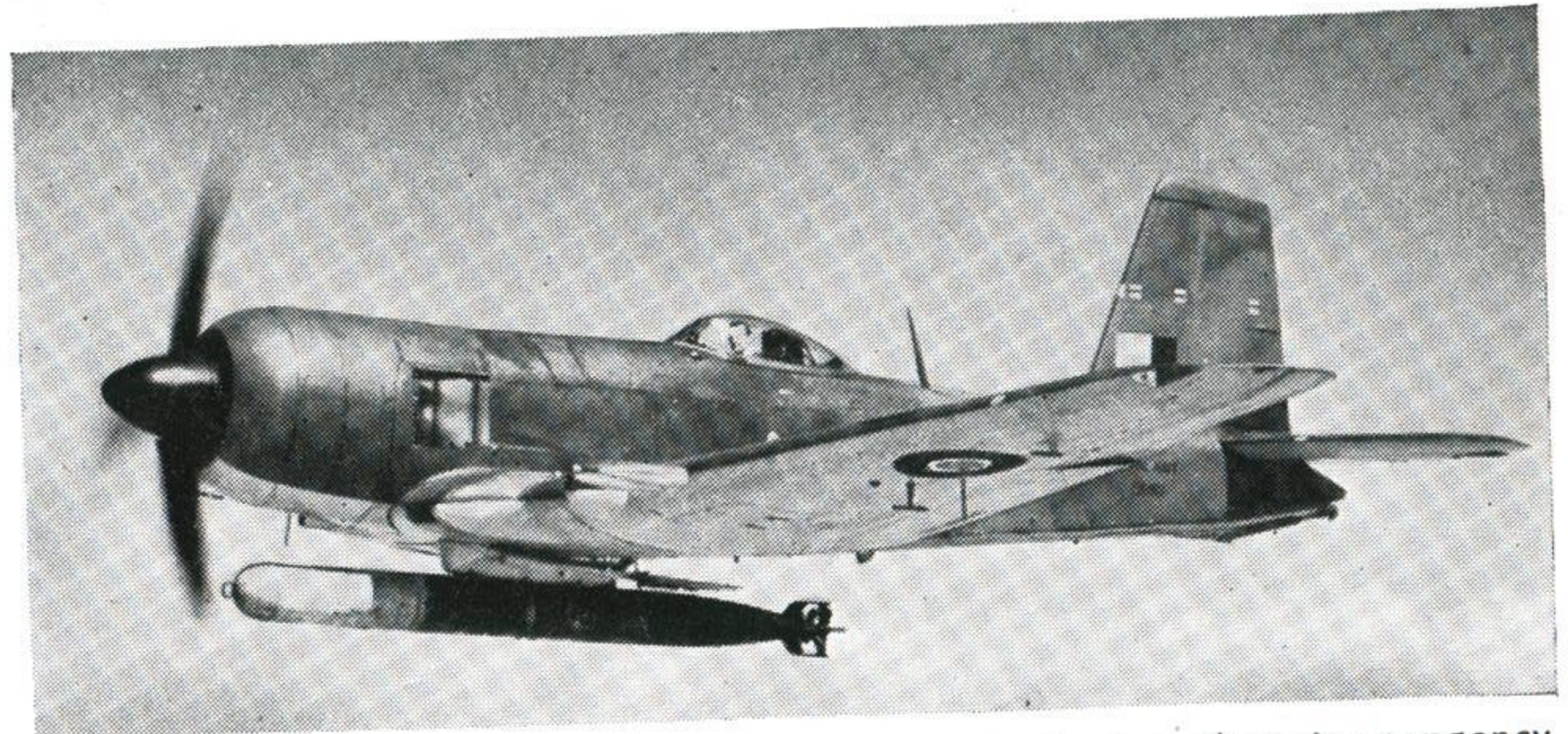
Jet Fighter Little need be said of the Gloster Meteor's capabilities. Recognitionally the Mk. IV shown here differs from the Mk. III in the long nacelles housing the Rolls-Royce Derwent engines, although some Mk. III's are similarly equipped.



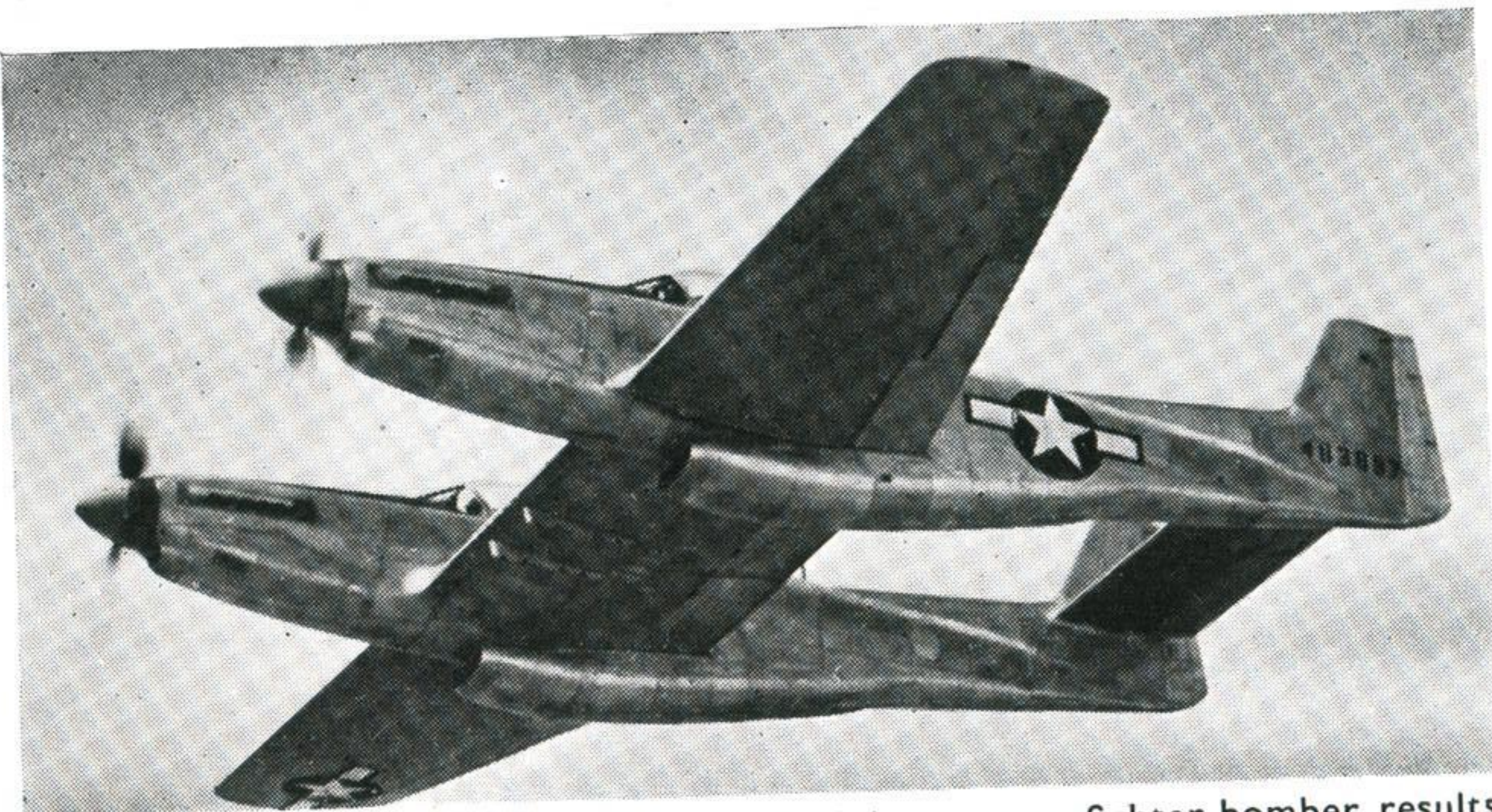
Prop-Jet The Ryan FR-1 Fireball of the U.S. Navy is the first prop-jet to go into regular service. Working together, the two forms of propulsion give it a top speed of 410 m.p.h. Normally, the jet is used only to assist take-off or in combat.



Helicopter Claimed to be the largest and fastest helicopter, the Piasecki P.V.3 has a top speed of 125 m.p.h. and a ceiling of 16,000 feet.



Fleet Strike With radar and radio to assist navigation, there is a tendency towards one-man aircraft in the Fleet Air Arm, an example being the Blackburn Firebrand IV torpedo fighter. Note the setting forward of the large, angular fin and rudder, a Blackburn characteristic.



Twin-Type The North American P-82 long range fighter-bomber results from the mating of two Mustangs and can carry a devastating assortment of guns, rockets and bombs.



Experimental The French N.C.3021 is intended for high-altitude aerodynamic, meteorological and cosmic ray research and has a suitably pressurized cabin. The engine is a Daimler Benz DB.610 "double" motor of 2,975 h.p.



Amphibian A smart little private-owner job, the Republic Seabee is in quantity production in the factory which turned out Thunderbolts during the War. The pusher propeller seems ideal for such an aircraft.



Civvy Delivery The Miles Aerovan, with its fuselage, flaps and fins, just bristles with recognition features. A ton of freight or ten passengers can be carried.

(Photographs of Meteor and Firebrand by Chas. E. Brown)

— an ever-changing programme!

THE INTER



SERVICES

AIRCRAFT RECOGNITION JOURNAL

(NEW SERIES)

FOREWORD

by

Air Vice-Marshal Sir Basil E. Embry, KBE · CB · DSO · DFC · AFC

Director General of Training, Royal Air Force

AFTER some unavoidable delays we have at last got the revived Inter-Services Aircraft Recognition Journal under way. I hope it will be a reminder to us all that the art of Aircraft Recognition is still a most important feature in our training programmes.

One sometimes hears the opinion expressed that with the advent of radar and the high speeds of the modern aeroplane, accurate Aircraft Recognition is no longer necessary. I see no foundation for this opinion and, in my judgment, it is vital that we should aim at a far higher standard than we ever did before ; for whereas a few years ago, we usually had a reasonable time to identify an aeroplane in flight, today high speeds have reduced the time available and tomorrow that time will be still further shortened. Immediate and accurate Recognition is essential if some of those unfortunate mistakes of the early days of the war are to be avoided in the future and if we are to be trained efficiently for the part we have to play.

I pay tribute to those who, by their industry and enthusiasm, raised the standard of Aircraft Recognition to a high pitch of efficiency during the war, but let us now aim still higher, for our task which lies ahead will be more difficult.

I hope this Journal will be the medium through which the latest and most important information on Aircraft Recognition will be conveyed to members of the armed forces, the Royal Observer Corps and the Air Training Corps.

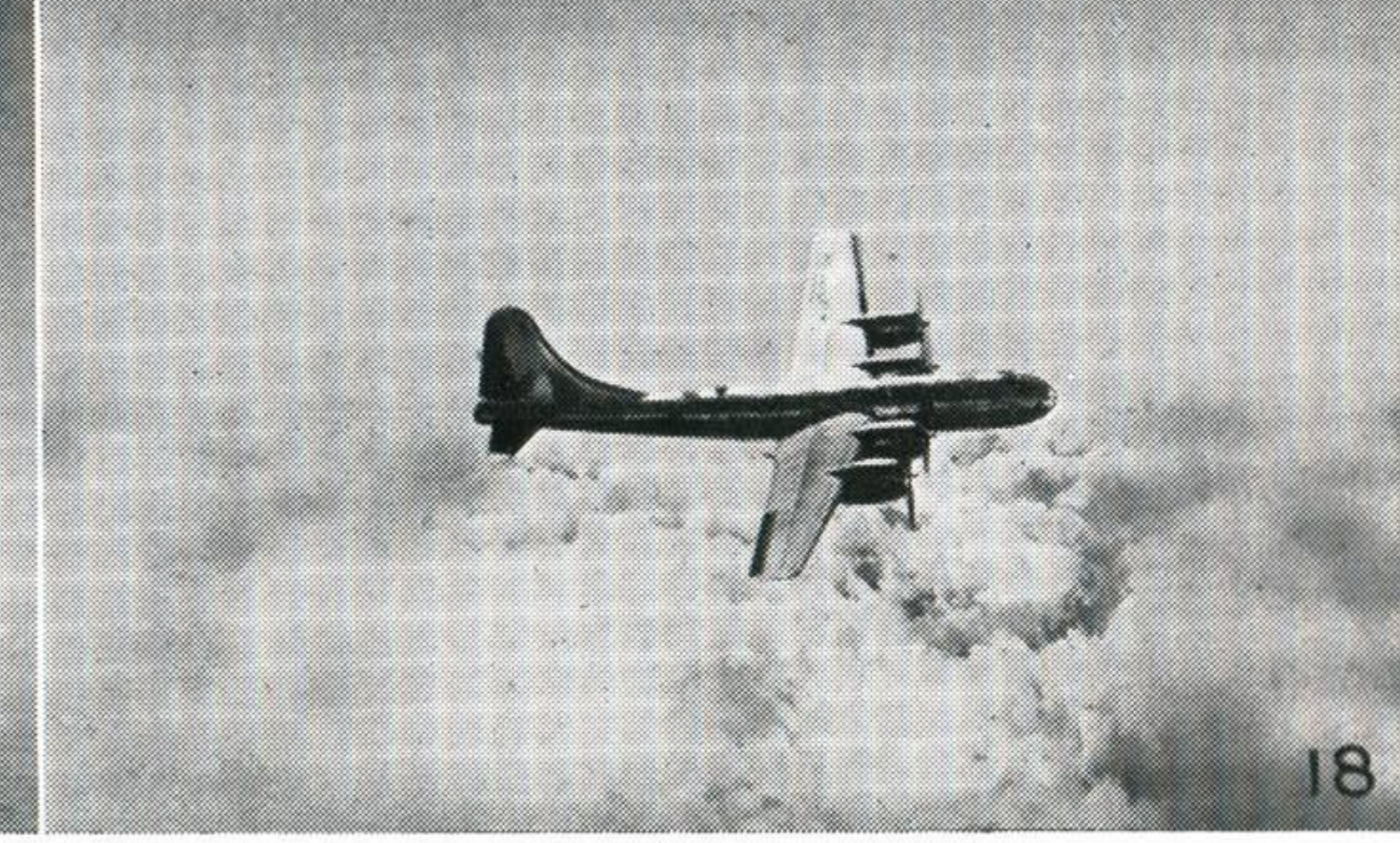
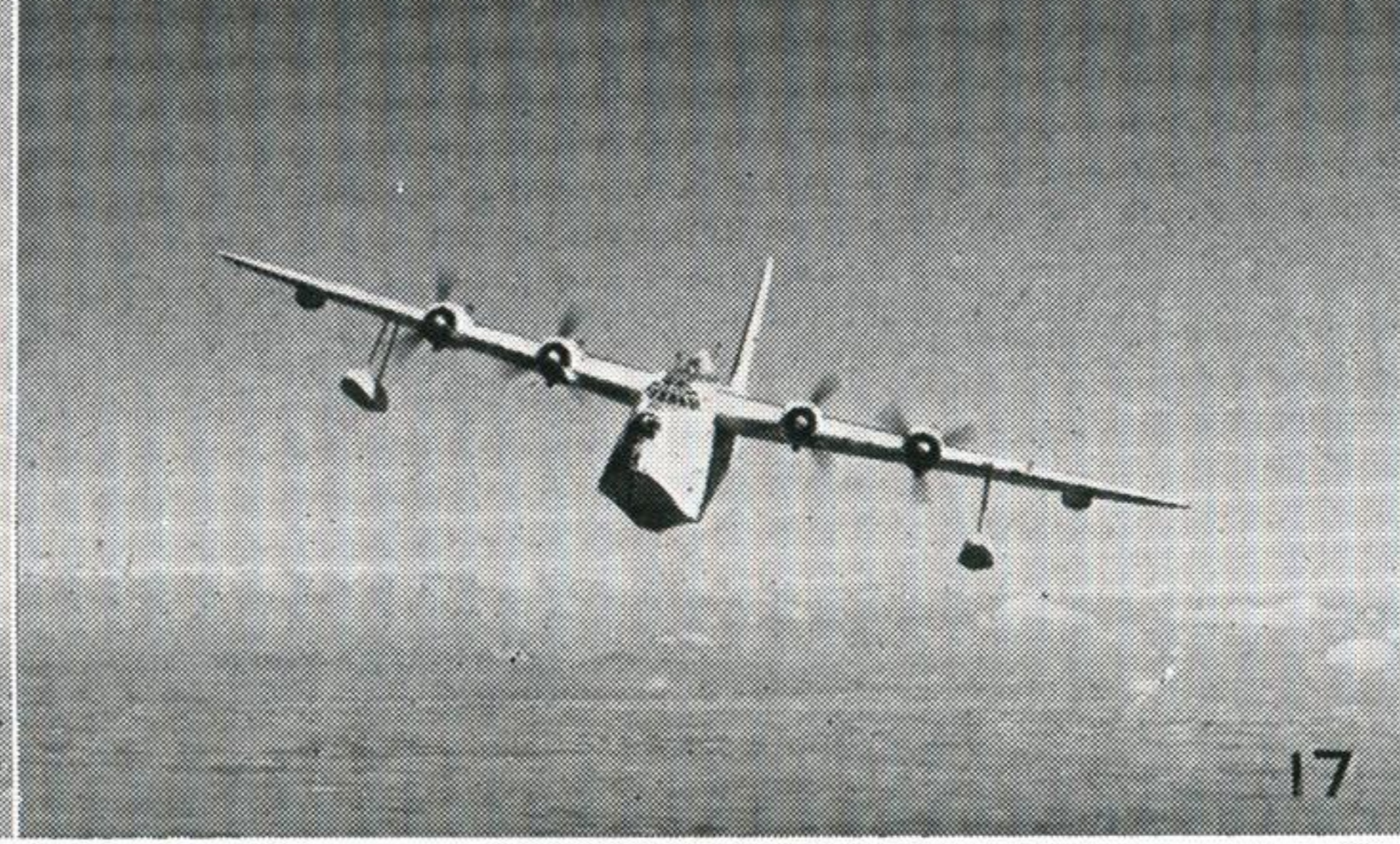
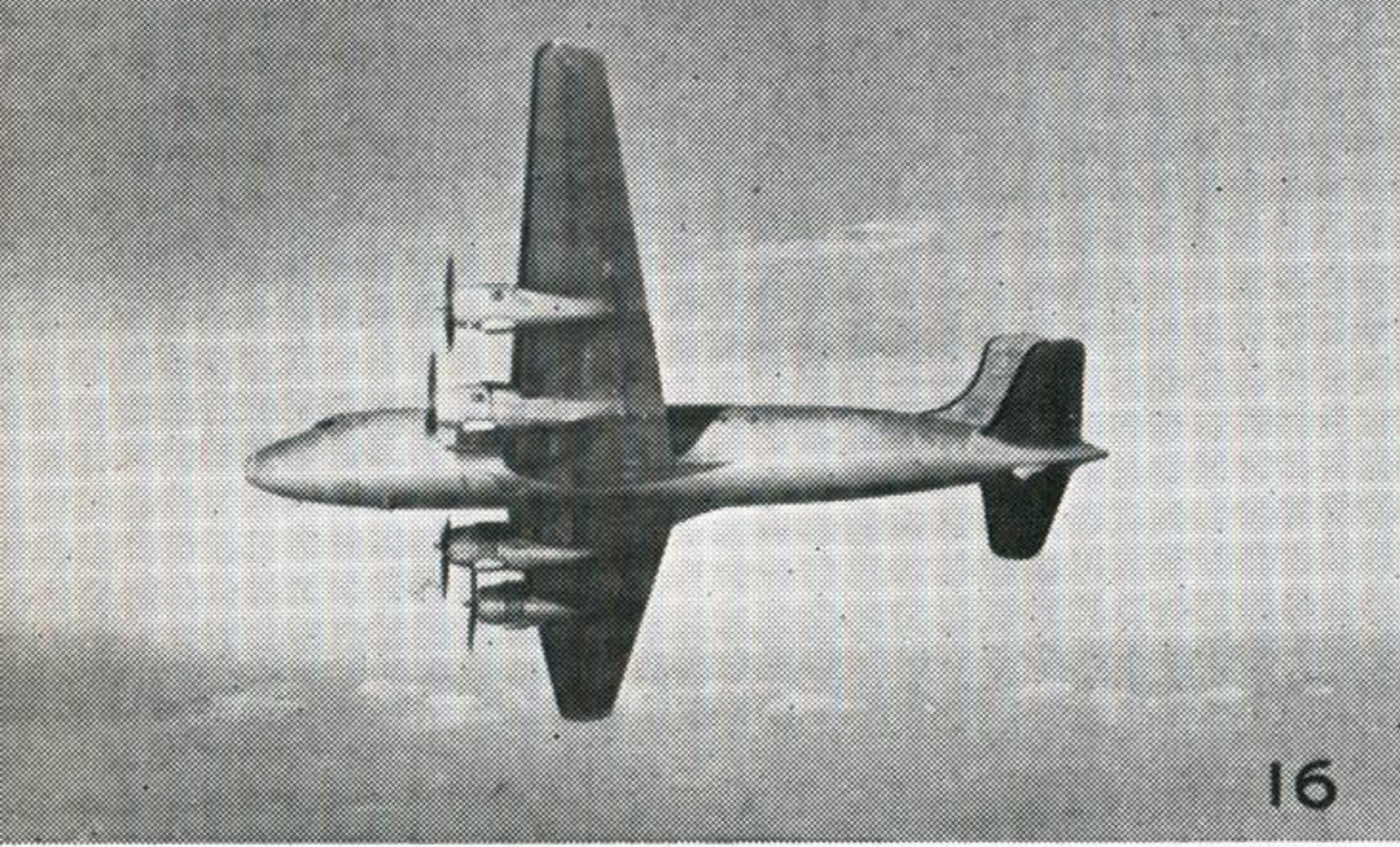
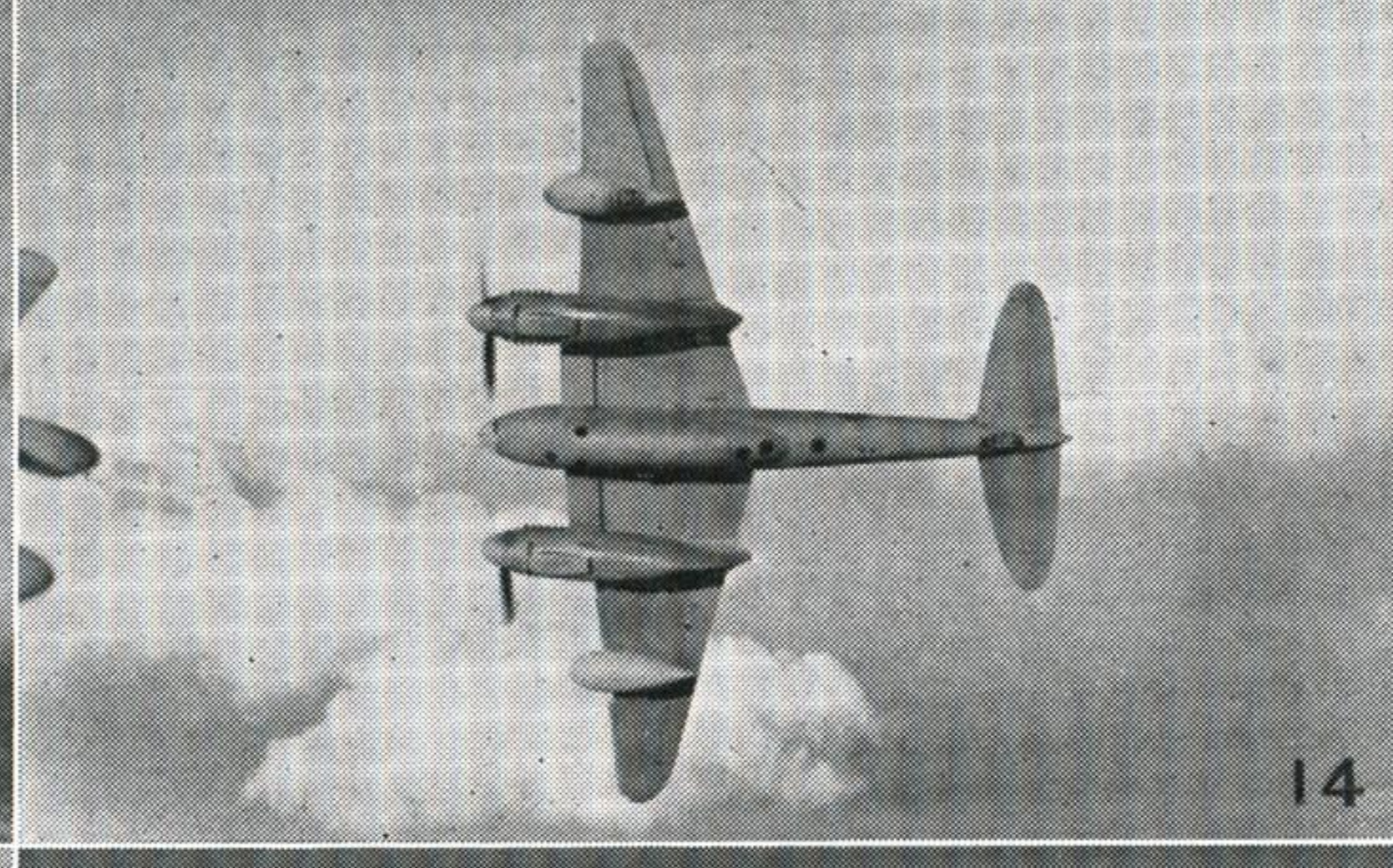
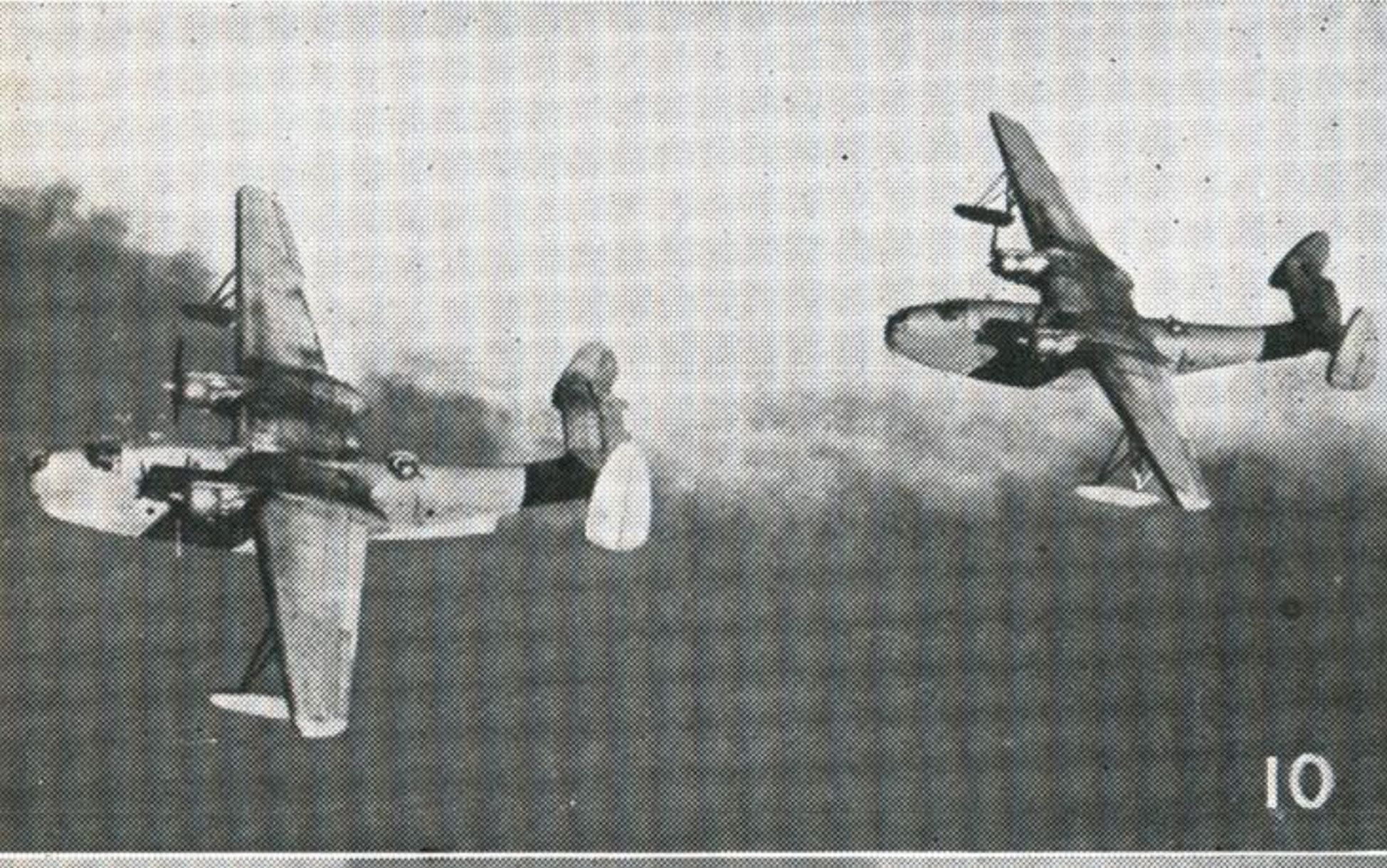
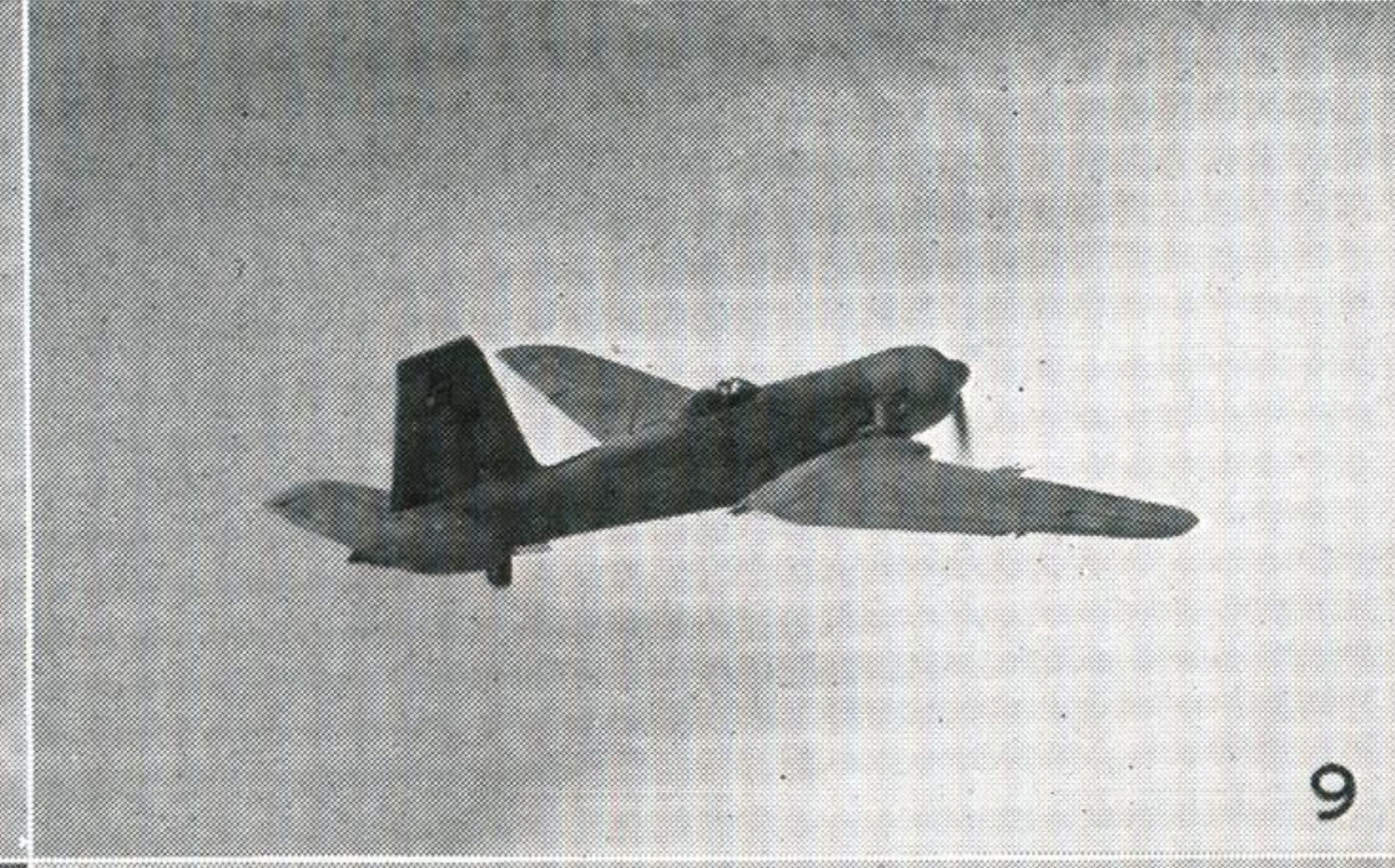
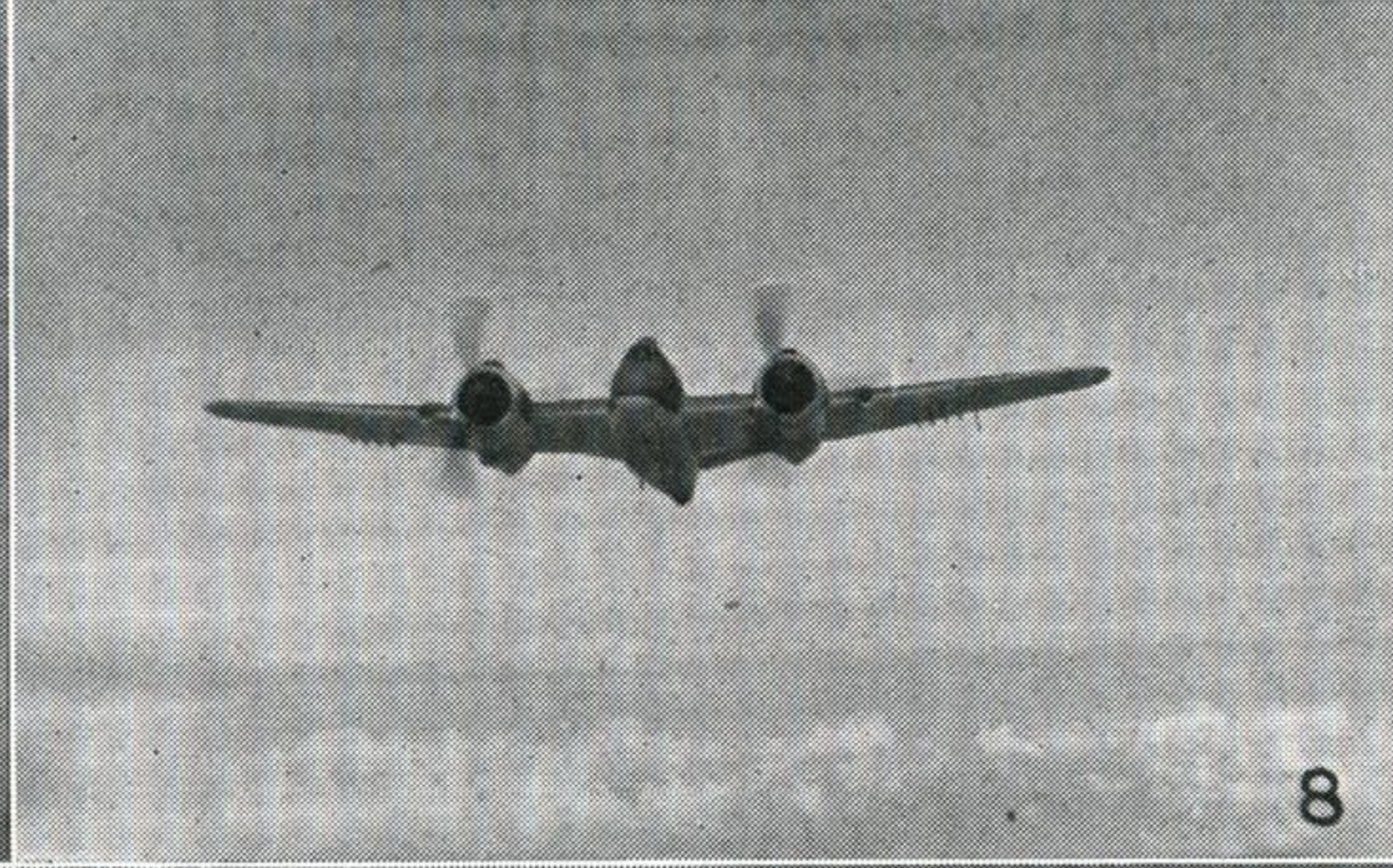
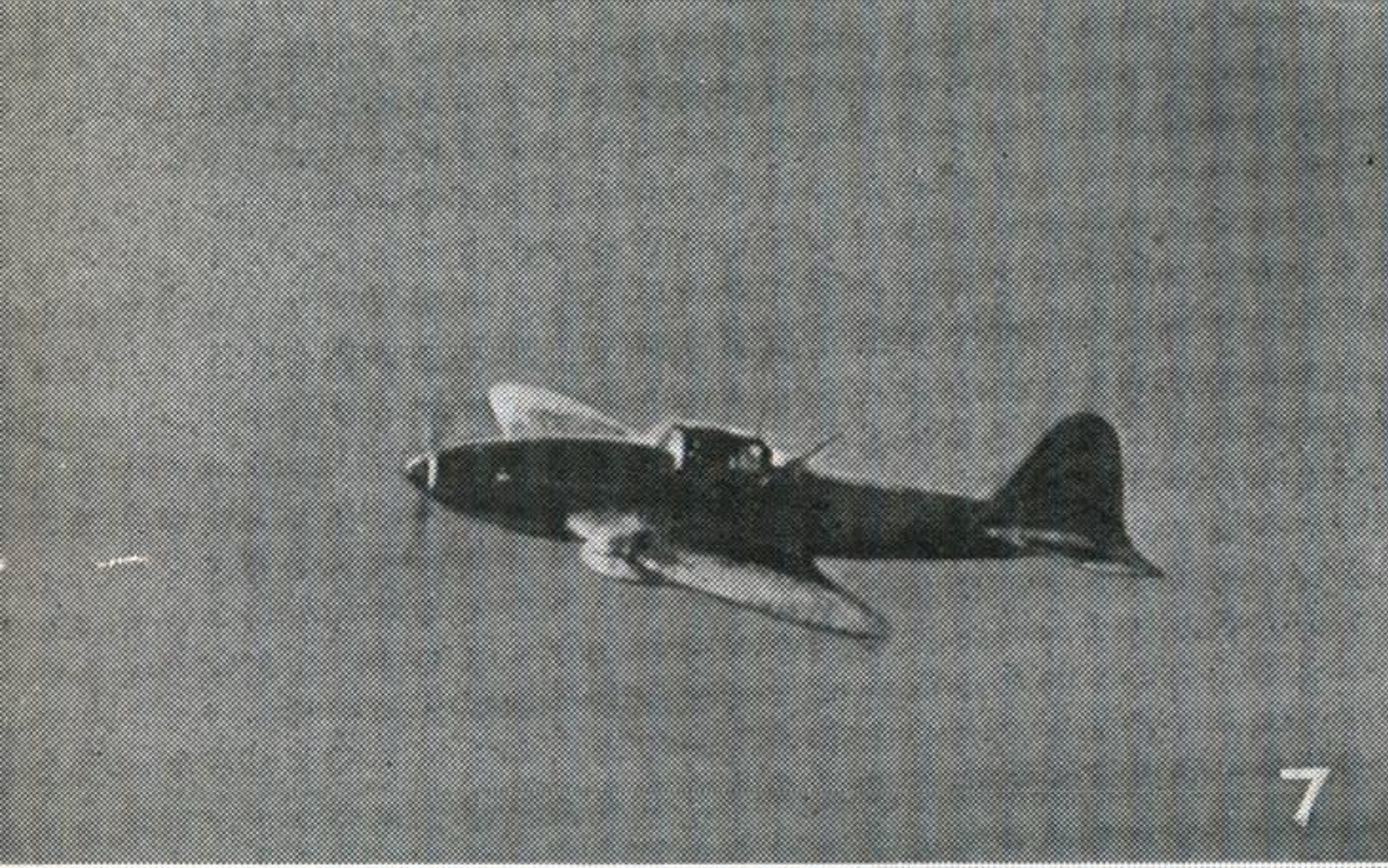
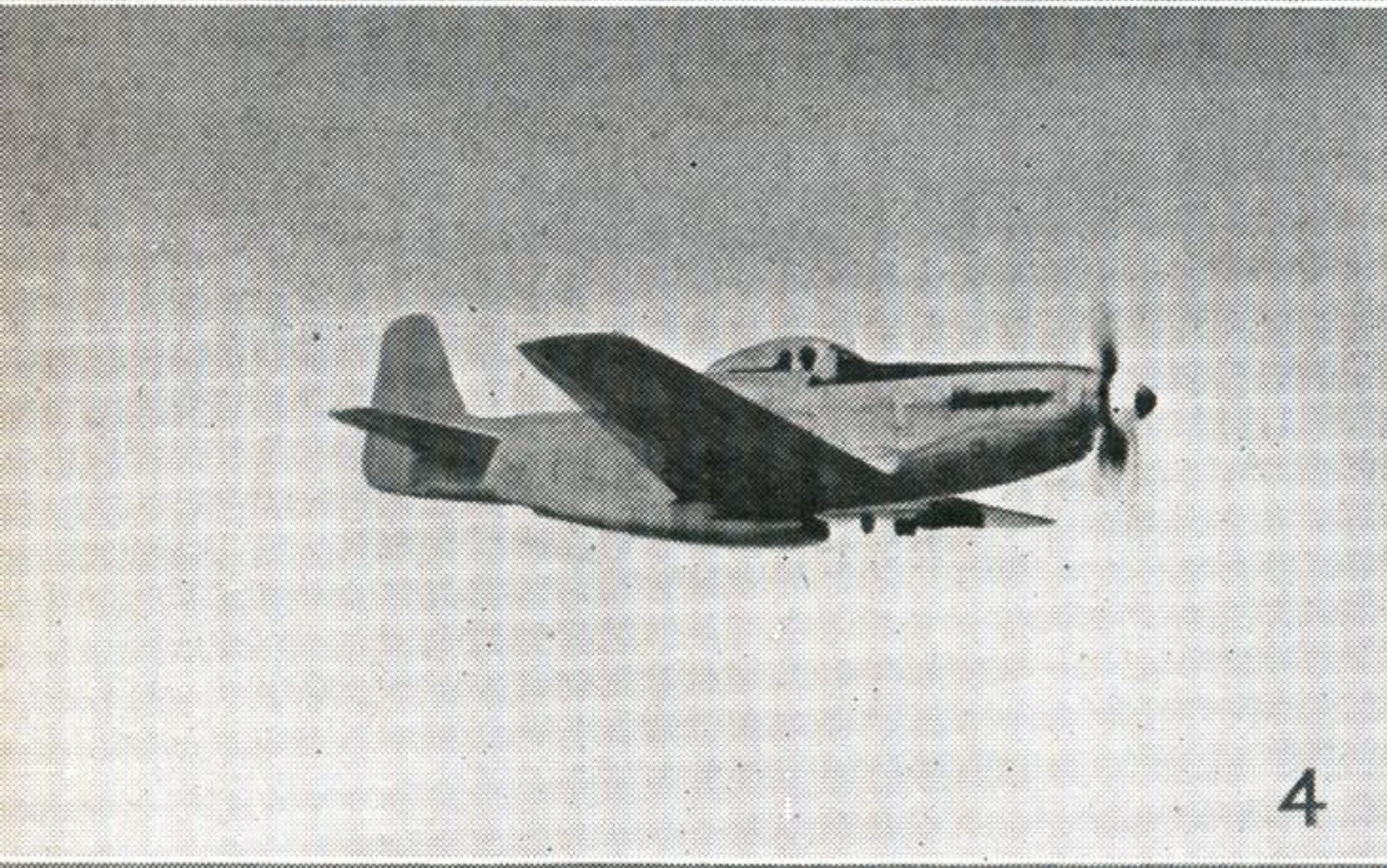
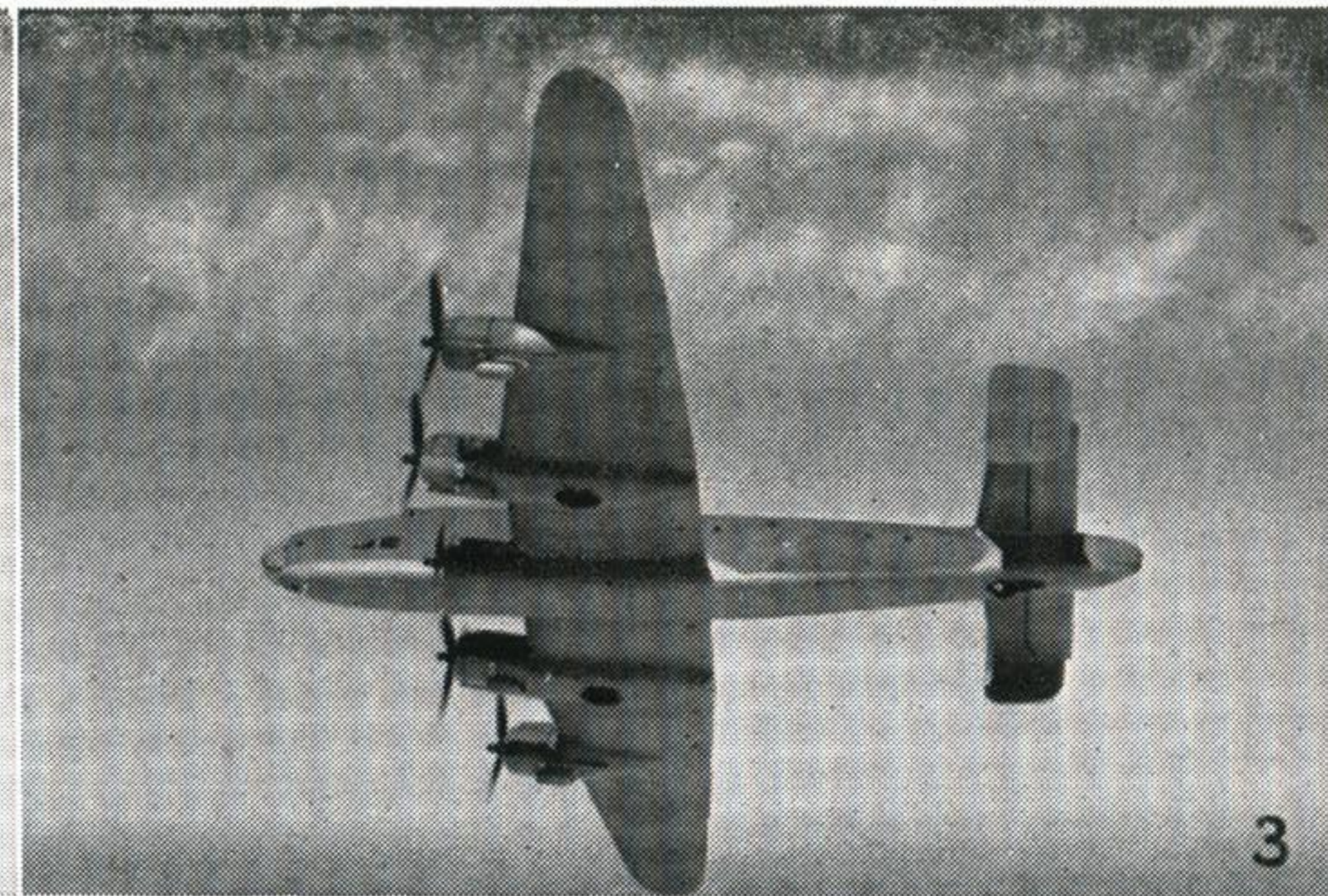
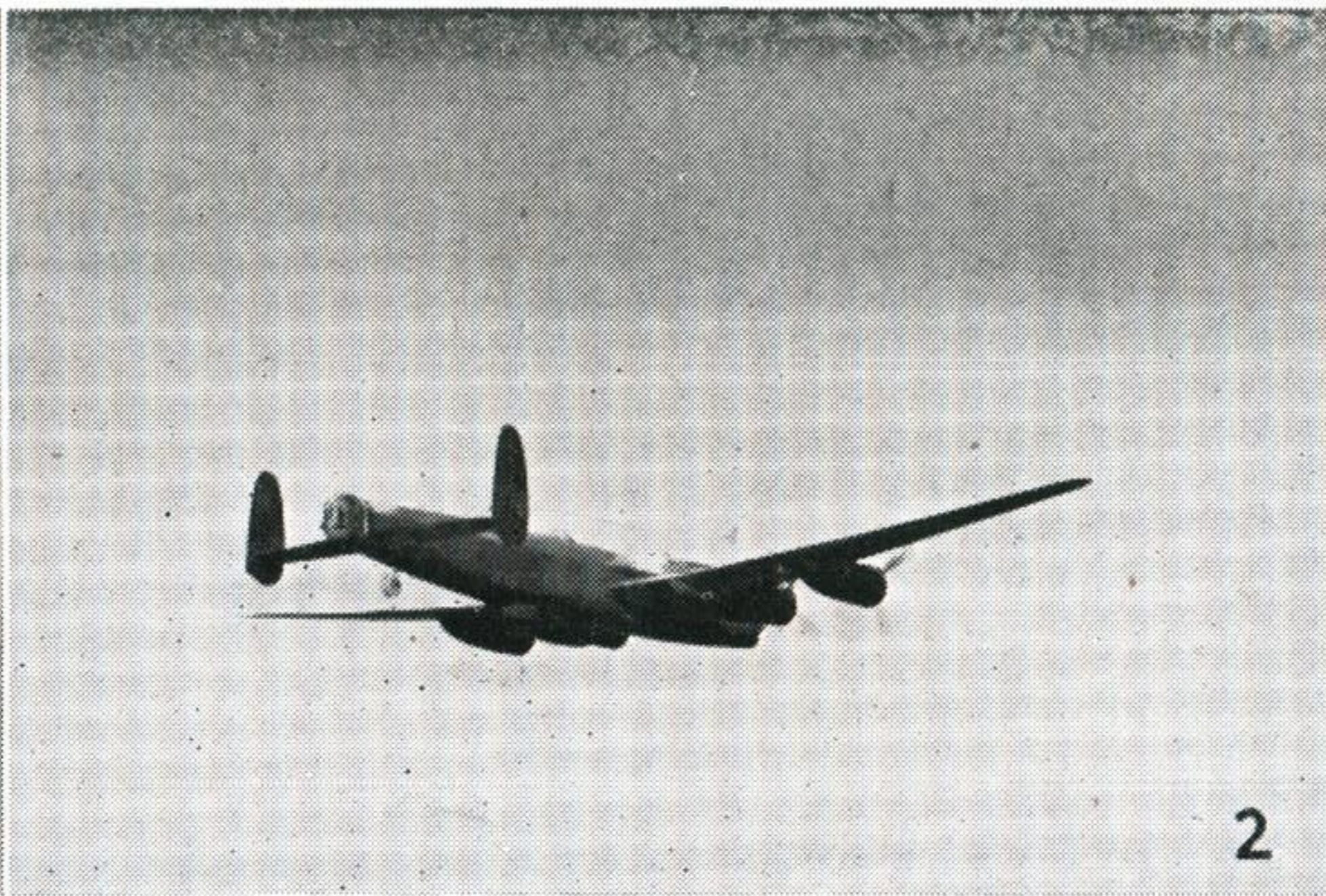
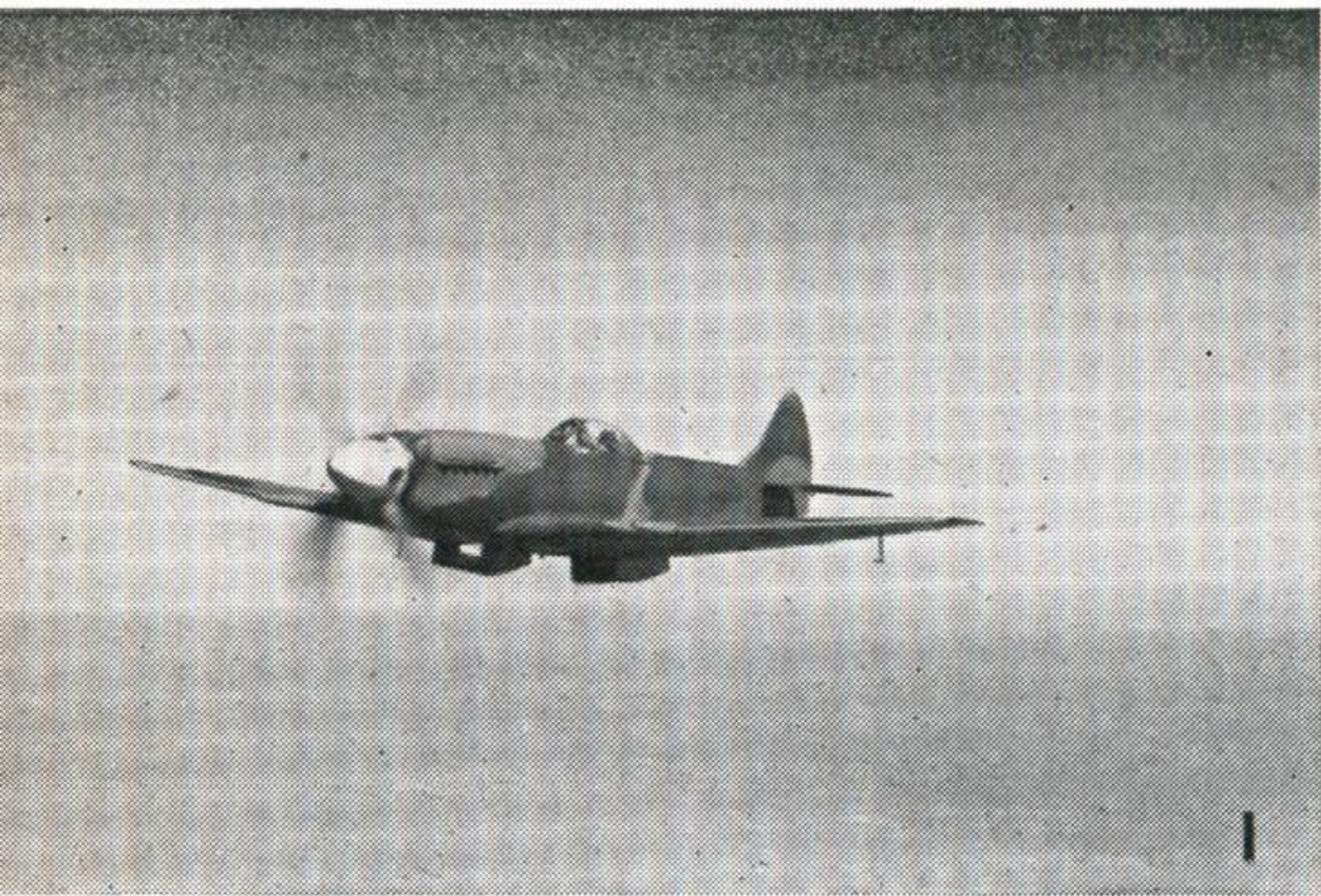
Air Ministry, London.

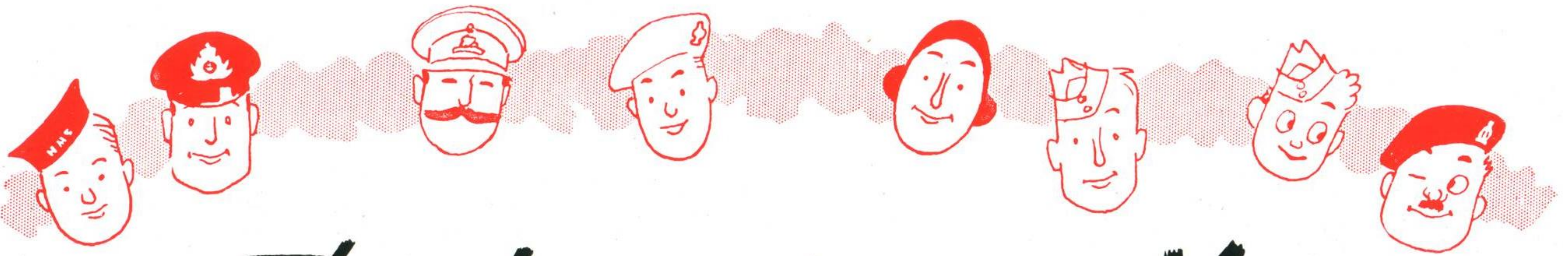
July, 1946.

Basil Embry.

ELEMENTARY SPOTTING

Recognition Test No. 1





The Journal - and YOU

YES, this concerns *you*. After all, you're reading it, aren't you? But are you getting the most out of it—or are you just casually interested? Just consider the facts for a moment. Times are hard, expenditure is being cut to the bone, most publications which started up during the war have departed this life or are on their way out. Nothing which is not considered absolutely essential to the Services is being retained. Yet the Aircraft Recognition Journal has started up again! It ceased publication last September only because the editorial staff returned to its pre-war occupations. Since then there has been a growing demand for its revival, and it is because of this demand from all the Services, the Royal Observer Corps and the Air Training Corps that the Journal is once more in circulation. Such is the importance with which Aircraft Recognition is regarded.

The fighting and defensive forces of a country exist on the presumption that the country may be involved in a war, however distasteful the idea of war may be. The last war showed again that comprehensive training is a winning factor, and we learned, too, that the ability to know friend from foe in the air was as important as knowing how to fire a gun. And so Aircraft Recognition maintains its place in the scheme of things—as long as there are air forces there *must* be Aircraft Recognition. During its three years of operational life the Journal was a welcome source of information, and the knowledge gained from a regular and conscientious study of its contents saved many lives and undoubtedly contributed to the final victory. Along with all the other Recognition training aids, it was issued with the express purpose of spreading the gospel of swift and accurate Recognition. That purpose remains. The Journal will cater for all tastes—pupils, instructors, “fans”; all whose duty or interest it is to know their aircraft when they see them.

Those of you who knew the Journal in the past will see that its general form is much the same in this new series. The number of pages has been reduced and the emphasis is necessarily very much on photographs. Remember, Confucius he say “One picture is worth a thousand words”. He must have had Aircraft Recognition in mind when he thought up that one. If it is your duty to be able to recognize aeroplanes, you will be receiving regular instruction in the subject and the Journal is here to back up that instruction.

Classroom training can take you only so far—it can put you on the road to success, but you must help the instructor and yourself by maintaining an interest in the subject outside the classroom. That is why small boys are such hot spotters—and without any instruction. Their *interest* in aeroplanes inspires them to read every aeronautical magazine they can lay their hands on. After all, if you see enough pictures of an object, you're pretty certain to recognize the actual thing when you see it “in the flesh,”

aren't you? You can apply the same principle to people—Mr. Churchill, for instance. So if you are an Aircraft Recognition pupil, study this Journal closely, look at every picture with interest, and read the articles. Do this every month and you will find that the subject, far from being dull and difficult, is fascinating and is *not* the difficult business that it is often thought to be.

Now, this publication differs from most others inasmuch as it is intended not only for reading and studying by all concerned with Aircraft Recognition, but is also a means of providing instructors with material for use in training. For instance, the cover picture and the “centre spread” can be removed and mounted on the wall of a classroom for the purpose of instructional display; the spotting pictures can be cut out, mounted on cards and used for projecting on to a screen to test pupils; the photographs on the inside cover and in “Photographic Angles” may be similarly cut out and used with the epidiascope for training; the small silhouettes on the back cover may serve to make good the lack of a large-scale silhouette of a certain aircraft.

But here are some points to watch—be sure to mount your pictures on card, put the name of the aircraft on the back, and *organize a filing system*. Do this right from the start. Suitably labelled envelopes will do. If you just let your epidiascope pictures pile up in heaps, they will get dirty and it will be difficult to find the pictures you want.

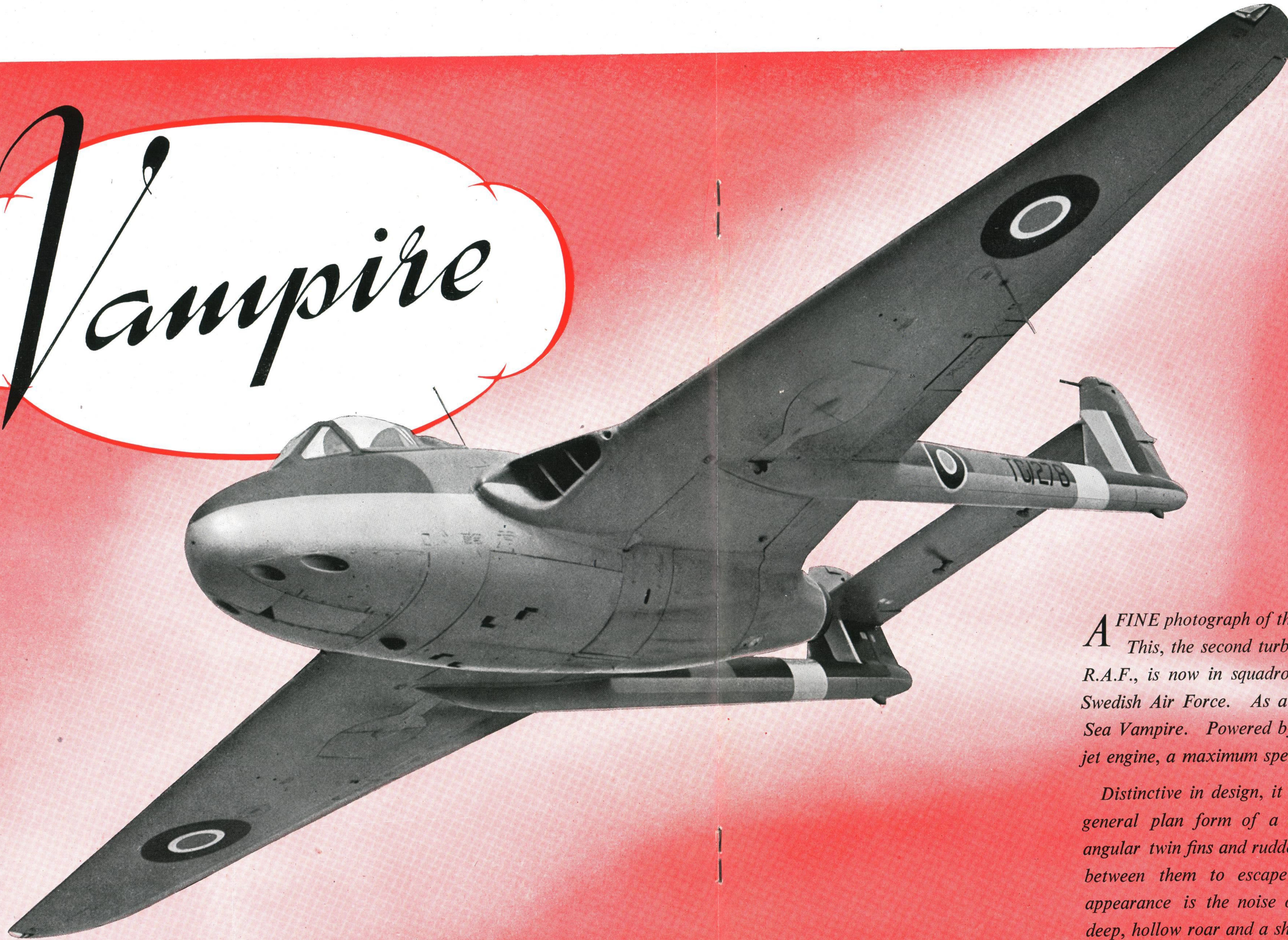
Every other month, commencing with the August issue, there will be a four-page supplement for the Royal Observer Corps, dealing with R.O.C. matters only. Unfortunately, for technical reasons, there will be no other way to include it except by insertion in the middle of the Journal, thus covering the centre spread. However, it will be easily removable by opening up the staples, and the centre picture will thus be revealed in all its beauty. This will, of course, apply to copies sent to the R.O.C. only.

Readers are reminded that the Journal goes to press more than a month before it is distributed, a condition which means that it cannot be an up-to-the-minute news sheet. This was not fully appreciated by many readers of the old Journal, particularly some of the keen types, who were sufficiently interested to write to us. May we say that suggestions will be very welcome, as will articles (up to 1,000 words) and drawings, which should be addressed to The Editor, Aircraft Recognition Journal, Air Ministry, T.Lit., London, W.C.2.

Don't forget that this Journal is an *official issue* and can be obtained *only* through recognized channels. It is not for sale, nor can copies be obtained from the editorial offices or the printers. We haven't time to enter into correspondence regarding distribution nor, indeed, are we allowed to do so. In short, do *not* write to us on this subject and do *not* send us money for copies.

So there we are. We hope you like the new Journal. Good spotting!

Vampire



A FINE photograph of the De Havilland D.H.100 Vampire. This, the second turbo-jet to go into production for the R.A.F., is now in squadron service. It is also used by the Swedish Air Force. As a Naval fighter, it is known as the Sea Vampire. Powered by a De Havilland Goblin II turbo-jet engine, a maximum speed of 540 m.p.h. is possible.

Distinctive in design, it has a sharply tapered wing in the general plan form of a diamond, twin booms, and small, angular twin fins and rudders with the tailplane mounted high between them to escape the jet. As distinctive as its appearance is the noise of its passing, a combination of a deep, hollow roar and a shrill whistle.

ВОЗДУШНЫЕ СИЛЫ КРАСНОЙ АРМИИ

THE AIR FORCES OF THE RED ARMY

THE Soviet Air Force has two branches; the Army Air Force consisting of a number of Air Armies, and the very small Navy Air Force. Each of these is controlled by the Army and the Navy respectively, and employs the same types of aircraft with suitable modifications. The Air Armies form the bulk of the Soviet Air Force and are almost entirely employed in support of ground forces, their activities being confined to battle areas only.

There is also a Soviet Long Range (Bomber) Force, not designed as a strategic bombing force as understood by us. Although under separate command from the Air Armies, it seldom operates in a strategic capacity, and is used chiefly to support ground forces.

Aircraft Types

With few exceptions, Soviet aircraft have been designed for the close support of ground troops. In fighters, emphasis is upon low altitude performance and lightness of structure weight. Armour and equipment have been kept to a minimum, except in special cases where aircraft have been designed for definite purposes. Generally speaking, the aircraft have good manoeuvrability. The Russians have not developed anything approaching a really large heavy bomber, the only noteworthy bomber type produced during the war being the TU-2, whilst others were merely modifications of earlier designs. For the moment they may be said to be behind the Western Powers in respect of their bombers, but we should not expect this state of affairs to continue.

Originally designated by an abbreviation of the task for which they were designed, Russian aircraft are now known by an abbreviation of the designer's name, followed by a number to indicate the model. The numbers do not necessarily indicate vintage; e.g., the YAK-9 appeared before the YAK-3. The most prominent Russian designers are Yakovlev (YAK), Lavotchkin (LA), Petlyakov (PE), Iliuchin (IL), Tupolev (TU), and Ermolaev (ER).



YAK - 3

Fighters

The three best Russian fighters at the moment are the YAK-3 (also YAK-9, an earlier model), the LA-5 and the PE-3.

The YAK-3 developed from earlier Yakovlev designs; a single-seat, single-engine fighter of conventional design, it has a top speed of over 360 m.p.h.

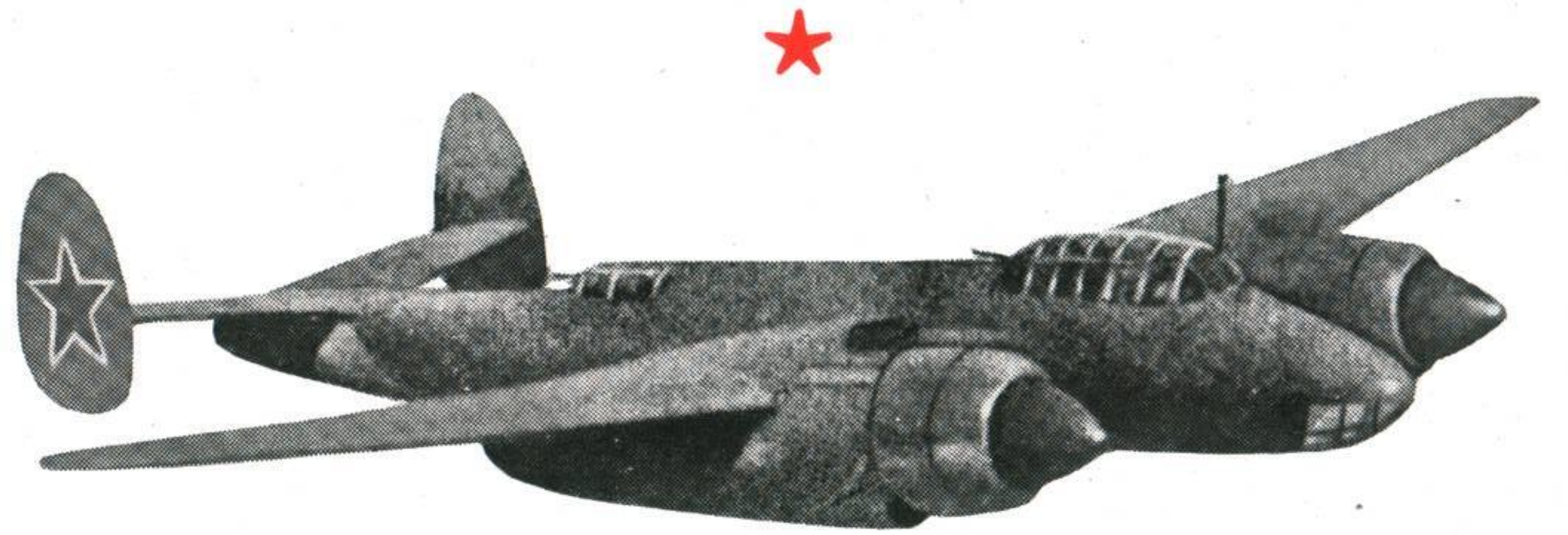
The LA-5, also a single-engine, single-seat type, possibly inspired by the Fw 190, has good performance, being capable of 380 m.p.h. at 16,000 feet. It has not been used in large numbers.

The PE-3, a modification of the PE-2, has a top speed of 335 m.p.h. This is the Russians' best twin-fighter. It is also used for reconnaissance.

The armament of these types is generally lighter than that of contemporary British and American aircraft.

Ground Attack Types

Probably the most famed of all Russian aircraft is the IL-2 "Stormovik", which specializes in ground assault work. Originally a single-seat type, it has been modified into a two-seater to enable it to defend itself from the rear. Its maximum speed is around 260 m.p.h. up to 7,000 feet; it is well armoured, its heavy armament varying with each task.



TU - 2

Bombers

The TU-2, an original and recent design, carries two tons of bombs at a maximum speed of over 340 m.p.h. and is well armed.

The only four-engine bomber worthy of mention is the PE-8, but this type is now obsolescent. As the TB-7, it was the first Russian bomber to "set foot" in this country, when it brought some Very Important Russians here during the war. The top speed is only about 235 m.p.h. at 17,000 feet.

The IL-4 (née DB-3F) is the main bomber type; its top speed is 275 m.p.h. at 2,000 feet, and up to three tons of bombs can be carried.

The PE-2 is also a much used type for bombing, but its load is only about one ton, with which it does 330 m.p.h. at 16,000 feet.

The ER-4 (ex ER-2), a comparatively new type, is credited with a very good range (figures not available) and a top speed of 280 m.p.h. Its carrying capacity is not known.

Recognition

Soviet aircraft designers do not seem to be prolific or radical in designs, but much modification to existing types is carried out. In some instances, they have followed well-trying and proven foreign designs. Those with an "eye" for aircraft line and shape will be able to discern some distinctive characteristics peculiar to Soviet designs which clearly label them as such.

The camouflage scheme for operational aircraft is grey on the upper surfaces and pale blue beneath. Five-point yellow stars, bordered in white, replace the red star found on non-camouflaged aircraft. Squadron symbols may be painted on the fuselage and tail fin.



PE - 2



ADVANCED SPOTTING

Recognition Test No. 2



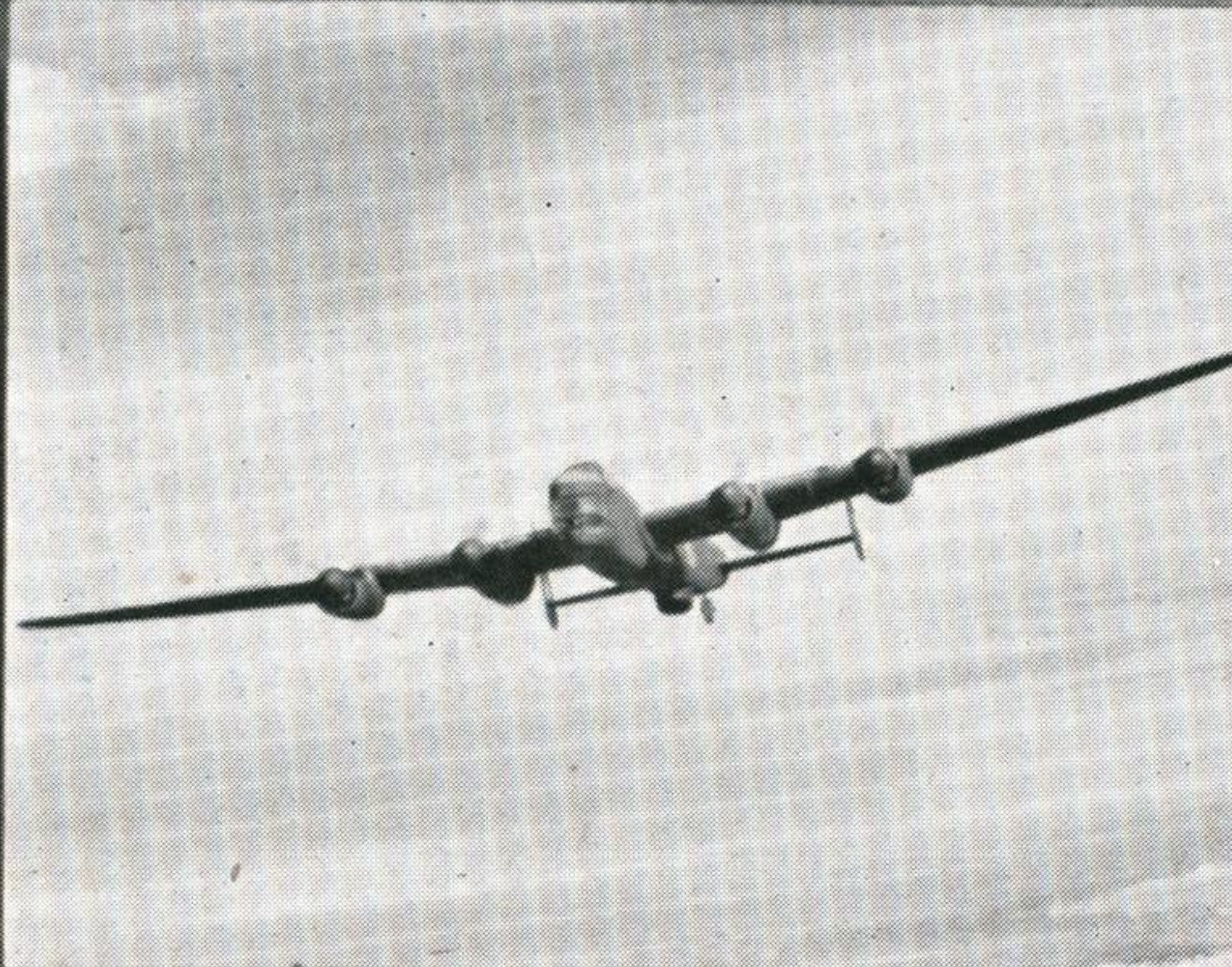
SILLOGRAPHS

PHOTOGRAPHIC ANGLES



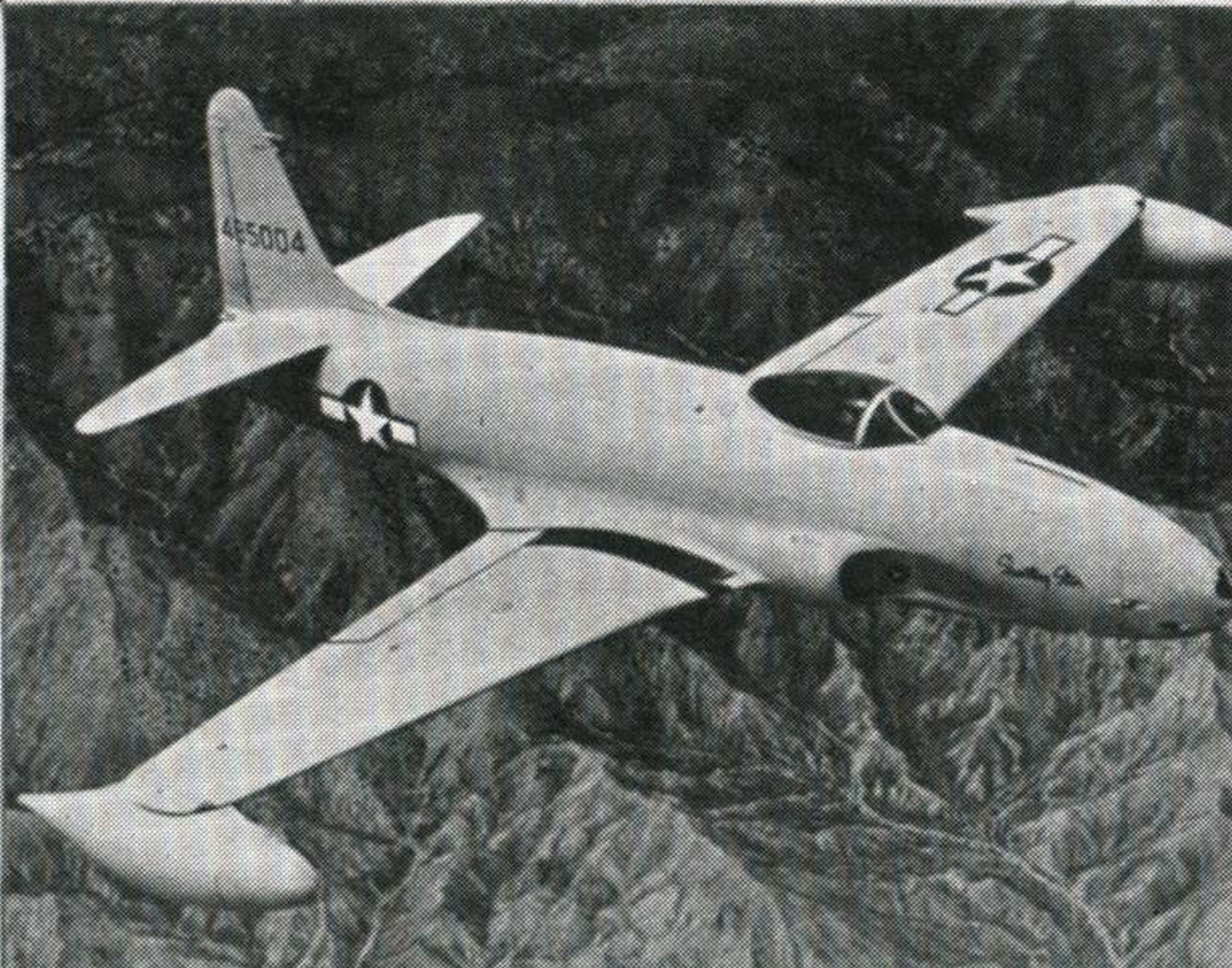
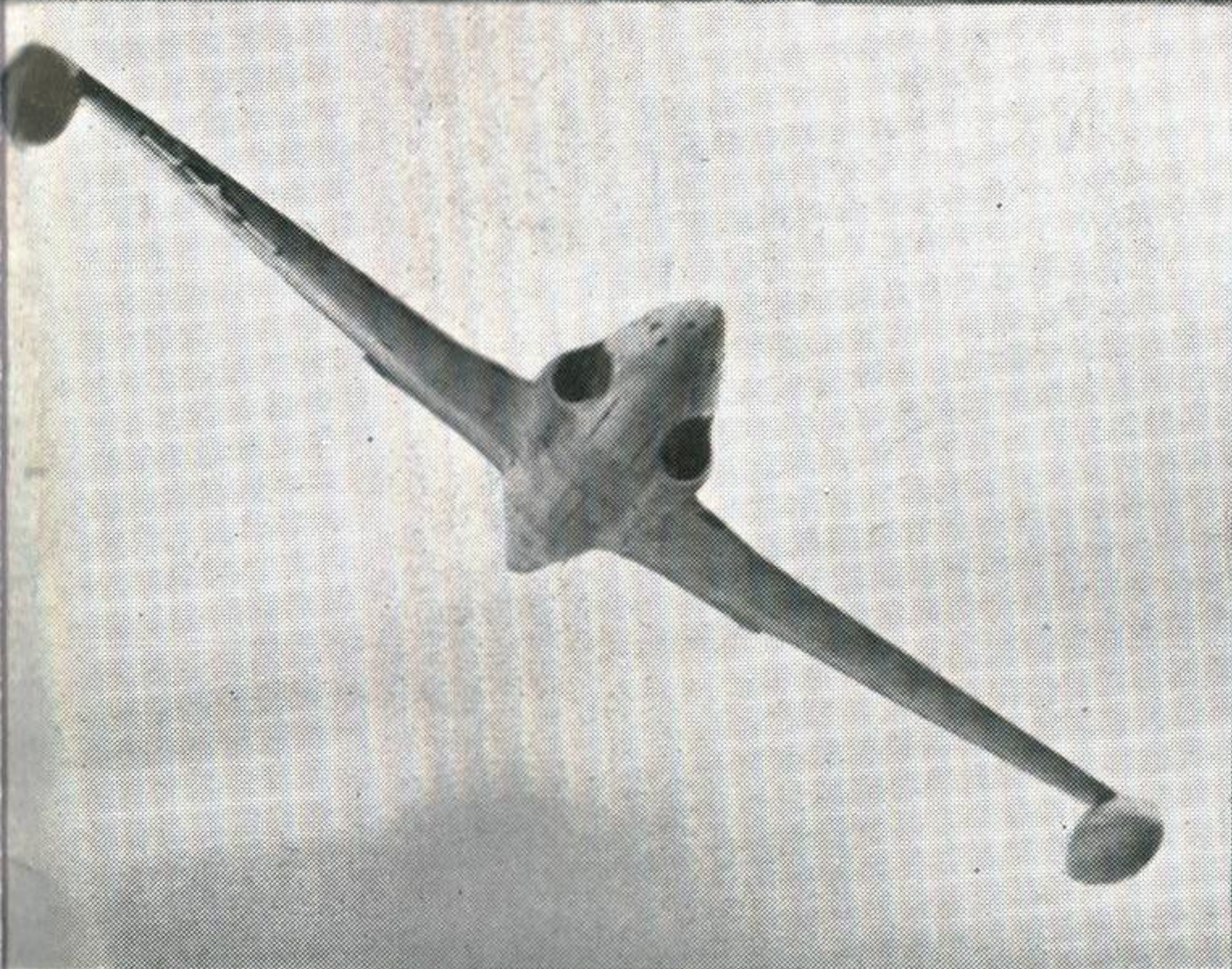
Sea Fury

Bristol Centaurus XVIII of 2400 h.p. Span 38 ft. 5 ins. The new Hawker Fury, "hooked" for the Navy, is launched as the Sea Fury; it differs from the Tempest II in its shorter span, humped fuselage and redesigned fin and rudder.



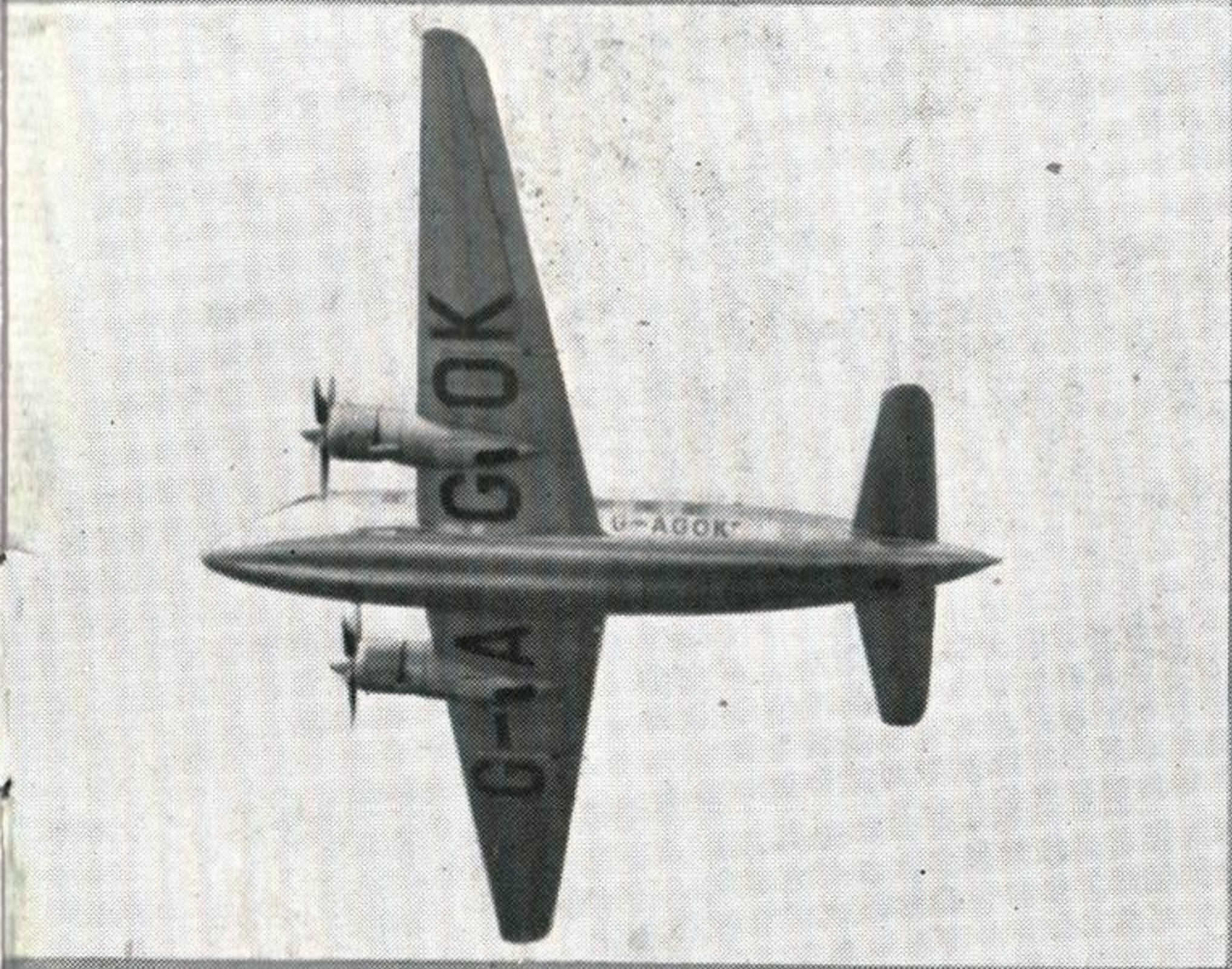
Lincoln

Four Rolls-Royce Merlin 85 of 1750 h.p. Span 120 ft. Constructed for Far East operations, the Avro Lincoln is a larger Lancaster and, at a distance, is distinguishable from that veteran only by its relatively slimmer appearance. Closer inspection shows revised nose, armament and engine cowlings.



P-80

General Electric I-40 Turbo-Jet. Span 38 ft. 11 ins. Wing tip drop tanks, when fitted, identify the P-80 Shooting Star instantly. Ugly from some angles, shapely from others, this Lockheed fighter has a long nose appropriately adorned by two large "nostril" jet intakes at the wing roots.



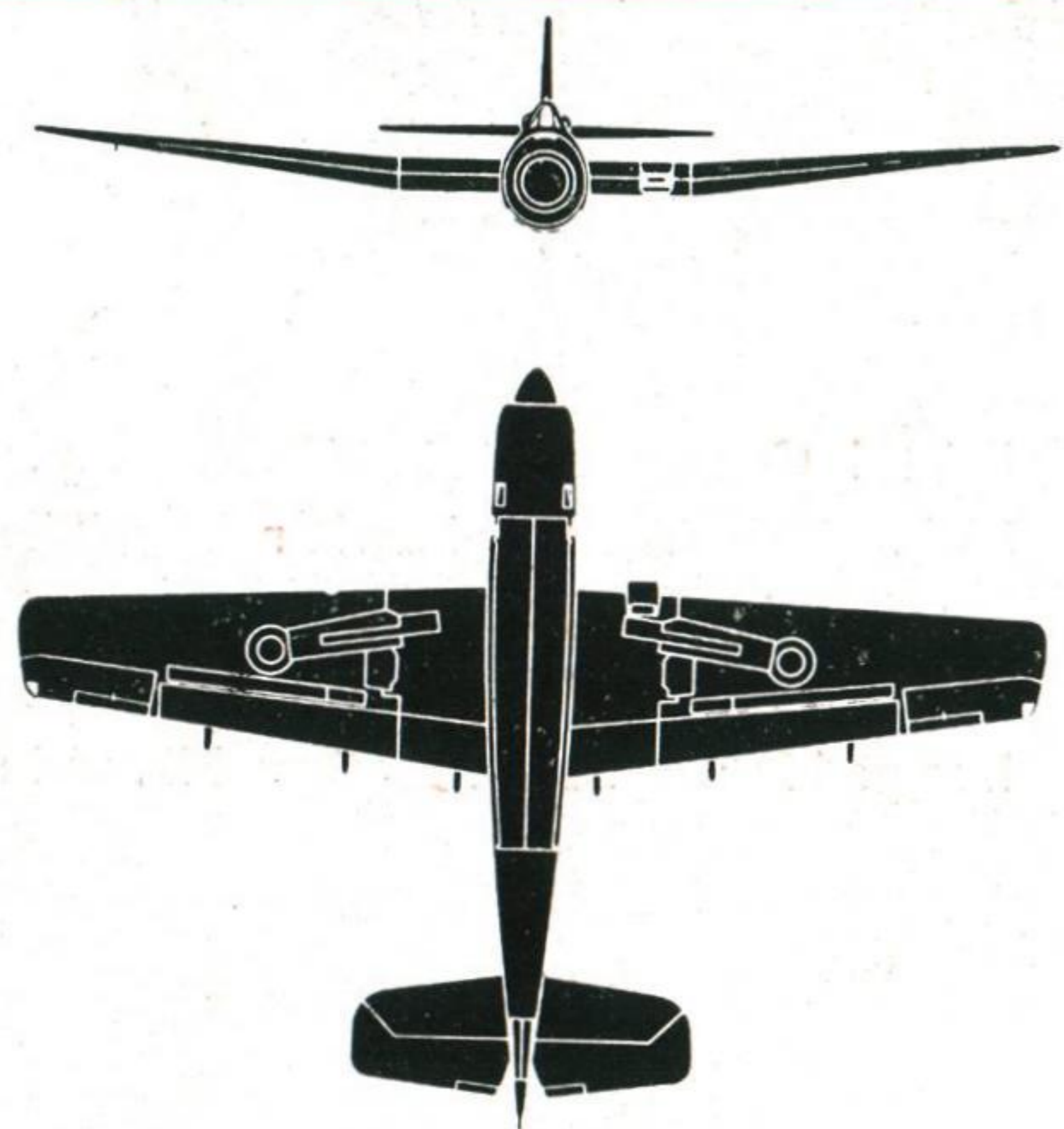
Viking

Two Bristol Hercules 130 of 1675 h.p. Span 89 ft. 3 ins. Looking somewhat overfed, the Viking will take up to 27 passengers at a sitting when operating on feeder-lines. The Vickers-Armstrong family characteristics are apparent in the geodetic wing and the tail surfaces, evidence of its Wellington-Warwick forbears. It cruises at 240 m.p.h.

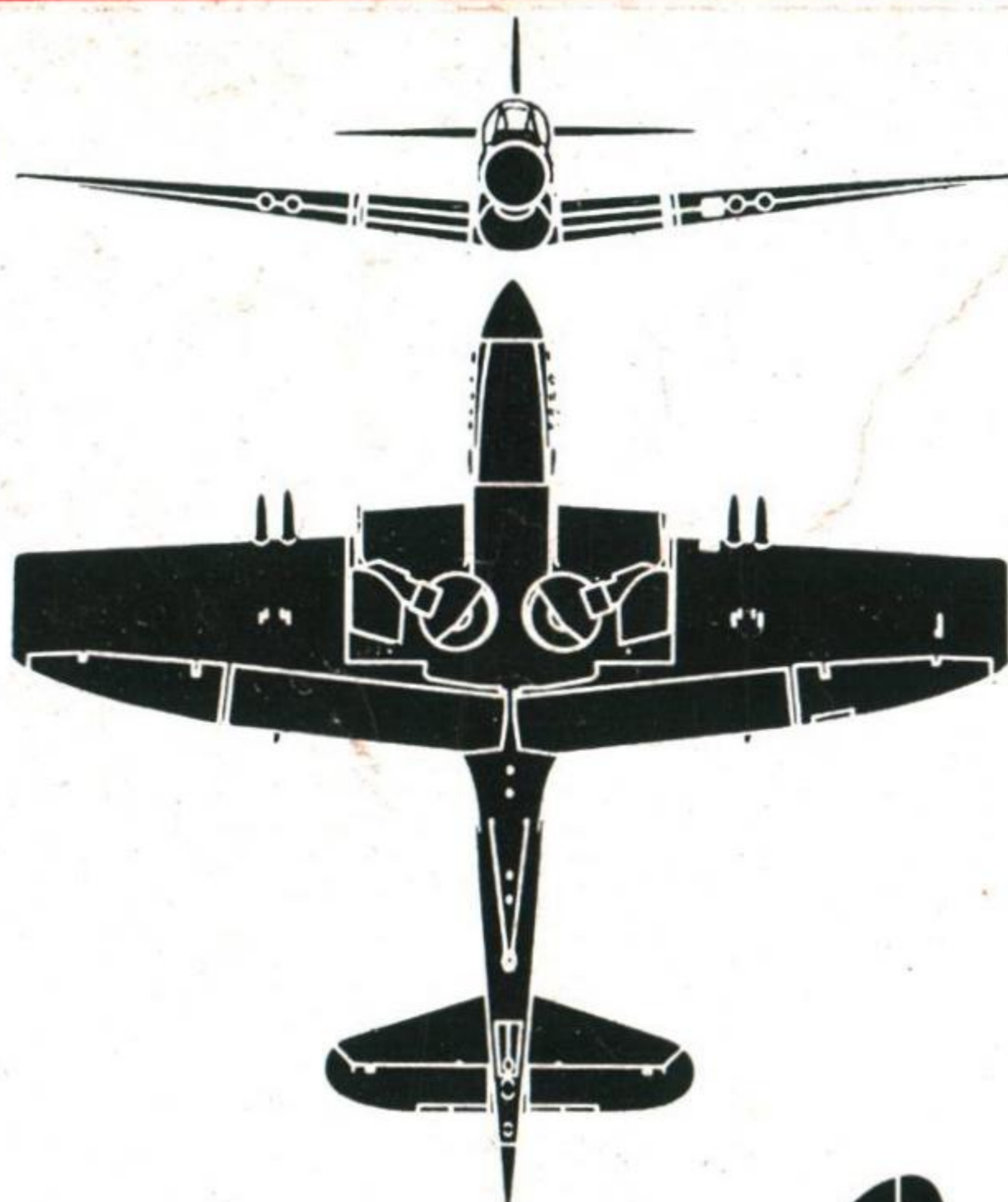


Tudor II

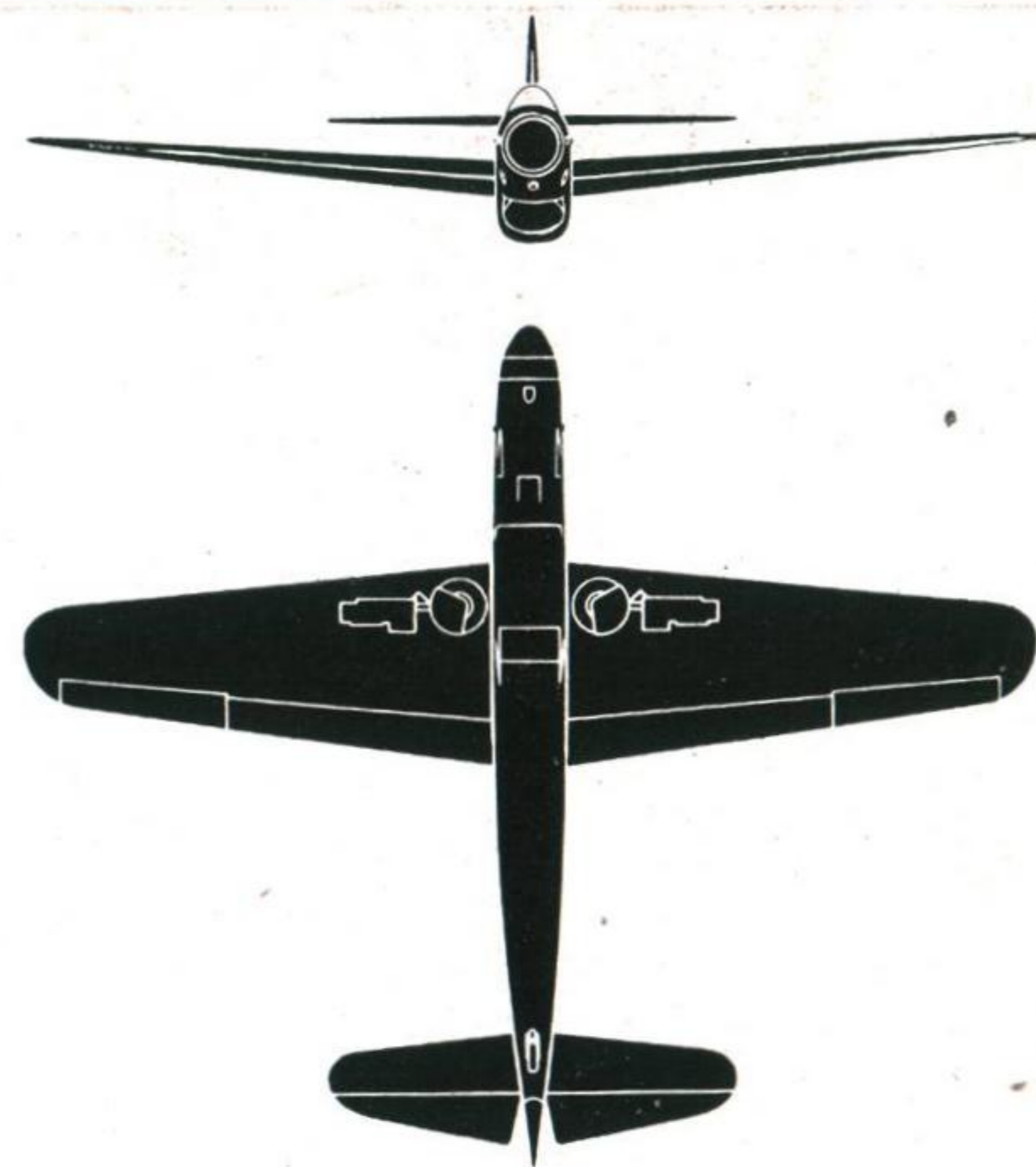
Four Rolls-Royce Merlin 620 of 1740 h.p. Span 120 ft. The 'tubular' Tudor II is in effect, a Tudor I with an extended fuselage and is fitted with all mod. con., right down to the proverbial kitchen sink. Later Tudors have a taller, round-topped fin and rudder to give better control in the case of an engine cutting at take-off.



FAIREY SPEARFISH
British Torpedo Bomber
(Centaurus) Span 60ft. 3in.



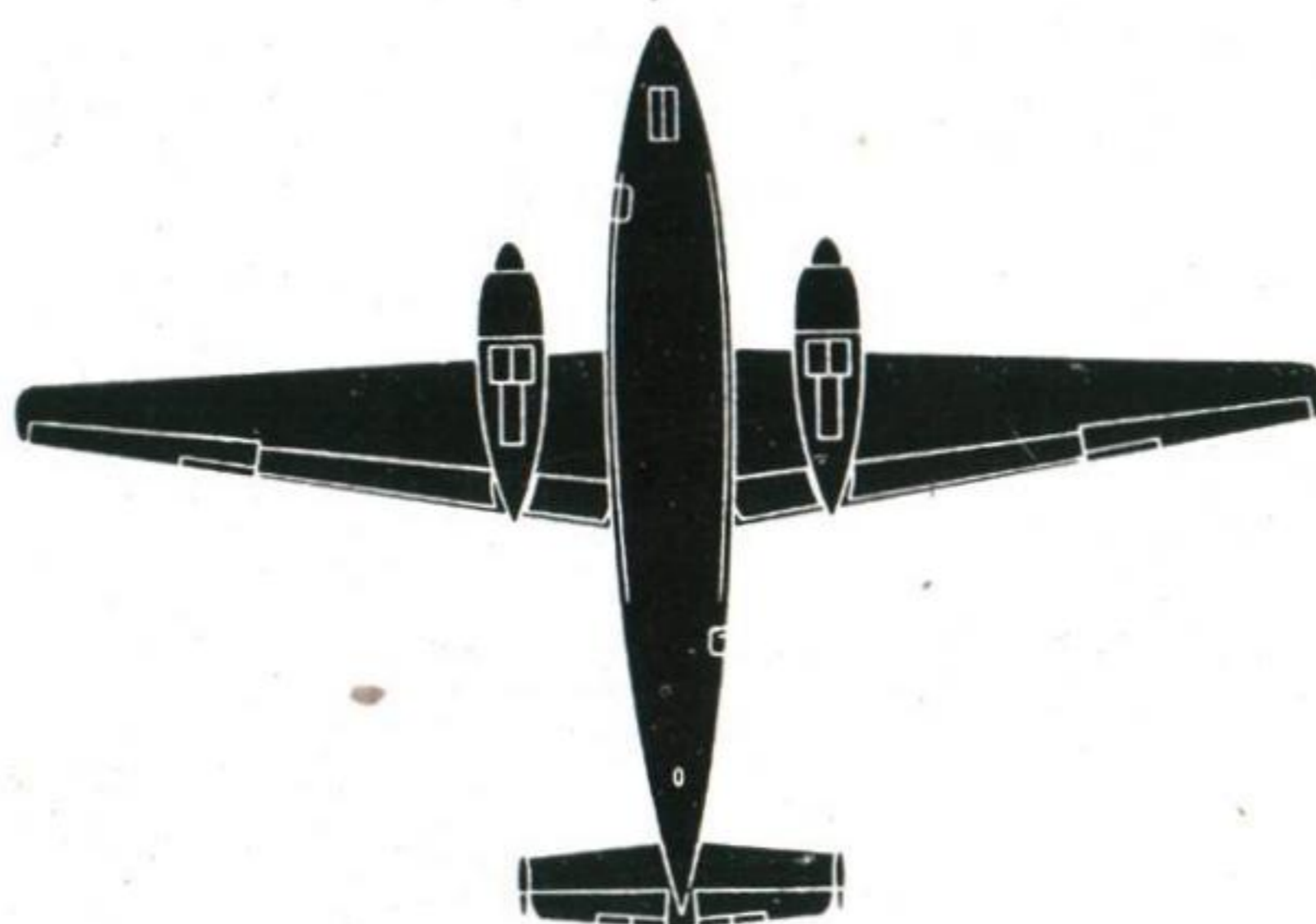
FAIREY FIREFLY IV
British Reconnaissance Fighter
(Griffon) Span 41ft. 0in.



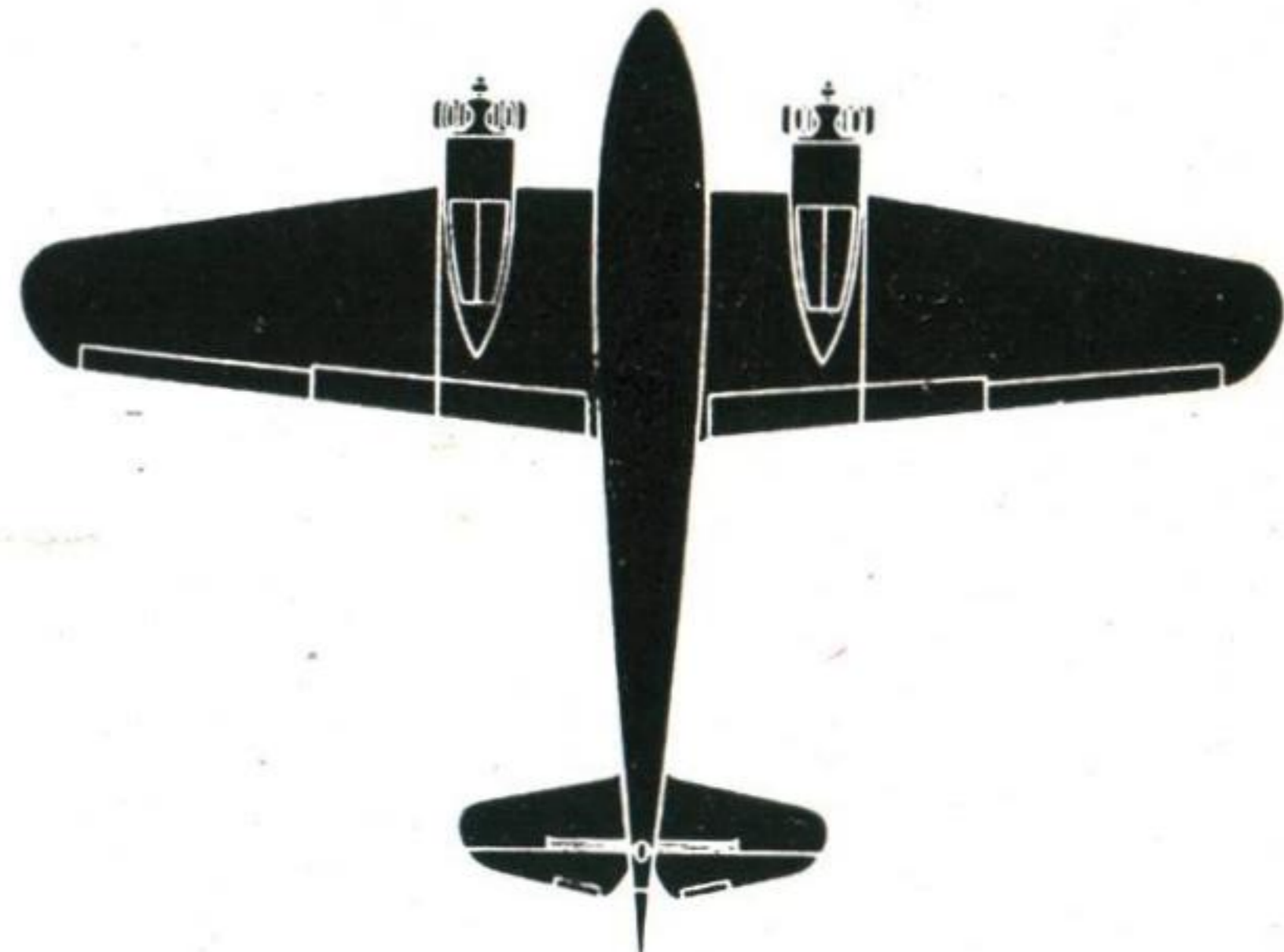
ARSENAL VB-10
French Fighter
(2 Hispano Suiza) Span 50ft. 9in.



DE HAVILLAND MOSQUITO PR XVI
British Photo Reconnaissance
(2 Merlin) Span 54ft. 2in.



AIRSPED AMBASSADOR
British Transport
(2 Centaurus) Span 115ft. 0in.



YAK-6
Russian Transport
(2 M-11E) Span 44ft. 9in.

SOLUTIONS TO RECOGNITION TESTS IN THIS ISSUE :

FRONT COVER : *Hornet*

No. 1 (ELEMENTARY SPOTTING) :

- | | |
|-------------------|------------------------|
| 1. Spitfire 22 | 10. PBM-3 Mariner |
| 2. Lincoln I | 11. Horsa |
| 3. Halifax C.VIII | 12. P-47N Thunderbolt |
| 4. P-51H Mustang | 13. LA-5 |
| 5. Tempest V | 14. Mosquito 34 |
| 6. York | 15. Consolidated RY-3 |
| 7. IL-2 | 16. C-54 Skymaster |
| 8. Beaufighter X | 17. Sunderland |
| 9. Firebrand IV | 18. B-29 Superfortress |

No. 2 (ADVANCED SPOTTING) :

- | | |
|-----------------------|------------------------|
| 1. Auster V | 15. F8F Bearcat |
| 2. York | 16. Sandringham |
| 3. C-46 Commando | 17. P2V Neptune |
| 4. CG-4A Hadrian | 18. Messenger |
| 5. Brigand | 19. Shetland |
| 6. B-17G Fortress | 20. C-82 Packet |
| 7. Mosquito 34 | 21. B-29 Superfortress |
| 8. FR-1 Fireball | 22. Warwick G.R.V |
| 9. Consolidated RY-3 | 23. Spiteful |
| 10. Vampire | 24. F7F Tigercat |
| 11. P-47N Thunderbolt | 25. Lincoln I |
| 12. JRM Mars | 26. Viking |
| 13. Sea Fury | 27. C-54 Skymaster |
| 14. IL-4 | 28. Tempest II |

No. 3 (SILLOGRAPHS)

- | | |
|--------------------------|------------------------|
| 1. B-29 | 14. Aerovan |
| 2. Constellation | 15. PE-2 |
| 3. Hornet | 16. TU-2 |
| 4. Spitfire 22 | 17. YAK-9 |
| 5. C-97 Stratocruiser | 18. F8F Bearcat |
| 6. F7F-3N (Mod Tigercat) | 19. Spearfish |
| 7. PE-8 | 20. P-80 Shooting Star |
| 8. Tudor I | 21. Mosquito 34 |
| 9. Sea Fury | 22. Mariner |
| 10. Firebrand | 23. C-54 Skymaster |
| 11. Beaufighter X | 24. IL-2 |
| 12. Lancastrian | 25. Viking |
| 13. P-51H Mustang | |

The Inter-Services Aircraft Recognition Journal is a monthly publication, prepared and produced by Air Ministry, *T.Lit.*, in collaboration with the Ministry of Supply, *A.R.Mat.* The subject matter is decided by an Editorial Committee consisting of the following members—AIR MINISTRY : *T.Lit.*, Wing Commander G. G. N. Barrett, A.F.C. (Chairman) and Flight Lieutenant

E. A. Wren (Secretary and Editor) ; *T.O.5*, Squadron Leader R. H. Adams, O.B.E. ; *A.I.2(g)*, Flight Lieutenant J. L. Newton ; ROYAL NAVY : Lieutenant (A) J. A. O'Dwyer, D.F.M., R.N.V.R. ; ARMY : Captain F. J. B. Crosse, R.A. ; MINISTRY OF SUPPLY : *A.R.Mat.*, Mr. A. E. Dollery ; ROYAL OBSERVER CORPS : Observer Commander R. R. Poole.