### FOR THE ALERT

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Incorporating THE HEARKERS' CLUB BULLETIN

Edited by PETER G. MASEFIELD

M.A. (Eng.) Cantab; A.F.R.Ae.S. Technical Editor of "THE AEROPLANE."

EVERY THURSDAY



HAWKER HURRICANES OF THE R.A.F. FIGHTER COMMAND

THIS NEW PUBLICATION, for those concerned In aircraft identification, is both supplementary and complementary to the information on aircraft recognition published each week in The Aeroplane. The need for such a news sheet has been expressed partly in the vastly increased sales of THE AEROPLANE, arising from its special services in identification matters, and partly in the demand by those in the R.A.F., in the Anti-Aircraft batteries, in searchlight crews, as well as in the Navy, the Mercantile Marine, the Army and the Home Guard, the Observer Corps, the Balloon Barrage and among the "Jim Crows" or roof watchers, for full, regular and accurate information in words, photographs and silhouettes on the recognition of

Since the War began THE AEROPLANE has devoted much attention to aircraft recognition in the course of its normal service on aeronautical matters. The subject has grown so much that THE AEROPLANE has not the space available to deal with it in the way called for by its national importance. Hence the founding, with official support and recognition, of THE AEROPLANE SPOTTER. In it we hope to supply in compact and useful form just that which is required by aircraft spotters without making it essential for them to buy THE AEROPLANE at three times the price. THE AEROPLANE SPOTTER will also contain exclusive features of its own and will provide each week a real

news service on the latest developments in aircraft recognition and its problems—so far as censorship

Accuracy is the first essential in work of the type which this new publication sets out to perform. The demand for material on aircraft recognition has become so great within recent months that a flood of hastily prepared and dismally inaccurate information has been sent out from many quarters not closely in touch with aeronautical matters. These pitfalls we hope to avoid and we are confident that the exceptional facilities enjoyed by THE AEROPLANE, now also available for THE AEROPLANE SPOTTER, will make possible the dissemination of the most up-to-date and precise information obtainable officially or unofficially. We have set ourselves the highest standards. We shall welcome constructive criticism in maintaining those standards. We present this first issue of THE AEROPLANE SPOTTER in the knowledge that it answers an urgent need, in the desire to perform a national service, and in the hope of gaining both the co-operation and good will of its readers in the discussion of an absorbing subject.

#### THE WEEK NEWS OF

WE PRESENT in this, the first issue of THE AEROPLANE Spotter, an attempt to fill some of the needs of those concerned officially and unofficially with the art and science of the recognition of aircraft.

The subject is immense, for there are now some 400 types of aeroplane, British, American, German, Italian and French, with which a competent spotter should be acquainted. In this and the following pages each week we hope to deal with some of the diverse subjects which help towards efficiency and encourage keenness in aircraft identification—a point of vital and national importance.

THE AEROPLANE SPOTTER is designed to help everyone interested in the subject. Numerous as are those who must watch the skies in the way of duty, there are perhaps as many who have come to recognise the fascination of knowing the various breeds of aeroplane so intimately that they rarely mistake one for the other, even at long range. We count ourselves fortunate in the co-operation and assistance promised and given so freely by all those officially concerned, by the Air Ministry, the War Office, the Admiralty and by the Ministry of Home Security. Besides this, THE AEROPLANE SPOTTER will include the Bulletin of the Hearkers' Clubs, which contain among them many of the most enthusiastic of those who have to deal with aircraft recognition.

The development of this paper will be governed largely by the demands of its readers. We present it here in the form planned to cover as many interests as possible. Regular features will include "Aeroplanes in the News": "Weekly Notes for Spotters," a contributed feature by R. A. Saville-Sneath, of The Observer Corps: "Aero-planes in Detail," a series of "split-open" drawings by J. H. Clark of THE AEROPLANE; "The Hearkers' Bulletin"; 'Aircraft Recognition''—the popular feature from THE AEROPLANE; "Aircraft Comparison," an analysis of different aeroplanes likely to be confused; an "Illustrated Glossary of Aeronautical Terms," and "Identity Problems." An index will be prepared and will be available separately at the end of each three months. We anticipate the need for a page of correspondence in the near future.

In THE AEROPLANE SPOTTER we confidently believe that readers will find a medium for the rapid dissemination of news on new problems in identification and a medium for binding together in a common interest all those throughout Great Britain who find in aircraft recognition, as we do, an absorbing subject for study.

## WEEKLY NOTES FOR SPOTTERS—I

By R. A. Saville-Sneath

(Member of the Observer Corps and a Founder Member of the Hearkers' Club)

IN THE PAST, spotters—whether Observers in the various defence forces or civilian "Jim Crows"—have had to rely very much upon their own keenness and initiative in pursuing their study of aircraft recognition and it has been left almost entirely to private enterprise to provide the essential material for those studies. I refer particularly to material which is suitable and available for individual use and home study.

THE AEROPLANE has quite naturally played a leading part THE AEROPLANE has quite naturally played a leading part in supplying topical, informative photographs and much-needed silhouettes which the enthusiastic spotter cuts out and pastes in his scrap-book regardless of the pearls of wisdom printed on the other side. I once was the proud possessor of many years' complete numbers of The Aeroplane, but these are now as riddled with holes as a Heinkel after three bursts from a Hurricane. Hurricane.

The pictures thus removed have served to elucidate this point or that and most of them are still in service. But the question invariably asked, after any instructional talk which they have illustrated, has been "Where can we get these pictures?" Unfortunately there has hitherto been no satisfactory answer, because back numbers of The Aeroplane have for long ceased to be obtainable. long ceased to be obtainable.

Now, in spite of all the obstacles to the launching of a new aper under war conditions, the initiative of the editors of paper under war conditions, the initiative of the editors of The Aeroplane has presented spotters with a weekly journal of their own, at only a fraction of the price, but with all the resources of the parent paper open to its readers.

This wealth of illustrative material and data from current or from past numbers—the rich contents of files which have always filled me with envy—is now placed entirely at the disposal of spotters.

disposal of spotters,

In future issues, under "Weekly Notes for Spotters," I hope not only to give notes on particular features of various types of aircraft coming into service, but also to discuss readers' recognition problems and matters of general interest to spotters.

to spotters.

The recently published results of the Half-Yearly Examination of the Hearkers' Clubs brought to light a fairly general difficulty in distinguishing between the Defiant and the Heinkel 113. There was also evidence of a tendency to confuse the Junkers 52/3m and the Savoia-Marchetti 81. From certain points of view the similarity in both of these instances is quite striking. There are, however, many less obvious "pairs" which present difficulties to observers for we do not all notice the same things about an aeroplane. Thus sometimes one spotter can discern no real similarity between two types of aircraft which continually confuse another. For example, the aircraft which continually confuse another. For example, the Hudson and the Messerschmitt 110 have been indicated as a troublesome pair, although without a hint of actual difficulty

in distinguishing between them others would not think of

in distinguishing between them others would not think of bracketing them together for close comparison.

I hope that readers will let me know of their recognition problems as they arise. By drawing upon the almost unlimited illustrative material now available to The Spotter I shall endeavour to show the truly characteristic features of particular arisers to and to clear up any points which appear to be in aircraft and to clear up any points which appear to be in



OFFICIAL TRAINING.—The importance attached to instruction in aircraft recognition at an Initial Training Wing of the R.A.F. is shown by this photograph of the recognition room.

# AIRCRAFT IN THE NEWS-I

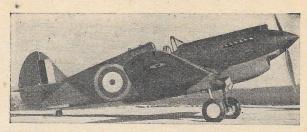
# The Curtiss P.40—The Tomahawk

DEVELOPED from the Curtiss Hawk H.75A single-seat fighters which were flown by the French (those in the R.A.F. are known as Curtiss Mohawks), the newer Curtiss P.40 now being delivered to single-seat fighter squadrons in Great Britain has been officially named the Tomahawk. It is being built for the U.S. Army Air Corps as well under the works designation Curtiss Hawk H.81A.

The Tomahawk powered by the 1.000 has Allican V.1710.

The Tomahawk powered by the 1,000 h.p. Allison V-1710





liquid cooled motor has a top speed of around 330 m.p.h. liquid cooled motor has a top speed of around 330 m.p.h. This is some 30 m.p.h. less than was expected, but the motor is not giving as much power as was hoped. The performance may be increased when the motor gets over its teething troubles, and a new Curtiss P-46, the Kittihawk, developed from the Tomahawk, is on the way. The armament is six machine-guns, four of them in the wings and the other two on top of the motor cowling firing through the airscrew disc through interrupter gear. The undercarriage retracts backwards and the wheels turn through 90 degrees to lie flat in the wing

wards and the wheels turn through 90 degrees to lie flat in the wing.

The original Curtiss Hawk gained fame for its manœuvrability, although it was shown to be not quite up to that of the Hurricane in mock dog-fights. The in-line motor has probably reduced the manœuvrability slightly in the Tomahawk, but it is still superior to the Me 109.

DIMENSIONS.—Span, 30 ft.; length, 25 ft.; height, 10 ft. 8 ins. Performance.—Top speed, 330 m.p.h. at 13,200 ft.
POINTS OF RECOGNITION.—Wings with swept forward trailing edge and almost straight leading edge. Rounded tips. Long deep nose with forward radiator and long bulge underneath fuselage. Rounded tailplane with curved "cut out" for single rudder. Wheels lie flat under wings with slight bulge housing retracted legs. Machine-guns protrude from the wings.

#### CIVIL IDENTIFICATION—I

# The de Havilland D.H.95—The Flamingo



CREAT BRITAIN'S only modern civil transport aeroplane Lis the de Havilland Flamingo 12-18 seat high-wing mono-plane (two 930 h.p. Bristol Perseus XVI motors). The de Havilland Hertfordshire troop-carrier, which has accommoda-tion for 22 fully armed soldiers, differs externally from the

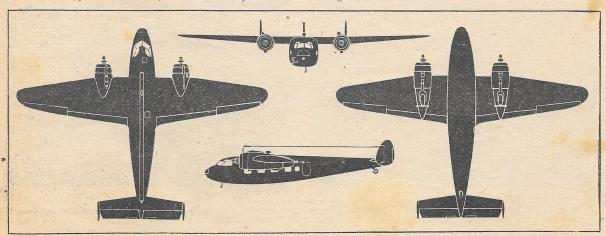
Flamingo only in the portholes to the cabin which replace the more generous windows of the civil machine. Construction is entirely of metal. No armament is carried. The main wheels of the undercarriage retract backwards into the motor nacelles. Although three fins were at one time fitted to the Flamingo, twin fins and rudders are now standard.

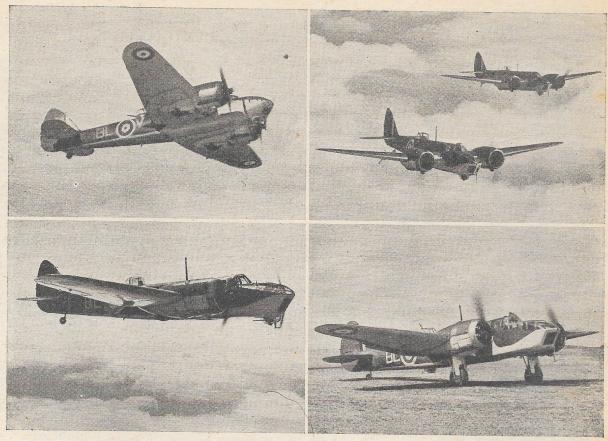
DIMENSIONS.—Span, 70 ft.; length, 51 ft. 10 ins.; height, 12 ft.; wing area, 651 sq. ft.; aspect ratio, 7.51.

WEIGHTS.—Empty, 12,020 lb.; loaded, 17,600 lb.

PERFORMANCE.—Top speed, 239 m.p.h. at 6,500 ft.; range, 1,210 miles at 203 m.p.h.; initial climb, 1,470 ft. per min.; service ceiling, 20,900 ft.

POINTS OF RECOGNITION.—Tapered high wings with pointed tips, and no dihedral. Wide fuselage with rounded nose. Lowslung radial motors. Twin fins and rudders at ends of tailplane. The Flamingo may be confused with the Do 17 or Do 215, but can be distinguished by the wing tips, wide fuselage and curved fins and rudders.





THE NEWEST BLENHEIM.—Four views of the Bristol Blenheim Mk. IV F bomber (two 920 h.p. Bristol Mercury XV motors) which differs from the earlier versions in the addition of a backwards-firing Vickers gun under the nose for tail defence. This gun is aimed by the navigator through a series of mirrors. The top speed of the Blenheim Mk. IV F is 295 m.p.h., the range 1,900 miles.

# AIRCRAFT RECOGNITION

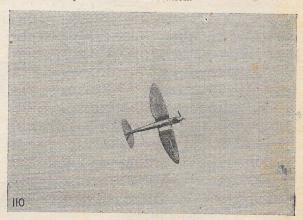
RAPID and certain identification is both an art and a science. It demands a certain amount of natural aptitude, a good memory, great concentration, profound and detailed study and long practice. There is no short cut to proficiency. The only way to success is to know the aeroplane at which one is looking, to know all the little details which go to make up its characteristic outline and to recognise its individual "sit" in the air from any aspect. A proficient observer recognises an aeroplane just as he recognises a person he knows well not from any one detail, though all are assimilated unconsciously, but by an automatic weighing up of its general composition. Familiarity with any particular type means that

its outstanding features blend into one characteristic whole

from whatever viewpoint it is seen.

Yet the details are important. They are the stepping stones to the final result. Constant and painstaking study is the only way to gain the necessary knowledge. But the greatest asset of all is an intense and unflagging enthusiasm for the subject. Fortunately aeronautics in all its branches has an irresistible attraction which gripes agrees the branches has an irresistible attraction which gripes agrees the branches has an irresistible attraction which gripes agrees the branches has an irresistible attraction which gripes agrees the statement of the statemen irresistible attraction which grips anyone who begins to study it and leads to a never ending thirst for more knowledge. In aircraft recognition as in all the other branches of aeronautics one is always learning no matter how immersed one is in the subject already. Hence its fascination.





FOR IDENTIFICATION 1.—Two photographs to give practice in the distant recognition of friendly and enemy aeroplanes. These two problems, the first in the series for THE AEROPLANE SPOTTER, are the 55th of the series which has been a popular feature in THE AEROPLANE for more than a year and will now be continued concurrently in both THE AEROPLANE and THE AEROPLANE SPOTTER. The names of the two aeroplanes illustrated this week, together with notes on their characteristics, will be published with two more photographs next week.

# THE HEARKERS' CLUB

The original Hearkers' Club was formed at Guildford rather more than a year ago by members of the Observer Corps for mutual help in the problems of the identification of British and enemy aeroplanes. The movement has grown to such an extent by spontaneous enthusiasm within the Observer Corps that Hearkers' Clubs have been formed throughout the country and now receive Official support and recognition. THE AEROPLANE SPOTTER will publish the Bulletins of the various Clubs on this page each week. Hon. Secretaries are asked to send their reports direct to the Editor for inclusion. Those wishing to form new Clubs should consult their O.G.O.s. Mr. H. James Lowings, Hon. Organising Secretary, 34, High Street, Guildford, will be glad to answer any problems that may arise about the formation of new Clubs. Although the Hearkers Clubs were founded by and for members of the Observer's Corps non-members who wish to attend meetings should get in touch with the local Secretary.

HEAKKERS' CLUB No. 4 (LIVERPOOL)

Hon, Sec.: S. P. Sugden, 4, Bath Street, Liverpool, 22

A meeting of the Crub was held on Saturday, November 30, at the A.R.P. headquarters, Hood Street, Liverpool. There was an attendance of about 60 Observers from the posts comparising the Club and from Centro.

was an attendance of about 60 Observers from the posts comprising the Club and from Centre.

The meeting was opened by the President, Lieut. Col. E. Tuite Dalton. A talk by Capt. Huntingdon, the Centre Controller, followed, and Captain Peers, of the A.A. School, gave a lecture and exhibition of sound films.

Major Campbell (H2) was elected Chairman in place of Mr. Hutton.

To wind up, the Club held an examination for Third Class Hearkers. The following 29 passed, nine of whom obtained full marks:—

J2.—H. C. Thewlis, H. L. Cowley, H. Singleton, J. Bold, W. L. Else, A. W. Holmes, A. Mowe.

K4.—E. Appleton, J. Leigh, J. Ainscough, W. L. Beck.

J1.—B. Malthouse, N. I. Wood, F. Flatman, J. Scott,

J3.—A. H. Knox, W. D. McCombe, A. Dunsmore, G. H.

Smith.
E3.—W. Twiss, C. F. Albinson, E. Evans, J. Chisholm.
H1.—G. J. Scarratt, G. W. Salt.
H2.—R. S. Nickson, N. H. Bushby.
A.O.G.O.—H. R. Whitty.
Messrs. Thewlis, Cowley, Mowe, Beck, Malthouse, Woods, Knox, Twiss and Albinson were those who gained full marks.
In this connection a point of note is that there are two new Posts in the Club, one of which has been operating for only a few weeks.

a few weeks.

At this meeting, our first, the fact was obvious that we had the enthusiastic support of the Posts and we look forward confidently to a successful Club.

#### HEARKERS' CLUB No. 5 (EVESHAM)

HEARKERS' CLUB No. 5 (EVESHAM)

Hon. Sec.: F. Dobson, Farnham House, Broadway,

Worcestershire

The usual Monthly Meeting was again held at The Co-operative Hall, Evesham, on Sunday, Dec. 15. We were pleased to welcome Mr. C. R. Lakin, our new O.G.O., who was unanimously appointed President of the Club in succession to our Commander Gravener. Commander Gravener has returned to his first love, the Royal Navy, and we wish him all good luck.

to his first love, the Royal Navy, and we wish him all good luck.

Our Guest speaker this month was Mr. H. I. Garlick, Head Controller of the Coventry Centre, ably assisted by Mr. E. T. Claridge, Duty Controller C.C. This lecture was unanimously voted the most interesting so far. Many questions were asked, and even some suggestions given, and there was no doubt that a closer understanding between Post and Centre will result.

Spoon Competition.—W. G. Smith (D3/5) and C. J. Fox (E2/5) again had a tussle here, both members tying with full marks. C. J. Fox took the spoon, as Smith was on handicap. Promotions.—Other members qualifying as Hearkers' Third Class were:—H. O. Roberts (D3/5), L. H. Boyd (E2/5), and W. C. Newbould (D2/5). B. Collenette (D3/5), and Bdr. K. J. W. Lowes (S/L 42511) again passed the test.

HEARKERS' CLUB No. 6 (CROWTHORNE)

K. J. W. Lowes (S/L 42511) again passed the test.

HEARKERS' CLUB No. 6 (CROWTHORNE)

Hon. Sec.: L. M. Leakey, "St. Lauvence," Crowthorne,

Berkshire

A meeting was held at Wellington College on Sunday, Dec. 8,
when 29 Observers attended to hear a talk by Mr. Saville
Sneath on "Mnemonics." The talk was illustrated with photographs and silhouettes and the speaker's usual wit, and was
much enjoyed. A small competition, which we call "Puzzle
Corner," followed—identification of photos and bits of silhouettes. Two films were shown, one of the Junkers 88, and

one or the Heinkel 111 Mk Va. After a break for tea, the meeting concluded with a Grade III test, in which the following qualified: one of the Heinkel 111 Mk Va.

F. W. Bennellick (4.N.2), J. W. Burke (4.N.1), E. T. Gordon (4.N.1), A. C. Hook (4.N.2). Mr. Hook gained full

The following have joined the Hearkers' Club through this

branch:—
Brig.-Gen. L. P. Collins, O.G.O. Group 4, Major H. S. Morris (4.M.3), S. G. Bentley (4.M.3), W. J. Arnold (4.N.3), W. H. Brooks, J. W. Burke and E. T. Gordon of 4.N.1, F. T. Angell, F. W. Bennellick, V. B. Burgoyne, A. C. Hook, H. M. Ifould, H. G. Knee and J. Steer of 4.N.2.

The next meeting will be held at Wellington College on Sunday, Jan. 5, at 14.30 hrs., and Mr. Peter Masefield has promised to speak on "Similarities between British and German Aeroplanes."

# HEARKERS' CLUB No. 7 (Southend)

Hon. Sec.: F. H. McLean, 109, Broadway, Leigh-on-Sea A competition for 3rd class certificates and silver spoon was held at the Civic Cinema, Southend-on-Sea, on Sunday, December 1. Out of 19 entries the following qualified for

A. R. L. Steel (04), 31 (awarded spoon); E. H. McLean (04), 30½; S. S. Sylvester (04), 30; A. C. Reynolds (04), 28.

#### HEARKERS' CLUB No. 9 (KENDAL)

Hon. Sec.: C. E. Hoggarth, "Fairhaven," Kent Lea, Kendal,
Westmorland
A representative meeting of Group 29 was held at Kendal
on Sunday, Dec. 8, and unanimously resolved to form a
Hearkers' Club. Colonel Cowper, O.G.O., Group 29, was
elected President, and Mr. T. A. Edmondson, A.G.O., Group
29, Chairman. Seven posts were represented and the following

29, Chairman. Seven posts were represented and the following Officers elected:—
Hon. Sec., C. E. Hoggarth, Toc 2, 29.
Hon. Treasurer, J. Studholme, Toc C, 29.
Hon. Auditor, W. P. Dobson, X2, 29.
Hon. Attendance Officer, J. A. S. Jamieson, Toc 2, 29.
Hon. Competition Officer, A. T. Gates, Toc 2, 29.
All Hearkers send their greetings to their colleagues in Westmorland and wish the Club every success.

# HEARKERS' CLUB No. 10 (Langport)

HEARKERS' CLUB No. 10 (Langport)

Hon. Sec.: R. T. Hawke-Genn, Durlston Court, Earnshill,
Curry Rivel, Somerset

The first Hearkers' Club in 22 Group met on Dec. 15 in the
presence of the O.G.O., Wing Commander Stewart, M.C.,
A.F.C., two A.G.O.s and the H.O.s and members of Posts L2,
M1, P2, P3, T4, Y1, Y2.

The following officers were elected:—
Chairman, L. Hillard, M1.
Hon. Sec., R. T. Hawke-Genn, T4.
Hon. Treas., Capt. Yeo, H.O., Y2.
Hon. Att. Off, D. J. Bird, Y1, the "Founder."
J. H. Osmond, Y1, Comp. Off.
Mr. K. S. Marsh, H.O., M1, and Commander Strange, H.O.,
P2, very kindly acted as Chairman and Comp. Off., and the
Silver Spoon was won by J. H. Osmond (29) with R. W. Ash
and the Hon. Sec. (28½), second. The next meeting, probably
on Jan. 19 at Glastonbury, will be announced in Forthcoming
Events.

A rather stiff 3rd class Test (29 plan, 2 side) was passed

J. H. Osmond, Y1, R. W. Ash, T4, R. T. Hawke-Genn, T4, A. C. Cook, Y1, A. T. Sims, M1, H. R. Pearce, P3.

## - FORTHCOMING EVENTS -

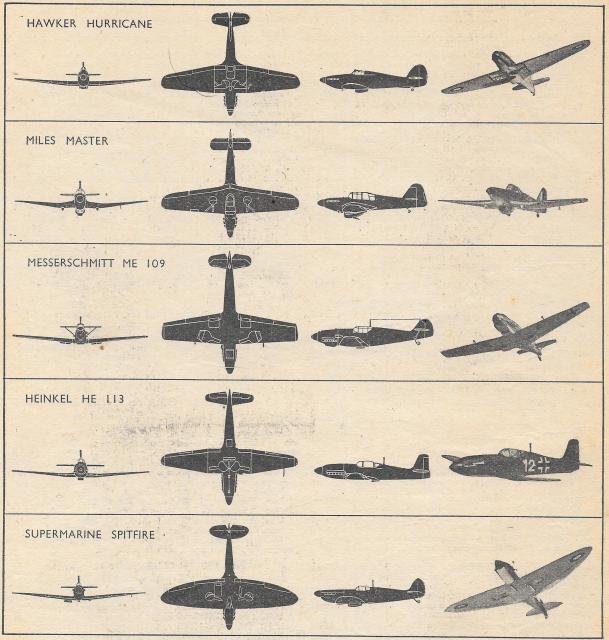
Jan. 5.—Crowthorne.—Hearkers' Club No. 6.—Talk by Peter Masefield on "Similarities Between British and German Aeroplanes," at Wellington College.—

Jan. 12.—Shirley.—Hearkers' Club No. 2.—Talk by

Mr. J. H. Stevens, Jun., on "The Aeroplane as a Family." Mr. R. A. Saville Sneath will talk on "Cloud Forms in Relation to Height" at the Shirley Poppy Hotel.—10.00 hrs.

Jan. 19.—Evesham.—Hearkers' Club No. 5.—Meeting at the Co-operative Hall, Evesham.—10.30 hrs.

# AIRCRAFT COMPARISON—I. SOME SINGLE MOTOR MONOPLANES



SUBJECTS OF CONFUSION—Drawings and photographs which bring out the main points of difference between five of the most common single motor monoplanes, both British and German.

## THE SPOTTER'S GLOSSARY OF AERONAUTICAL TERMS

The first instalment of a comprehensive series to appear weekly in THE AEROPLANE SPOTTER. Those anxious to obtain a complete work on Aeronautical Terms are recommended to "A Glossary of Aeronautical Terms" by Wing Comdr. D. H. Nelson, published by George Newnes, Ltd., price 3/6 and to the official "British Standard Glossary of Aeronautical Terms" published by the British Standards Institution, price 5/-

ABSOLUTE CEILING.—The greatest height which can be reached by an aerodyne or aerostat in Standard Atmosphere. The theoretical height at which the rate of climb is zero.

ACCELEROMETER.—An instrument for measuring accelerations in a definite direction.

ACROBATICS.—A term used errone-ously to describe voluntary evolutions in the air other than those required for normal flying. The proper descrip-tion is AEROBATICS.



ACORN.—A streamlined fitting placed at the intersection of bracing wires to prevent abrasion.

ACTION, RADIUS OF .- Half the range

in still air.

ADJUSTABLE PITCH AIRSCREW.—

An airscrew the angle of the blades of which can be adjusted on the ground. which can be adjusted on the ground.

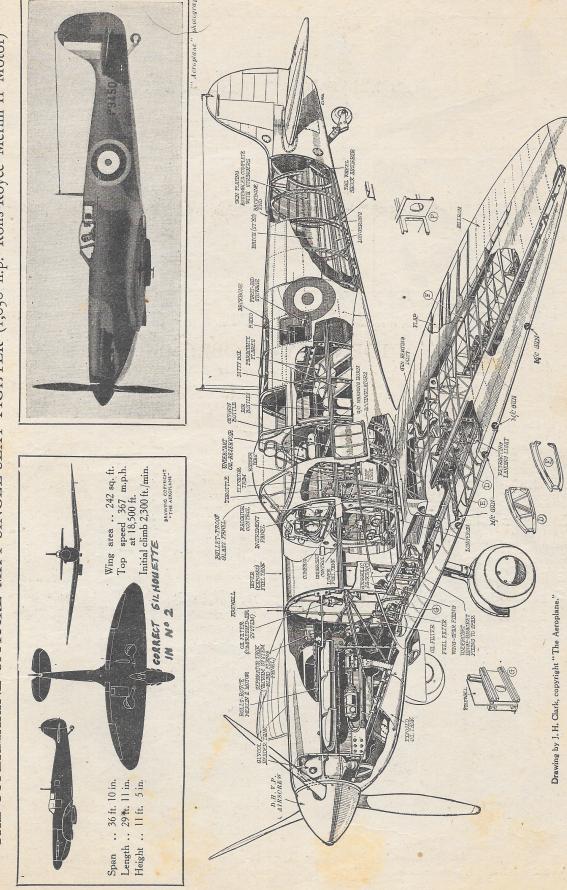
AERIAL.—The wire, fixed or trailing, used for radio reception and transmission from aircraft. Sometimes erroneously used as an adjective such as "Aerial Reconnaissance" which should be "Air Reconnaissance."

AEROBATICS.—Voluntary evolutions performed in the air other than those required for normal flying.

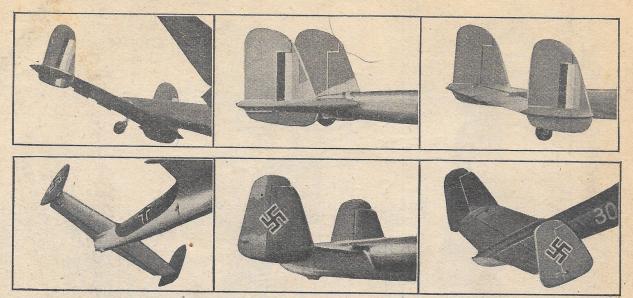
(To be continued)

(To be continued)

THE SUPERMARINE SPITFIRE MK I SINGLE-SEAT FIGHTER (1,030 h.p. Rolls-Royce Merlin II Motor) AEROPLANES IN DETAIL—I



### TAIL COMPARISONS—I



POSSIBLE CONFUSIONS.—The twin fins and rudders of the Handley Page Hampden and Hereford (top) and the Dornier Do 17 and Do 215 (below) are uncomfortably alike, although the aeroplanes themselves differ considerably. The tail plane of the Hampden and Hereford project slightly outboard of the vertical surfaces, whereas that of the Do 17 and Do 215 do not. All tail wheels retract.

# IDENTITY PROBLEMS

Mental Aerobatics-I

OWINGS, Linton, Brock and Stroud were pilots of a OWINGS, Linton, Dicea and a Gladiator.

Defiant, a Hampden, a Fulmar and a Gladiator.

1. All the pilots of Lowings' Squadron swore by their Bristol motors.

2. Linton was forced to land with a bullet in his radiator.
3. Stroud's wing-guns caused an enemy aeroplane to explode in the air.
4. Lowings scored two victories on one fighter potent

4. Lowings scored two victories on one fighter patrol. Who flew what?

# An Aeronautical Crossword

# 13 14 15 16 21 20 24 25 | 26 29 30

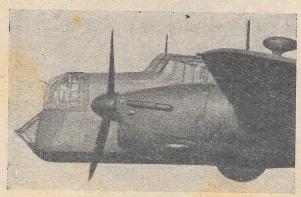
### Clues Across

- Clues Across

  I. A speedy gull—a catcall
  5. Long-range geodesy.
  10. Could tell us about the latest Whitley.
  11. A "coming" engine.
  13. A cardinal point.
  14. No weather for flying.
  15. Do not miss this.
  16. A rod—bond with the old school.
  17. All the sensations of flying, bar flying.
  18. Designates an Italian fighter.
  19. A good example.
  21. Important to keep it in the right place.
  22. Kept going by coupons.
  24. Handles merchandise—if possible.
  28. Seaplanes like them—the best are blue.
  30. An old spirit and an older order.
  31. Makes pilots rasher.
  32. Describes the fuselage of the Beaufort, forward.

#### Clues Down

- 2. Flexible.
- Flexible.
   Beat Napoleon—will beat Hitler.
   The sun sets in the land of the whirlwinds.
   Whether single or twin it stings.
   It's useful to count them at night.
   Sunderland's underparts, reversed.
   One half of a game—either beginning or end.
   Sending aircraft to Britain.
   Part of the metropolis.
   We've no time for them now.
   Motorists' Mecca.
   Prefix to an Italian aircraft with a Shakespearean flavour.
   Difficult to turn a phase without it.
   The better half of leave.
   Sets things moving.





WHERE AND WHAT?—Detailed knowledge of aeroplanes is of great advantage to rapid recognition at a distance. These two photographs are of portions of well-known aeroplanes from odd angles or close positions. What they are will be told with another photograph of the same type next week.