JOINT SERVICES

RECOGNITION

Journal

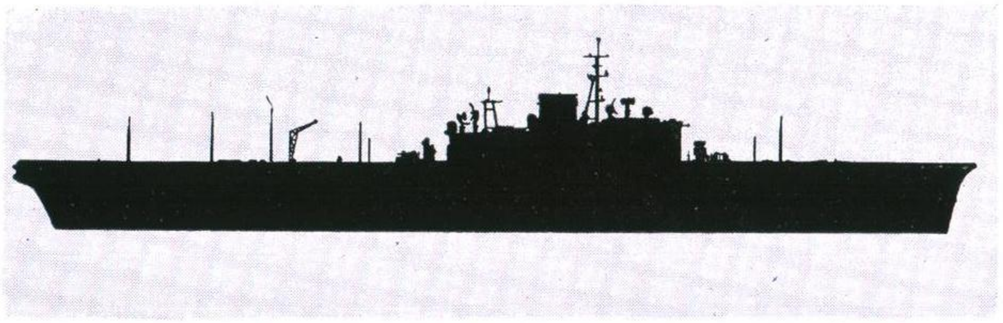


Vol. 7 March/April 1952 No. 2

H.M.S. EAGLE

Some further views of the new British Fleet Carrier H.M.S. Eagle taken in rough weather during her speed trials. Showing main characteristics of earlier British Fleet Carriers she has nevertheless her own distinguishing features notably in the "block-built island" which is larger than those of her predecessors, and the less broken outline of the flight deck when seen from the air. Note also, in the silhouette view—which is, incidentally, only visually correct—the pouting "lip" at the bow and the prominent overhang at the stern.





MARCH/APRIL 1952 **Vol. 7 No. 2.**

JOINT SERVICES

RECOGNITION JOURNAL

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NEPTUNE NICETIES

THE arrival of the first two P2V-5 Neptunes in Great Britain will provide observers with opportunities to translate their synthetic experiences of this aeroplane into practice and to see in " live " form what has previously been only an interesting shape on paper—or a model hanging in the recognition room.

So far there have been five basic " editions " of the Neptune. They are numbered from P2V-1 to -5 with numerous supplementary ones added to each such designation. There are in fact over a dozen variants of the Neptune. However there is neither time, space nor need for us to consider them all since they are basically the same aeroplane and we are confining our illustrations here to the three main ones.

The Neptune is a large twin-engined shoulder-wing monoplane dominated by an exaggerated fin and rudder and a long-span narrow-cord straight-tapered wing. Its two large radial engines hang from the wings and extend far forward. The models which we show here each have mid-upper turrets.

Getting down to niceties ; the P2V-2 Neptune has the more common " beaky " nose, an assortment of small bulges along its belly, and a long, narrow " coxcomb " on the fuselage just behind the cockpit. In this view its wing-tips are unadorned by tanks though it may sometimes carry them.

The P2V-4 Neptune has exchanged the smaller bulges on the belly for one large one which is placed well forward. The coxcomb fairing behind the cockpit is missing and the wing sports two long shapely tip adornments containing fuel and other equipment.

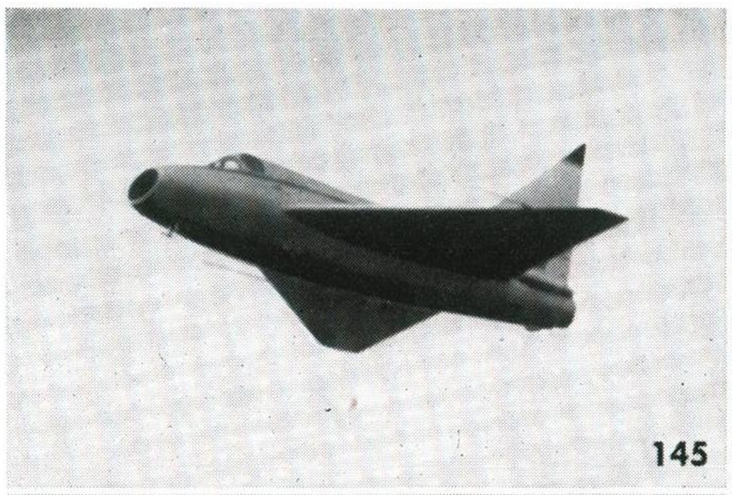
The P2V-5 has exchanged the " beaky " nose for a " snub " one and a pair of guns emerge from the " blister " at the tip of its nose. Like the P2V-4 it carries one large bulge on the belly. On the wing the slender cigar-shaped tip-tanks are replaced by more rotund articles which carry vertical and lateral fins : they contain fuel and equipment. The radial engines of the P2V-5 are of the compound type and the eagle-eyed may discern the changes which have been made in the engine-cowling details. Adjustments have also been made to the cockpit shape.

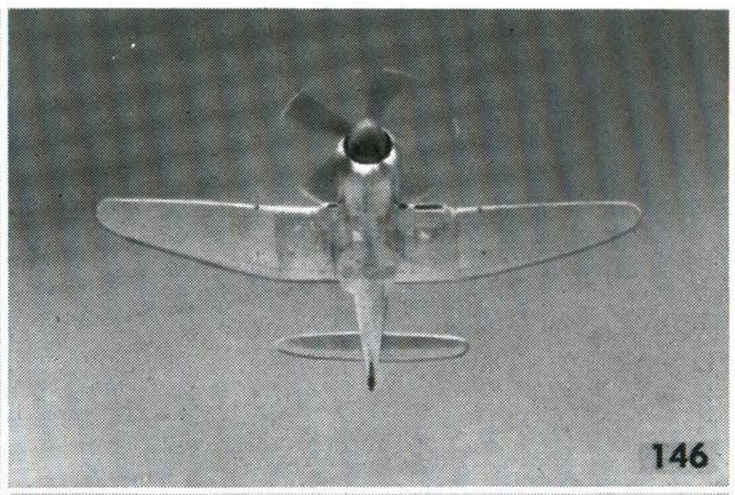
More P2V-5 Neptunes are expected by Coastal Command of the Royal Air Force and it will not be long before the name " Neptune " becomes a common sight on its way across plotting tables in Great Britain.

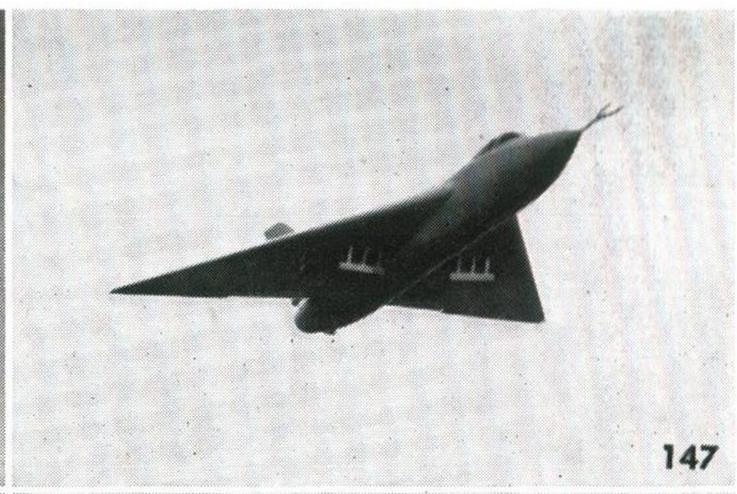




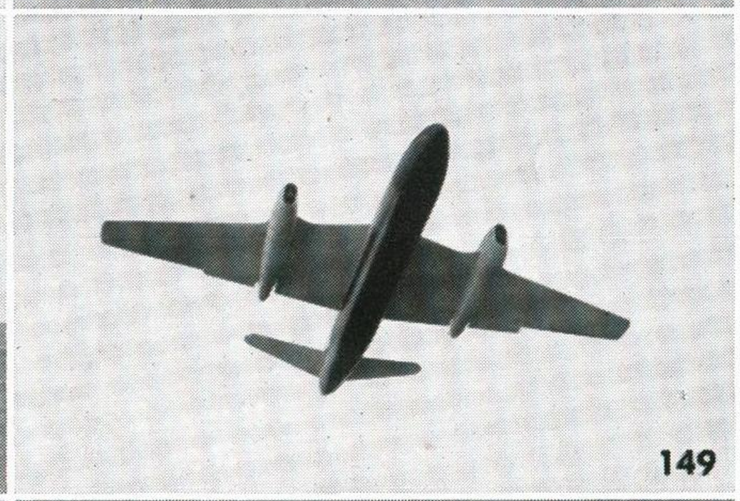


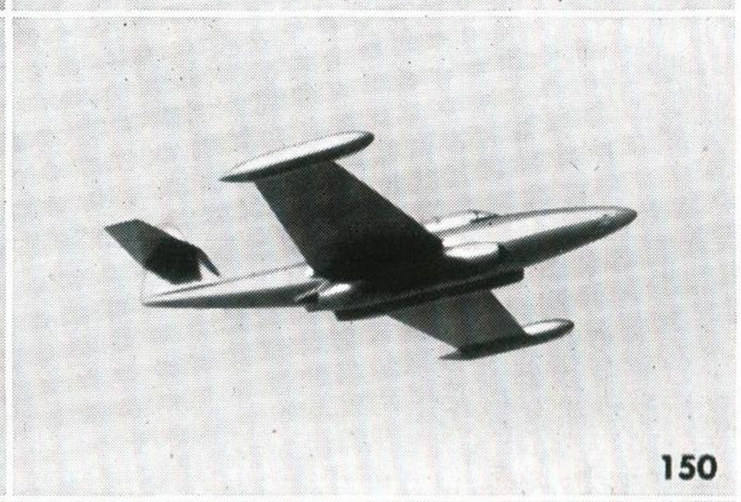

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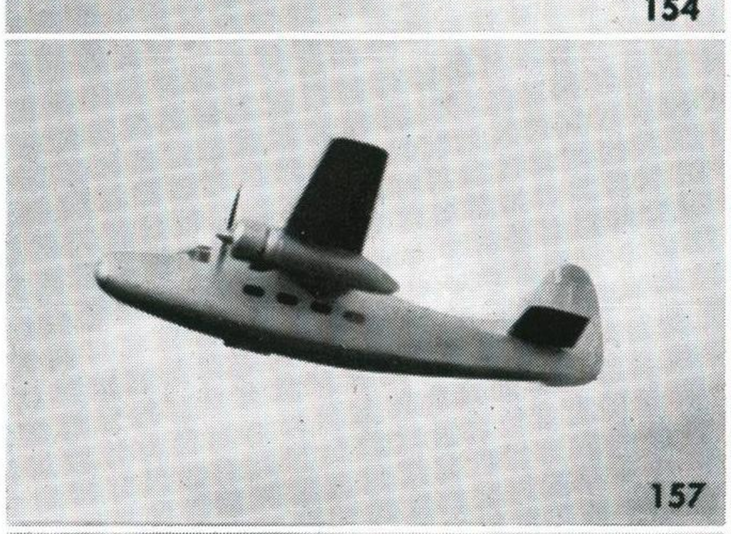

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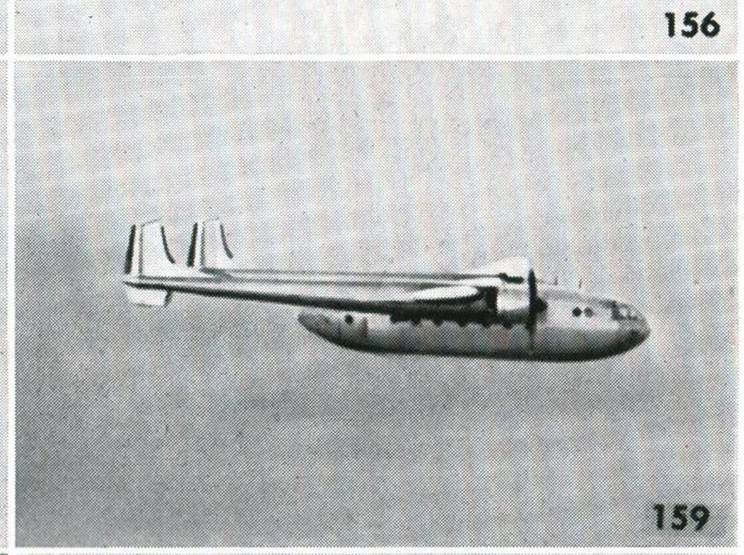

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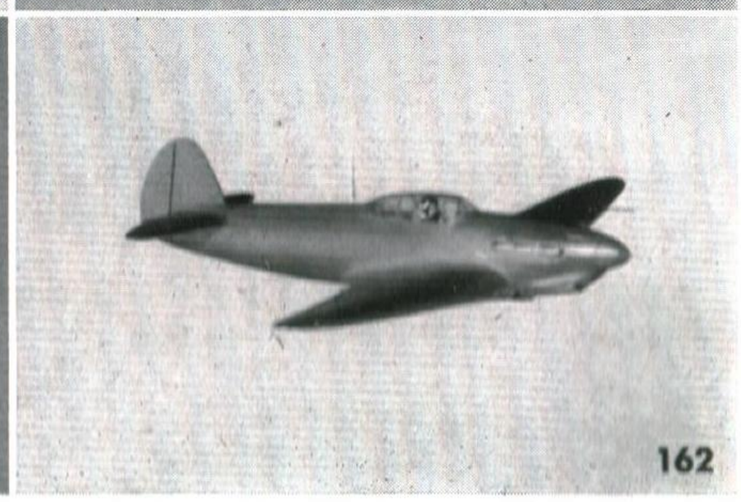

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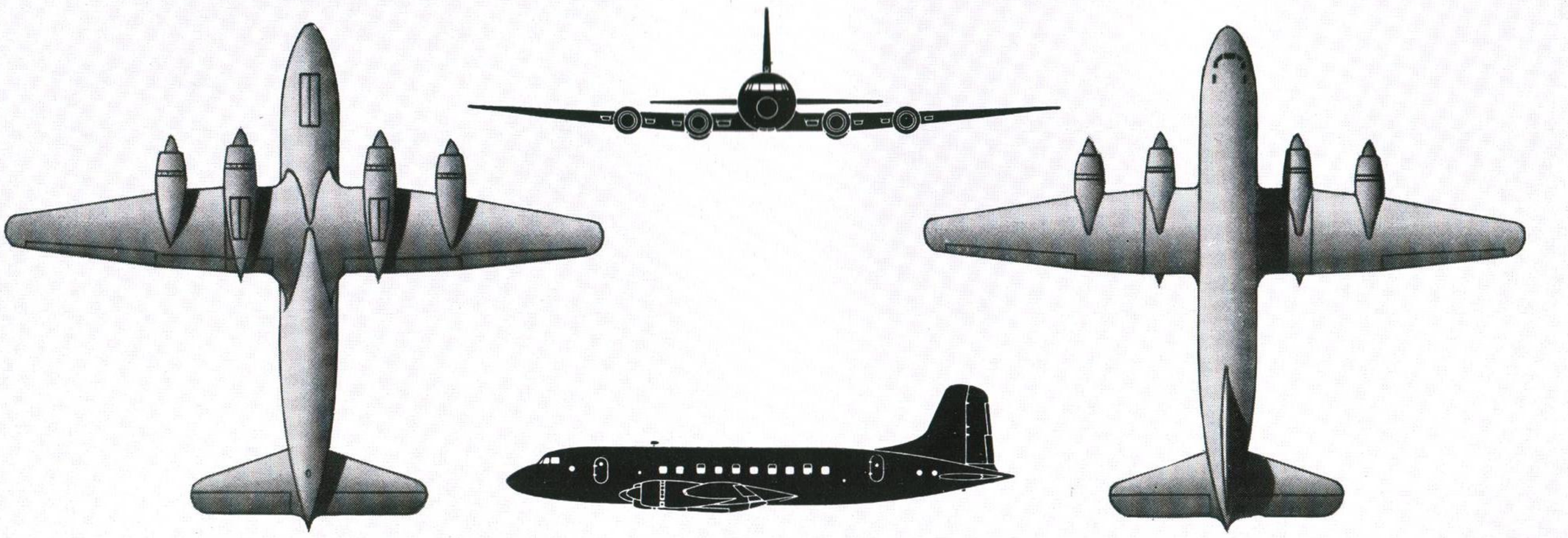

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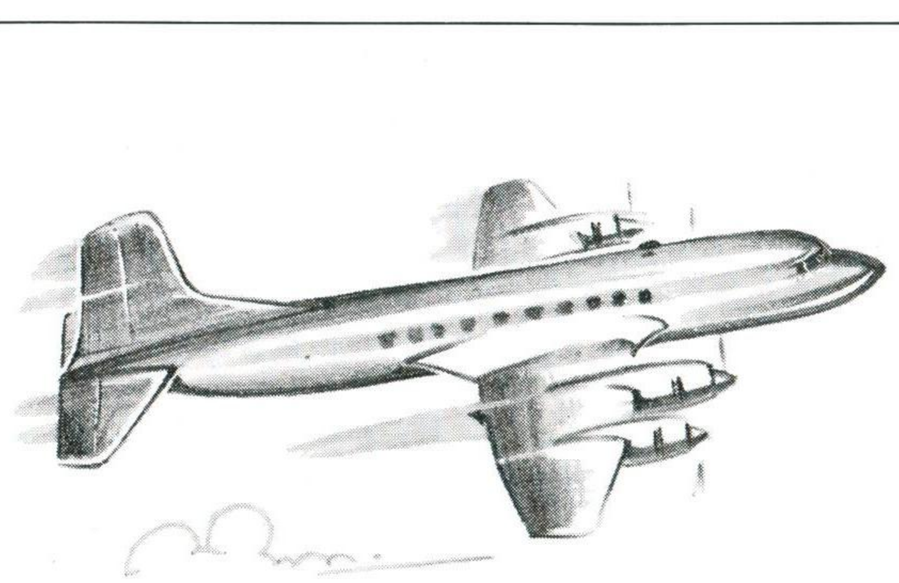


Character Study No. 24—HANDLEY PAGE HERMES

THE HERMES, let us face it, is not a machine of outstanding individuality—she literally does not stand out especially amongst others of her class, age and figure. She is a long, plump, but graceful lady with a steady look but rather nondescript features.

The fuselage is a long bulky structure with parallel top and bottom lines, pinched in at nose and stern from every view. The nose is a prim, pointed, and rather pert feature with the actual point rather higher and longer than most of her kind. The fuselage attains full girth just ahead of the wings and maintains it to well aft of the cabin windows, where from the side it gracefully tapers to a fine needle-point ; and in plan it tapers more quickly to a fatter needle-point. Fin and rudder have a rather uncomfortable look as if they were in fear of slipping off the pillion. This is caused by the sharply curved extended fin and the top of the fin and rudder combine which—although a flattish curve—falls downwards and rearwards overall. The tailplane is a big bold affair with leading-edge taper, rounded tips and straight trailing-edge.

. . . let us face it, is not a machine of outstanding individuality . . .



The wings, set low, are very thick rooted, and have slight dihedral—optically exaggerated by the lower surface dihedral on the outer panels. In plan there is considerable broken—or rather bent—taper to the blunt-rounded tips. There is noticeable filleting at the roots.



The four engines look rather small but very trim as they jut out ahead, very slightly staggered, with neat curve-fronted cowlings. The nacelles make slight bulges on top of the wings and deep bulges below—the two inboard nacelles just projecting behind the trailing edge.

The Hermes, now a tricycle type, first flew in 1948 and is in service with B.O.A.C.

The principal figures are :—

Span : 113 ft. *Length :* 96 ft. 10 ins.

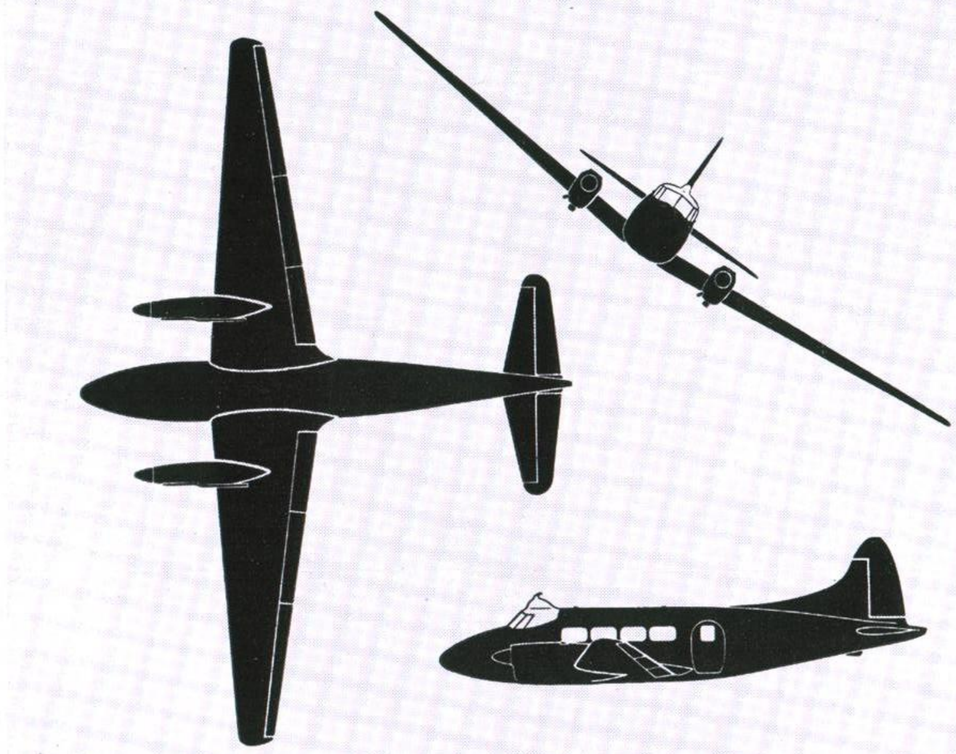
Engines : 4 BRISTOL HERCULES RADIALS.

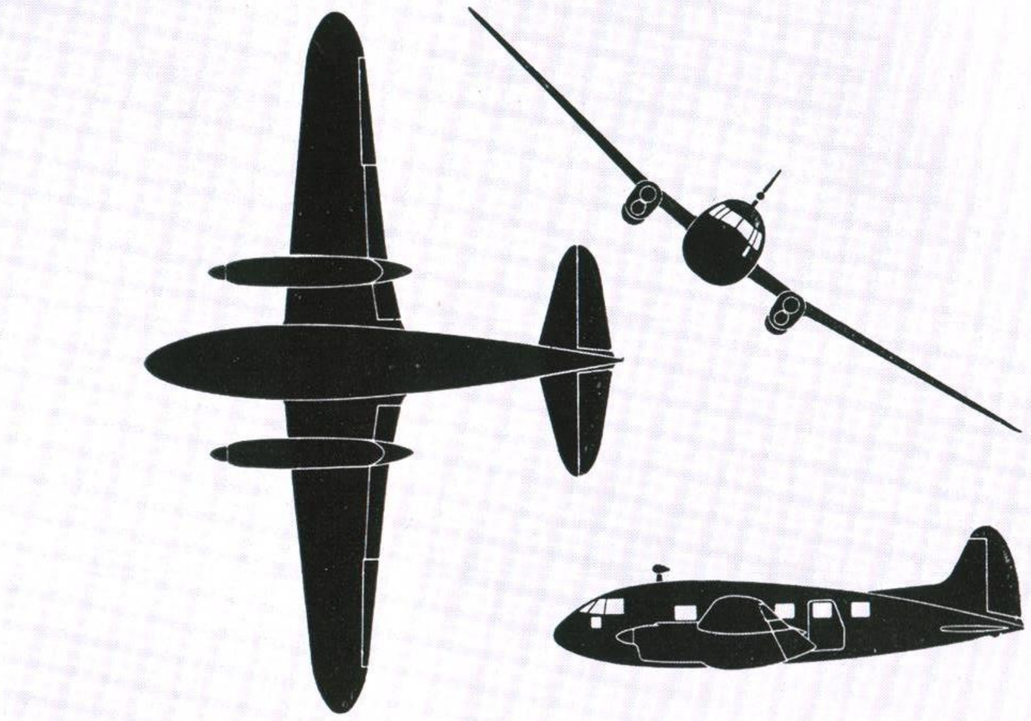
Maker : HANDLEY PAGE.

Function : CIVIL AIRLINER.

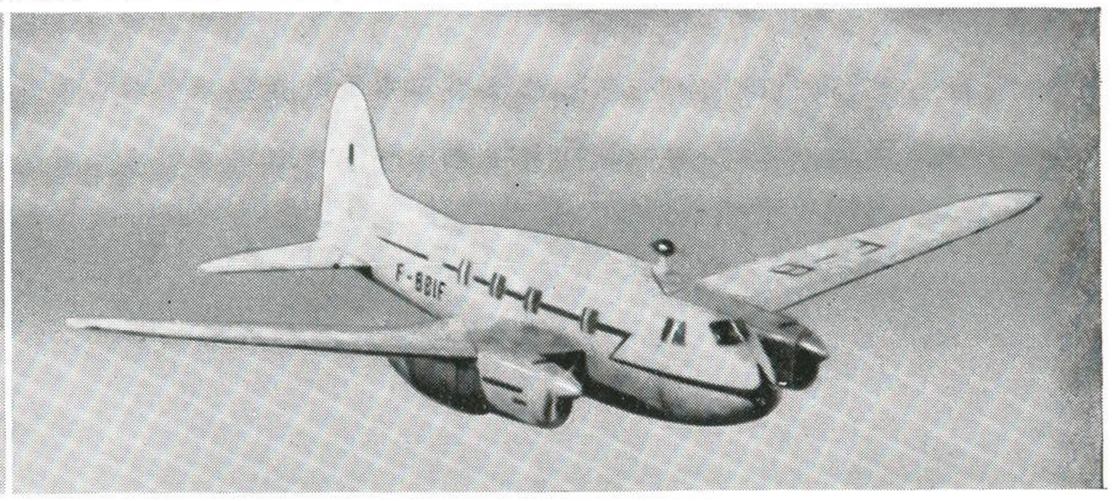
C. H. G-S.

DOVE —— and —— CORSE









BRITISH CIVIL TRANSPORT

Engines: 2 D.H. Gipsy Queen in-line. Span: 57 ft. Length: 39 ft. 4 ins.

Recognition Features:

Wings: low-set, moderate dihedral, narrow, equi-straight taper, small blunt tips.

Engines: mid-set, slender pointed nacelles protruding forward of wing.

Fuselage: pointed nose, tapering aft to small tail-cone.

Tailplane: low-set, narrow, equi-straight taper, small tips.

Fin and Rudder: curve-pointed de Havilland type with curved dorsal fairing to fuselage, set slightly forward of tail-cone.

Detail: stepped-up cockpit canopy surmounted by D/F blister.

FRENCH CIVIL TRANSPORT

Engines: 2 Renault inverted-Vee. Span: 59 ft. 2 ins. Length: 40 ft. 5 ins.

Recognition Features:

Wings: mid-set, moderate dihedral from engine nacelles, straight taper, more marked between nacelles and fuselage on trailing edge, pointed tips.

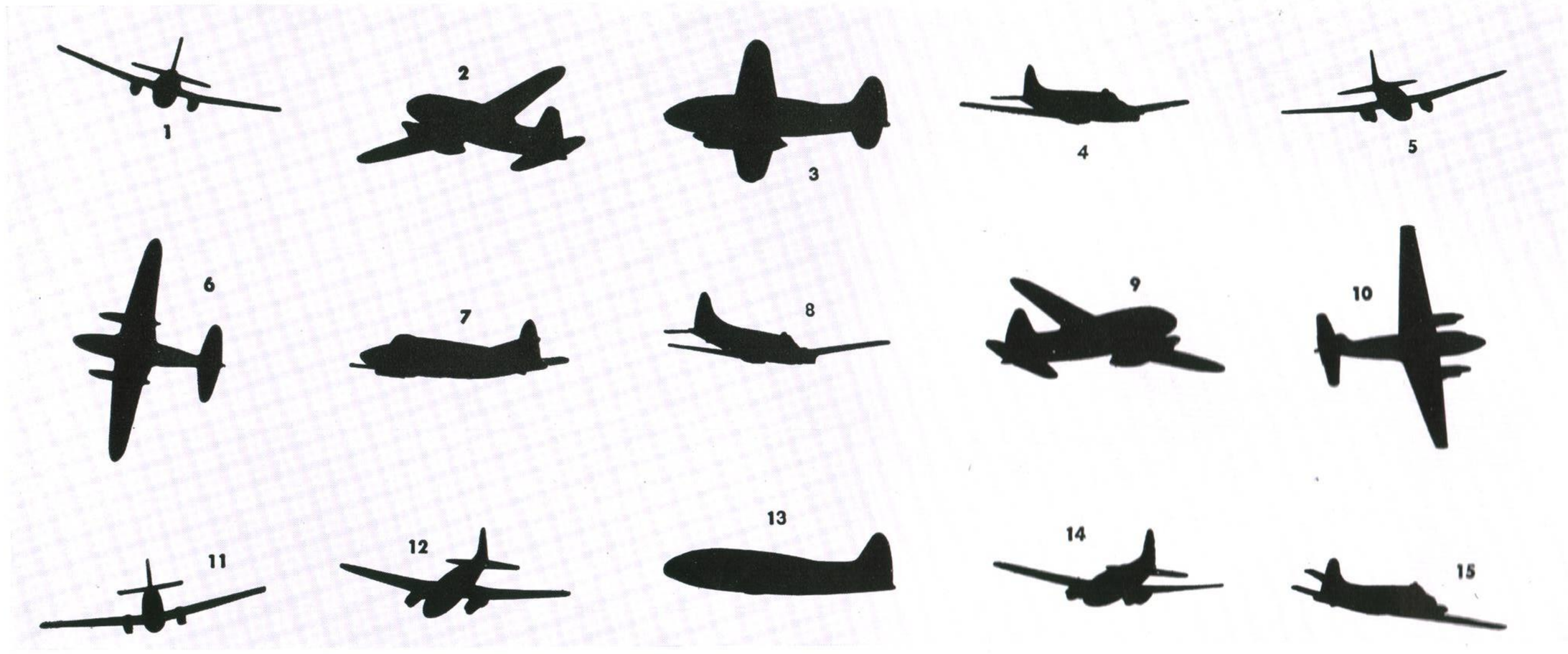
Engines: underslung, slender pointed nacelles protruding mostly fore and slightly aft of wing, bulge for undercarriage.

Fuselage: "tadpole" shape.

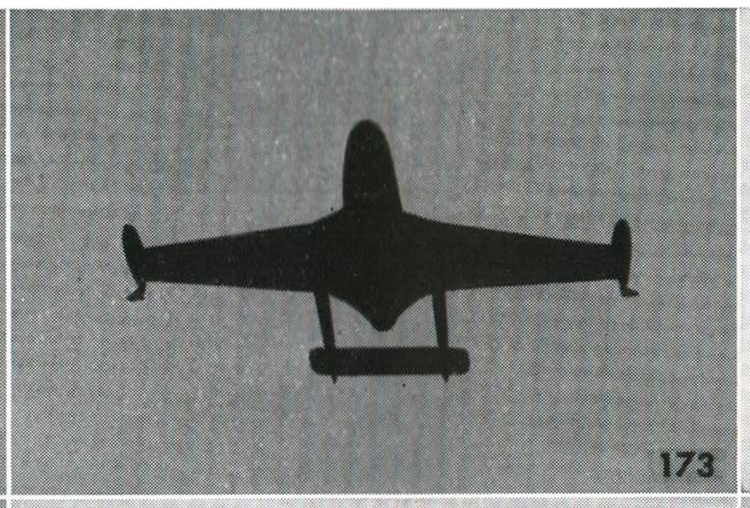
Tailplane: low-set, straight taper, pointed tips.

Fin and Rudder: straight tapered leading edge, curved trailing edge forming angle with fuselage baseline, pointed tip, straight dorsal fairing.

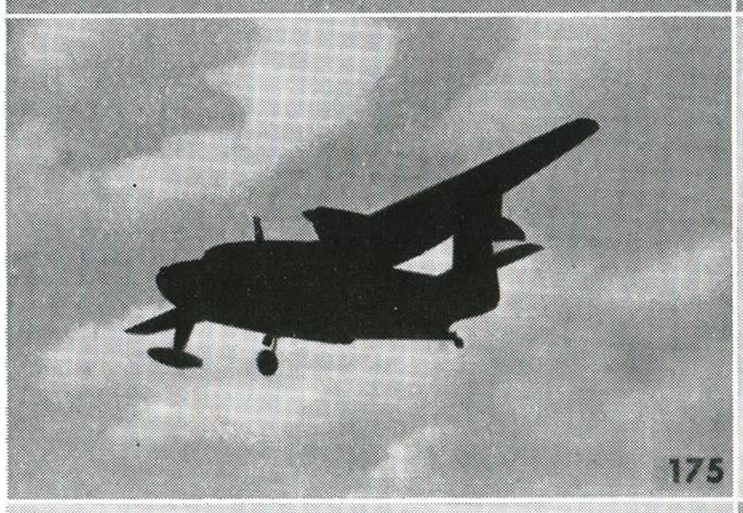
We present two "twin-type" light transports, which may at first glance look very much alike. They are very different however. With the aid of the known information identify each view below and check your answers with the solutions shown on the rear cover.

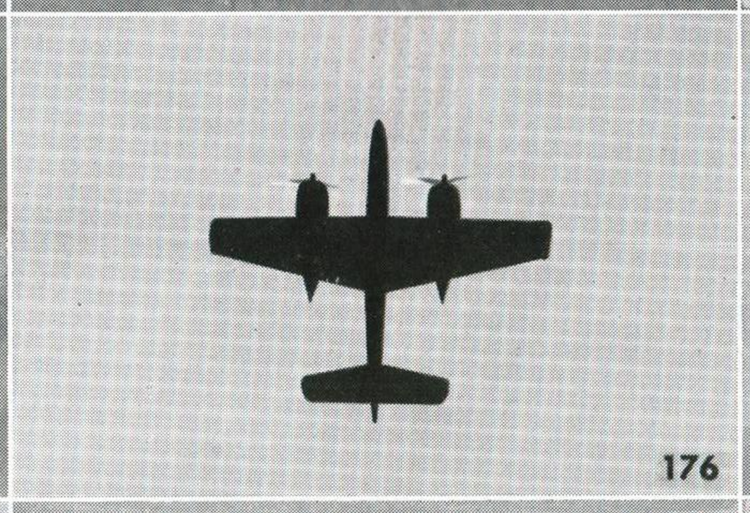


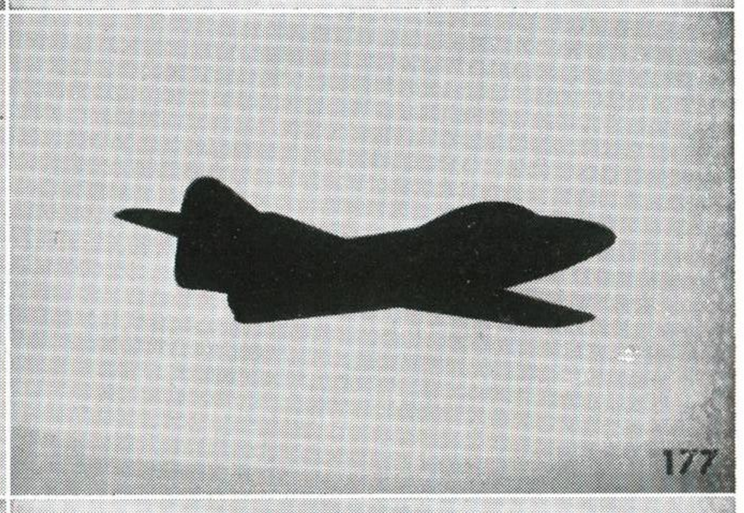

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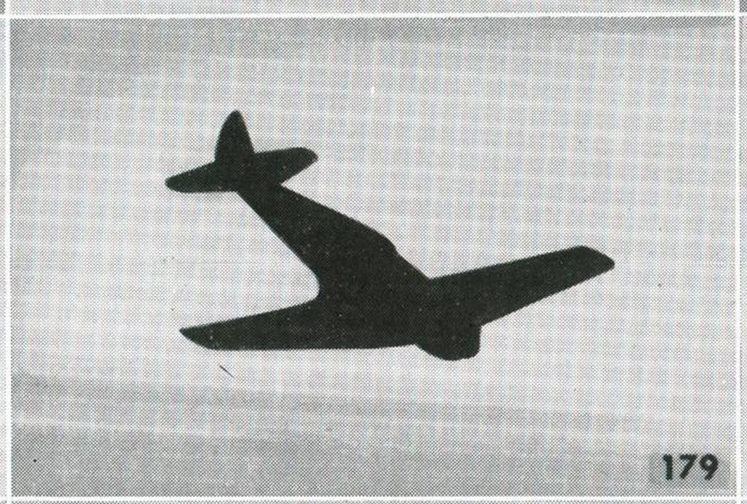

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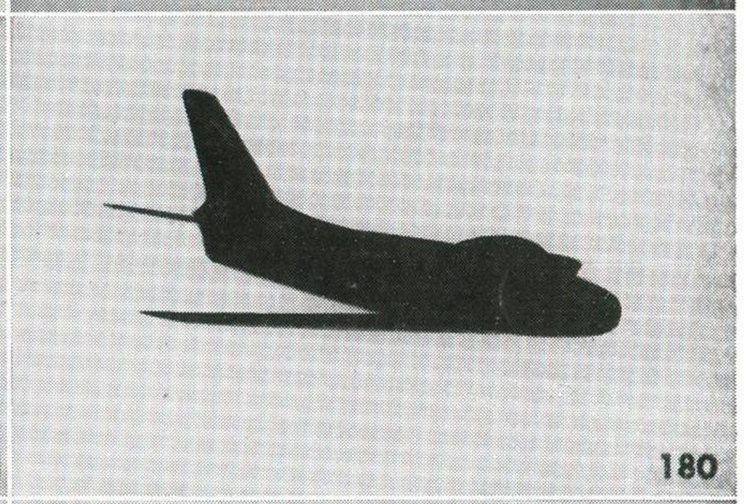

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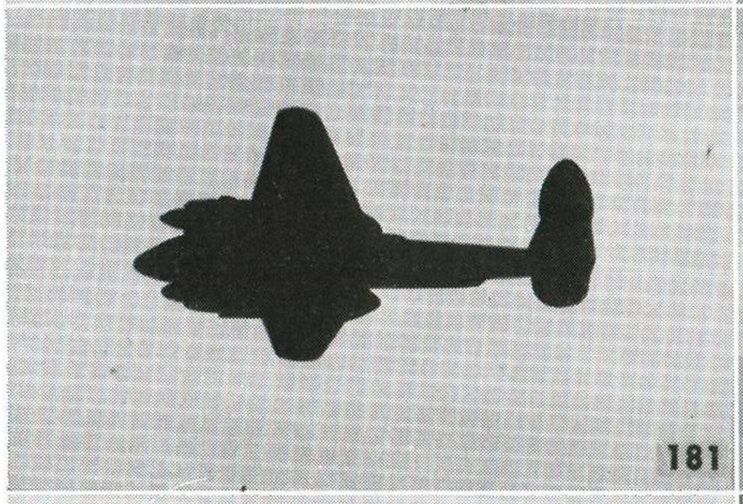

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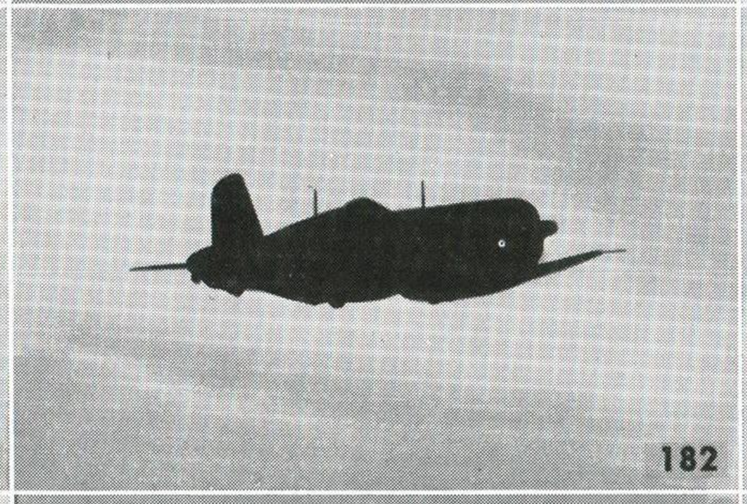

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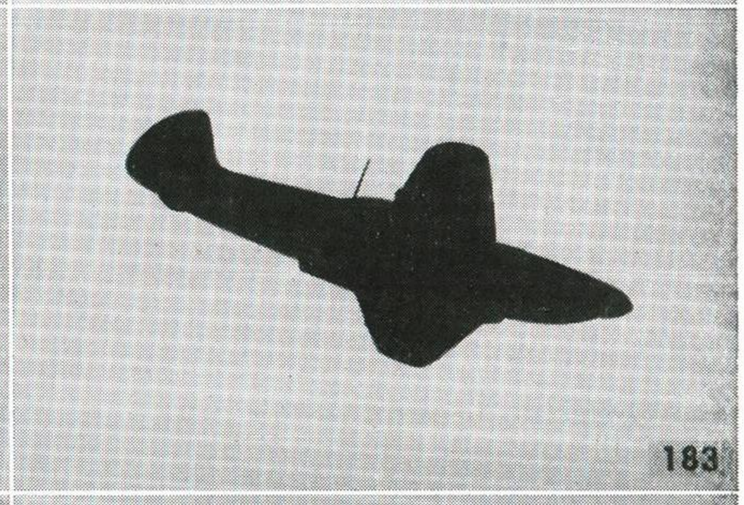

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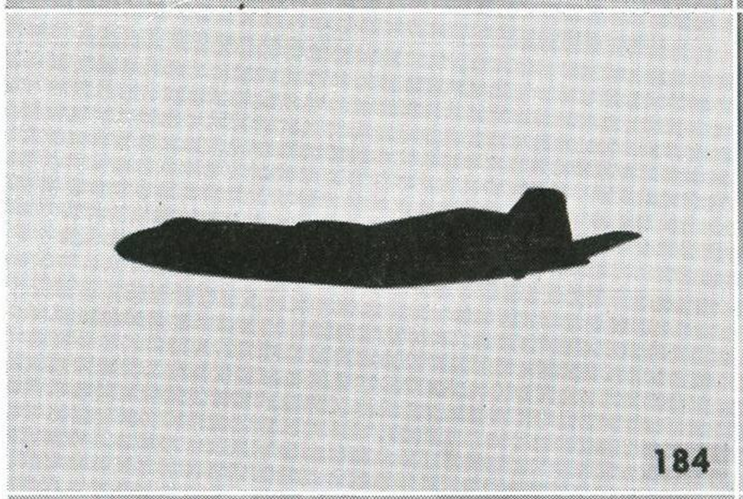

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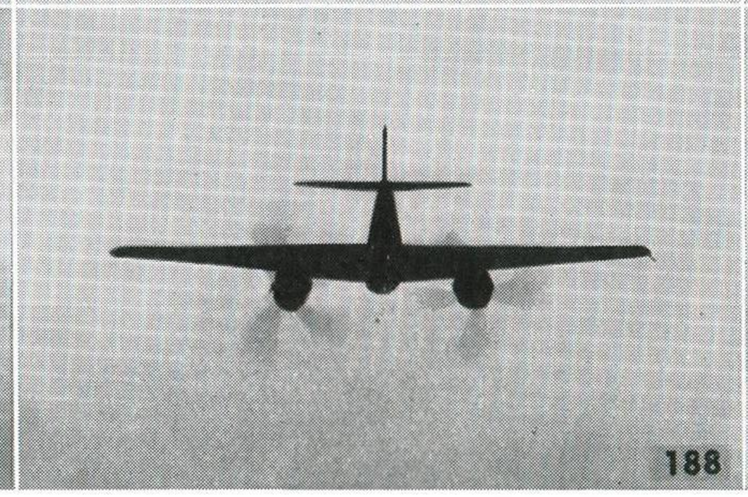

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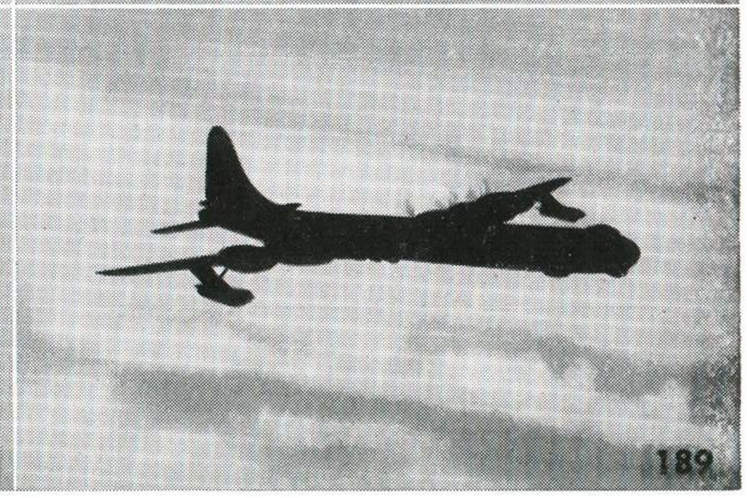

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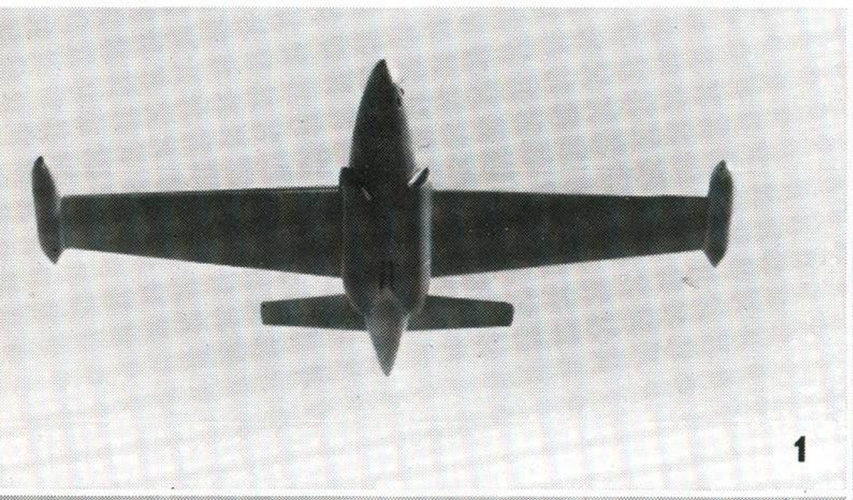

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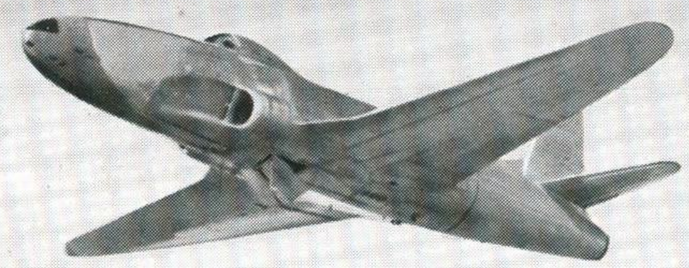

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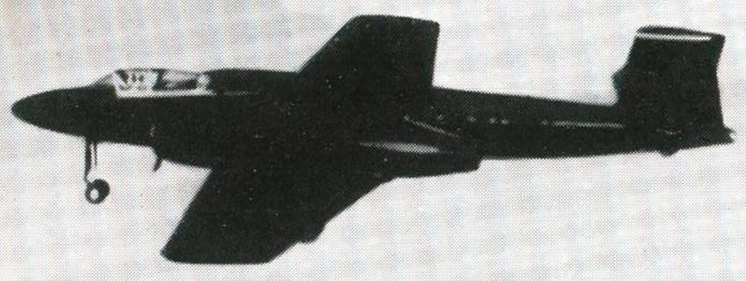

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'SINGLE-JET' TYPE TUTOR

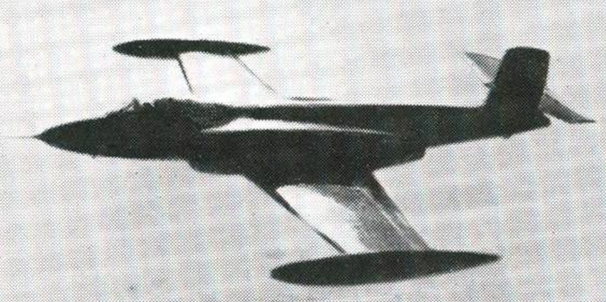
(Including some twin-jet types which generally appear as "singles"). With the aid of the three-view silhouette key following, deduce the identity of the aircraft in the photographs and sillographs on these two pages and list your results before checking with solutions on rear cover. Instructors can improve the scope of the training device by preparing additional sheets of illustrations of different kinds for deduction by students.


1


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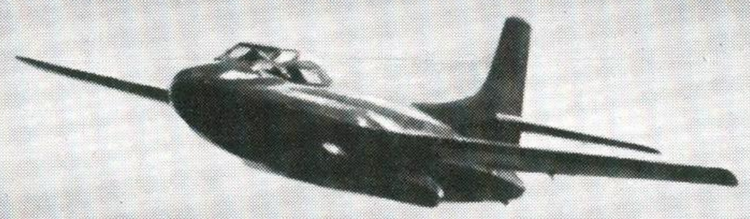

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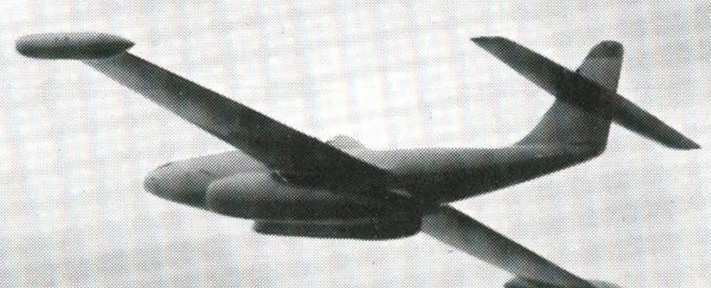

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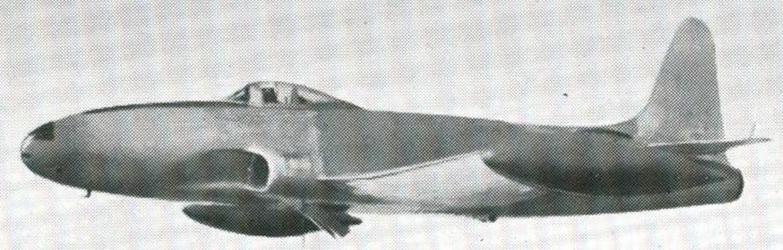

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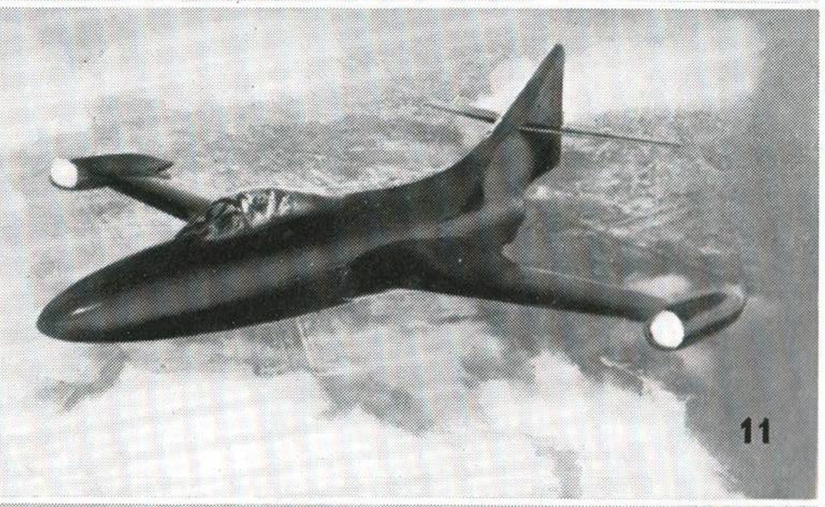

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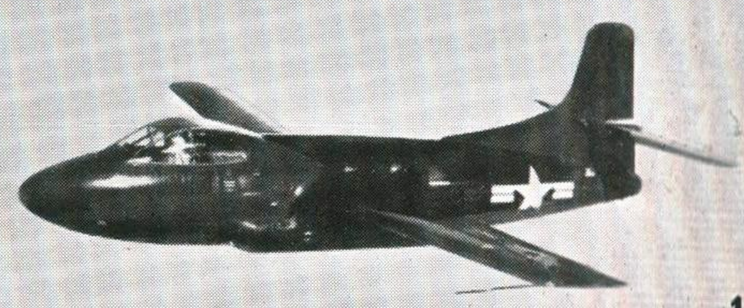

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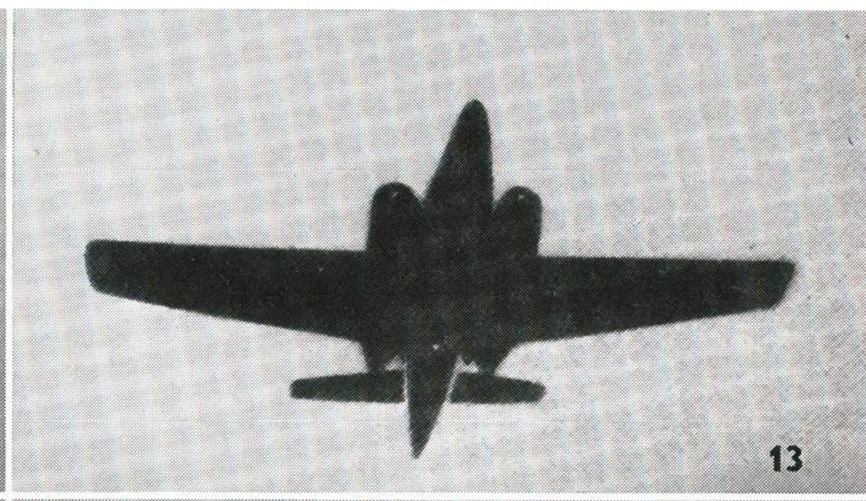

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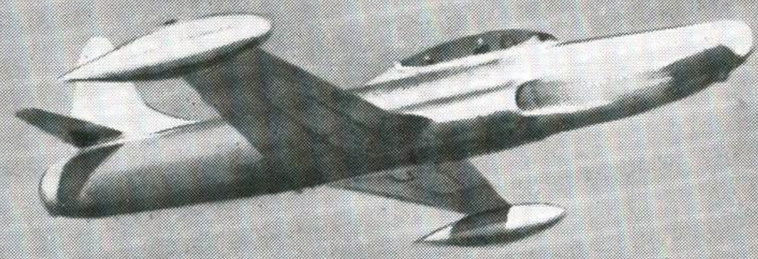

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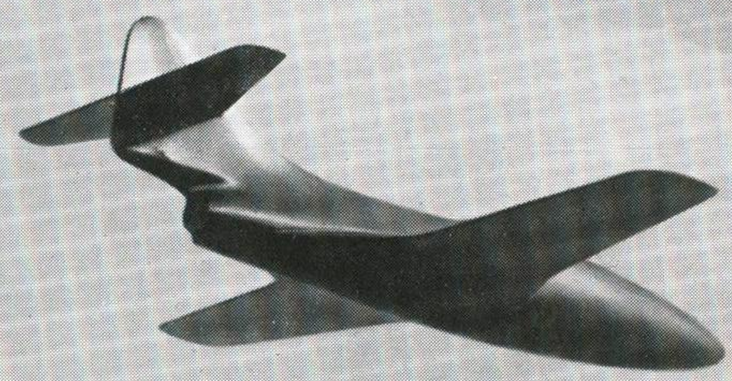

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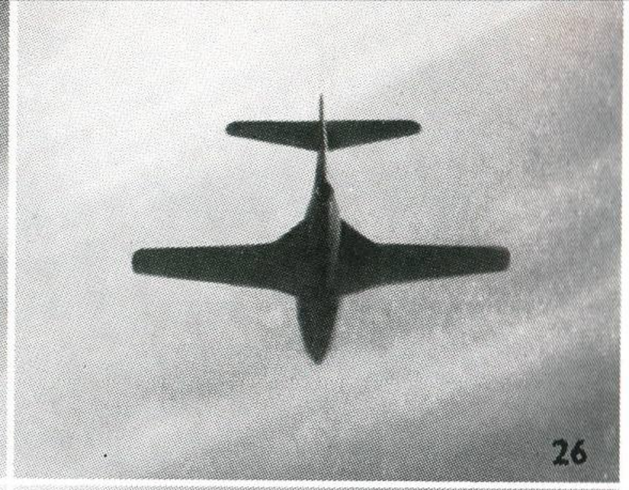

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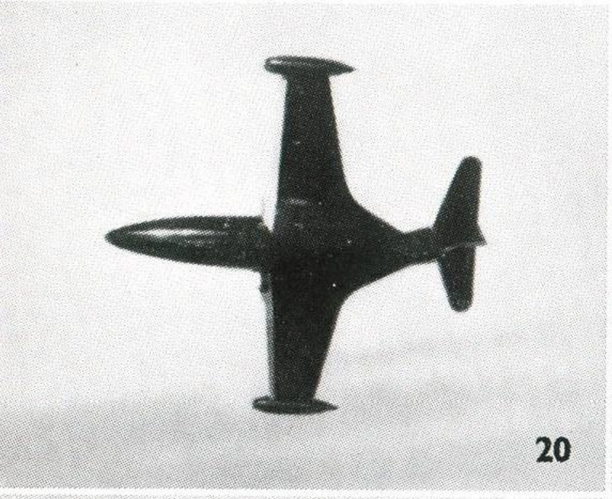

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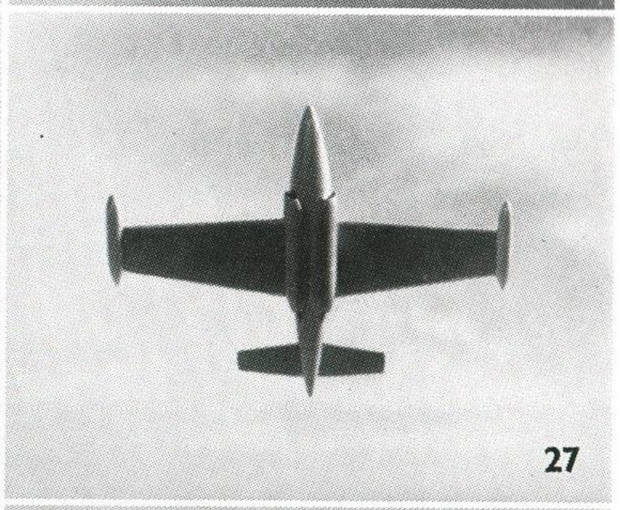

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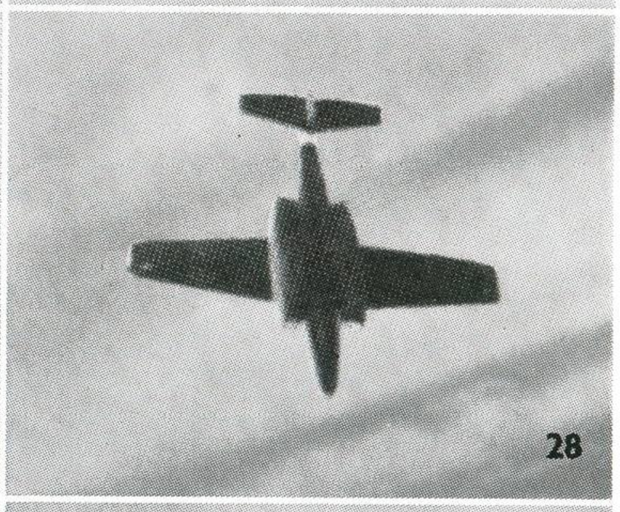

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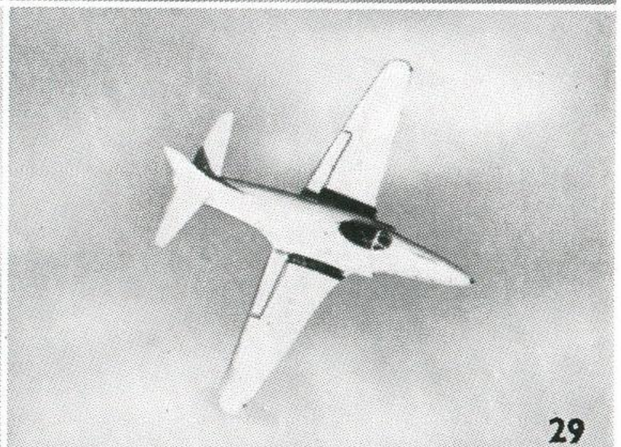

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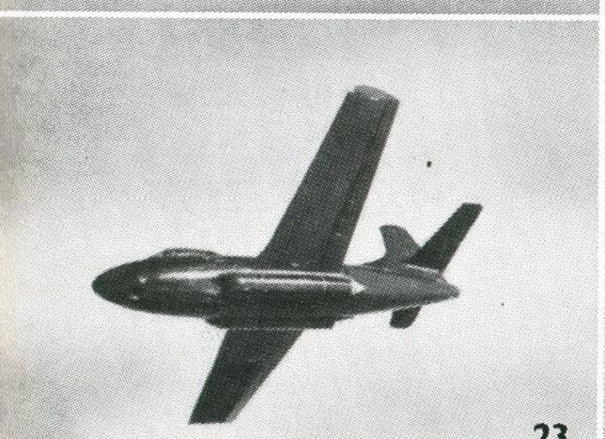

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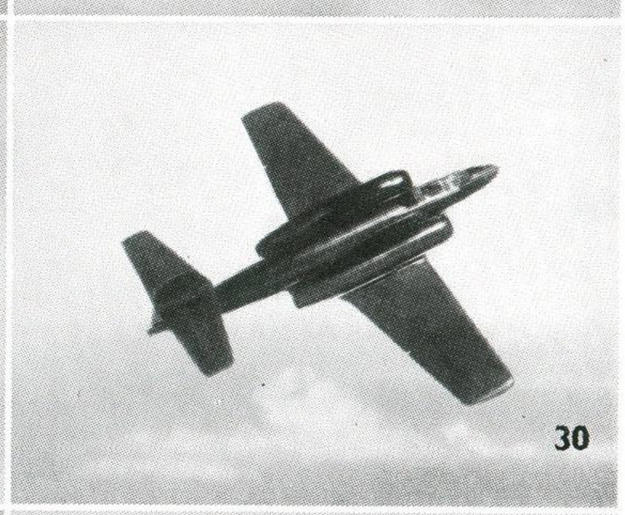

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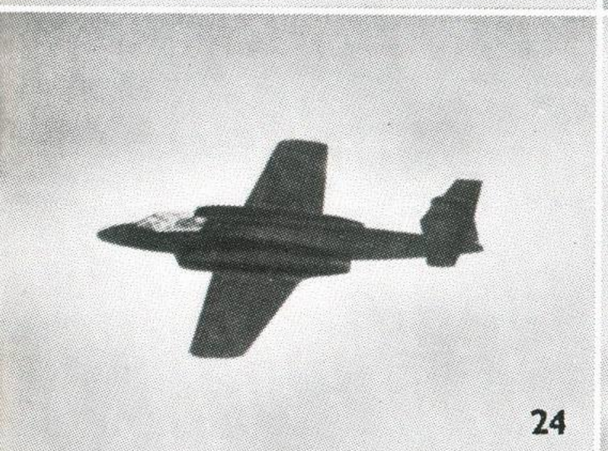

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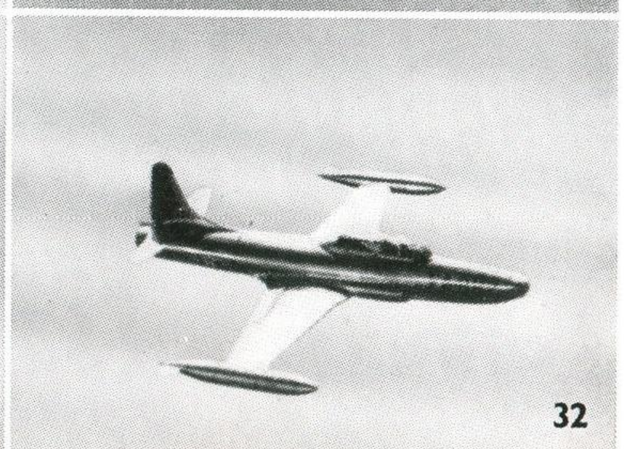

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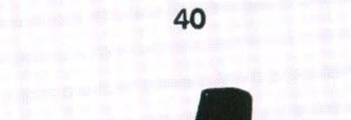
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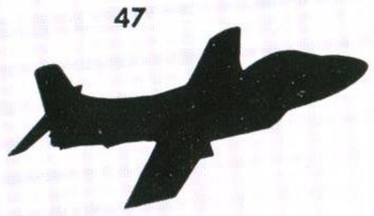
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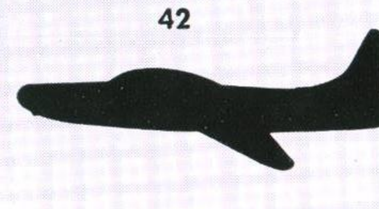
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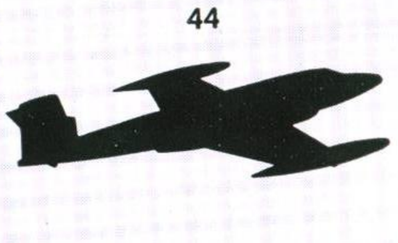
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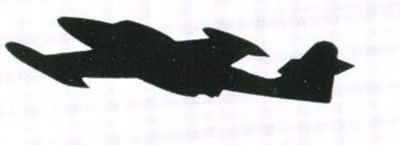
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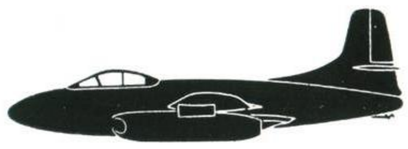
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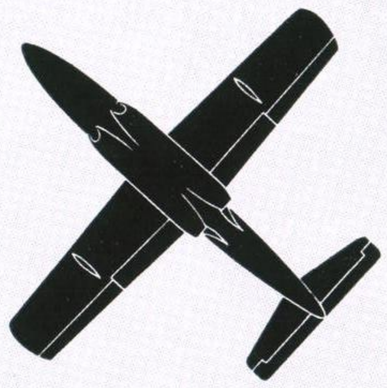
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52

KEY SILHOUETTES FOR 'SINGLE-JET' TYPE TUTOR



SKYKNIGHT
(F3D)

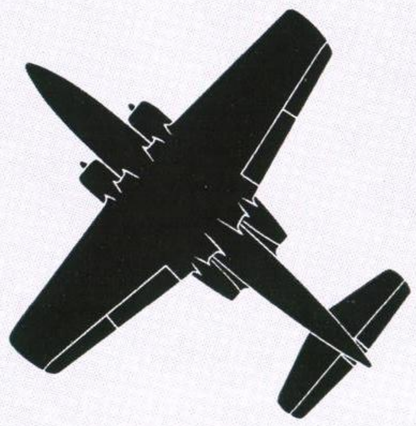




Span : 50 ft. (approx.)



CANUCK
(CF-100)

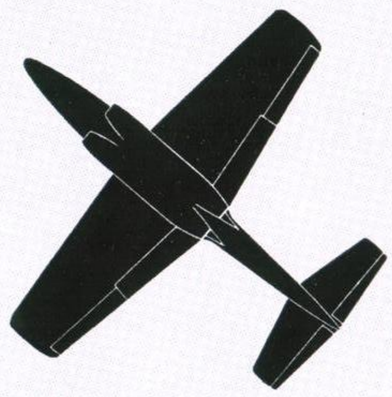




Span : 52 ft.

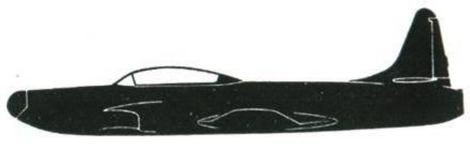


SCORPION
(F-89)

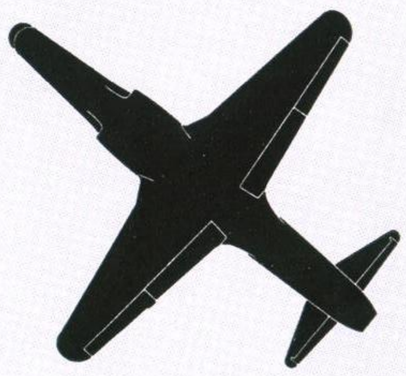




Span : 56 ft. 2 ins.



STARFIRE
(F-94)





Span : 38 ft. 10 ins.



SHOOTING STAR
(F-80)

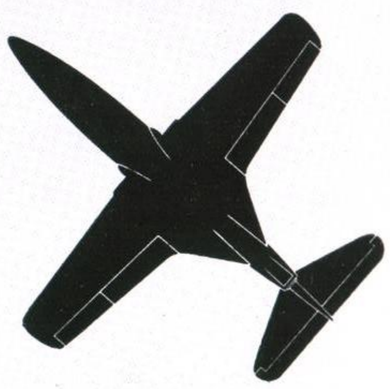




Span : 38 ft. 10 ins.



PANTHER
(F9F)





Span : 38 ft.

TANK SYNOPSIS

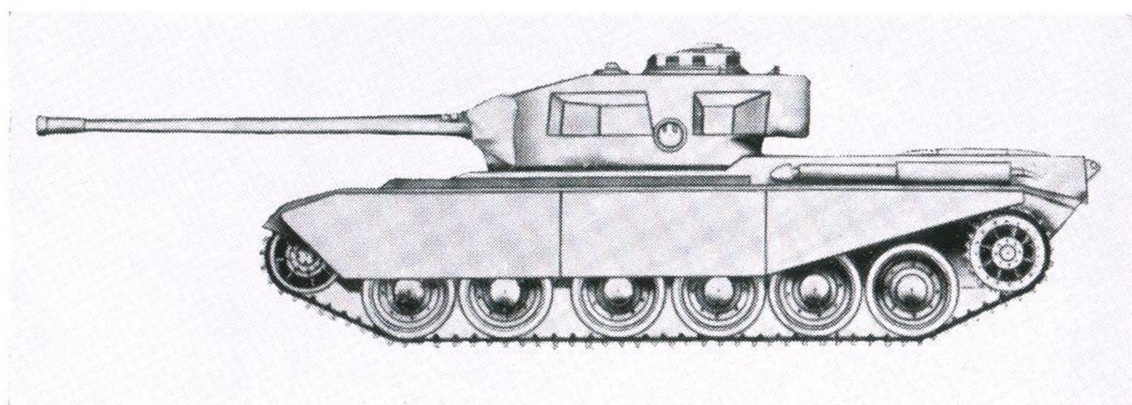
—by C. H. GIBBS-SMITH—

THESE brief recognition notes have been written to cover fifteen of the most important armoured fighting vehicles in use by the World Powers today. The notes have been reduced to essentials and the tone drawings have purposely been made visually correct without attempting intricate technical detail; they are drawn approximately to a common scale. The photographs have been chosen, where possible, to give the best single tank view; that is to say a three-quarter front view from slightly above ground level to reveal both structure and proportions. These pages can be removed for use as a reference guide and we shall publish further illustrations from time to time which can be used in conjunction with it.

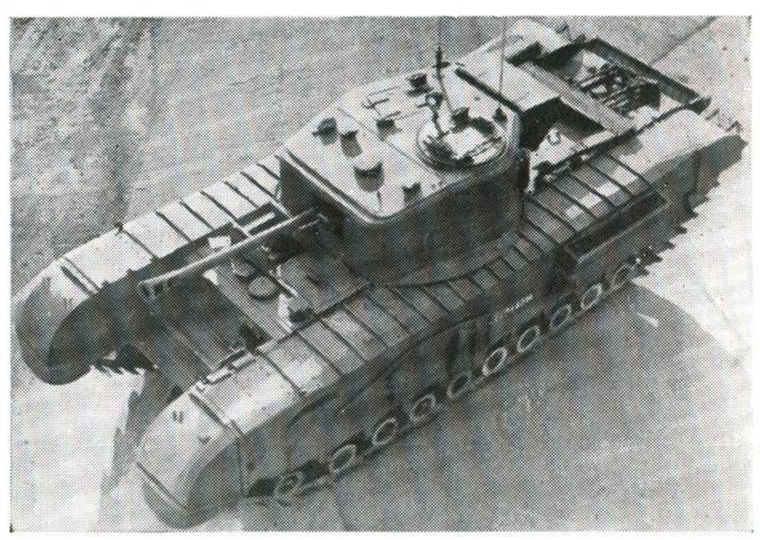
CENTURION



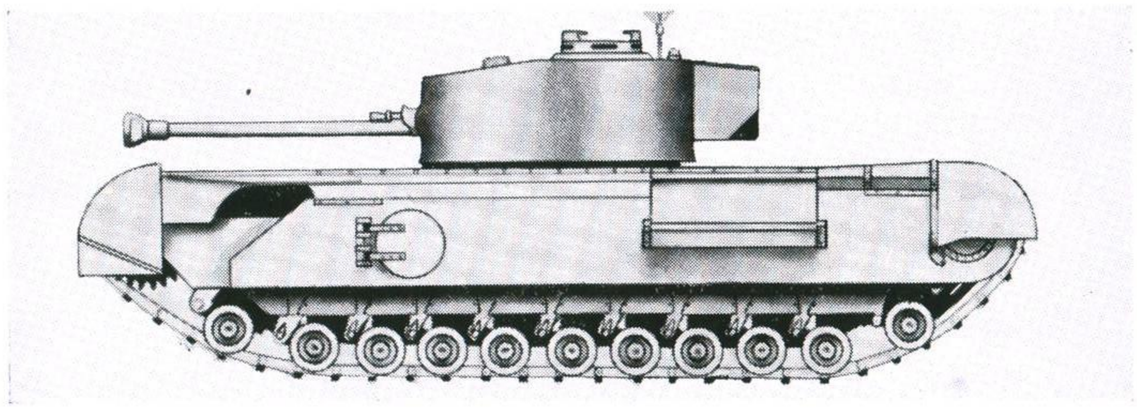
Hall-marks : markedly long overall; large low turret; large skirting plates (often removed); six road wheels. **Turret :** long; low; placed nearly amidships; tapered in plan; bottom flush with deck; sloping rounded sides; distinctive broadly bevelled roof; cupola visible but not prominent; neat curved mantlet (often shrouded); slight rear overhang; breadth accentuated by side stowage bins. **Hull :** has two deck levels; shallow front deck bears turret but extends well in front of mantlet; long steep glacis plate; nose plate does not fold back acutely, and is well in evidence; rear deck is higher, with prominent exhausts lying alongside on either track guard. **Suspension :** six large road wheels with unequal gap between numbers 2 and 3; large rear sprocket; large idler; deep detachable skirting plates (hiding four top rollers) cut obliquely up on rear section, which may be partly or wholly removed. **(British.)**



CHURCHILL



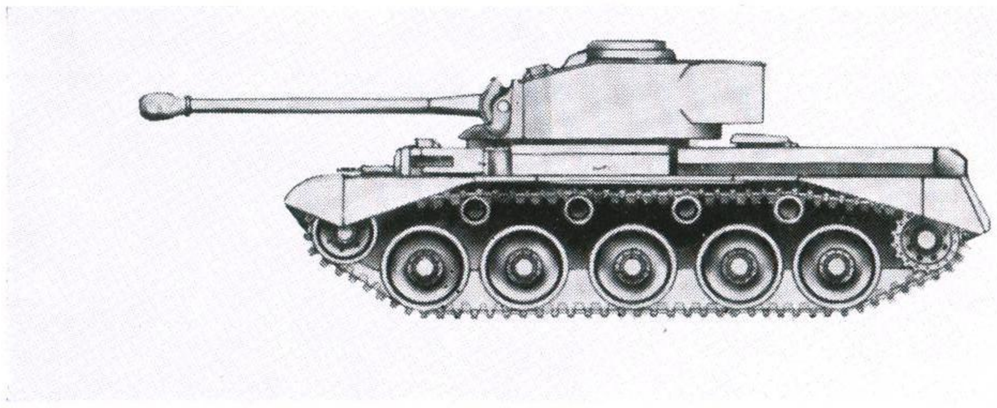
Hall-marks : visually, the hull has been reduced to a small, almost invisible box squashed between (and flush with) the enormous suspension, and bearing the large turret. **Turret :** tall; round-edged; vertical-sided; sitting flush with deck; flat roof and long sloping forehead; large rear stowage bin; recessed mantlet in flat vertical front. **Hull :** only visible (with flat deck) fore and aft of the turret; deck is flush with track guards; vertical front plate; short roof-ridged glacis plate; nose plate is only slightly turned back and under, giving strongly lit surface. **Suspension:** very high and broad; divided into two distinctive parts —the upper part is armour-skirted with great curved and knuckle-like end pieces covering front sprocket and rear idler; lower portion shows eleven centipede-like little road wheels, with the two end wheels "riding" on the track as it lifts off the ground. **(British.)**



COMET



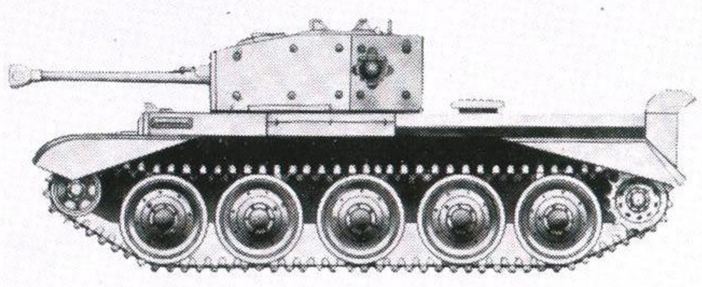
Hall-marks : overall angular, box-like, hull; prominent, high-set, turret (with bold cupola) set nearly amidships and giving the vehicle a balanced look fore and aft. **Turret :** high; vertical, slightly angled sides, but rounded-seeming from a distance; steep sloping forehead and projecting chin rim, between which is a broad mantlet with slightly recessed centre, often shrouded; prominent cupola; overhang exaggerated by large stowage bin clapped on rear; stowage bins amidships on track guards. **Hull :** upstanding; box-like; flat-decked from stem to stern; vertical front plate giving way to steep glacis plate; nose plate well visible as it slopes back under. **Suspension :** five large road wheels; medium-sized sprocket at rear, and idler in front, both set low, and fairly close to road wheels; four evenly spaced top rollers; semi-triangular skirtlets shade idler and sprocket. **(British.)**



CROMWELL



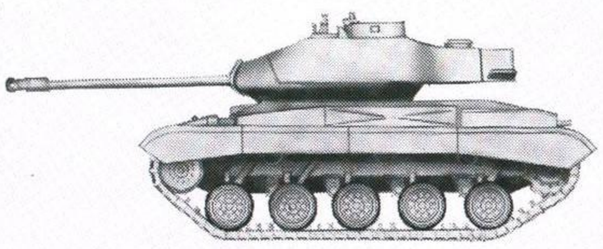
Hall-marks : sharp-edged slab-sided turret ; recessed mantlet ; simple suspension with no top-rollers. **Turret :** vertical sides ; sharp edges ; flat roof and flat sloping forehead ; no visually important excrescences ; bottom flush with deck ; completely recessed mantlet with short, muzzle-braked gun. **Hull :** shallow and flat-decked from stem to stern, with vertical hull front plate ; short glacis plate at gentle slope ; small vertical nose plate with towing eyes ; lower nose plate folding underneath, but clearly visible ; intake louvres under broad raised prominence directly behind turret ; curved exhaust outlet stands prominently across and above the stern. **Suspension :** five large road wheels ; no top rollers ; deep shadowed space between wheels and track guard ; small rear sprocket set close to wheels ; small idler placed well away from front wheel ; small skirtlets shading idler and sprocket. **(British.)**



T-41 WALKER BULLDOG



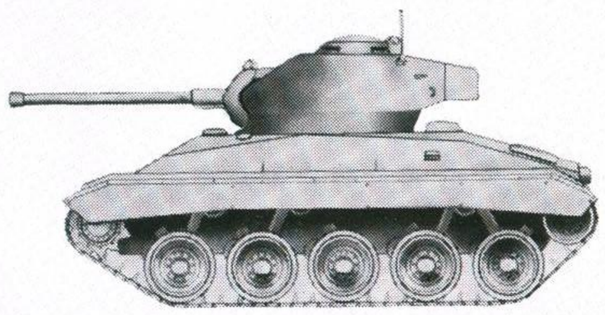
Hall-marks : A tank in the compact stump-tradition ; high suspension ; long turret set amidships ; prominent funnel-shaped mantlet. **Turret :** Centrally set ; high on its ring ; large rear overhang ; flat roof ; prominent cupola and machine gun ; inward-sloping sides ; tapers to flat, stowage-bin, rear ; gun with bottle-stopper shaped muzzle brake and fume extractor. **Hull :** high built with vertical sides hidden by prominent stowage bins and exhaust " boxes " on track guards ; long gradual sloping glacis plate with prominent light-catching, nose plate folding back underneath ; rear deck giving way to gentle slope and steeper back plate. **Suspension :** five small road wheels ; large rear sprocket and front idler shaded by narrow skirting plate, all of which leaves gap above road wheels and reveals much of three top rollers. **(United States.)**



CHAFFEE



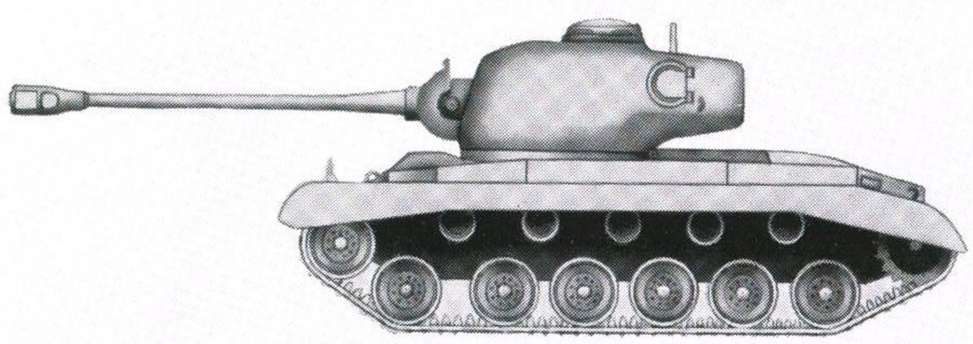
Hall-marks : the stumpiest tank in existence ; road wheels with large gap and skirt above ; high deck ; high-set tapering turret set amidships. **Turret :** set amidships ; large ; high-set on deep ring ; tapering plan with rear stowage-bin giving exaggerated length ; curved and slightly inward-sloping sides ; flat roof, with flat sloping forehead and rear roof ; prominent cupola ; mantlet like an oblong folded cushion with a sharp horizontal edge and sprouting a long collar on the gun barrel. **Hull :** a high structure sloping fore and aft of the turret with vertical sides ; bevelled side edges at front and rear ; long sloping glacis plate ; very prominent nose plate folding back beneath but not acutely, and forming a large lit surface. **Suspension :** very high; five medium-sized road wheels ; front sprocket set high and well away from the wheels ; rear idler set high but close to wheels giving pronounced "kicked-up" effect to the track ; large gap between road wheels (showing crank arms) and shallow curving skirt which dips at either end to shade sprocket and idler ; if skirt is removed three small irregularly-spaced top rollers are visible. **(United States.)**



PERSHING



Hall-marks : the great plump turret ; the large cushion-like mantlet ; the high suspension with six small road wheels. **Turret :** plump ; round-edged ; broad and tapered in plan ; set forward of the centre-line and sitting flush with the deck ; flat roof with short, gently sloping forehead ; prominent cupola ; pronounced rear overhang ; large and distinctive cushion-like mantlet. **Hull :** shallow ; stowage-bins at deck height lying much of the way on both track guards ; long steep glacis plate with noticeable promontory bulge at its top ; nose plate shelves down and back fairly acutely, but picks up light ; rear deck slopes gently aft. **Suspension :** high ; six small road wheels with big gap between the first and second ; large rear sprocket ; large (road wheel size) front idler ; large gap above road wheels ; shallow skirting plate all along which shades the idler and sprocket and reveals all but the tops of five top rollers. **(United States.)**



THE OBSERVER CORPS GAZETTE

Vol. 4 No. 2 MARCH 1952

THE OFFICIAL ORGAN OF THE ROYAL OBSERVER CORPS



Attacker F Mk.1

The more we are together . . .

Impressions of a 1951 Camp by Observer Officer E. W. FITCH

6 Group (Derby)

AT first this article was written for the consumption of (*a*) those unfortunate members of the R.O.C. who were unable to attend any Camp, and (*b*) those who were luckier, and joined Camps 1, 2, 3 or 4—but not those most favoured beings who went to Camp 5, for it is upon the writer's experiences therein that this narrative is based.

Second thoughts, however, suggest that a few members of Camp 5 may have a rather hazy recollection of some of the activities, and that they too may find some memories stirring in the sludge, as it were, if they read on !

The opinion of all who attended any of this year's Camps seems to be that their particular one was " the best ever ". It is therefore proposed to record our appreciation of the Organisers' efforts by coupling some of the principal names with this chronicle of events. Apologies are tendered in advance for any omissions, for tributes are due to all who helped to complete our enjoyment. The letters and numbers after the names will no doubt cause a glow to the members associated with them, for they refer to their Areas or Groups, and not their height in thousands of feet ! Some were too low even for finger-plotting, anyway !

The chief dilemma is—what to mention first ? It was all so good. Perhaps the dominating factor of every Camp was the completeness and precision of organisation. " Never a dull moment " seemed to be the motto. Over the P.A. equipment, the firm, cheery directives of O/Cdr. W. Rusby (H.Q.) guided our wandering footsteps, it seemed, all the time : and the genial personality of another Yorkshireman, O/Cdr. J. Roseigh, M.B.E. (Midland Area) blended a fatherly care for our comfort with an amazing ability to make soldiers of us on parade within the first day or so. The good behaviour of all members was proof of our affectionate regard for his wishes, and gave the lie to the old R.O.C. Routine Order tag " Discipline—Nil " !

Bracketed with these tributes must be our appreciation of the goodwill shown to the Corps by Group Captain Mount, the Officer Commanding R.A.F. Station, Waterbeach, his Officers and personnel. Nor must we forget the N.A.A.F.I. All were very tolerant of our exuberance and our indifference to normal civilised hours of sleep, and took us right into their family circle from the word " go ". As a permanent reminder of our happy association with them, a handsome silver cigarette box was presented by our Commandant to the Group Captain for use in the Mess.



The tent-lines at Waterbeach

Photograph by courtesy of Observer D. L. Buckland

" OPS "

The " feast of gen " mapped out for us was as varied as it was comprehensive, and Officers and N.C.Os. were often to be seen making copious notes, with an eye to plans for their future meetings " back home ".

The puckish humour and " pukka gen " (sorry !) of Flt./Lt. Dye, with Flt/.Lt. Broad and Sgt. Lane (C.S.A.R.) will be remembered for months to come in many brighter and better-informed Post and Crew meetings. These three recognition experts were mainly occupied with " C-course " (N.C.O.s from Posts), skilfully combining practice with precept in lecturing, spotting, sketching, films, shadowgraph, flash trainer, and in such variations of instruction methods as Twenty Questions, Housey-Housey, etc. Flt./Lt. Dye also entertained the whole hangarful of "A" and " B " Courses with his lectures on Russian and Allied Aircraft Development, apparently thriving on the competition which he and other lecturers had to endure from the " Noises-Off " in the adjoining hangar, where Meteor-borne Derwents under maintenance and test rent the air at intervals.

The other N.C.O.s and the Officers (detailed as " B " Course) picked up many useful tips from such talks as "Training People" and "Working with People"—psychology without tears!—by Messrs. H. J. White and Bradbury, of H.M. Treasury, during the course of which we were taught, surprisingly enough, how to tie an electrician's knot!

Lectures on general subjects included stories from the " back-room boys " of the R.O.C., such as an interesting review of the past twelve months by O/Cdr. Wilson (N.W.A.) : lessons to be learnt from our Exercises (O/Cdr. F. Mitchell, S.A.) : and a very informative piece of dismantling and re-assembling of the machinery of " Ops " Instructions by O/Cdr. W. Rusby (H.Q.) which will no doubt result in our " works " running much more smoothly in future. (This stuff gets into one's veins, too : it may be noticed that this article evolved itself on the " Information—Intention—Execution " principle !)

The need for constant vigilance against careless talk was well presented by O/Lt. Lardner (H.Q.) and the various problems tackled by Area H.Q.s in looking after our welfare, were described by O/Lts. Robens (N.W.A.) and Nisbett (Scottish Area). A sort of " Whodunit " mystery was the theme of the talks on " Lost Tracks " by O/Lt. Jay (H.Q.) but the identity of the criminals was still being hotly disputed in Post versus " Ops " Room debates for days afterwards. The solution seems to be in the hands of all types of observers, inside and outside, and is certainly one in which all of us must play an intelligent part in our handling of modern air tactics.

Our good friends the R.A.F., ably represented by Wg./Cdr. Huxley, Wg./Cdr. Le Rougetel, Sqn./Ldr. Mundy, Sqn./Ldr. Julian and Flt./Lt. Broad gave us a tantalising peep into their set-up in their talks on the organisation of a Fighter Command Sector, and of the R.A.F. itself.

It was, however, during the last afternoon that the unique



R.O.C. members preparing to enter the Dakota aircraft during the 'airlift.' *Photograph by courtesy of Observer D. L. Buckland*

democratic character of the R.O.C. was revealed at its best. Could there be any other similar organisation where one would find five executive officers forming a quiz team to be bombarded with questions, aye, and criticisms, on every R.O.C. subject imaginable, from a total, on the five last afternoons, of over 2,500 of their members ?

The good humour and tact of these officers, their expert replies, and their readiness to note many points for future action, must have given everyone a lasting confidence in the practical men who guide the destiny of the R.O.C. The " team " comprised O/Capt. C. G. Cooke, O.B.E. (Deputy Commandant R.O.C.) : O/Cdr. W. Rusby (H.Q.) : O/Cdr. F. Mitchell (Southern Area) : O/Lt. Farquhar (H.Q.) : and Mr. A. B. Archer (H.Q. Admin Officer). Some idea of the diversity of the questions may be gleaned from the following samples noted at random :—Night Exercises : Women Officers : Long Service Medal : The National Coal Board's attitude



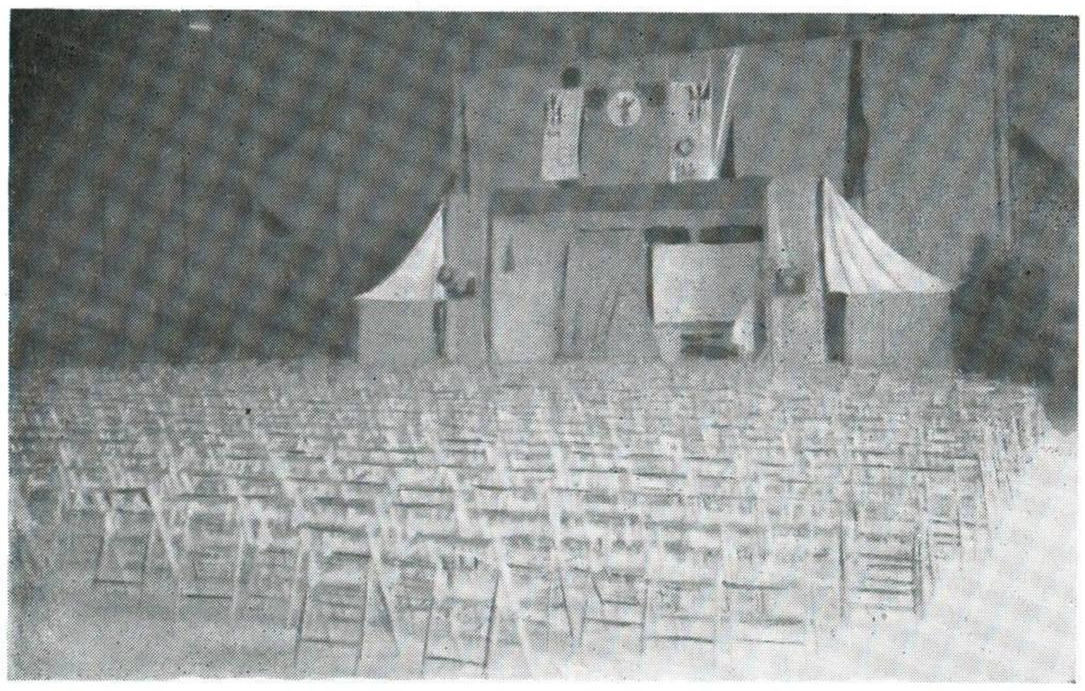
On arrival bedding was issued

to Camp : Plans for an " Emergency " : Master and Intermediate Tests : Injuries on Duty : Rifles—and alarm clocks !—on posts : Log Sheets : equipment problems by the score, from boots to berets and flashes to 477's : and such naïve questions as " What IS ' Seaborne ' ? ".

Throughout each week, five post tables and instruments were set up on a mound on the airfield, and connected to five plotters' positions at a model " Ops." Room main table in the static show building. This ingenious idea enabled teams of ten post observers and five plotters, plus floor supervisors and raid orderlies, to gain some intensive practice every morning and afternoon with the variety of aircraft constantly flying in the district : low jets, vapour trails : formations : civil air liners : trainers : bombers—all helped us to remedy our weaker points in reporting and plotting, even when crews of officers and N.C.O.s tried their hands !

The Static Exhibition (NOT a " static tank " as one innocent described it !) produced by O/Lt. Aggett (H.Q.) really deserved an " Oscar ". The wealth of " gen." and diagrams : the striking effect of the all-black miniature aircraft against whitened ceiling : the talent revealed by the models and sketches shown for weekly competition by members of the Corps : the " kolossal " ex-German binoculars set up on their stand outside : the clever artistry of the whole display—all were most impressive. And as for our own inimitable cartoonist, " Sessions " (Gp3 /Jig 4), surely he has never been better in his shrewd wit, and in the fertility of his ideas. For a few modest shillings his cartoons and crests were available so that members could illuminate their own post or centre rooms with appropriate masterpieces.

To our hosts in the R.A.F., we were also indebted for the flying of Meteors during each Camp for speed and height-judging competitions. Some of the estimates were remarkably close—and some were just as wide of the mark !—but much fun as well as practical benefit was derived by everyone. The visits to Air Traffic Control also proved very interesting and instructive.



Interior of the R.O.C. hangar at Waterbeach

Photograph by courtesy of Observer D. L. Buckland

On the last Friday we were honoured by the visit of the then Secretary of State for Air, the Rt. Hon. Arthur Henderson, M.P., accompanied by the A.O.C. in C. Fighter Command, Air Marshal Sir Basil Embry ; an ex-Commandant of the Corps, now Air Vice-Marshal the Earl of Bandon (for whom a special roar of welcome shook the hangar !), and of course our own Commandant, with other V.I.P.s. Appreciation was expressed of the help given by the R.O.C. to the R.A.F. in their Exercises, and of the voluntary spirit which continues to actuate our efforts.

" PLAY "

So much should suffice to show how well the Camps obeyed our Commandant's exhortation to " work flat out ". But he also bade us " play flat out ", and so we did. Every taste was catered for, and surely there can be no-one without some tales of fun and frolics to carry back to his or her less



Ready for inspection—all beds and bedding laid out R.A.F. fashion

Photograph by courtesy of Observer D. L. Buckland

fortunate colleagues at home. Limitation of space prevents justice being done to the complete framework set up by the Entertainments Officer, O/Lt. Roy M. Phillips (15 Gp.) and his assistants, who themselves must have " worked flat out " for many months beforehand. Everyone saw to it that this framework was duly filled in, and here it is in brief :—cricket matches and rifle shooting competitions daily, Obs. *v.* W/Obs., W/Obs. *v.* W.R.A.F., etc. (the " pistol-packing mommas " we have in our ranks !) : a smoking concert, a variety show, and two dances (each Camp) : a cinema : liberty coach trips to the Festival of Britain : to the Festival cruising ship H.M.S. *Campania* at Hull (Camp 1) : to the Norfolk Broads, to Yarmouth, to Newmarket Races, and to Ipswich (on Camps 1 and 4) : and to the Royal Show at Cambridge (on Camp 2) : motor treasure hunts on some of the Camps : and so on.



The static Tank—sorry, Show! was full of interesting models and exhibits!

The Concerts revealed many a genius in our ranks, not the least of whom was Mr. A. H. Young (H.Q.) who played the piano like a " maestro " for hours on end every Monday and Friday evening, taking everything in his stride—classics, be-bop, song accompaniments, choral works—with or without music ! Pleasant memories still persist of our many gifted instrumentalists : of the golden voices of W/Obs. V. Grist (Gp. 10) and other songsters, solo and in choirs. The concerts were spiced with humour, unconscious as well as deliberate, such as the occasion when a Welsh observer in one of the choirs, fired with patriotic zeal after they had sung one refrain of " Land of My Fathers " in a medley, made several unsuccessful attempts to sing it again on his own, defying the conductor and pianist, but vociferously encouraged by his compatriots in the audience !

The treasure hunts were great successes, and it is hoped, will form a permanent feature of future Camps. The variety of the articles to be " brought in," and the ingenuity of the doggerel concealing the " clues ", were crowned by frolics at the finish. Few will forget the old-world charm of The Plough Inn at Fen Ditton : the beauty of the illuminated flower garden : the peace of the river flowing past : the stirring sight of " fours " and " eights " flashing by on their rowing practices. Nor will a certain high-ranking officer of the R.O.C. forget being wound out into mid-stream on the chain-ferry, and left there awhile to meditate ! Typical of the spontaneous wit which these Camps seem to inspire was the said officer's solemn remark on this occasion:—" Seaborne at last ! "

Flights were arranged at some Camps, but the disappointment at the non-appearance of the air-lift at others was rather mollified by the knowledge that the circumstances were outside the control of our own H.Q. staff, who did their best to secure the required aircraft.

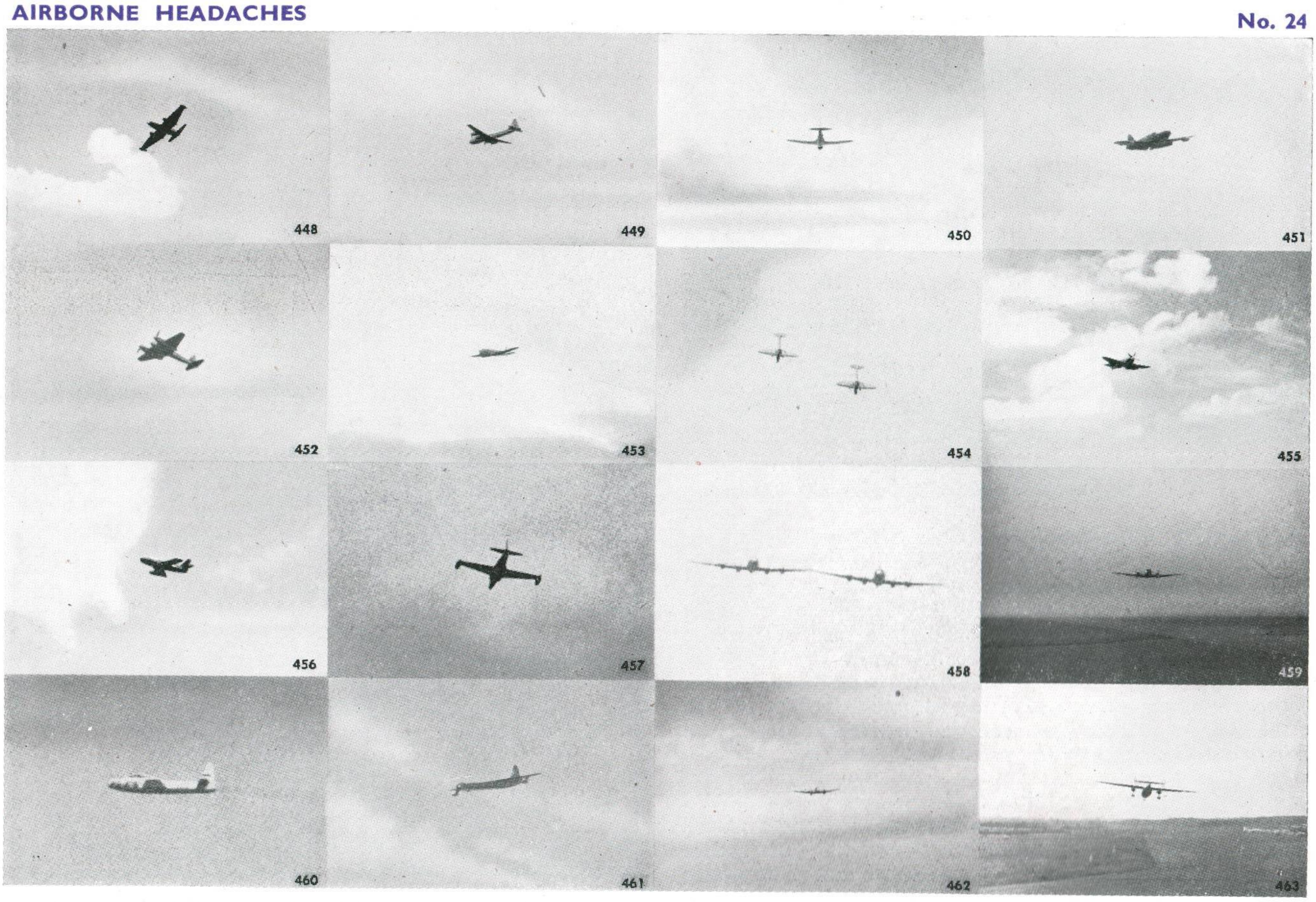
The " Observer Arms " and the " N.A.A.F.I." were " on tap " (literally) most of the time, and here, with a choice of wet or dry canteens, were ample opportunities to renew old friendships and, in the words of Air Commodore Vasse, " to discuss matters of common interest ", and " to strengthen that comradeship which is such an important factor in the life and entity of the Corps ". The family groups snapped outside our hangar must have run into thousands ! Much interest was aroused by the stalwarts who displayed the Long Service Ribbon ; one wag remarked that he thought it would have been " a piece of red tape browned off at both ends " !

Another true prediction of our Commandant's was his view that being under canvas (males only : the " weaker sex " was in barracks !) would be " an added attraction ". It gave us a feeling of freedom and independence. The sounds of merriment which sometimes continued well after " lights out " were evidence of our agreement, and there's nothing like fresh air for deep sleep (or is there ? !) Credit is also due to the Clerk of the Weather for being so kind throughout almost the whole Camp period.

For some, there may be rather confused memories of the events of the last evening : of the grand farewell variety concert : of the last trip to a favourite rendezvous : of au revoirs over the time-honoured R.O.C. " cup o' char "—or, something stronger : of the sing-songs and the swapping of yarns : of the writing down of addresses, with promises to send snaps and to meet again " same Camp next year " : of returning to the tents eventually to find them looking like the wake of a cyclone, with stacks of beds and blankets which had been " attended to " in our absence ! : of the awful thought that it would soon be 6 a.m. when the bedding was due to be handed in ! But there is one outstanding impression which endures even several months afterwards—that it was a jolly good show, and well worth it.

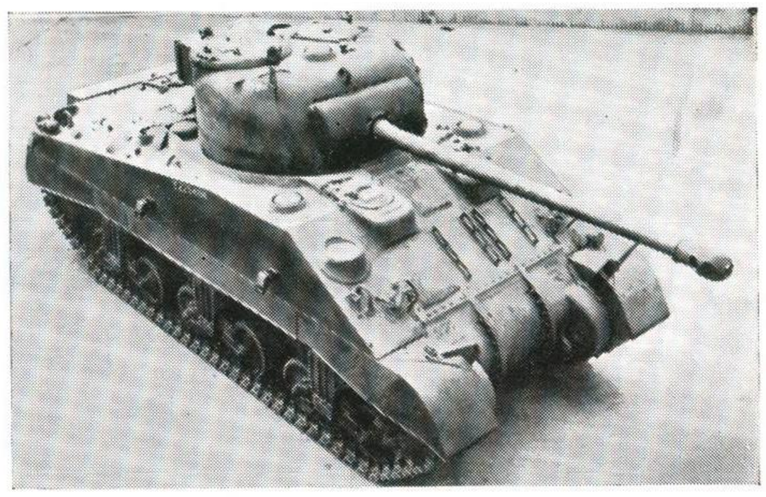
AIRBORNE HEADACHES

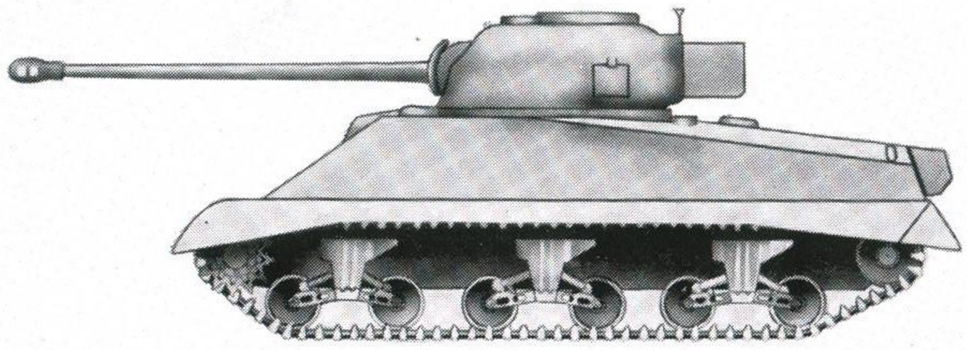
No. 24



Submission dates for Answers to Airborne Headaches No. 24 will be notified by Group Headquarters.

SHERMAN (17-Pdr.)

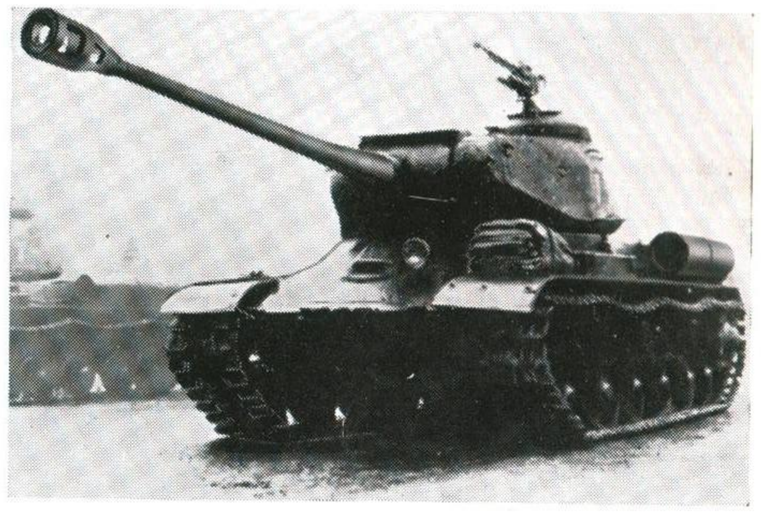


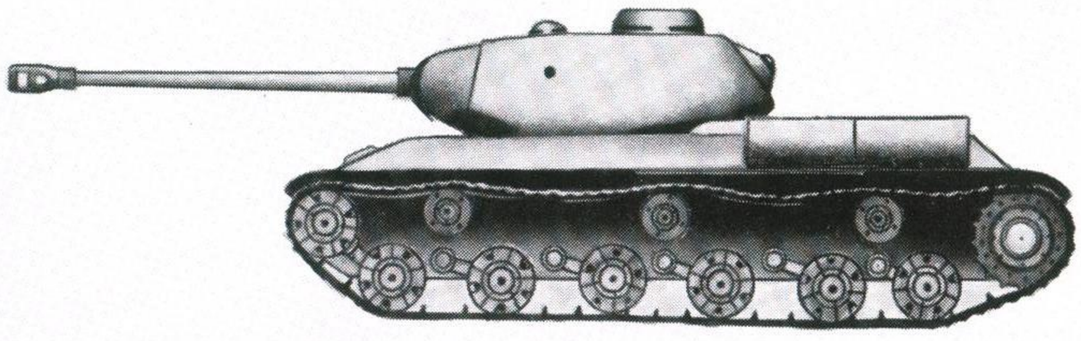


Hall-marks : mountainous hull rising sharply in front and sloping gently aft; bogey suspension; sprocket in front. **Turret:** medium height; sharply tapered in plan ; perched high amidships and with feeling of being set back caused chiefly by steeply sloping forehead ; rounded sides and edges ; flat roof ; rear locker giving overhang, and still more pronounced taper in plan ; no striking excrescences ; simple curved oblong mantlet. **Hull :** great mountainous structure with precipitous drop in front to bold, rounded and ribbed nose plate ; two bold upper knuckles for periscope hatches, and below, two bulging covers for sprocket gear; steady down-sloping rear deck, with broad bevelled edges to high stern; sheer vertical sides. **Suspension :** six very distinctive small road wheels grouped in three pairs of bogies with bold anvil-like supports ; sprocket is at the front ; idler at rear ; shallow skirting plate hiding the track, and spreading into skirtlets shading sprocket and idler.

(United States.)

JS-2

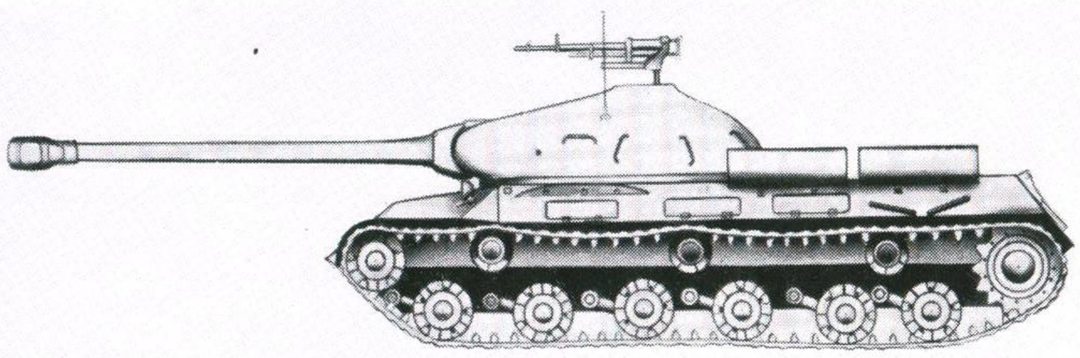




Hall-marks : the broad curve-sided turret, set well forward ; medium high deck ending right under the mantlet ; swelled cushion-like glacis plate ; small road wheels and large sprocket. **Turret :** broad, smooth and curve-sided ; inwards sloping ; prominent cupola on flat roof ; mantlet is curved and set in flush with the turret-front, and with a short sleeve. **Hull :** fairly high with inwards-sloping sides ; flat rear deck with intake louvres aft ; large bulging glacis plate falls steeply away beneath the mantlet ; and nose plate, also " cushiony ", bends down and back but picks up much light ; cylindrical fuel tanks (up to two on each side) placed on after track guards. **Suspension:** six small road wheels (with noticeable crank-arms) with front idler looking like another road wheel pushed upwards, large rear sprocket ; three top rollers ; lack of skirting plates and small road wheels gives suspension an " empty " look. **(Russian.)**

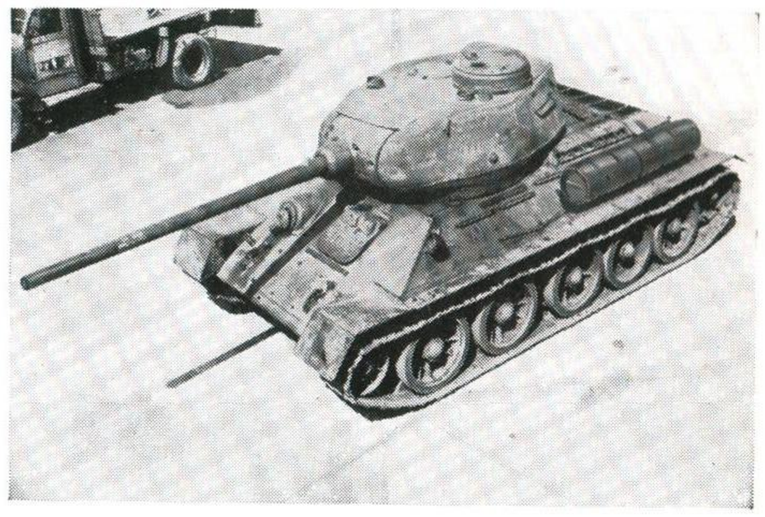
JS-3

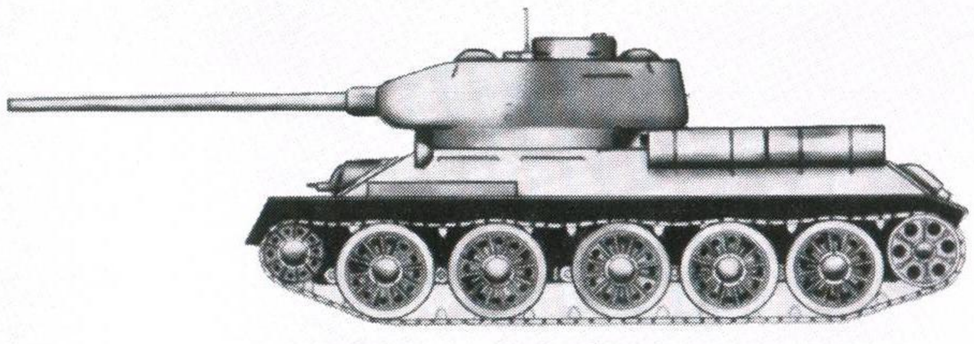




Hall-marks : this tank is dominated by the great turtle-back turret perched far forward with its outsize in guns, accentuated by the " openwork " look of the suspension. **Turret :** large, flattish turtle-back, round in plan, spreading over track guards ; perched far forward ; long, sloping, flat forehead topping the pinched-in jaws which grip the recessed mantlet ; large collar swelling at root of gun barrel ; prominent cupola and machine gun on roof. **Hull :** high, with sloping sides forming track-guards ; flat rear deck with two cylindrical fuel tanks on either hull edge aft ; large tent-ridged glacis plate falling steeply to peak ; nose plate folds under and back in shadow. **Suspension:** open look due to lack of skirting plates and the six small road wheels ; crank-arms well visible ; high-set small front idler ; large rear sprocket exaggerated in size by small road wheels ; three top rollers. **(Russian.)**

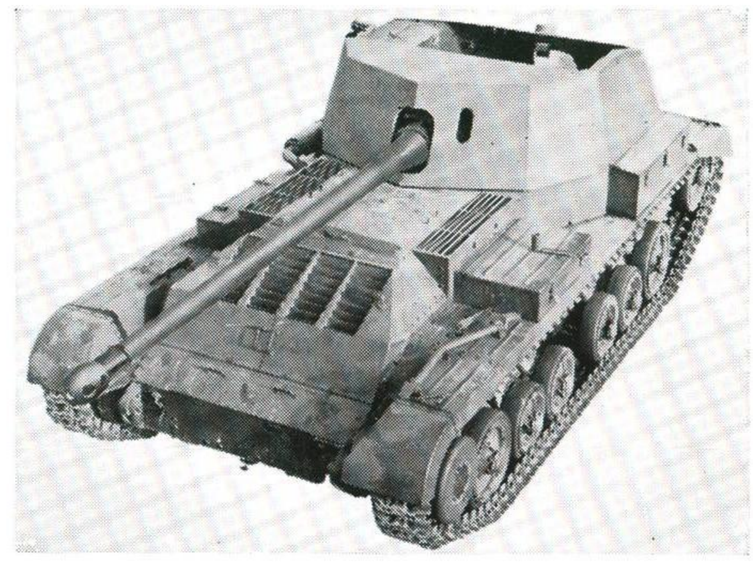
T34-85



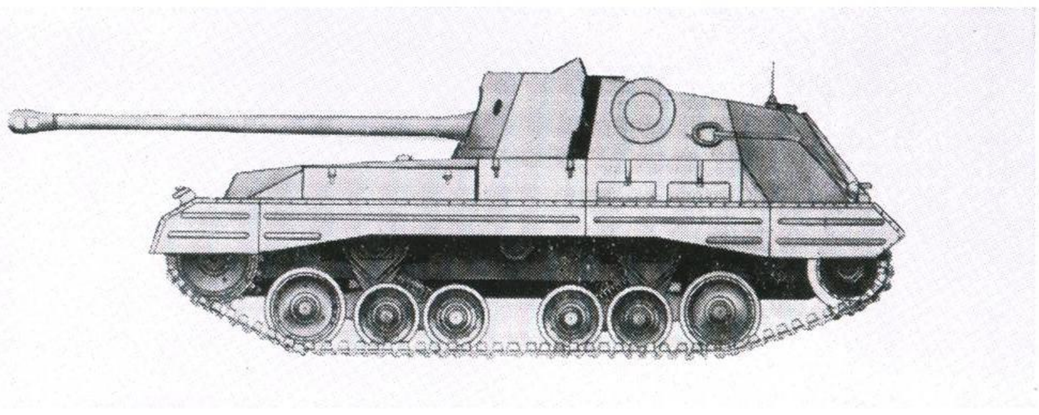


Hall-marks : large turret set well forward ; long rear deck ; high hull ; five large road wheels with no top rollers. **Turret :** large ; narrow ; deep ; with inward sloping sides, front, and rear ; set high on ring, and well forward ; flat roof with shallow sloping forehead and prominent cupola ; mantlet set in flush with the front surface with prominent gun-barrel collar. **Hull:** a high flat-decked structure, strongly inward-sloping on all sides, and spreading at sides to allow only narrow track-guards ; long steeply-sloping glacis plate with nose plate folding back underneath, but well visible ; long flat rear deck ; long sloping back plate. **Suspension :** very low effect caused by the five large road wheels with no top rollers and track moving on the wheel tops ; narrow gap above ; large rear sprocket with no teeth ; smaller front idler ; track making only shallow angles when rising at front and rear. **(Russian.)**

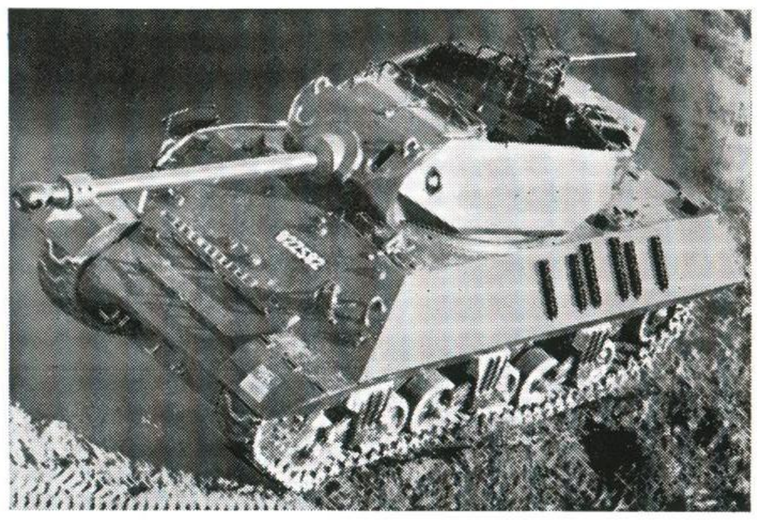
VALENTINE (17-Pdr.)



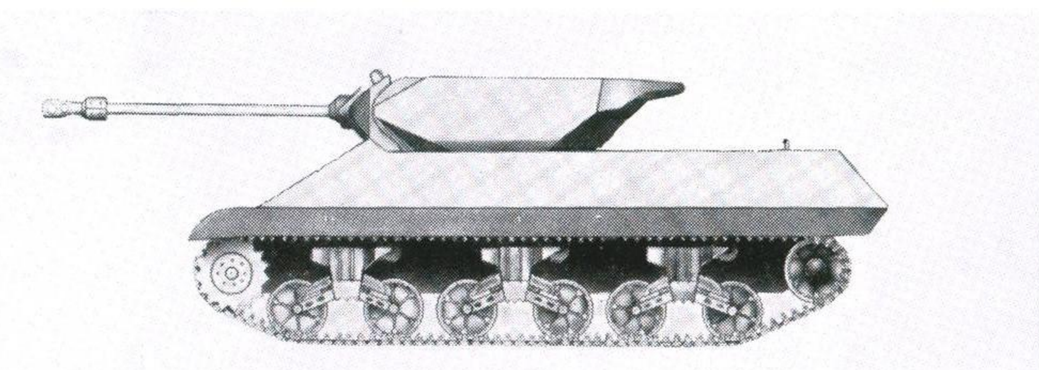
Hall-marks : the dominant features of the Valentine are the open-topped fighting compartment set at the front of the vehicle—it travels " backwards "—and the distinctive suspension. **Turret and Hull :** the long gun, always pointing rearwards when on the move, with a completely recessed mantlet, is set in an open-topped fighting compartment with inwards-sloping sides and with its top lines sloping down rearwards ; this, with the forward placement of the whole structure, gives a "bow-heavy" look to the whole vehicle ; the rear deck is a broken-up area of ridges, intake louvres and stowage bins, with a jumble of broken-up shapes where the sprocket gear is covered. **Suspension :** six road wheels grouped in two bogies, each with one large and two small members with a large gap between the bogies ; large rear sprocket set near both road wheels, and front idler set far away ; shallow centre-tapering skirting plates which include (where not removed) plates which shade sprocket and idler. **(British.)**



M.10



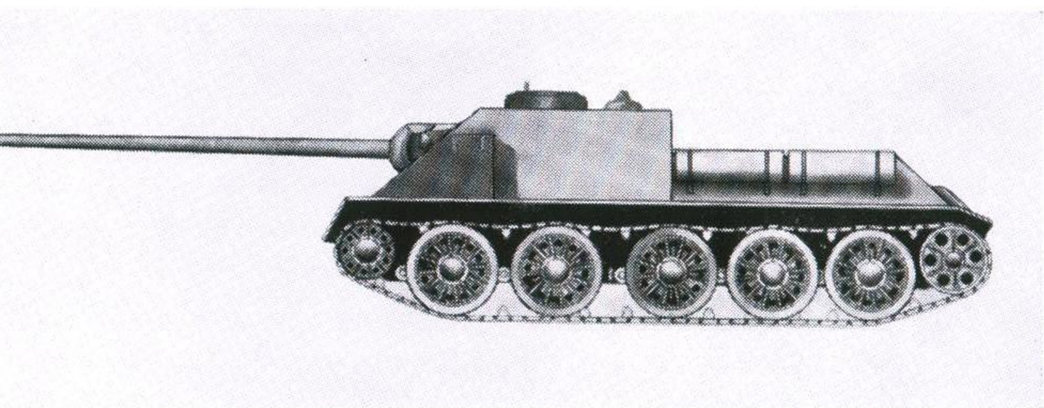
Hall-marks : a long, low open-topped turret (with a prominent rear lip) on a Sherman chassis. **Turret and hull :** the fighting compartment is a low open-topped structure, broadening to a very distinctive rear lip which makes an exaggerated overhang ; the bowing sides are often covered with equipment, etc. : the gun, with its distinctive hand-cuff ring behind the muzzle-brake, sprouts from an angulated mantlet, which has four distinct surfaces and a spreading collar on the root of the gun ; the high inwards sloping hull is very prominent; the long glacis plate curves down and under, with bulges covering the sprocket gear.
Suspension : three two-wheel bogie road wheels with bold anvil-like supports ; large front sprocket and rear idler ; shallow skirting plate conceals track tops. **(United States.)**



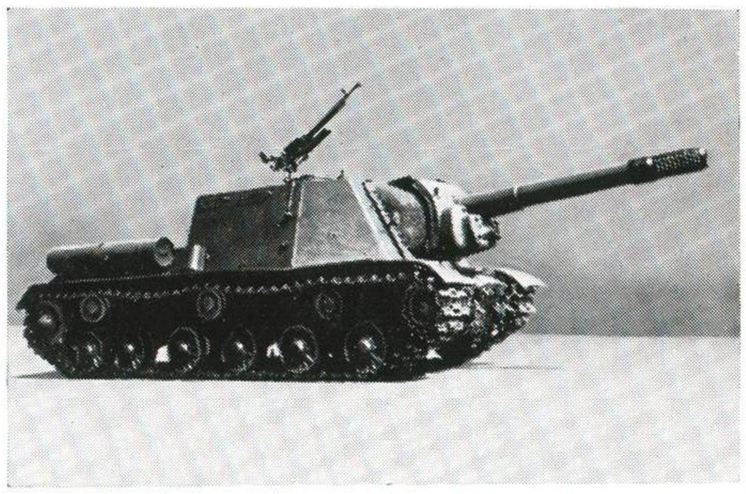
SU-100



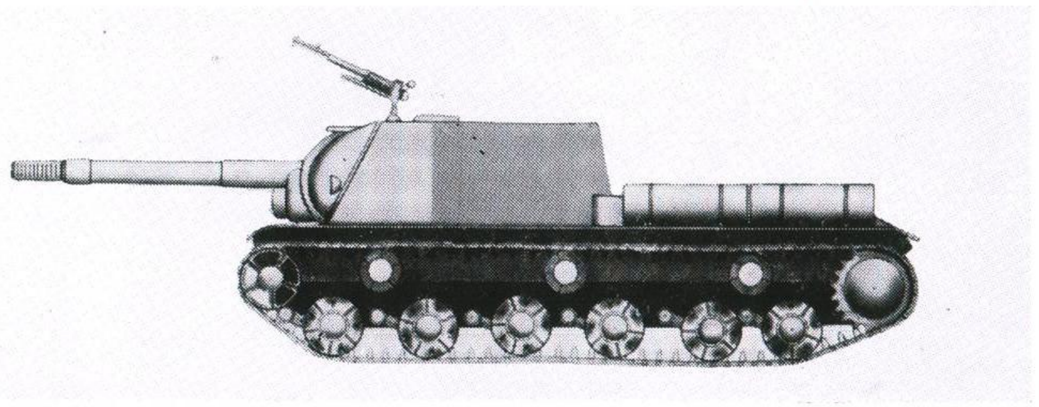
Hall-marks : this vehicle is a large slope-fronted box planted on the fore-part of a T-34 chassis and reminds one of a snow-plough ; flat rear deck ; five large road wheels and no top rollers. **Turret and Hull :** a great glacis plate slopes steeply down from the top of the turret to meet the sharply bent-under nose plate ; out of this the offset gun thrusts forth out of a flat-topped mantlet which makes a major excrescence ; a prominent cupola is offset to the right on the flat roof ; sheer vertical sides and the back drop to track guards and deck ; rear deck, with inward - sloping sides and rear, has intake louvres aft, and two cylindrical fuel tanks on either side.
Suspension : low, with five large road wheels and no top rollers, front idler and rear sprocket ; no skirting plates (*i.e.*, T-34 suspension). **(Russian.)**



JSU-152



Hall-marks : this vehicle is a great angular box with a distinctive and massive mantlet placed forward on a JS chassis. **Turret and Hull :** the fighting compartment is a slab-sided, flat-roofed five-sided box sloping inwards from its base : the mantlet and other excrescences at the base of the thick stubby gun are notable and unusual—a combination of curves and bulges which seem to surround and support the gun from beneath ; four cylindrical fuel tanks, two on either side, are on the rear track guards ; there is a curved glacis plate, and the nose plate bends back slightly enough to pick up much light.
Suspension : six small road wheels with clearly visible crank - arms ; front idler set high and close to road wheels ; large rear sprocket ; three top rollers ; openwork appearance due to smallness of road wheels and lack of skirting.
(Russian.)



The views expressed in this correspondence are not necessarily held officially.

Dear Editor —

Recent issues of the *Journal* have included a full page spread of the "Tutor Trainer". The question must surely have arisen, "can this form of training supersede the present aircraft lecture?" It would be interesting to get opinions on the merits for and against the two systems of training. To form the basis of a discussion a few points are outlined in the following paragraphs.

Does the "tutor" form of training in fact cause confusion by bunching all aircraft of one structural layout (*e.g.*, twin boomed-aircraft) together? Does it not lead to photographic recognition and also the identification of an aircraft by counting the windows or positions of aerials and other small items which, under actual spotting conditions would be invisible to the spotter? In other words, can people become efficient spotters with this form of training or is it essential to maintain the present system?

The present system of training is based on interest; with each lecture a few facts and figures are given concerning the aircraft; this is considered essential to give the aircraft a personality, and is done in an endeavour to bolster up the dreary business of shape and shape alone. It is maintained that to arouse the interest of a class the pupils must first and foremost interest themselves in aircraft; this can only be done by giving a few interesting facts about the aircraft. The aircraft must be given a personality or "glamourised". Care, of course, should be taken not to over elaborate with a host of technical facts and figures, otherwise the object will be lost. This is a point that is sometimes overlooked by the over-enthusiastic instructor.

Yours faithfully,

(Sgd.) C. GAIGER BROAD.

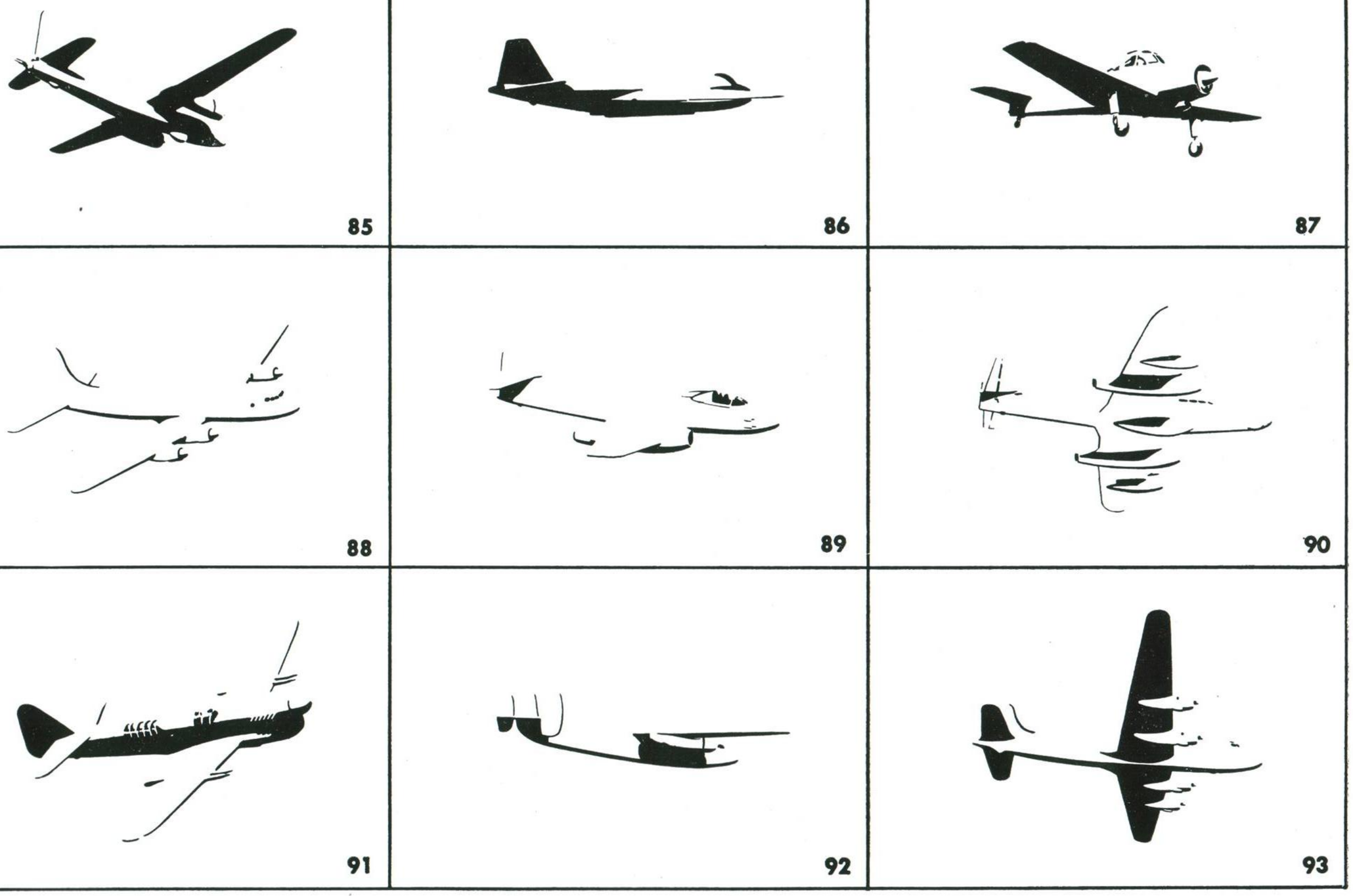
(*Flight Lieutenant*).

CENTRAL SCHOOL OF AIRCRAFT RECOGNITION.

Designer's Note

The designer of the "Tutor" type recognition trainer has written the following note upon it.—Editor.

> "The 'Tutor' type of recognition trainer is based on the principle that a large part of recognition training is a matter of continuous planned experience in the identification of the object (or group of objects) with the aid of known visual data on those objects. The 'Tutor' teaches by forcing the pupil to scan an unfamiliar view of an object and to identify it with a different but known view. The pupil gathers visual experience and information from both and in so doing he exercises his powers of observation, discernment and deduction—powers it is essential to develop for recognition work of any kind. At the same time he is continually linking the name of the object with its shape and reinforcing the experience by writing it down."



SEMI-SILLOGRAPHS

Close-Up—

THIS feature is mainly for the benefit of those who have few opportunities to see aeroplanes at close quarters and to help them to become more closely familiar with aeroplane structural details generally. Also, by relating the pictures to the large three-view drawing the reader will see how and where these structures fit into the overall shape of the aeroplane and exercise his faculty for interpreting three-dimensional views from two and vice versa : a necessary practice in all forms of recognition training.

—The Wyvern TF Mk. 4

Naval "Strike" Fighter

This large single-engined " strike " fighter is in production for the Royal Navy. It will normally carry 4 × 20 mm. cannon in the wings for air fighting and additionally it may carry rockets, bombs or a torpedo for other lethal purposes. Underwing fuel tanks may also clutter its otherwise shapely outline.

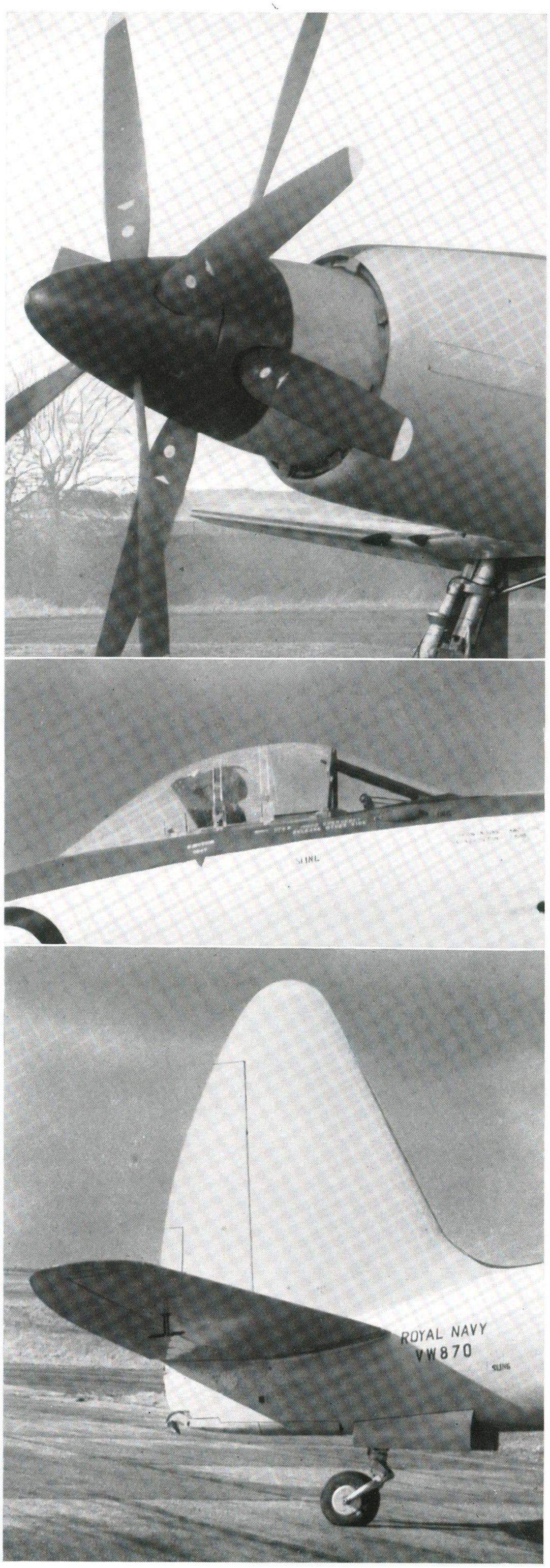
The first picture (top) shows the outsize spinner emerging, as it were, from the tight fitting " sleeve " of the cowling housing the powerful propeller turbine (an Armstrong Siddeley Python of about 4,000 h.p.).

The second picture shows the " blister " type cockpit cover crowning the " hump " of the fuselage—thus exaggerating the hump even more.

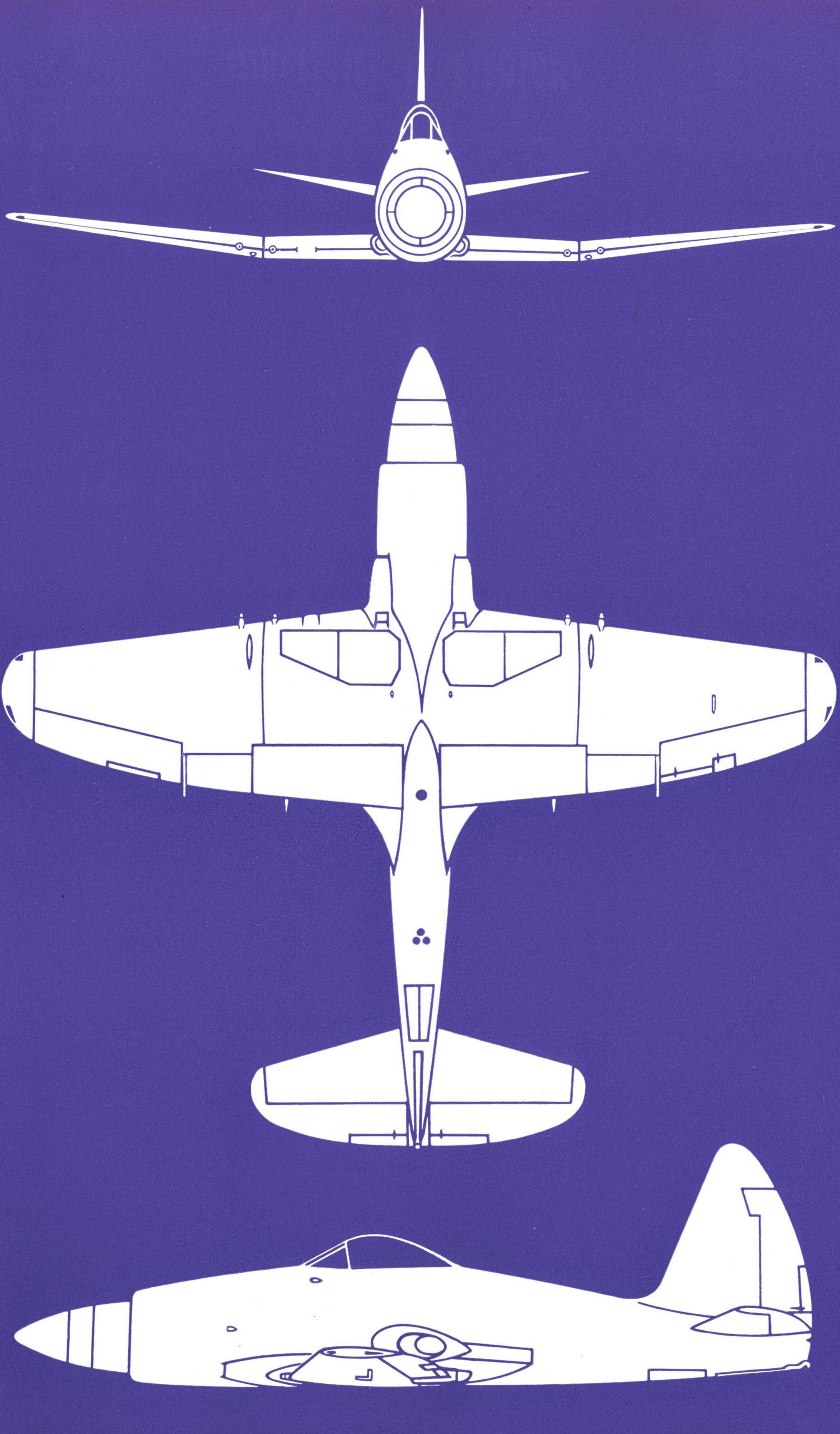
The third photograph illustrates the tail unit and the aeroplane's dominant feature, the giant " shark fin " shape of its vertical stabilizer. Note, incidentally the neat deck hook stowage.

The fourth picture (below) gives some under-carriage details and shows the small intake jutting from the wing's root.

In all it is a handsome aeroplane with its semi-elliptical wing and tailplane ; its deep, humped fuselage and large " shark-fin " arching over its back.

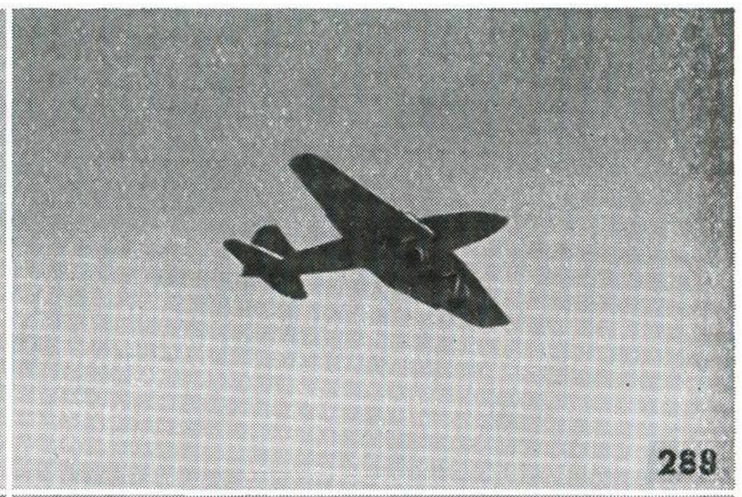






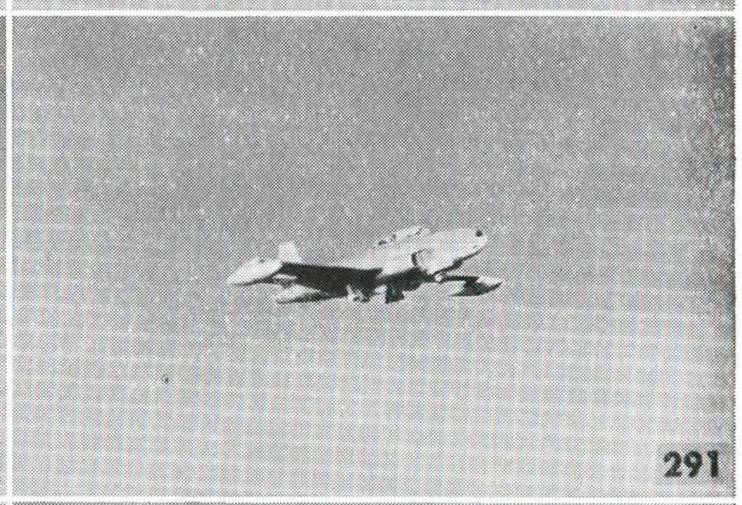

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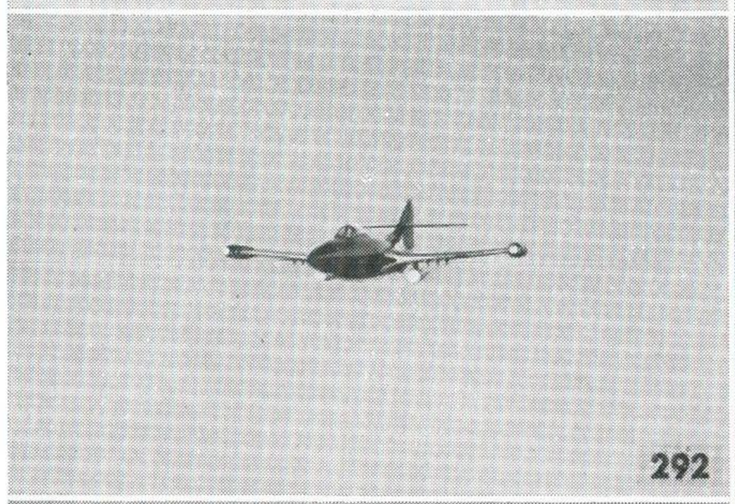

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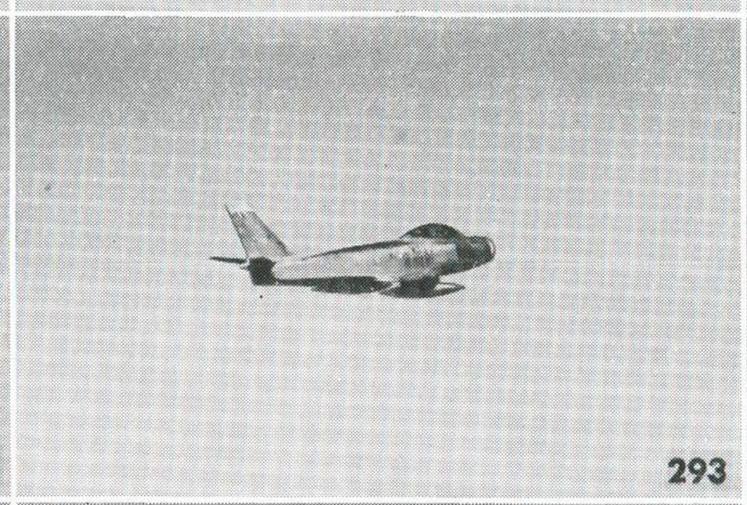

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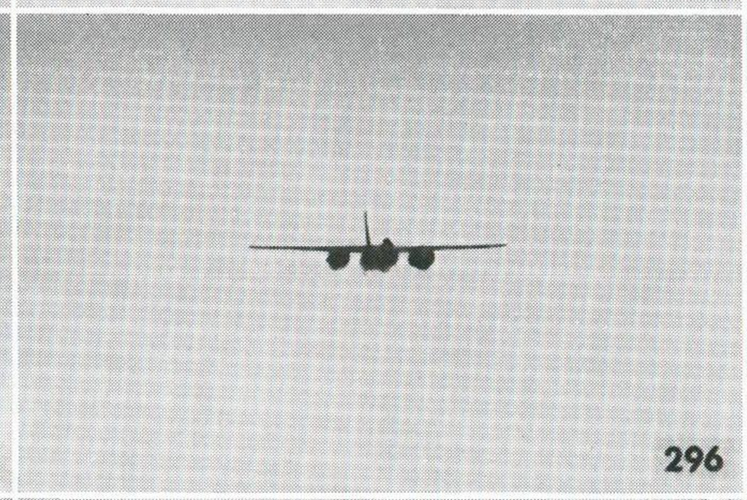

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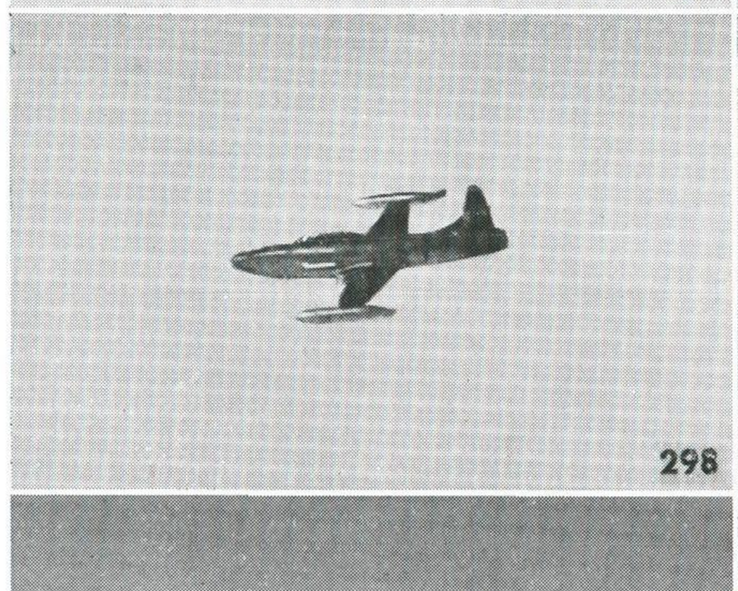

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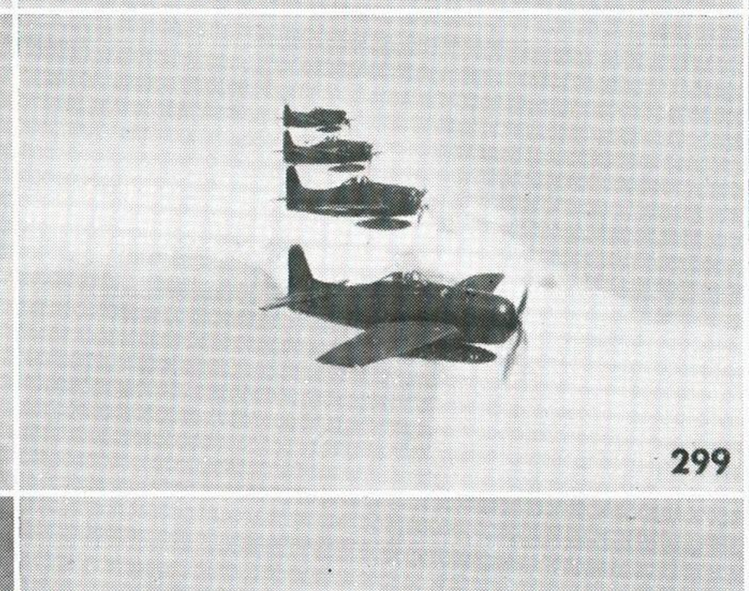

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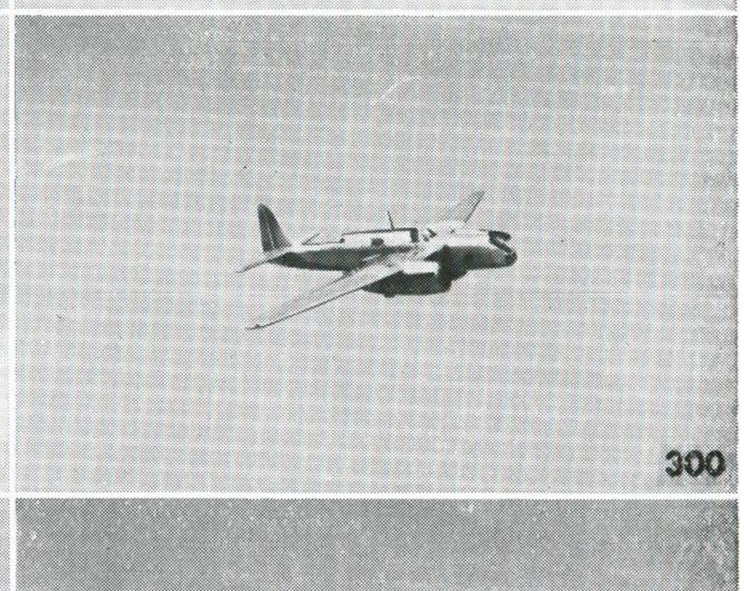

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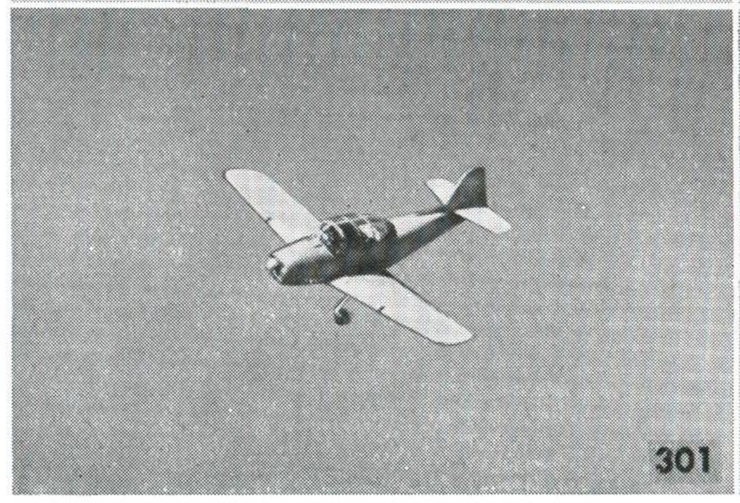

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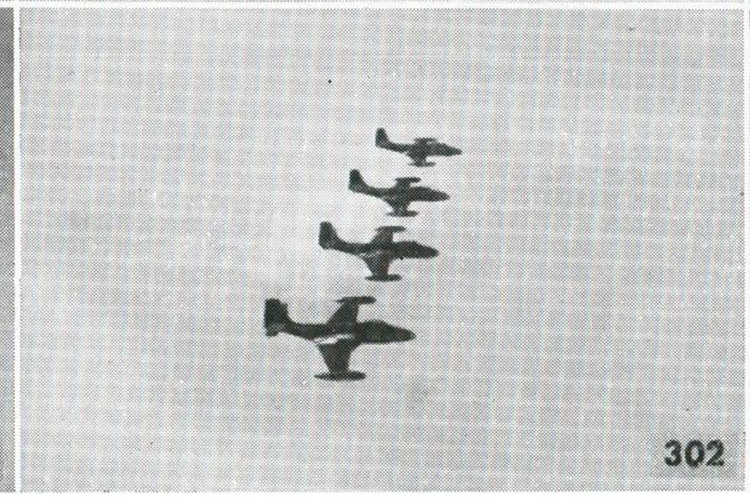

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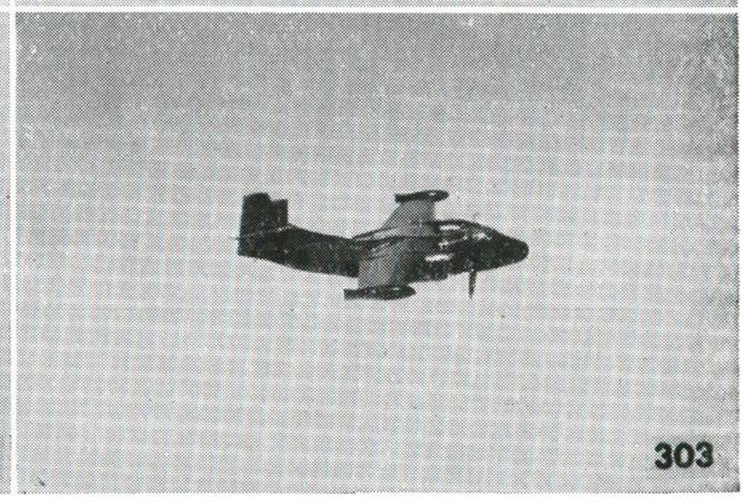

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ADVANCED

FEATURE DOMINATION

by C. H. GIBBS-SMITH

IN the early days of recognition training a great deal of time was spent in dissuading people from learning aircraft by single features, for the obvious reason that when the feature was invisible the machine went unrecognised. Also of course this old " feature-fetish " was ultimately a bad way to learn anything, as it kept the learner from grasping the overall character of the aircraft. In those days the tail was such a favourite feature, and one heard men say that they could recognise any aeroplane by its tail. And so on, and so on.

Now that the " overall shape " is an accepted teaching principle we are perhaps inclined to go too far the other way—too far in the neglect of dominating features. To check such a tendency it might be as well to re-examine this subject of " feature domination ". First of all there is the question of aircraft (or for that matter any vehicle) which are visually nondescript ; aircraft whose parts are like many other aircraft with similar parts ; aircraft with features which seem to conform to some visual average which simply fails to register strongly on the watching mind. Or to put the point in reverse, as it were, such nondescript aeroplanes lack any one or more features which stand out from their fellows and arrest attention.

Such machines must be learnt, of course, and they are learnt " overall " ; and the good spotter will know them anywhere if he is well trained. In extreme cases it may only be possible to say such an aircraft is " either . . . or." That is perfectly good spotting, and much better than guessing.

But when there are one or more features which dominate a machine there is no doubt that the learners and the instructors have an easier job, because the impact of dominant features is quicker, greater and more lasting. The difficulty is that the learner is seldom persuaded to go the whole way and relate the dominant feature(s) to the whole. But of that, more later.

What makes a feature or features dominant ? What jerks the mind out of its routine and its indifferent appraisal of what lies before it ? Sheer size is one kind of dominance ; then a feature may obtrude by its individual peculiarity ; by its being relatively unlike any other shapes ; by its striking contrast with nearby shapes ; by its resemblance to some common or uncommon object in the animal or vegetable worlds ; and so on. Then it may be a case of two features being dominant because they contrast with, or complement each other, or together make an outstanding combination.

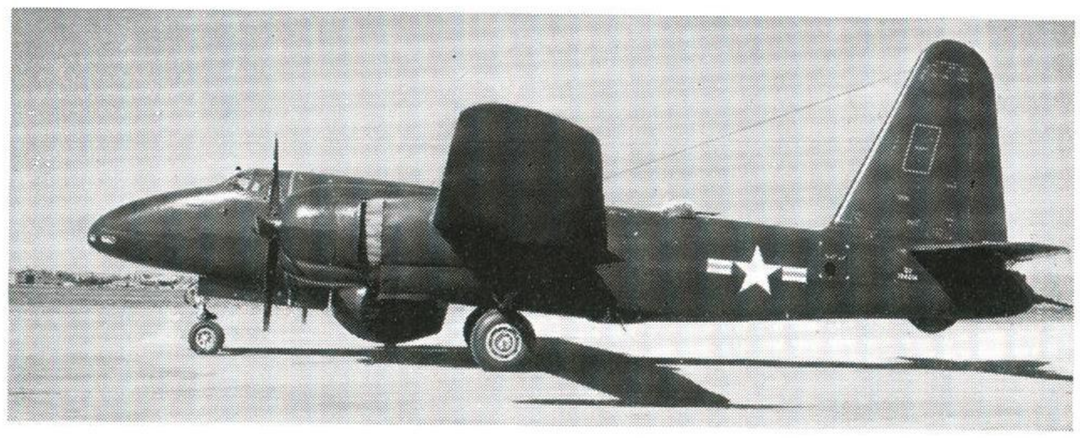
There is no doubt that such dominant features, when they exist, make the whole job of learning and practising recognition much easier. One can go even further, and say that dominant features at once cast a spell over the whole machine ; they give it a life of its own ; they colour it with individuality ; and invest the whole complexity of the aircraft's shapes with a unique and distinctive personality.

When an aircraft is thus seen to have one or more dominant features it is one of the hall-marks of a good instructor that he brings them out fully and in a lively manner, and by apt expression or analogy succeeds in fixing these features in the " eye-minds " of his pupils, thus making them appreciate the full force of the shape peculiarities.

But he will be only a " demi-good " instructor if he leaves it at that, although the temptation is strong to discontinue his task after a dramatic disquisition on some outstandingly dominant feature. We return here to the overall approach. For however much the aircraft is feature-dominated, it must be learnt overall too ; and the real quality of the instructor will emerge if he can manage to put over the relation of the dominant features to the other parts of the machine, and with the machine as a whole.

In practice this means getting the learners to scan the aircraft shapes with an intelligent " eye-mind " and all the time to keep the dominant features at the back (or on the side) of their minds so that there is a constant link between the nondescript and the especially significant shapes, and a constant appreciation of the total form to which they all contribute.

Neptune



Sheer size is one form of dominant feature—in this case the fin and rudder—which " casts a spell over the whole machine "

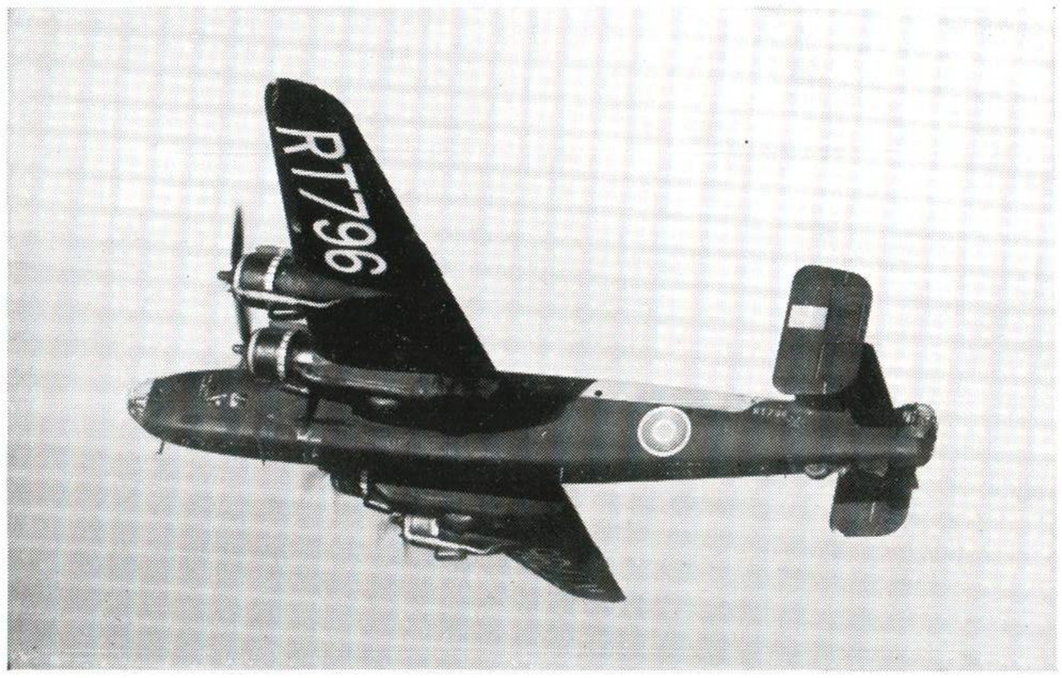
Panther



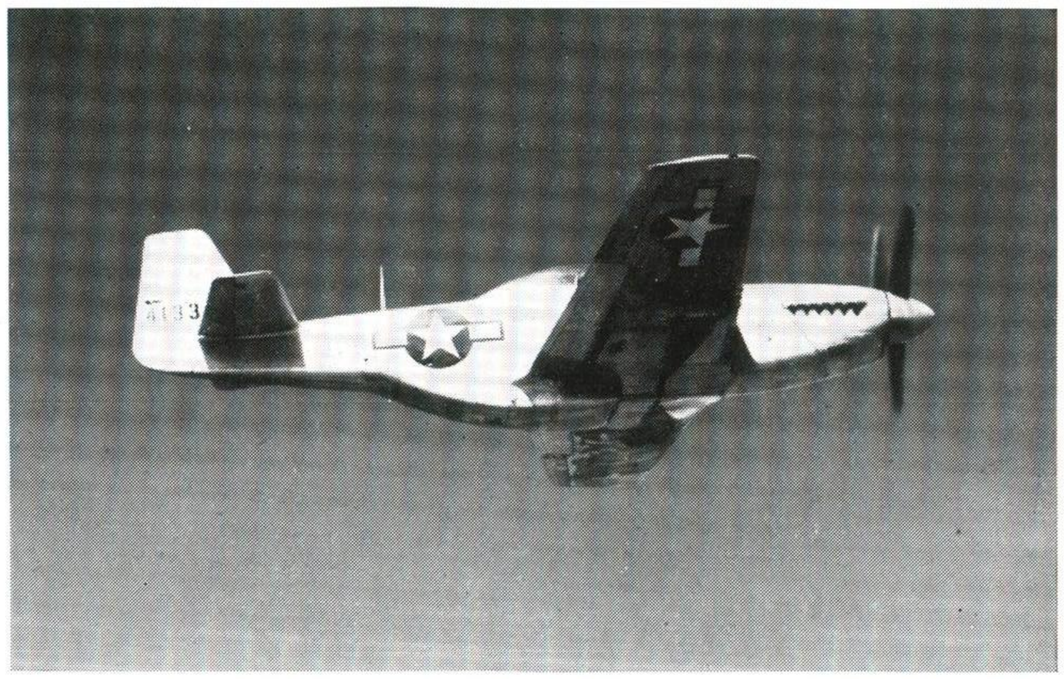
" It may be a case of two features being dominant because they contrast with each other "—the long nose and the short rear fuselage

A FURTHER SELECTION OF OLDER TYPES WHICH ARE

"STILL GOING STRONG"



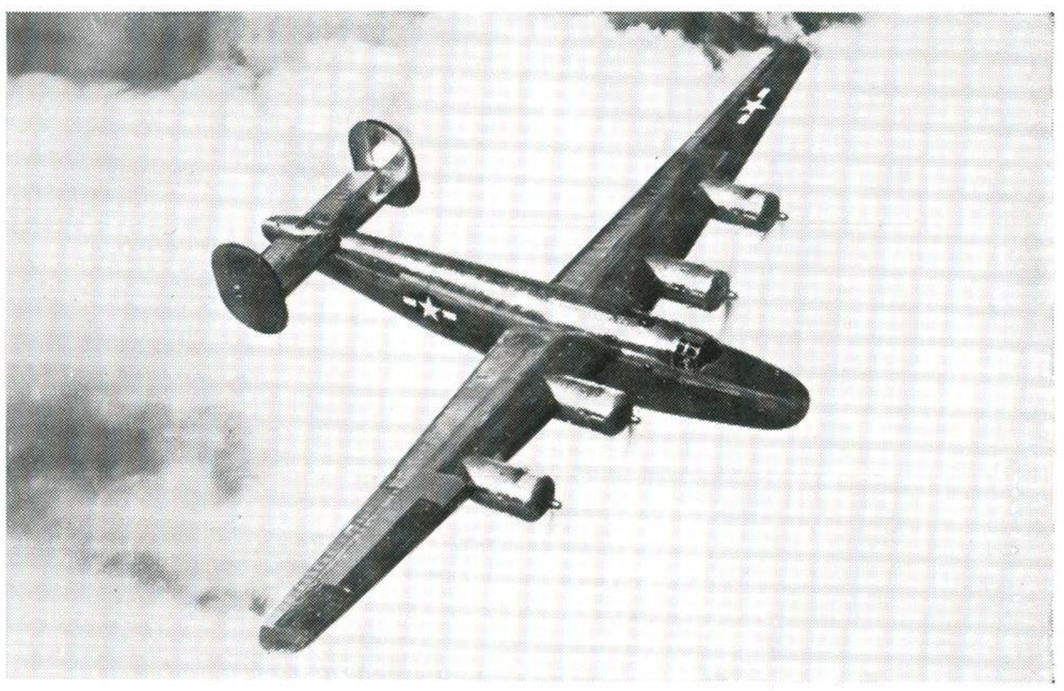
HALIFAX Shown here is a Halifax A Mk.9, still in service with the R.A.F. and France, Pakistan and Egypt also use it. **Span : 104 ft.**



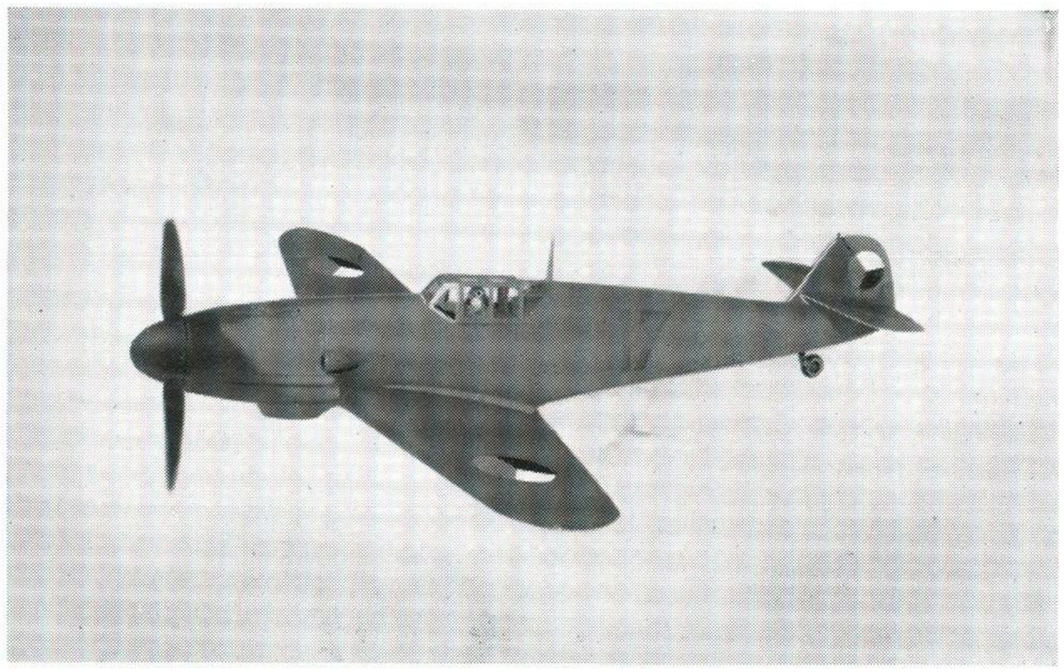
MUSTANG The North American Mustang is used today by a number of countries including U.S.A., Canada, China, and France. Above is an F-51D of U.S.A.F.
Span : 37 ft.



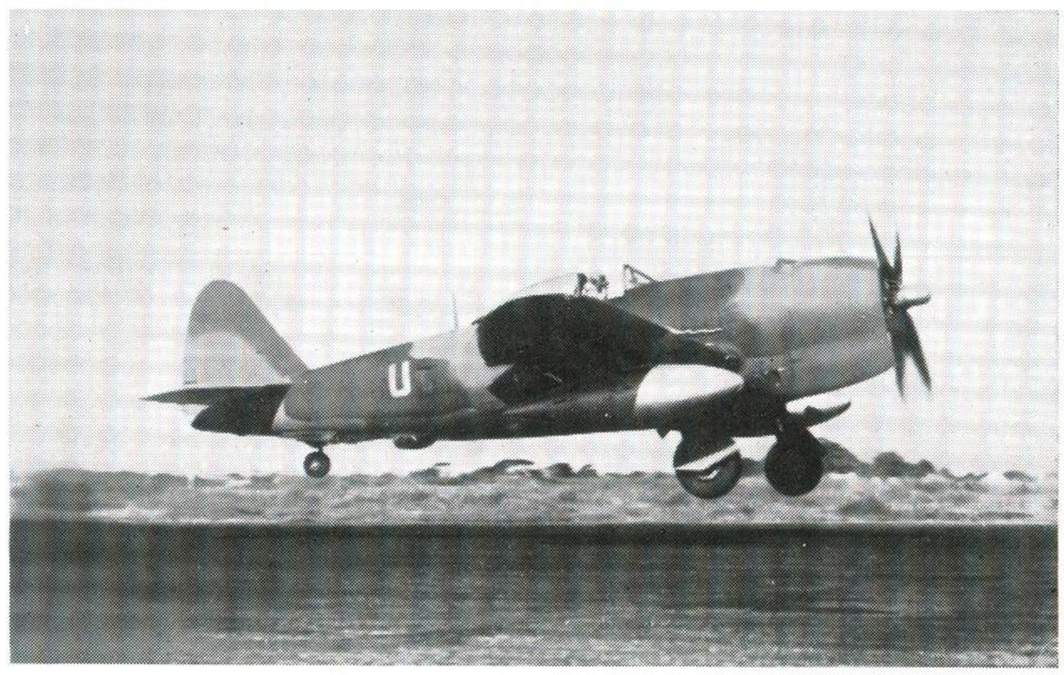
YORK Still a familiar sight to many spotters in Great Britain, the York is in service with the R.A.F. (C Mk.1 shown here) and with British Civil Airlines.
Span : 102 ft.



LIBERATOR Structurally in the same recognition class as the York, the Liberator is greatly dissimilar in character. A C-87 of U.S.A.F. is depicted. Also used by France, China and others. **Span : 110 ft.**



Me 109 Shown here is an Avia C.10 (Me 109G-14) of Czech Air Force. The Me 109 is also flying in China, Yugoslavia and other countries. **Span : 32 ft. 9 in.**



Thunderbolt Still used by numerous countries including France, China, Italy, and in the U.S.A.F. Reserve. We illustrate above an F-47D. **Span : 40 ft. 9 in.**

BRIEFS

R.A.F. Fighters

In a recent speech the Secretary of State for Air said that the biggest problem which faces the R.A.F. today is that of increasing the rate at which aircraft of the latest type are supplied for service. " The Russians have produced, with the aid of a British jet engine, an excellent fighter aircraft—the MIG-15—which is already in service in large numbers. Our standard fighter is the Meteor." The Secretary of State said that the Meteor was a good aircraft, but in some important respects inferior to the MIG-15. The new Hawker fighter would undoubtedly be superior to the MIG-15, but it would be a considerable time before it came into service in R.A.F. Squadrons. " In the meantime, we must continue to produce aircraft such as the Meteor."

More about Helicopters

Below we reproduce a front view of the Bristol Sycamore Mk.10 ambulance version of the Bristol 171 specially designed for air ambulance work and general communications. Two large perspex blisters have been incorporated in each side of the fuselage to house two stretchers one above the other, athwartships. The blisters can be replaced by ordinary faired units when the aircraft is required for communications duties.



High-speed helicopters are now being considered by British designers for fast point-to-point flying obviating the need for the long runways demanded by conventional fixed-wing aircraft. Present-day helicopters have the disadvantage that they cannot fly very fast between cities, and headwinds can easily disrupt schedules. The aim is to produce an aircraft capable of 200 m.p.h. or more which can take off from a city roof and make speedy flights between cities and across the Channel. Several designs have been considered including one where the aircraft stands on its tail for take-off and landing, and tips through 90 deg. for flight. Other interesting experiments include fitting small fixed-wings to the fuselages of present types of helicopters, and we may soon see such designs as the Westland S-51 experimentally so fitted.

Italian Jet

Fiat G-80 two-seat jet trainer aircraft has made its first flights. The machine is a low-wing type with cheek intakes not unlike the F-80, and a streamlined tandem cockpit cover spine-faired to the fin. The latter carries a " crosstree " tailplane. The G-80 has a tricycle undercarriage, and is powered by a de Havilland Goblin.

Mystère

A development of the Ouragan with a much increased sweep-back in the wing is now flying in France. The full designation is Dassault MD.452 Mystère. Rumoured that it may go into production instead of the Ouragan.



Gloster Delta

Two Armstrong Siddeley Sapphires give what we presume are deceptive reflections in the fuselage of the new Gloster GA.5 delta wing all-weather day and night long-range fighter. This is the world's first twin-jet delta, about which the following comment has been made by Mr. Percy Crabbe, Gloster's General Manager : " Since the war we have been building Meteors in a variety of developments. However, whilst Meteor production has been going on, we have been steadily at work in our design and experimental departments on new aircraft just as versatile as the Meteor but adapted for the maximum use not only of current jet power but foreseeable power into the future. The GA.5 Delta is our answer to this vital design problem. The low aspect ratio of the delta wing provides minimum change in stability and control characteristics at sonic speeds. The delta planform permits engines, undercarriage, fuel and equipment to be contained inside one smooth envelope and the shape permits a very rigid and economical construction. The airframe design itself is the corollary to the immense power demands of the twin Sapphires."

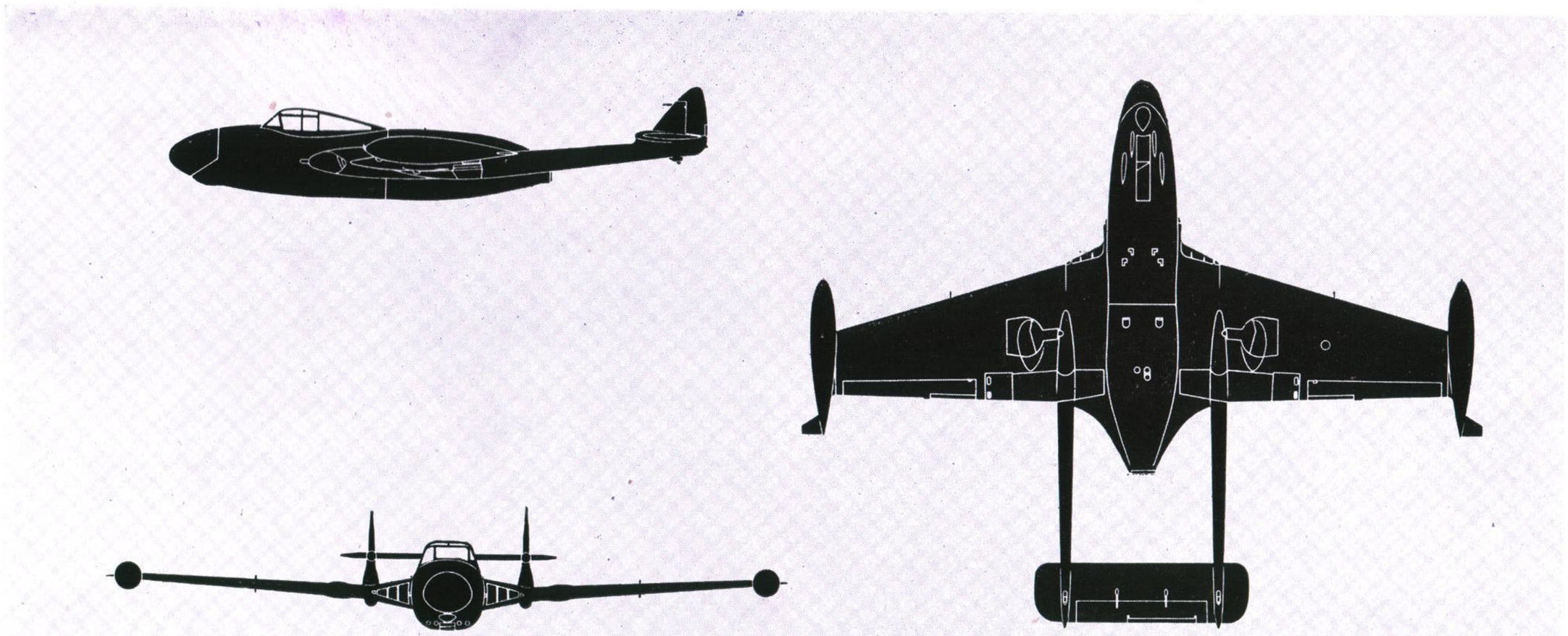
* * *

Multiplex Adaptability

A recent news release from Douglas informs us of a new version of the Skyraider which has multiplex adaptability. Douglas explain that AD-5 Skyraiders are produced as " universal chassis," along with packaged conversion kits. On board Navy carriers the AD-5 may thereby be readily converted to carry out any one of a dozen different rôles. Illustration of the AD-5 below.



IDENTITY PARADE — VENOM NF MK. 2



RECOGNITION DETAILS

Wings: mid-set, slight dihedral, tapered leading edge, straight trailing edge.

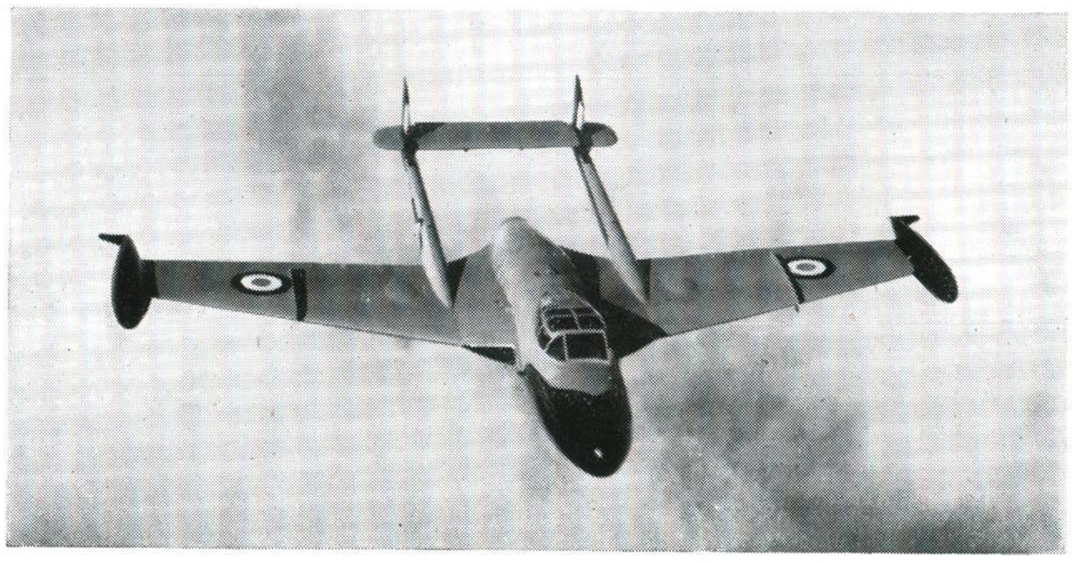
Fuselage: pod form with long nose, short jet-pipe faired to trailing edge of wings, twin-booms.

Tailplane: rectangular, set across top of booms with blunt-curved tips overlapping booms.

Fin and rudder: small, triangular.

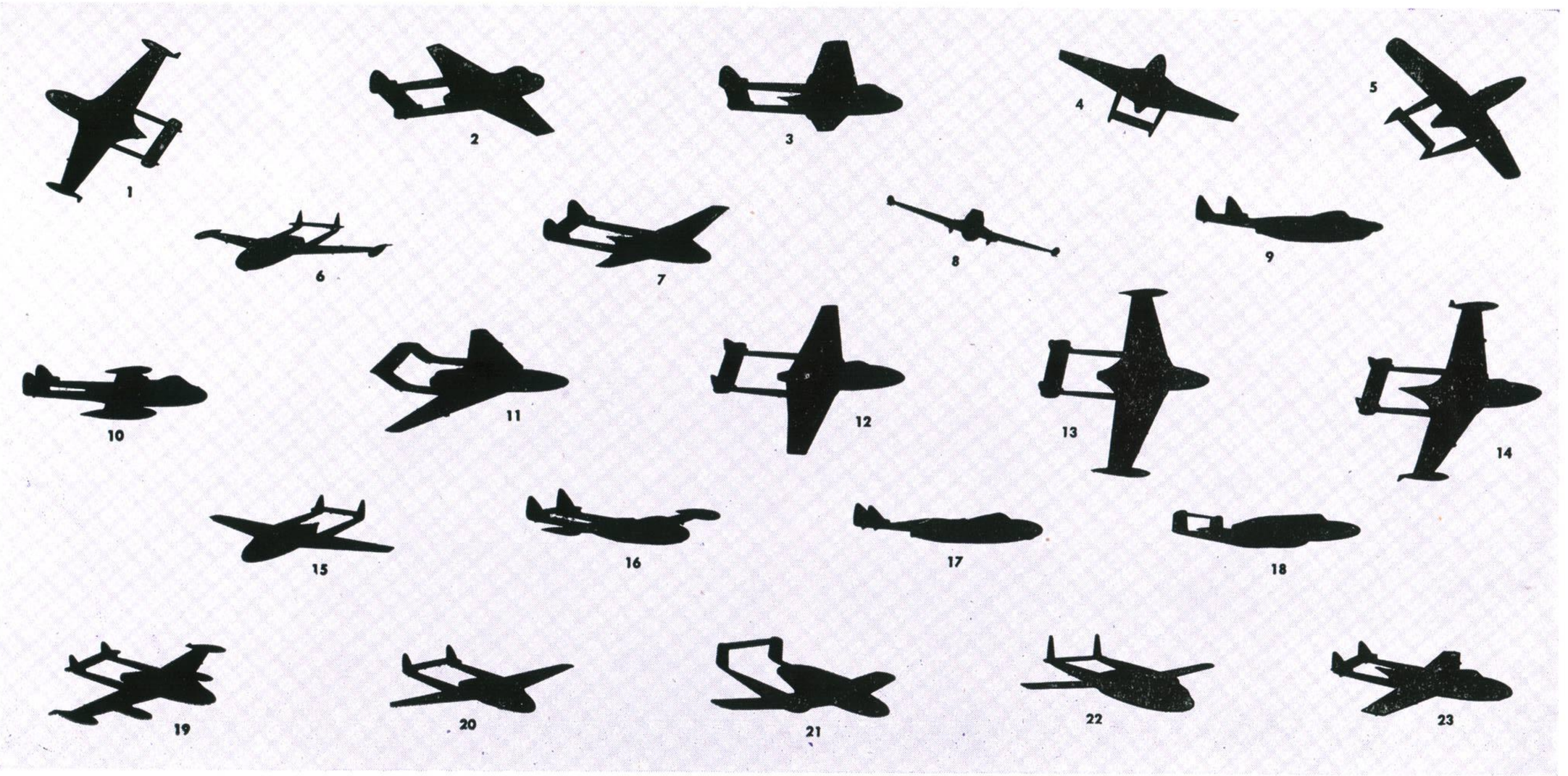
Detail: glasshouse cockpit canopy.

Span: 41 ft. 9 ins. **Length: 34 ft. 7 ins.**



With the aid of the information given above, identify the Venom NF Mk. 2 from amongst the twin-boom types below.

(ANSWERS ON REAR COVER.)



BOOK REVIEWS

FROM

JOHN W. R. TAYLOR

" Jane's All the World's Aircraft, 1951/52," compiled and edited by LEONARD BRIDGMAN. Sampson Low, Marston and Co., 25, Gilbert Street, London, W.1. 482 pp. Fully illustrated. Price £4 4s.

The year 1951 marked the tenth anniversary of the first flight of the first British jet-plane, and the most striking tribute to the genius of our designers is that, at the end of such a brief period of time, almost half of the aircraft illustrated in the British section of this latest issue of *Janes* are powered by turbojet and propjet engines. The gradual switch to jet-propulsion has been recorded faithfully in successive issues of *Janes*, together with the slow decay of British private-flying, the growing ascendancy of sweptwing jet-fighters and the advent of the delta.

The most knowledgeable enthusiast will find something new and much of interest in the 1951/52 *Janes*. Other readers will, as always, be able to spend hours studying world aviation progress in this, the world's greatest aeronautical reference book.

" Marshal Without Glory," by EWAN BUTLER and GORDON YOUNG. Hodder and Stoughton Ltd., Warwick Square, London, E.C.4. 288 pp. Illustrated. Price 15s.

This is the biography of a gallant young fighter pilot who, by energy, diplomacy, loyalty to a tyrant and ruthless cunning, rose by 1939 to be commander-in-chief of the world's most powerful air force. It tells also of his private life and loves, with again the same mixture of loyalty and ruthless ambition. And it shows how the attributes which brought him power and greatness finally destroyed him.

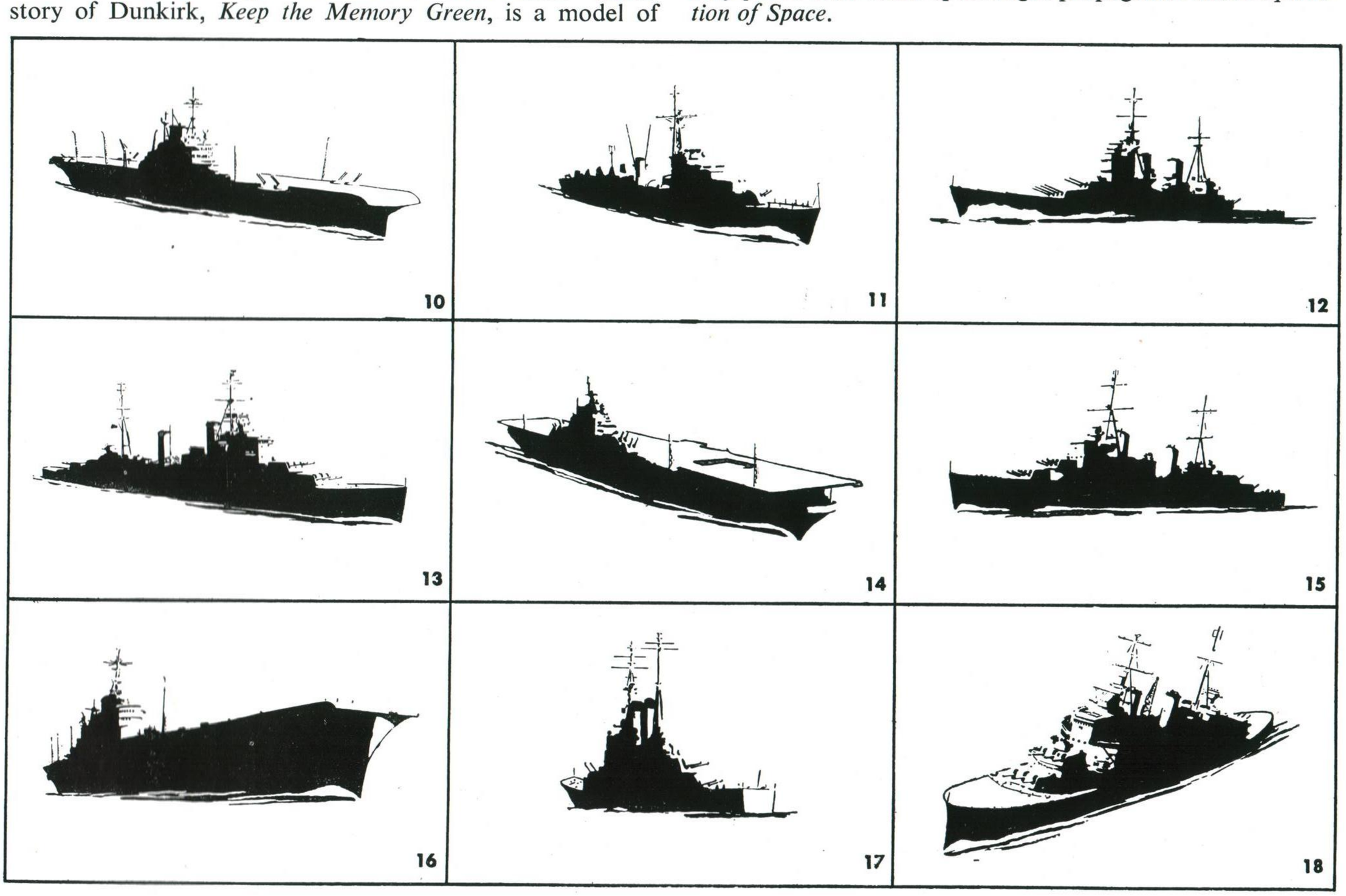
The man is Goering. The authors Ewan Butler—whose story of Dunkirk, *Keep the Memory Green*, is a model of readable history—and Gordon Young. The result is a first-class biography, a terrible indictment of National Socialism and a most interesting study of the rise and fall of the Luftwaffe.

" Boxcars in the Sky," by RICHARD MALKIN. Import Publications (New York). Obtainable from J. B. Tratsart, 5, London Street, London, W.2. 288 pp. Illustrated. Price 45s.

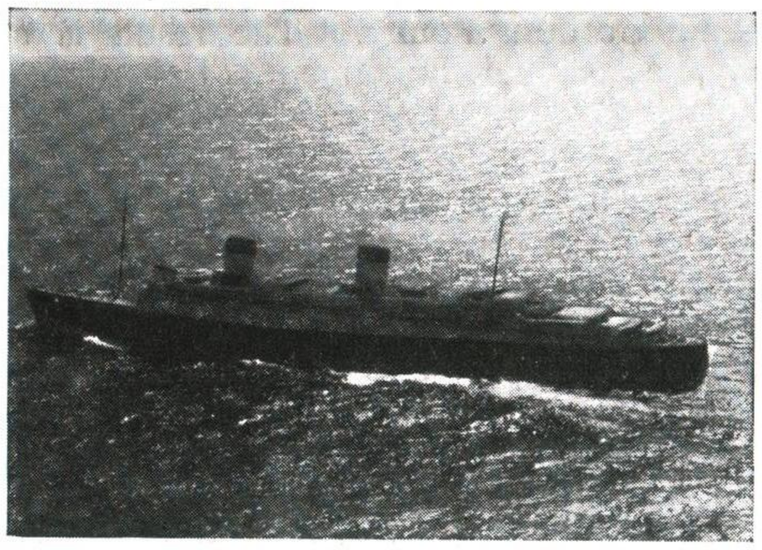
A rather " wordy," but comprehensive and valuable book covering the history and possibilities of cargo-flying. In it, one meets the aircraft and men who have built up the air freight business—the G.I. who brought his experience of flying ammunition over the " Hump " to solve the transport problems of a New York dress manufacturer ; the farmer who could not get his stock to market ; the doctor with a life to save a thousand miles away ; the general who had to smash a Russian blockade ; the restaurateur who found a new way of obtaining fresh, exciting seafoods for his customers ; the housewife with vitamins on her mind—a host of people just like ourselves, which is hardly surprising as air cargo is playing an ever-increasing part in our daily lives. It is impossible to realise just how great a part it is playing until one has read *Boxcars in the Sky*.

" The Sands of Mars," by ARTHUR C. CLARKE. Sidgwick and Jackson Ltd., 44, Museum Street, London, W.C.1. 220 pp. Price 10s. 6d.

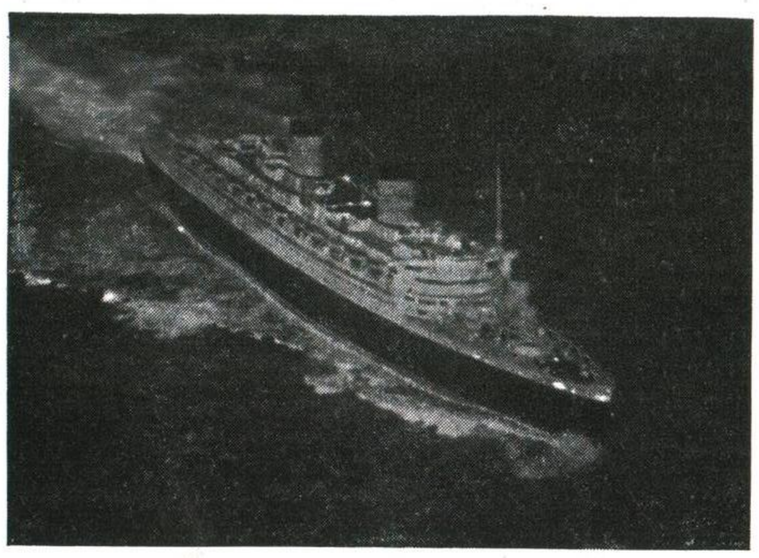
When recommending Mr. Clarke's *Exploration of Space* last month, we remarked that not only did he explain how we may one day be able to fly to the planets, but what we might do when we get there. Now, in *The Sands of Mars*, he has gone beyond the world of fact and scientific deduction into the realms of science fiction, and proved himself a master of this also. His story of a voyage to Mars in the space-ship *Ares* and of the life there of the first colonists from Earth is absorbing and, except for the introduction of such things as his lovable little Martian, based on scientific knowledge. It may prove even better space-flight propaganda than *Exploration of Space*.

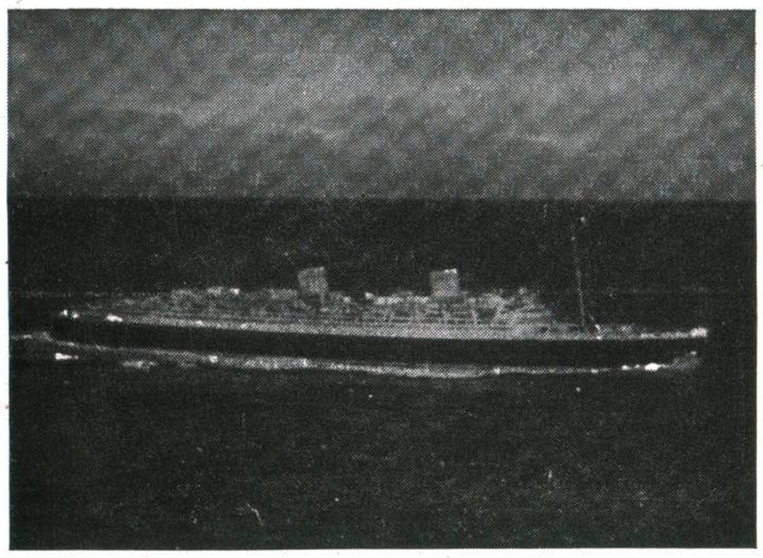


SHIP SHAPES



Cover : R.M.S. *Queen Elizabeth* on passage New York to Southampton. Other pictures below.





SOLUTIONS TO TESTS AND TRAINERS IN THIS EDITION:

If you are unable to recognise any ship, tank or aircraft in the test or trainer illustrations, try to identify it with the aid of silhouettes or other illustrations before checking with lists below.

ELEMENTARY

145. **Boulton Paul P.111**
146. **Seafury** (T Mk.20)
147. **Avro 707B**
148. **Gannet**
149. **Short SA-4**
150. **Scorpion** (F-89A)
151. **Sabre** (F-86A)
152. **Sycamore** (Mk.3)
153. **Provost** (T Mk.1)
154. **Wyvern** (TF Mk.4)
155. **Canberra** (B Mk.2)
156. **Savage** (AJ-1)
157. **Sea Prince** (T Mk.1)
158. **Sabre** (F-86A)
159. **Noratlas** (Nord 2501)
160. **Firefly** (AS Mk.7)
161. **Panther** (F9F-3)
162. **YAK-9**

ADVANCED

286. **Thunderjet** (F-84E)
287. **TU-4** (B-29)
288. **IL-2**
289. **Saab J-29**
290. **MIG-9**
291. **Shooting Star** (TO-2)
292. **Panther** (F9F-3)
293. **Sabre**
294. **Sikorsky S.55** (H-19A)
295. **Sabre** (F-86A)
296. **Ilyushin Twin-Jet**
297. **Marlin** (P5M-1)
298. **Starfire** (F-94B)
299. **Bearcat** (F8F-1)
300. **Sturgeon** (TT Mk.2)
301. **Instructor** (S.11)
302. **Banshee** (F2H-2)
303. **Savage** (AJ-1)

SILLOGRAPHS

172. **Viscount**
173. **Venom** (NF Mk.2)
174. **Scorpion** (F-89A)
175. **Sealand**
176. **Tigercat** (F7F-3)
177. **Panther** (F9F-3)
178. **Stratojet** (B-47A)
179. **LA-9**
180. **Sabre** (F-86A)
181. **TU-2**
182. **Corsair** (F7U-4)
183. **YAK-9P**
184. **Canberra** (B Mk.2)
185. **Viking** (Mk.1B)
186. **Ilyushin Twin-Jet**
187. **Superfortress** (B-50D)
188. **Hornet** (F Mk.3)
189. **Convair** B-36D)

"SINGLE-JET" TYPE TUTOR

1. **Scorpion** (F-89)
2. **Shooting Star** (F-80)
3. **Canuck** (CF-100)
4. **Skyknight** (F3D-1)
5. **Canuck** (CF-100)
6. **Starfire** (F-94B)
7. **Panther** (F9F)
8. **Skyknight** (F3D-1)
9. **Scorpion** (F-19)
10. **Shooting Star** (F-80)
11. **Panther** (F9F)
12. **Skyknight** (F3D-1)
13. **Canuck** (CF-100)
14. **Starfire** (F-94A)
15. **Panther** (F9F)
16. **Starfire** (F-94A)
17. **Scorpion** (F-89)
18. **Shooting Star** (F-80)
19. **Shooting Star** (F-80)
20. **Panther** (F9F)
21. **Starfire** (F-94B)
22. **Panther** (F9F)
23. **Skyknight** (F3D-1)
24. **Canuck** (CF-100)
25. **Scorpion** (F-89)
26. **Panther** (F9F)
27. **Scorpion** (F-89)
28. **Canuck** (CF-100)
29. **Shooting Star** (F-80)
30. **Canuck** (CF-100)
31. **Scorpion** (F-89)
32. **Starfire** (F-94B)
33. **Scorpion** (F-89)
34. **Skyknight** (F3D)
35. **Panther** (F9F)
36. **Shooting Star** (F-80)
37. **Panther** (F9F)
38. **Shooting Star** (F-80)
39. **Canuck** (CF-100)
40. **Skyknight** (F3D)
41. **Panther** (F9F)
42. **Starfire** (F-94)
43. **Scorpion** (F-89)
44. **Canuck** (CF-100)
45. **Panther** (F9F)
46. **Canuck** (CF-100)
47. **Skyknight** (F3D)
48. **Starfire** (F-94)
49. **Skyknight** (F3D)
50. **Panther** (F9F)
51. **Scorpion** (F-89)
52. **Shooting Star** (F-80)

SHIP SHAPES

10. **British Illustrious Class Carrier**
11. **British Weapon Class Destroyer**
12. **British King George V Class Battleship**
13. **British Uganda Class Cruiser**
14. **American Essex Class Carrier**
15. **British Southampton Class Cruiser**
16. **British H.M.S. Eagle Carrier**
17. **British H.M.S. Vanguard Battleship**
18. **British Southampton Class Cruiser**

SEMI-SILLOGRAPHS

85. **Neptune** (P2V-2)
86. **Canberra** (B Mk.2)
87. **Provost** (T Mk.1)
88. **Hermes** (Mk.4)
89. **Meteor** (F Mk.8)
90. **Meteor** (NF Mk.11)
91. **Firefly** (FR Mk.1)
92. **Ambassador**
93. **Skymaster** (C-54)

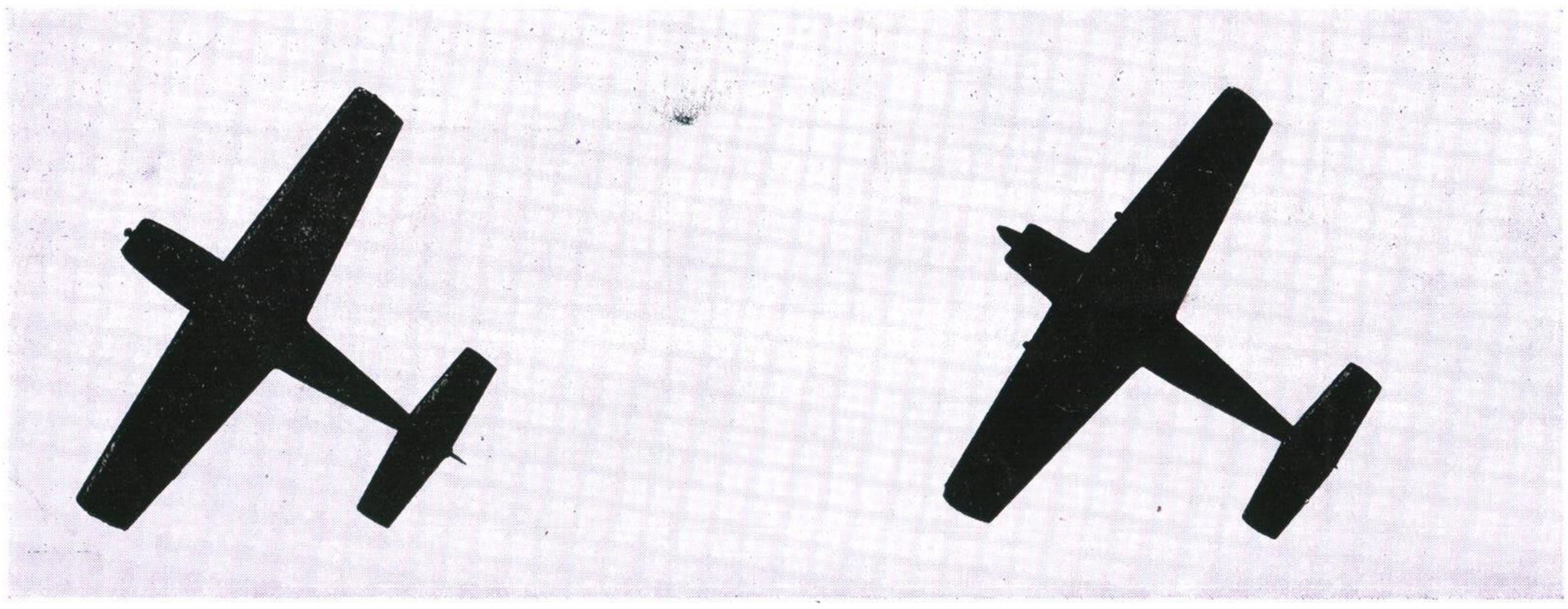
PERPLEXING PAIR

Left ; Navion. *Right* ; Provost.

DOVE AND CORSE SILLOGRAPHS

1. **Corse**
2. **Corse**
3. **Corse**
4. **Dove**
5. **Corse**
6. **Corse**
7. **Dove**
8. **Dove**
9. **Corse**
10. **Dove**
11. **Dove**
12. **Corse**
13. **Corse**
14. **Corse**
15. **Dove**

PERPLEXING PAIR



IDENTITY PARADE— VENOM NF Mk.2

1. **Sea Venom** (NF Mk.20)
2. **Vampire** (FB Mk.5)
3. **Sea Vampire** (F Mk.20)
4. **Vampire** (FB Mk.5)
5. **Saab J-21R**
6. **Venom** (NF Mk.2)
7. **Sea Vampire** (F Mk.20)
8. **Venom** (NF Mk.2)
9. **Venom** (NF Mk.2)
10. **Venom** (FB Mk.1)
11. **D.H.110**
12. **Vampire** (NF Mk.10)
13. **Venom** (FB Mk.1)
14. **Sea Venom** (NF Mk.20)
15. **Sea Vampire** (F Mk.20)
16. **Venom** (NF Mk.2)
17. **Venom** (NF Mk.2)
18. **Saab J-21R**
19. **Venom** (FB Mk.1)
20. **Vampire** (FB Mk.5)
21. **Saab J-21R**
22. **Packet** (C-119B)
23. **Sea Venom** (NF Mk.20)

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