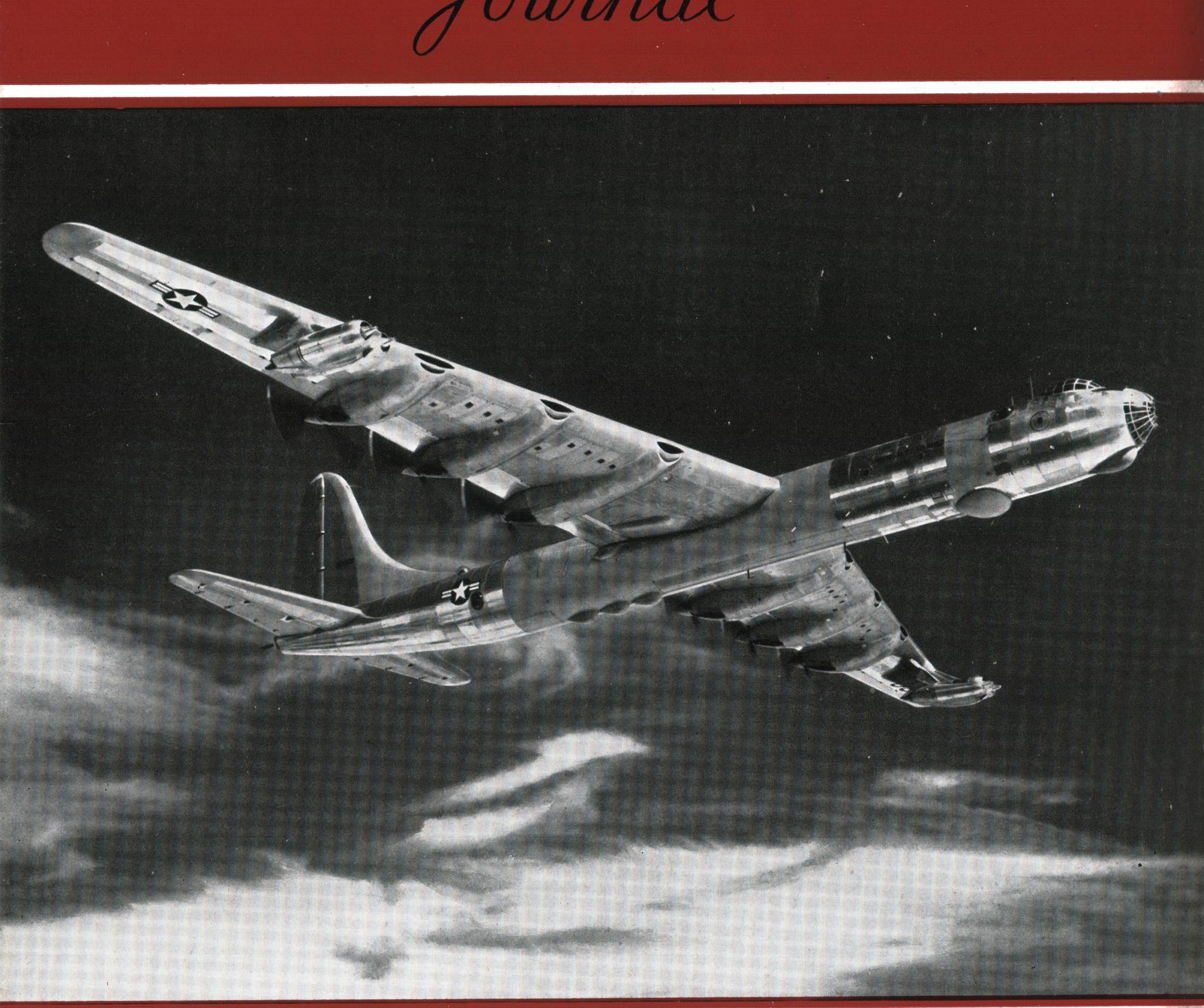
JOINT SERVICES

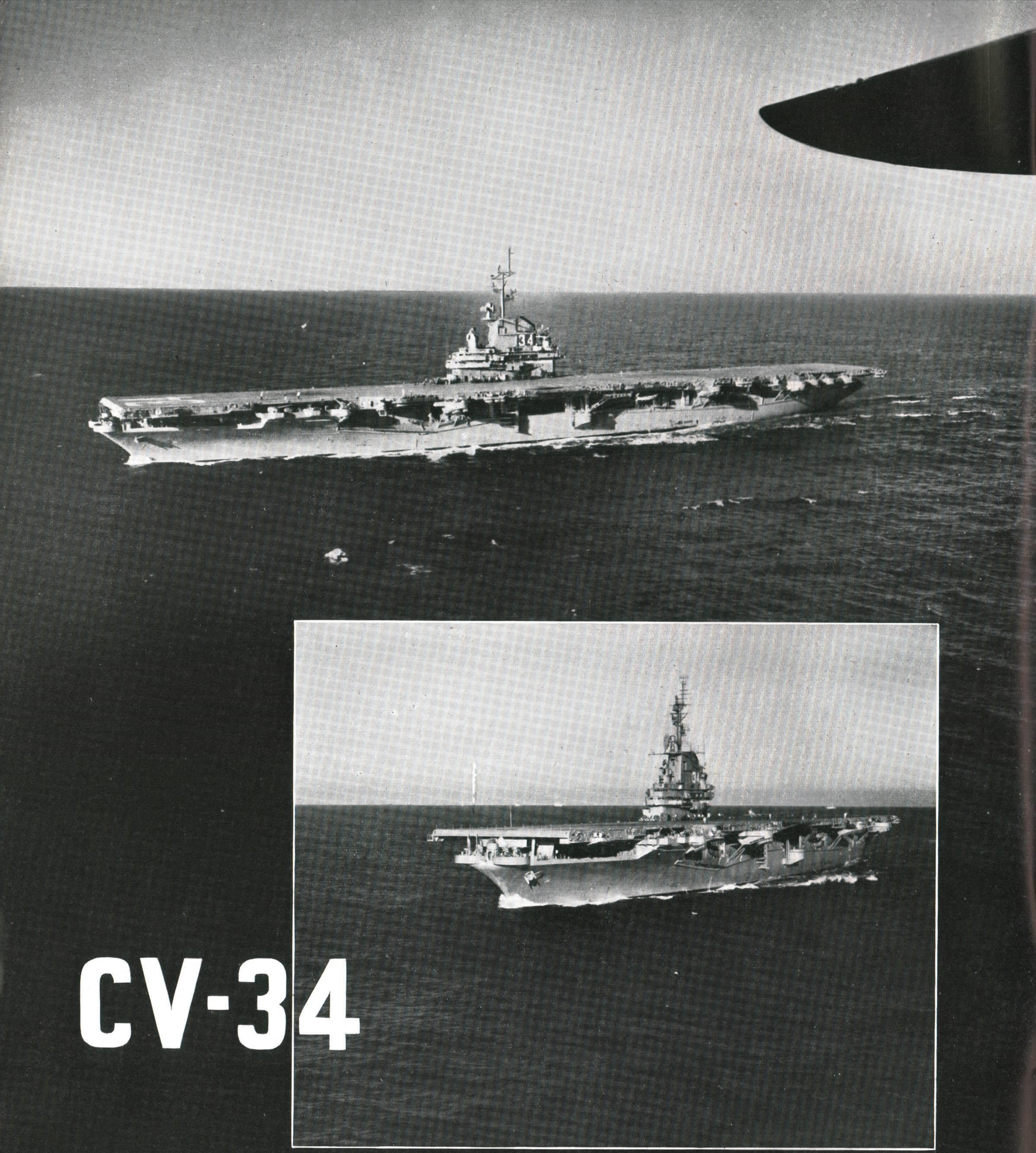
RECOGNITION

Journal



Vol. 6 MAY 1951 No. 5

For official use only



CV-34

THESE are the first views of the U.S.S. " Oriskany," an improved "Essex" class carrier, designed to meet the needs of jet-propelled carrier-borne aircraft. In these views, " Oriskany " appears to differ from others of her class only in having a smaller overall island structure, caused by removal of turrets fore and aft. She is reported, however, to have larger aircraft lifts, more powerful catapults, a stronger flight deck and increased stowage for petrol. Other features visible here are: sharply raked bow, circular gun platforms on the forecastle head and the ship-side aircraft lift.

MAY 1951 Vol. 6 No. 5

JOINT SERVICES

RECOGNITION JOURNAL

The *Joint Services Recognition Journal* is a monthly publication prepared and produced by the Assistant Chief of Air Staff (Training), Air Ministry, in collaboration with the Ministry of Supply—Controller of Supplies (Air)—Air Technical Publications. Contributions and correspondence should be addressed to the Editor, *Joint Services Recognition Journal*, Air Ministry, Room 213, Metropole Buildings, Northumberland Avenue, W.C.2.

CONTENTS

Feature	Page
Convair B-36D (Cover)	97
CV-34 U.S.S. Oriskany	98
Study Groups (Editorial)	99
Tramps (Ship section)	100
In Passing . . .	102
Banshee	103
Saab J.29 in Production	104
Highlights	105
Multi-Type Tutor	106
Convair B-36D	108
Character Study—Convair B-36D	110
Elementary Spotting	111
Centurion 2 and 3 (Tank section)	112
Sillographs	114
The English Electric Canberra	115
Advanced Spotting	117
Tank Test	118
Silhouettes—Saab J.29 and MIG-15	119
Solutions to Recognition Tests in this Edition	120

STUDY GROUPS

THE ADVENT OF THE TURBOJET is radically altering aeroplane shapes, and a situation has arisen in which it is no longer always possible to present aeroplanes for recognition training purposes by the time-honoured method of grouping them by the number and types of engines.

Large permanent objects like nacelles, growing upon aeroplane wings, have always been and will remain, of great visual recognition importance, because they automatically provide clues enabling the spotter to eliminate a large number of possible identities. But the nacelles which hitherto contained and were called " engines " are, in many cases, disappearing and in others, contain groups of engines. Other structural innovations have added to the problem and it has become necessary to devise a convenient, flexible system of grouping aeroplanes so that types which are similar in appearance can be presented together under collective titles.

The greatest problem arises in the presentation of land monoplanes. Fortunately they seem to fall more or less naturally into three main structural groups. These are :— visual-single types ; visual-twin types ; and visual-multi types. We shall refer to them briefly as " single-types ", " twin-types " or " multi-types ".

The name " single-type " refers to any aircraft in which power units are contained within the fuselage, or embodied in the wing structure in such a way that, from the point of view of visual recognition, they cannot be discerned. For presentation purposes we should include within this structural group such aircraft as the Banshee, and, on occasion, the Comet, although the Banshee has two turbojets and the Comet four. It might also be convenient at times to include certain types of glider in this group.

The " twin-type " group includes aircraft which clearly show one nacelle upon each wing irrespective of the number of engines contained in those nacelles. In other words all aircraft which appear to be " twin-engined ". In this group would be included such aircraft as the B-45 Tornado and the P4M-1 Mercator, both of which aircraft have, in fact, four engines. Tri-motored types would also be included in this group as occasion demanded, since, visually speaking, they remain twin-types.

The term "multi-type" includes aircraft which have four or more nacelles clearly discernible on the wings irrespective of the number of engines contained within each nacelle. In short, those aircraft which appear " multi-engined ". In this group will be found such aircraft as the B-50 and the B-36.

We must make it clear that this is not a rigid system of classification for its own sake. It is a natural and convenient method we have adopted for the *Journal*, of relating aeroplanes by their appearances. It has great advantages in recognition training since similar types are brought together and differences made more obvious, and it may provide instructors with a fruitful field for the development of schemes of presentation in recognition rooms.

Structural groups need not only refer to engines or nacelles. Flying boats, biplanes, and helicopters fall naturally into their own groups. Delta-wings and tail-less types form a convenient structural group of their own. Certain swept-wing types can be presented together with advantage. In our next edition we are presenting a number of " boom-types ", that is, a selection of aircraft with twin-booms or twin fuselage structural layouts. The " single " " twin " and " multi-type " main groups can also be conveniently sub-divided as occasion demands. There is no reason why individual aircraft cannot be included in more than one group if it helps to teach shape.

In all grouping systems there are bound to be anomalies ; but this one seems to be cursed with less of them than any other. We shall be pleased if readers will set to work and think up some awkward aircraft which defy grouping in this way and at the same time send us suggestions for small groups for inclusion in the *Journal*.

TRAMPS

by Flight Lieutenant R. M. DYE

THE trained observer in warship recognition will normally have little difficulty in deciding the nationality of his target, for "national characteristics" are both common and clear cut. Just as the man in the street can unhestitatingly tell the Asiatic from the European by shape, proportion and physical characteristics, so the ship spotter can tell the characteristic silhouettes of the warships of one country as opposed to those of another. Furthermore, the vast majority of naval vessels fall into seven clear groups : battleships, aircraft carriers, cruisers, destroyers, frigates, submarines and those glibly disposed of as " small craft ".

The would-be spotter of merchant ships is faced with an infinitely more difficult task, for there are virtually no clear signs of nationality to be seen. Indeed, what few



This ship would be identified as a small tramp of 4,500 tons. In actual fact she is an ore-carrier and provides a problem in tonnage estimation, and an example of how the system mentioned in this article does not always work. Her tonnage is actually 3,500 tons.

exist serve only to confuse because of international ownership of vessels of all classes (witness the so-called " Liberty " ships).

What information then is the observer to deduce from the examination of the average merchant vessel ? He must be trained to report three things. First, to describe a ship's appearance briefly and accurately. Secondly, to decide the vessel's duty (passenger-liner, tanker, train ferry, etc.). Thirdly, to estimate tonnage. The purpose of this article is not to cover the first of these three requirements, for notes on both naval and merchant ship description have already appeared in this journal.

Let us first consider the final requirement, the estimation of tonnage. There are many other systems of tonnage estimation, but we are going to concentrate on one.

When the tonnage of a merchant ship is referred to, it means (unless otherwise stated) its gross registered tonnage. This is really a measure of the ship's internal capacity rather than its weight, and is calculated at the rate that one hundred cubic feet of completely



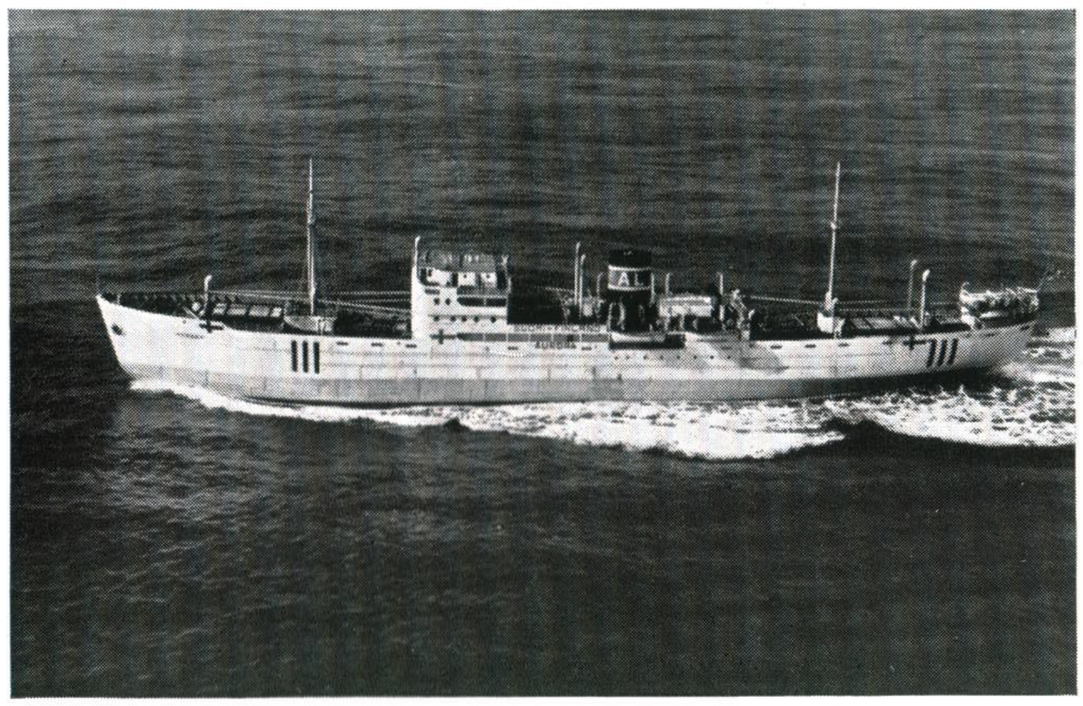
An interesting example of how colouring can alter the appearance of a ship's lines. This is also an ore-ship similar in class to the one illustrated left, converted to a hospital ship.

enclosed space equals one gross ton. Thus the building of a small deckhouse will add several gross tons to the vessel although it may mean only a fraction of a ton in extra weight. It is most important that this is borne in mind by the observer as obviously no method of gross tonnage estimation can be accurate if large sections of superstructure are left unallowed for.

Now let us analyse the most common of all merchant ship types, bearing in mind that the only way to ensure recognition is to appreciate the factors influencing a particular type's design.

THE TRAMP

The term Tramp is essentially a British one, and in Canada and the United States of America the usual term is Freighter. Tramp-ships do not ply set routes but go wherever there is work to be done. In the days gone by this led them to cover many thousands of miles before they returned to their home ports, and meant that crews would be, on occasion, literally years away from home. A tramp can carry any kind of cargo, the line only being drawn at specialized loads such as oil or perishable fruits. To facilitate the loading and unloading of the cargo the holds have large hatches to them and are serviced by derricks attached to sturdy king posts.



Typical modern medium-size tramp (5,000 tons). This ship is in ballast and therefore shows more of her hull, also, incidentally, causing the " cruiser spoon " stern to look rather like a counter-stern.

Naturally it is difficult to see the actual hatches from any distance but the spacing of the king posts still makes counting the hatches an easy business even to the inexperienced eye. The importance of this is explained later.

As might be expected in a vessel designed for the economical transport of bulky cargoes the speed is not high, and this, combined with the lack of set routes, means that few passengers are carried. The result of less than a dozen passengers on the appearance of the tramp is that superstructure is kept to a minimum. The necessity for easy access to the holds is another reason for minimizing superstructure.

The funnel position is of immense value to the ship spotter and in the tramp it is almost always to be found amidships. Its height and shape will obviously vary with the age and size of vessel encountered, but it is of such value that Sherlock Holmes might well have written one of his famous monographs on it. Generally we may say that the taller the funnel appears to be, the smaller is the ship. Broadly speaking, the fatter the funnel the more modern the ship, and, in the case of the tramp, the further it is from the bridge the larger is the ship. A number of Japanese and Italian tramps are built with engines (and thus funnels) aft, but they are rare and bear all the other hallmarks of the type.

In the estimation of gross tonnage the observer, especially the air observer, should bear in mind that a system must be used. Guesswork never is successful and caused immense trouble during the last war. Particular care must be taken to avoid over estimation in the case of a vessel in ballast (lightly laden or empty) for it will ride much higher in the water and give the novice a false impression of size. The recommended method is to count the number of hatches and allow a certain gross tonnage for each hatch, the figure varying with the type of tramp. This method is not foolproof, but will give a result to within 1,000 gross tons in over 80 per cent of the cases, and is certainly preferable to any method relying on length estimation. Allow as follows :

Small (4 hatches) : 750 tons per hatch.

Medium Tramps (5 hatches) : Old—1,000 tons per hatch. Modern—1,100 tons per hatch.

Large Tramps (6 or more hatches) : Modern—1,300 tons per hatch. Old—1,000 tons per hatch.

In a number of old tramps the amidships or " cross-bunker " hatch is much smaller, and greater accuracy is achieved by regarding this as only half a hatch (i.e. 500 tons) for tonnage estimation purposes. Due to the universal lack of superstructure in the tramp no allowance need be made for it.

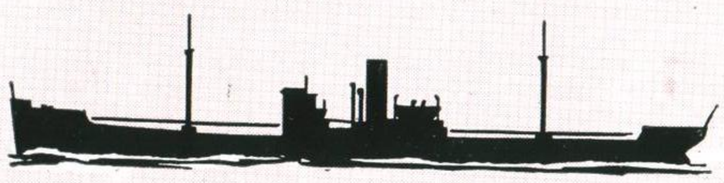
RECOGNITION SUMMARY OF A TRAMP

1. Single funnel amidships.
2. Not less than four large hatches interspaced by heavy masts and king posts.
3. Very little superstructure (covers no more than one-quarter of the hull length).

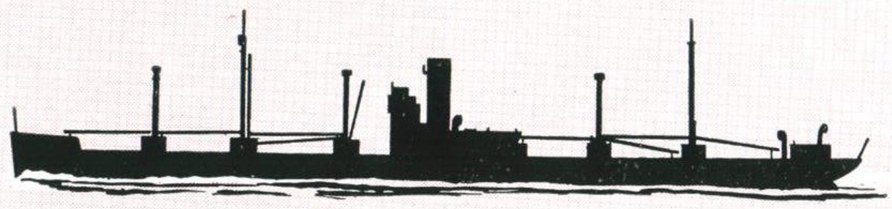
TYPES OF TRAMPS



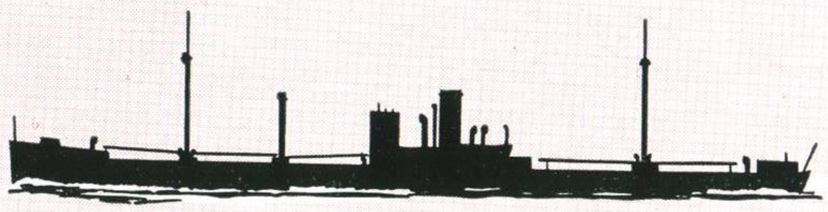
Small old tramp



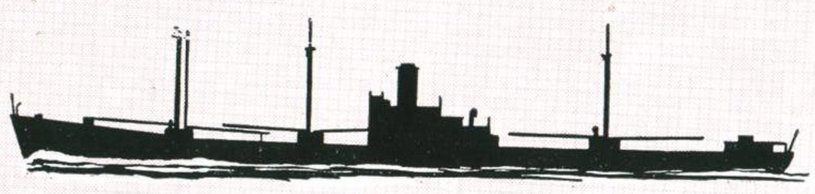
Medium old tramp



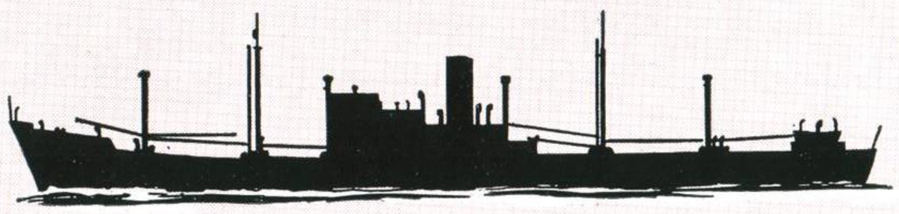
Large old tramp



New medium tramp



Large modern tramp—Liberty ship



Large modern tramp



Spotting Possibles in Britain

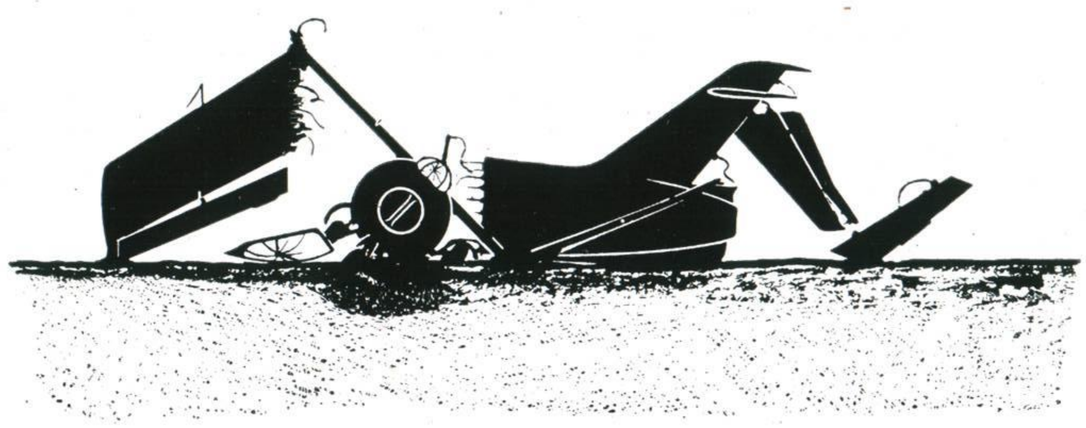
The following revised list replaces that in the August, 1950, *Journal* :—

Aeronca (C.3, 50 and 100)
Aerovan
Aiglet (Auster)
Air Horse
Airmaster (Cessna C-34)
Albemarle
Ambassador
Anson
Apollo
Argus
Aries (Miles)
Arrow (Auster)
Ashton
Athena
Attacker
Auster
Autocar (Auster)
Autocrat (Auster)
Avenger
Avian
Avro 504
Avro 707B
A.W.52
Balliol
Barracuda
Beaufighter
Beauty (BHT-1)
Beaver (DHC-2)
Belfair (Tipsy)
Bell 47
Benes-Mraz Bibi
Bestmann (Bücker 131)
Blackburn B.2
Blackburn YA-5
Blackburn YB-1
Bobcat (Cessna C.78)
Bonanza
Boulton Paul P.111
Bretagne (S0.30P)
Brigand
Bristol Fighter ("Brisfit")
Bristol 170 (Freighter and Wayfarer)
Bristol 171
Buckmaster
Cadet (Avro)
Canadair C.4
Canberra
Cessna 140
Chilton
Chipmunk
Cierva C.30
Comet
Commando (C-46)
Constellation
Consul (and Oxford)
Convair-Liner
Convair B-36D
Courier (Airspeed)
Cygnet (G.A.L.)
Cygnet (Hawker)
Dakota
D.H.86
D.H.113
Douglas DC-4 (Skymaster)
Douglas DC-6
Dove (and Devon)
Dragon
Dragonfly (D.H.)
Dragon-Rapide (ex-Dominie)
Drone (B.A.C.)
Elf (Parnall)
Ercoupe
Expeditor
Fairey 17
Fairey FD-1
Falcon (Miles)
Fiat G.212
Finch (Fleet 7c)
Firebrand
Firefly
Firth FH.01
Flamingo
Fokker F.22
Fokker S.11 (Instructor)
Fortress (B-17)
Fox Moth
Fulmar
Gemini
Globemaster (C-124)
Gloster E.1/44
Göeland
Gyrodyne
Hadrian
Halifax (and Halton)
Hamilcar
Handley Page HPR-2
Harrow
Hart
Harvard
Hastings
Hawker P.1052
Hawk Major (Miles)
Hawk Speed Six (Miles)
Hawk Trainer 3 (ex-Magister)
Heath Parasol
Hendy Heck
Hermes
Heron
Hiller 360
Hillson Praga
Hirtenberg HS-9A
Hornet (and Sea Hornet)
Hornet Moth
Horsa
Hurel-Dubois HD-10
Hurricane
IL-12
Invader
Junior (F airey)
Junior (Junkers)
Junkers Ju52/3m
Junkers Ju-86
Kitten (Dart)
Klemm L.25
KZ. VII Lark
Lancaster
Lancastrian
Languedoc (SE. 161)
Leopard Moth
Liberator
Lignel 46
Lockheed 12A
Lockheed 14
Lockheed 18 (Lodestar
Luton Minor
Mallard
Marathon
Martinet
Master
Messerschmitt Me108
Mentor (Miles)
Mercator (P4M-1)
Mercurey (Boisavia)
Mercury (Miles)
Messenger
Meteor
Mew Gull
Mitchell
Monarch (Miles)
Monitor
Mosquito (and Sea)
Mosscraft MA-4
Moth (DH. 60)
Moth Minor
Motor-Tutor
Mustang
Navigator (Beech T.7)
Navion
Neptune
Newbury Eon
Nighthawk
Norecrin (Nord 1203)
Packet (C-82 and C 119)
Percival P.56
Petrel (Percival Q.6)
Phoenix (Heston)
Pioneer (Scottish Aviation)
Piper Cub
Piper Super Cruiser
Prefect (Avro)
Prentice
Primer
Prince (and Sea Prince)
Privateer (PB4Y-2)
Proctor
Pup (Sopwith)
Puss Moth
Reliant
Sabre (F-86)
Safir (Saab 91)
Sandringham
Scion Junior
Seabee
Seafury
Seagull
Seahawk
Sealand
Sea Otter
Sentinel
Shackleton
Shooting Star (F-80)
Short SB-3
Siebel 204 (NC. 702)
Sikorsky S-55
Silvaire (Luscombe)
Skeeter (Cierva)
Skyjeep (Chrislea)
SIAI-Marchetti SM-95
S.I.P.A. S.11
Sokol (Mraz M.1c)
Solent
Sparrowhawk (Miles)
Spitfire (and Seafire)
Stampe-Vertongen SV-4
Stratocruiser
Sturgeon
Sunderland
Super Ace (Chrislea)
Superfortress B-29 (and Washington)
Superfortress B-50
Supermarine 510
Supermarine 535
Swallow (B.A.)
Swift (Comper)
Swift (Globe)
Swordfish
Sylphe (Fouga)
Taylorcraft Cub
Taylorcraft Plus
Tempest
Thunderjet
Tiger Moth
Tipsy B.2
Tomtit (Hawker)
Tornado (RB-45c)
Traveller (Beech 17)
Tudor
Tutor (Avro)
Universal (Blackburn)
Valetta
Vampire (and Sea Vampire)
Varsity
Vega Gull
Venom
Viking
Viscount
Voyager (Stinson)
Walrus
Warwick
Wellington
Westland-Sikorsky WS-51
Whitney-Straight (Miles)
Wicko GM. 1
Wyvern
York
Youngman-Baynes
Zaunkönig

The War in Korea

Two important aircraft not mentioned in "The War in Korea" in the March *Journal*, but which have nevertheless been playing an active part in the Korean campaign are the Short Sunderland and the Martin PBM Mariner. Widespread maritime patrols and rescue operations have been carried out by both these aircraft in Korean waters. The Sunderland has a long and distinguished record of service in the R.A.F. Most readers will be familiar with its graceful lines and tali fin and rudder, which combine to impart an impression of solid stability in the air. The Mariner is rather less conventional in form, sporting a gull-wing and twin fins and rudders set off-vertical at right angles to a tailplane with dihedral. This 'boat excels in key recognition features. We shall feature them both later.

Wreck-cognition



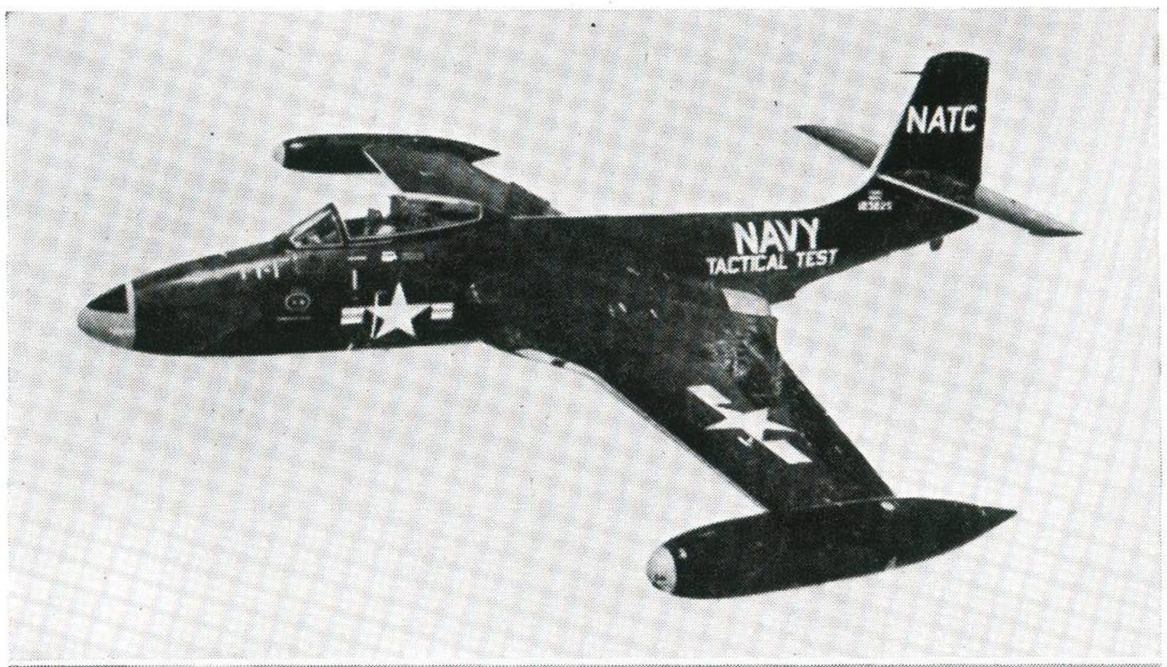
(*Answer on rear cover*)

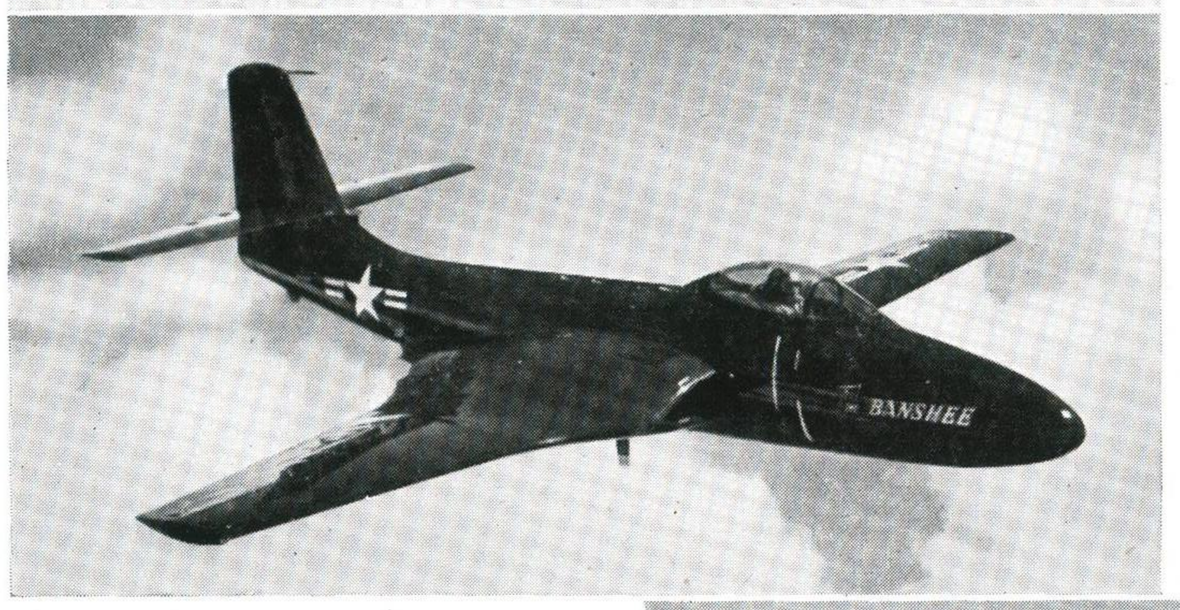
Sessions Impressions

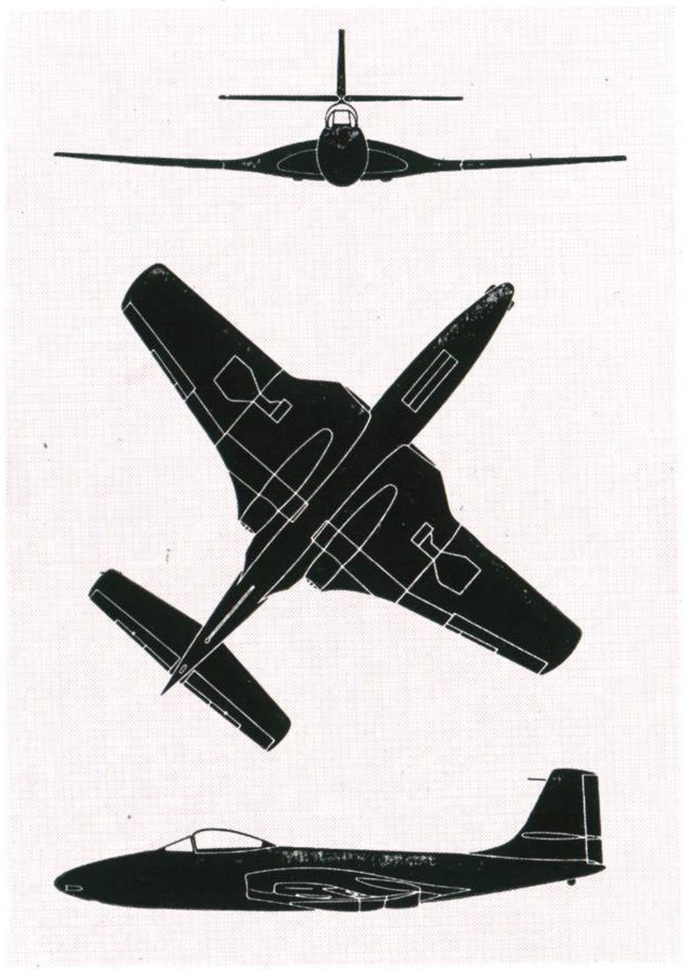
We have asked Mr. Sessions to illustrate points from previous editions of the *Journal*. If on this occasion no bell is heard to ring, no penny drops, nor a chord is struck, please read or re-read the article "Shapes and Words" in the February edition.



BANSHEE







RECOGNITION CLUES :

THE fuselage of the Banshee is a long slender streamlined form, of which the nose tends to droop and the tail-cone to rise. Its wings comprise an excessively puffed up—almost bursting—centre section (forming air intakes) which thins out into two simple straight-tapered, square-tipped outer sections, which have slight dihedral angle. Extensive root fillets—notched by the jet pipes—join the fuselage below the point where the fin fairing starts to rise. The tail-unit has a large spread of squared-off tail plane set through the fin base. The fin and rudder are also sharply cornered, and tend to lean backwards. The





Banshee is in the "single-type" visual class. It is an aeroplane of extravagant shapes, and unusual structural proportions and arrangements.

Designation : F2H Banshee

Duty : Naval Fighter.

Span : 41 ft.

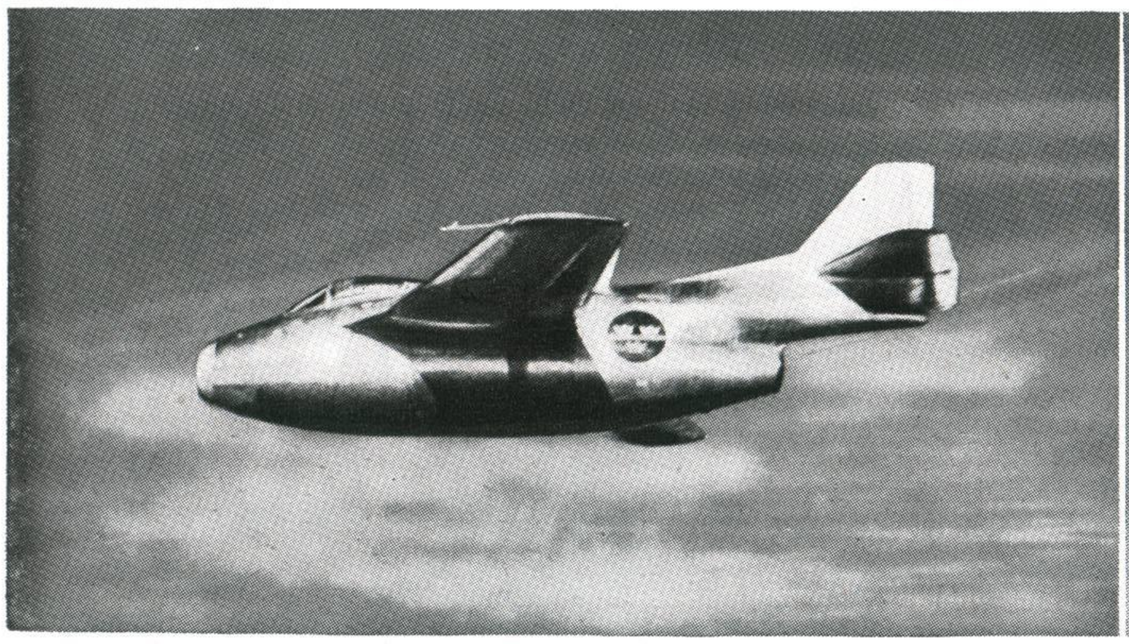
Length : 40 ft. 2 ins.

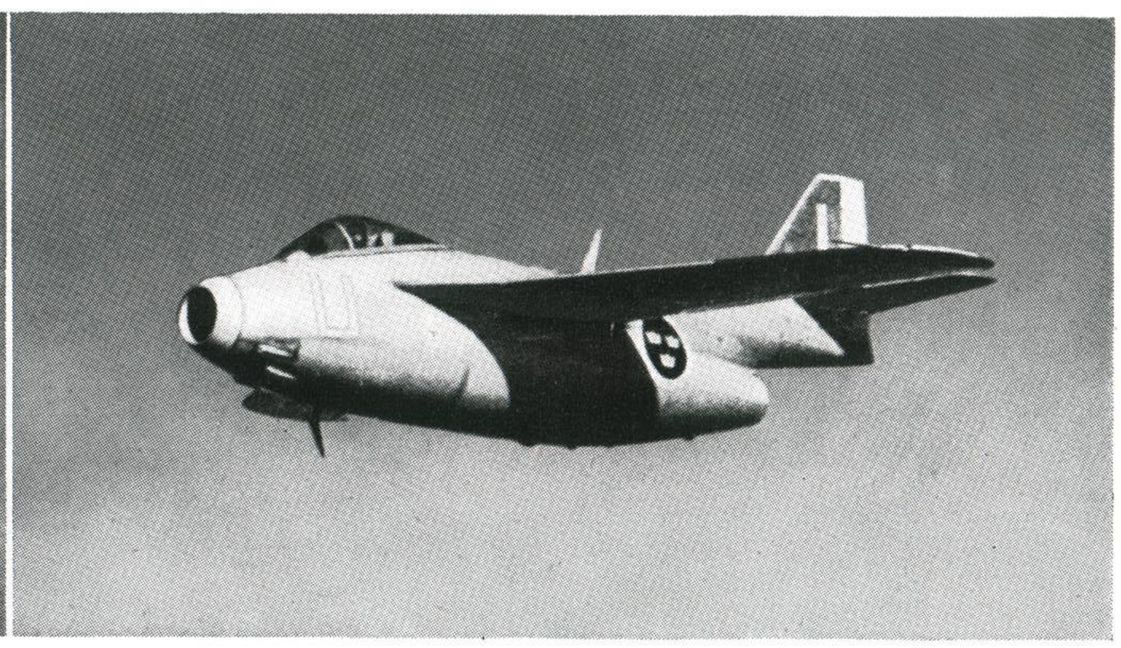
Engines : 2 Westinghouse turbojets

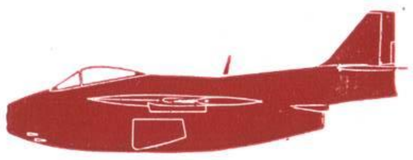
Armament : Four 20 mm. cannon in nose

Top Speed : Over 630 m.p.h.

Saab J.29 on test

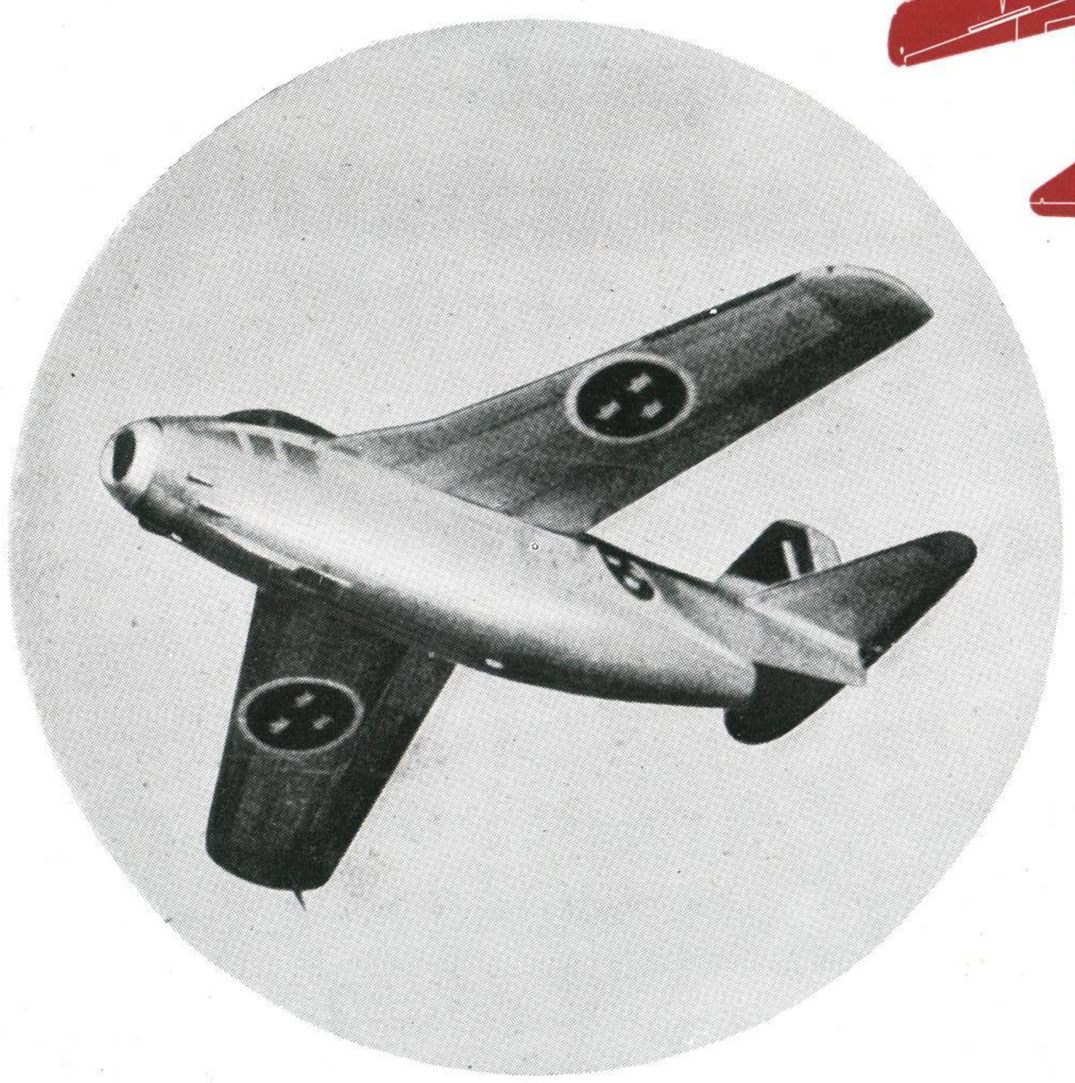














Recognition Clues :

The J.29 has a deep barrel body form. A short, thick boom rises rearwards from the barrel to carry the tail. Swept and rather stunted wings are set shoulder high and almost on the nose : a distinctive fan-shaped tailplane at the extremity of the boom is produced beyond the sharp angular rudder. The J.29 is a collection of contrasts, combining smooth streamlined form and inelegant surface shapes and abrupt ends. Yet, viewed in its entirety, it has a more bird-like appearance than many contemporary jet-fighters.

Technical Data :

Designation : Saab J.29. (Saab: Svenska Aeroplan Aktiebolaget)

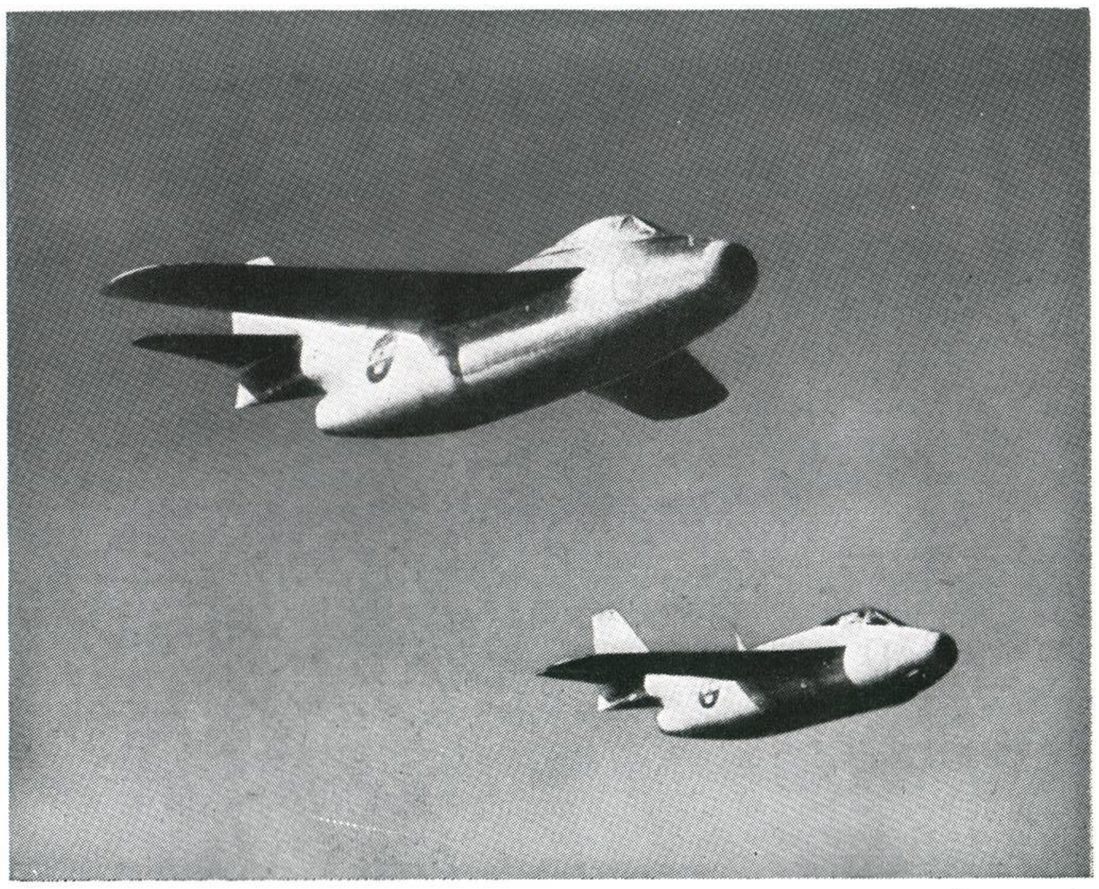
Duty : Fighter.

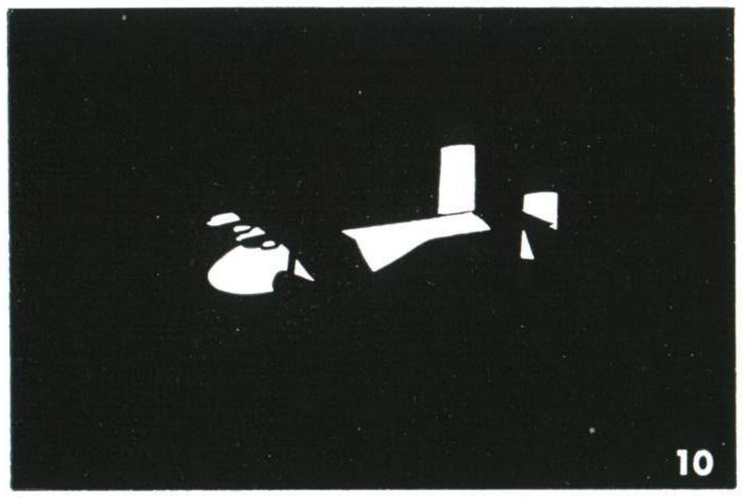
Power : D.H. Ghost.

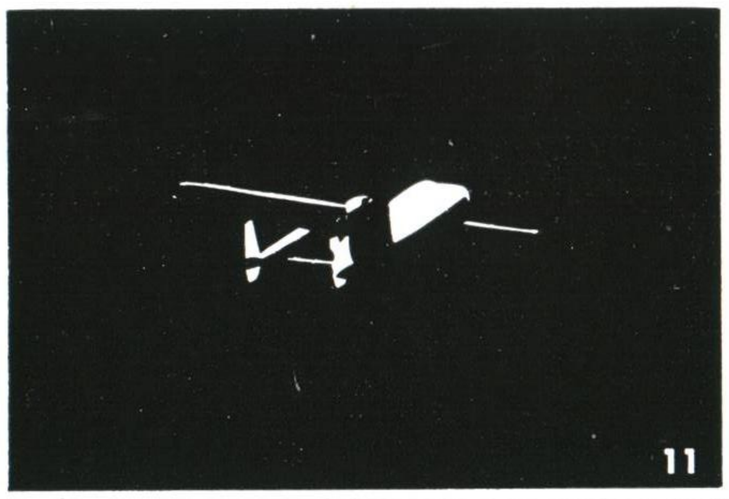
Maximum Speed : 600 m.p.h. plus

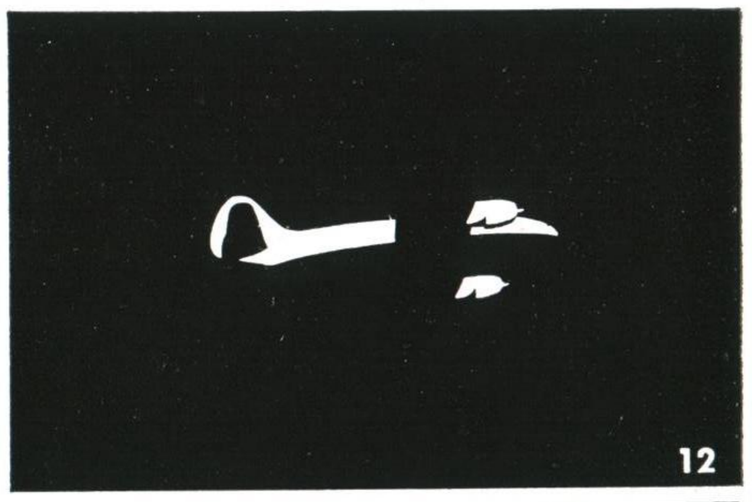
Armament : Cannon and rocket.

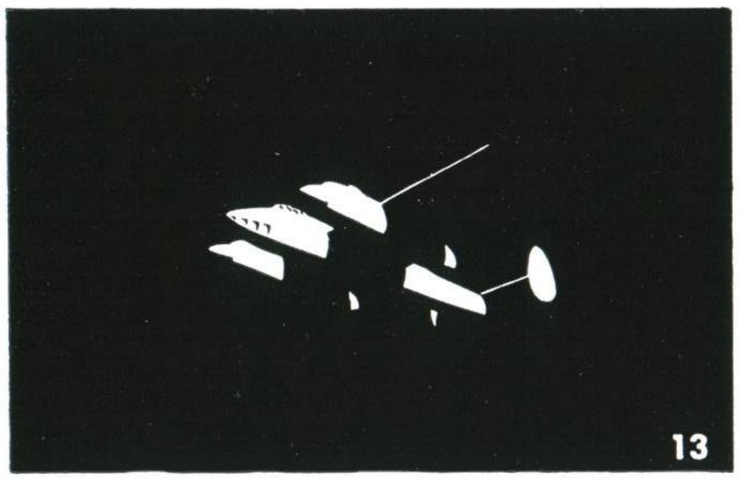
Remarks : Provision is made for carrying auxiliary underwing fuel tanks. The J.29 is in production for the Swedish Royal Air Force.

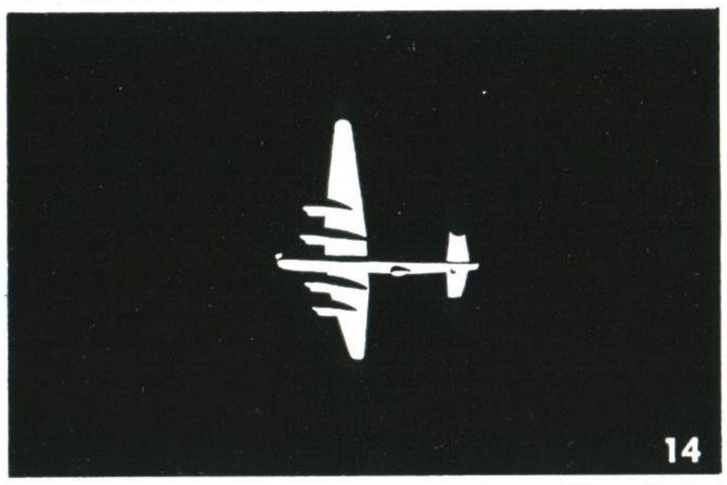


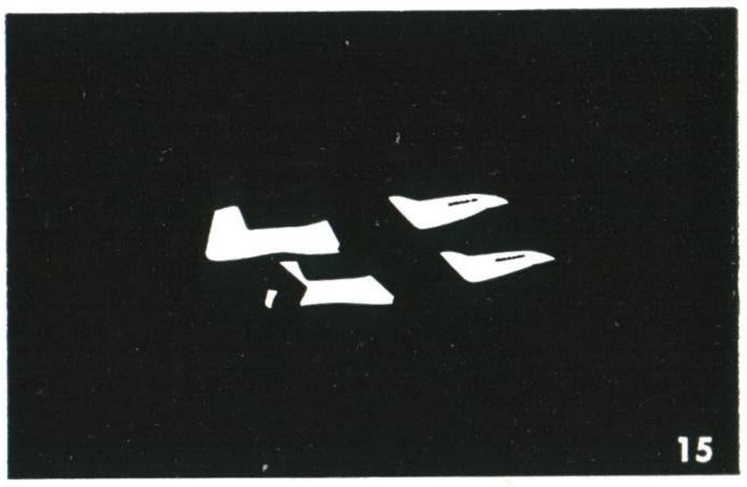


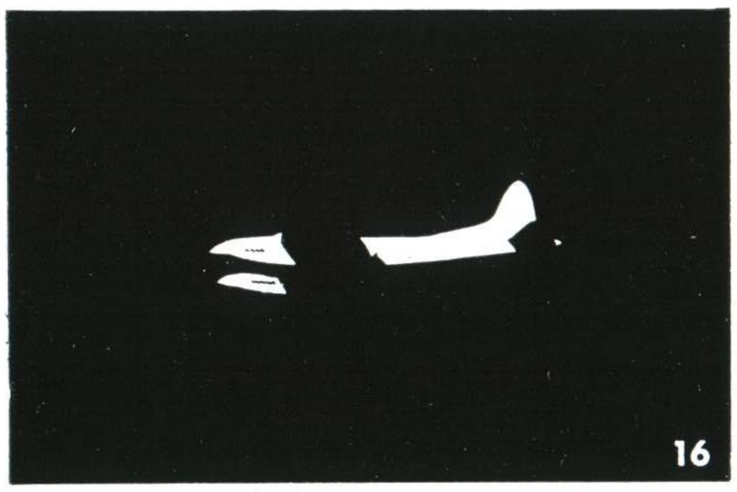


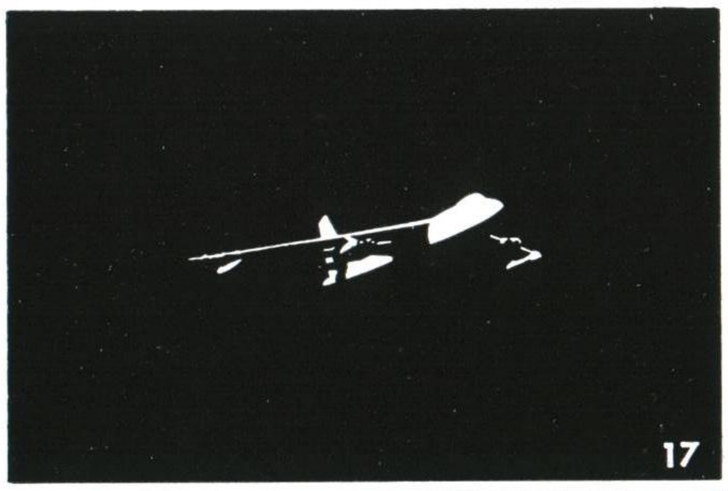


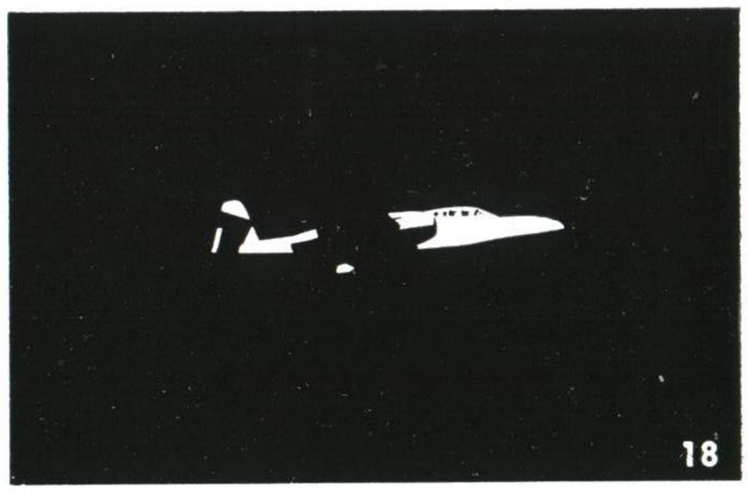


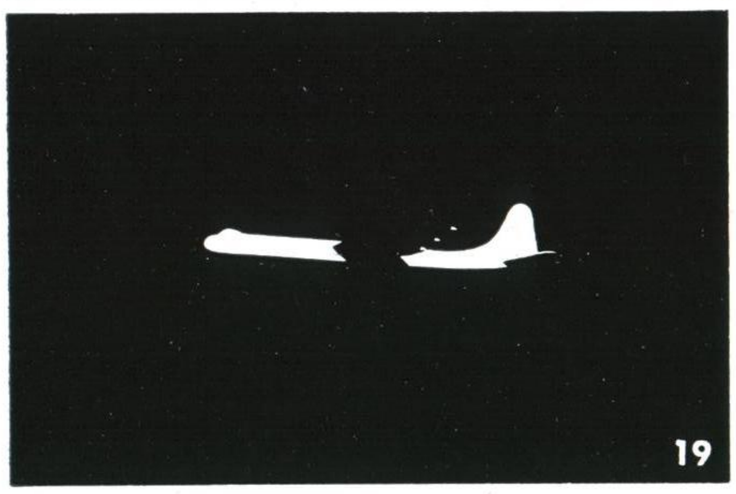


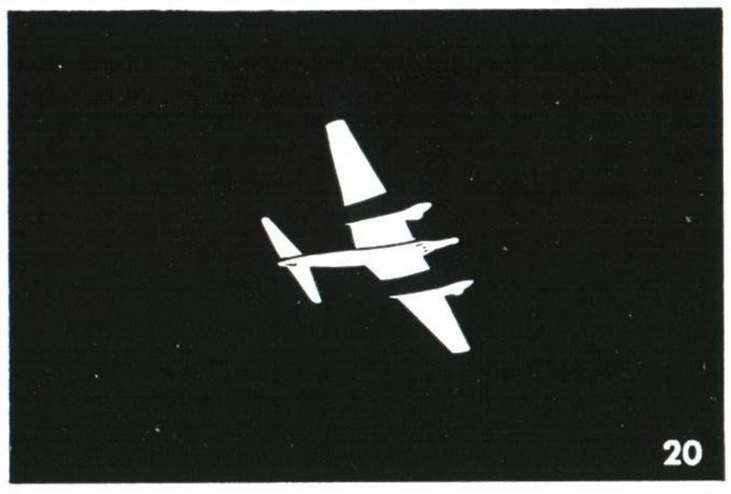


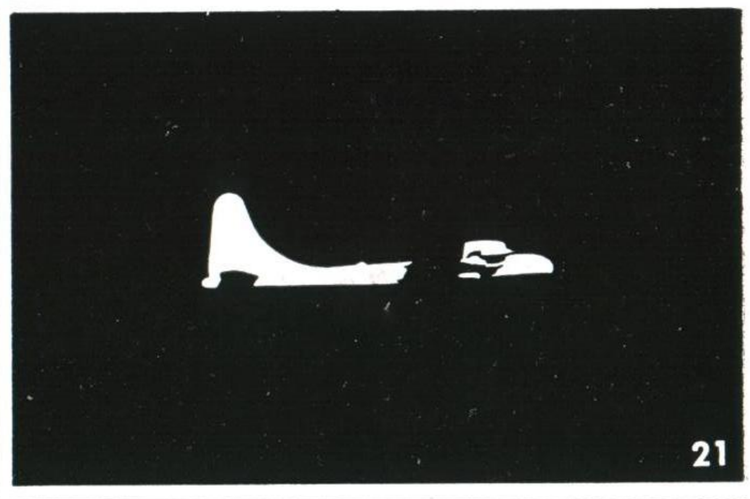


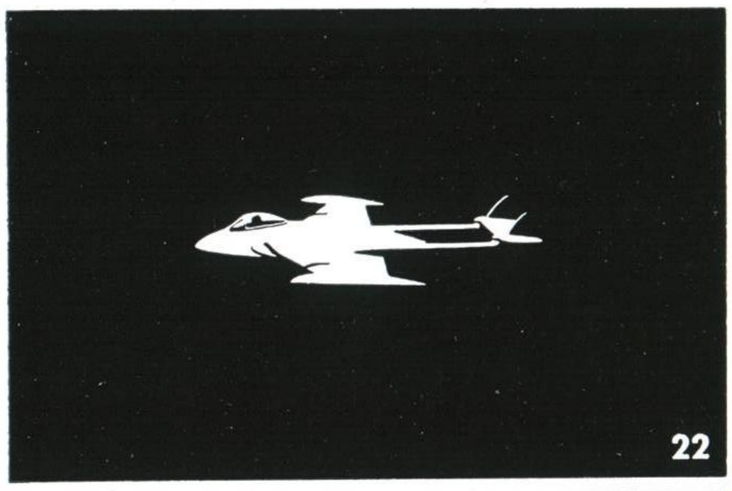


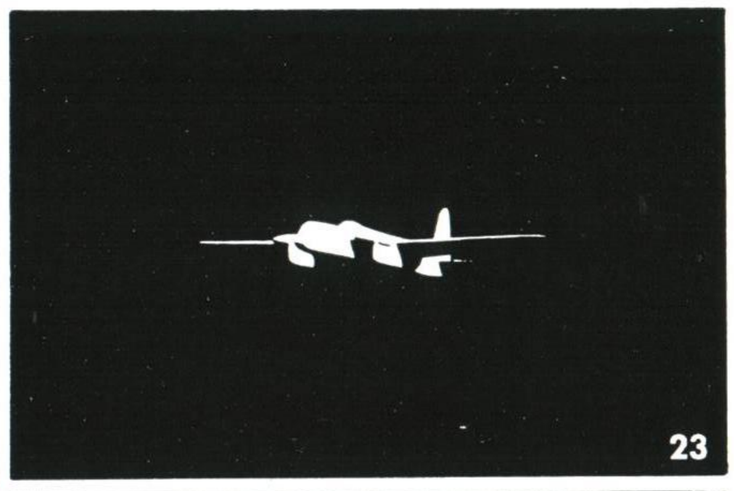


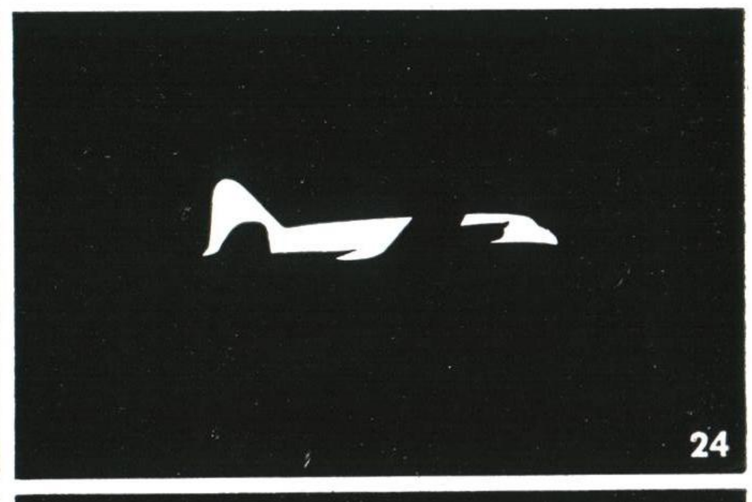


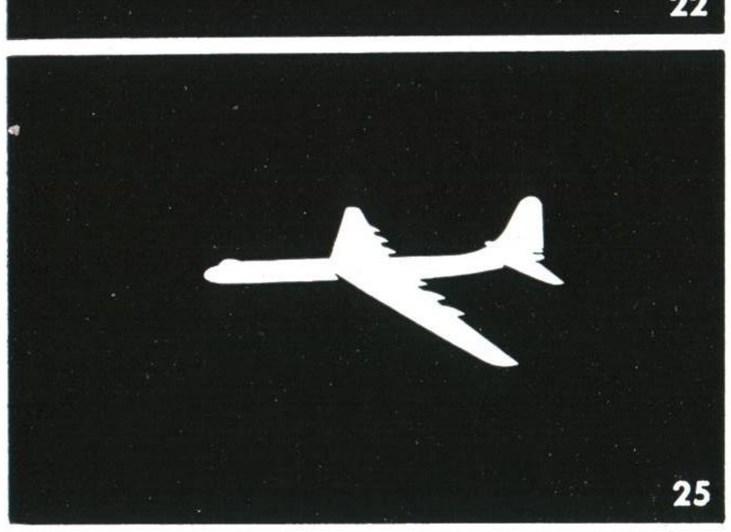




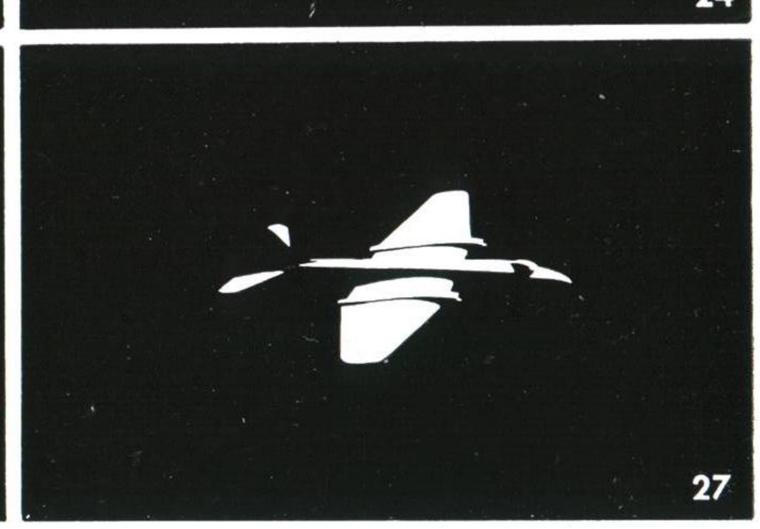












HIGHLIGHTS

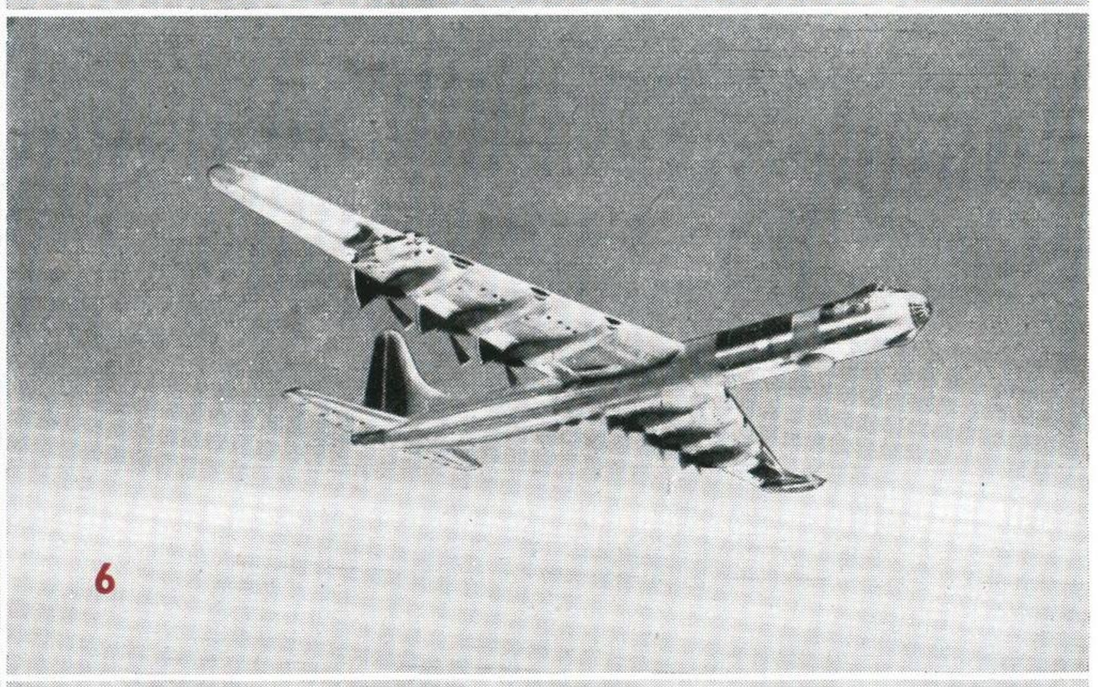
'MULTI-TYPE' TUTOR

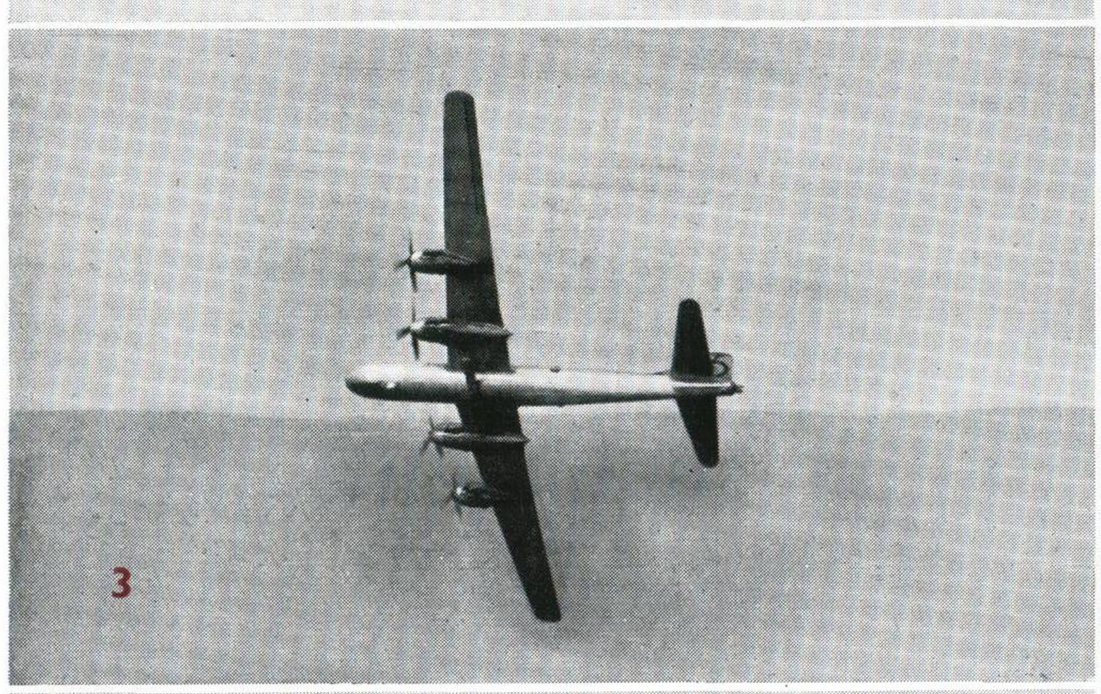
With the aid of the 2-view silhouette key, deduce the identity of each of the aircraft in these twenty photos and sillographs, and list your results. Ensure correct identity by as many points as possible before checking your list with the results given on the rear cover. Instructors can improve the scope of this 'Tutor' by preparing additional sheets for deduction by students.


1


5


2


6


3


7


4


8

9



10



11



12



13



14



15



16



17



18

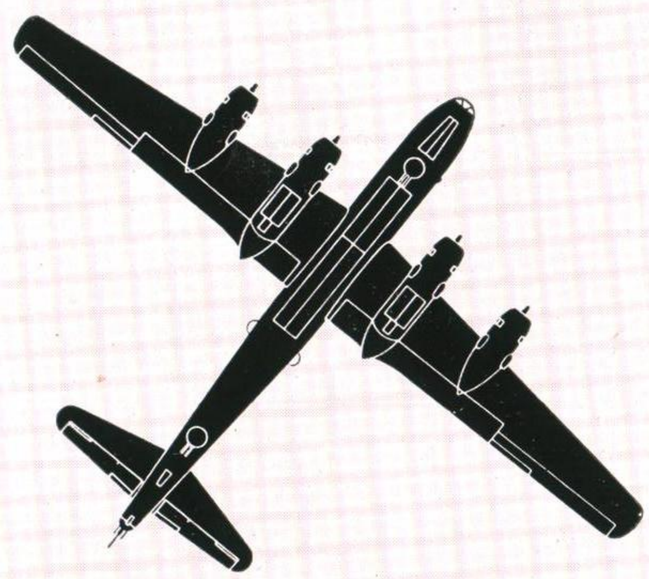


19



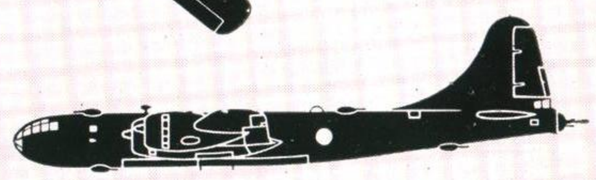
20

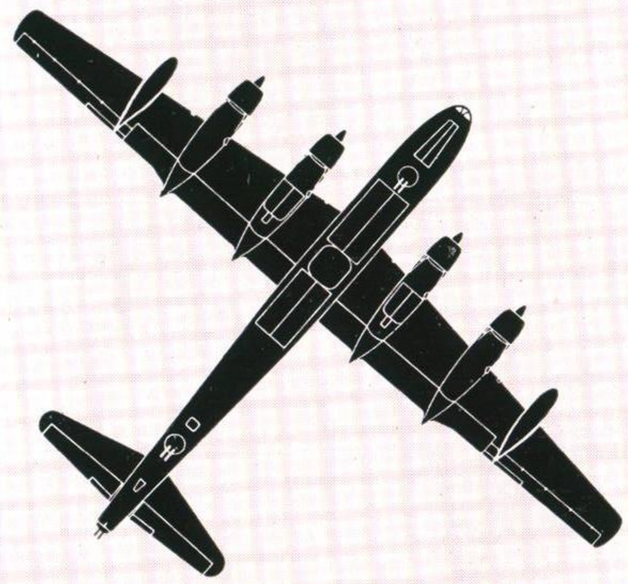




B-29

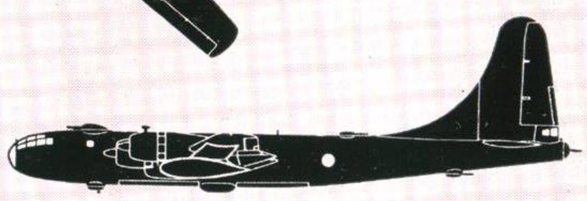
Superfortress
or Washington

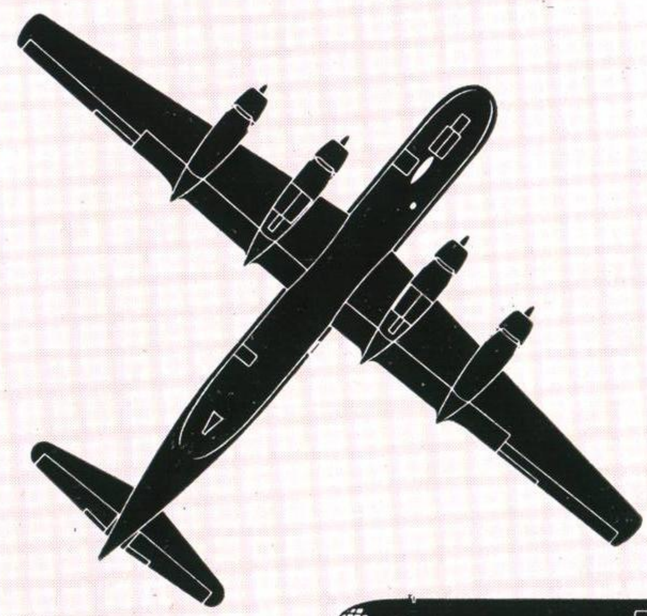




B-50D

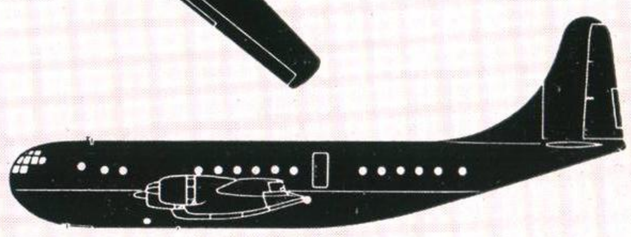
Superfortress

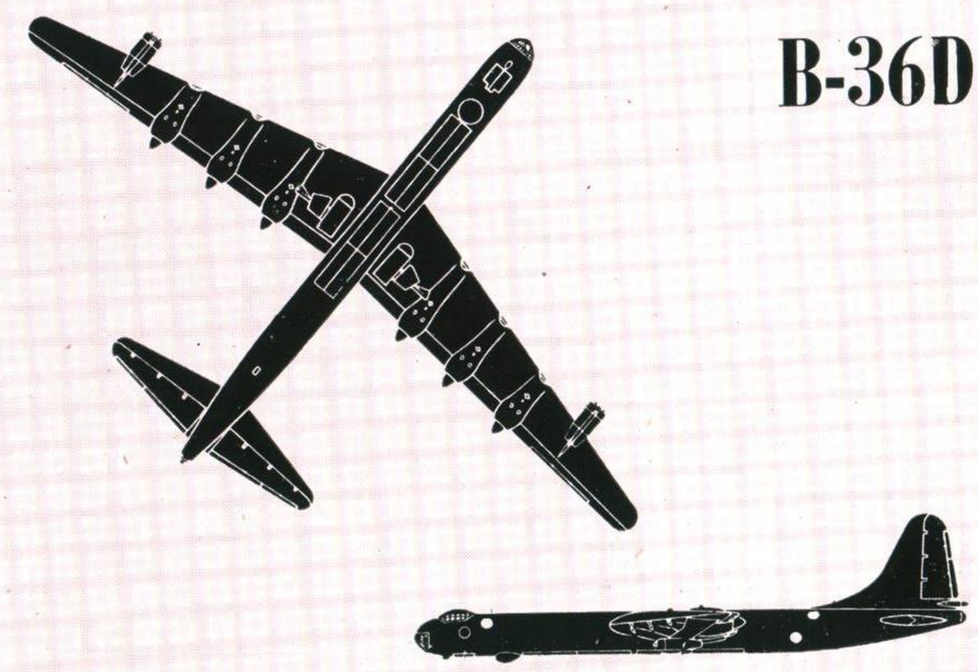




C-97

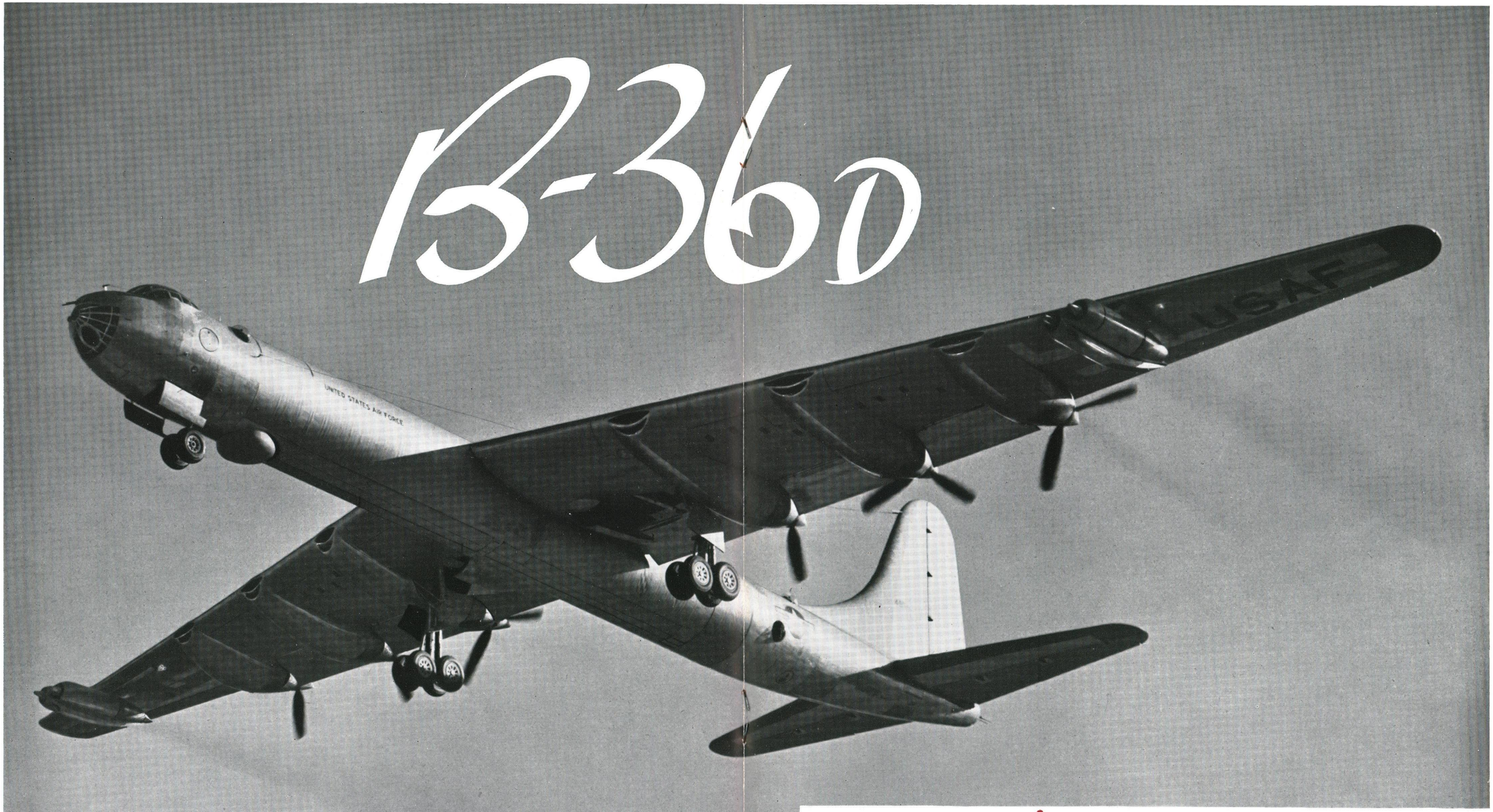
Stratocruiser



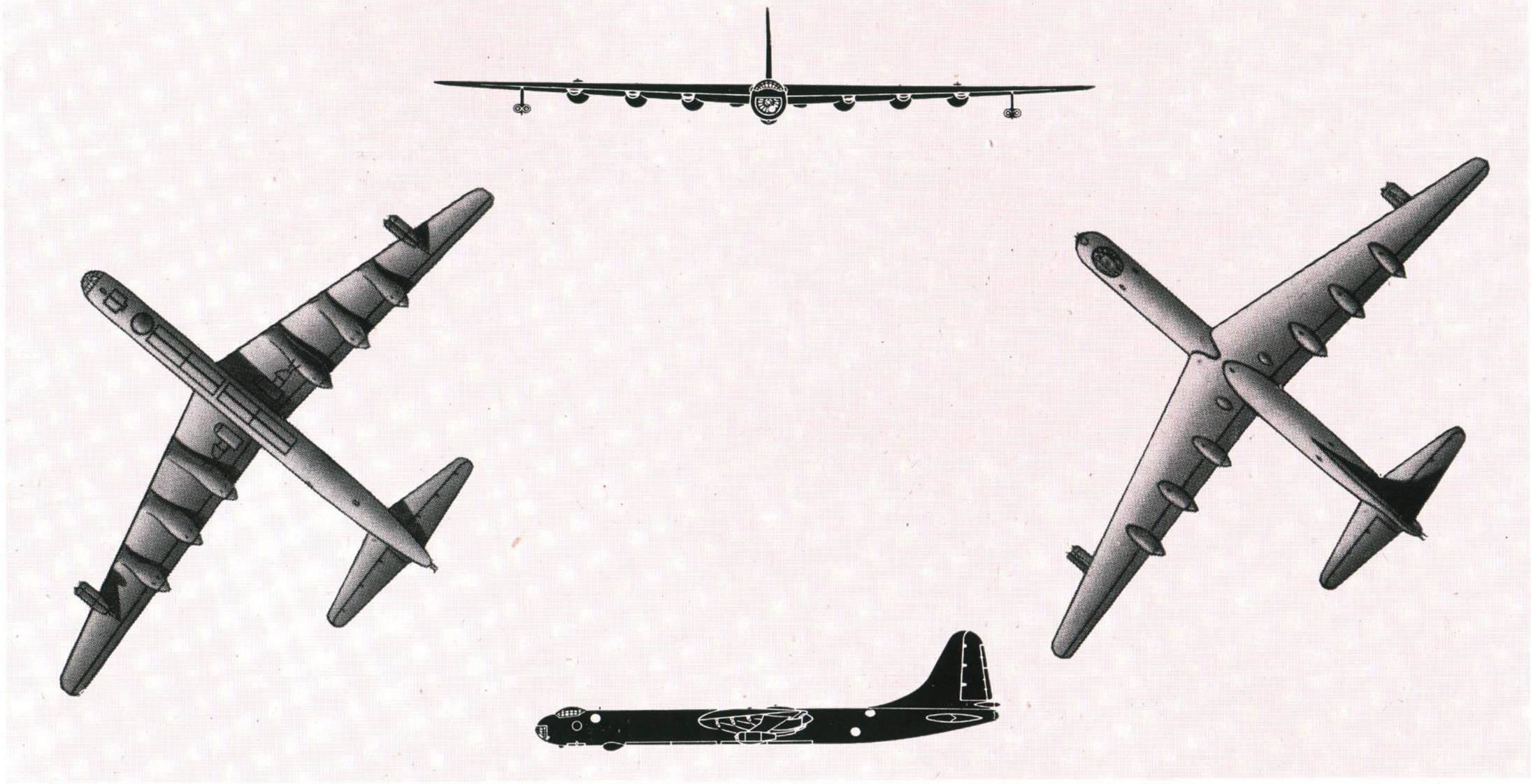


B-36D

B-36D



. . . reincarnated Zeppelin"



CHARACTER STUDY—THE CONVAIR B-36D

THE Convair B-36D is a reincarnated Zeppelin, uncomfortably reborn into a stratosphere rôle in which she has to sprout vast wings for support and a towering tail for control. Modern warfare has demanded that this largest of bombers, with its ten assorted power plants, should put out over 40,000 horsepower to urge it through the thinning air at over 435 miles an hour at some 45,000 feet for ten thousand miles.

The great round fuselage, with her jumble of bumps at the bow, stretches back in straight, smooth, parallel lines to a distant point aft. Here the fin starts to sprout on top and the fuselage starts to slope up underneath to end in a small rear gun cone.

The wings, fixed shoulder high and half way down the fuselage, are cumbersome affairs with sweeping taper on the leading edges and the slightest back sweep on the trailing edges. The overall swept back effect of the wings is partly due to the extreme taper and partly to the amount of fuselage forward, which accentuates the " left behind " feeling of the wings. Tips are like full rounded paddle blade ends.

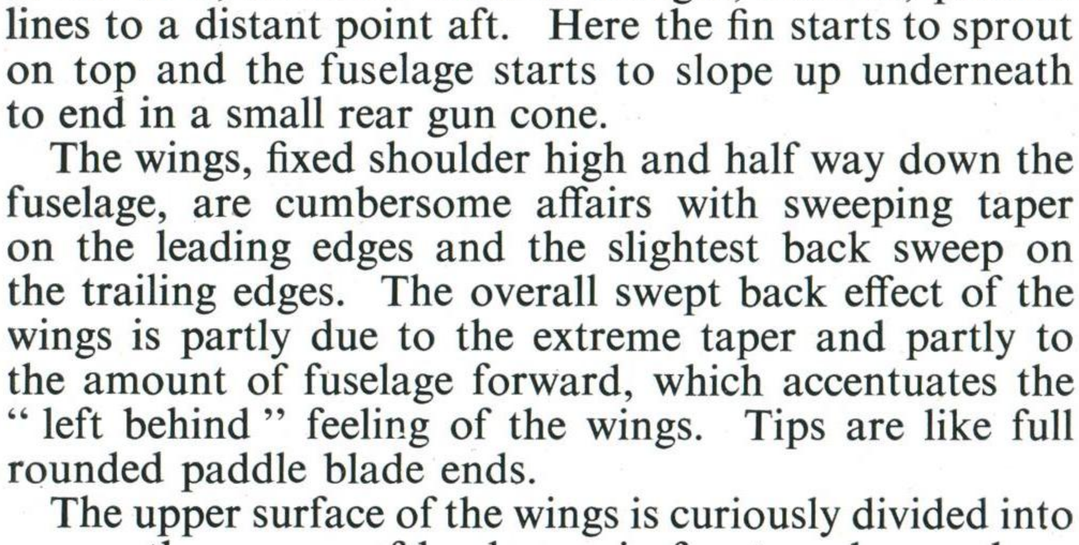
The upper surface of the wings is curiously divided into a smooth expanse of landscape in front, and a seashore full of turtle-backs at the rear ; but the whole underside is a bumpy terrain of engine bellies, with six nacelles protruding boldly back to their pusher airscrew bosses. In addition there are the two inelegant pairs of jet motors, mounted outboard of the wing motors ; they are thrust down, out, and forward in the form of Siamese twin pods on slender stalks. The six engine intakes make flattish fish mouths in the leading edges of the wings.

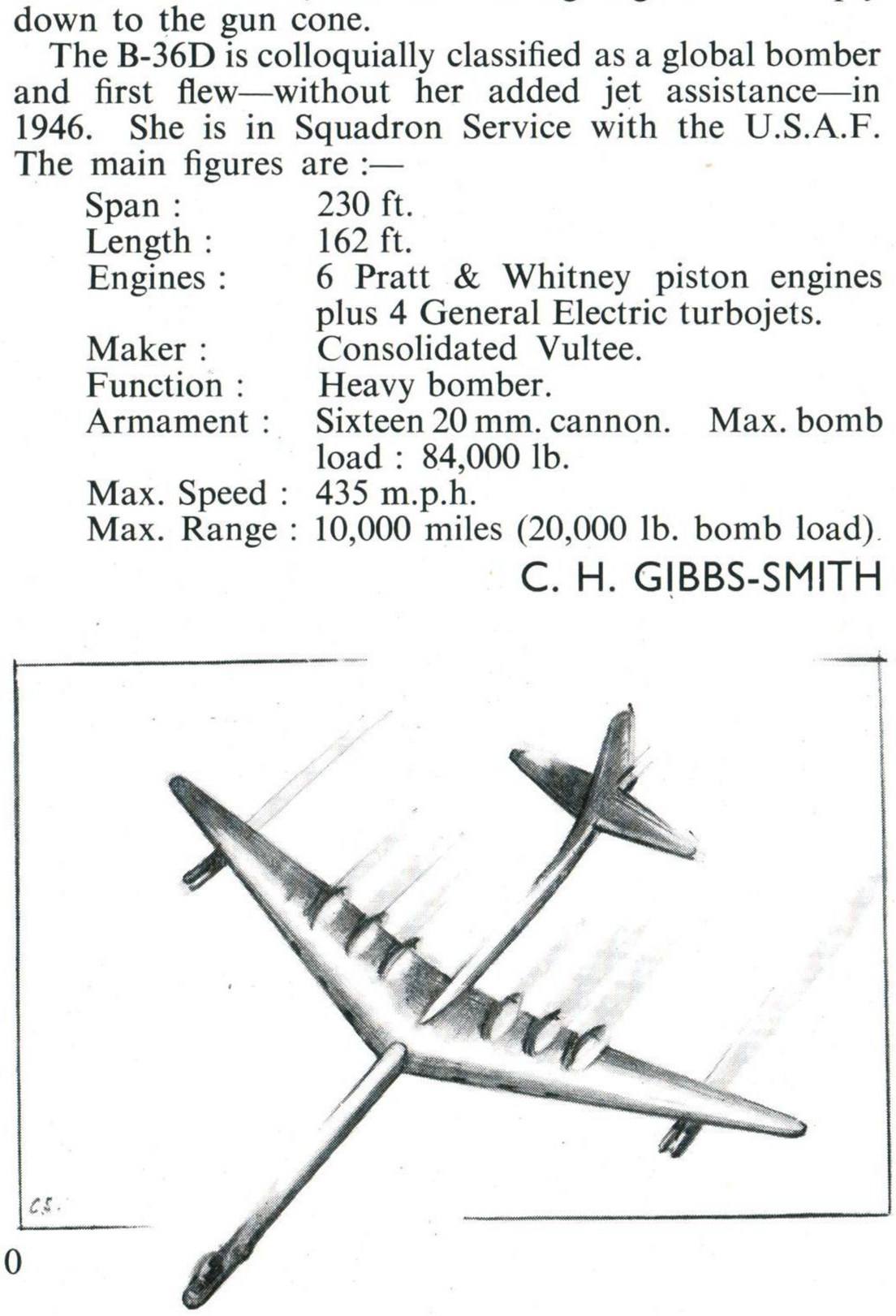
The tail unit is a bold conventional group of shapes, with a tailplane tapered on leading and trailing edges and with full round tips ; the fin and rudder rise in a broad bold course, and the trailing edge dives steeply down to the gun cone.

The B-36D is colloquially classified as a global bomber and first flew—without her added jet assistance—in 1946. She is in Squadron Service with the U.S.A.F. The main figures are :—

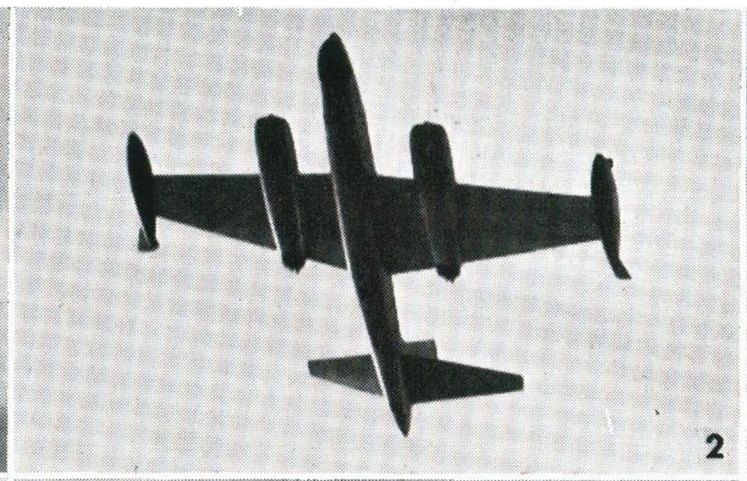
Span :	230 ft.
Length :	162 ft.
Engines :	6 Pratt & Whitney piston engines plus 4 General Electric turbojets.
Maker :	Consolidated Vultee.
Function :	Heavy bomber.
Armament :	Sixteen 20 mm. cannon. Max. bomb load : 84,000 lb.
Max. Speed :	435 m.p.h.
Max. Range :	10,000 miles (20,000 lb. bomb load).

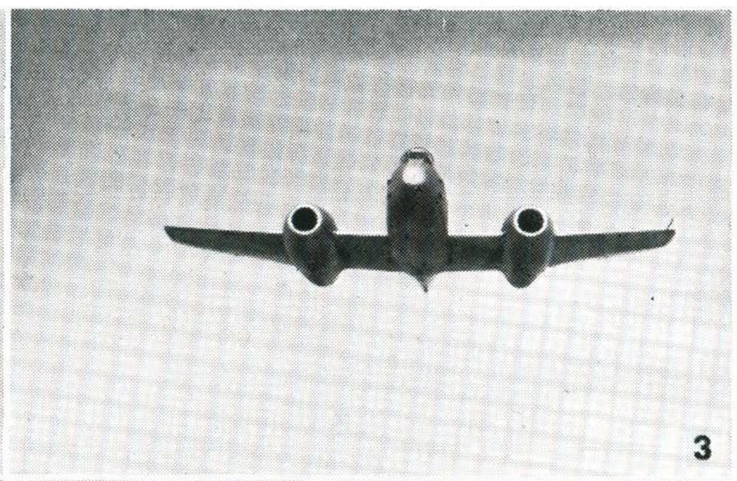
C. H. GIBBS-SMITH






1


2

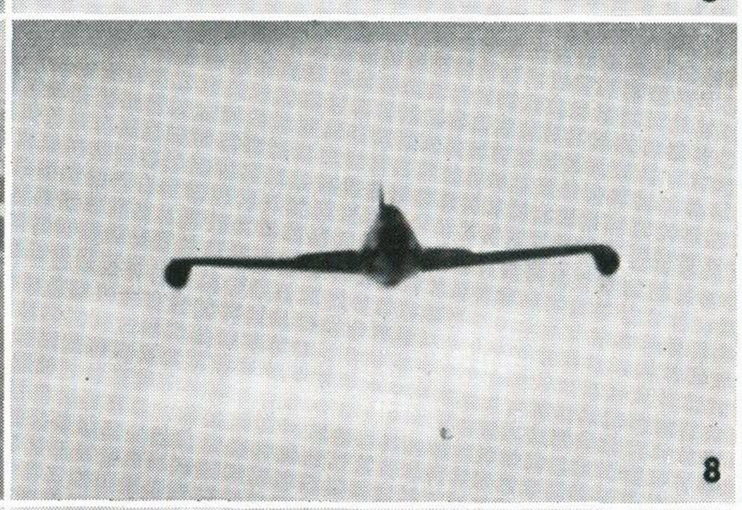

3


4

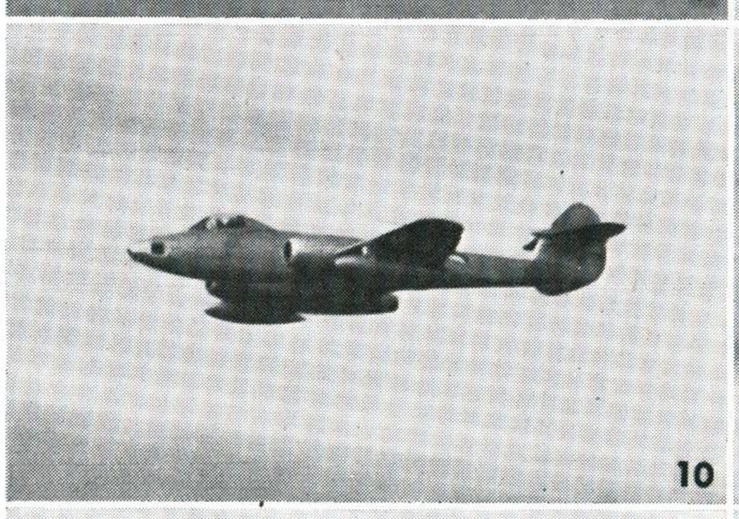

5


6

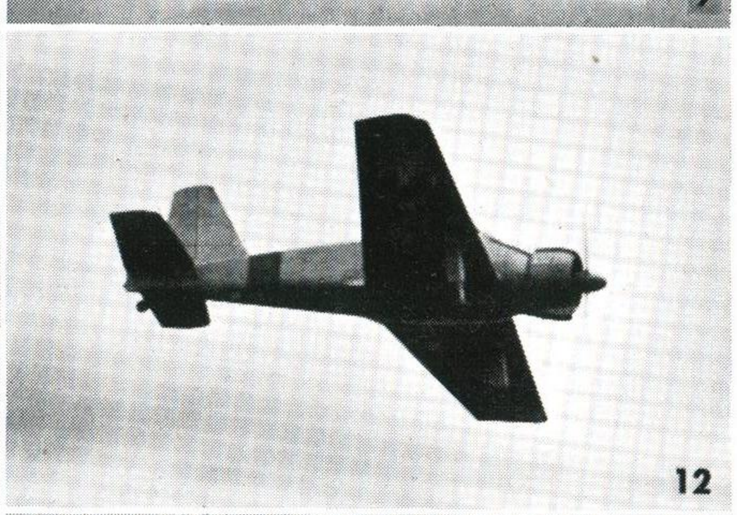

7


8


9


10


11


12


13


14


15


16

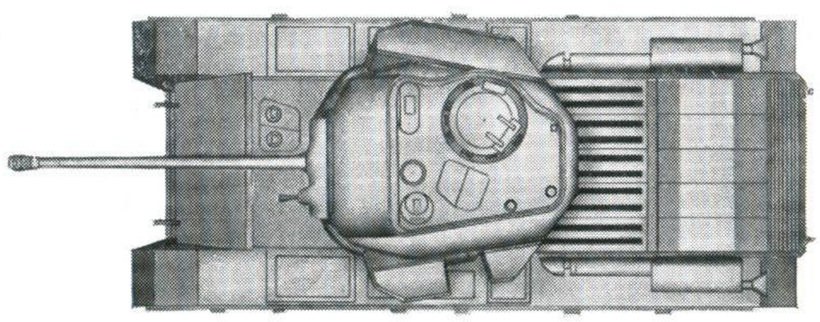

17


18

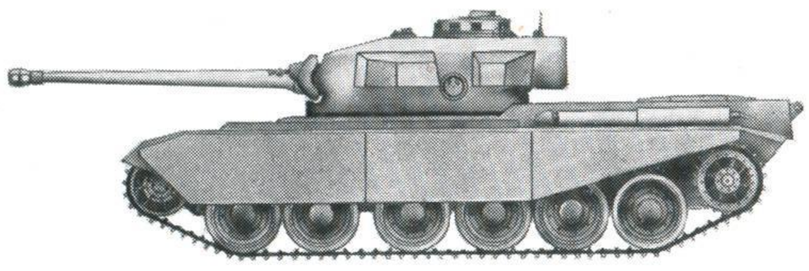
ELEMENTARY SPOTTING



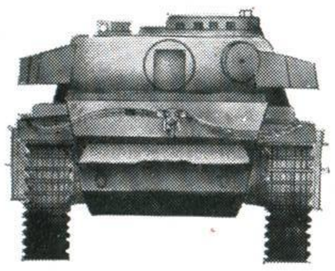
CENTVRION II & III.

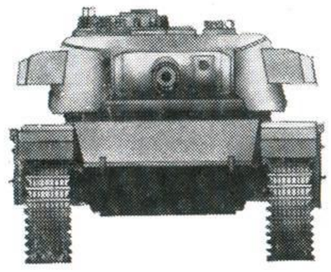


LENGTH ... ... 32 ft. 3 ins.



WIDTH (OVERALL) ... 11 ft. ¾ ins.
HEIGHT ... ... 9 ft. 7¾ ins.





TRACK WIDTH ... ... 2 ft. 0 ins.



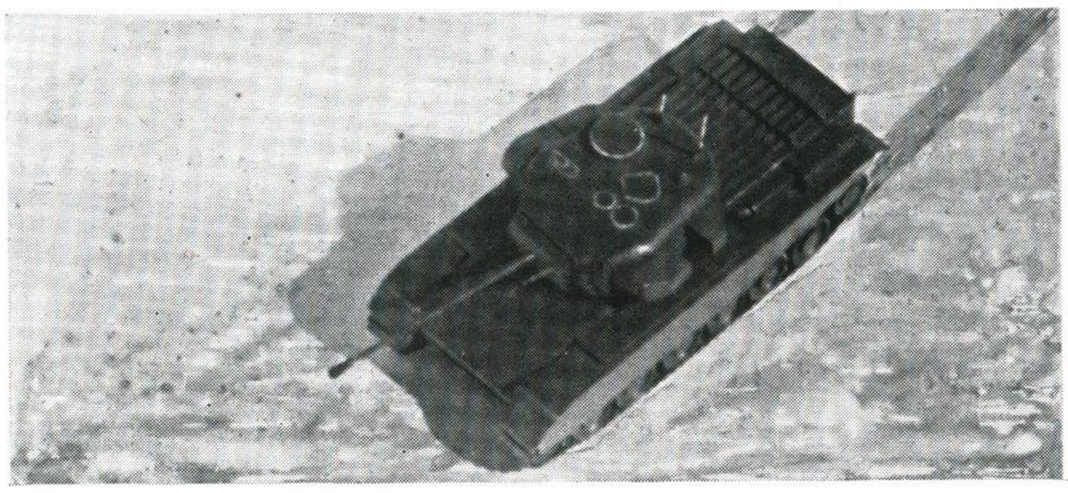
Technical data :

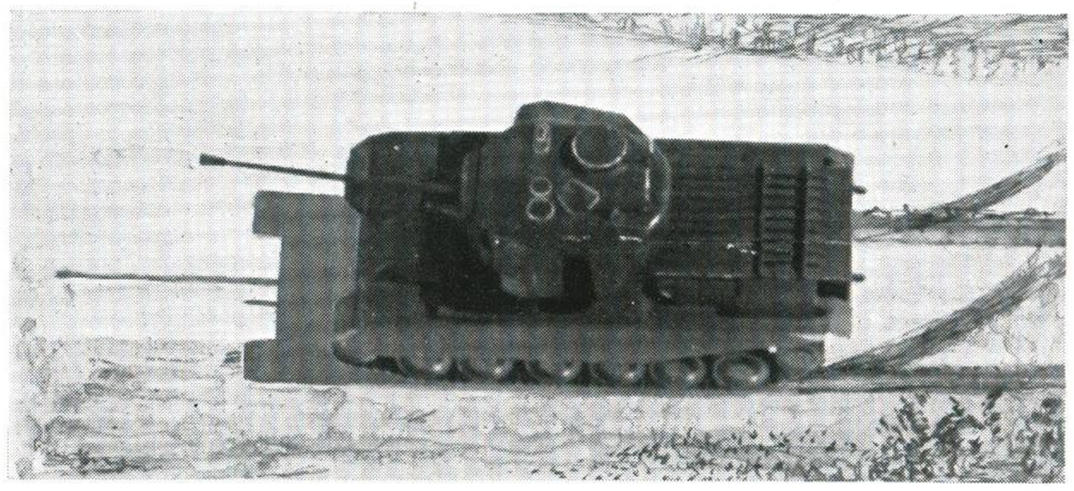
Weight :	9¼ tons
Armament :	Mk. II—One 17-pounder gun Mk.III—One 20-pounder gun and a 7.29 mm. machine gun
Crew :	Four : Driver, commander, gunner and loader.
Maximum road speed :	21.5 m.p.h.
Radius of action :	84 road miles.

THE turret of the Centurion is a squat and shallow one, roughly rounded at the front and tapered to the rear where there is a large overhang. The front of the turret slopes to the mantlet. A small cupola is offset to the right and to the rear on the turret. The turret is well equipped on either side with pannier bins which extend the overall turret shape well out over the tracks. The gun emerges from slightly right of centre of the semi-cylindrical mantlet and a machine-gun is mounted in the mantlet co-axially with the main armament. The turret is set forward on the hull.

The long, low-slung hull of the Centurion is characterized by a sharply sloping glacis plate which joins the lower nose plate at an acute angle to form a sharp nose. The rear deck of the hull is variously rutted, ribbed and gridded. Immediately aft of the turret the air intake grid extends about one-third of the distance to the rear ; engine cover plates extend a similar distance and a narrow strip of grid at the extreme rear covers the air outlet. Stowage bins line the track guards alongside and forward of the turret, whilst exhaust silencers lie on them at the rear.

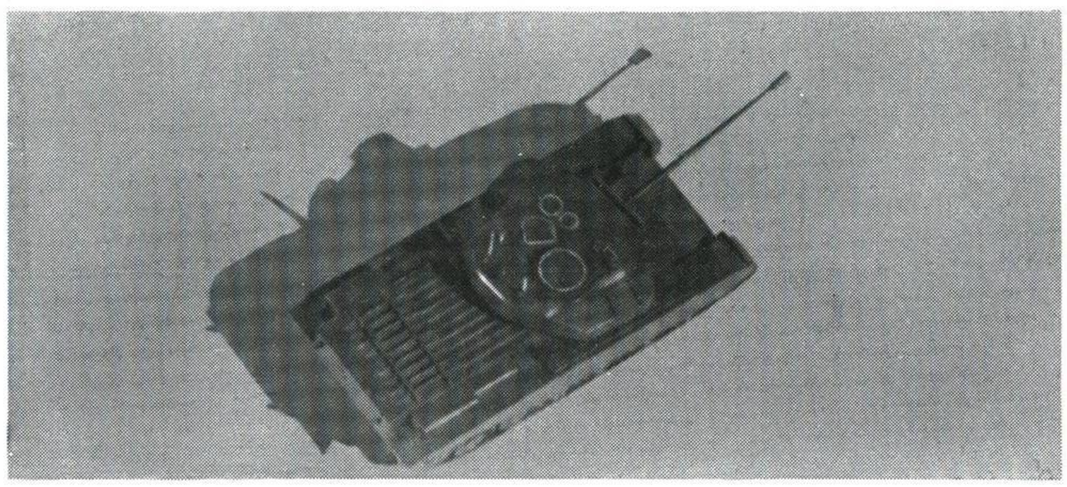
Suspension. An extensive skirting plate normally obscures the five track return rollers, but that part of the suspension which is visible comprises six road wheels—unevenly spaced —which have rubber tyres. The driving sprocket at the rear and one wheel are completely exposed by the cut-away of the skirting plate.

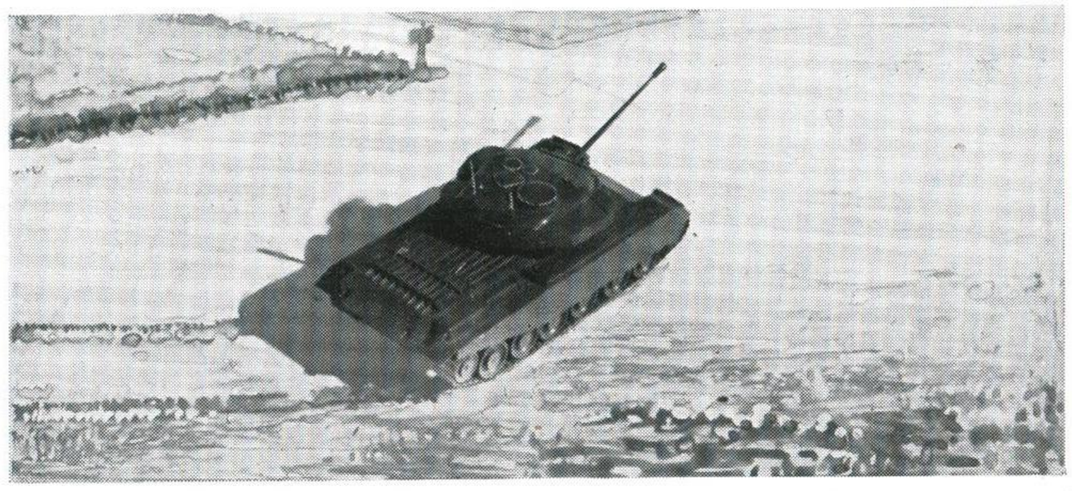


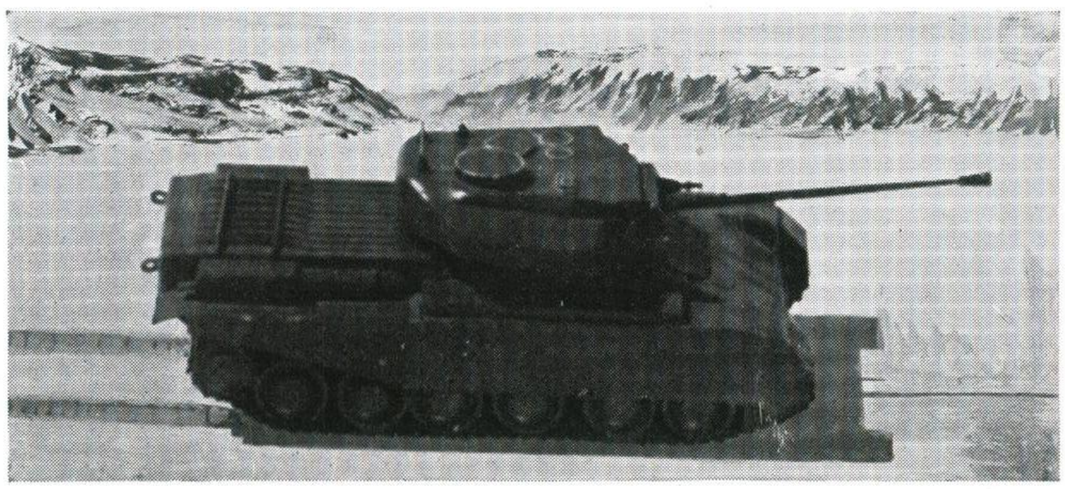


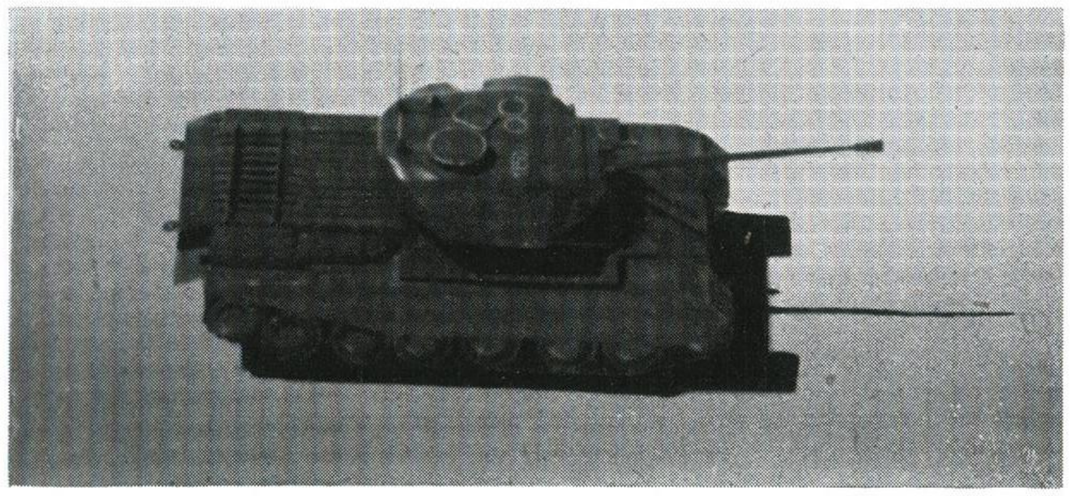


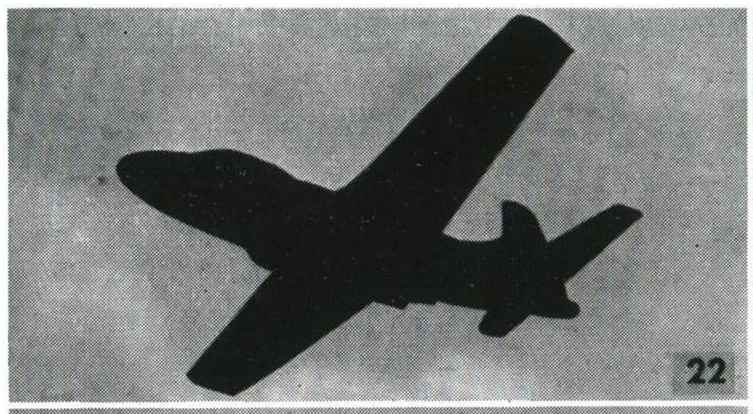


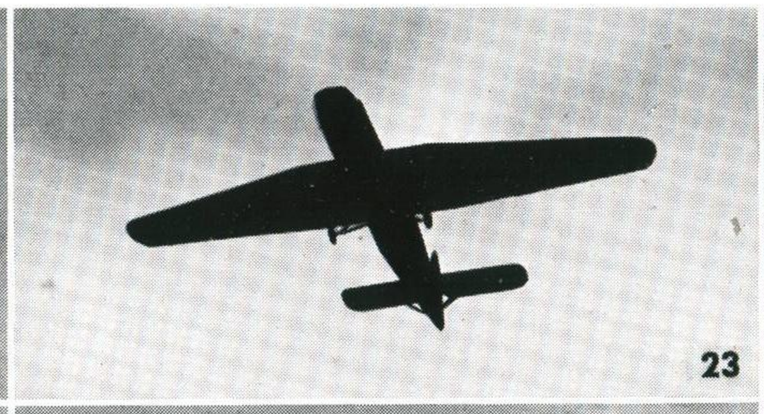


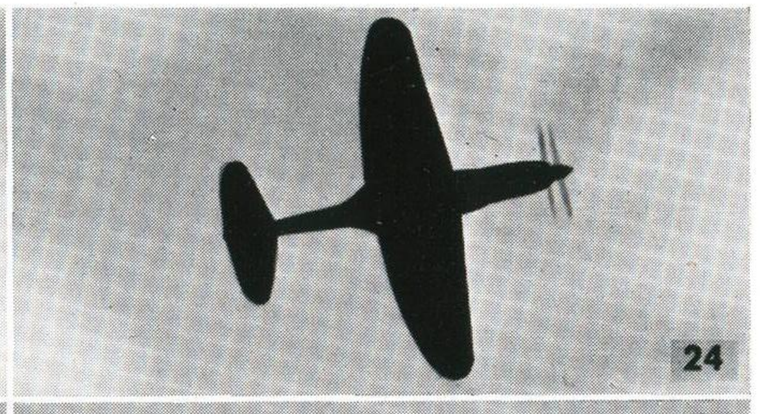


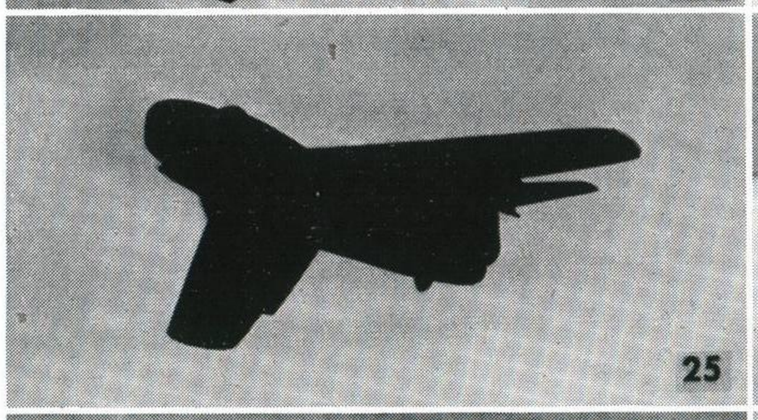


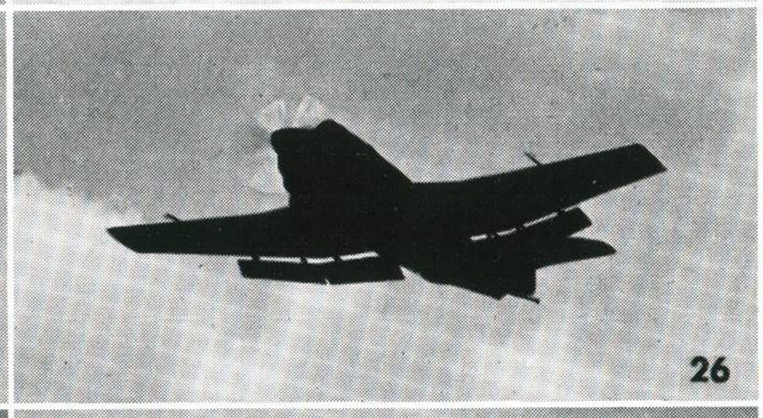


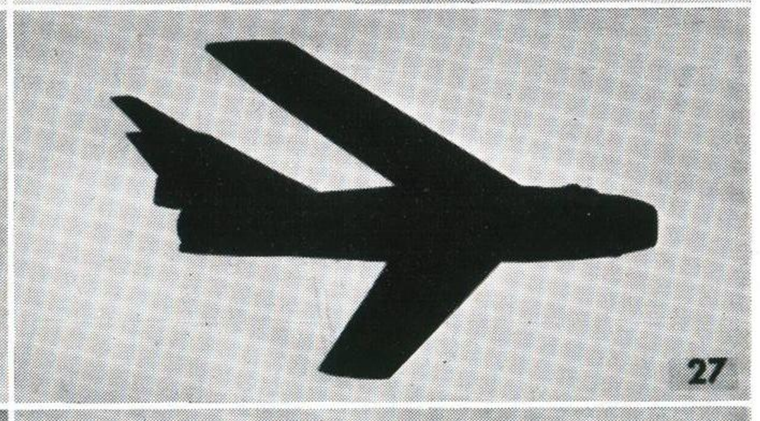


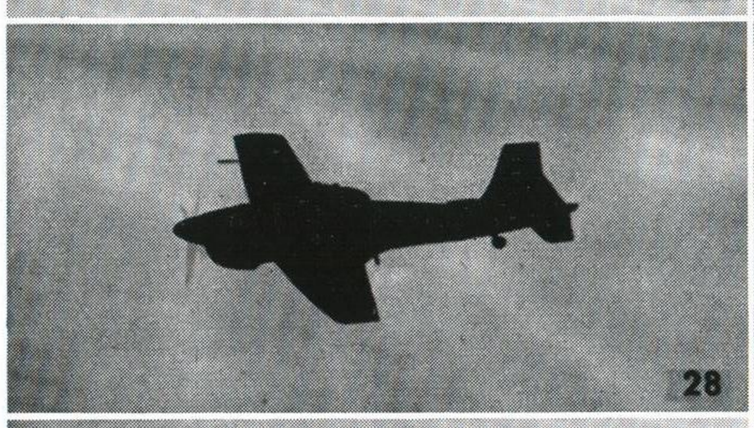


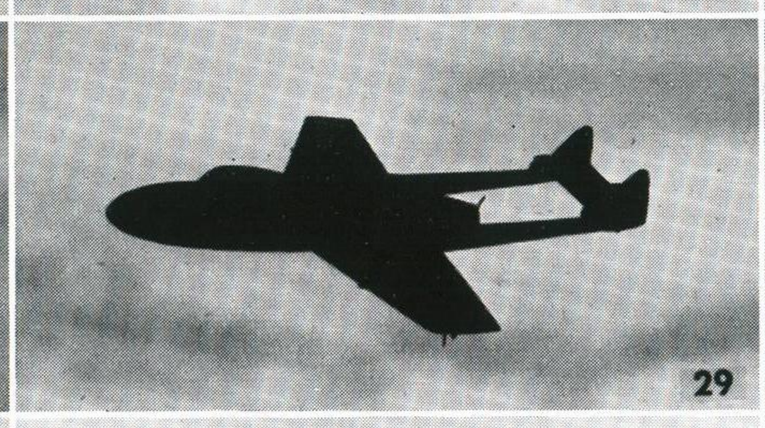


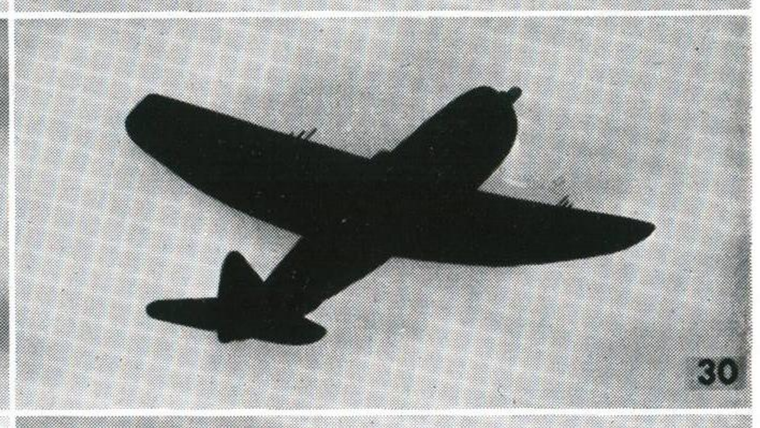








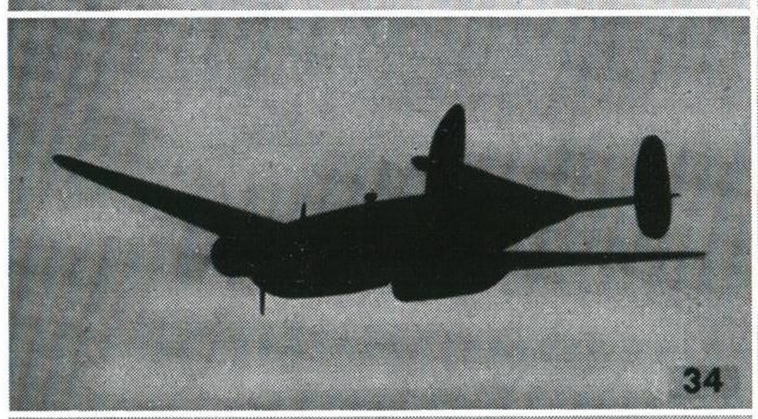


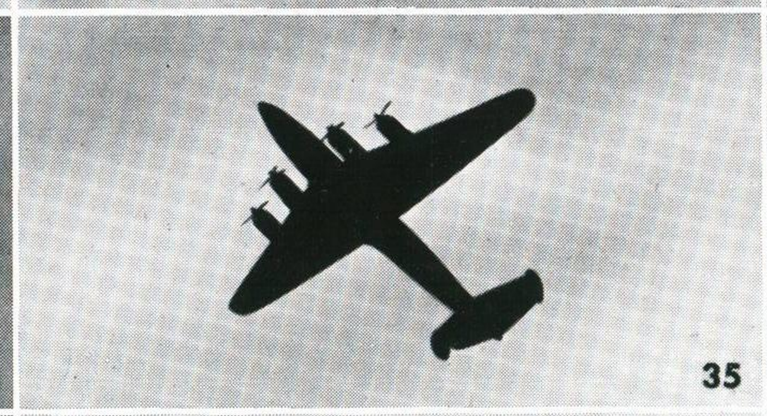


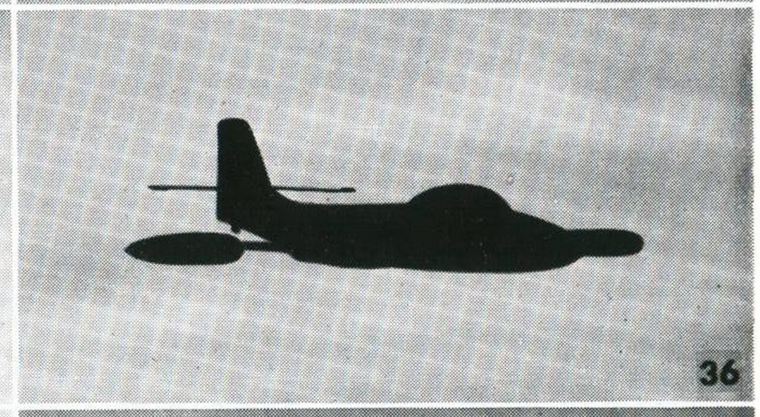


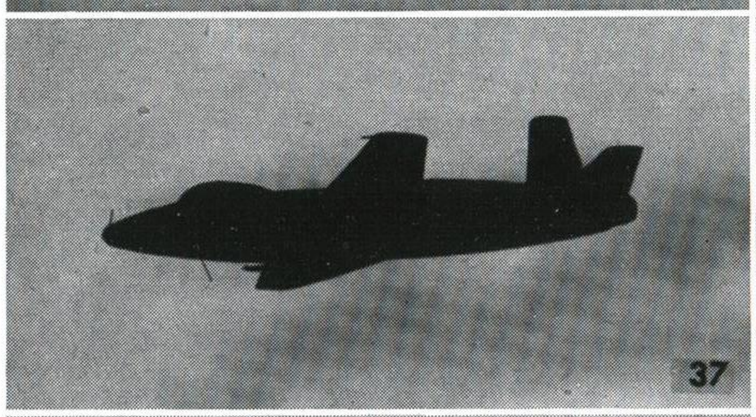


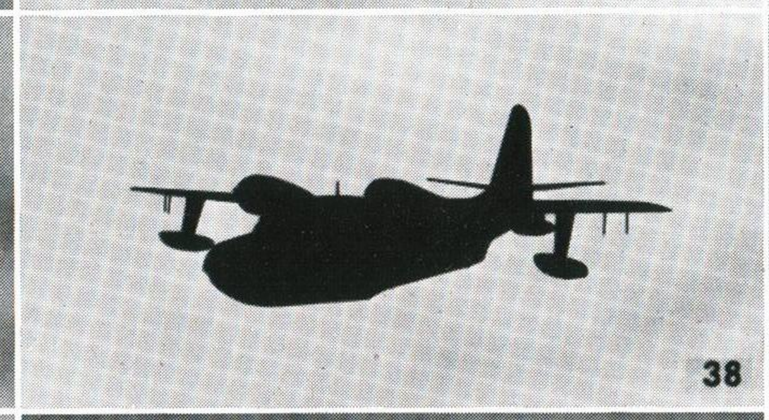








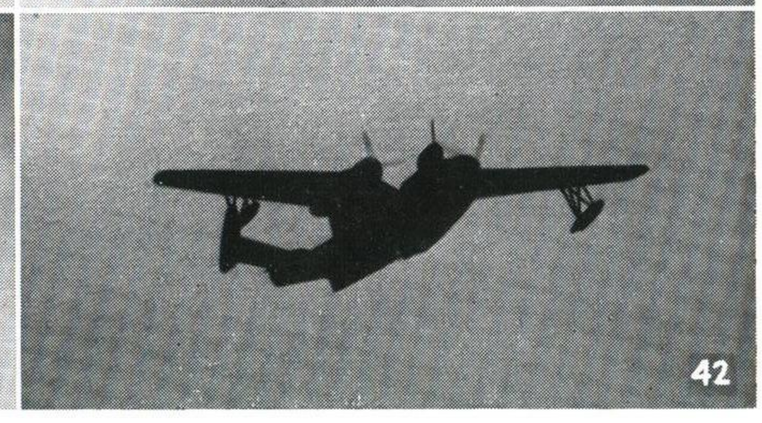












SILLOGRAPHS



3rd prototype Mk. 1

THE ENGLISH ELECTRIC CANBERRA

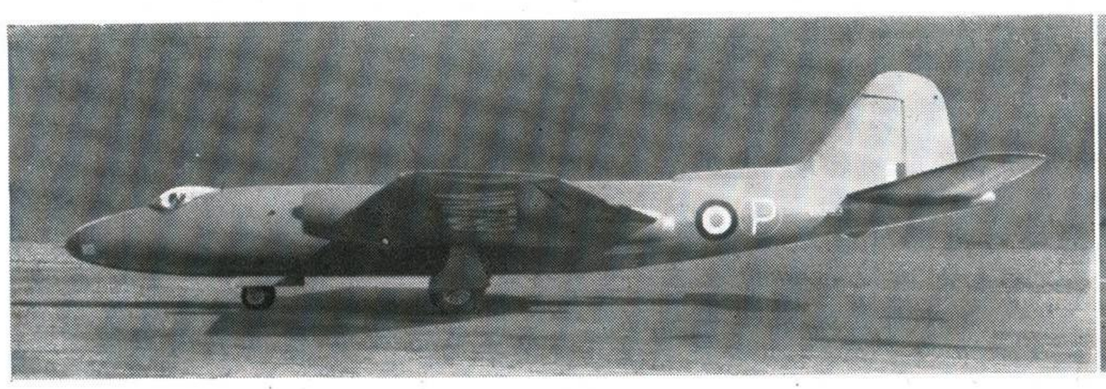
by R. W. THOMAS, B.Sc.

NO MILITARY AEROPLANE since the War has so captured public imagination as has Britain's first jet-bomber, the English Electric Canberra. Not only has this twin-Avon aircraft the most elegant lines but it also has a performance which brings it in line with most present-day fighters. Recent news shows that it is being put into production on a large scale, and so it is of great importance that it should be well known.

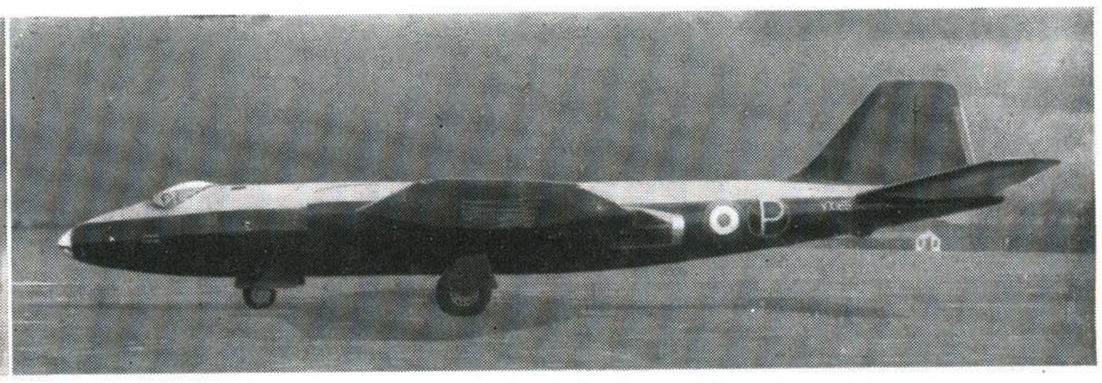
The Canberra story began just after the last war. At that time, the English Electric Company was asked by the Ministry of Supply to design a high-speed, high-altitude bomber. The result was the A.1 which, as the Canberra B Mk.1, first flew on the 13th May, 1949. Its performance startled everybody, especially as the power of its two Rolls-Royce Avon gas turbines had not been revealed. The rate of climb from take-off, in particular, amazed everyone at that year's S.B.A.C. Display. This prototype Canberra had an opaque nose and carried a crew of two. Four Mk.1 prototypes were built and these are similar in external appearance, with the exception of one which was experimentally fitted with Rolls-Royce Nene engines. The first photographs of the Canberra, showed a rudder with a rounded top, but following the initial flight of the first prototype the rudder horn was reduced and all Canberras now have a squat, squarish looking rudder. The dorsal fin, which was on the early prototypes, has now been entirely deleted.

The production Canberra is a light bomber and differs from the earlier types in having a glazed nose. A crew of three are accommodated in a pressure cabin in the nose. The Service Canberra B Mk.2, as this version is designated, also has a slightly modified rudder and cockpit hood.

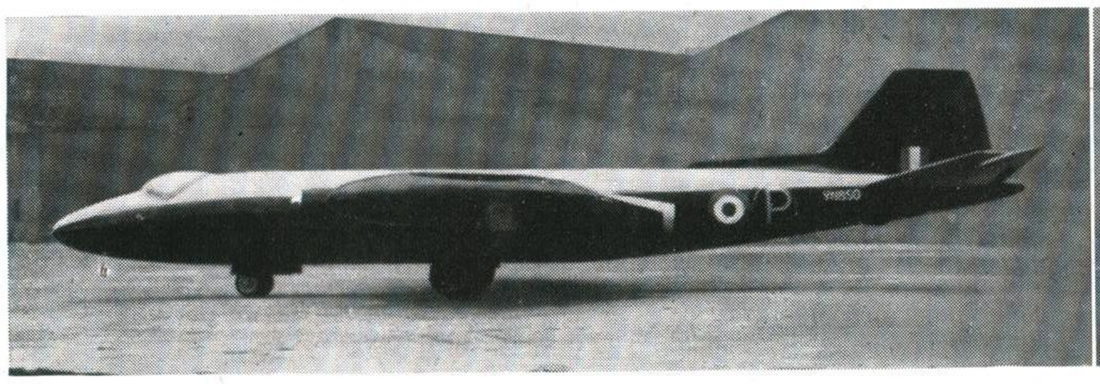
The Canberra is being produced in this country by Short Bros. and Harland, A. V. Roe and Handley Page, Ltd., as well as by its parent firm. It is also going to be manufactured by the Government Aircraft Factories in Australia. One is, at the time of writing, in the United States, after a record east to west crossing of the Atlantic, where it has impressed the Americans sufficiently to cause its series production. In America it will be known as the Martin B-57.



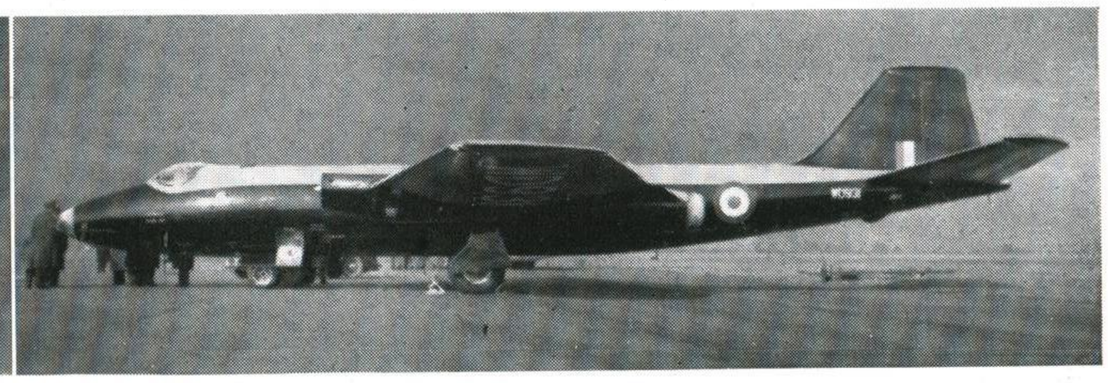
1st prototype Mk. 1 (curved top fin)



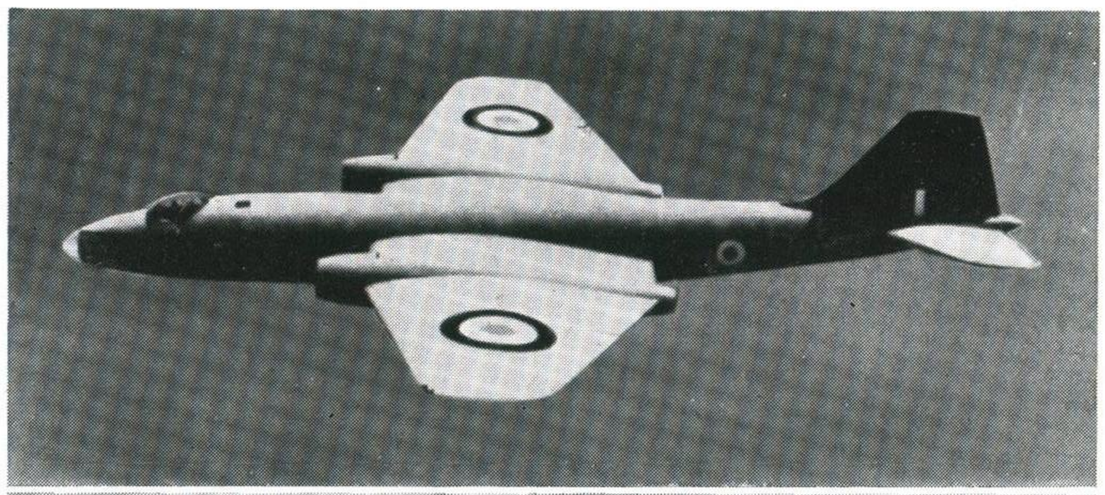
1st prototype Mk. 2 (perspex nose)

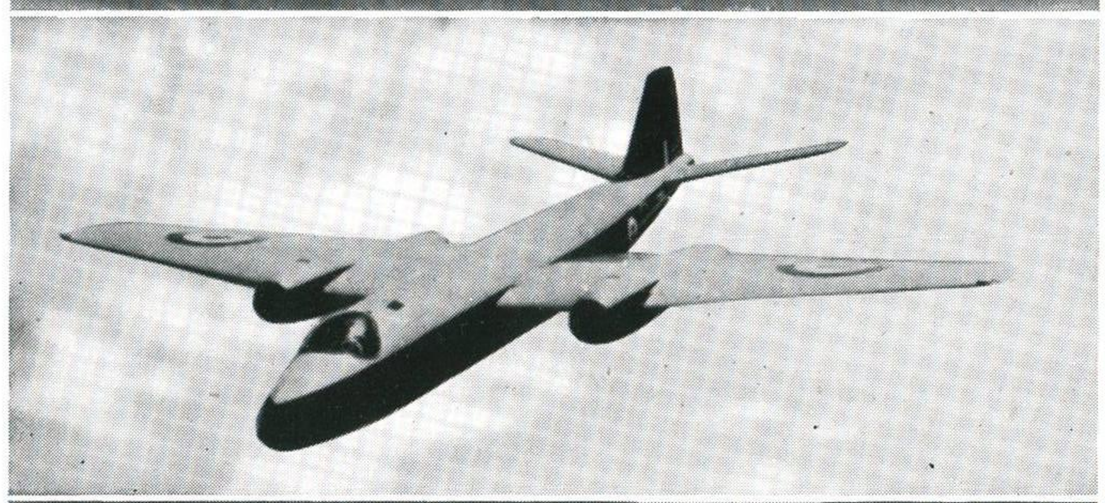


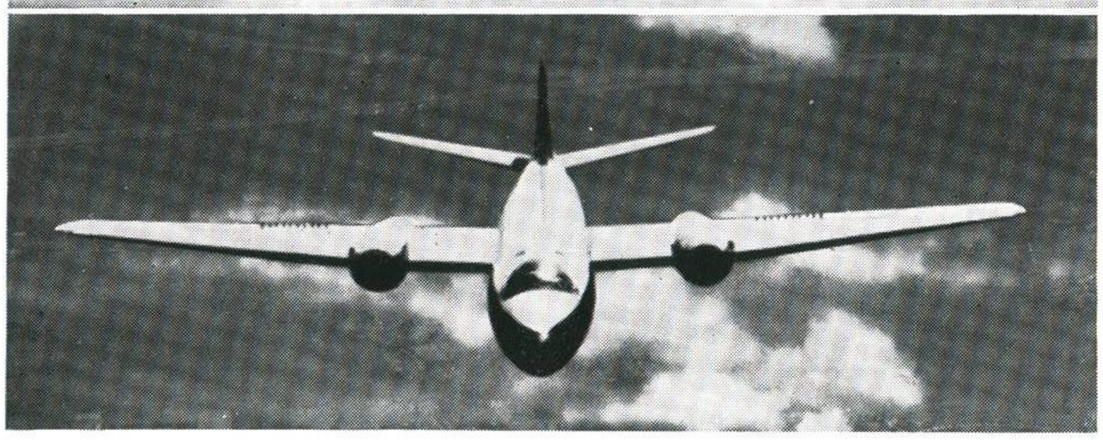
4th prototype Mk. 1 (showing tip tanks)



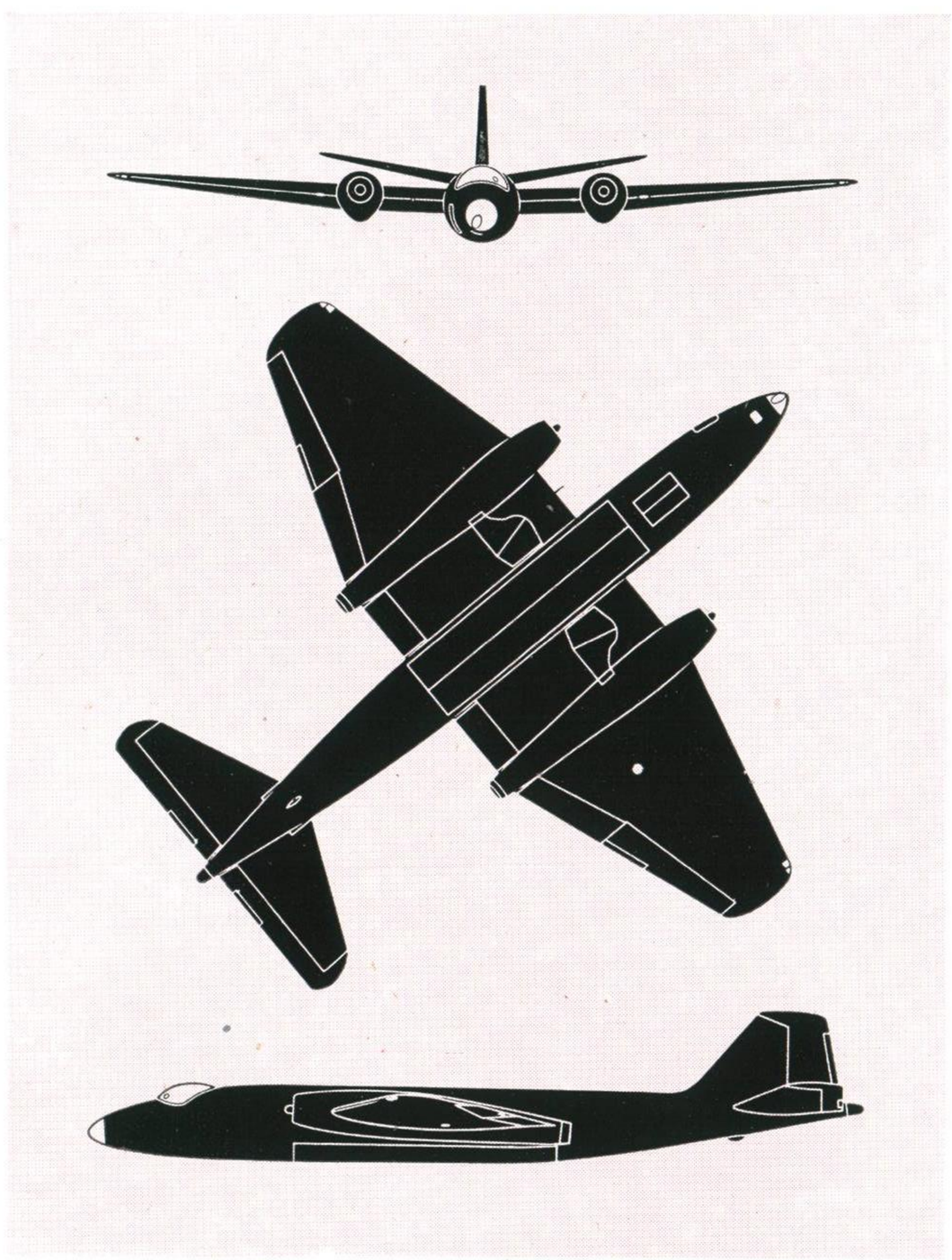
Production B Mk. 2 (modified rudder and canopy)







1st prototype Mk. 2



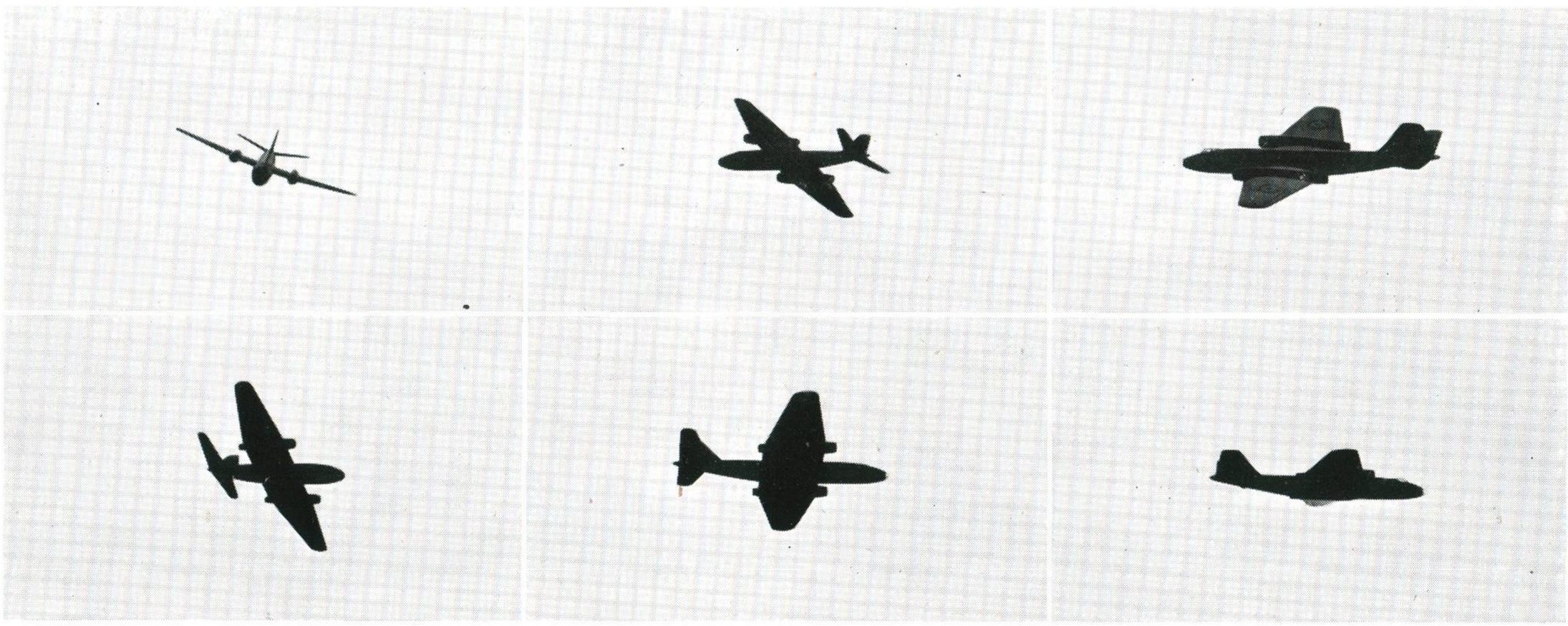
Canberra B Mk. 2

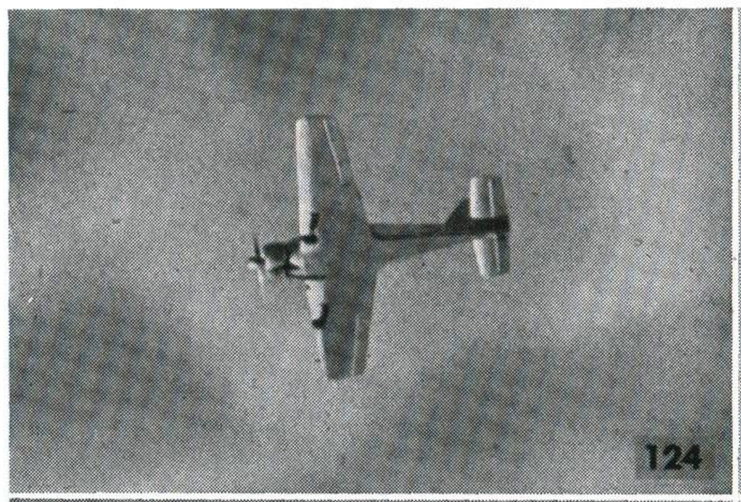
Recognition of the Canberra should not be difficult, although, despite derisive comment from many experienced spotters, it can look like a Meteor at first glance from certain aspects. Reference to p.57 of the December *Journal* should help clear up this trouble, however.

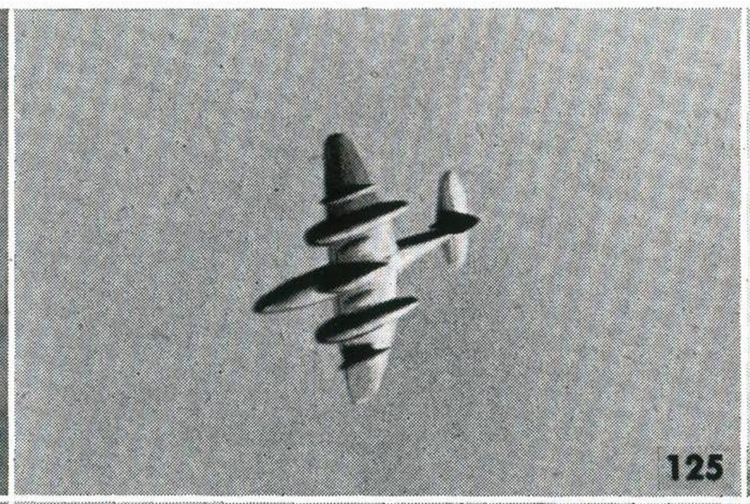
The Canberra is a midwing aeroplane with a very low aspect-ratio wing of broadly octagonal shape with blunt tips. The two turbine nacelles are not very prominent but they do make a slight break in both leading and trailing edges. In the side view, the fuselage has a very sleek look, and aft of the wing trailing edge the underside sweeps up to the tail. Fin and rudder are very low and broad and the tailplane has slight dihedral to clear the jet exhausts. In the head-on view, the wings are rather thick for a machine of this type and have slight dihedral. Provision has been made for wing-tip drop-tanks on all production aircraft.

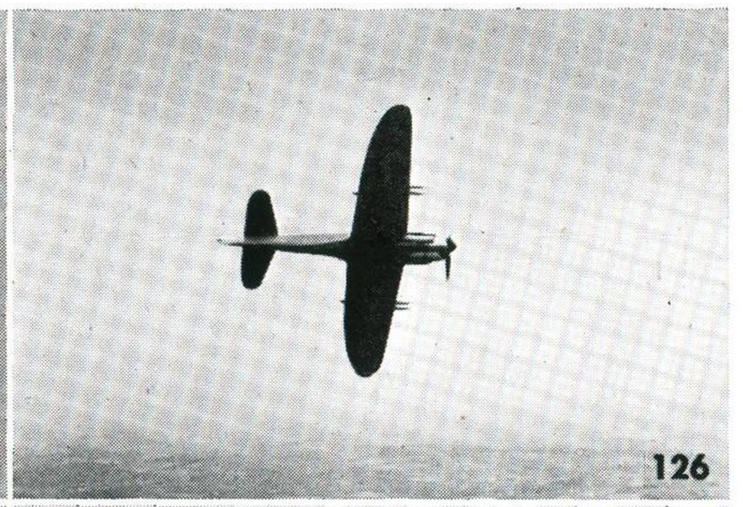
No performance figures or details of bomb-load can be given, but the bomb doors extend roughly one-third the length of the fuselage. It has been stated unofficially that the Canberra could carry an atomic bomb but there has been no official confirmation or comment on this statement. It should be noted in conclusion that, although the Canberra is going into service with the R.A.F. as a light bomber, there is no reason why it should not be used for photographic reconnaissance, for which purpose, incidentally, a prototype has recently been produced; or in a number of other rôles, especially as the type is still in its infancy. There is obvious possibility of development.

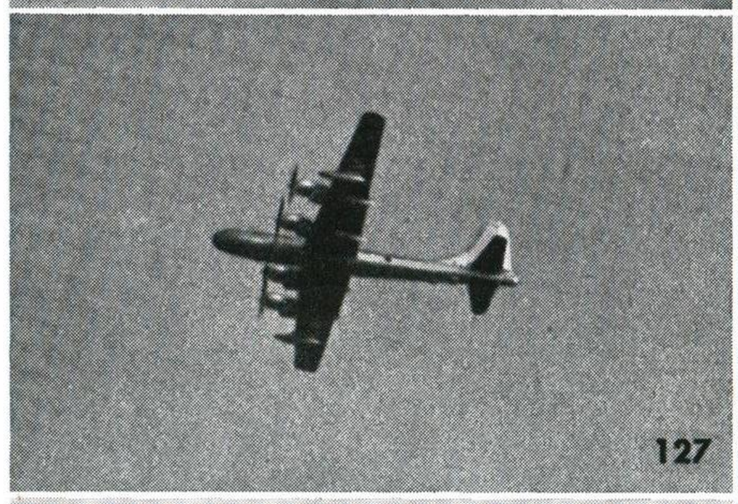
Canberra Circus——(B Mk. 2)




124


125

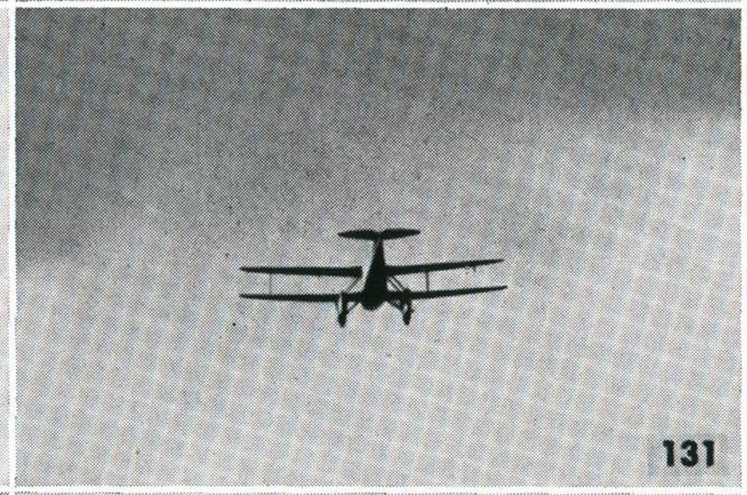

126

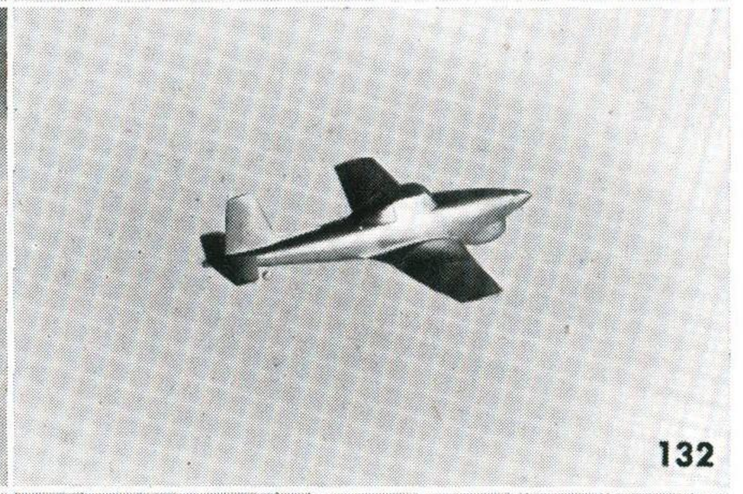

127

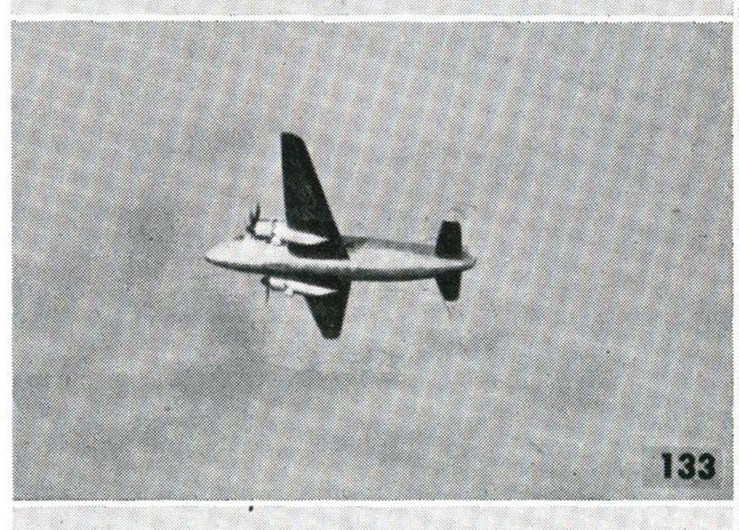

128


129

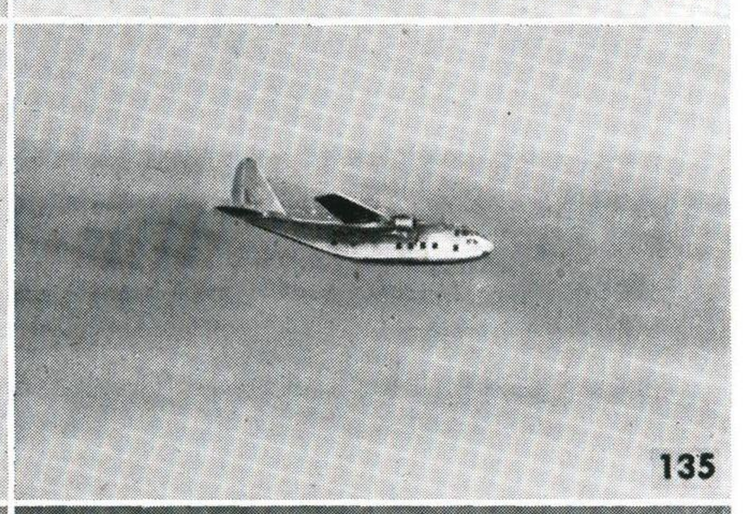

130


131


132


133

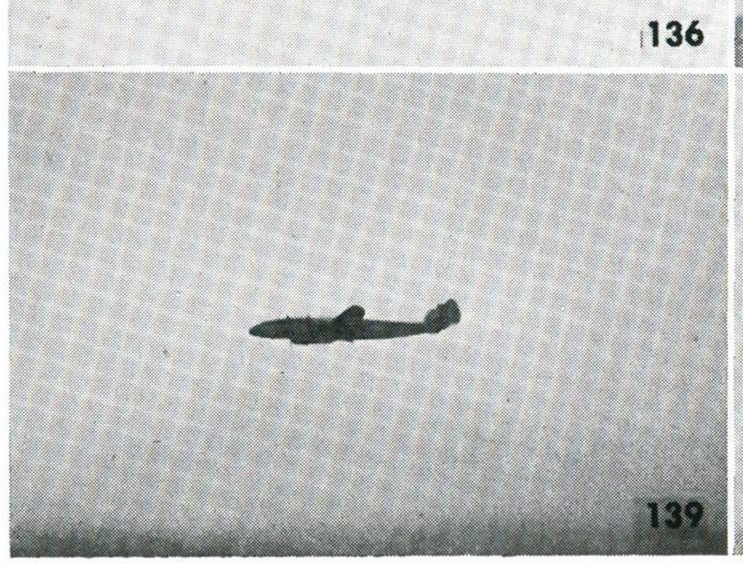

134

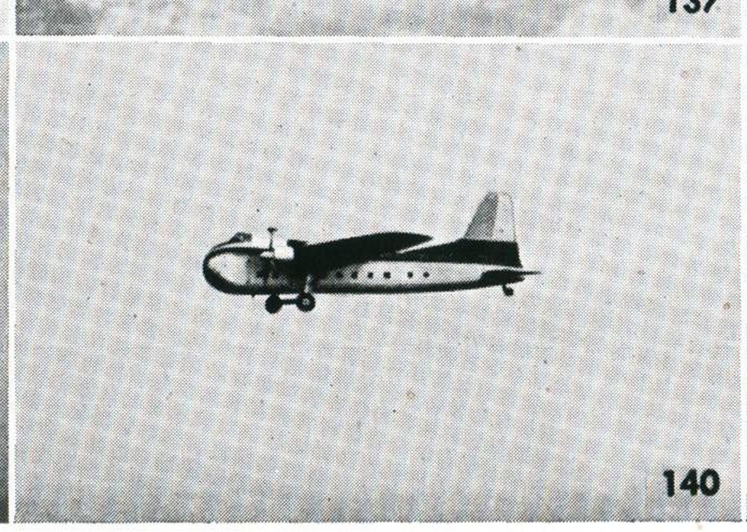

135

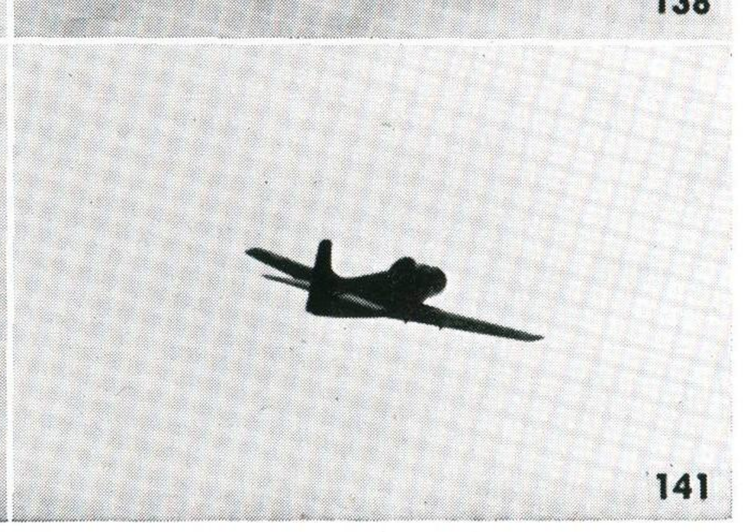

136


137


138


139

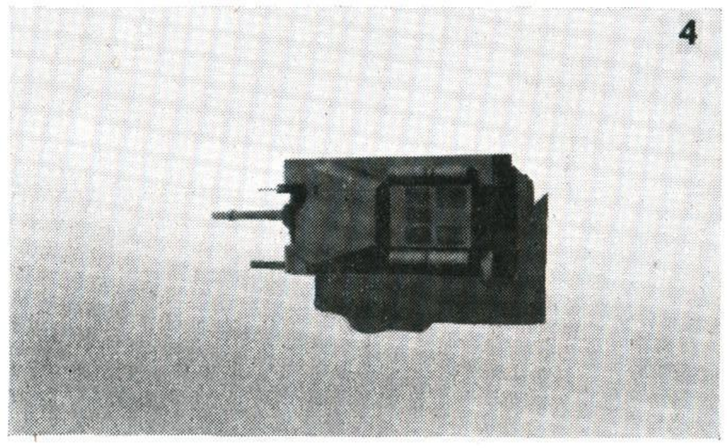

140

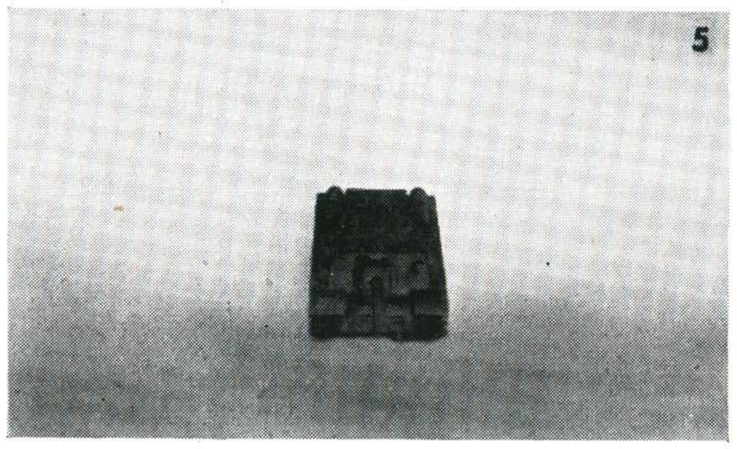

141

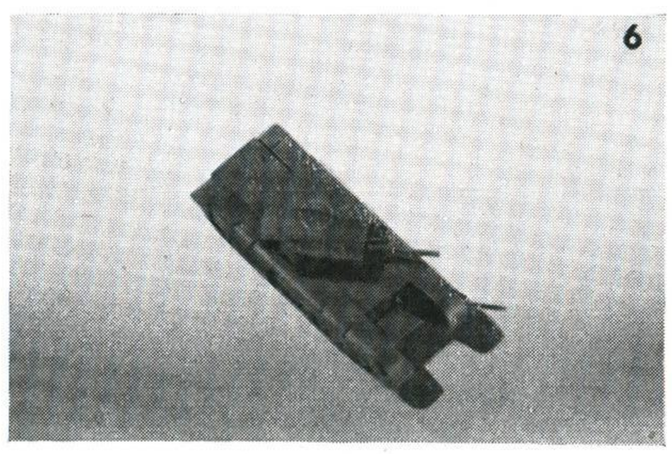

1

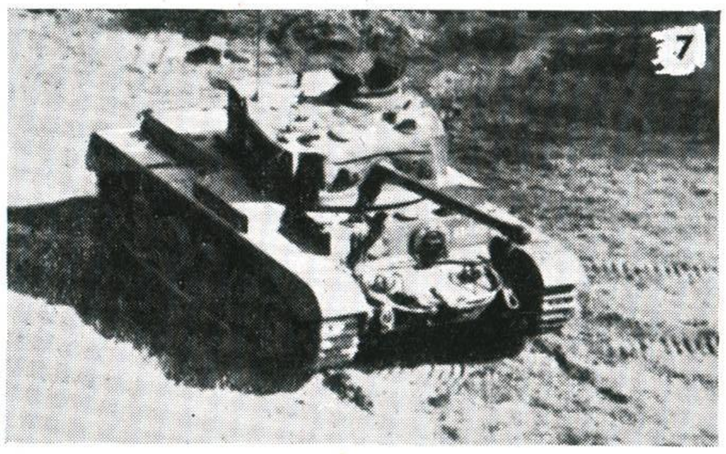

2

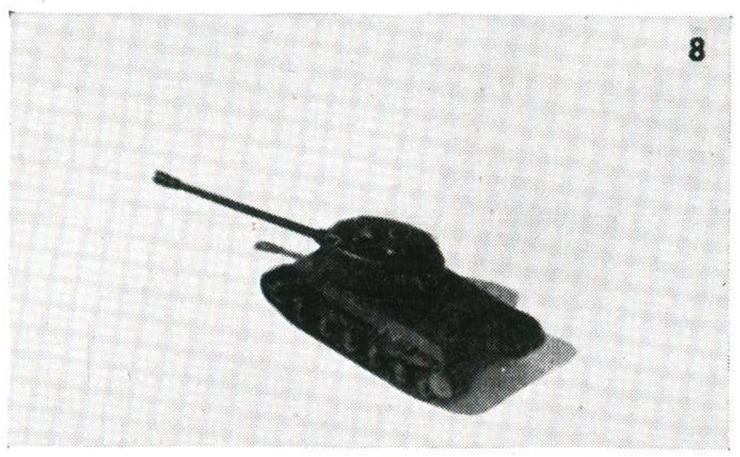

3

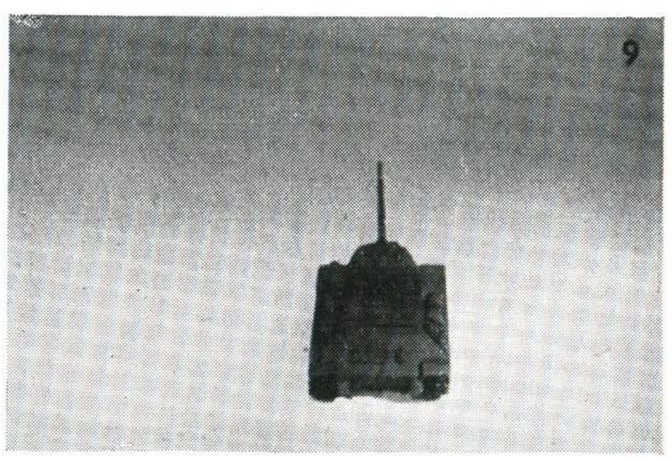

4


5

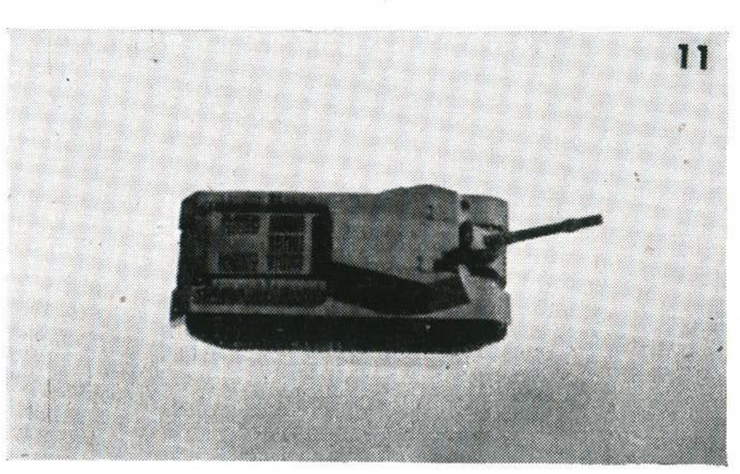

6


7

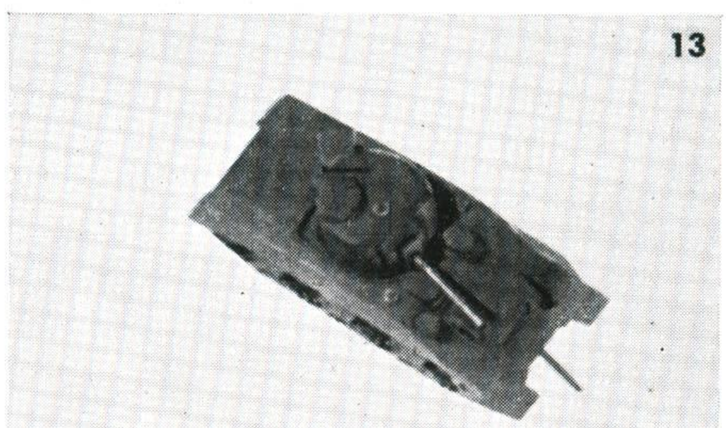

8

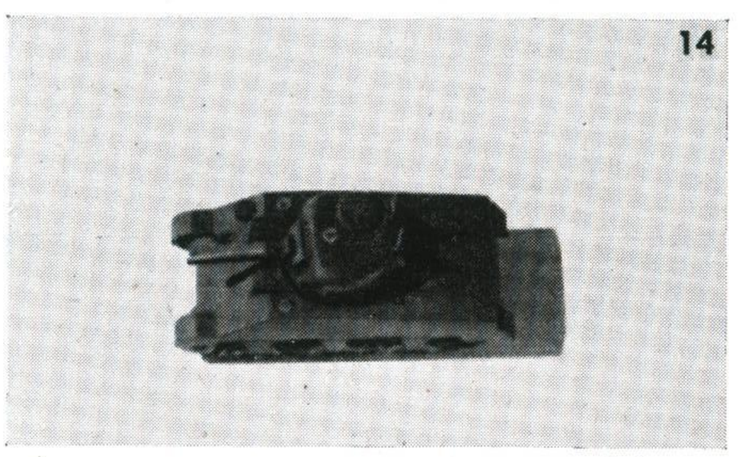

9

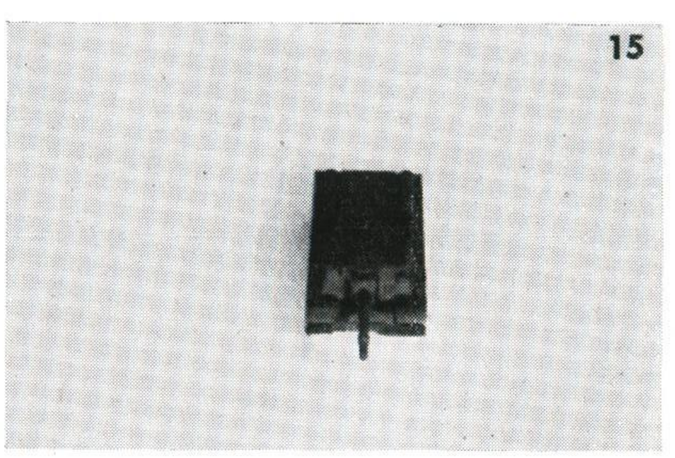

10

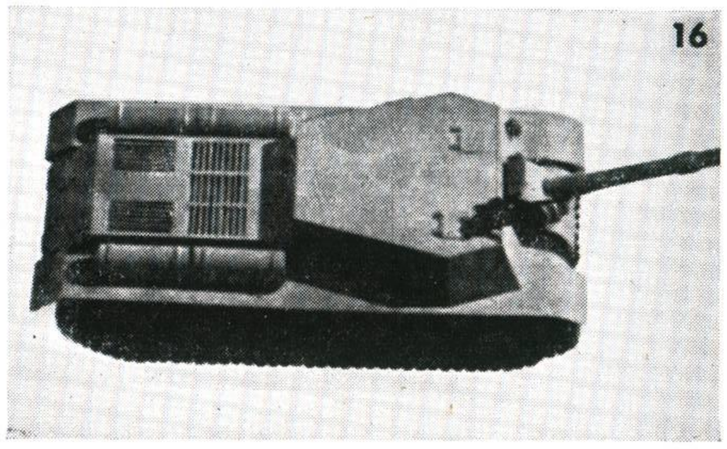

11

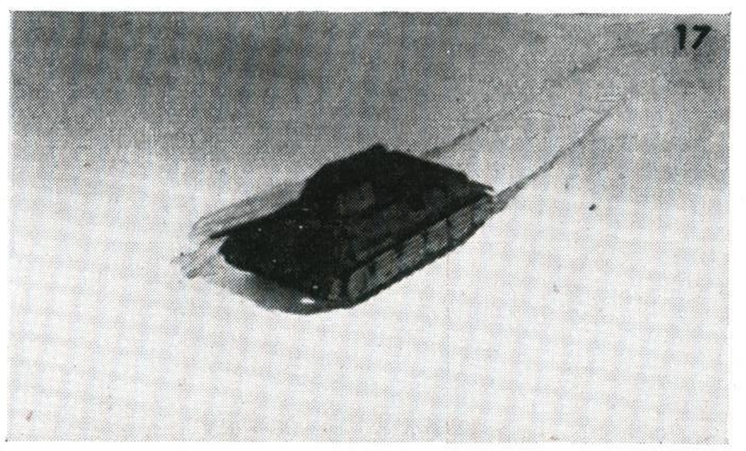

12


13


14


15


16

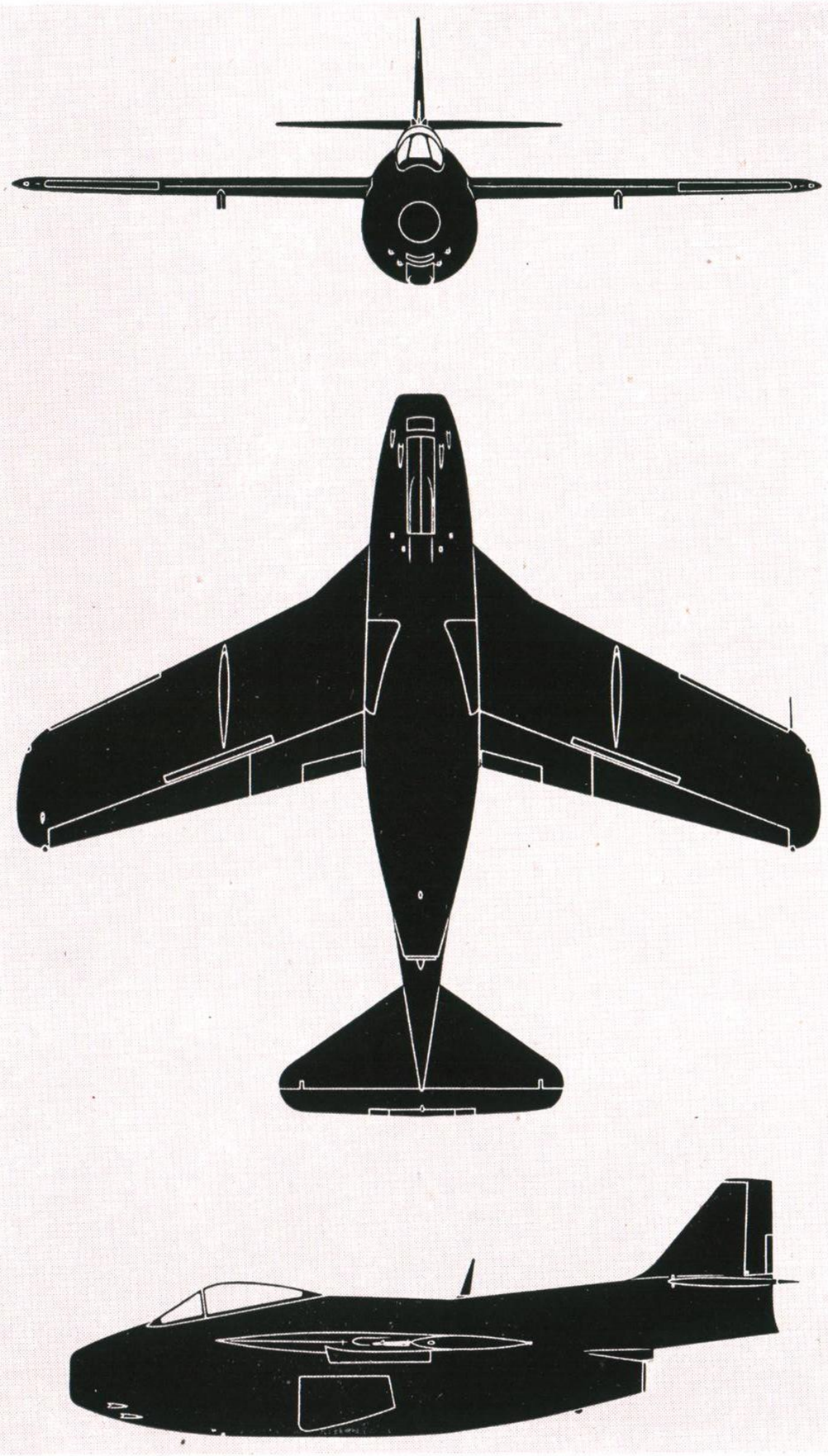

17


18

TANK TEST

SILHOUETTES — A PAIR TO COMPARE

SAAB J.29



Swedish Fighter
Engine : One D.H. Ghost turbojet
Span : 36 ft. Length : 33 ft. 5 ins.

Recognition features :

Wings : high-mid set, straight, swept back with leading edge root fillets and blunt/rounded tips.

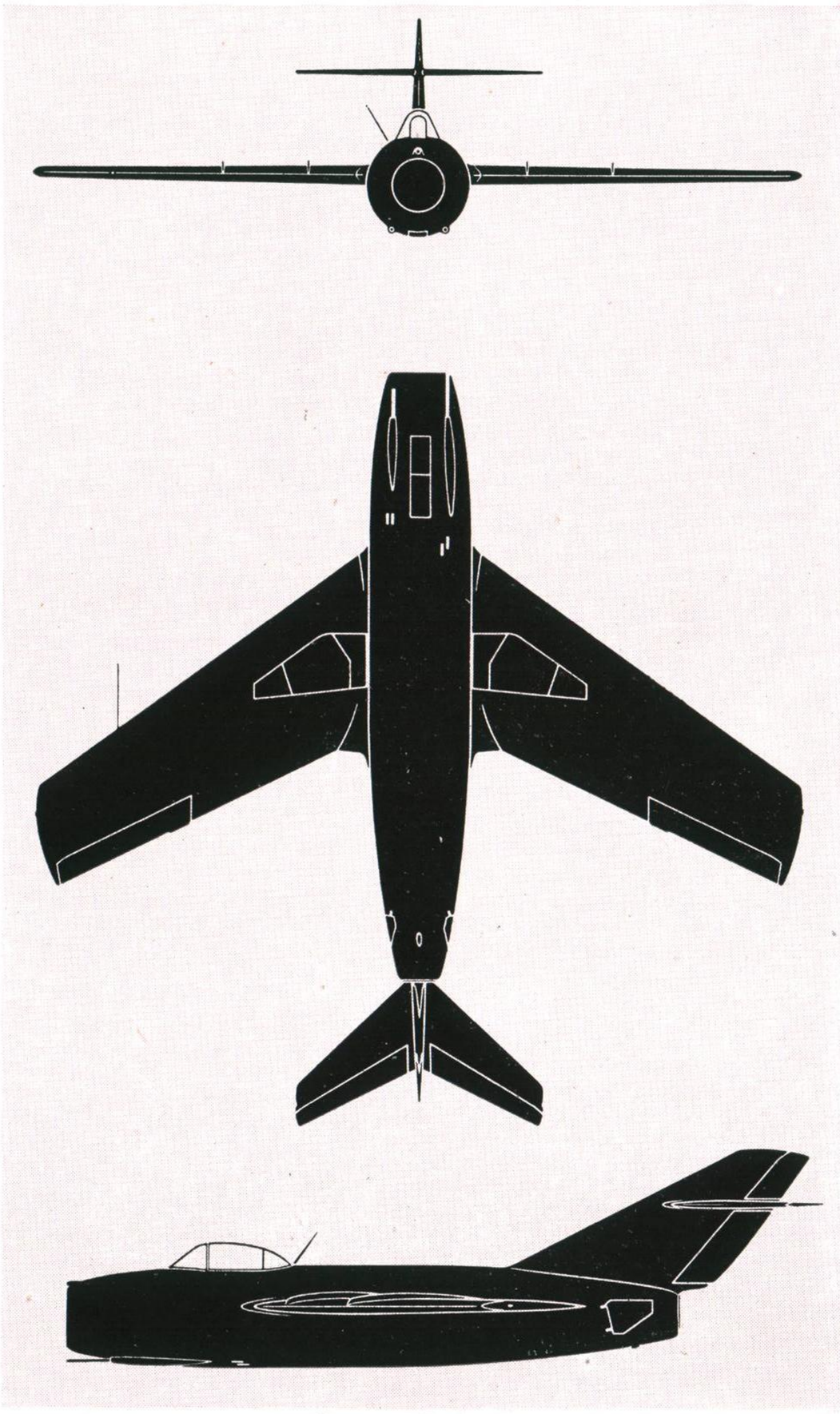
Fuselage : barrel shaped with " pear-drop " section, upswept tail-boom forming step with jet tailpipe.

Tailplane : broad, triangular, with straight trailing edge.

Fin and Rudder : broad triangle with squared-off tip, straight trailing edge forming sharp point with tail-boom baseline.

Detail : streamlined cockpit canopy on nose.

MIG-15



Russian Fighter
Engine: Unknown
Span : 34 ft. (approx.) Length : 32 ft. (approx.)

Recognition Features :

Wings : mid-set, straight, swept-back, blunt tips.

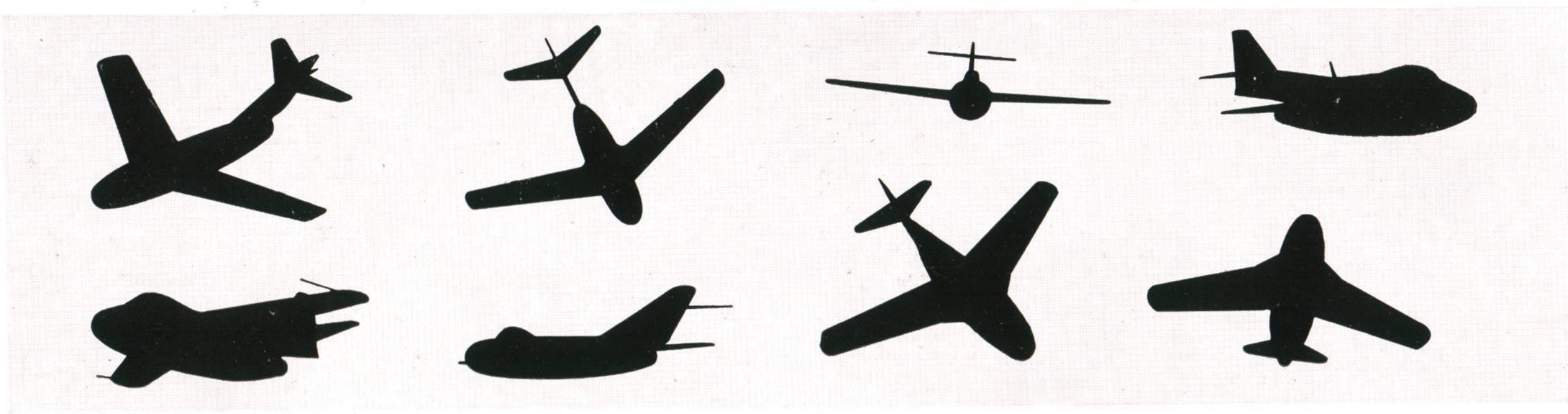
Fuselage : short, cylindrical, " sawn-off "at both ends.

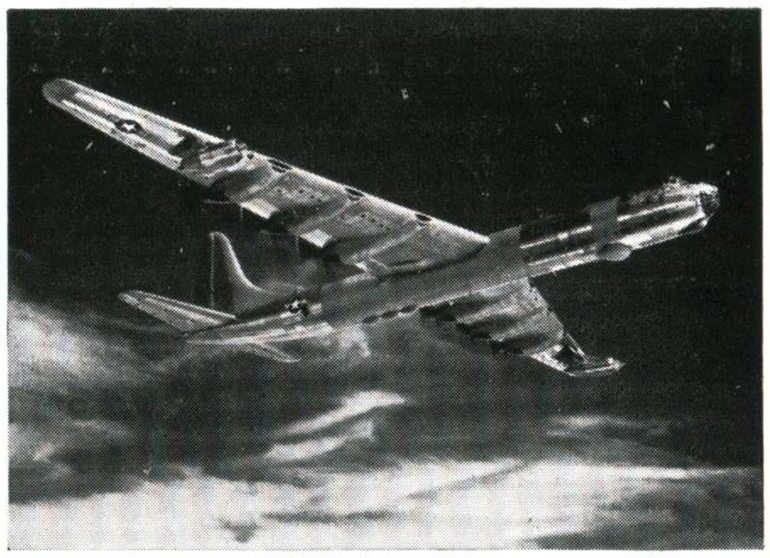
Tailplane : small " crosstree " type set high on fin and rudder, swept back, blunt tips.

Fin and Rudder: large " shark's-fin ", swept back well aft of tail-pipe, blunt tip forming sharp point at trailing edge

Detail : cockpit canopy riding on front fuselage.

Now solve these SILLOGRAPHS (Answers on rear cover)





Cover Photo: Consolidated B-36D a multi-engined heavy bomber which puts all other multi-engined bombers into the medium class. A 'high quarter' shot below illustrates 'top side' characteristics.





Left to Right: DC-4 (Skymaster), DC-6, DC-4M (Argonaut)

TRICKY TRIO

WRECK-COGNITION
LA-Jet

SOLUTIONS TO RECOGNITION TESTS IN THIS EDITION:

ELEMENTARY

1. Viscount 700
2. RB-45C Tornado
3. Meteor F Mk. 8
4. Bristol 171 Mk. 3
5. Balliol T Mk. 2
6. B-47A Stratojet
7. Ambassador
8. F-80 Shooting Star
9. B-36D
10. Meteor PR Mk. 10
11. Wyvern TF Mk. 2
12. Percival P. 56
13. Mosquito PR Mk. 34
14. Varsity T Mk. 1
15. CF-100 Canuck
16. RB-50B Superfortress
17. Canberra B Mk. 2
18. RB-45C Tornado

ADVANCED

124. Percival P. 56
125. Meteor PR Mk. 10
126. Firefly FR Mk. 1
127. RB-50B Superfortress
128. Canberra B Mk. 2
129. AM-1 Mauler
130. Fairey 17
131. Dominie
132. Balliol T Mk. 2
133. Valetta C Mk. 1
134. Spitfire PR Mk. 19
135. C-123 Avitruc
136. RB-45C Tornado
137. Vampire FB Mk. 5
138. Convair-Liner
139. Constellation
140. Bristol 170 Mk. 31
141. AD-2 Skyraider

SILLOGRAPHS

22. F3D-1 Skyknight
23. Horsa CX Mk. 2
24. Wyvern TF Mk. 2
25. MIG-15
26. Fairey 17
27. LA-Jet
28. Balliol T Mk. 2
29. Venom NF Mk. 2
30. F-47N Thunderjet
31. L-5 Sentinel
32. Auster AOP Mk. 6
33. C-64 Norseman
34. SO 30C Bretagne
35. SE 161 Languedoc
36. F2H-2 Banshee
37. Attacker F Mk. 1
38. UF-1 Albatross
39. F-82 Twin Mustang
40. F-86 Sabre
41. Chipmunk T Mk. 10
42. PBM-3 Mariner

TANK TEST

1. Joseph Stalin 2 (Russian)
2. Joseph Stalin 3 (Russian)
3. Centurion (British)
4. J.S.U. 152 (Russian)
5. J.S.U. 152 (Russian)
6. Churchill (British)
7. Comet (British)
8. Joseph Stalin 2 (Russian)
9. T.34/85 (Russian)
10. T.34/85 (Russian)
11. J.S.U. 152 (Russian)
12. J.S.U. 152 (Russian)
13. Sherman M4A2 (American)
14. Sherman M4A2 (American)
15. J.S.U. 152 (Russian)
16. J.S.U. 152 (Russian)
17. T.34/85 (Russian)
18. Sherman M4A2 (American)

HIGHLIGHTS

10. Blackburn Universal
11. C-82 Packet
12. C-46 Commando
13. TU-2
14. Lincoln B Mk. 2
15. F-82 Twin Mustang
16. Hornet F Mk. 3.
17. B-47 Stratojet
18. Meteor NF Mk. 11
19. Convair B-36
20. Sea Hornet NF Mk. 21
21. B-50A Superfortress
22. Venom FB Mk. 1
23. Sturgeon TT Mk. 2
24. IL-12
25. B-36
26. Hastings C Mk. 1
27. Canberra B Mk. 1

Saab J.29 and MIG-15 SILLOGRAPHS
Top: MIG-15, MIG-15, MIG-15, J.29.
Bottom: J.29, MIG-15, J.29, J.29.

MULTI-TYPES

PHOTOGRAPHS		SILLOGRAPHS	
Left-hand Col.	*Right-hand Col.*	*Left-hand Col.*	*Right-hand Col.*
1. C-97	5. TU-4	9. B-50D	15. C-97
2. B-50D	6. B-36D	10. B-36D	16. B-50D
3. B-29	7. C-97	11. B-29	17. C-97
4. B-50D	8. B-29	12. B-29	18. B-50D
		13. C-97	19. B-36D
		14. B-36D	20. B-50D

Acknowledgment.—We are indebted to Mr. Harold G. Martin of New York for use of his photographs of the Banshee on page 103.

TRICKY TRIO



47,145 5/51 38-241-0

Printed under the Authority of H.M. Stationary Office by Fosh & Cross Ltd. London