JOINT SERVICES

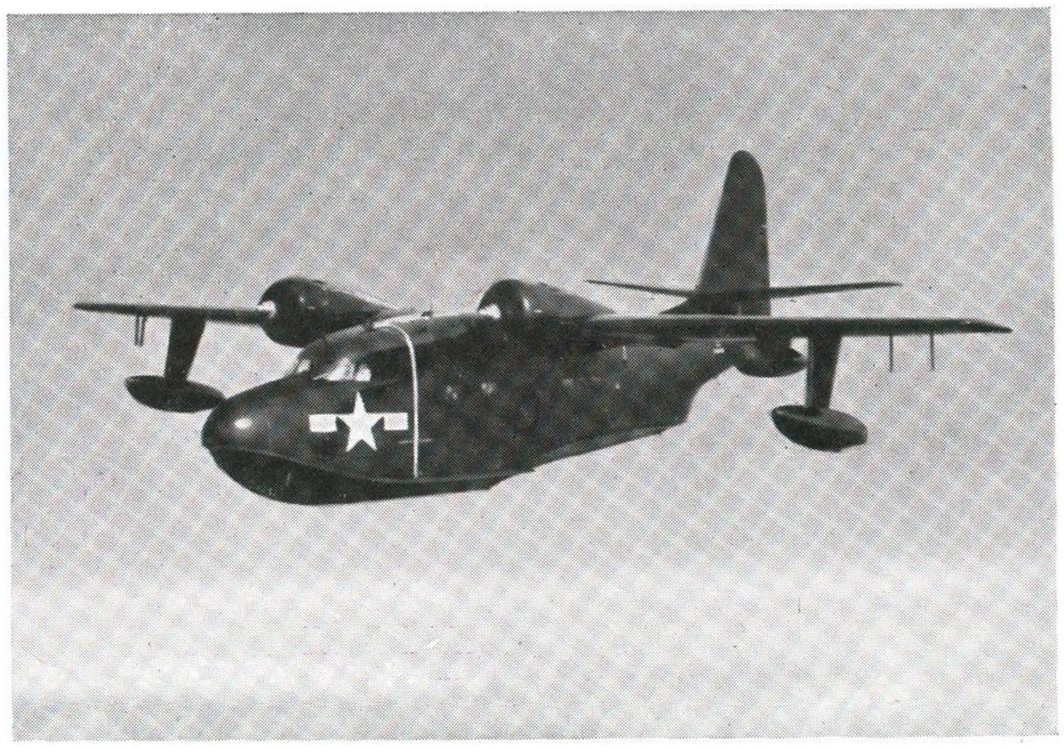
RECOGNITION *Journal*



Vol. 6 JULY 1951 No. 7

EARLY WARNING!

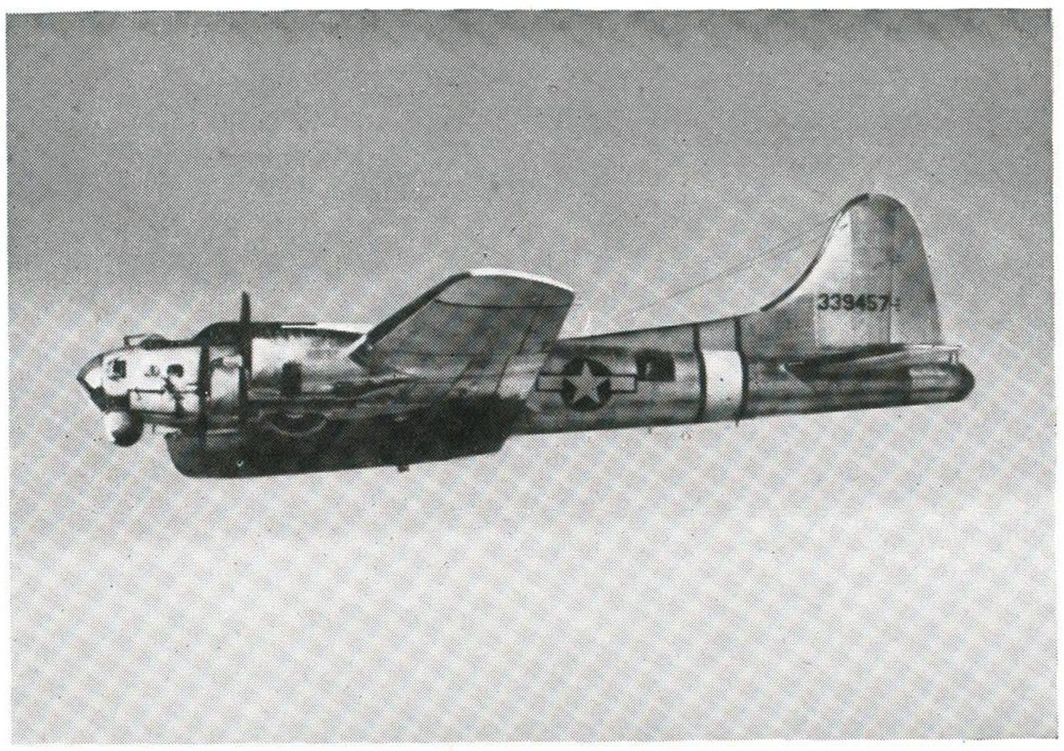
Six new or modified types which are worth watching.



Albatross UF-1 by Grumman, utility amphibian flying boat is on order for both U.S.A.F. (SA-16A) and U.S. Navy (UF-1). For land legs the Albatross has a retractable nose wheel undercarriage, the two main wheels being housed neatly in the hull just above the first " step ". Span : 80 ft.



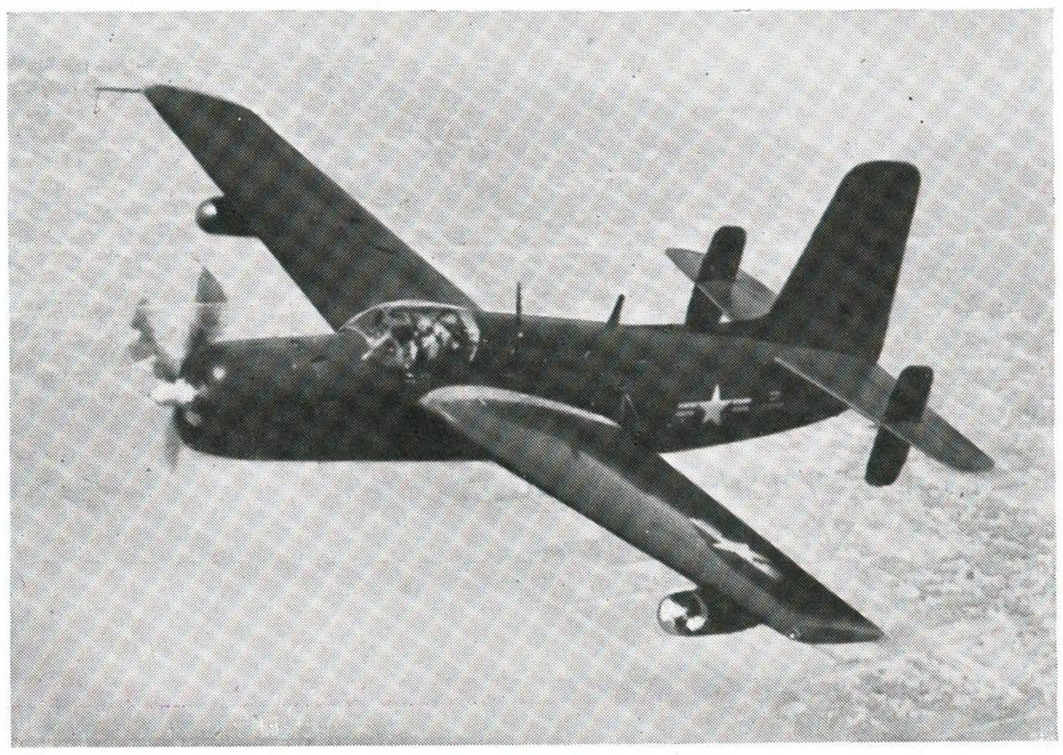
Goose Neck is the impression we get from the thrusting nose of the Chance Vought F7U-1 Cutlass. Twin (swept) fins appear to ride precariously on its swept wings. This tail-less twin-jet fighter is in production for the U.S. Navy. Span : 39 ft.



Boeing Lifesaver. The unusual object under the fuselage of this Boeing SB-17H modification of the wartime Fortress is a plywood lifeboat designed to be dropped by parachute. Span : 104 ft.



Super-Tutor. The Boeing TB-50 is an unarmed internally modified B-50 Superfortress designed as a flying classroom, and is the largest trainer in the world. It is similar externally to the B-50D except that no wing tanks and no gun-turrets are carried. Span : 141 ft.



Sub Sinker. The Grumman AF-2S Guardian is armed with guns and bombs to attack and destroy targets located by the AF-2W opposite. Recognition features include " plank " like mid-set wings and a tall blunt tipped fin and rudder. Span : 57 ft.



Sub Seeker. This sub-hunter, the Grumman AF-2W Guardian carries electronic equipment in its belly bulge, apart from which it is practically identical externally to the AF-2S. The two aircraft work together. Incidentally, both may be seen with or without their twin finlets. Span : 57 ft.

JULY 1951 Vol. 6. No. 7

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.

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A MATTER OF "DOING"

SINCE RECOGNITION TRAINING is much more a matter of "doing" than it is of amassing knowledge and facts, training methods which exercise powers of discrimination and identify the names of objects with their shapes are among the most effective.

The "Tutor", "Teacher" and "Trainer" presentations recently introduced into the *Journal* are designed to exercise powers of discrimination by identification. They comprise a series of unnamed views and a set of named key diagrams. In order to identify the unnamed views the student is forced to concentrate on their shape details and to compare them closely with those of the known key diagrams. For reasons of space, these presentations cannot be made comprehensive enough to give complete familiarization training, but the instructor should add further sets of illustrations for use with each set of key diagrams to provide complete cover. Backed up by suitable tests and enriched by practical experience a good standard of visual recognition should follow.

This method of familiarization is a sort of slow motion version of the mental process of recognizing any object. When a well-known object is presented, the eyes enquire of the brain, so to say, what it is. The brain identifies and names the object from its store of references, that is, from its previous experiences of it. This operation is often performed so quickly that we are not aware that it has taken place. For example : in order to use a telephone one must first recognize it : yet one is never conscious of the act of recognition. Which illustrates, incidentally, what can and must be the standard of visual recognition of targets. When an unknown object is presented, there is no store of previous experiences to go on and the viewer must then provide himself with his first experience of naming the object by referring to some external source of reference.

This month, we introduce our first ship recognition "trainer". It is entitled "Fleet Carrier Digest" (pages 158-161). We should like all readers who are interested in shape recognition—especially those who have no knowledge of ships and who are not called upon to recognize them—to go through this exercise thoroughly and to react by writing to us. Incidentally, much good can result from doing the exercise twice or even three times; searching out as many new identification points as possible each time. Finally, try out the test on page 70 of the March *Journal*. The exercise will not, of course, train anyone completely to recognize these Fleet carriers, but it will provide a good "workout" in shape recognition and demonstrate how much recognition can be learned from a small amount of material properly presented and methodically used.



CHARACTER STUDY

The Grumman F9F-3 Panther

THIS aircraft looks like a giant rifle bullet which has been fitted with wings and provided with a tail unit torn off another aircraft for the emergency. It is one of the most distinctive aircraft alive today.

From all side views, the long bullet nose and the freak stern portion are visually striking even at long distances. Not only does the fuselage deepen as it goes aft, but the fin sweeps up in a long rising eminence to a rounded rudder which is stiff and straight-backed. The most striking feature, however, is the way in which the whole unit is cut away beneath to clear the way for the jet pipe. Add to this unique collection of shapes the high-set tailplane—with leading edge taper and straight trailing edge—and we have a tail of unforgettable form and structure.

From in front or behind there is nothing very distinctive, and the thick " intake-roots " of the wings are typical of other jets, as well as the moderate dihedral. Fuselage section is a familiar oval.

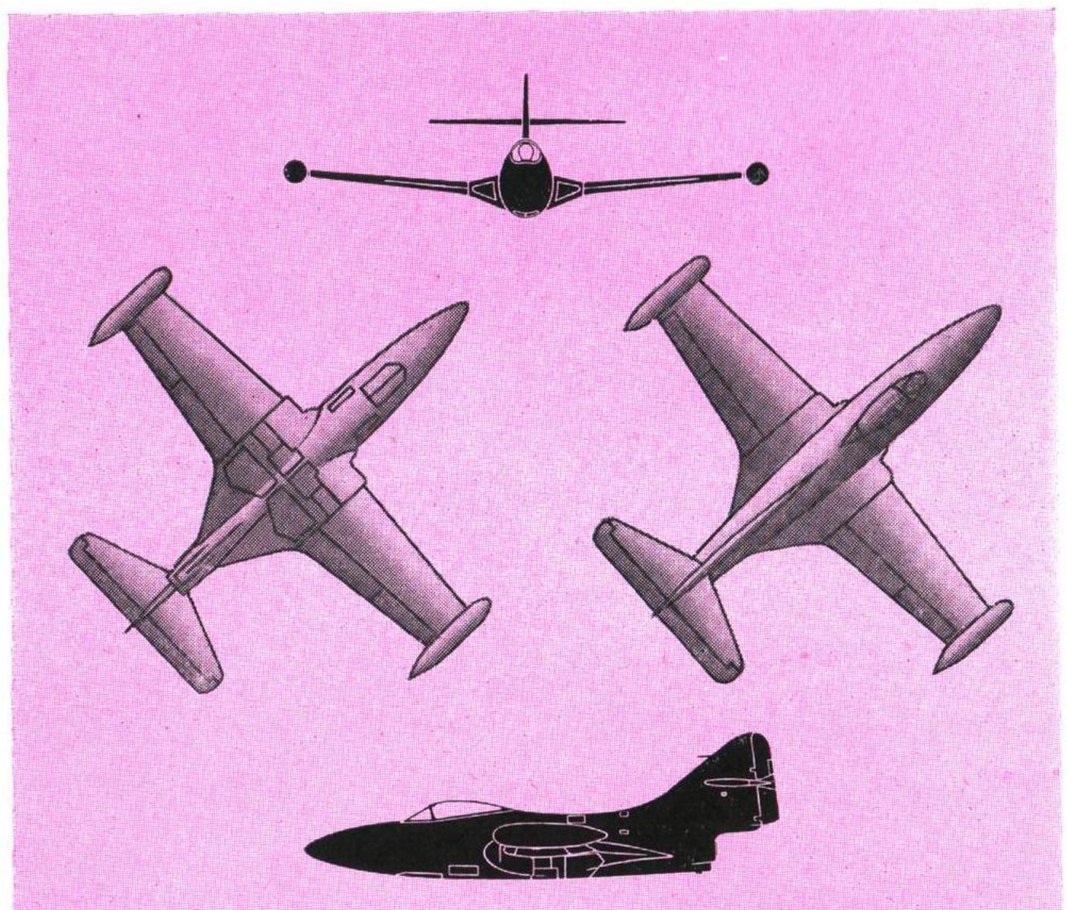
The moment one gets a view of the Panther in which the wing surfaces are plainly visible, the aircraft takes on an even more distinctive aspect—its real overall personality. More than ever does it look like a projectile. The long, smooth, and pointed nose juts out in front and gives the aircraft a speedy look from whatever angle it is seen. The wings sprout from the deep " intake-roots," with moderate and slightly unequal taper ; but the rear fillets spread like a duck's webbed feet, and merge with the rear fuselage just forward of the jet pipe. In most perspective views the " step-tail " then makes an abruptly startling end to the machine ; but in plan an equally noticeable feature is the extreme thinness of the fuselage end which is joined to the wings, and hence accented, by the great " webbed feet " fillets. The plan view needs some consideration on its own, as it is a unique combination of shapes, with the long pointed nose thrusting ahead of the broad centre section of the wings and the clean lines of the main planes themselves. The great fillets then close in on the wasp waist, and the pattern bursts forth again in the bold broad tail.

The Panther first flew in 1947 and is now in service with the U.S. Navy.

The chief figures are :—

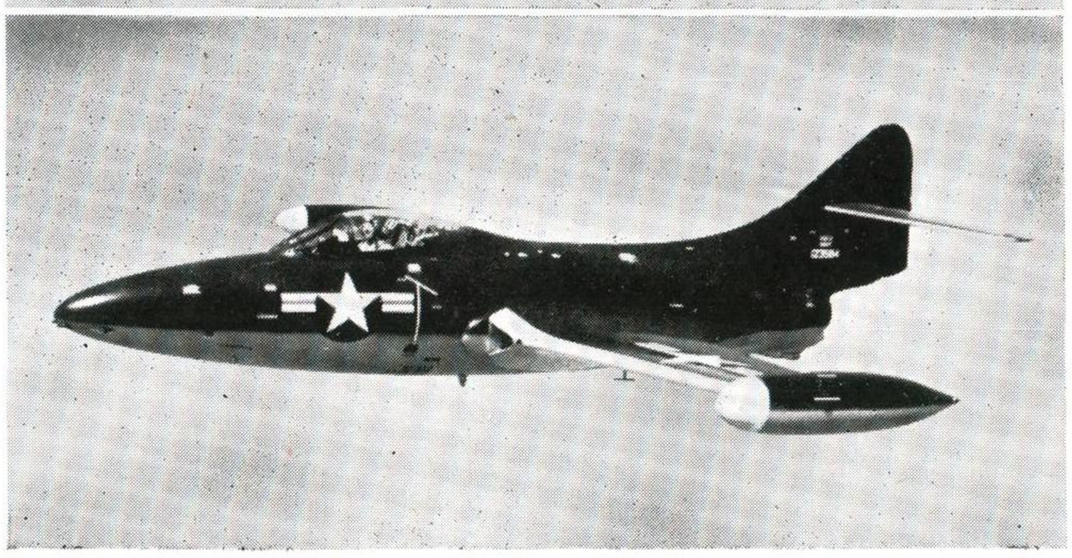
Span : 38 ft.
Length : 40 ft.
Engine : One P. & W. Turbowasp (Nene).
Maker : Grumman.
Armament : Four 20 mm. cannon.
Max. Speed : 572 m.p.h.
Function : Naval fighter.

C. H. GIBBS-SMITH



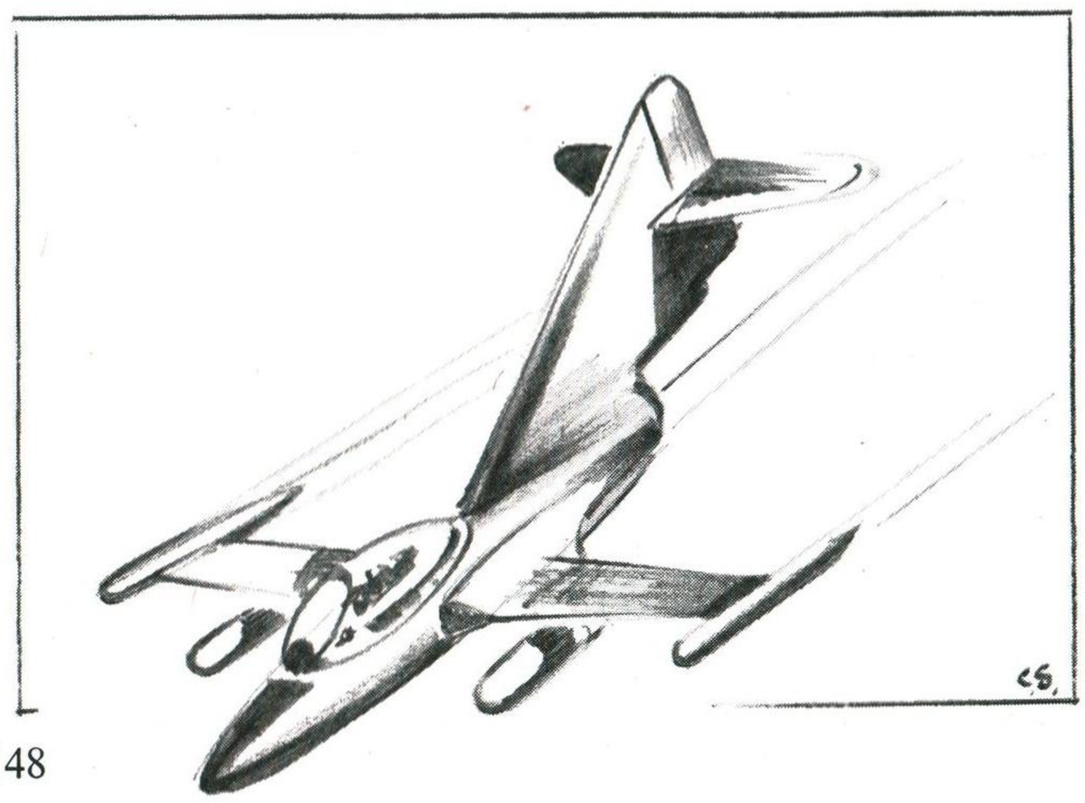
Span : 38 ft.





. . . a giant rifle bullet

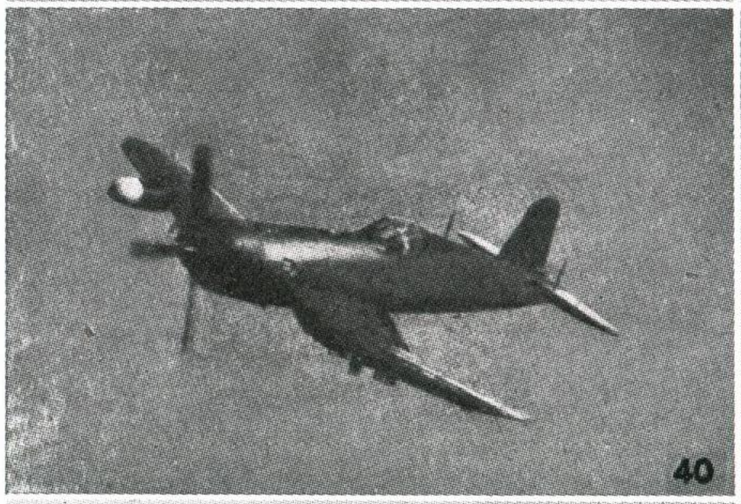
. . . provided with a tail



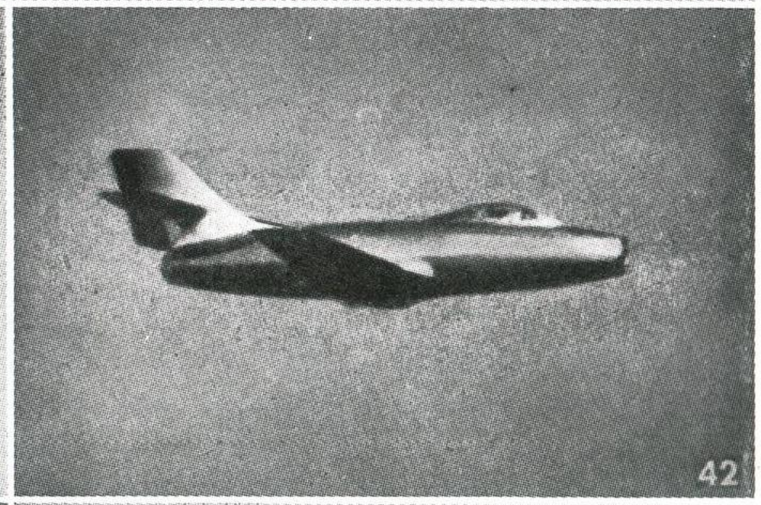

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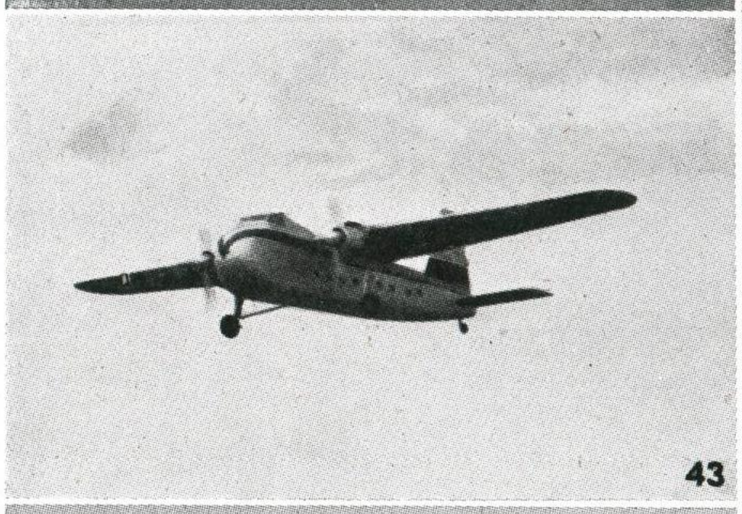

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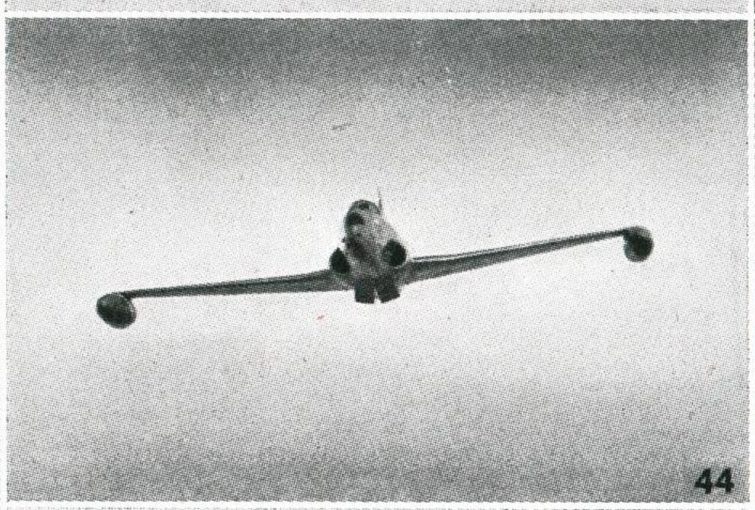

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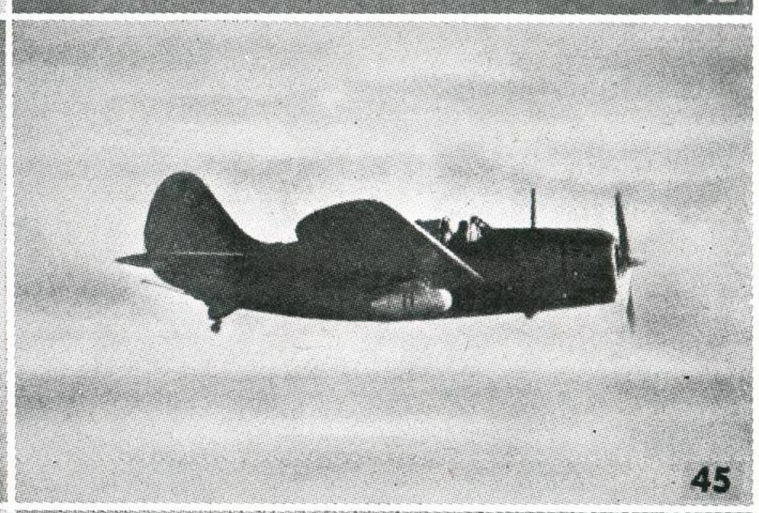

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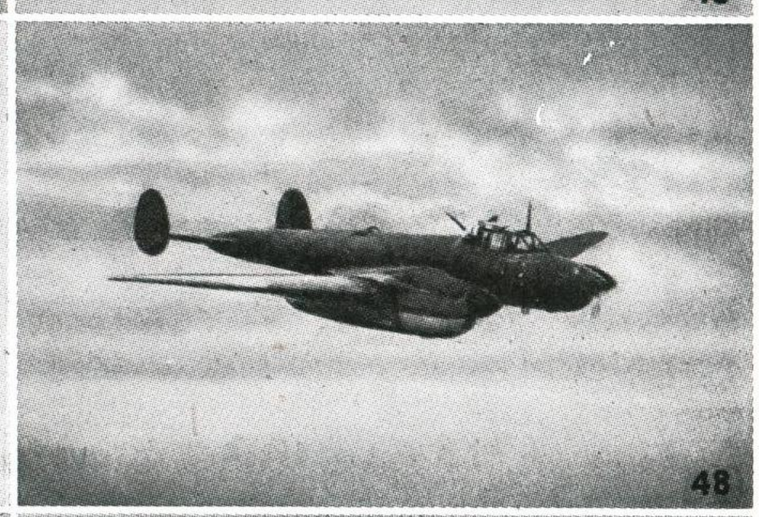

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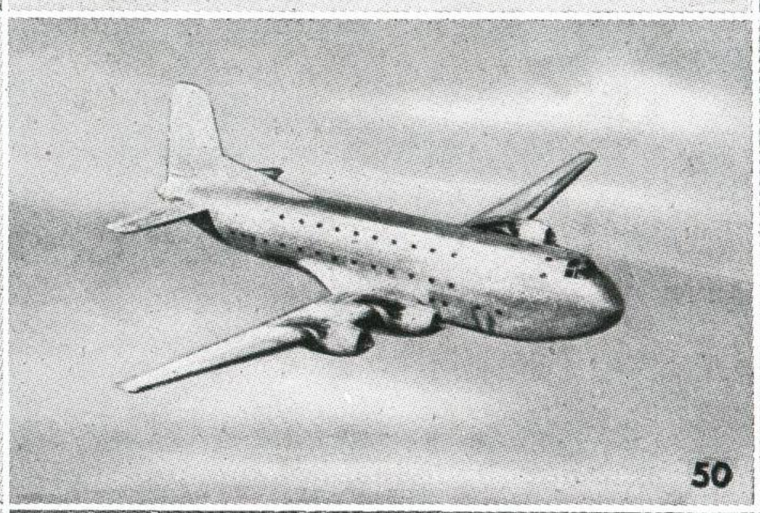

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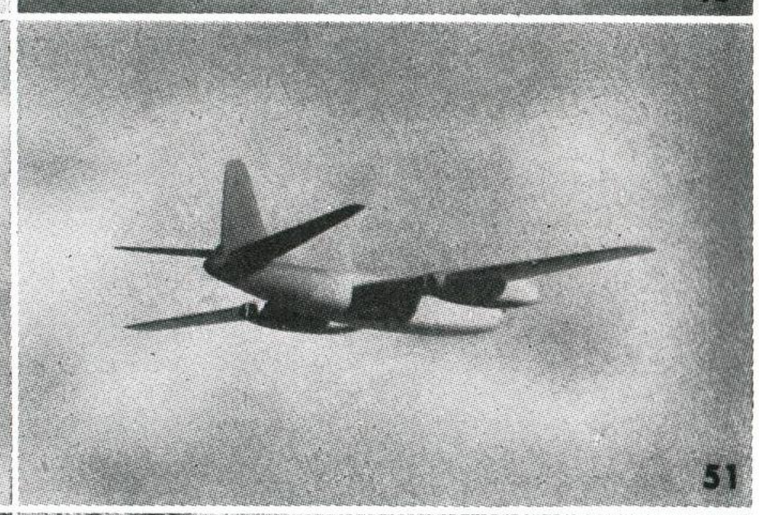

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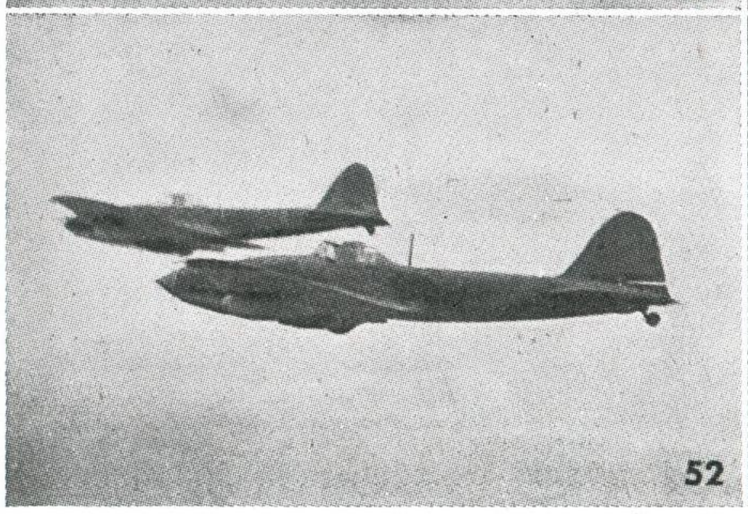

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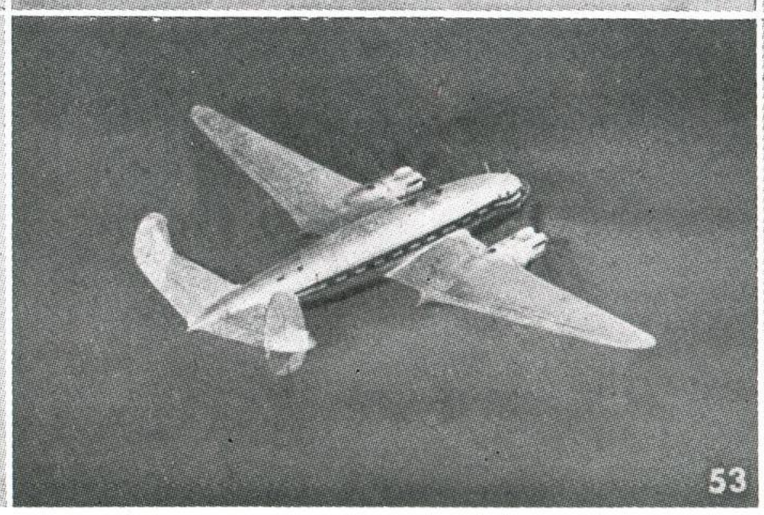

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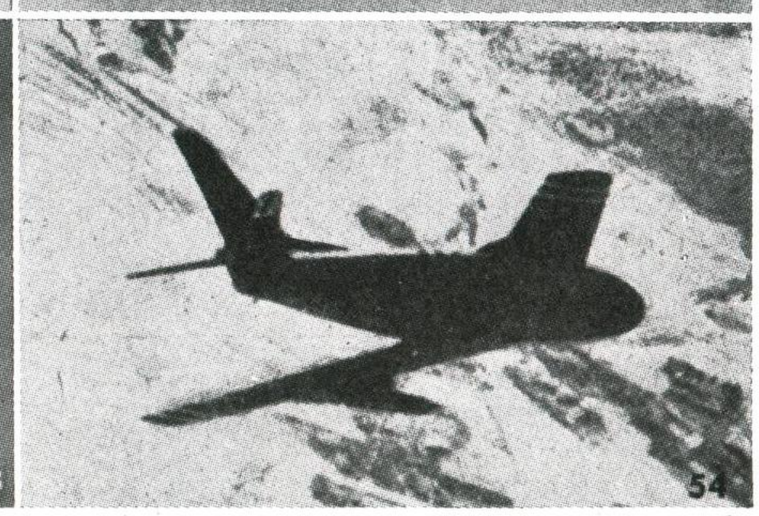

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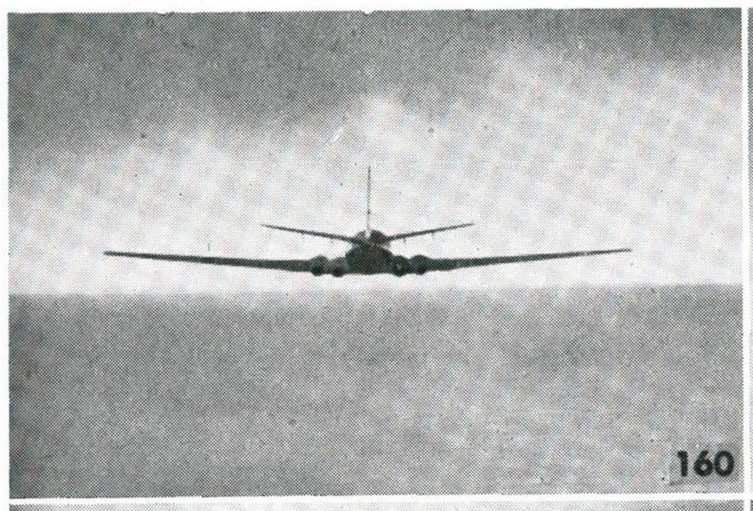

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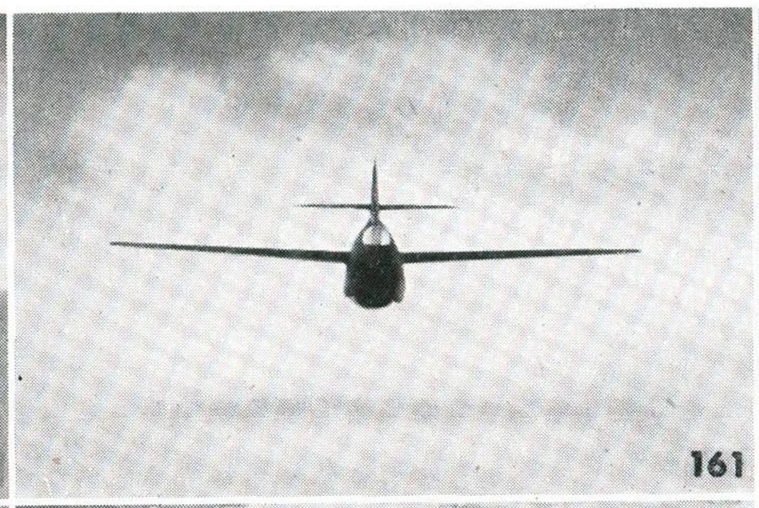

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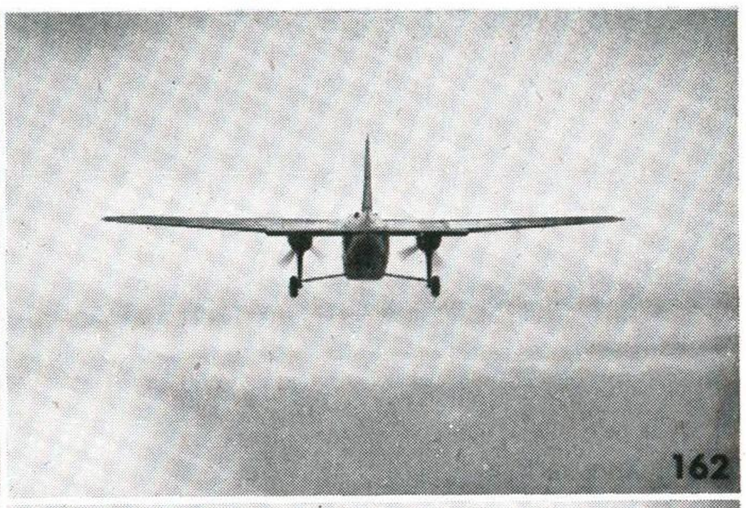

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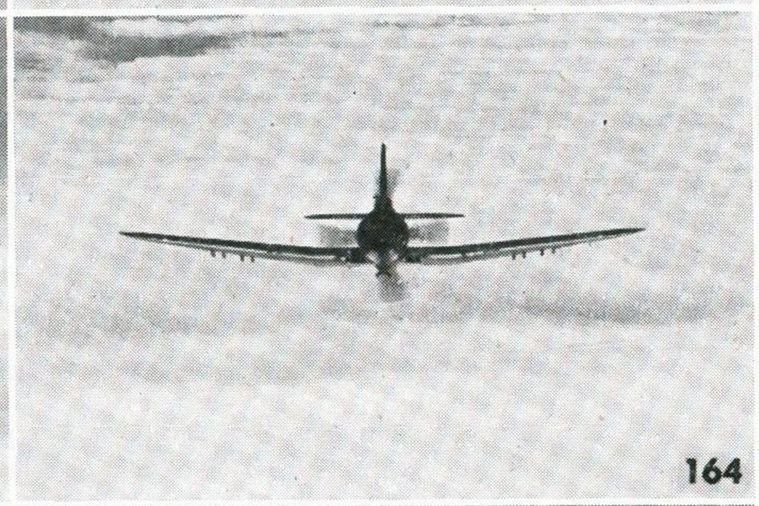

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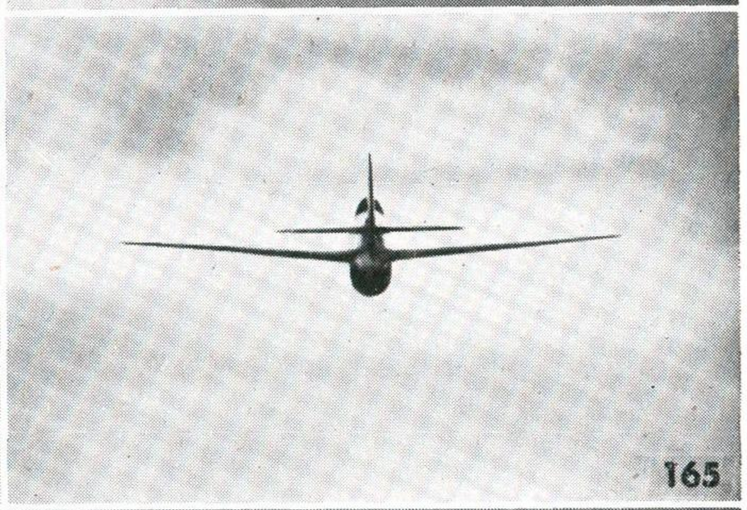

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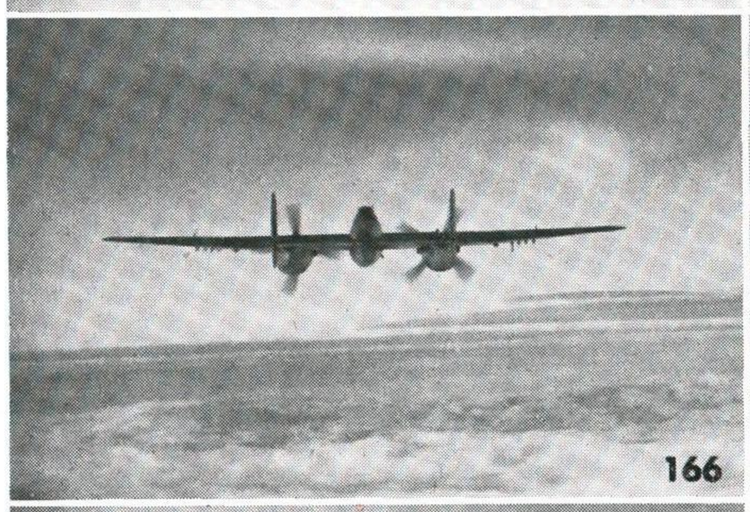

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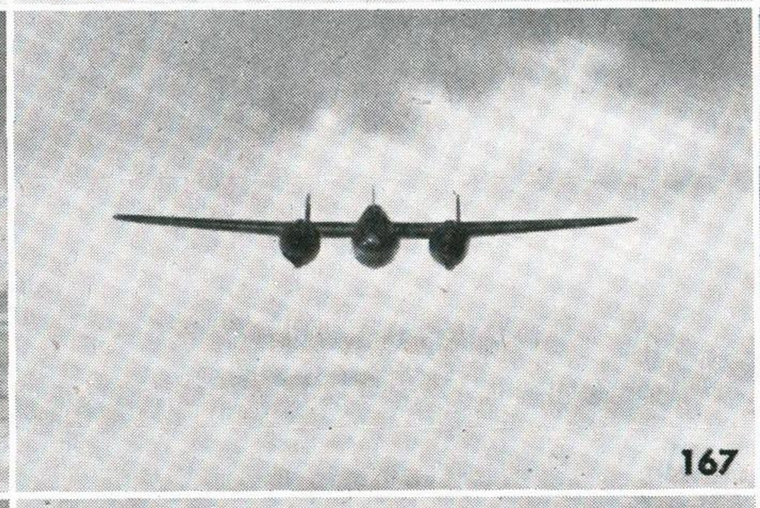

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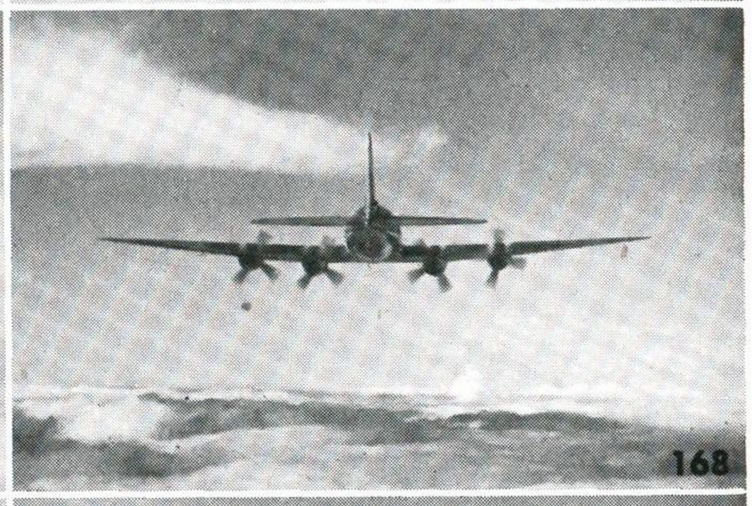

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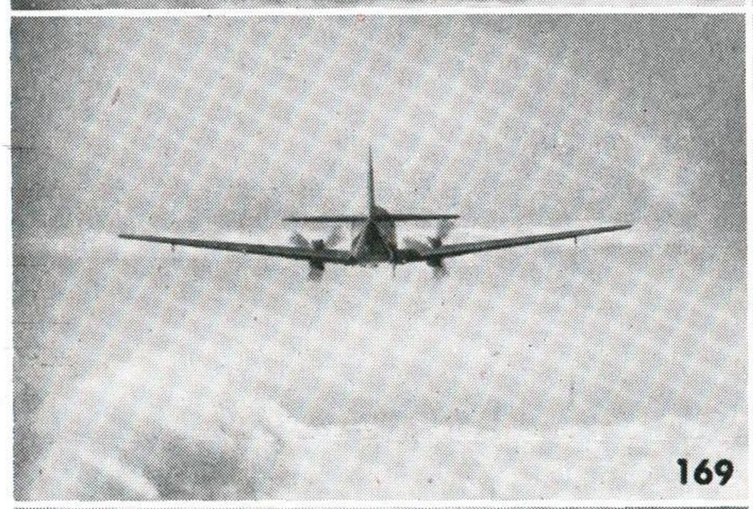

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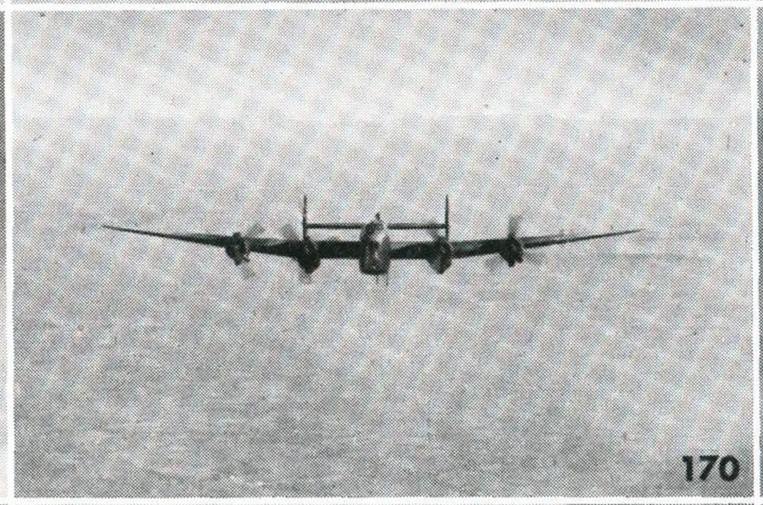

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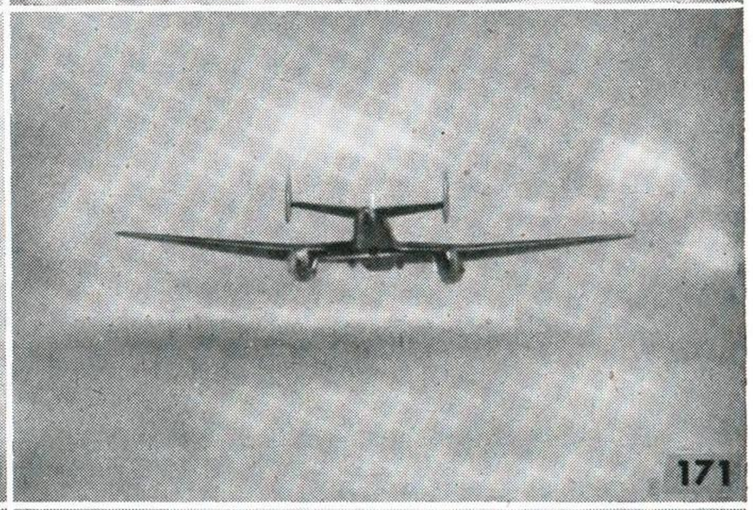

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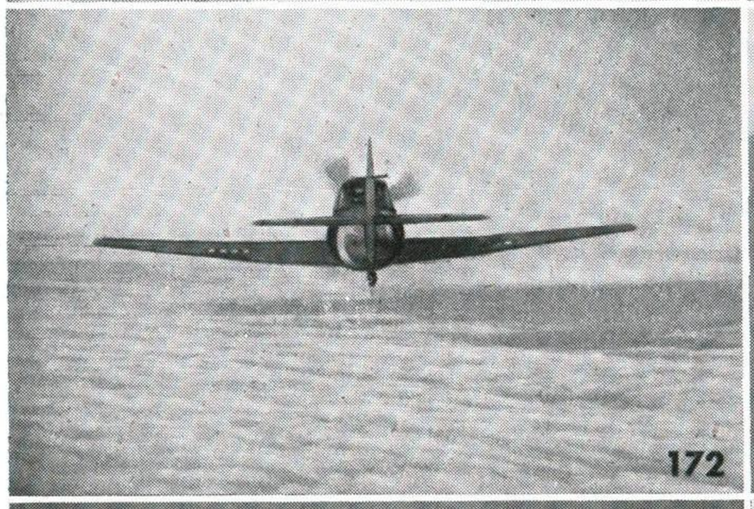

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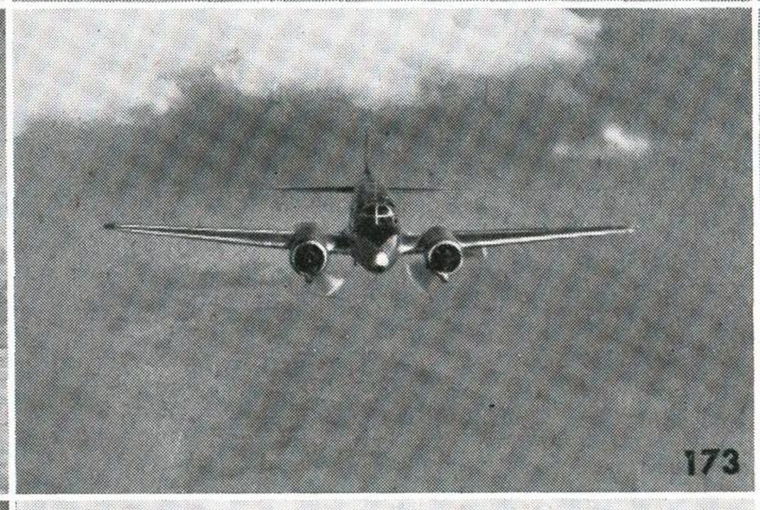

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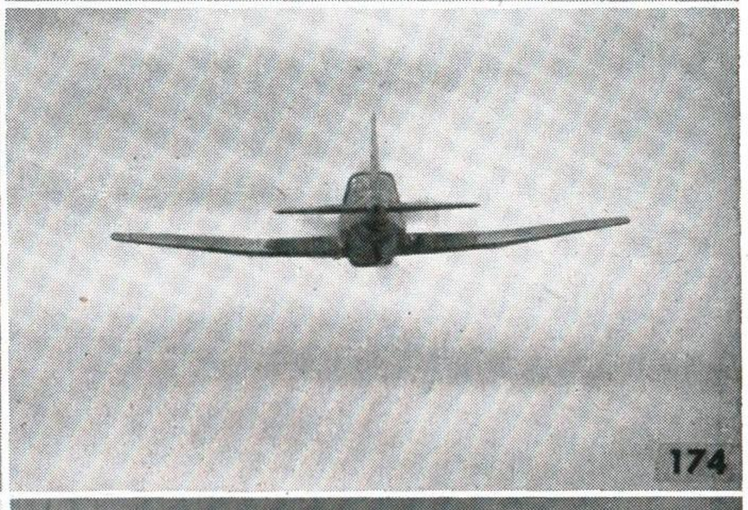

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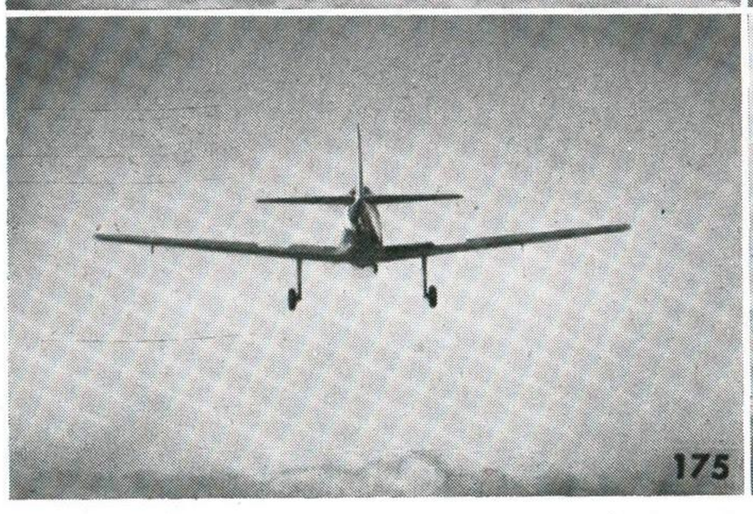

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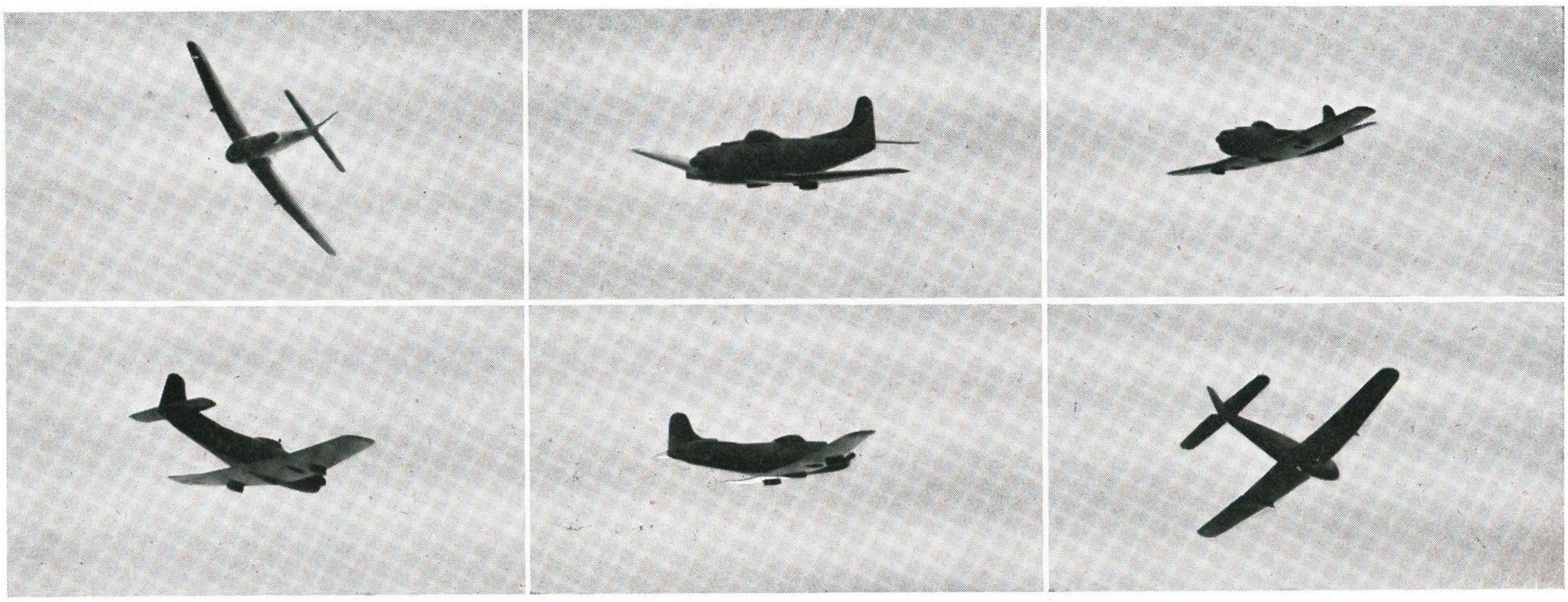

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ADVANCED SPOTTING

'ABLE-MABEL' IN SERVICE



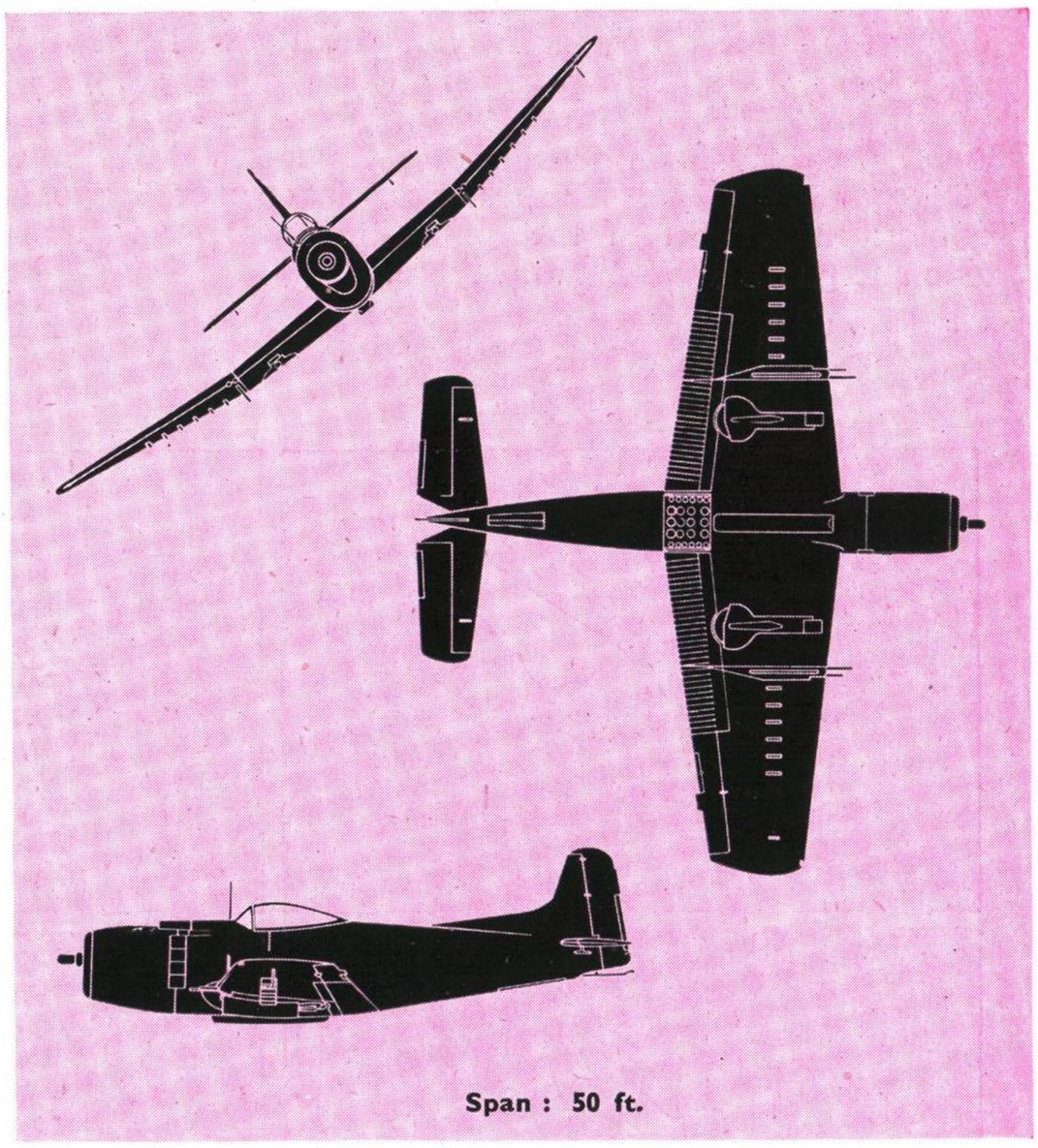
The Martin AM-1 Mauler (known in the U.S. Navy as "Able-Mabel") looks tough and ugly and, to judge by the large picture below, behaves accordingly.

RECOGNITION DATA

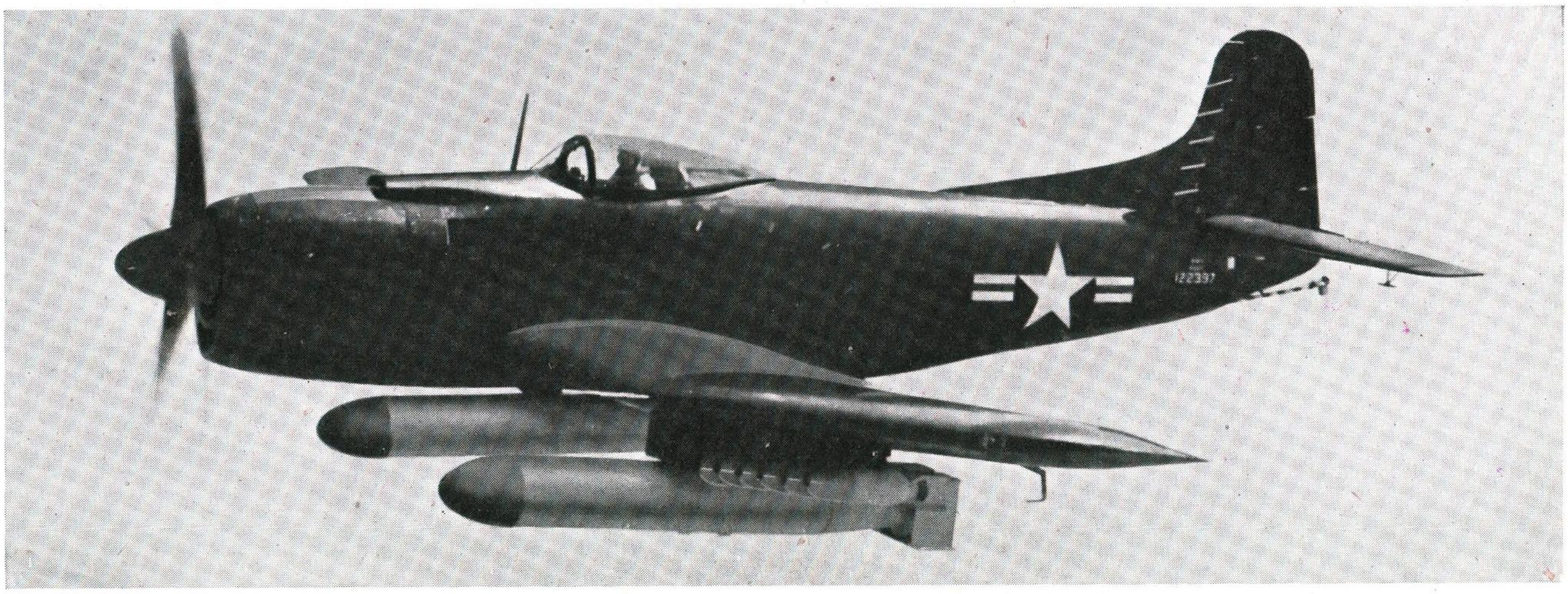
The short, deep-chested body with its blunt engine cowling sits firmly on thick equi-tapered wings of which the outer panels bend up sharply to broad blunt tips. The small cockpit rides close behind the engine. A small round-topped fin and rudder, making a sharp, distinctive corner with the fuselage bottom line, is nearly lost within its overgrown fin-fairing. This fairing, aided by the low setting of a wide-span, slightly tapered, deeply cleft tailplane, is responsible for the "tail-high" flying attitude of the Mauler. An unusual feature of the Mauler is the inter-meshing "finger" type dive-brakes (see 3-view diagram) which show only when extended for use. The Mauler "merry-go-round" above gives some characteristic aspects of this formidable carrier-based dive-torpedo bomber.

TECHNICAL DATA

Span : 50 ft.
Length : 41 ft. 8 ins.
Speed : Over 350 m.p.h.
Armament : Four 20 mm. cannon in wings.
Various combinations of bombs, rockets, mines or radar gear.



Span : 50 ft.





Assizes Surprises

Readers will be interested in the following quotation from a local newspaper sent to us by an Observer in Devon :

" This anomaly, pointed out yesterday by Mr. Justice Hallett, was probably the most surprising thing to emerge from the trial, at the Northampton Assize, of Brynley Fussell, the Borstall youth who took an Auster Autocrate monoplane, worth £600, from Sywell aerodrome, and flew it to France."

Misquote

The Vickers Attacher " quick-fix " fighter.

Errata

April, p. 96, Elementary 983 *read* DHA-3 Drover ; May, p. 120, Sillographs 30 *read* F-47N Thunderbolt.

Centurion

In our presentation of the Centurion in the May edition we did not lay sufficient emphasis upon the differences between the armaments of the Centurion II and III. The Centurion II has a 17 pounder gun which has a double-baffle muzzle-brake as shown in the side-view drawing. The Centurion III has a 20 pounder gun which is 2 ft. 6 ins. longer and has a collar-form balance weight (unperforated) in place of the muzzle-brake. The technical data suffered two misquotes: the weight of the Centurion is 49½ tons, and its machine gun is of 7.92 mm. calibre.

New Aircraft Recognition Material

PICTORIAL CHART

A.D. 5129 FJ-1 Fury

LARGE SILHOUETTES

A.D. 4983 Wyvern TF Mk. 2 A.D. 4988 Balliol T Mk. 2
A.D. 5199 Saab J.29

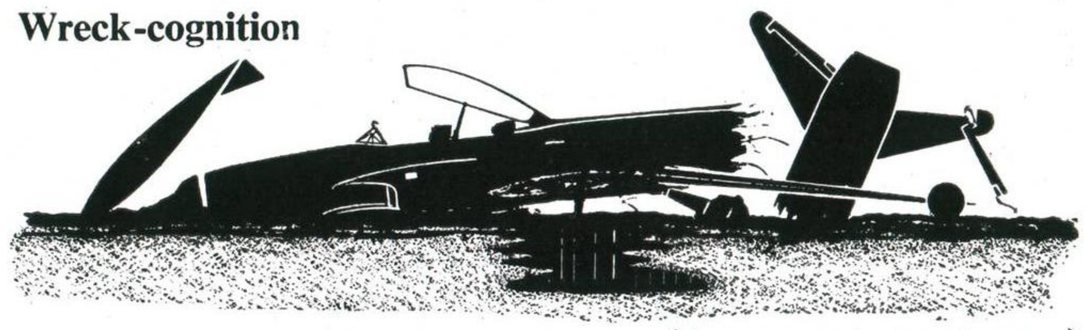
NIGHT SILHOUETTES

A.D. 4641	F2H-1 Banshee	A.D. 5178	B-45 Tornado
4697	F-47 Thunderbolt	5179	PBM-3 Mariner 1
4698	B-36A	5180	B-47 Stratojet
4699	Ambassador	5192	B-36D

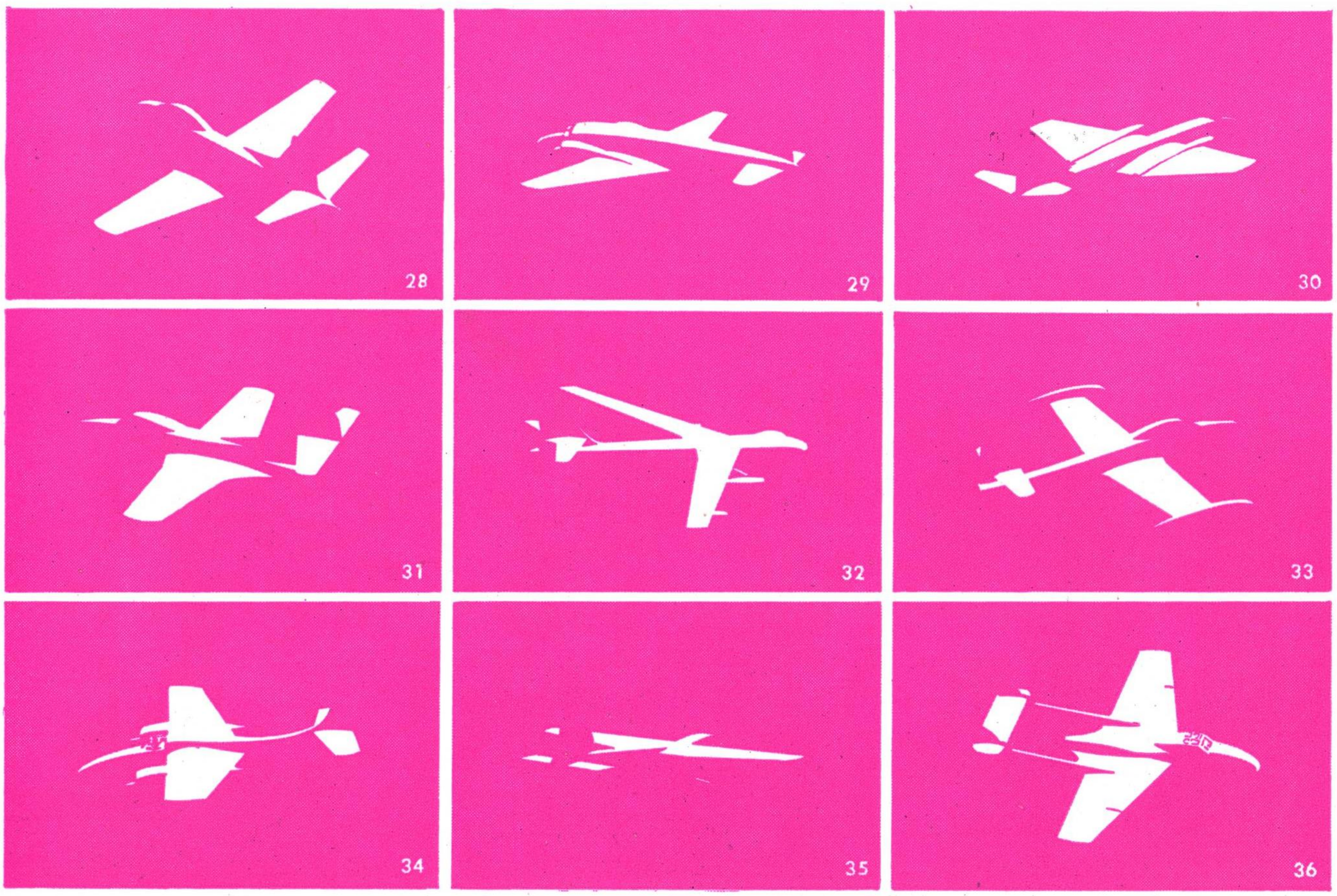
1/72ND SCALE MODELS

R.A.F. Stores Ref. No.	Navy Patt. Ref. No.	
52/960	6056	F-86A Sabre
963	6055	Convair-Liner

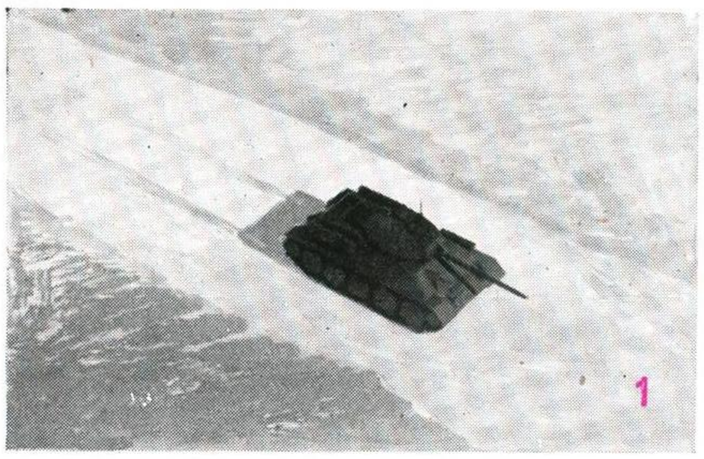
Wreck-cognition



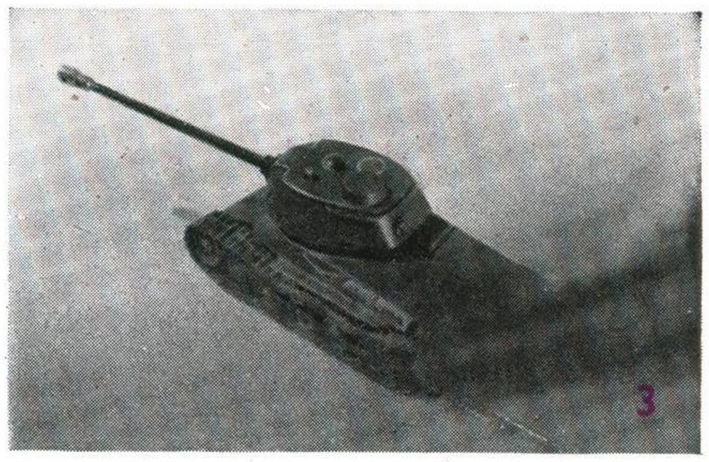
(Answer on rear cover.)



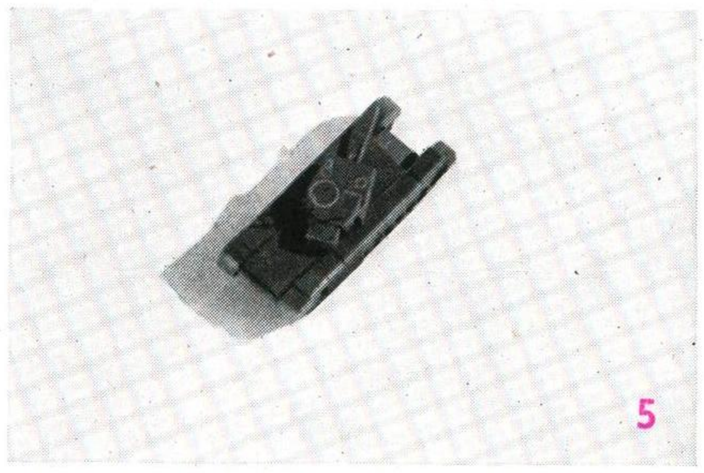
HIGHLIGHTS


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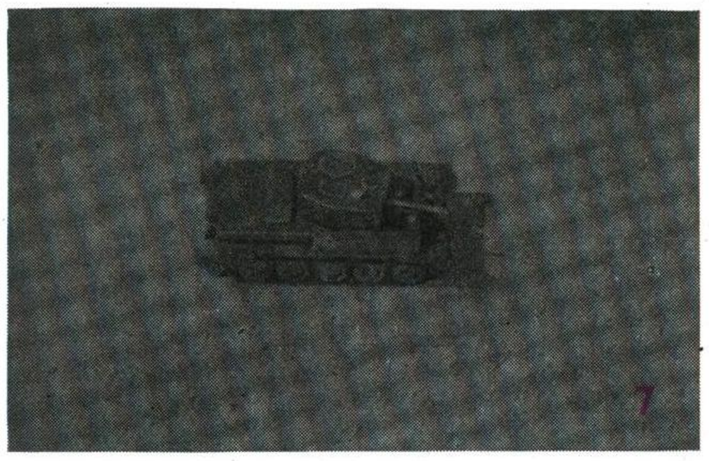

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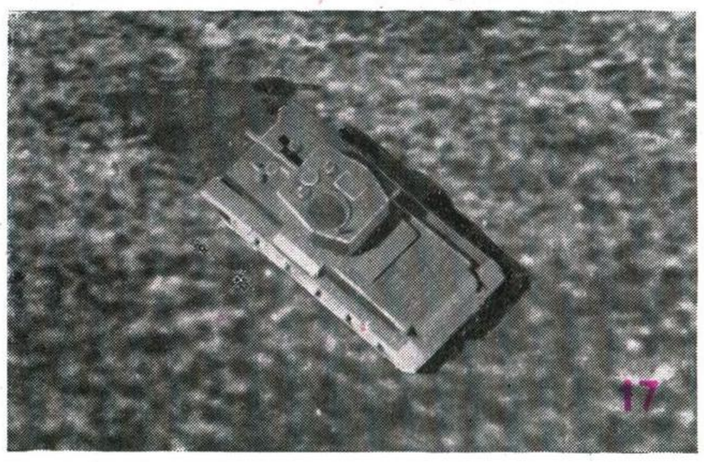

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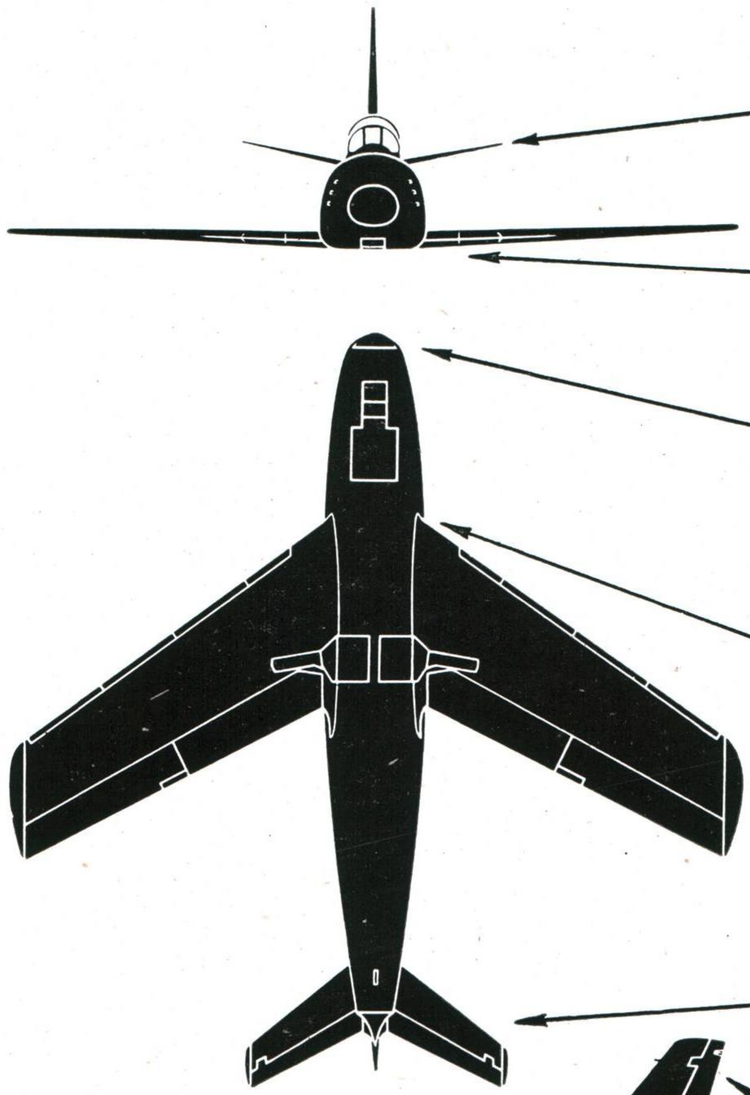

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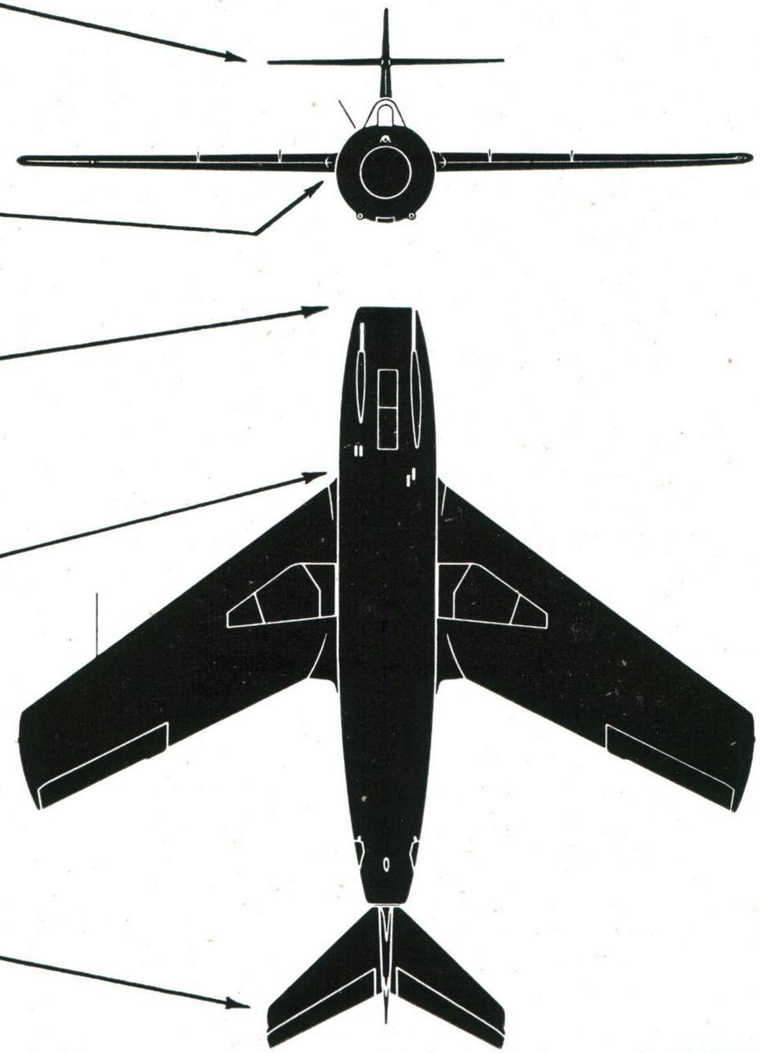

18

TANK TEST

A PAIR TO COMPARE

AN IDEA WHICH CAN BE USED BY INSTRUCTORS FOR DISPLAY PURPOSES





HORIZONTAL HIGH-SET TAILPLANE

DIHEDRAL, LOW SET TAILPLANE

SHOULDER WING

LOW WING

CHOPPED-OFF NOSE

BLUNT NOSE

SHORT, BLUNT, SMOOTH UNINTERRUPTED FUSELAGE

TAPERED FUSELAGE, WITH WING ROOTS BREAKING SMOOTH UNDERSURFACE OF FUSELAGE

COMBINED TAIL UNIT PROJECTING AFT OF CHOPPED-OFF JET PIPE

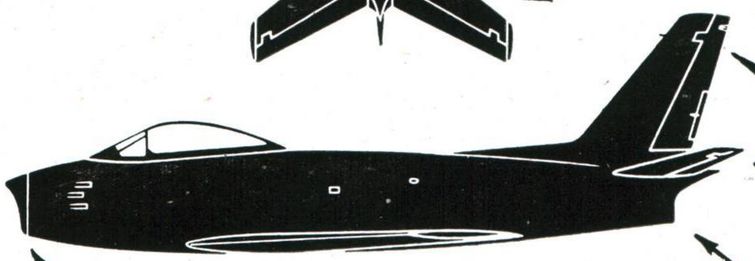
NARROW TAILPLANE SPROUTING FROM FUSELAGE

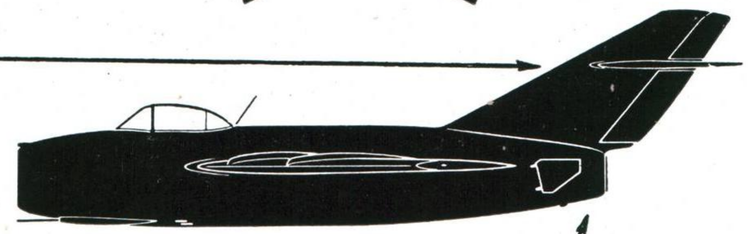
BROAD FIN AND RUDDER WITH EXTREME RAKE, AND TAILPLANE SET HIGH ON FIN

TALL, NARROW FIN AND RUDDER, SLIGHTLY RAKED, WITH TAILPLANE SET ON FUSELAGE BENEATH

SHORT, DEEP, CHOPPED-OFF FUSELAGE

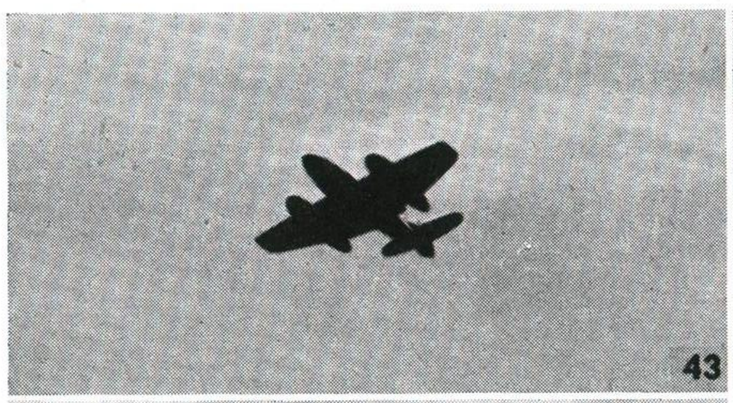
LONGER FUSELAGE WITH LIPS AT EACH END



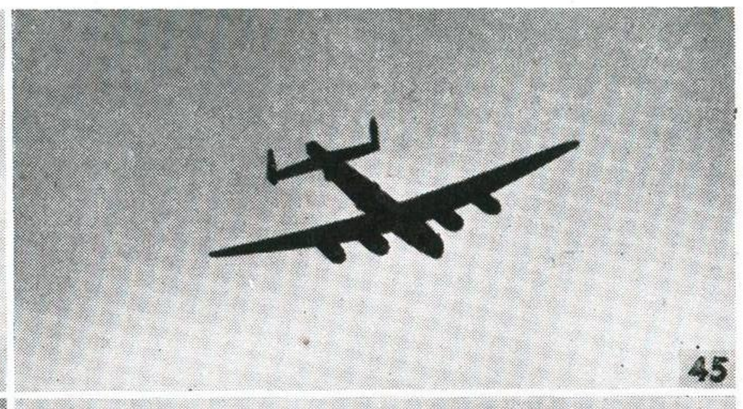


SABRE Closely-knit; all of a piece; with all swept-back shapes in good optical proportion. Fuselage is longer and more tapered, riding on wings.

MIG-15 Short, chopped-off appearance; disjointed feeling owing to exceptionally broad and raked fin and rudder; tailplane set right away from fuselage—both above and aft of it.


43

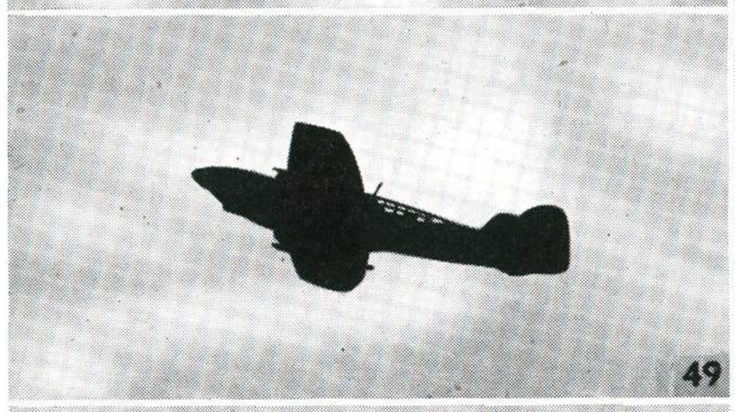

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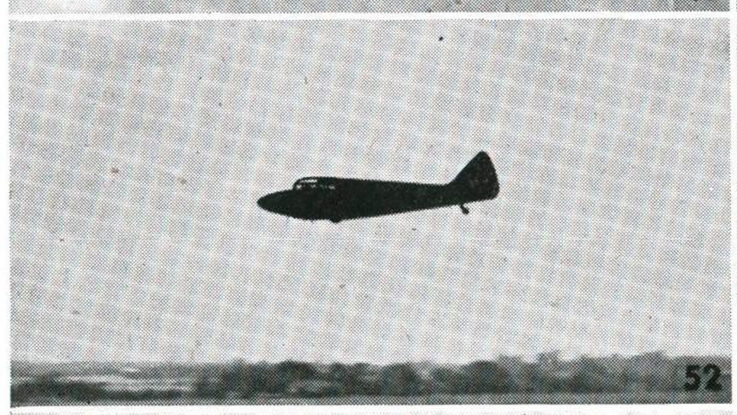

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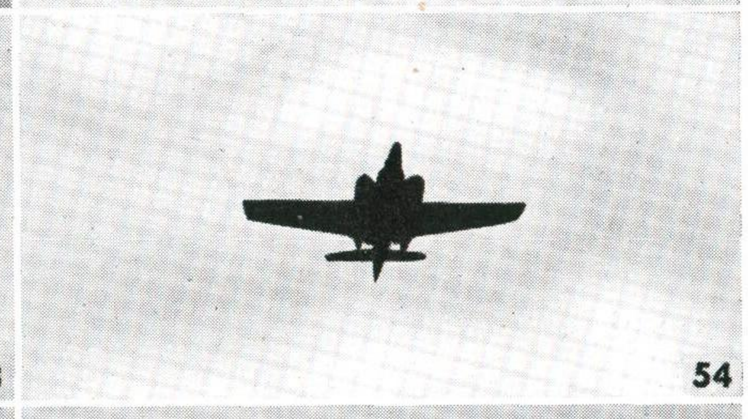

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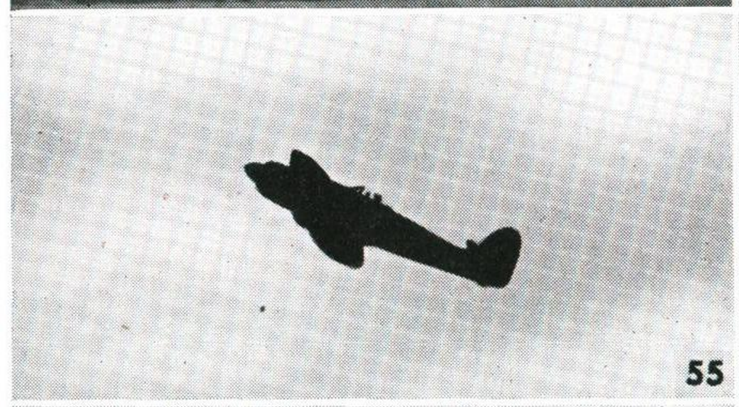

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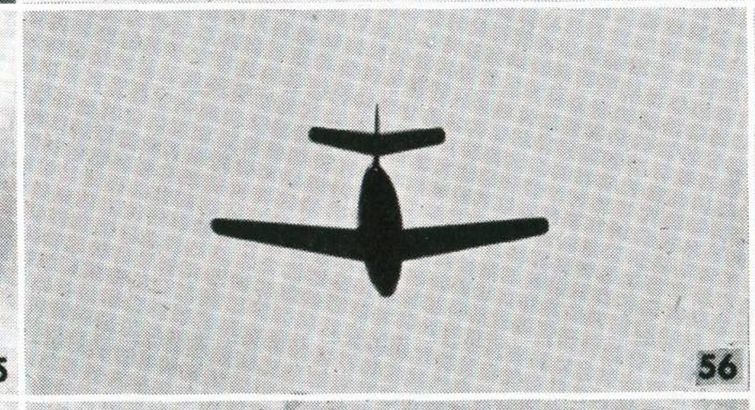

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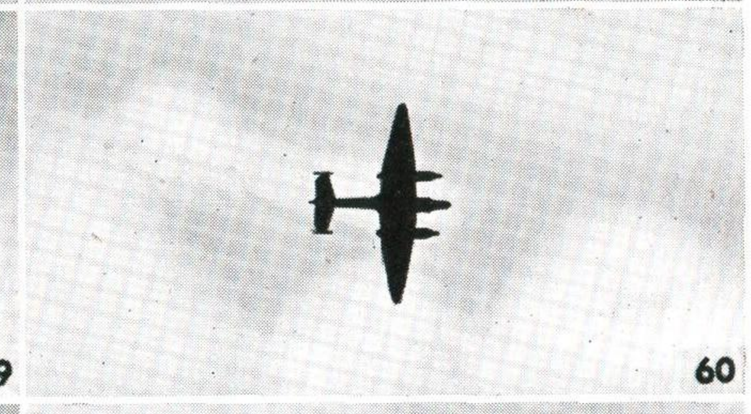

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SILLOGRAPHS

Light Types

A group of small 'single' (engine) observation and liaison types in Service. They are, in general, a race of snub-nosed high-winged, strutted 'glass-houses' with fixed undercarriages. They do not as a rule fly fast or high or far, but content themselves, as do grasshoppers, with short jumps from one patch of grass to another. Like grasshoppers they swarm, though the helicopter is starting to attack them at many of their preoccupations and may succeed in reducing their numbers, but not, it is thought, to a serious extent at present.

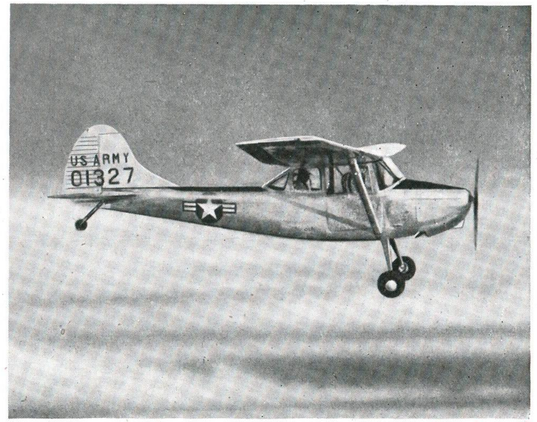


The Ryan L-17 Navion was originally a North American civil design (note characteristic cut of tail) now adapted and produced by Ryan. The only low-wing type in this group, the Navion is a liaison and observation aircraft. There are about 2,500 Navions (civilian and Service) in service and in production.
Span : 33 ft. 4 ins.

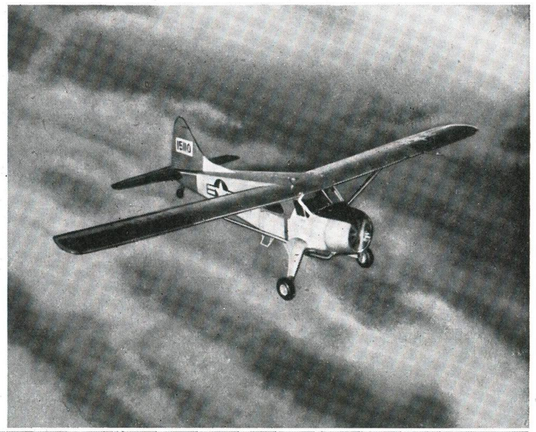


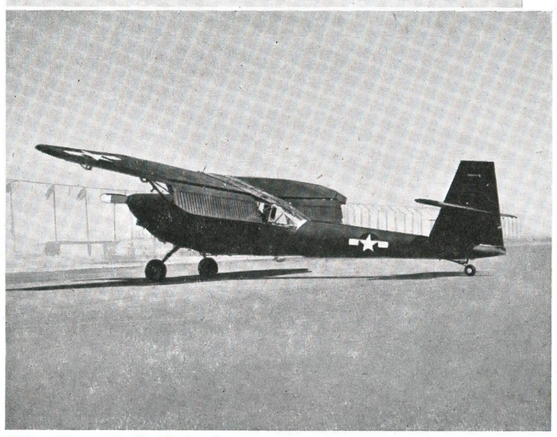


Auster A.O.P. Mk. 6 : chief characteristics of which are the large untapered strutted wing with "stepped" trailing edge flap, deep, narrow "Gipsy" engine, and an equilateral triangular fin. **Span : 36 ft.**



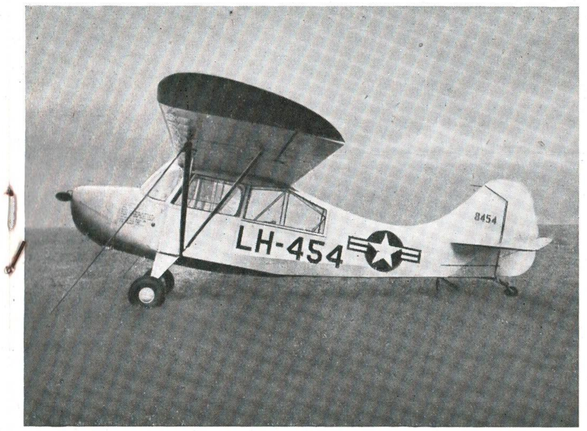
The Cessna L-19A is a slender little aeroplane with a fin and rudder of unusual shape. Its strutted parasol wing seems to perch precariously on a large "glasshouse" and it has the slenderest of undercarriages. There are about 2,000 L-19A's in service and production. **Span : 36 ft.**



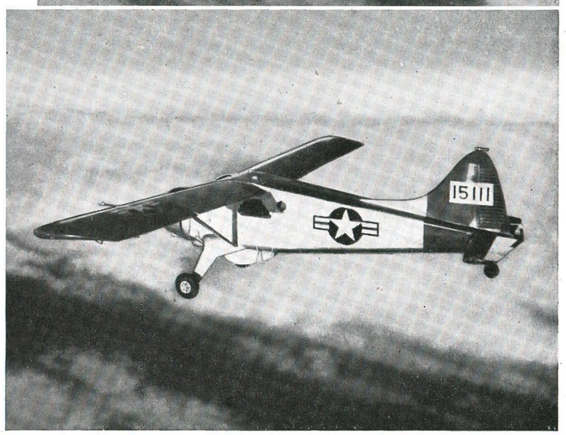


The Convair L-13 is almost a "pod-and-boom" type. This 2/3 seater is designed for ambulance, liaison, observation and photographic work. Its flying surfaces are of unusually angular cut, shape and arrangement. There are about 300 in service.
Span : 40 ft. 6 ins.

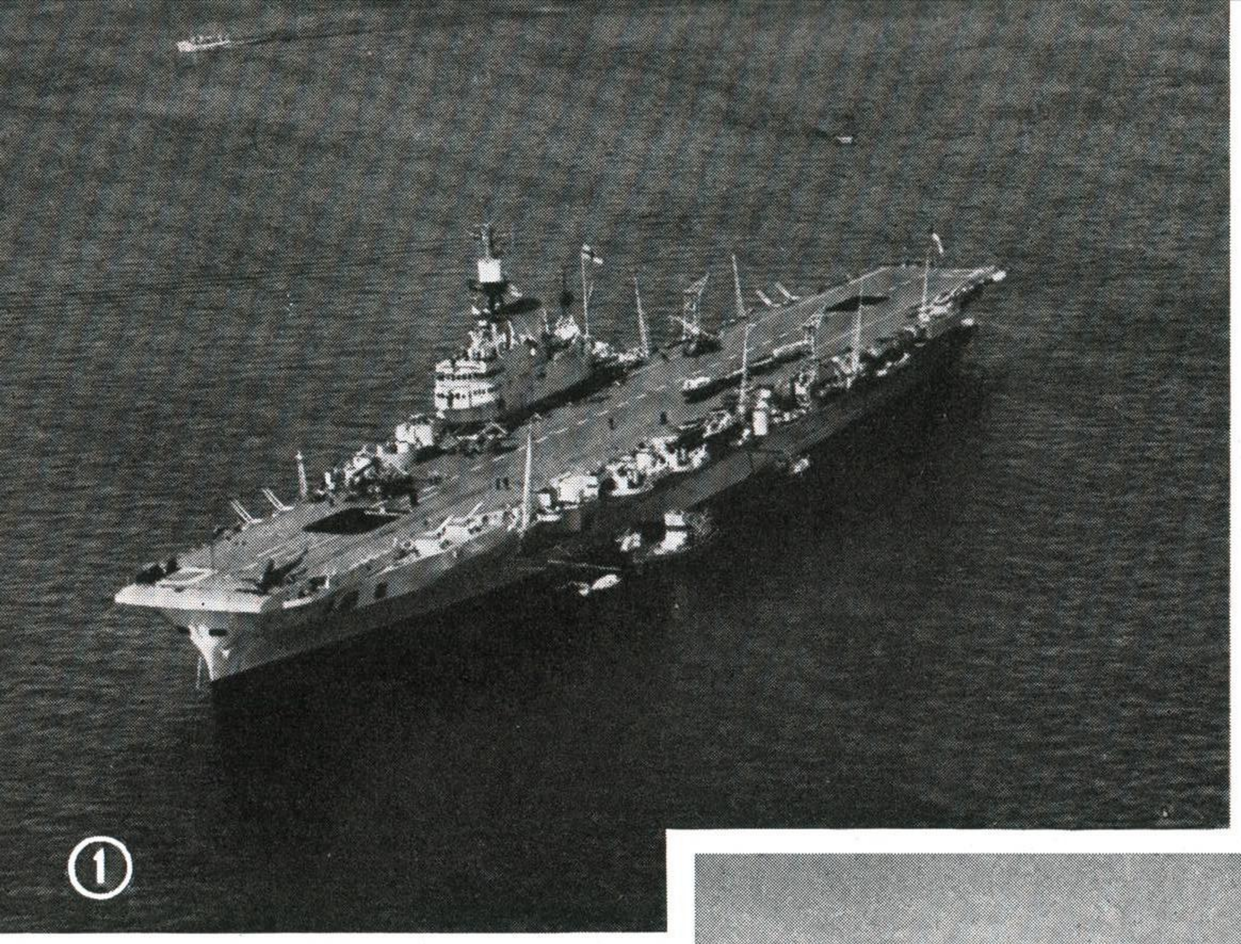




Aeronca L-16A and B. These chubby 2/3 seat liaison and communications type number about 600 in current production and service. The only external difference between models "A" and "B" is in the fin-fairing, which is extended into a deep sweeping curve in the L-16B, altering its side view characteristics. **Span : 35 ft. 3 ins.**



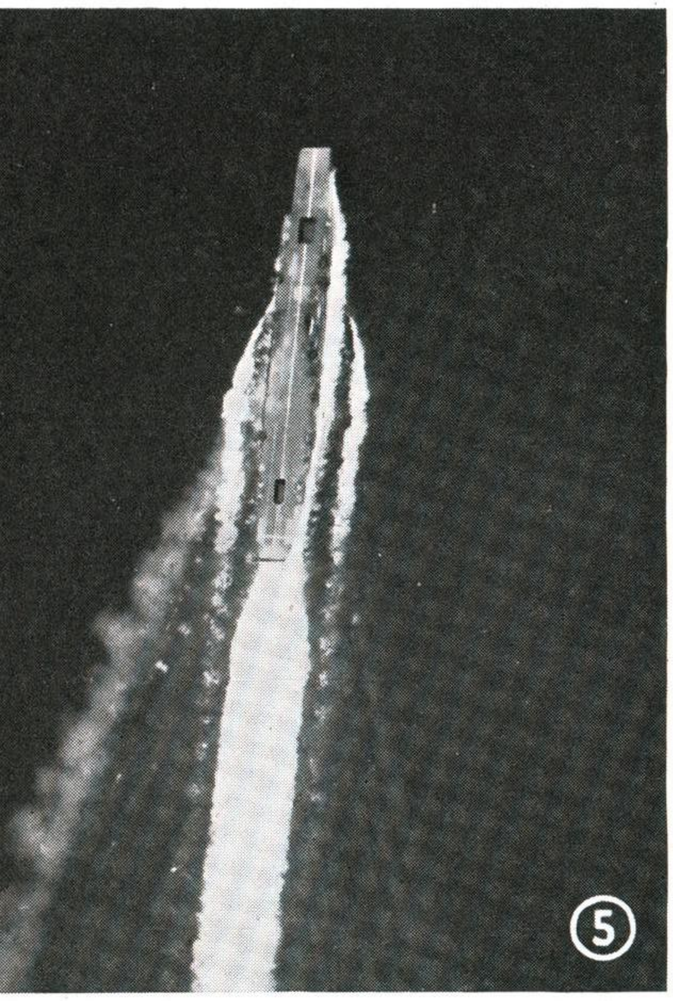
De Havilland L-20. The sturdy DHC-2 Beaver is in service and production for the U.S.A.F., 100 having been ordered. In addition, many are being built for civilian orders. Characteristics of the Beaver are its slab-sided build, strutted "plank" wing and snub-nose radial engine. The fin is a tell-tale hallmark.
Span : 48 ft.



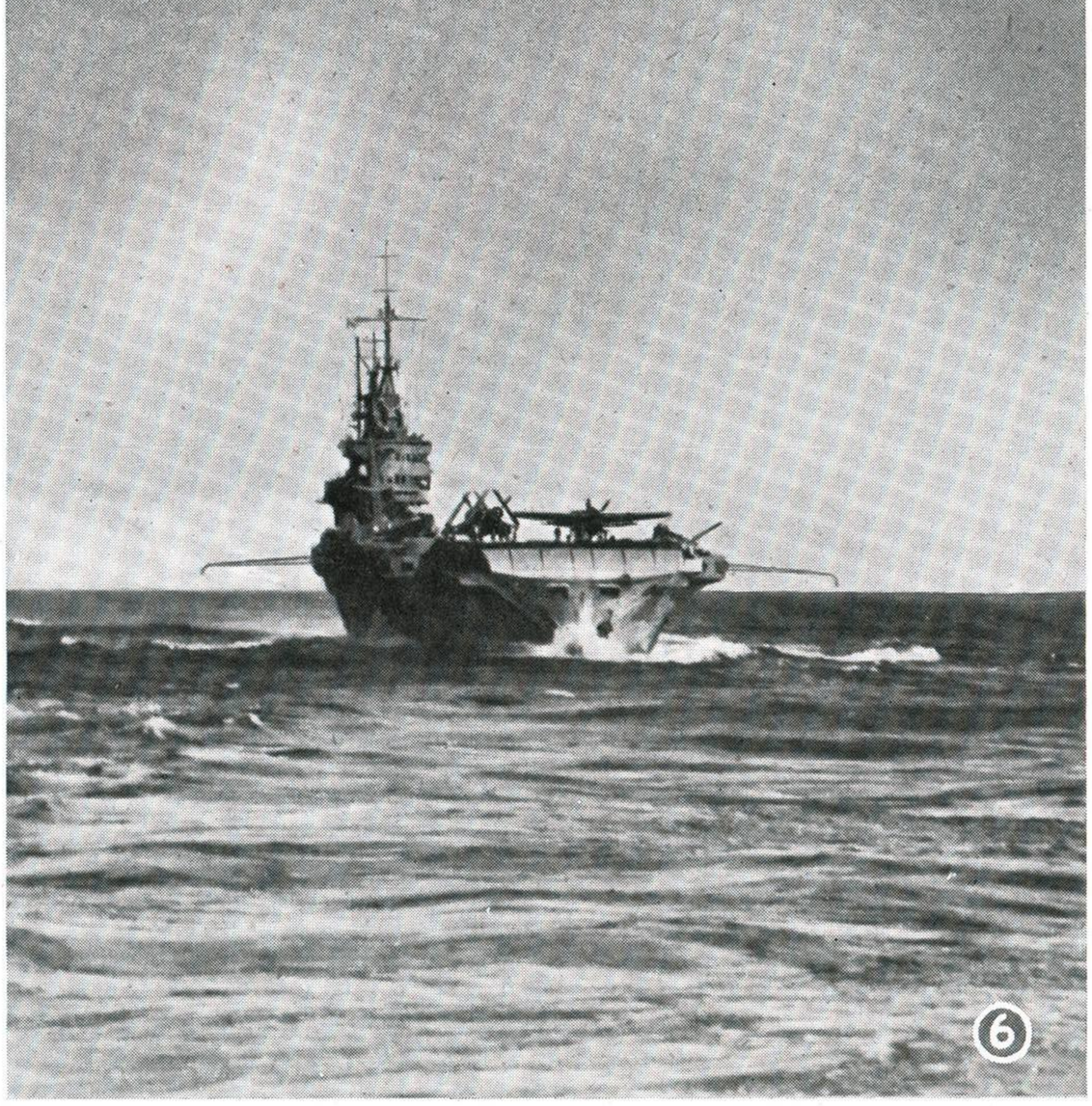
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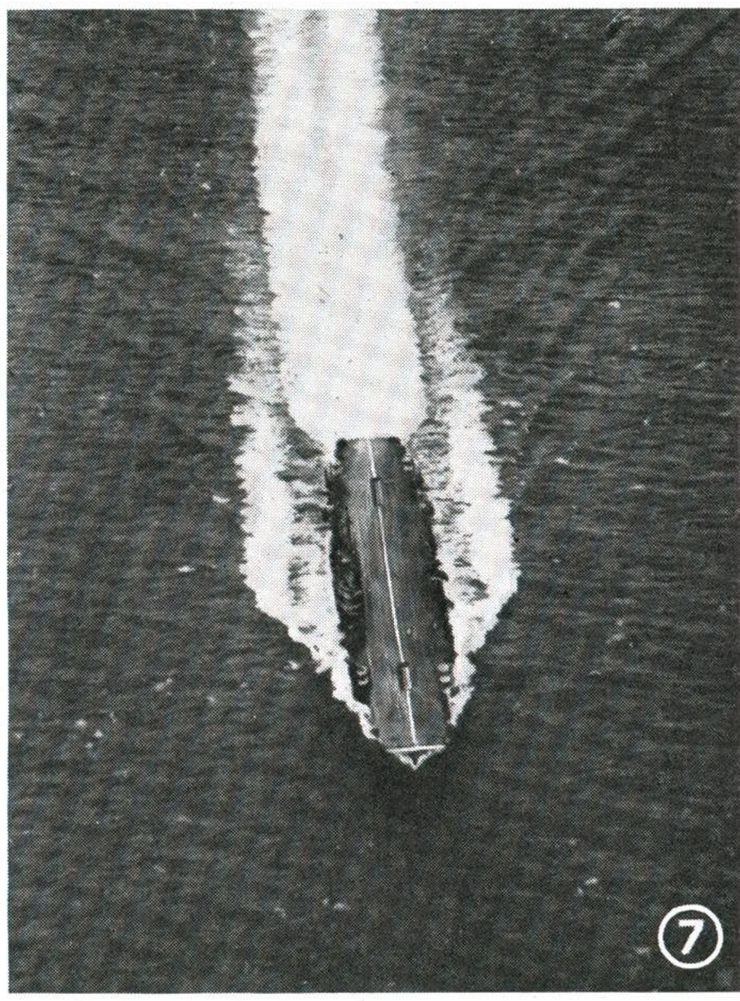
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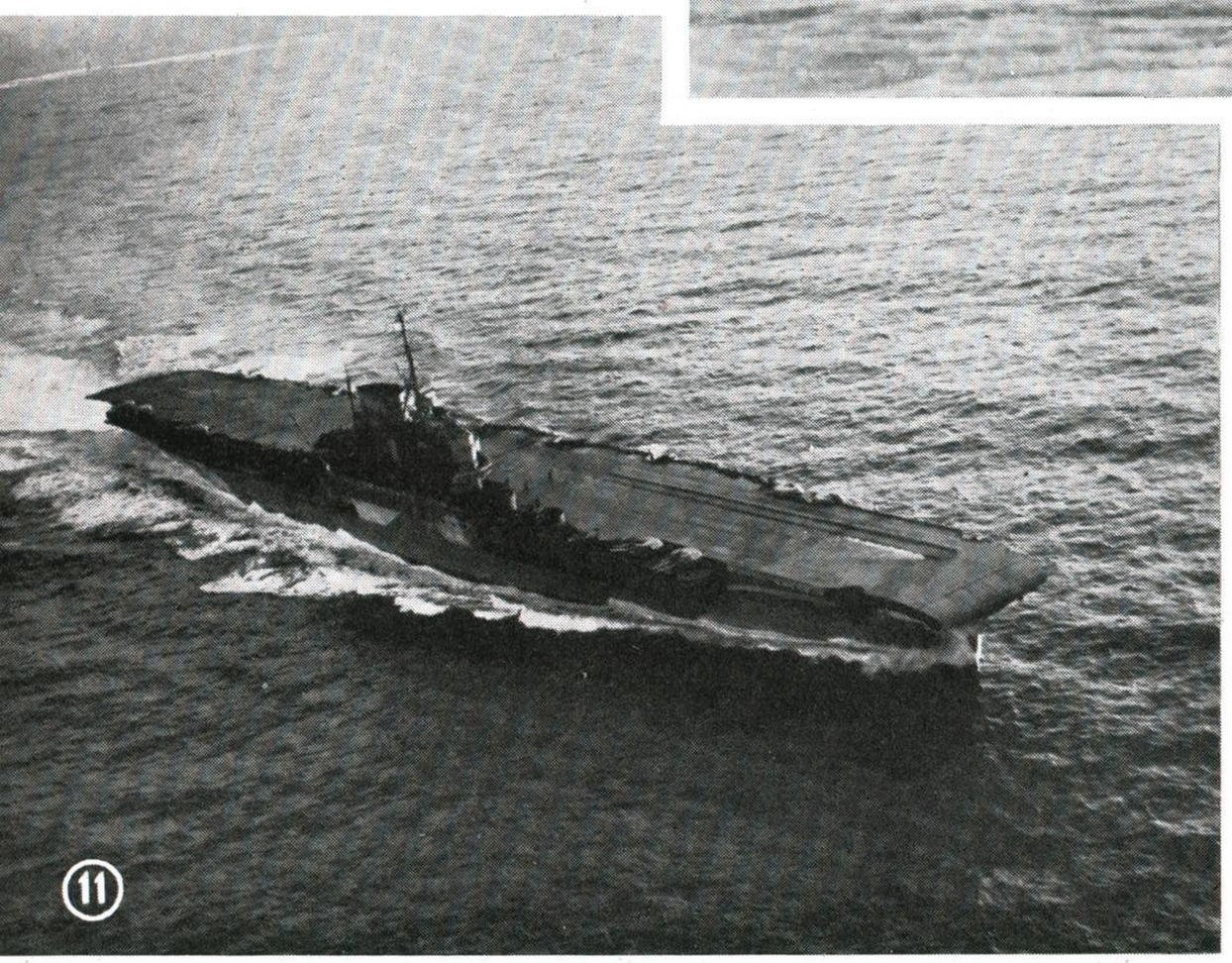
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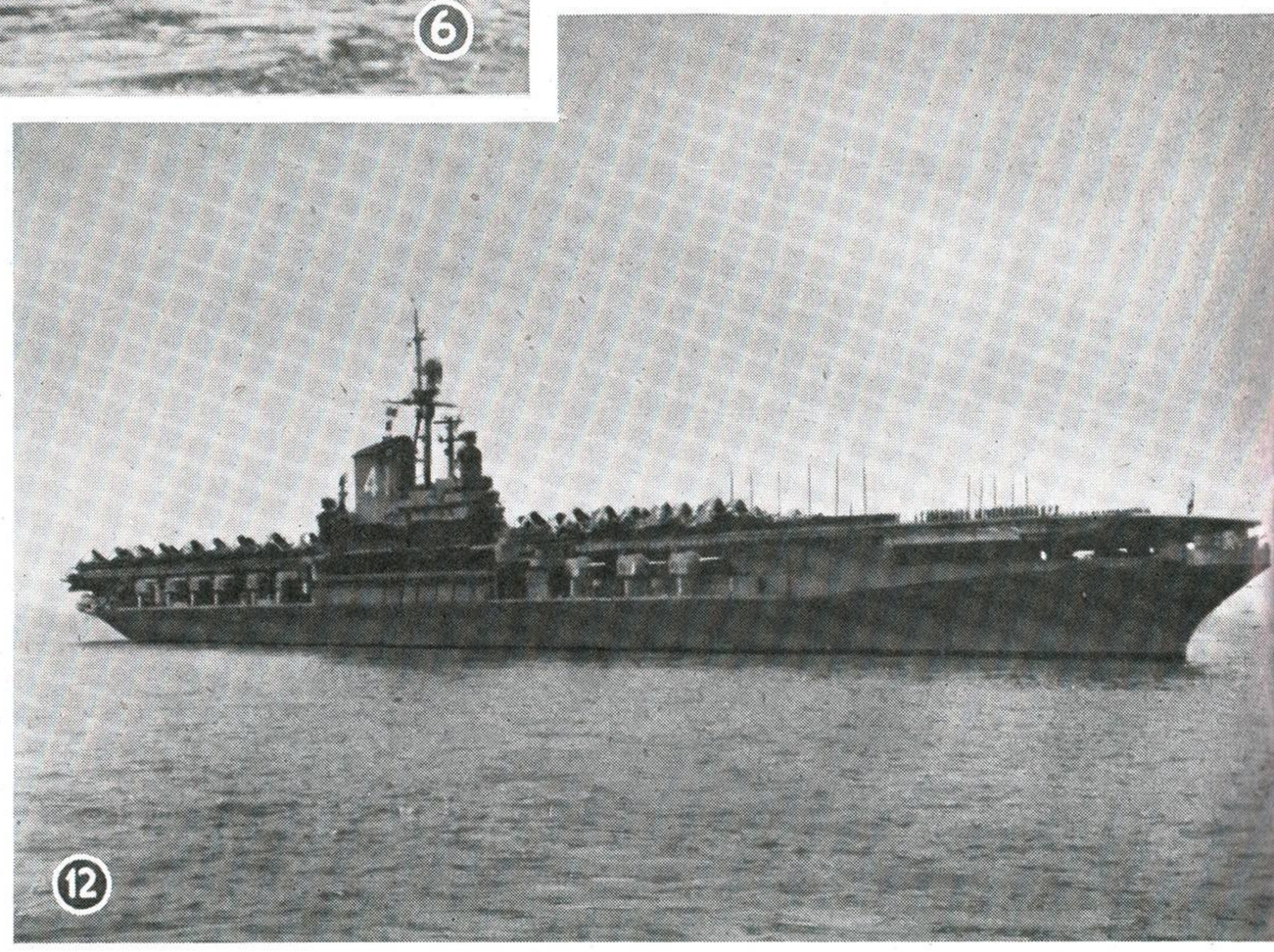
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⑦

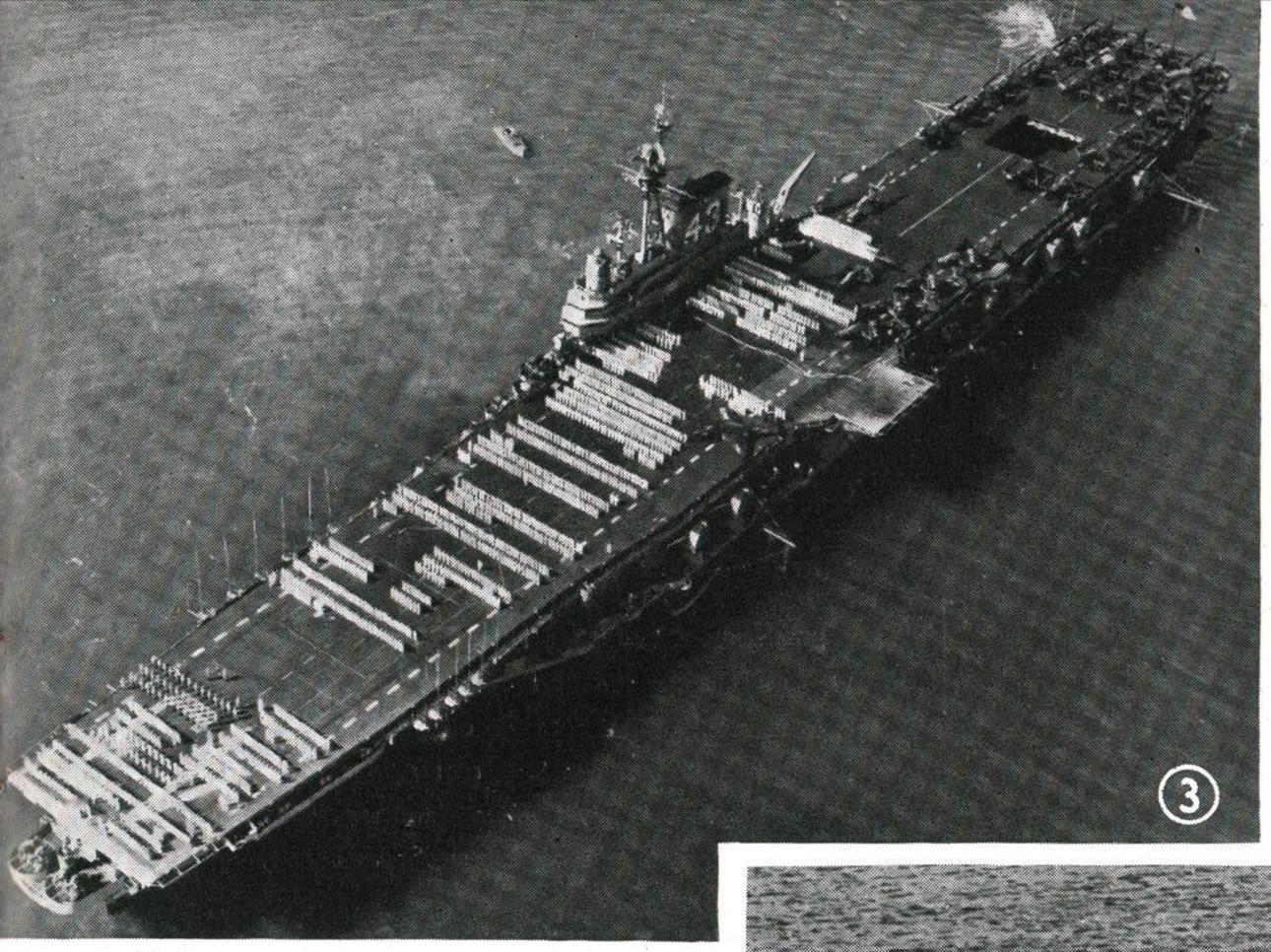


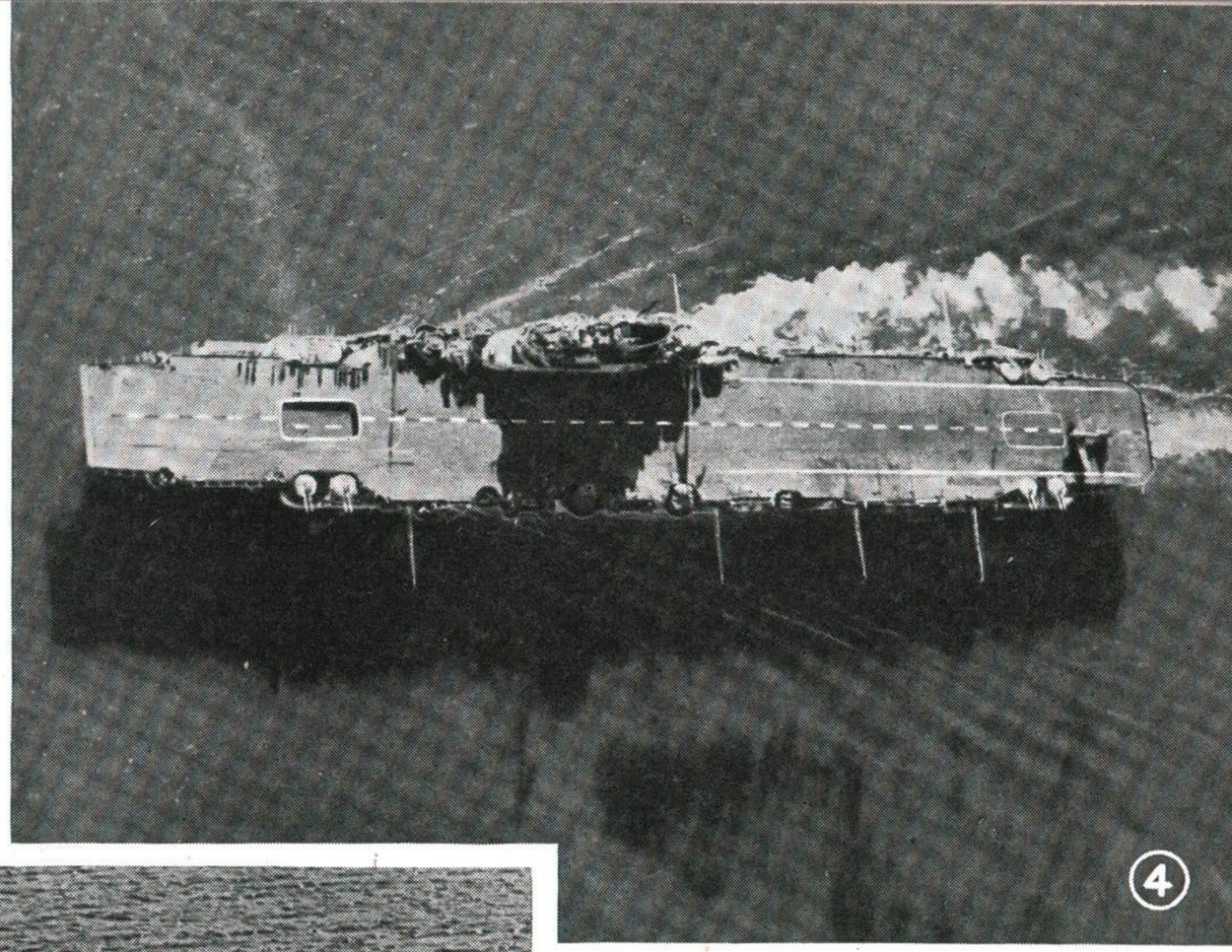
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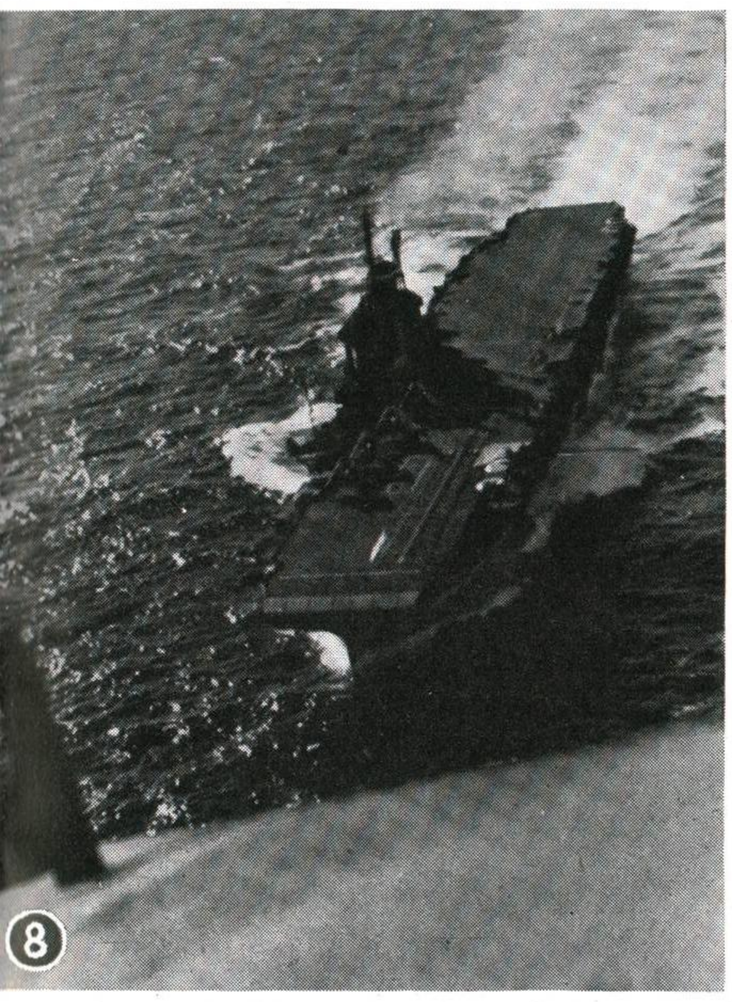


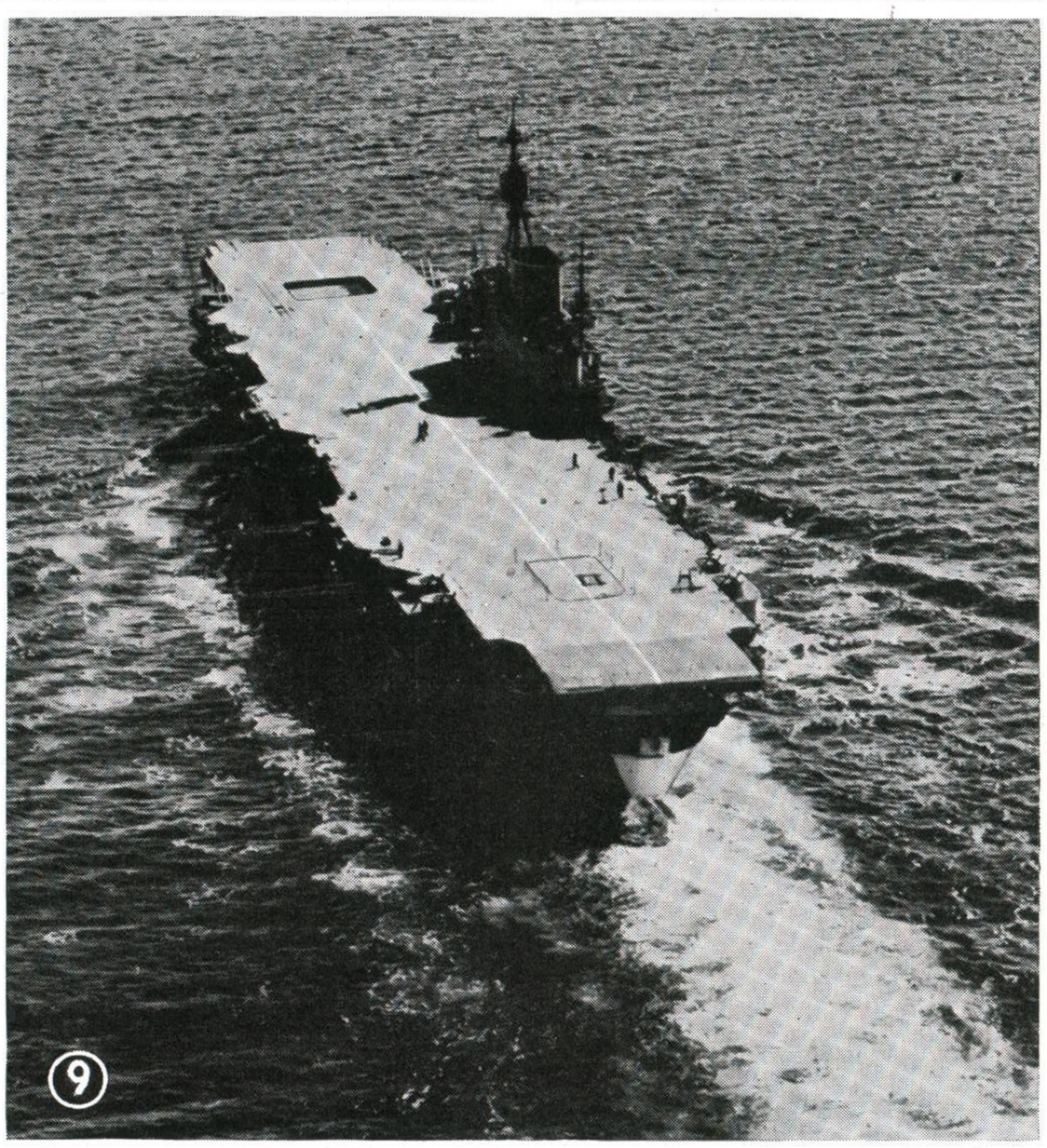
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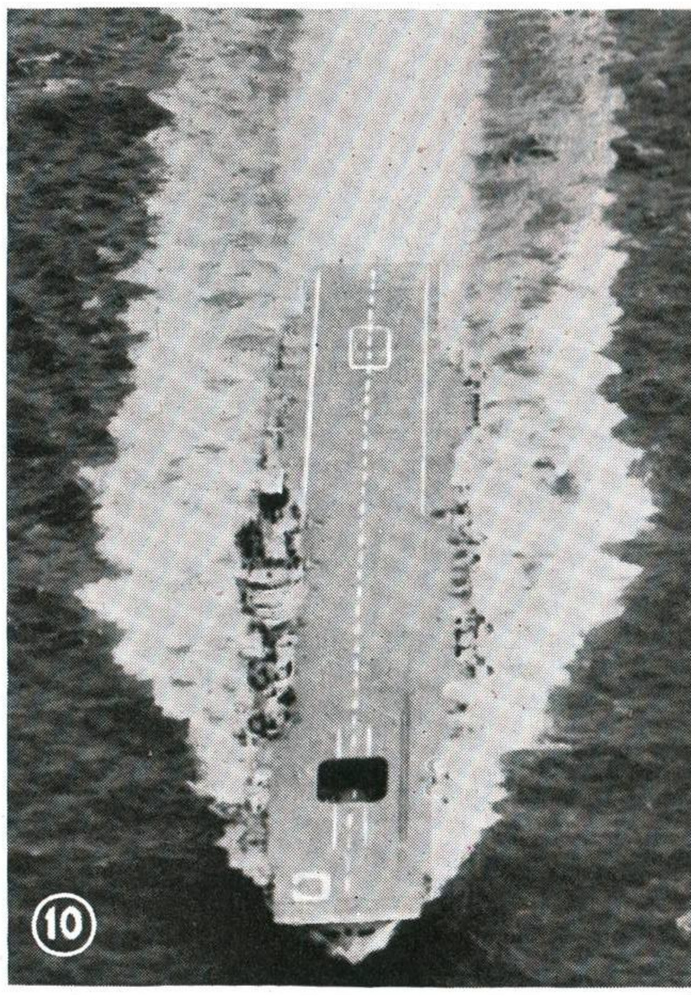
Warships are identified by : (1) type, (2) nationality, (3) class. With the aid of the basic drawings on the pages following, identify these fleet carriers. Commit your findings to paper before checking with results on the rear cover. British fleet carriers are distinguishable by "solid" silhouettes, flight decks being streamlined into bow and stern, whereas the American ships are "open-ended" and mount gun platforms at bow and stern; flight deck outlines of British fleet carriers are in general more "broken" than those of their American counterparts.

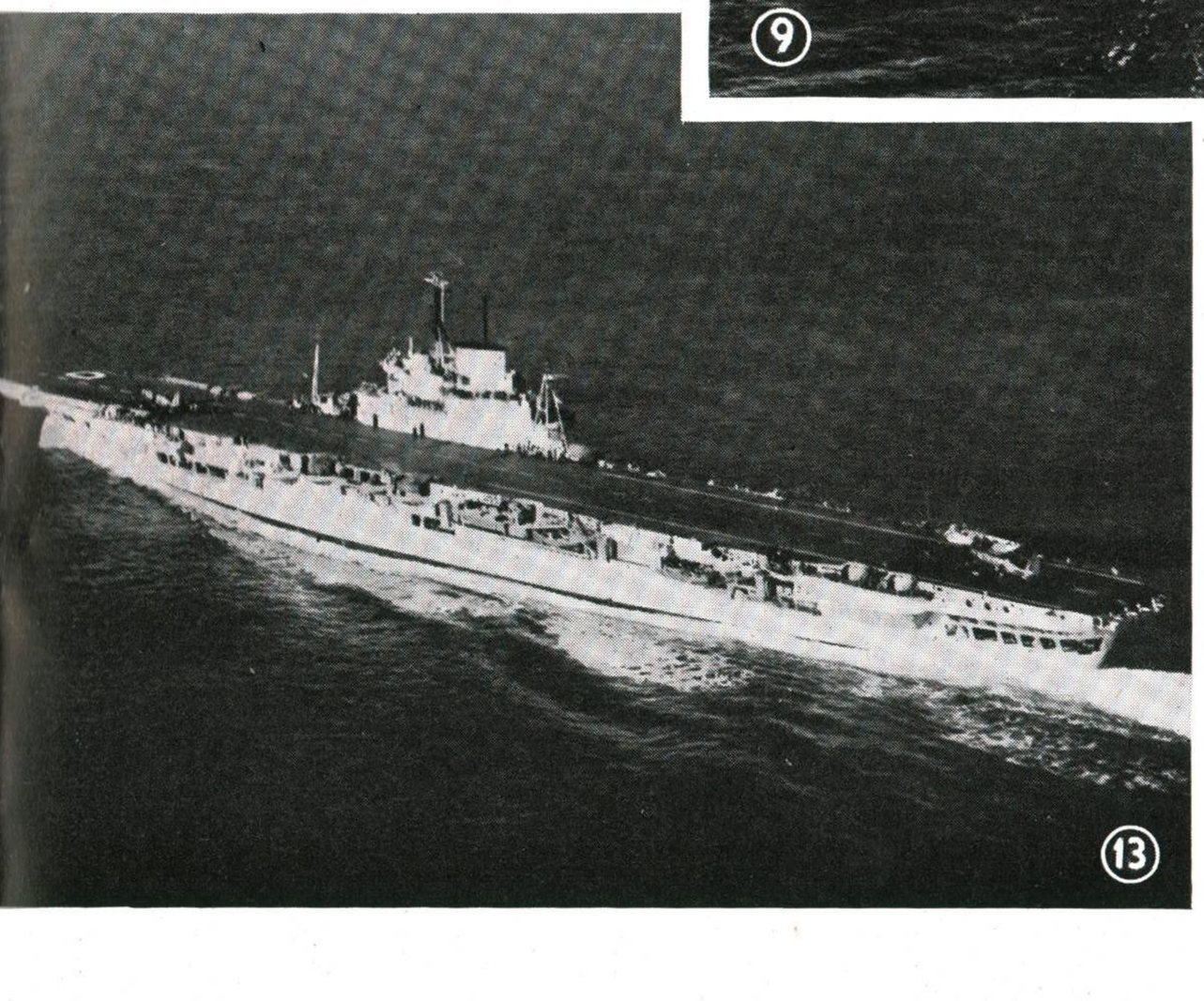


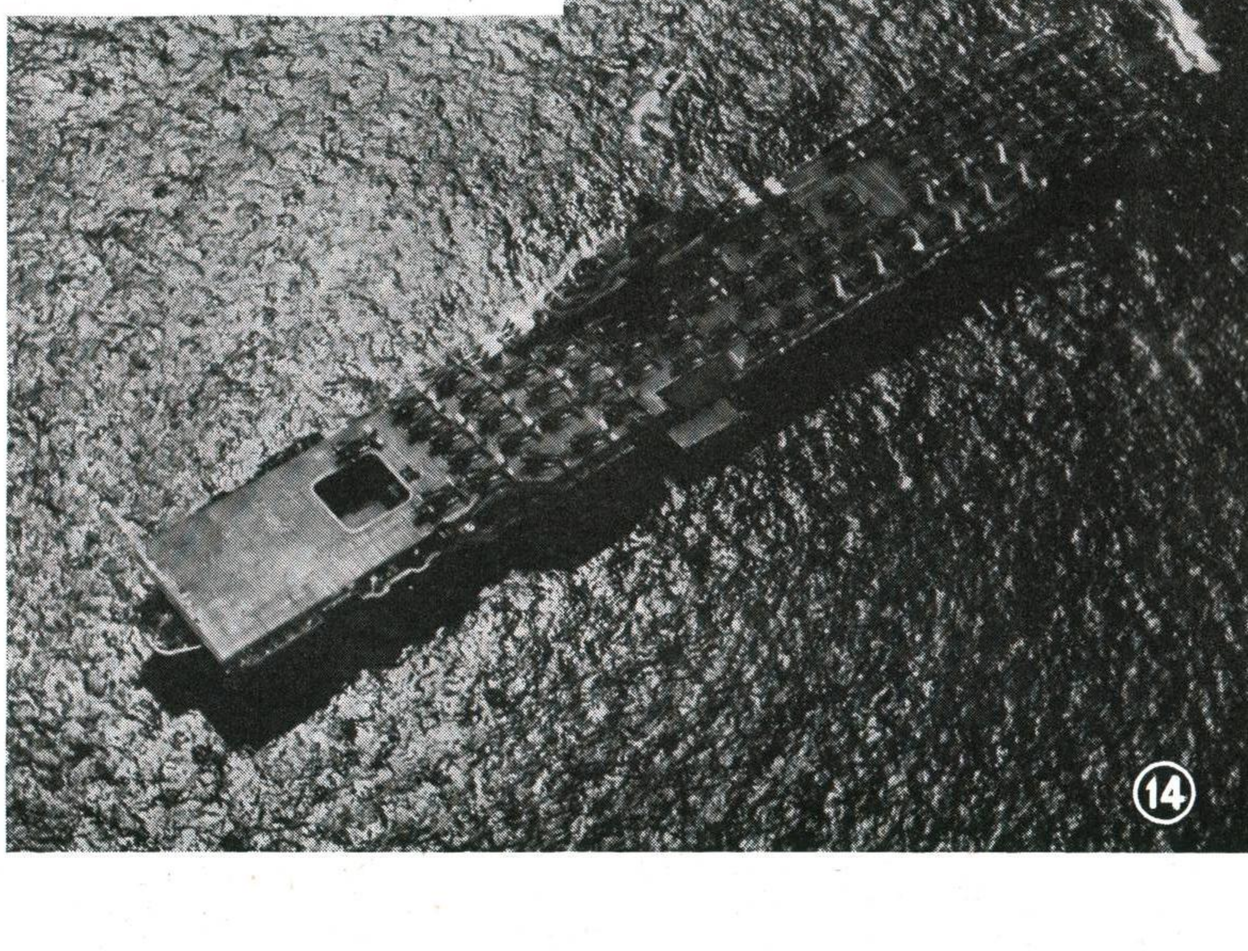




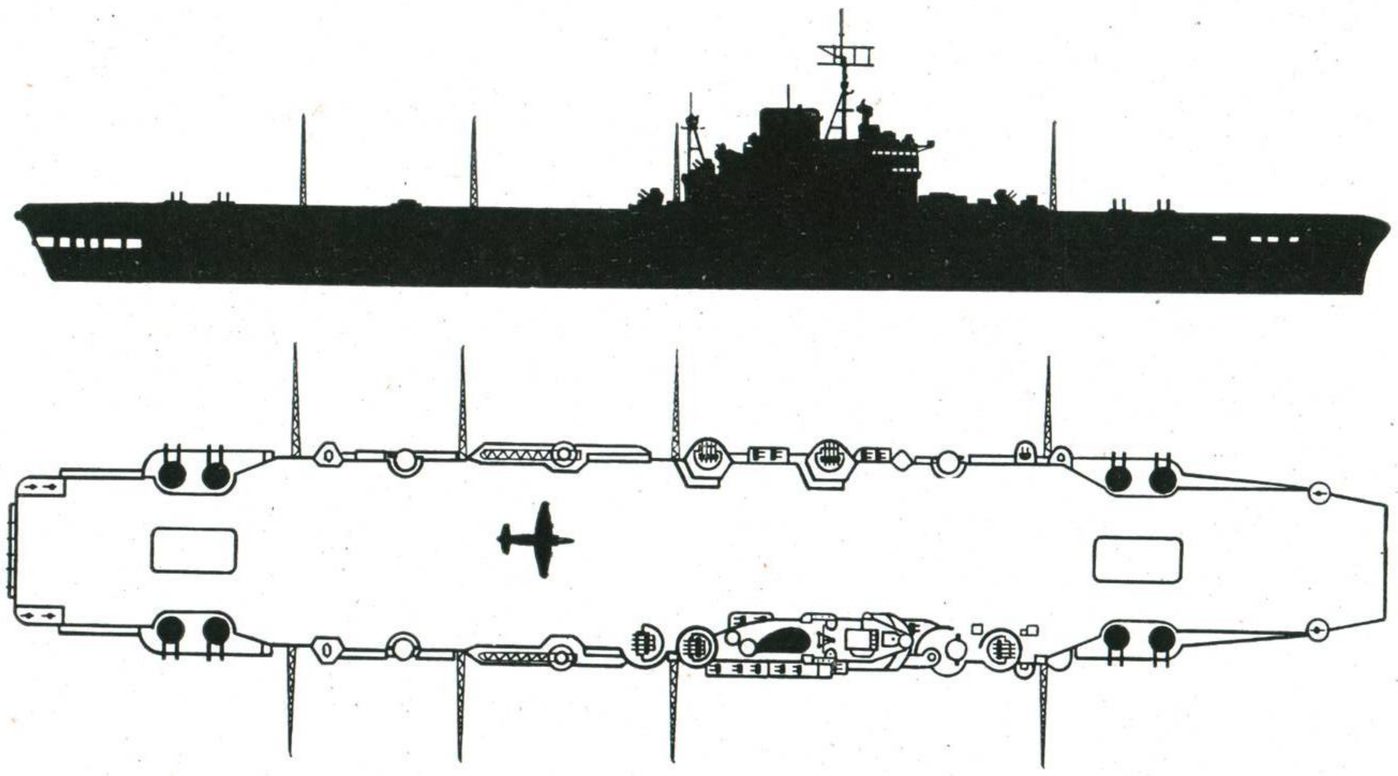








fleet carrier digest . . .



ILLUSTRIOUS CLASS

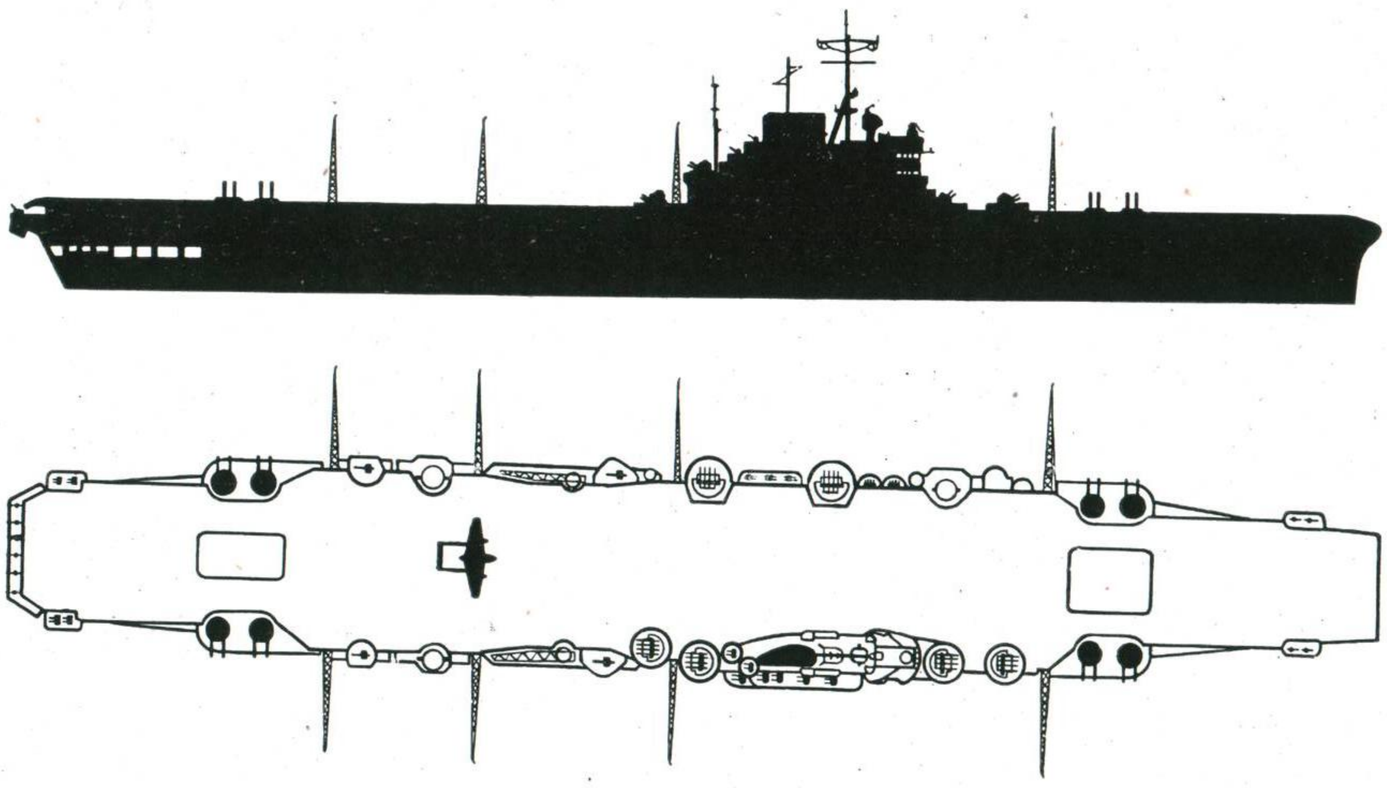
Displacement : 25,500 tons (31,790 fully loaded).

Length : 753 ft. *Width :* 95 ft. 9 ins.

Aircraft : Over 60.

Guns : 16 4.5 inch H.A. in turrets on corners of flight deck. Numerous 40 and 20 mm. A.A.

Illustrious Class (comprising *Illustrious*, *Formidable* and *Victorious*) were the first of a group of six British fleet carriers to follow the design of the *Ark Royal*. All three ships of this class have long rectangular aircraft lifts fore and aft, and a slightly smaller island structure than those of the two British fleet carriers shown below.



INDOMITABLE

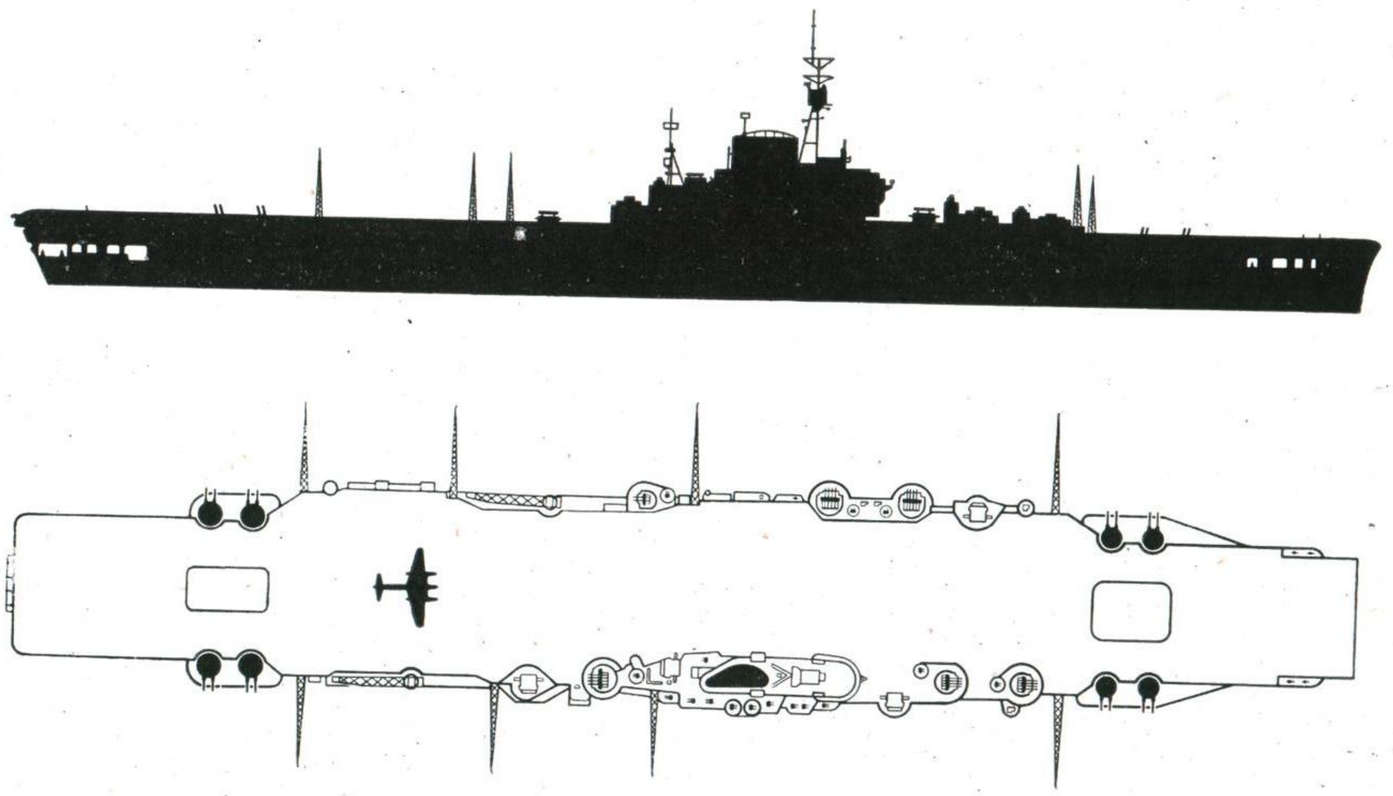
Displacement : 23,500 tons (29,730 fully loaded).

Length : 754 ft. *Width :* 95 ft. 9 ins.

Aircraft : Over 60.

Guns : 16 4.5 inch H.A. in turrets on corners of flight deck. Numerous 40 and 20 mm. A.A.

The *Indomitable* (single ship) was the immediate development of the Illustrious Class and differs little from it, apart from having a double-hangar deck. *Indomitable* has a near square foremost aircraft lift and a long rectangular one aft. Armament arrangement of twin 4.5 inch turrets (two guns per turret, two turrets in sponsons to port and starboard of each aircraft lift) is common to all six ships.



IMPLACABLE CLASS

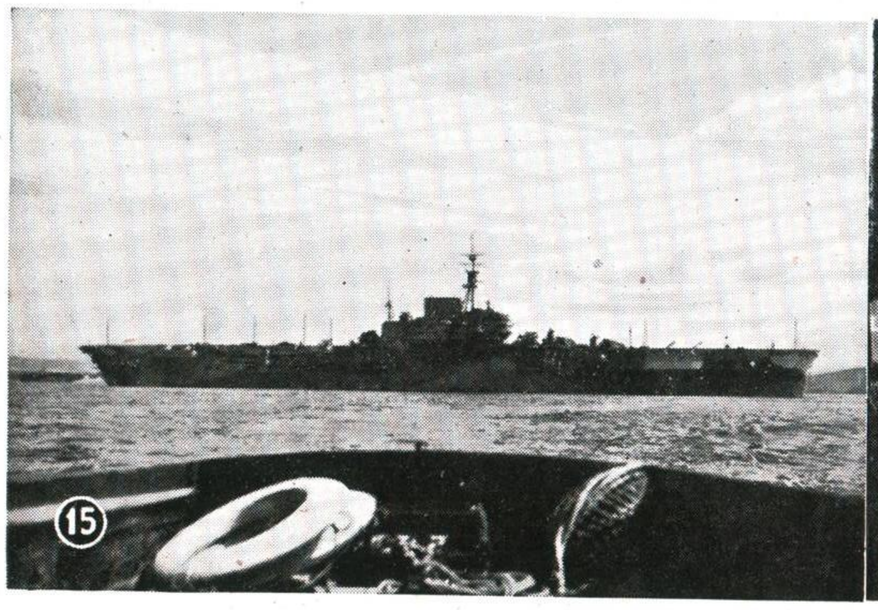
Displacement : 23,000 tons (32,110 fully loaded).

Length : 766 ft. 5 ins. *Width :* 95 ft. 9 ins.

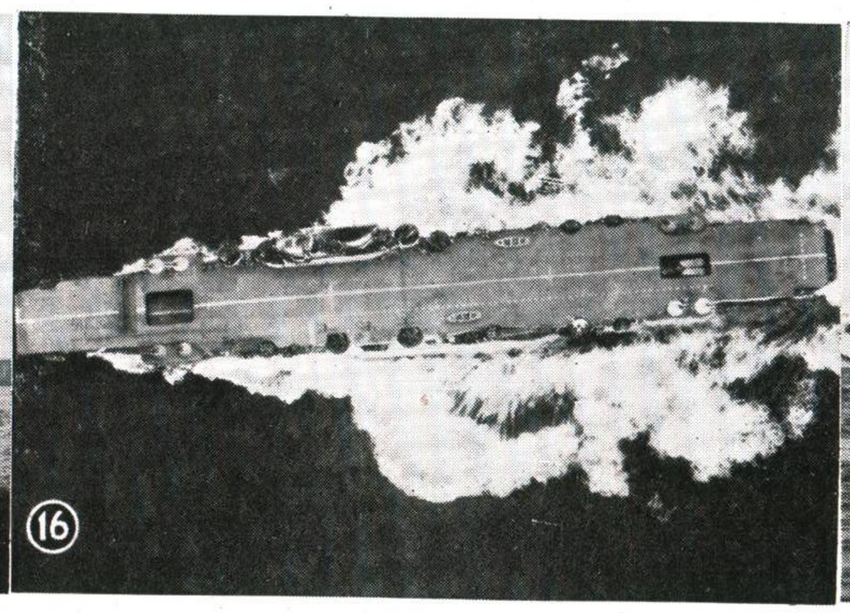
Aircraft : Over 60.

Guns : 16 4.5 inch H.A. Numerous 40 and 20 mm. A.A. and 2-pdr. Pompom. Four 3-pdr. saluting.

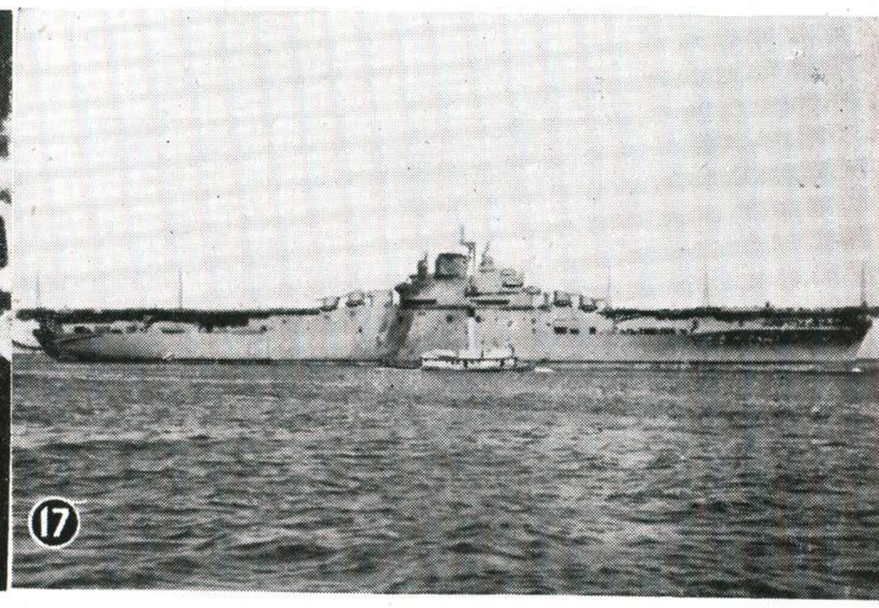
Implacable Class (comprising *Implacable* and *Indefatigable*) are the later descendents of the *Indomitable*. They are slightly larger than their forerunners, having a slightly higher freeboard. Aircraft lifts are similar to *Indomitable*. Aerofoil section funnels and round-downs fore and aft are common to all three classes, although the round-downs of the *Indomitable* are slightly more streamlined.



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17

MIDWAY CLASS

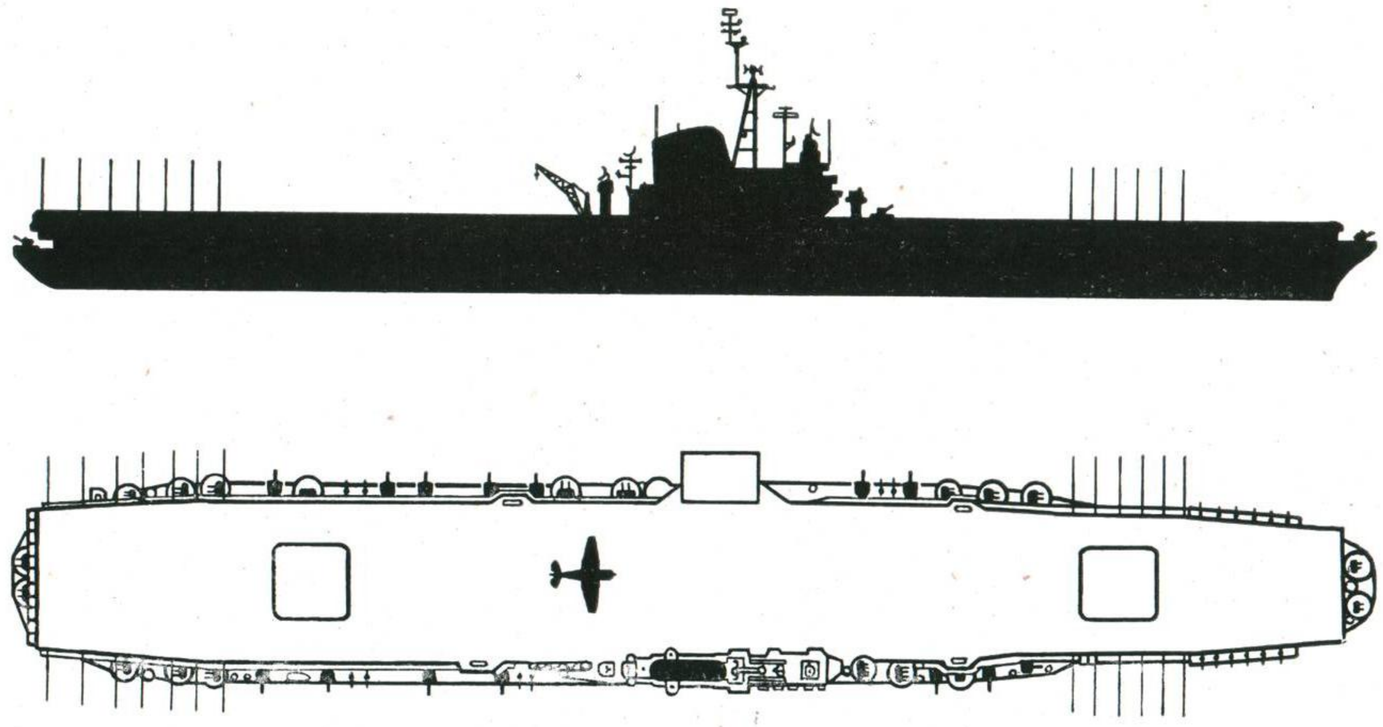
Displacement : 45,000 tons (60,000 fully loaded).

Length : 968 ft. *Width :* 136 ft.

Aircraft : 137.

Guns : 14 5 inch H.A. (seven in continuous sponsons each side along hull). Numerous 40 and 20 mm. A.A.

Midway and her two sister ships *Franklin D. Roosevelt* and *Coral Sea* are the largest carriers of their type afloat. Characteristics include unobstructed flight deck (almost all armament being carried on sponsons below flight-deck level) tapering more fore than aft, square box-like funnel with slight rake, on rear of narrow island, and square aircraft lifts fore and aft, together with a ship-side lift opposite the island. There are gun platforms on the stern and on the forecastle head



ESSEX CLASS

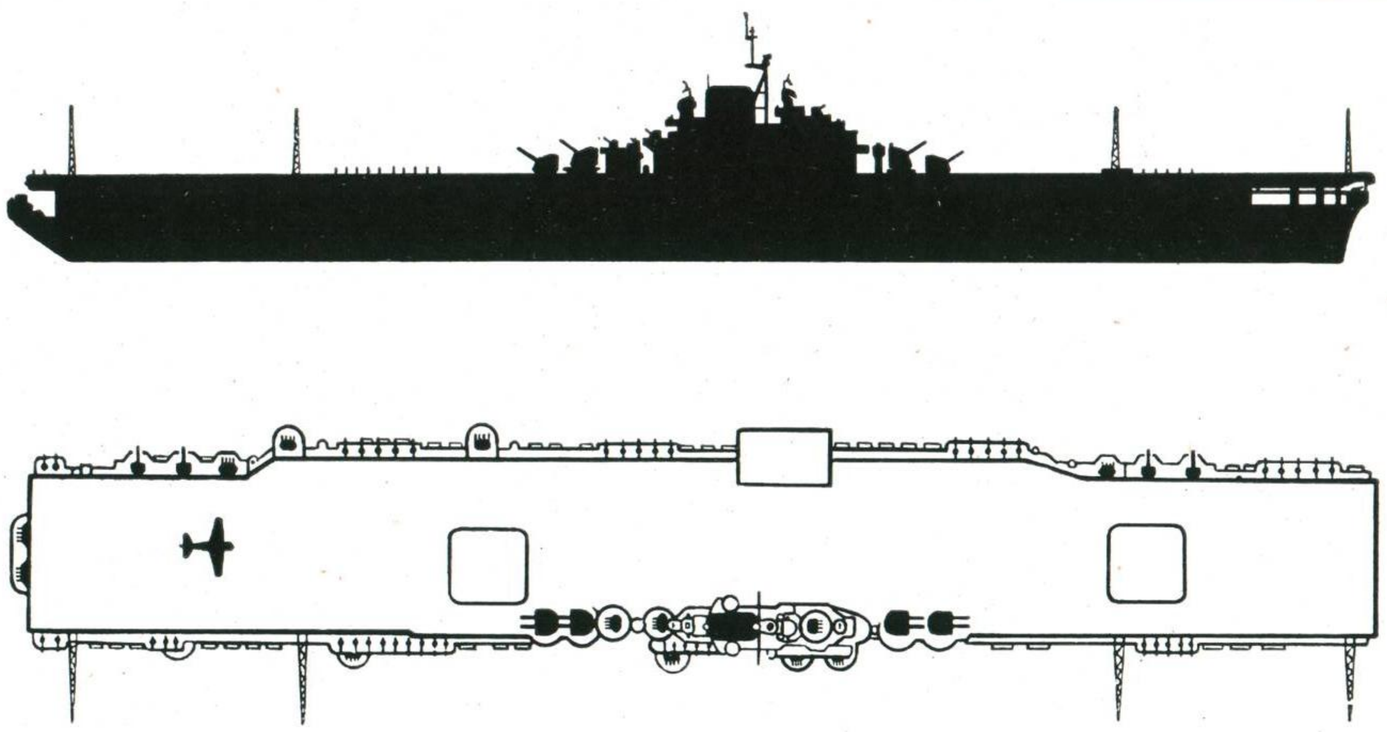
Displacement : 27,000 tons (33,000 fully loaded).

Length : 888 ft. *Width :* 147 ft.

Aircraft : 82 to 90.

Guns : 12 5 inch H.A. in twin turrets fore and aft of island. Numerous 40 and 20 mm. A.A.

There were originally 24 ships of the Essex Class. They are easily distinguishable from *Midway* by their rectangular flight decks and mountainous island structures which include much armament. Essex Class ships have similar ship-side aircraft lifts to *Midway*, and deck lifts are square in plan. There are gun platforms on the stern and on the forecastle head.



MODIFIED ESSEX CLASS

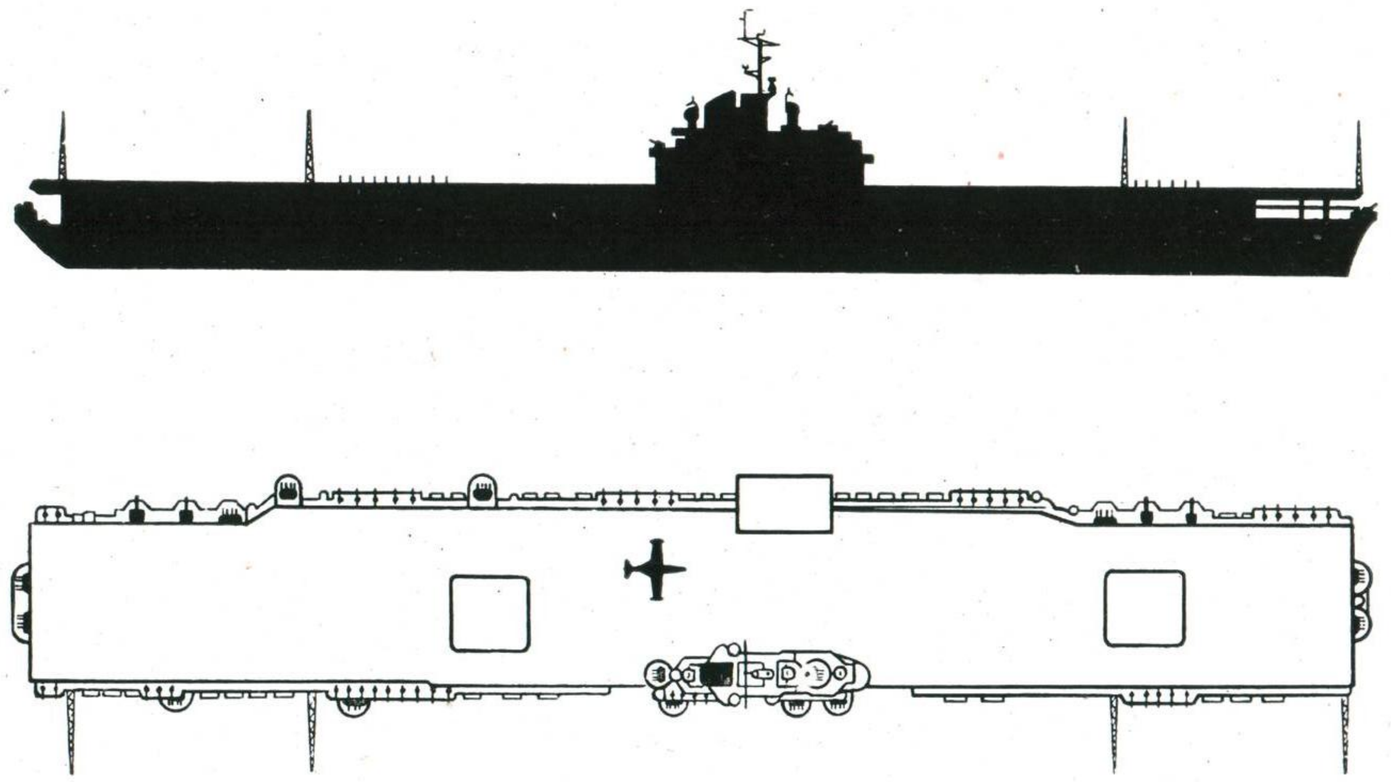
Displacement : 27,000 tons (33,000 fully loaded).

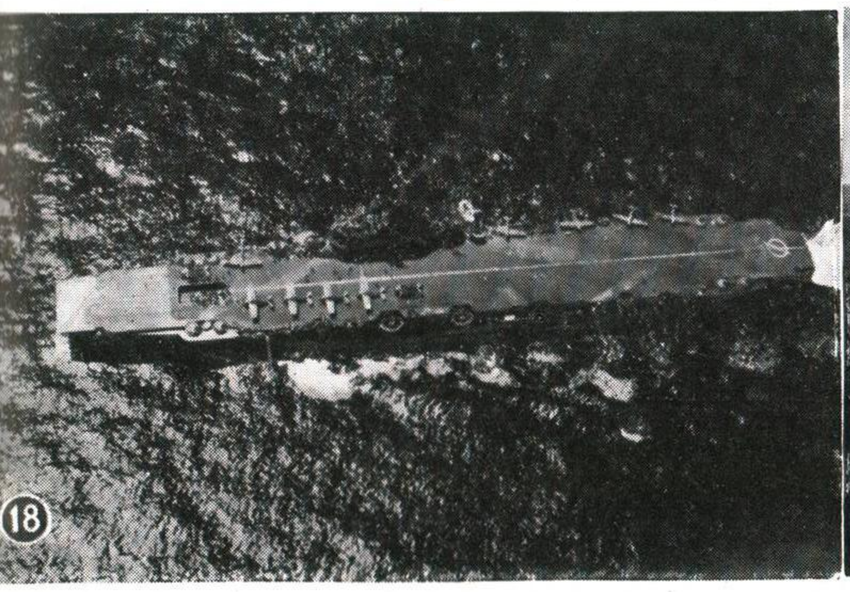
Length : 888 ft. *Width :* 147 ft.

Aircraft : 82 to 90.

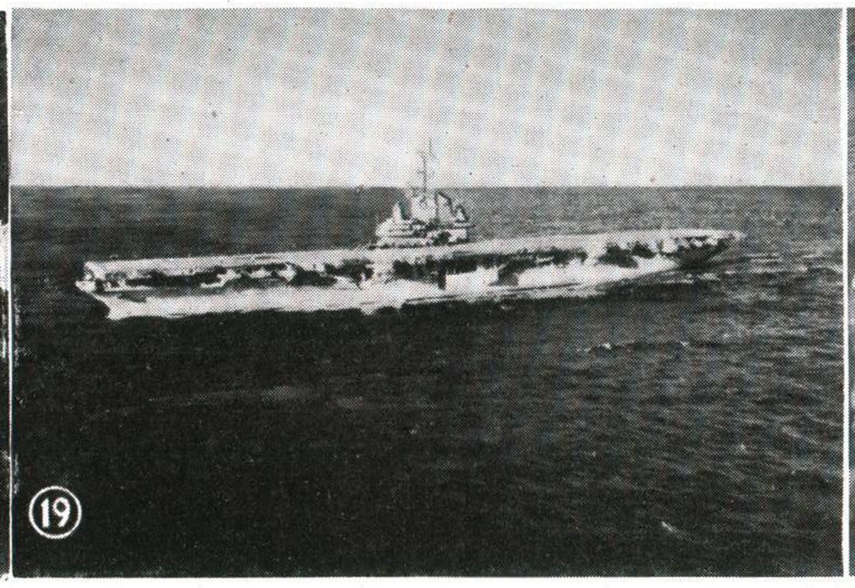
Guns: 3-inch rapid fire in tubs along deck edge.

Modified Essex Class comprises later ships of the Essex Class which are being modernized to cater for larger and more powerful aircraft. The *Oriskany*, which is the first to be modified, differs from *Essex* in having 3-inch rapid fire A.A. in tubs along the side of the deck in place of 20 mm. A.A. Owing to the removal of the 5-inch guns the island has completely lost its " mountainous slopes," and a rather smaller, upright structure remains. (Note sloping-top funnel.)

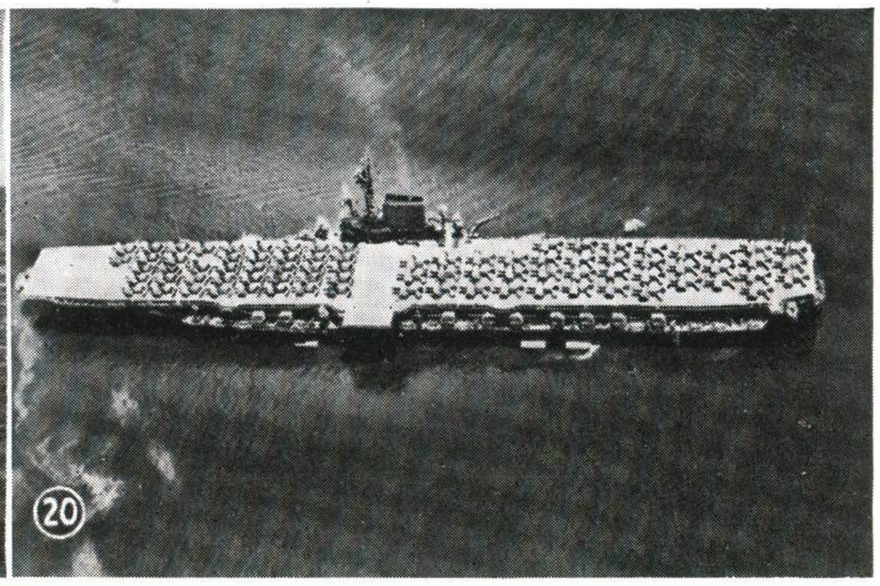




18



19

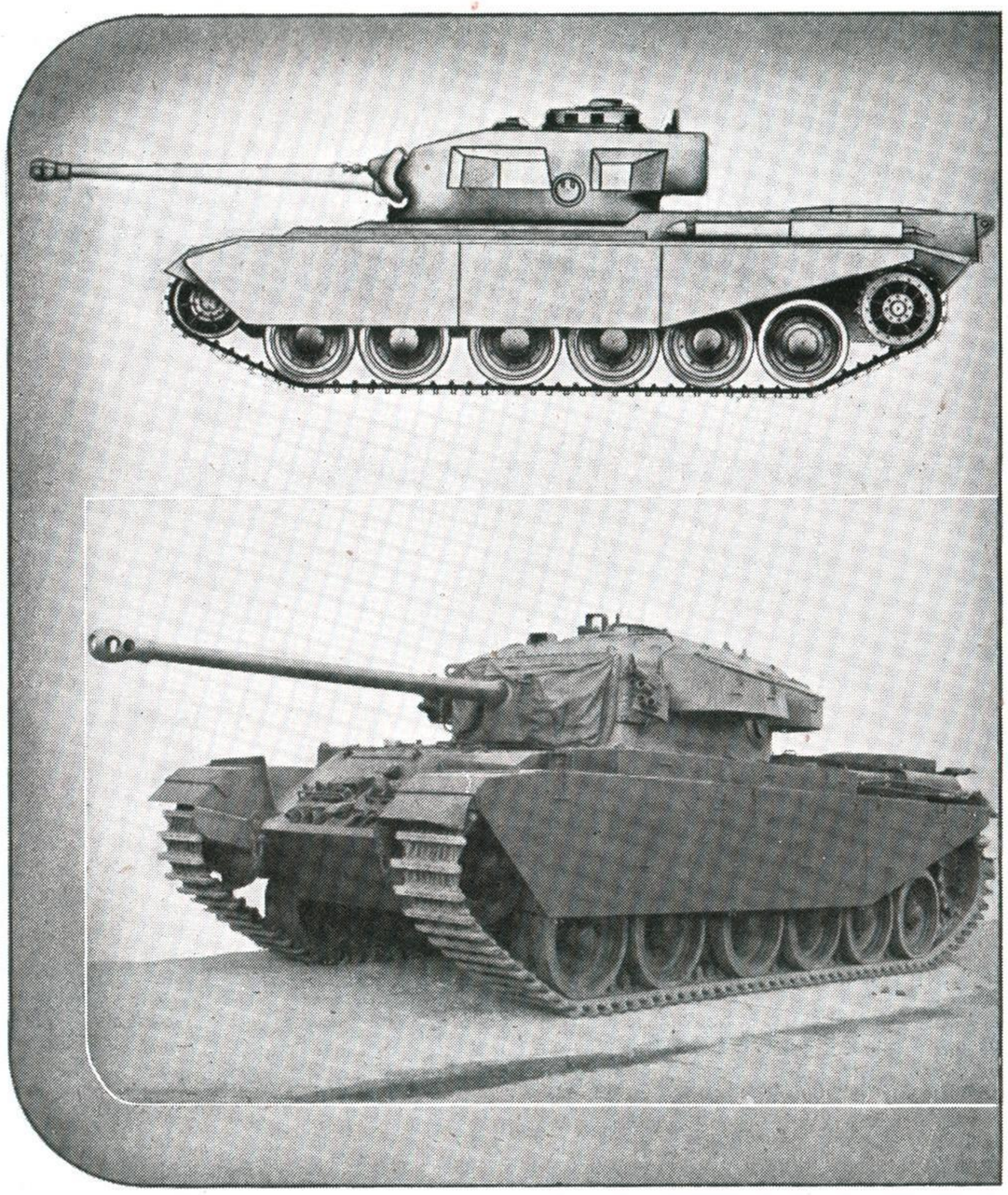


20

TANK

Basic Recognition Features of Four Types

by C. H. GIBBS-SMITH



CENTURION



Centurion. Hall-marks are (1) deep flattish-topped turret on (2) long low deck, with (3) broad glacis-plate making acute angle with nose plate, and (4) outstandingly prominent skirting plates.

Turret. Especially deep-centred ; slightly inwards sloping ; curve-sided, bow-fronted, and with mantlet often shrouded ; flattish top fore and aft of a centre ridge, with cupola and other excrescences causing little optical disturbance. The rear is tapered, locker-flanked and prominently overhung. The whole turret rises boldly and sheer from the deck. Muzzle brake is bulbous with two circular baffle outlets.

Hull. Long, and with low, flat deck visible above the suspension. Glacis-plate is long and flat, with a 25 degree slope making an acute angle with the nose-plate, which is cut away into deep shadow. The whole nose is set well back behind the front idlers, making the tracks into prominent " horns."

Suspension. Dominated by the great skirting plates which are dropped to axle height and chopped off obliquely in front to reveal half the high-set idler. Rearwards, just beneath the rear line of the turret, the skirt is slowly raised in a gentle taper. This partially uncovers the fifth road wheel, leaves the sixth one clear, and also exposes the large driving sprocket in all its toothy nakedness. This rear skirt-taper, parallel with the rising tracks, is what gives the vehicle its slightly skittish appearance as if pulling up its skirts and kicking up its hind legs. There are six road wheels and the front idler (high set) and the driving sprocket (low set) are as large as the road wheels.

COMET



Comet. A stumpy, box-like vehicle with the following hall-marks : (1) high-set turret with steep forehead, on (2) high flat deck, with (3) prominent vertical box-front above glacis-plate, and (4) suspension of five bold road wheels and four top rollers, with idler and sprocket slightly shaded by small triangular " skirtlets."

Turret. Vertical and curve-sided, with bow front and peculiar " bent-in " mantlet which is often shrouded. The flattish top is broken by a prominent cupola and slopes steeply down in front, but with a distinctive nose-up lift at the mantlet. A large rear locker gives exaggerated overhang. Muzzle-brake is ovaloid with two circular baffle outlets.

Hull. Short, angular and high-decked, with a flat forward box-end broken by the driver's visor and a machine-gun. The glacis-plate is short and slopes down to a narrow nose-plate almost flush with the track ends. The nose-plate catches some light and gives way to a lower nose-plate in deep shadow.

Suspension. Five large road wheels (throwing strong interior shadows) with four top rollers are all bold and visible. But at bow and stern the idler and sprocket (both low set) are coyly shaded by small " skirtlets," roughly triangular in form, which optically reduce the length of the vehicle. The idler (front) and the sprocket (rear) are of similar size and slightly smaller than the road wheels.

Quartet

Joseph Stalin II.

Hall-marks are (1) the flat, curve-sided turret, set well forward ; (2) the medium-height deck ending beneath the mantlet ; (3) the swelled cushion-like glacis-plate and nose-plate ; and (4) the small road-wheels and large rear driving sprocket.

Turret. Flat, smooth and curve-sided, inwards-sloping, with noticeable round cupola on almost flat top ; and set well forward. The turret is slightly tapered fore and aft, and there is a small but prominent bulge on the back to house a machine-gun mounting. Mantlet is curved and flush with the turret front, and with only a short sleeve. Muzzle-brake is cylindrical, with two rectangular baffle outlets.

Hull. Flush-decked, with tented intake louvres aft. The deck shows well above the suspension, slopes slightly inwards, and ends beneath the mantlet. The great bulging glacis-plate (with centred visor) is clapped on the front and falls forward from the top of the deck-front. Glacis-plate and nose-plate make a blunt angle ; hence the latter is not lost in shadow and is clearly visible. Together they form a large cushion shape, coming as far forward as the idlers.

Suspension. Dominated by the great rear driving sprocket, which seems to chase before it a brood of six little road wheels, and the still smaller trio of top rollers. The idler looks like a road wheel which has been jostled upwards and out of the way by its six restless neighbours. Visible in some lights are the crank-arms, which emerge from behind the road wheels like clenched fists.

Joseph Stalin III.

Hall-marks are (1) the turtle-back turret set far forward, (2) the high inwards sloping deck and (3) the small road wheels and large rear driving sprocket.

Turret. Like a low smooth turtle-back topped by a prominent cupola and exterior mounted machine-gun. It sits far forward and gives the vehicle a nose-heavy aspect. The curve of the turret mounts more steeply at the rear and then slopes gently forwards in a slimming rounded forehead. The mantlet is clamped firmly between smooth rounded jaws. The muzzle brake is cylindrical, with two rectangular baffle outlets.

Hull. High-decked and inwardly sloping, with bold curved sides which meet on a great tent-roofed glacis-plate which sweeps down to a sharp ridge in line with the idlers. The nose-plate doubles back into deep shadow.

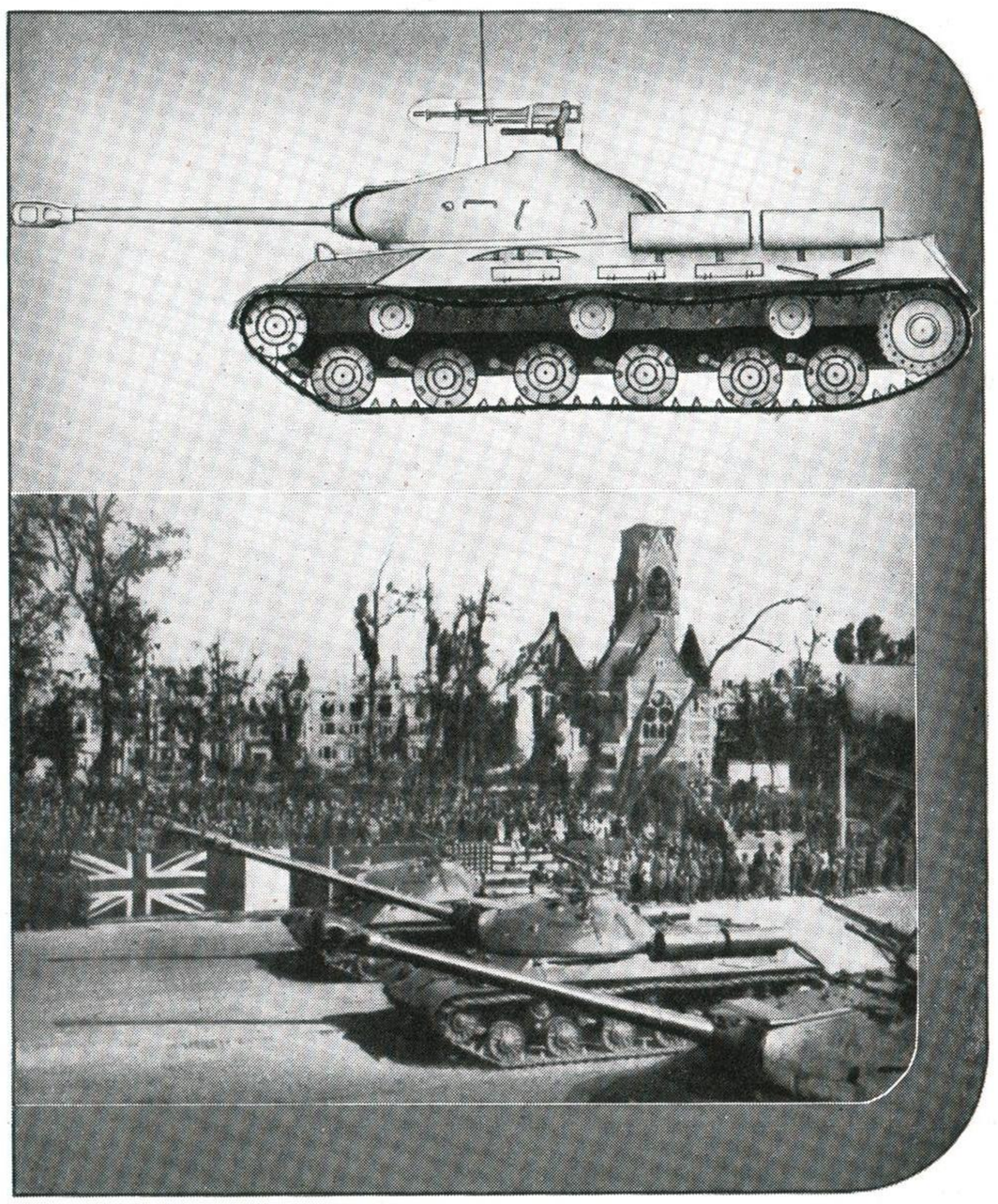
Suspension as for Joseph Stalin II.



JOSEPH STALIN II

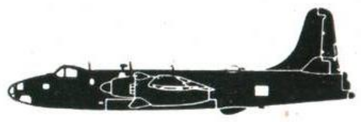


JOSEPH STALIN III



'TWIN-TYPE' TEACHER

With the aid of the 3-view silhouette key, deduce the identity of the aircraft in the photographs and sillographs overleaf, 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.







MERCATOR

(P4M-1)

Span : 114 ft.



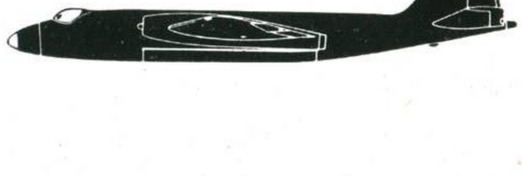


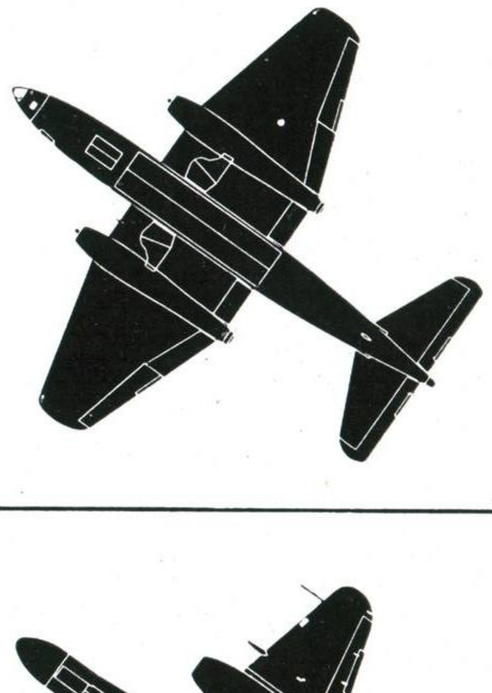


TORNADO

(B-45C)

Span : 89 ft.



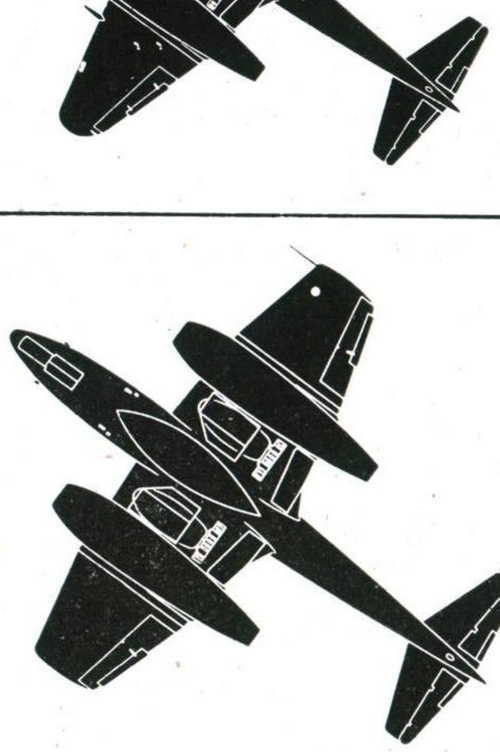


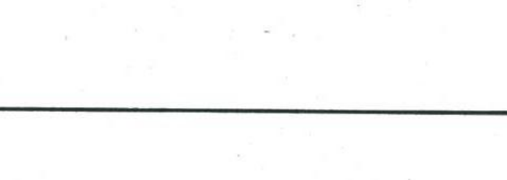


CANBERRA

(B Mk. 2)

Span : 64 ft.



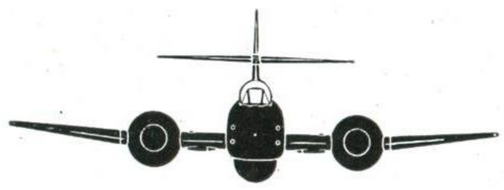


METEOR 11

(NF Mk. 11)

Span : 43 ft.

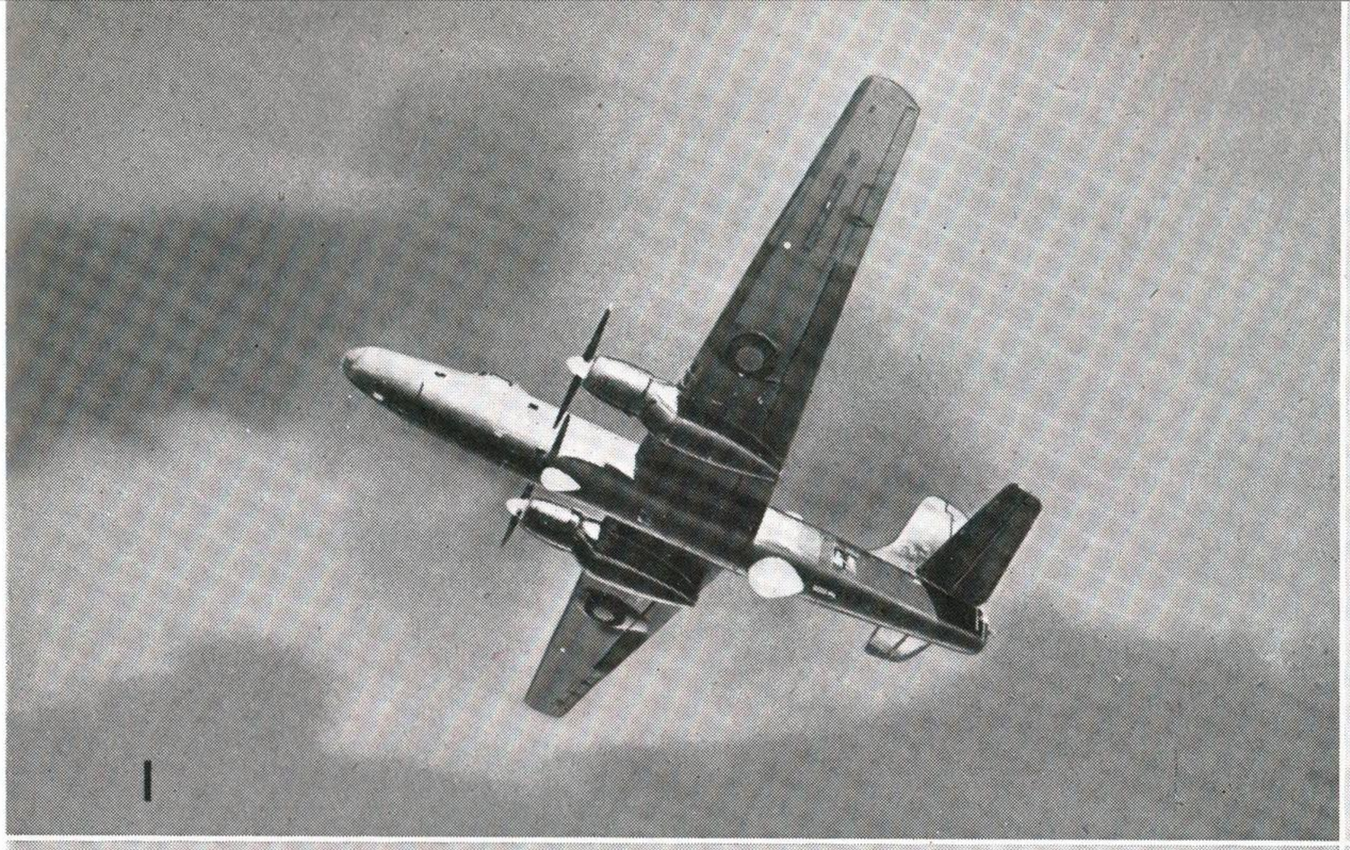




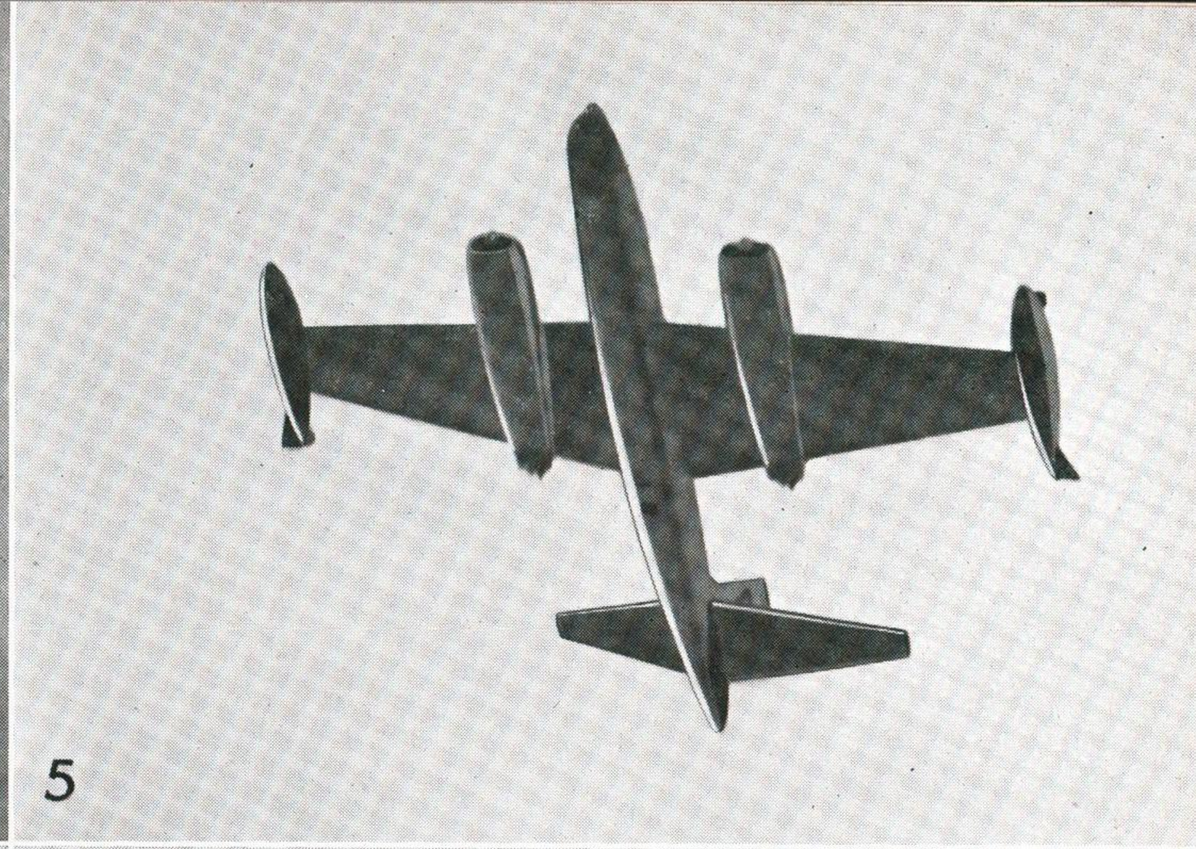
METEOR 8

(F Mk. 8)

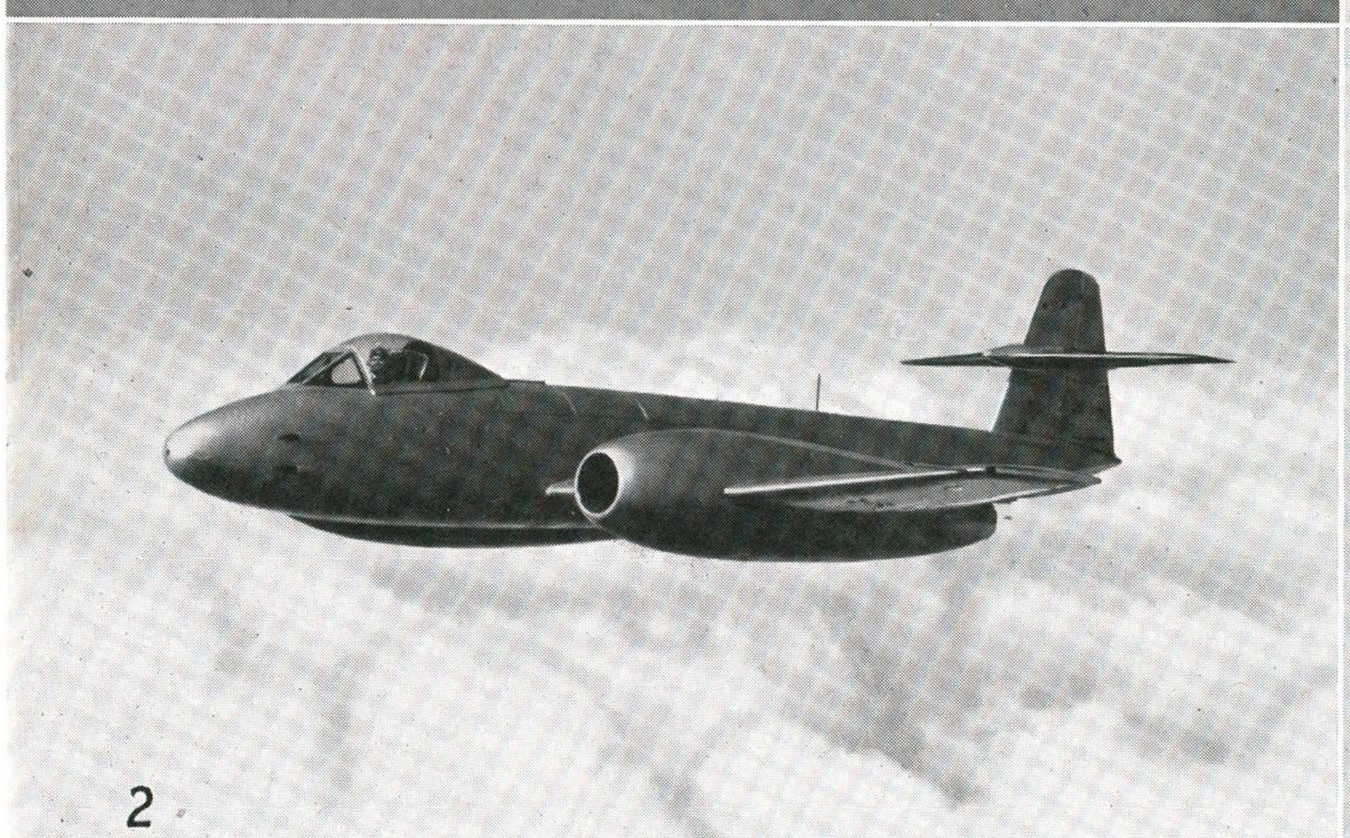
Span : 37 ft.



1



5



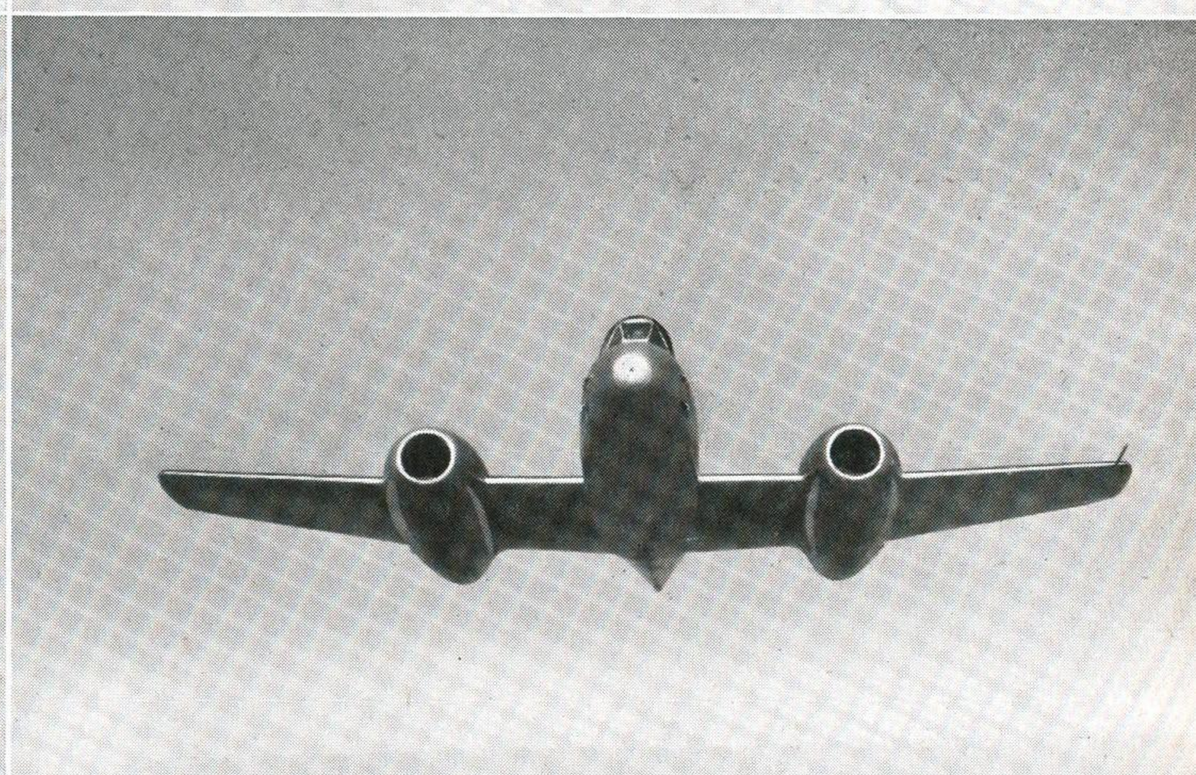
2



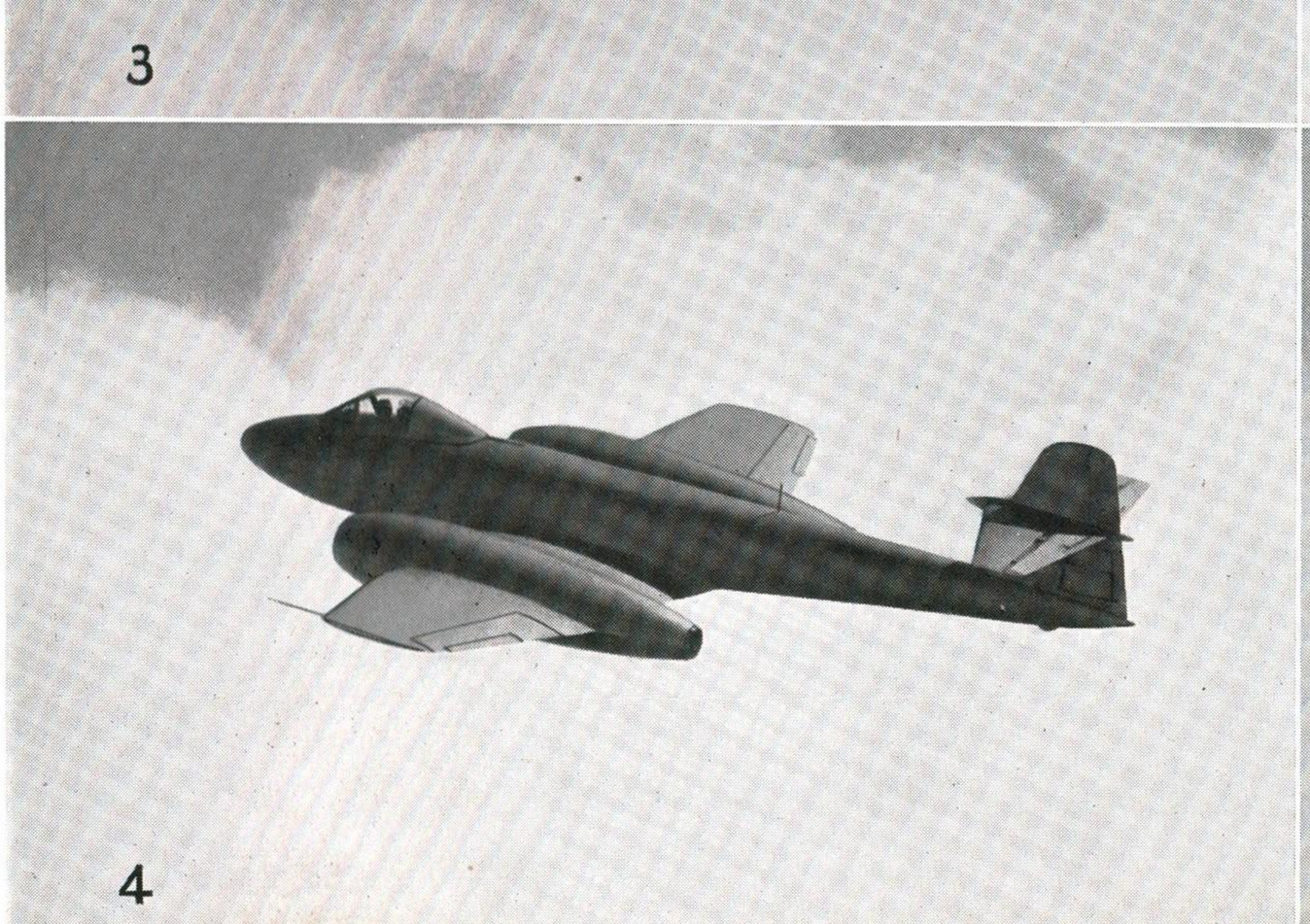
6



3



7



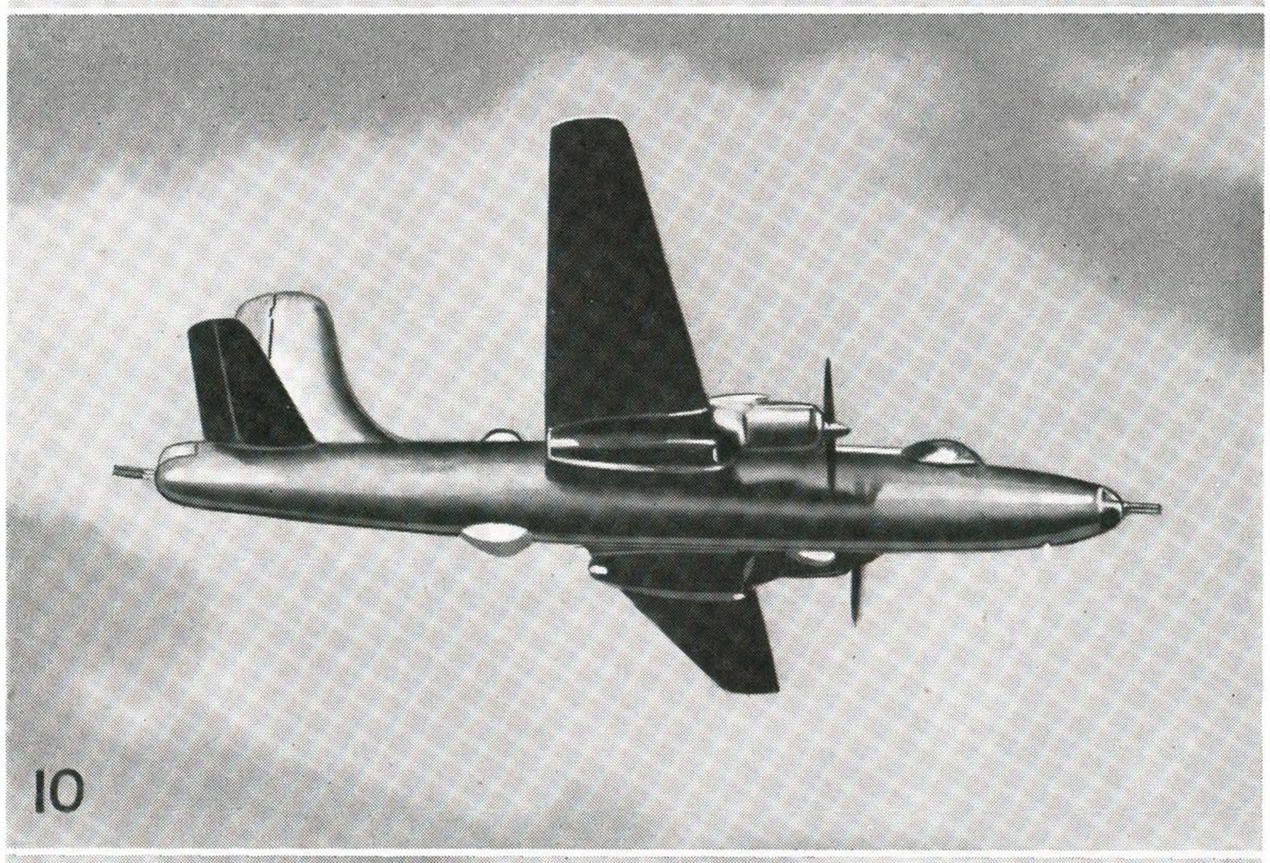
4



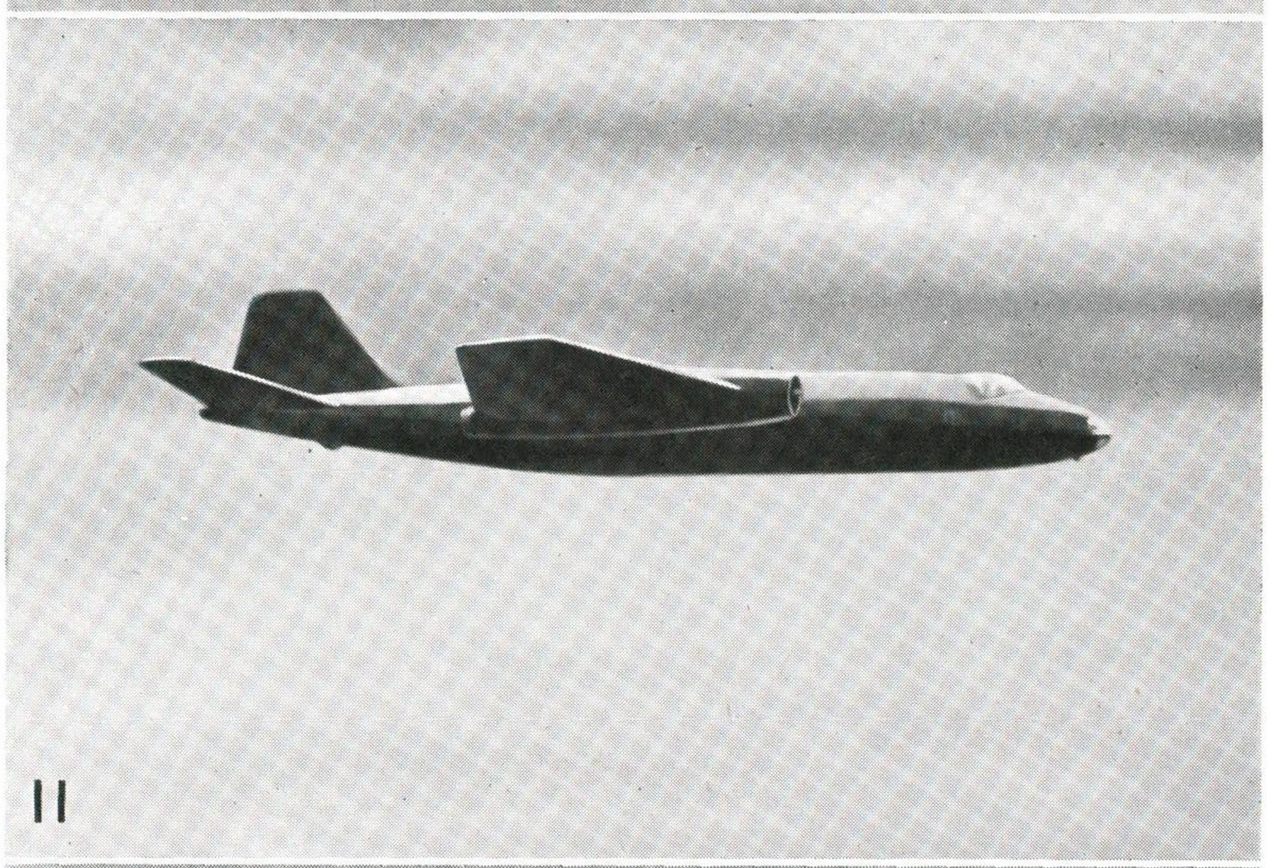
8



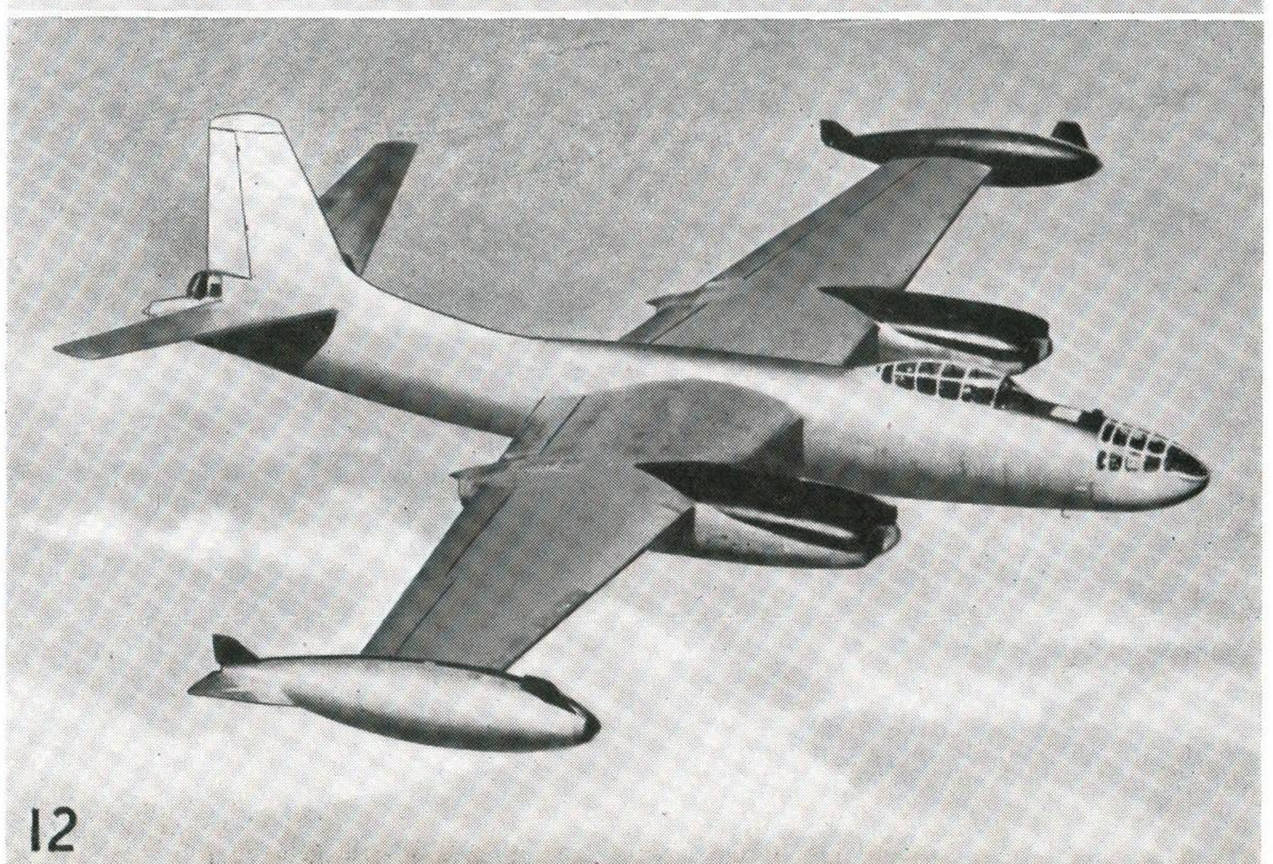
9



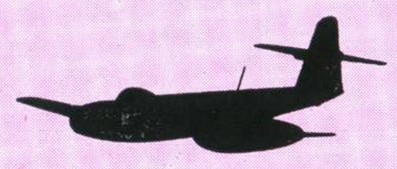
10



11



12



13



18



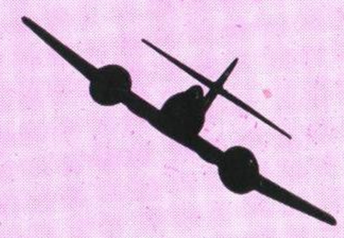
14



19



15



20



16



21

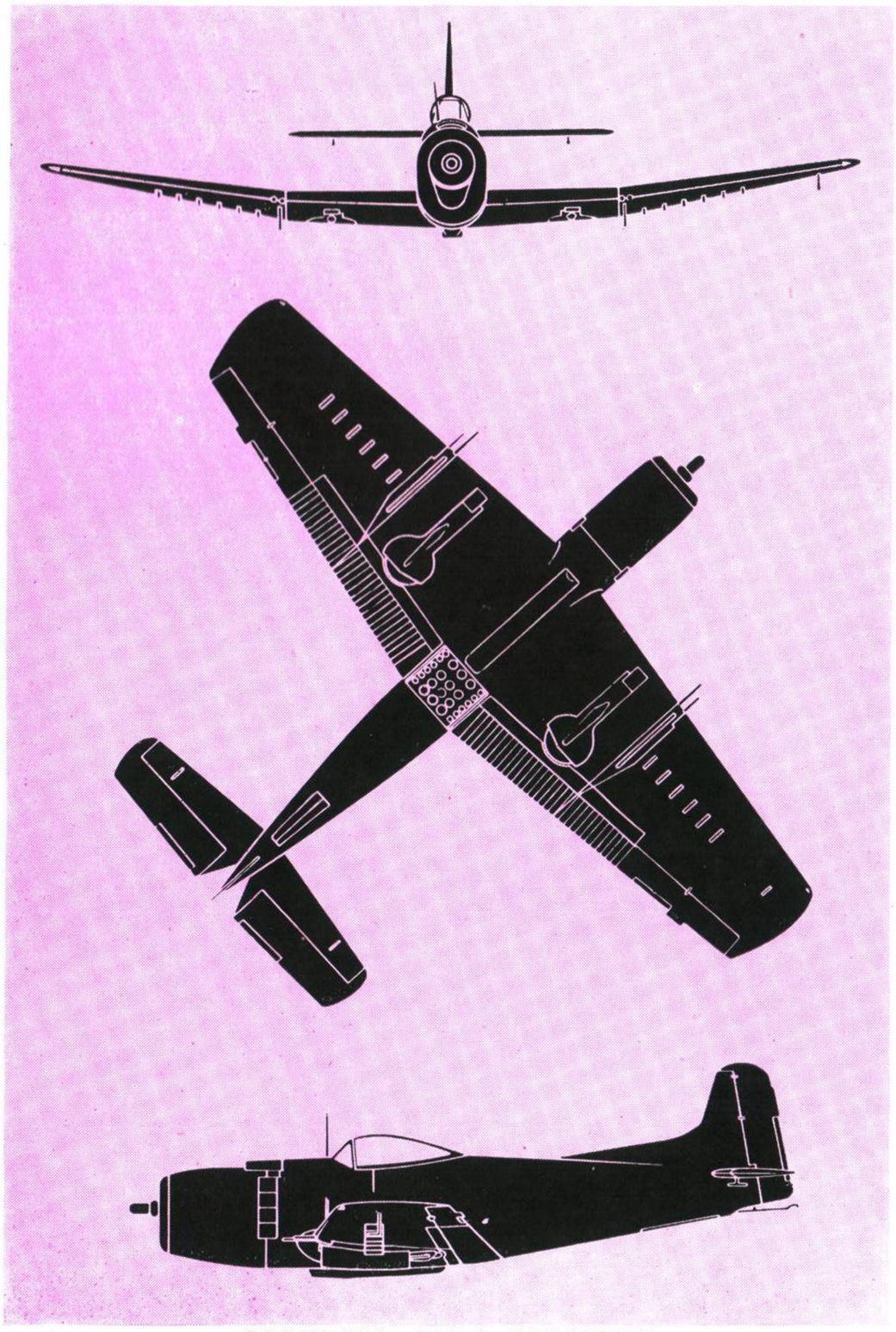


17

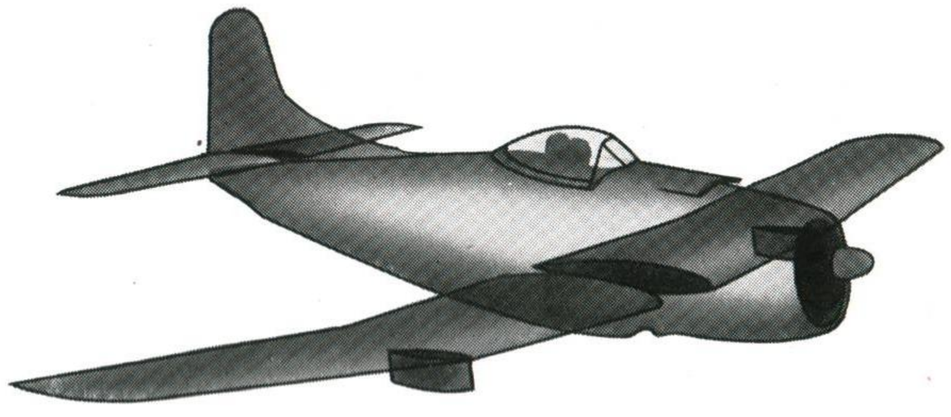


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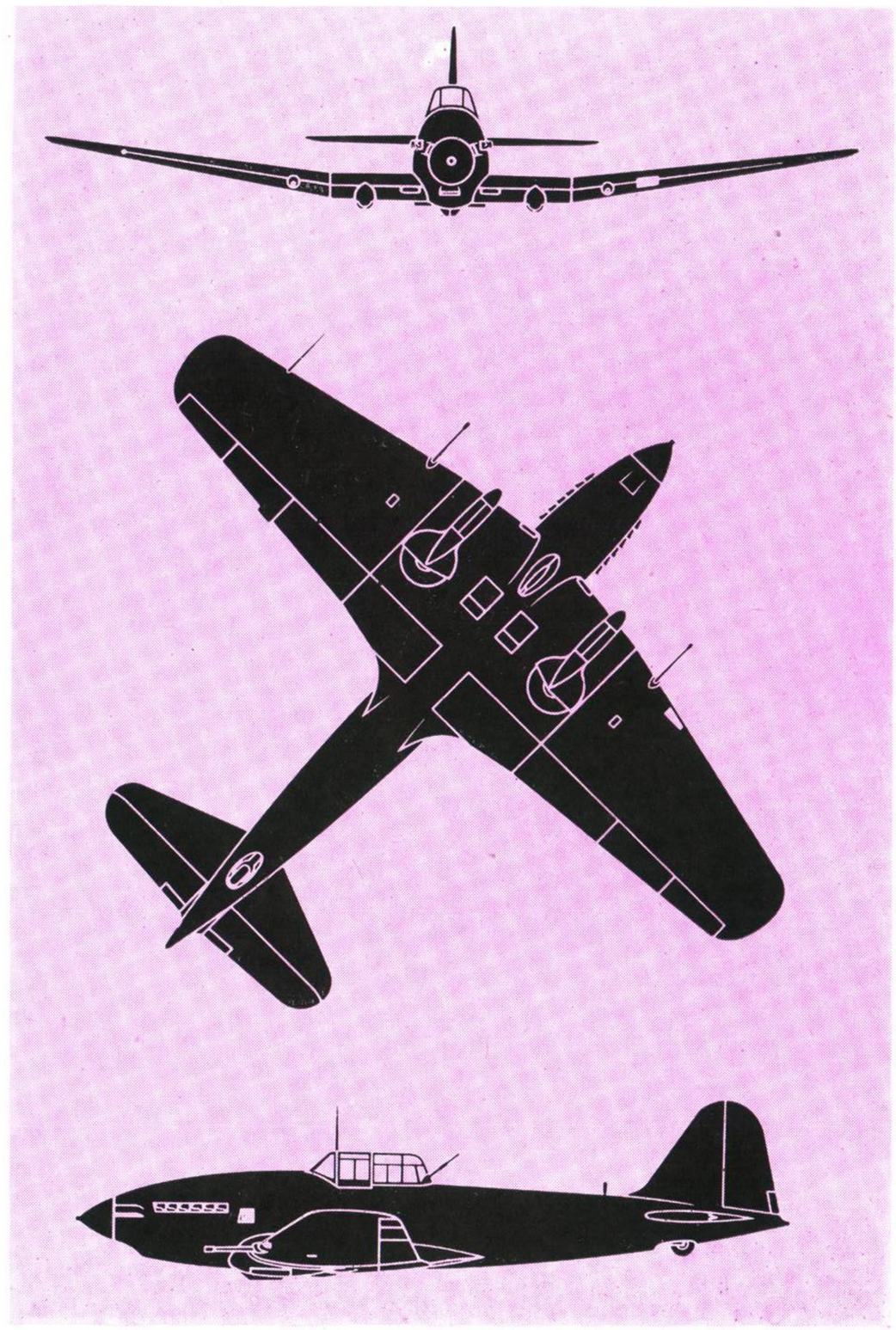
SILHOUETTE TO SOLID



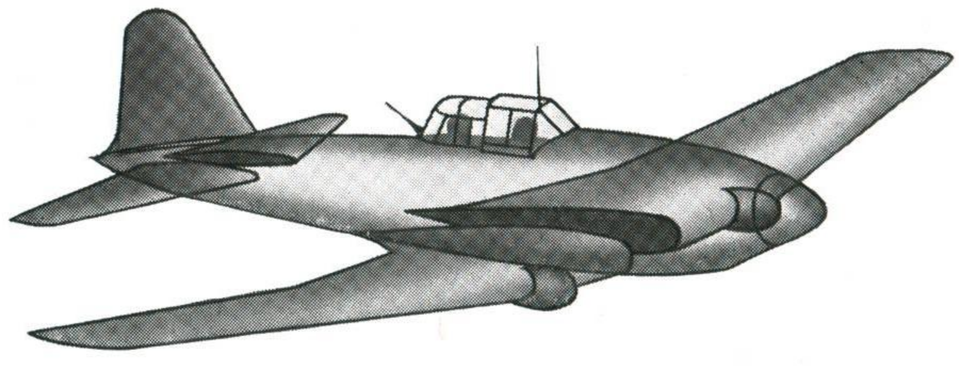
MARTIN AM-1 MAULER



Span : 50 ft. **Length : 41 ft. 8 ins.**

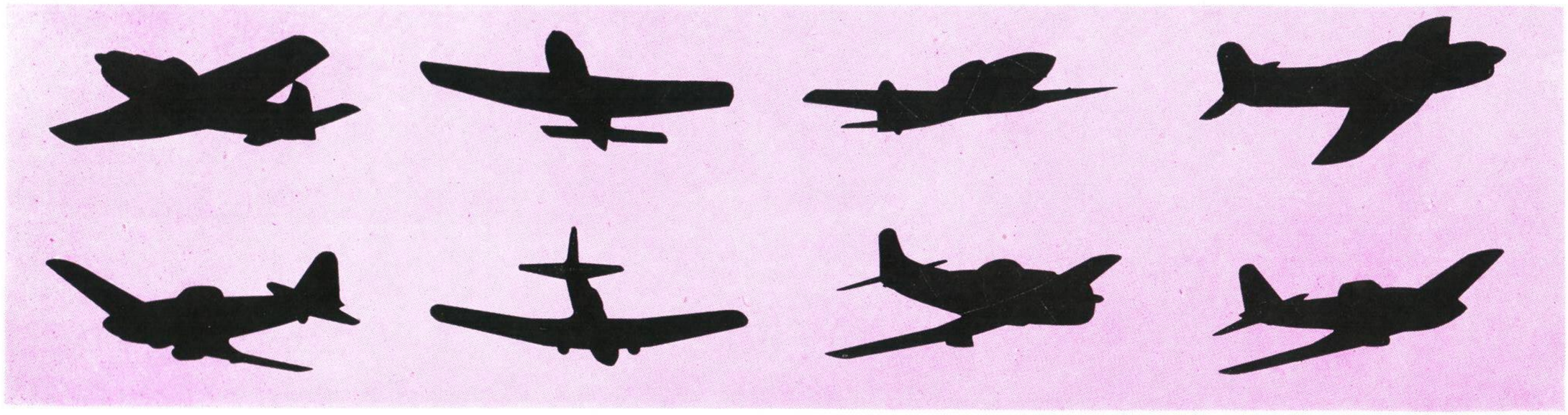


ILYUSHIN IL-10



Span : 48 ft. **Length : 39 ft. 3 ins.**

Solve these Sillographs with the aid of the diagrams above (Answers on rear cover)





Cover Photo : "Three threes" on parade are Joseph Stalin III heavy tanks. Mark, learn and inwardly digest the effect of the forward-set "inverted-saucer" turret. Other views below, and side-view diagram on page 163.



"TWIN-TYPE" TEACHER

PHOTOGRAPHS

1. P4M Mercator
2. Meteor F Mk. 8
3. Canberra B Mk. 2
4. Meteor F Mk. 8
5. RB-45C Tornado
6. Canberra B Mk. 2
7. Meteor F Mk. 8
8. Meteor NF Mk. 11
9. Meteor NF Mk. 11
10. P4M Mercator
11. Canberra B Mk. 2
12. B-45C Tornado

SILLOGRAPHS

13. Meteor F Mk. 8
14. B-45C Tornado
15. Meteor NF Mk. 12
16. Canberra B Mk. 2
17. P4M-1 Mercator
18. P4M-1 Mercator
19. Canberra B Mk. 2
20. Meteor F Mk. 8
21. Meteor NF Mk. 11
22. B-45C Tornado

SOLUTIONS TO RECOGNITION TESTS IN THIS EDITION:

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

ELEMENTARY

37. MIG-15
38. AD-2 Skyraider
39. Gannet (Fairey 17)
40. F4U-5N Corsair
41. SE 161 Languedoc
42. MD 450 Ouragan
43. Bristol 170
44. F-80A Shooting Star
45. Helldiver
46. Sikorsky S-55
47. Canberra B Mk. 2
48. PE-2
49. B-47 Stratojet
50. C-124 Globemaster 2
51. B-45 Tornado
52. IL-2
53. SO 30P Bretagne
54. F-86 Sabre

ADVANCED

160. Comet
161. MIG-9
162. Bristol 170
163. FJ-1 Fury
164. Firebrand TFB Mk. 5
165. YAK-15
166. Brigand B Mk. 1
167. TU-2
168. Hastings C Mk. 1
169. Dove 1
170. Halifax A Mk. 9
171. PE-2
172. Athena T Mk. 2
173. Anson C Mk. 19
174. Balliol T Mk. 2
175. Chipmunk T Mk. 10
176. Gemini 1A
177. Dragon-Rapide

SILLOGRAPHS

43 Meteor F Mk. 4
44 Seafire FR Mk. 47
45 Lincoln B Mk. 2
46 DHC-2 Beaver
47 Proctor T Mk. 4
48 P4M Mercator
49 Firefly FR Mk. 4
50 SM-95
51 SE 161 Languedoc
52 Consul
53 Prentice T Mk. 1
54 CF-100 Canuck
55 Seafury F Mk. 10
56 MD 450 Ouragan
57 Halifax C Mk. 8
58 F3D Skyknight
59 F-86 Sabre
60 PE-2
61 Sealand
62 Convair-Liner
63 Lockheed XF-90

TANK TEST

1. T 34 (Russian)
2. Centurion (British)
3. Joseph Stalin 1 (Russian)
4. Centurion (British)
5. Churchill (British)
6. Chaffee (American)
7. Comet (British)
8. Sherman (American)
9. Staghound (British)
10. Pershing (American)
11. T 41 "Walker Bulldog" (American)
12. T 34-85 (Russian)
13. Churchill (British)
14. Comet (British)
15. S.U. 100
16. Joseph Stalin 1 (Russian)
17. Comet (British)
18. Somua (French)

FLEET CARRIER DIGEST

1. Implacable Class
2. Essex Class
3. Midway Class
4. Illustrious Class
5. H.M.S. Indomitable
6. Illustrious Class
7. Illustrious Class
8. Illustrious Class
9. Implacable Class
10. Implacable Class
11. Illustrious Class
12. Midway Class
13. Illustrious Class
14. Essex Class
15. Implacable Class
16. H.M.S. Indomitable
17. Essex Class
18. Illustrious Class
19. U.S.S. Oriskany (Modified Essex)
20. Midway Class

HIGHLIGHTS

28. FJ-1 Fury
29. Varsity T Mk. 1
30. Canberra B Mk. 2
31. F9F-3 Panther
32. B-47 Stratojet
33. F-84 Thunderjet
34. F7F-3 Tigercat
35. Bristol 170
36. Venom NF Mk. 2

PERPLEXING PAIR

Left: Canberra B Mk. 2;
Right: B-45 Tornado.

WRECK-COGNITION

Lockheed F-94C

MAULER and IL-10 SILLOGRAPHS

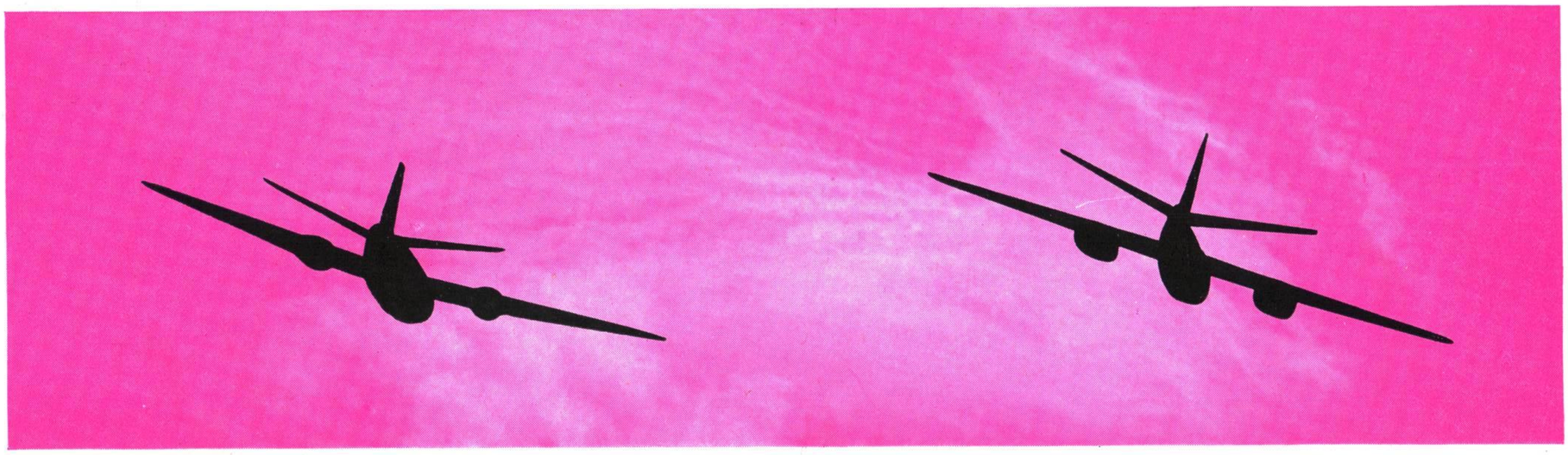
Top : Mauler, Mauler, IL-10, Mauler.
Bottom : IL-10, IL-10, Mauler, IL-10.

We are indebted to Mr. Harold G. Martin for the pictures of Grumman aircraft on pages 146 and 148.

READERS, ATTENTION!

When this note appears, it is expected that the *Journal* will be back to the normal printing schedule. This means that full delivery by the printer to distribution centres is made by the 18th of the month of issue. We mention this for the benefit of readers who may be under the impression that the *Journal* should reach them on the 1st of the month of issue. Additionally, time is taken up in the various channels of distribution, and no fixed date can be given for the arrival of the *Journal* in the hands of readers.

PERPLEXING PAIR



47,145 7/51 38-241-0

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