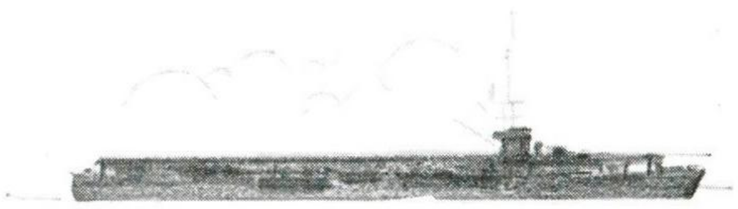
JOINT SERVICES

RECOGNITION *Journal*

Vol. 6 SEPTEMBER 1951 No. 9



Commencement Bay class escort carrier U.S.S. Badoeng Strait (CVE 116) hoisting in Corsairs for Korea.

Photo by Courtesy of Naval Aviation News

SEPTEMBER 1951 Vol. 6. No. 9

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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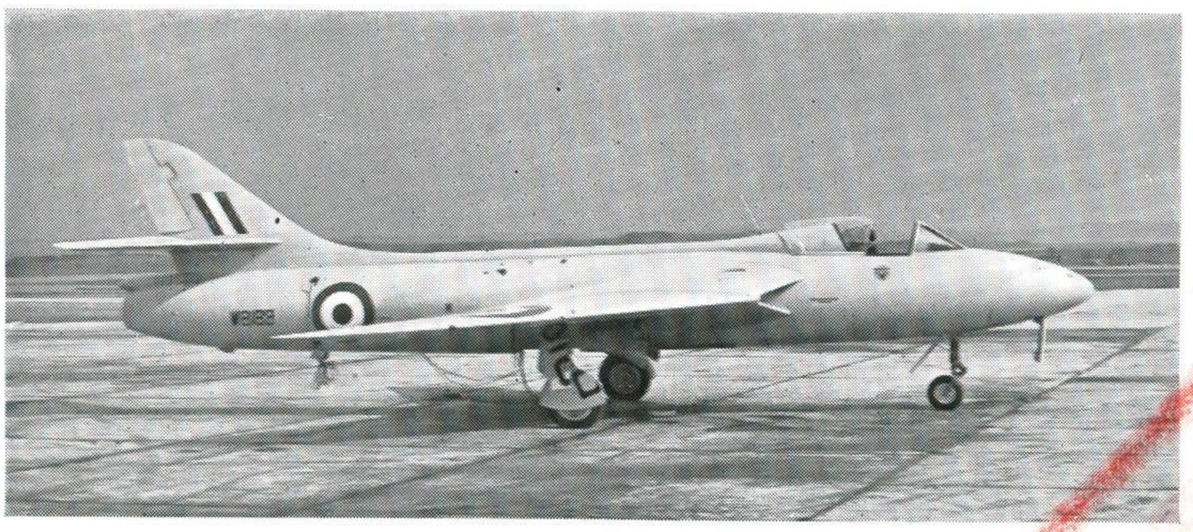
1067 AND ALL THAT

INDIFFERENT and hardened as we think we may be, by the seemingly endless procession of new and startling aeroplane shapes which have been projected into the air during the post war years, there is still a good measure of pleasure and satisfaction in contemplating a new one. The association of the names " Hawker " and " Camm " with the latest interceptor-fighter doubles that measure.



The Hawker P.1067 is the sleekest and slimmest fighter-form yet produced from that famous stable. It shows no visible Hurricane-Typhoon-Fury ancestry, but will doubtless display in turn the same high qualities of performance which they did in their day. It does show clear shape characteristics of previous Hawker jet aeroplanes—and is, if anything, easier on the eye, but flatter fuselage lines make it look slimmer than its precursors P.1040, 1052 and 1081. The innovation of a spine-like ridge joining fin and cockpit-fairing aids the run of the eye from its sharp, shapely nose to the rudder tip and somehow visually speeds up the whole aeroplane. The abrupt cut-back of the rudder trailing edge, leaving a length of tail pipe beyond, produces the momentary impression that the aeroplane is rudderless.

The head-on view of the P.1067 is typical of Mr. Camm's jet models. Short stubby outer wings expand into swollen roots which together look like one great yawning mouth taking a big bite across the small-sectioned fuselage in which is buried the Avon turbojet.

No performance details are yet available but as befits an interceptor-fighter, it creates the right impression—of a swift thoroughbred hunter. It is already in production for the Royal Air Force.

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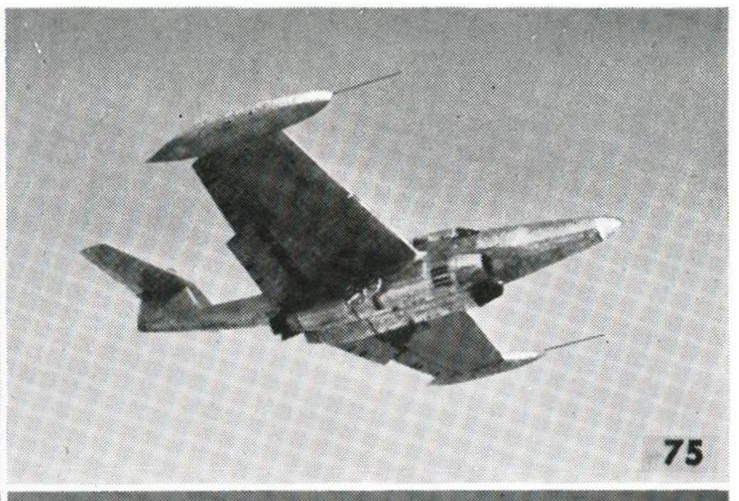
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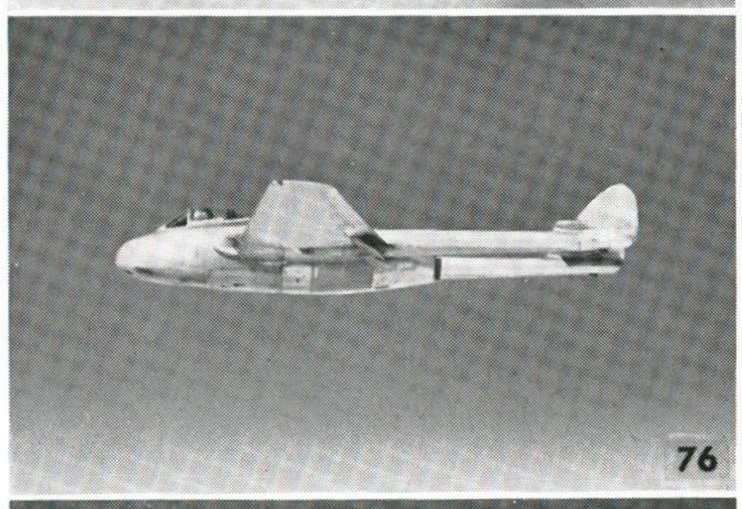
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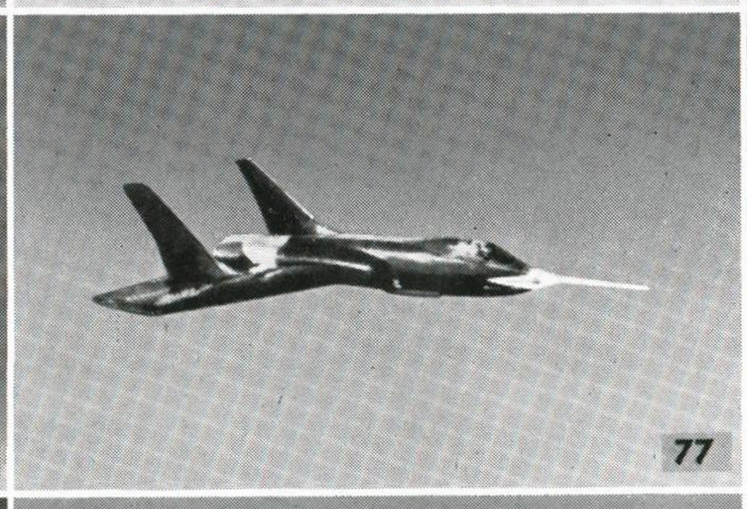
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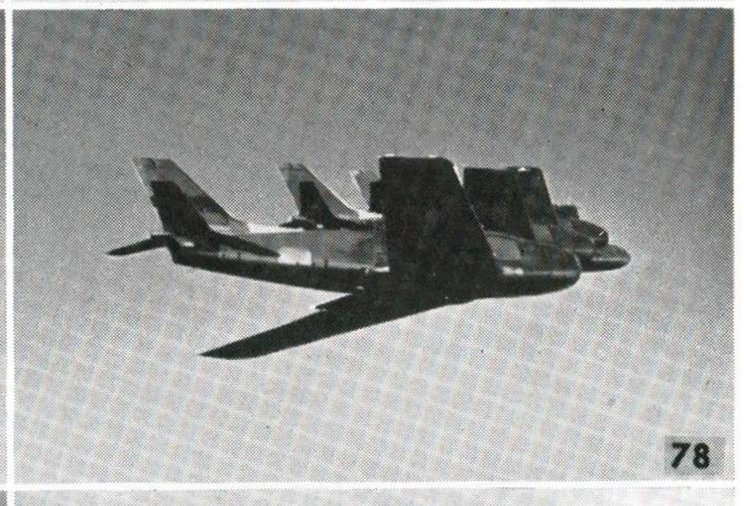
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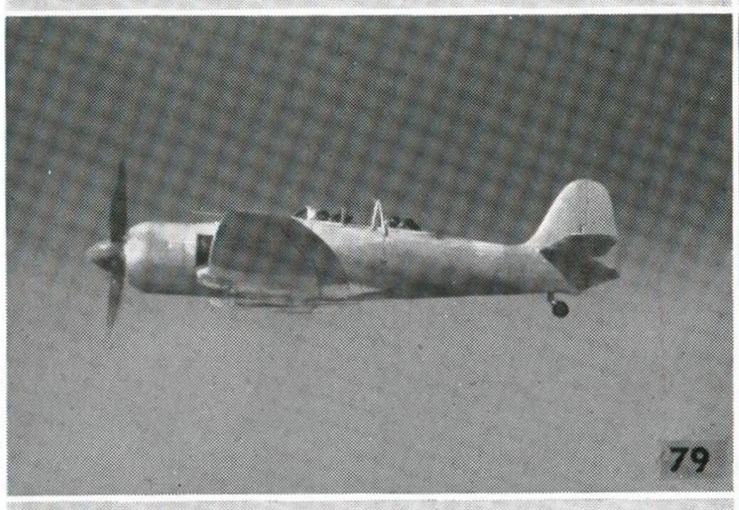
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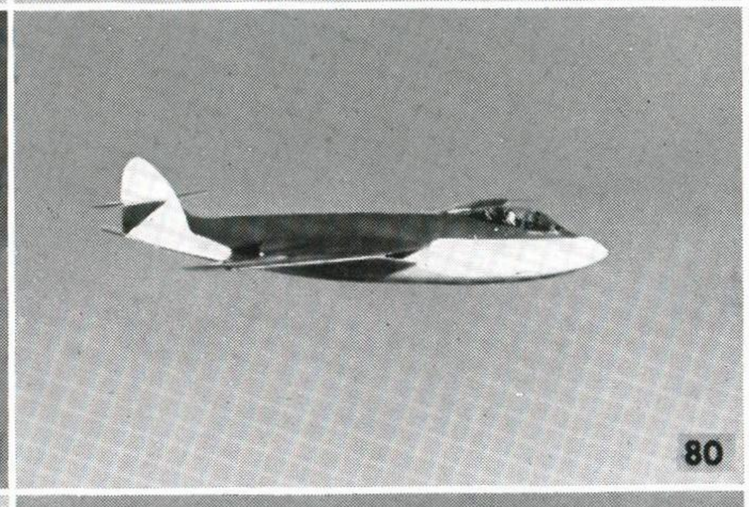
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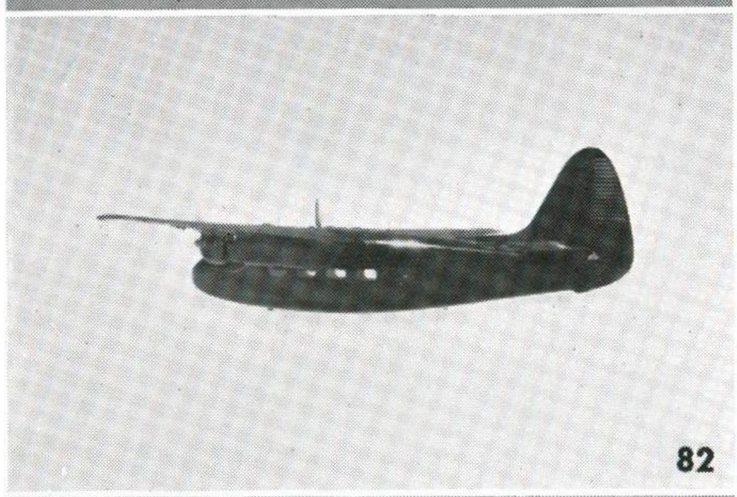
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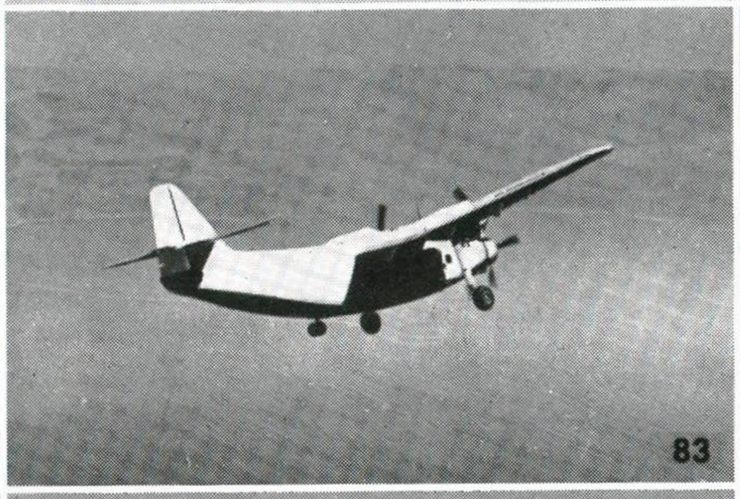
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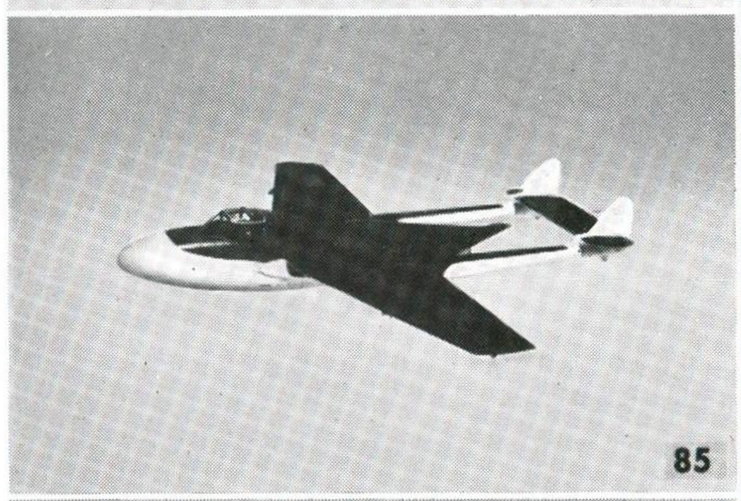
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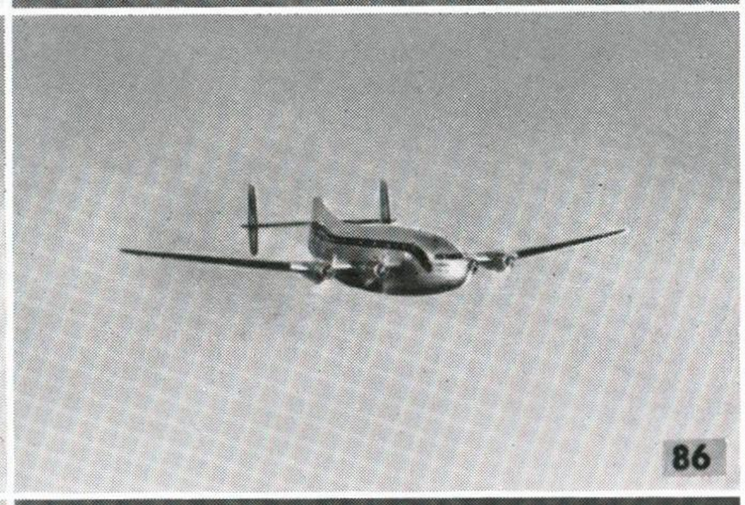
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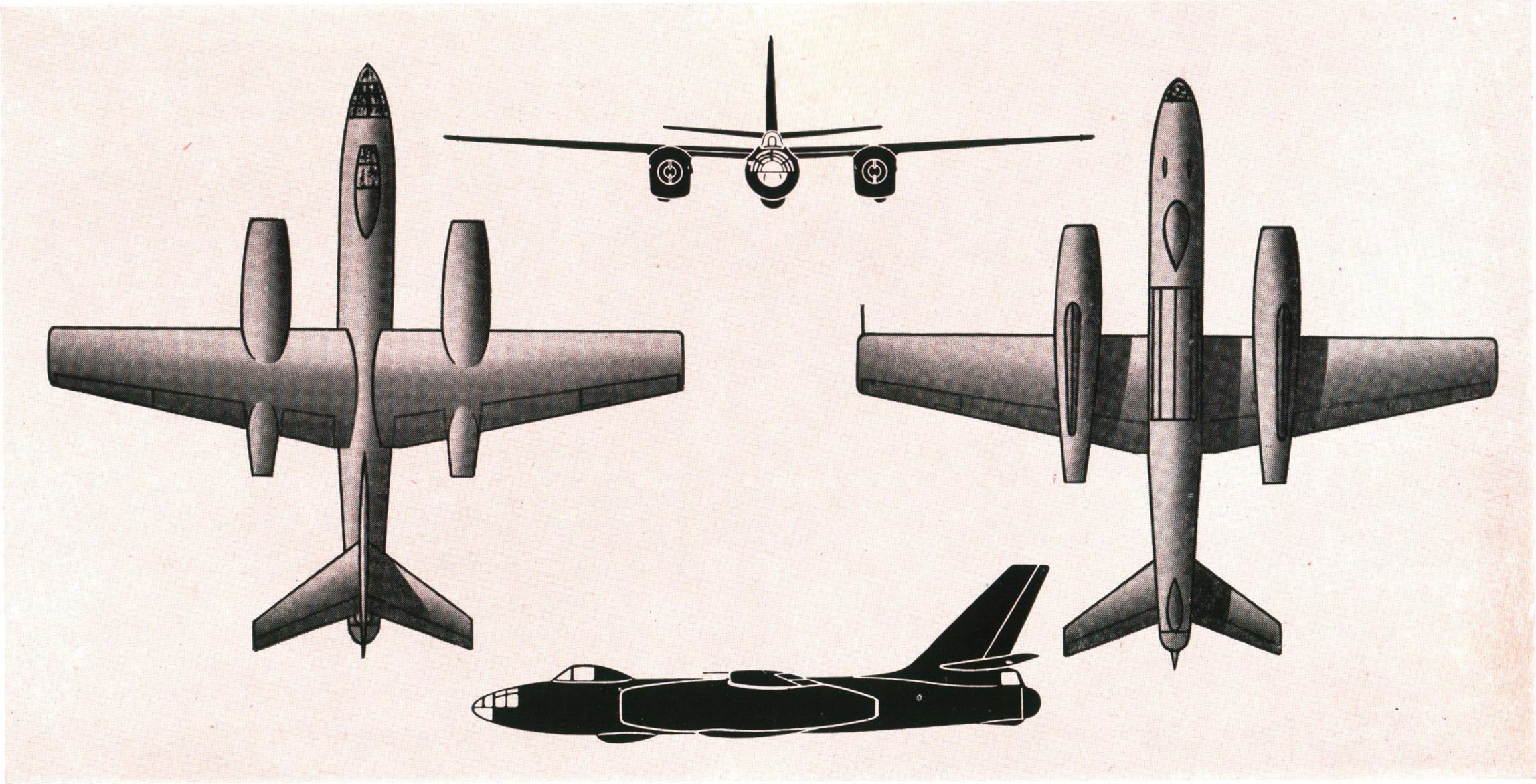


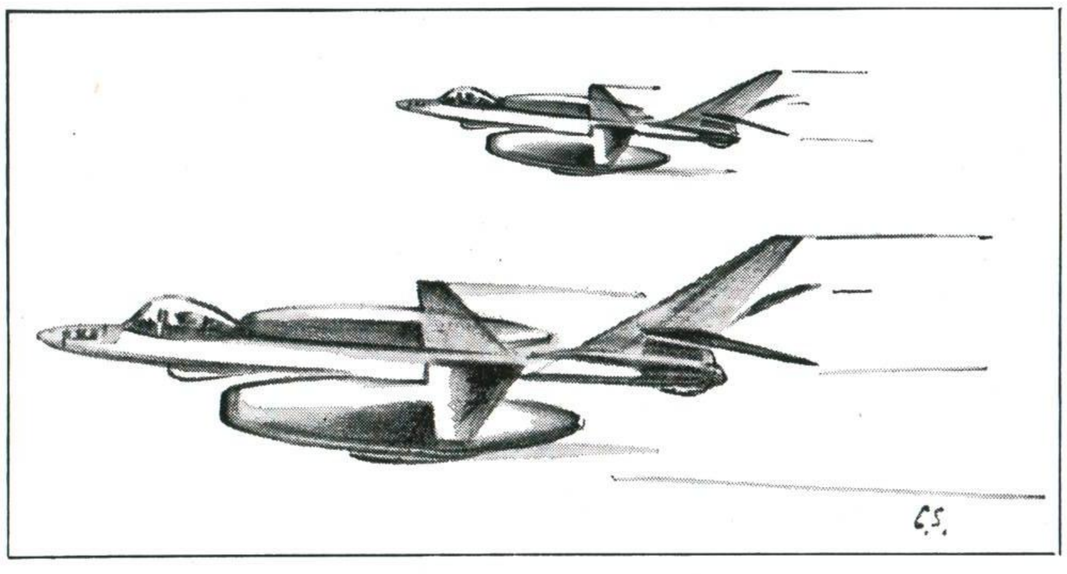
CHARACTER STUDY—TWIN-JET RUSSIAN BOMBER

THIS NEW RUSSIAN BOMBER is a very distinctive creature. It is the perfect aerial embodiment of the phrase " to stick one's neck out ". The neck of this machine is not only stuck out, it is stretched out like a Derby racehorse at the winning post. What is more, both the motors seem to be in the race as well, reaching forward as if they will shoot away from the wing at any moment and overtake the nose.

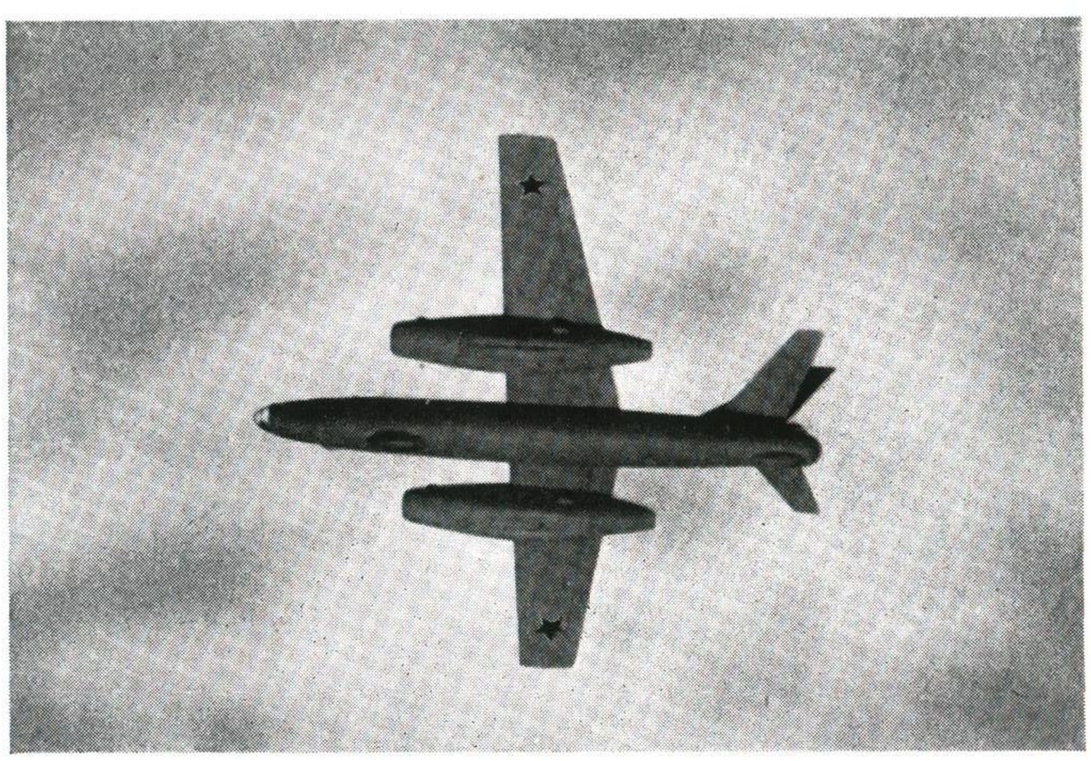
This aircraft, nameless at present, has its character imposed on it chiefly by the " neck out " nose and motors, combined with the hard sharp wings set more than half-way back on the fuselage. This wing-setting in its turn makes a very close relationship with the tailplane and rudder, all of which surfaces seem markedly crowded together from any angle below or above the machine.

Protuberances forward of the wings have been mentioned already. In detail, we have the round and gently tapering nose (extremely long) with the bulge of the cockpit cover breaking the top surface, and a slight Adam's apple on the underside. The jet motors, set quite close in, reach forward as far as the rear of the cockpit, and are visually of similar girth to the fuselage. They are underslung, project rearwards enough to be clearly visible from many angles, and are of very distinctive shape : for their sides are flat, with curved edges blending with the rounded tops and bottoms. This flat-sided feature makes distinctive light and shade patterns with no side high-lights.

. . . neck and neck.



The wings to which these spindles are attached are high on the fuselage, and so the whole feature-group of fuselage and motors has a decidedly underslung look. The wings also have their own distinctive character. With only slight dihedral they are square cut throughout, with the lack of



noticeable fillets giving them a board-like crispness. There is no taper on the leading edge, there are squared-off wing-tips, and pronounced trailing-edge taper.

The short rear fuselage carries a tail unit whose shapes all lean backwards ; there is the swept back tail-plane and fin and rudder, which together give an even more pronounced push-forward impression to the eye. The slightly dihedral tail-plane is small in relation to the wings, and their opposite tapering, combined with their nearness, produce a very striking contrast of angles. The fin and rudder is tall, bold and back-swept with straight lines and sharp angles. The extreme rear is a peculiar bunched-up shape, blunt-bulbed from all angles, and very deep in side-view where the rear-gunner's pulpit is accentuated by the bulge beneath.

No data available.

C. H. GIBBS-SMITH.

'TRANSPORT TYPE' TUTOR

With the aid of the three-view silhouette key following, deduce the identity of the aircraft in the photographs and sillographs on these two pages and list your results. 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 training device by preparing additional sheets for deduction by students.

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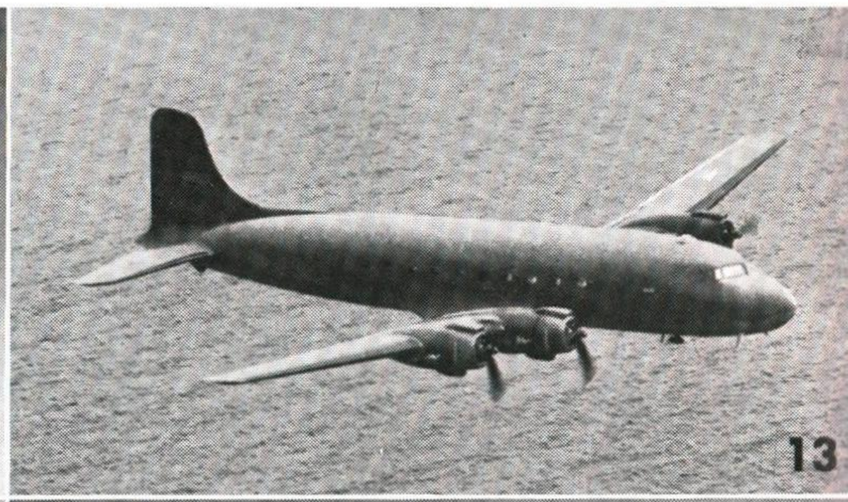
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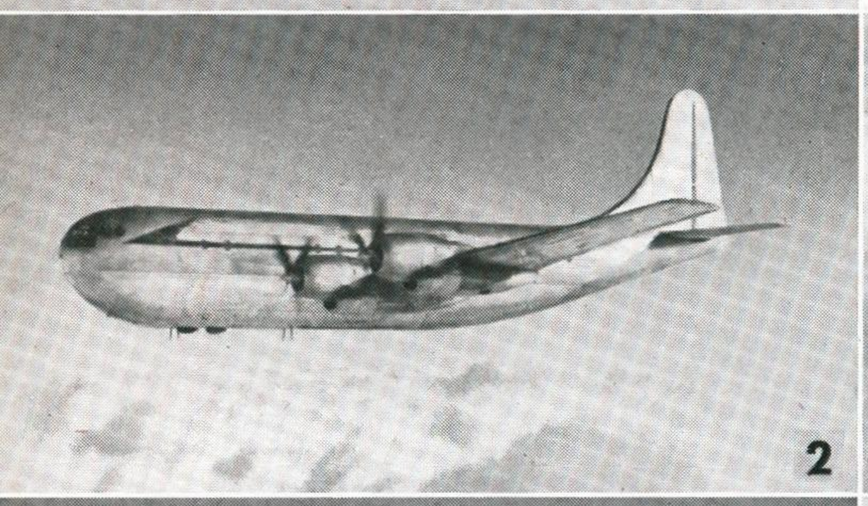
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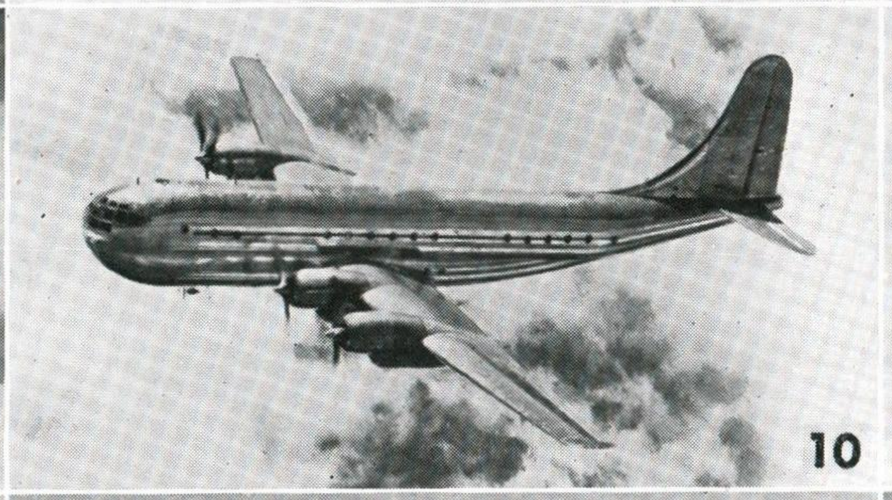
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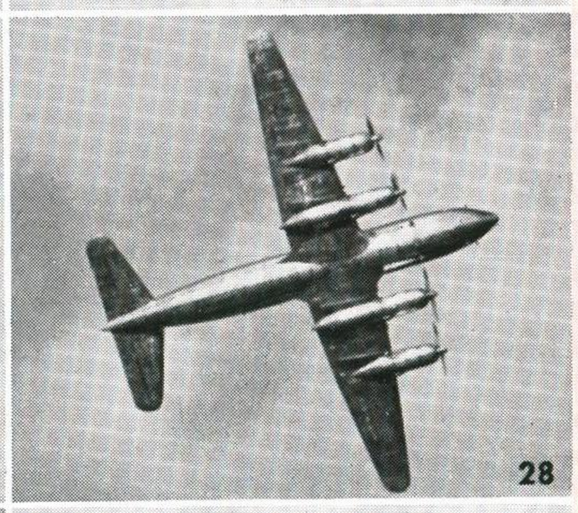
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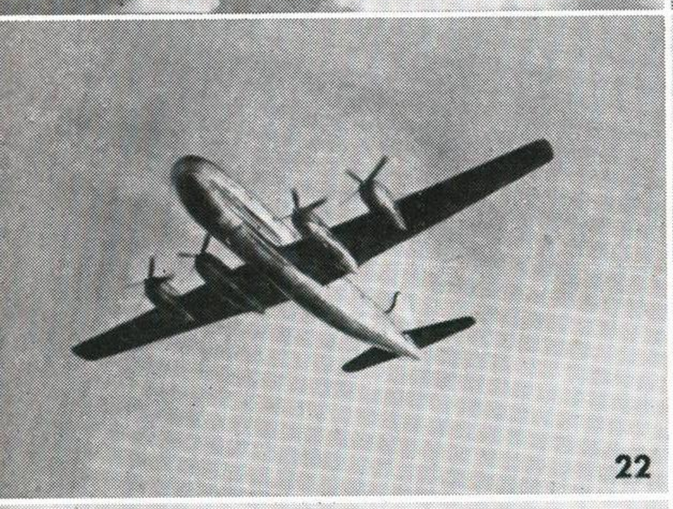
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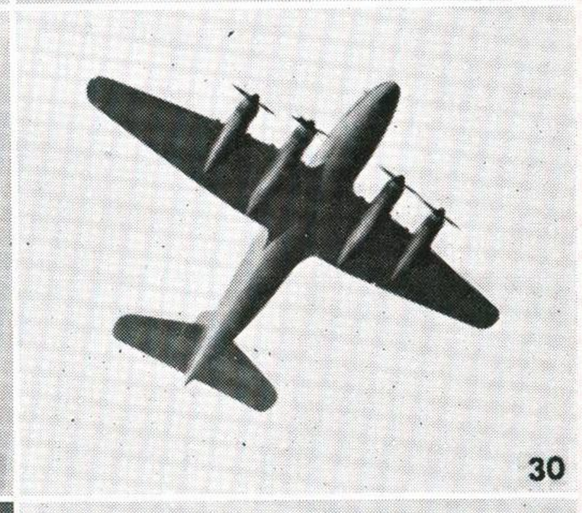
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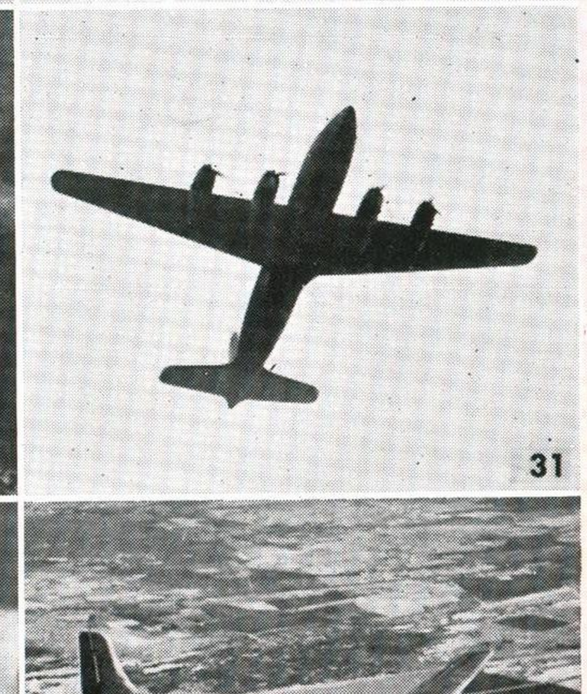
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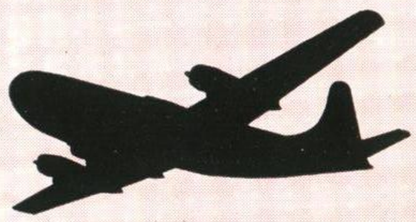
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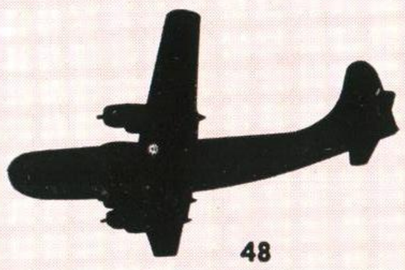
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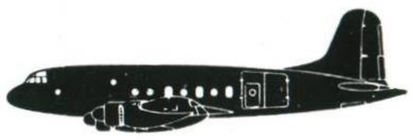
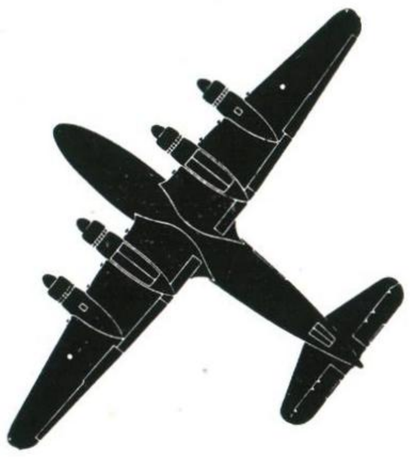
KEY SILHOUETTES FOR 'TRANSPORT TYPE' TUTOR

HASTINGS

(C Mk. 1)

Span : 113 ft.

HERMES 4

Span : 113 ft.

SKYMASTER

(DC-4)

Span : 117 ft. 6 ins.

DC-6

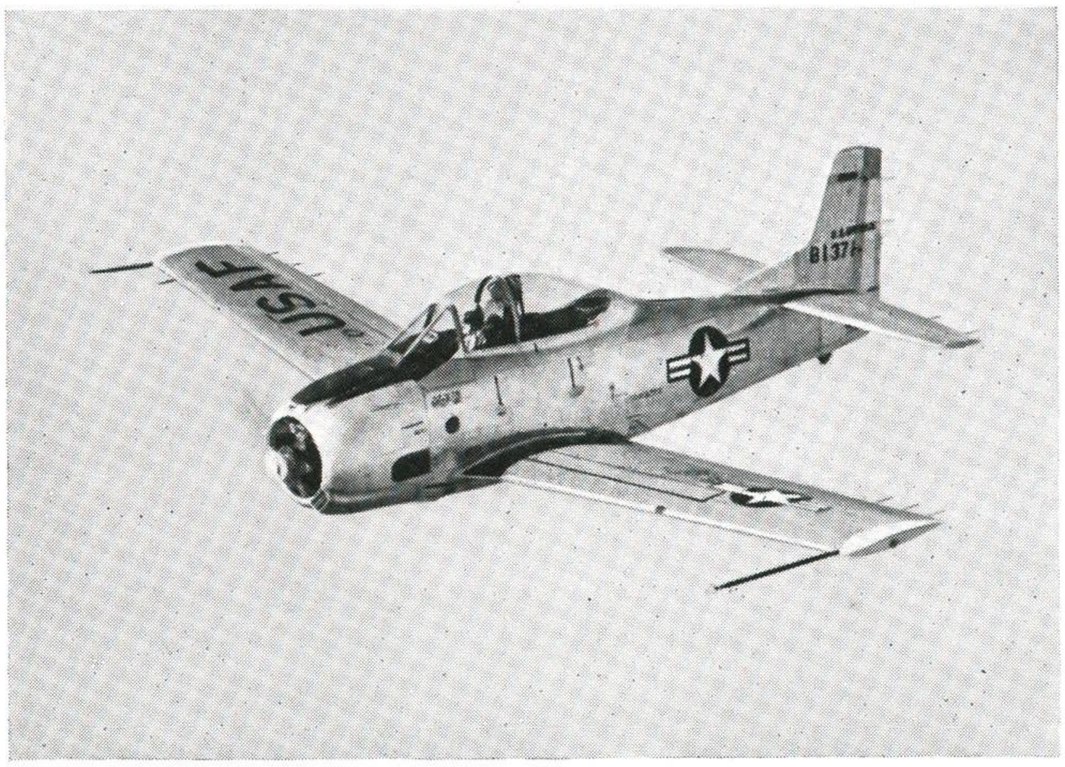
Span : 117 ft. 6 ins.

STRATOCRUISER

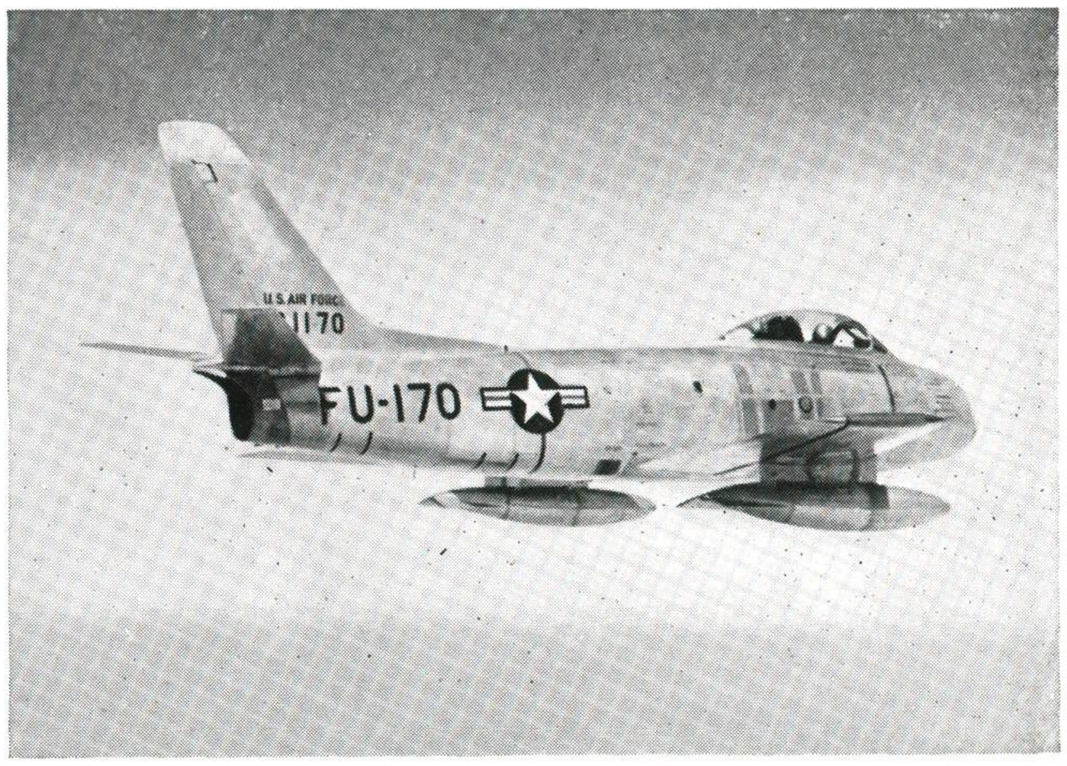
Span : 141 ft. 3 ins.

A selection of aircraft shapes new to the *Journal*, including types which can be expected to be seen with increasing frequency, or of well-known types with shape-changing modifications and additions of which readers may like to have

EARLY WARNING!

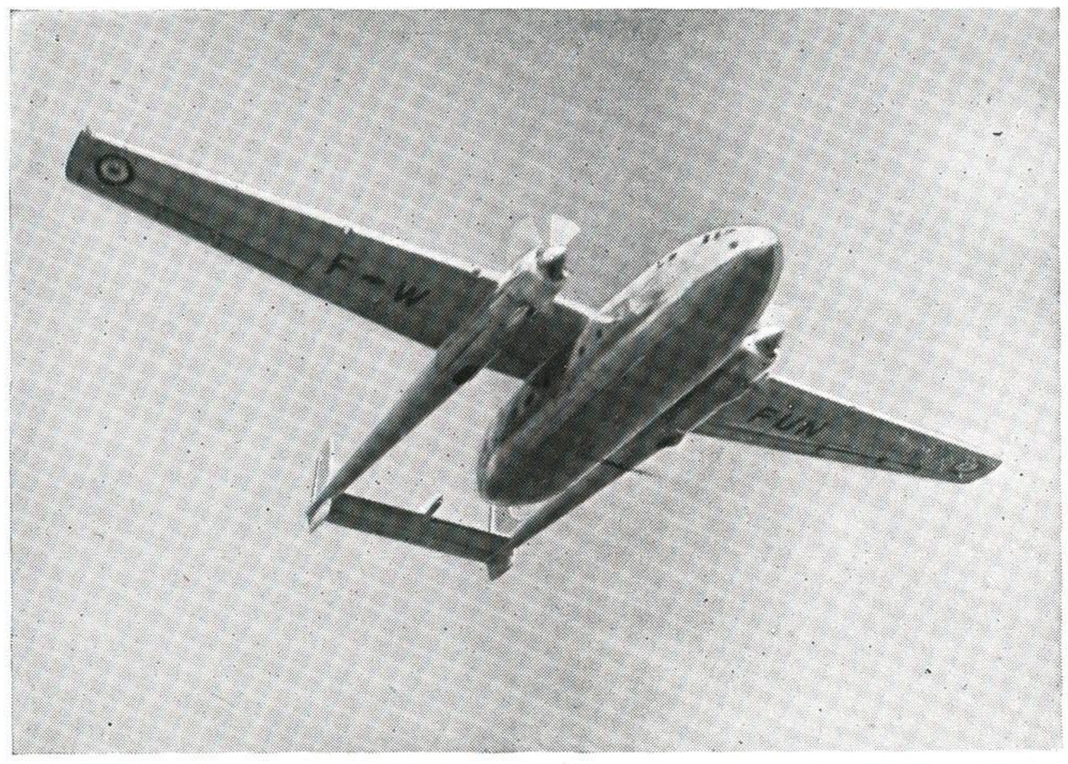


Snub-Nosed and tubby is this trainer for the U.S.A.F., the **North American T-28.** Features include the "family fin" (appearing also on the Mustang and Tornado), excessive dihedral and a tubby little fuselage surmounted by a bulging canopy. The T-28 has a tricycle undercarriage. **Span: 40 ft. 1 in.**

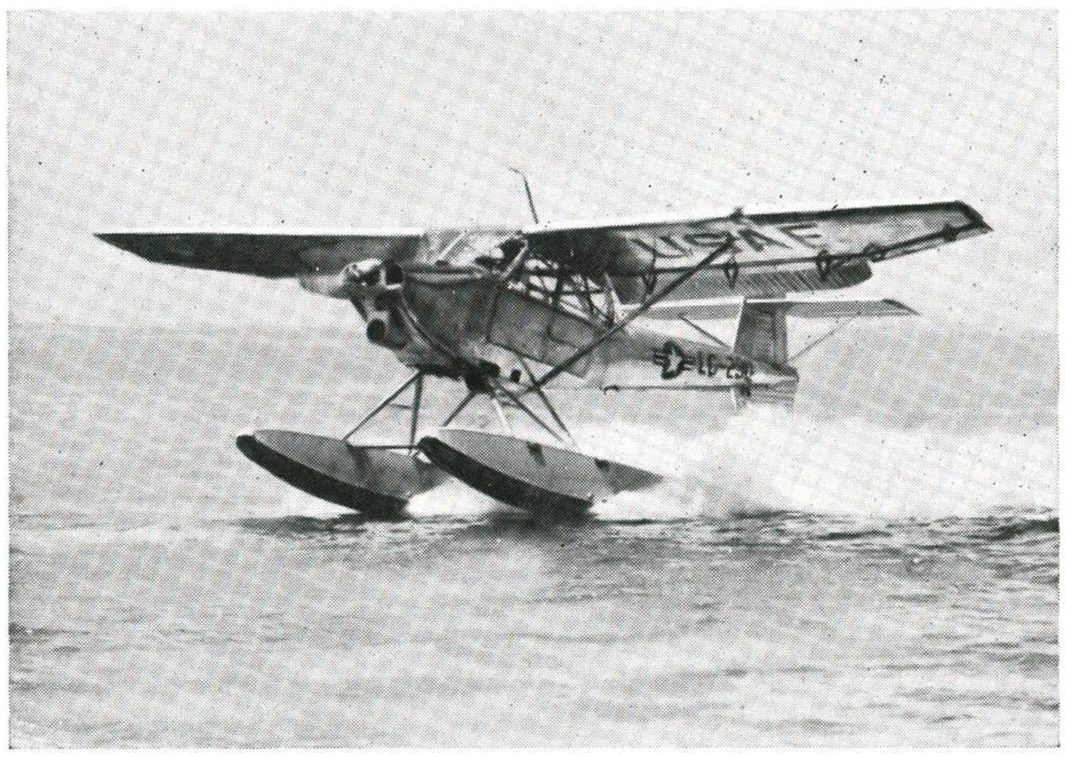


Sleek Streaks. Two long-range, finned "slipper" tanks contrive to make the **Sabre** look even speedier than ever. Fitted on the underside of the wings, fairly close in to the fuselage, they may tend to disguise the usually clear-cut shapes in some views. **Span: 37 ft. 1 in.**

Knees Bend ! or the Double Jointed Instructors. There are two types of Fokker Instructor two/three seat basic-trainer. **The S.11 Instructor** (shown here) has a tail-wheel undercarriage, with unusual "knuckles" to support the main wheels. The S.12 Instructor is identical to the S.11 apart from having a nose-wheel undercarriage. **Span: 36 ft.**



Nord 2501 Noratlas is a military transport in production for the French Air Force and Navy. This aircraft is a "pod and rods" type, not unlike the Packet. The production Noratlas is probably to be powered by two French-built Bristol radial engines. **Span: 106 ft. 7 ins.**



Convair L-13 fulfils many functions including liaison, observation, photography and ambulance. Shown here is the twin-float version. None of these roles however, disguise its basic broad angular flying surfaces, or its boom and glasshouse fuselage carrying aloft a braced "crosstree" tailplane. **Span: 40 ft. 6 ins.**

Breguet 763 is a civil transport in production for Air France and is under development for military and naval use. The prototypes were called Deux Ponts, but will probably be renamed "Provence" by Air France, in keeping with their policy of naming their aircraft after provinces of France. The **Provence** has a deep double-deck fuselage sweeping up to a stumpy, central fin, and tall twin fins and rudders a la Packet. **Span: 141 ft.**

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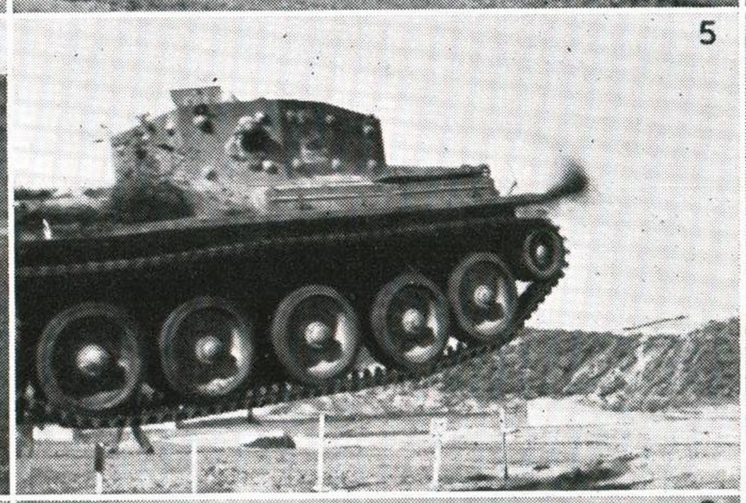
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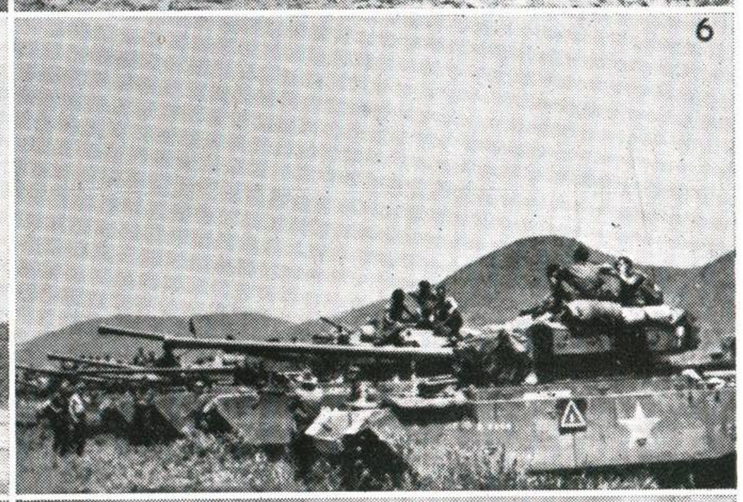
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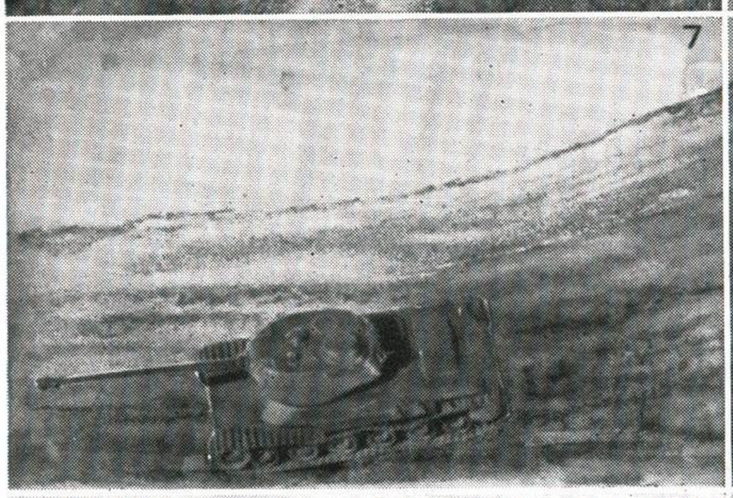
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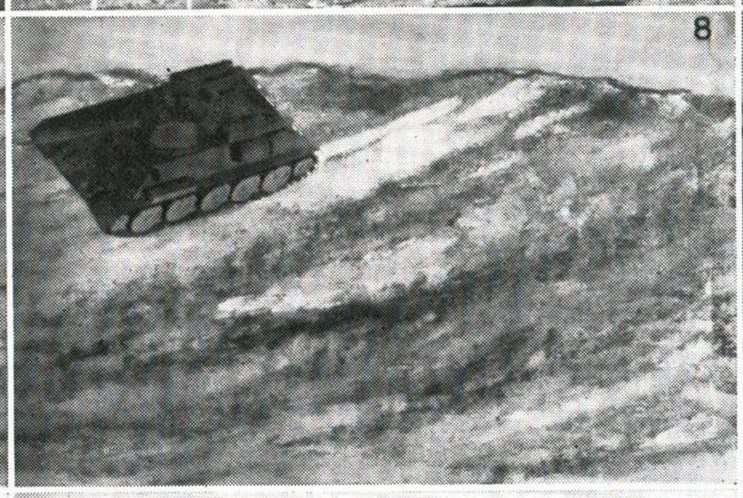
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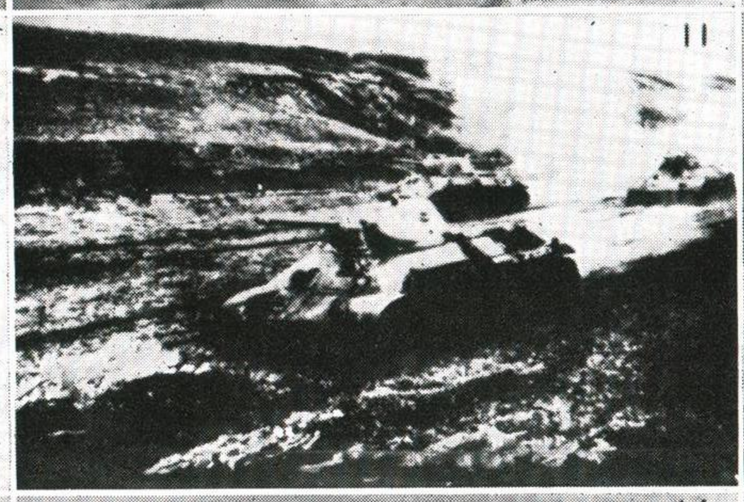
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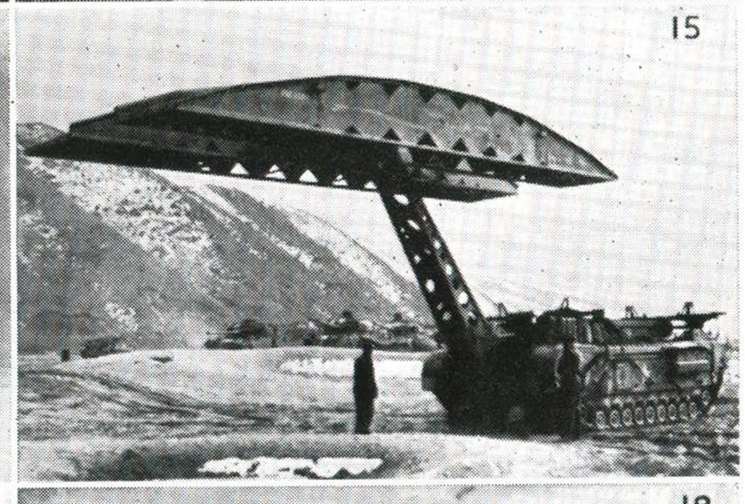
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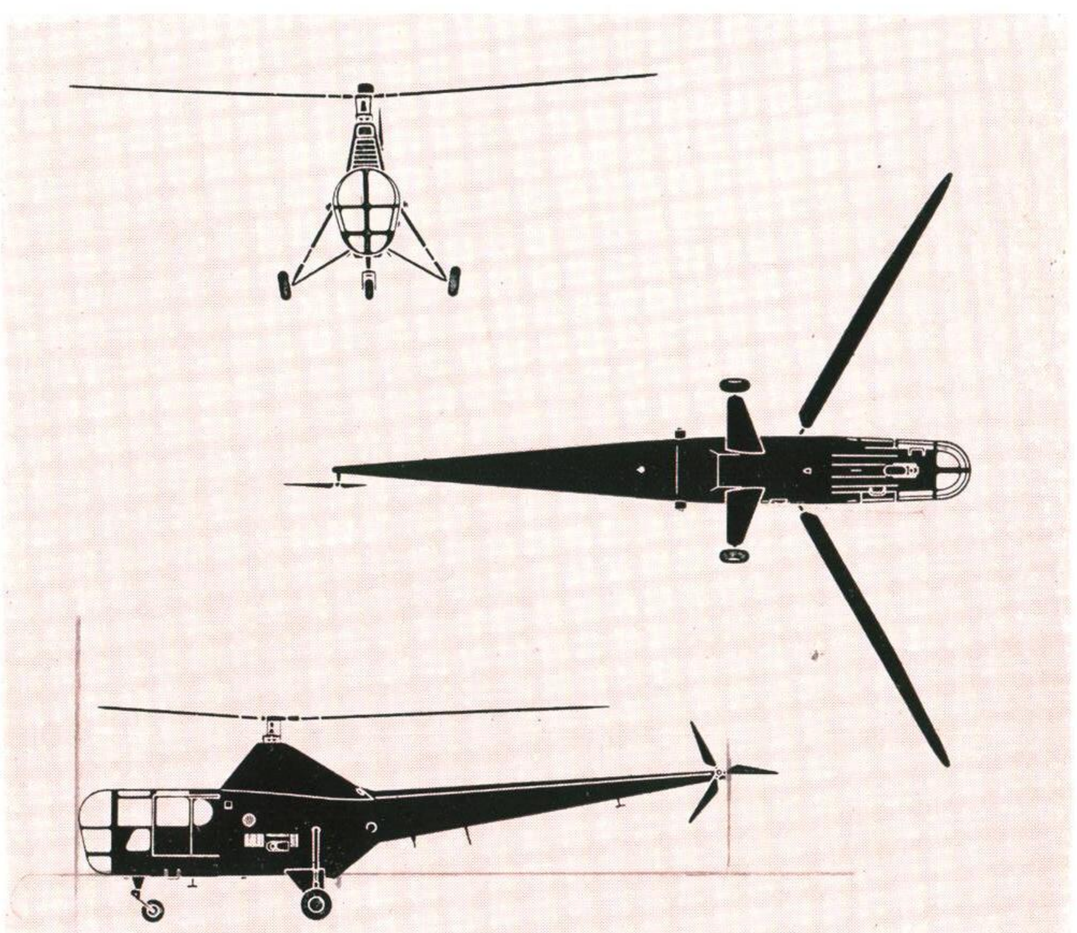
TANK TEST

DRAGONFLIES IN SERVICE

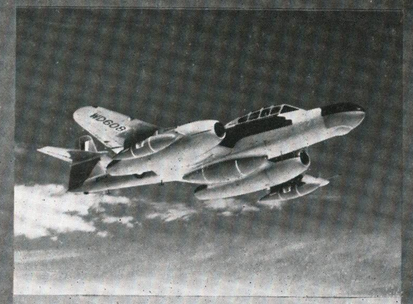


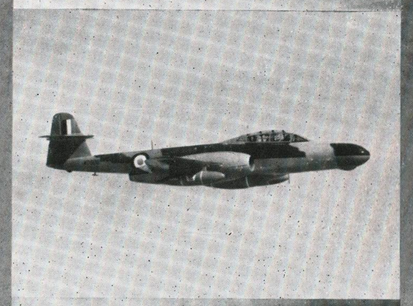
Helicopters (known variously in the U.S. as: " pin-wheels ", " whirlibirds " or " eggbeaters ") are coming into Service all over the World. The Korea War has stimulated interest in them and pointed new possibilities. The Royal Air Force and the Royal Navy employ the Westland Sikorsky S-51 at present. Known generally as the Dragonfly, the Royal Navy designations are HR Mk. 1 (illustrated here) and HR Mk. 3. The R.A.F. version is the HC Mk. 2. Duties of all marks comprise communications, transport, ambulance, air-sea and other kinds of rescue, and photography. The Dragonfly is distinct from other forms of " Daddy-long-legs " by virtue of its slab-sided body and straight tapering boom.

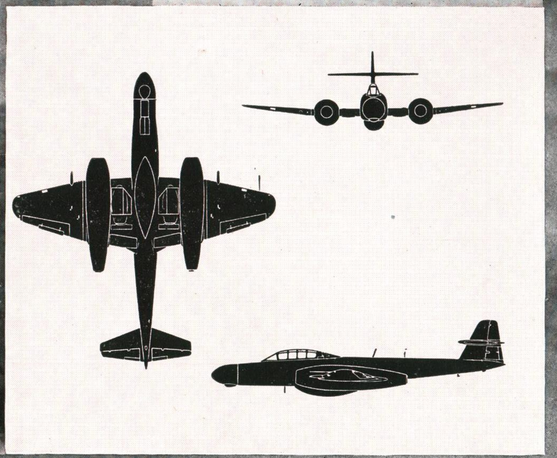
Rotor diameter: 48 ft. Overall length: 57 ft.

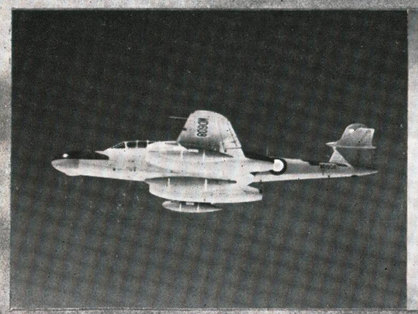
Engine: One Alvis Leonides.

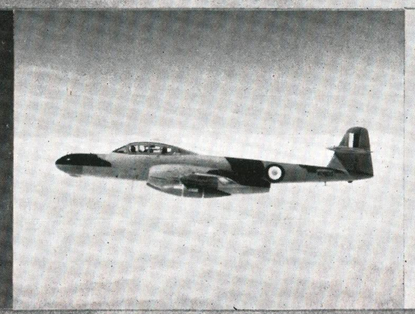
Meteor Eleven

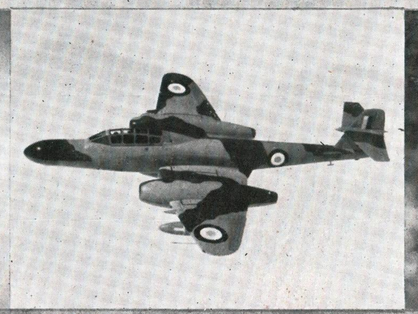


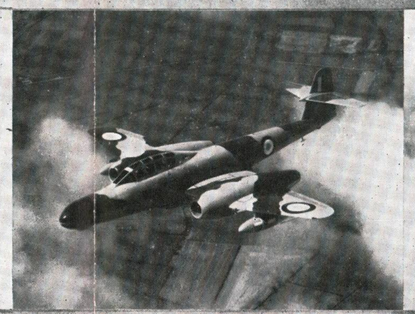


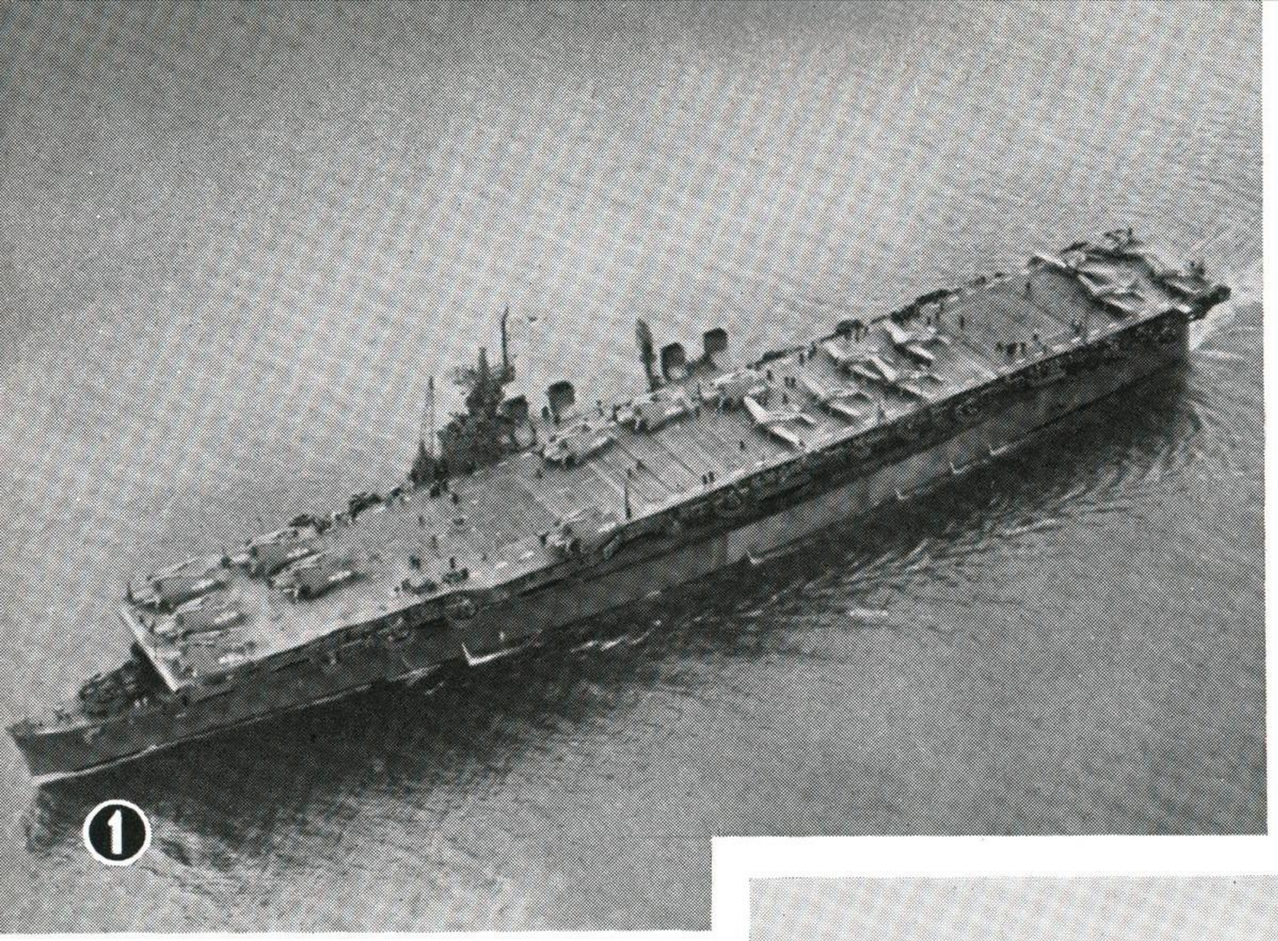


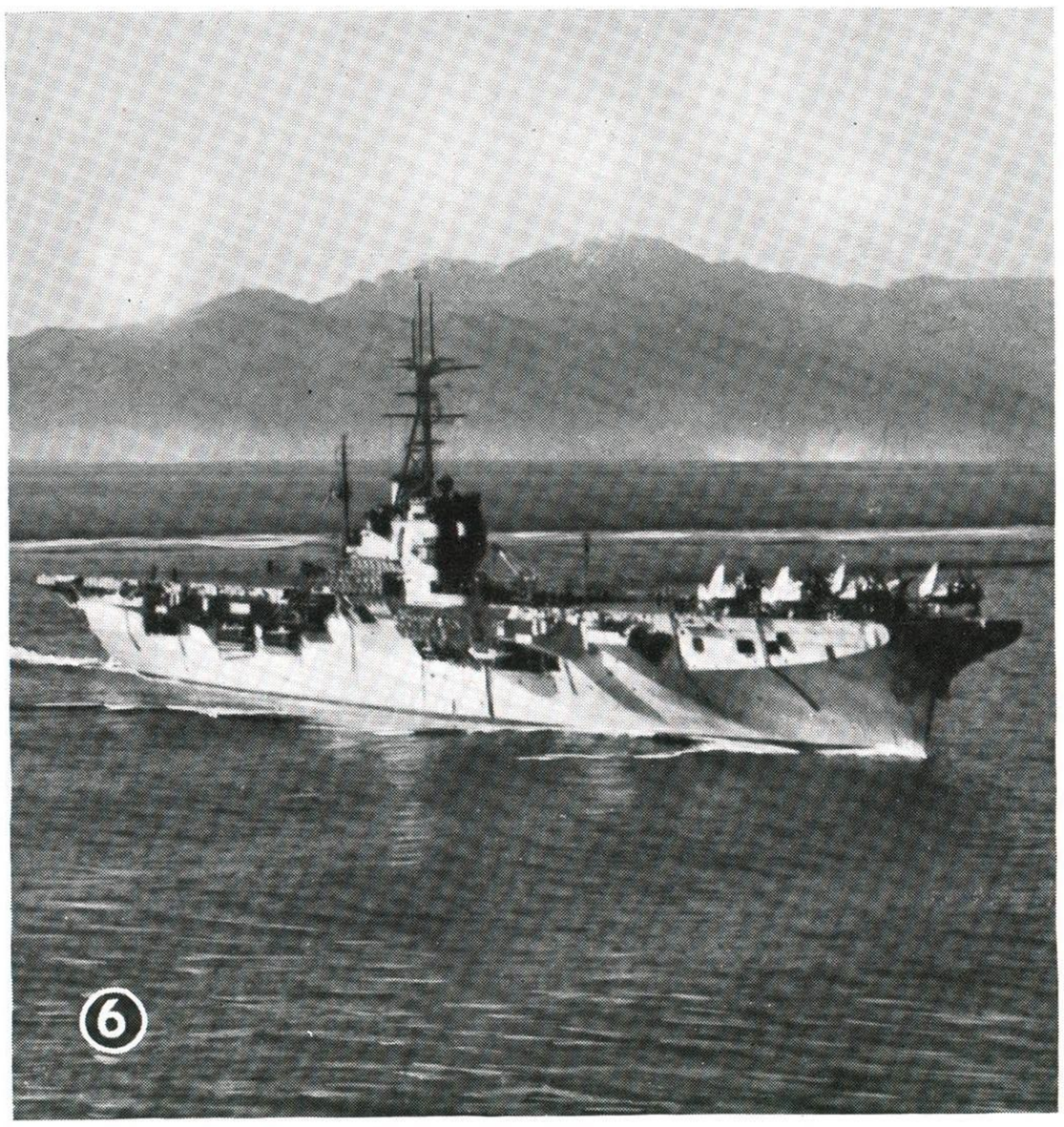


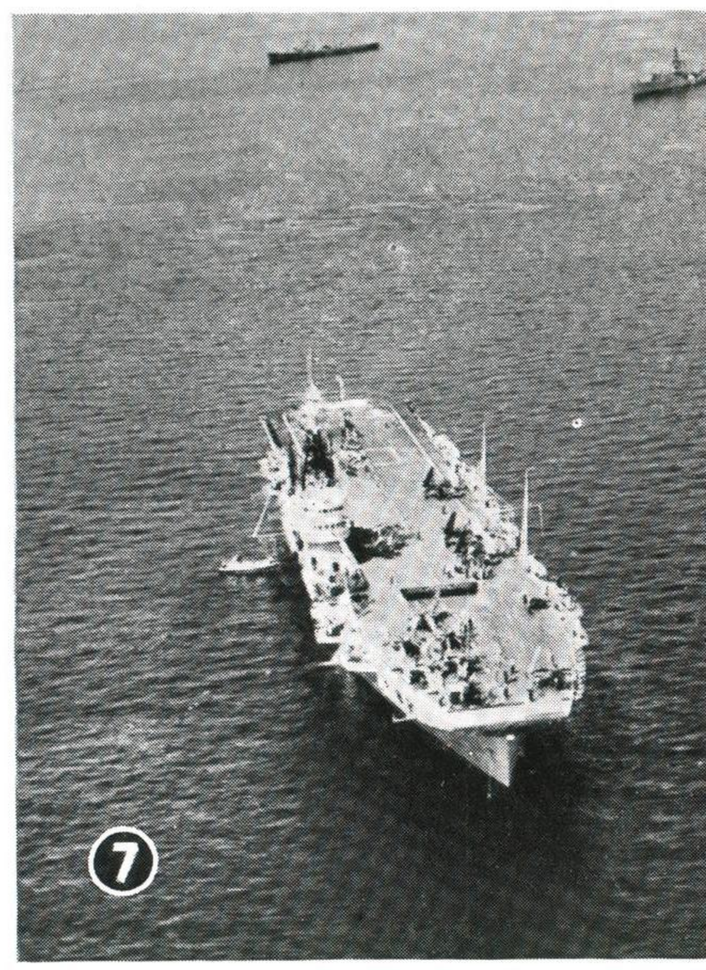


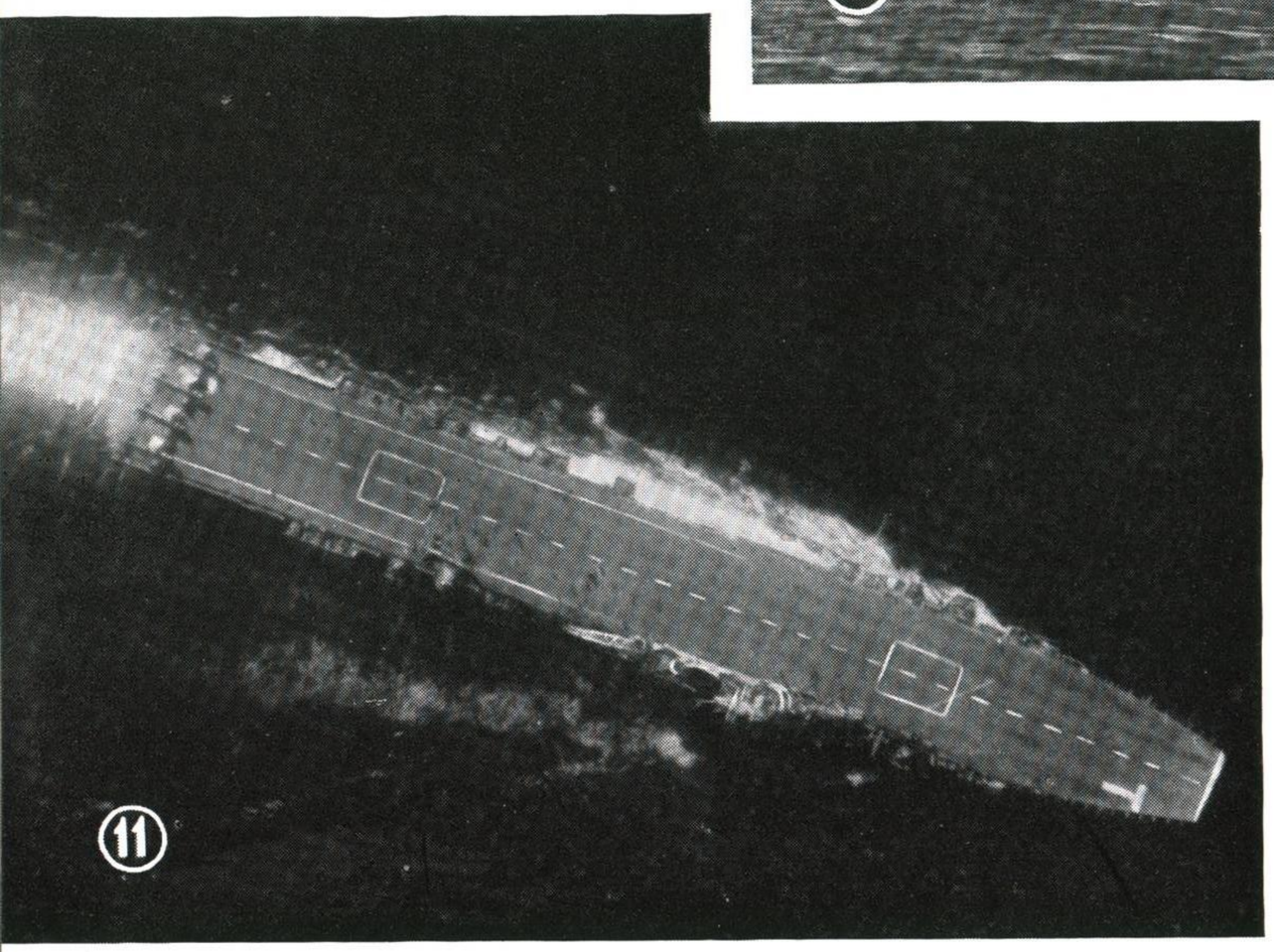


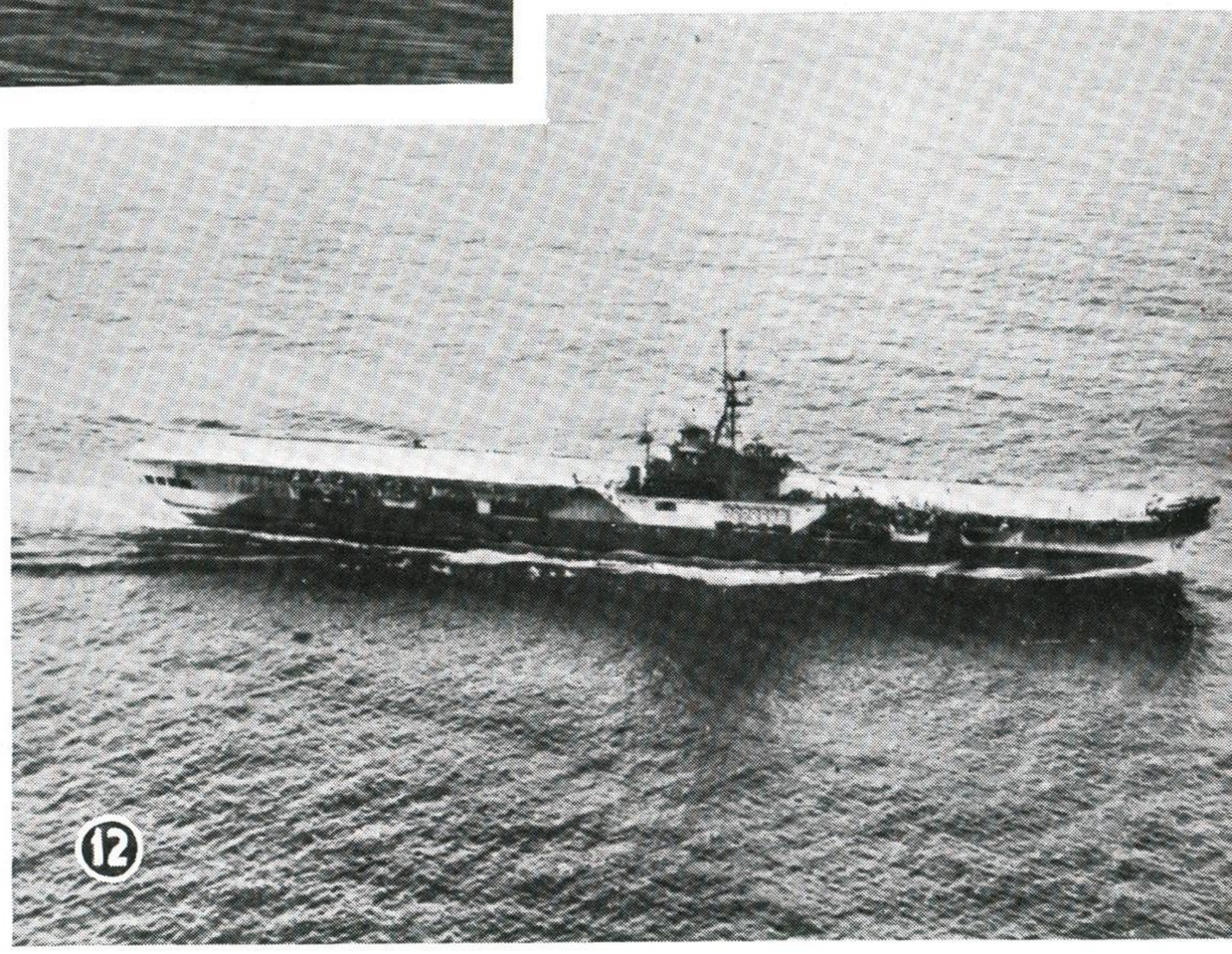




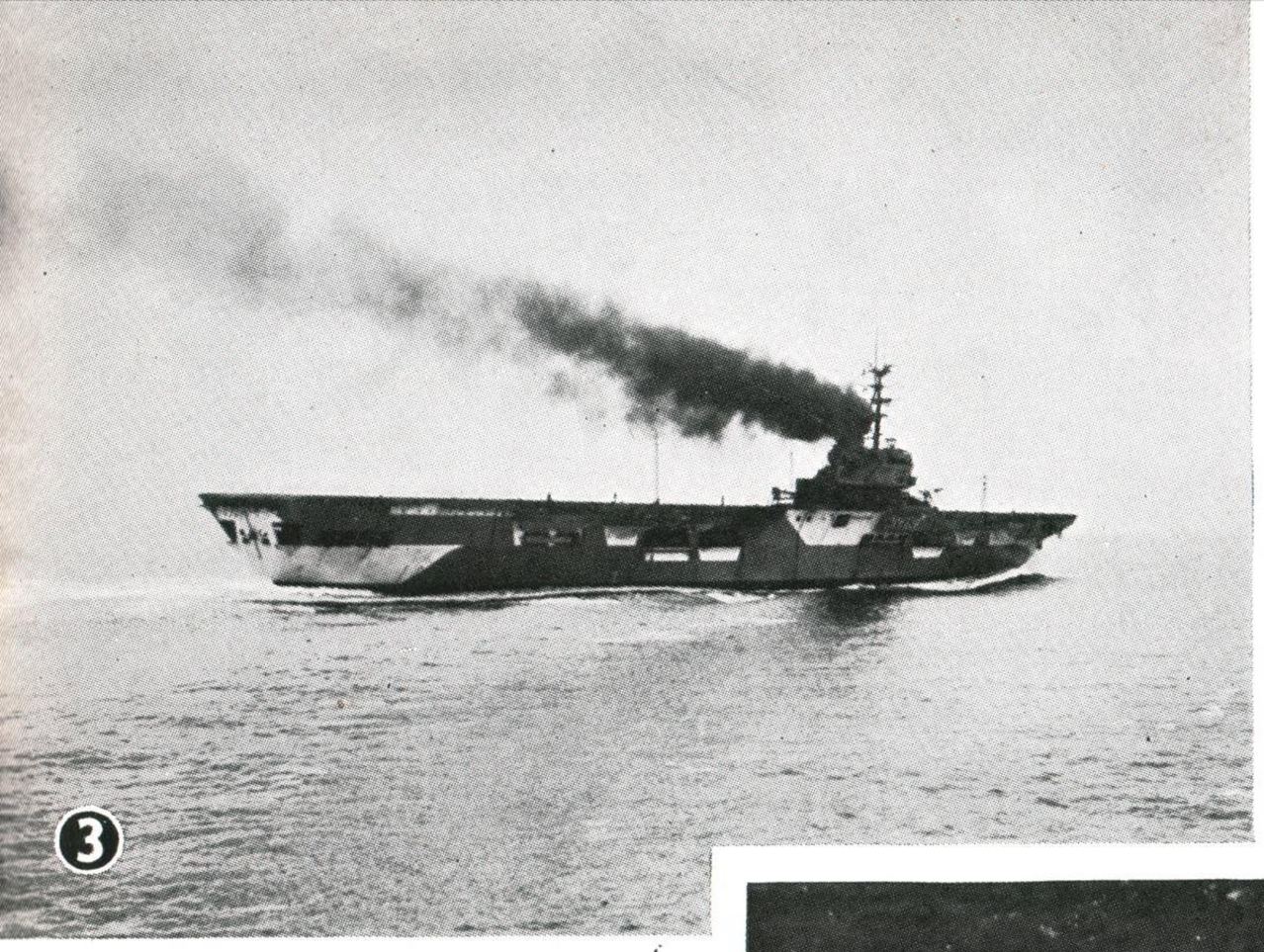








There is only one class of British light fleet carrier—the Colossus. The nearest American equivalent is, perhaps, the Independence Class. There is very little to confuse between them either in the side-view silhouette or in deck plan. Drawings and details of these two carriers appear on the following pages.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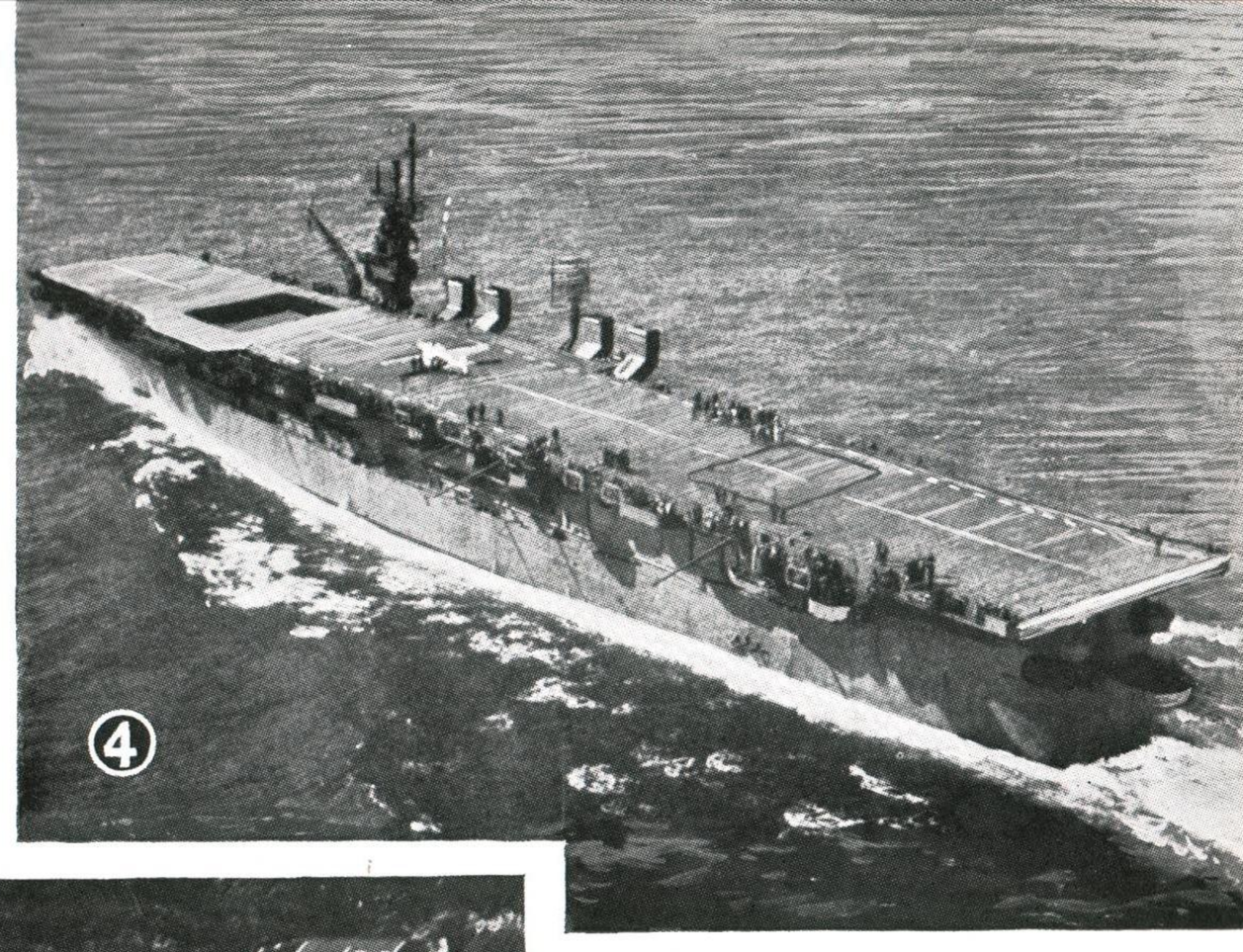
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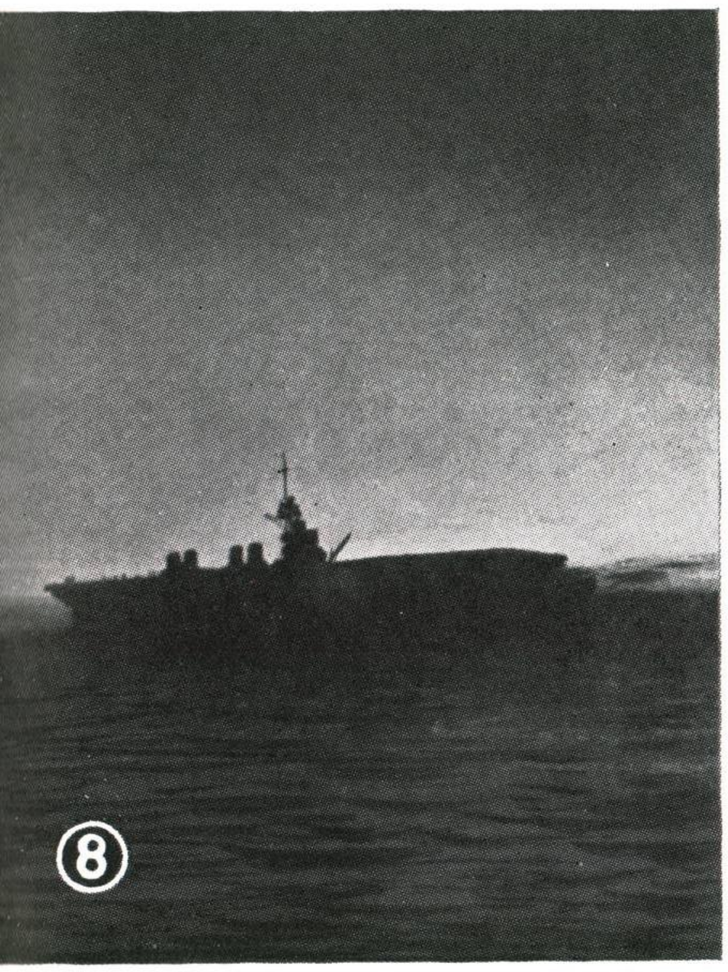
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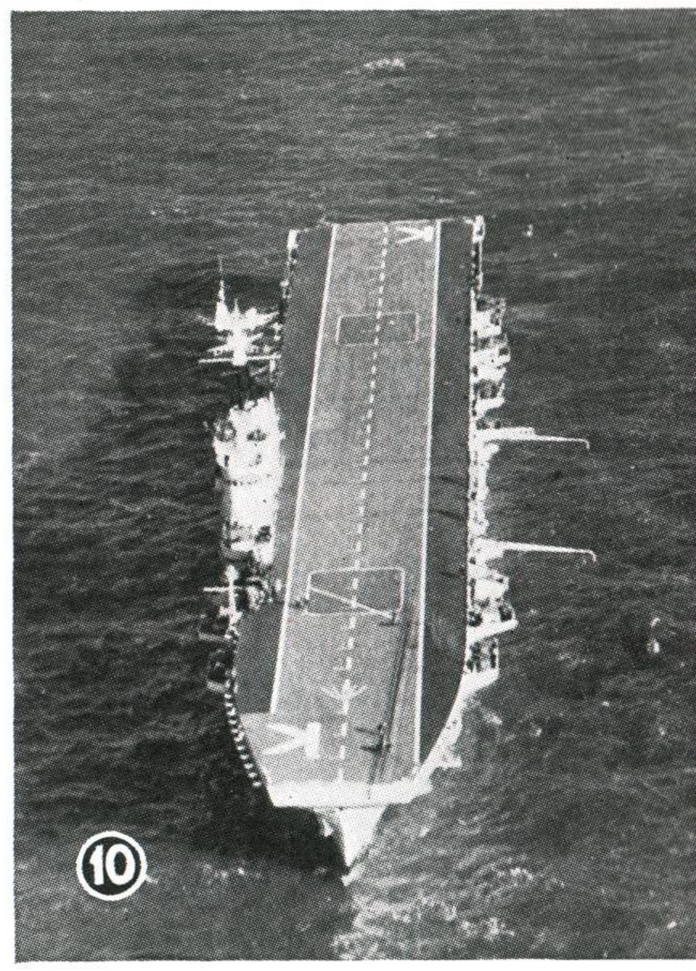
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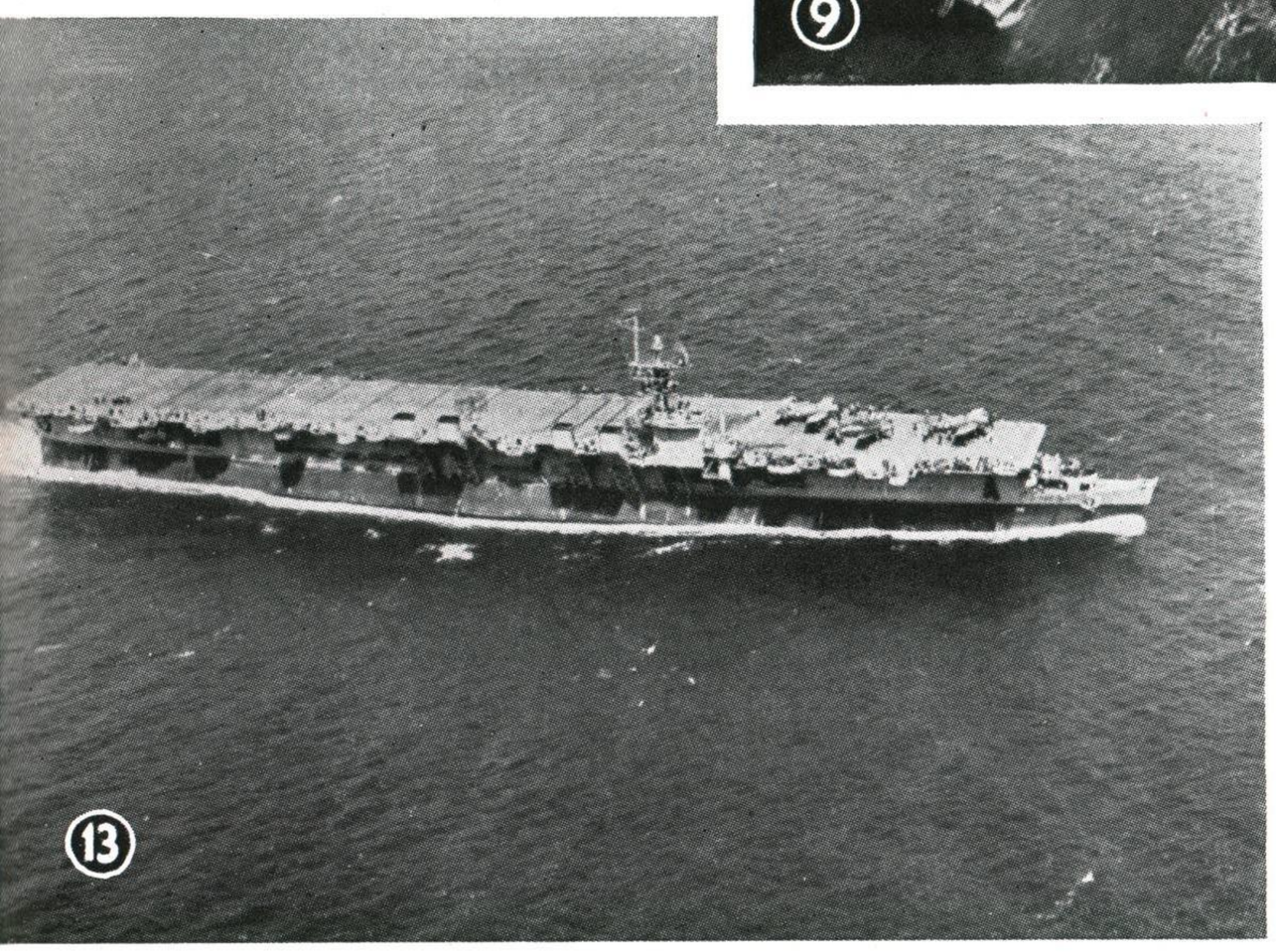
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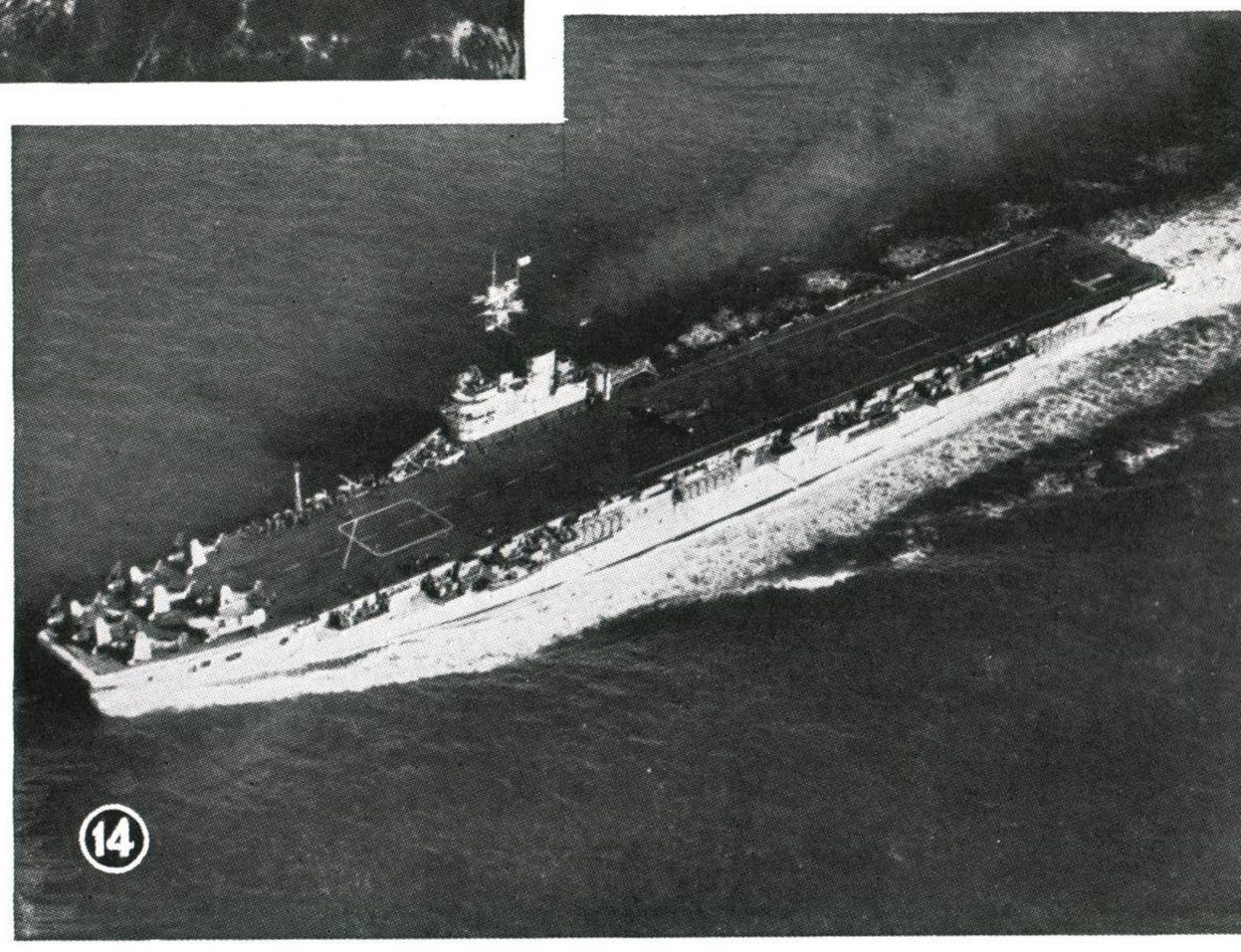
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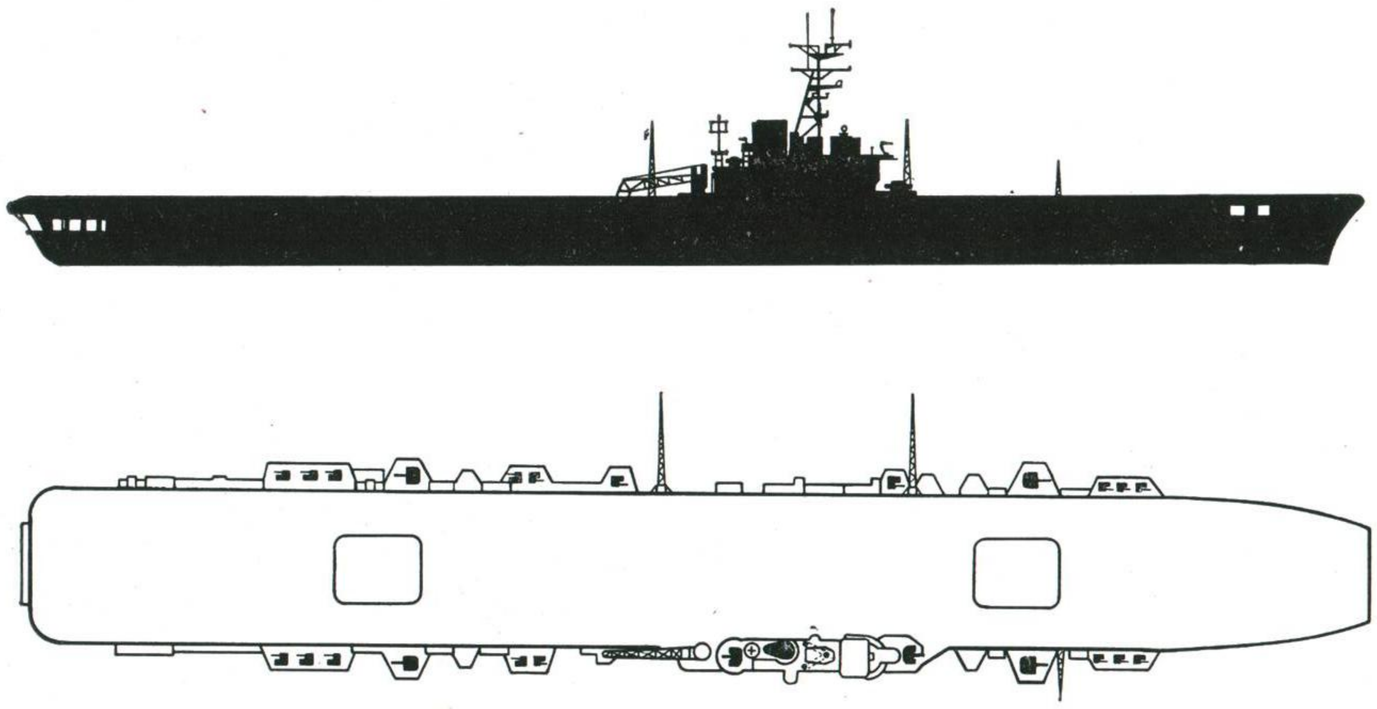
light fleet carriers . . .



COLOSSUS CLASS

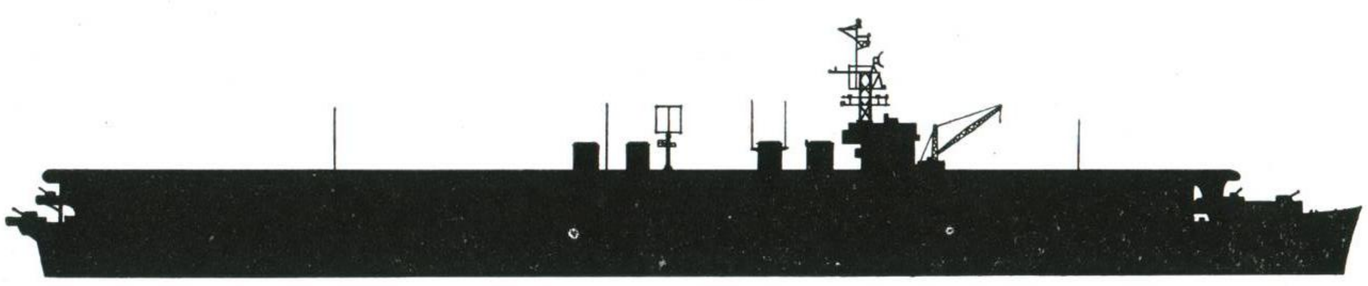
Displacement : 13,190 tons (18,000 fully loaded).

Length : 695 ft. Beam : 80 ft.

Aircraft : over 40.

Armament : 24 2pdr. (quads) pompom, 4 3pdr., numerous 40 and 20 mm. AA.

Ships of the COLOSSUS CLASS are the first light fleet carriers to be designed as such, and to a certain extent resemble the Illustrious Class apart from smaller overall size and a number of marked recognition features. These include thin pear-section funnel, more prominent tripod mast, sectional appearance of the forward ships side (see illustrations), more curved bows (plan view) and unbroken flight deck. The ships in this class are as follows : *Glory*, *Thesus*, *Vengeance*, *Ocean*, *Triumph*, *Warrior*, *Colossus* (now *French Arromanches*), *Venerable* (now *Netherlands Karel Doorman*), *Magnificent* (R.C.N.), *Terrible* (now *Sydney* of the R.A.N.) and *Majestic* (now *Melbourne* of the R.A.N.). *Perseus and Pioneer* are maintainance carriers.



INDEPENDENCE CLASS

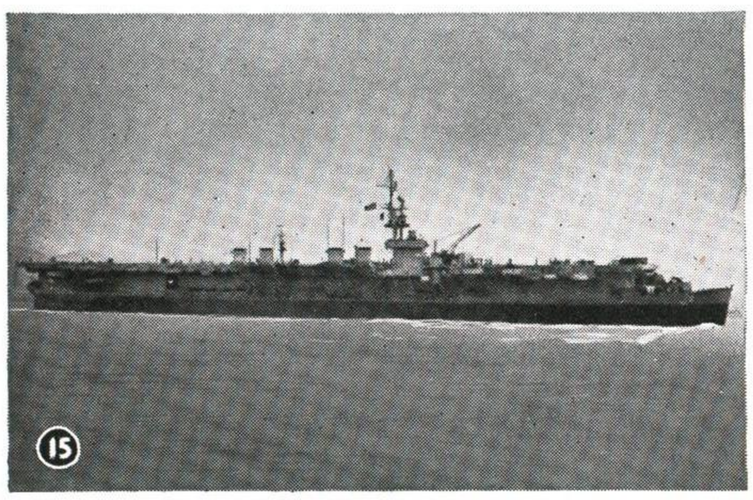
Displacement : 11,000 tons (14,000 fully loaded).

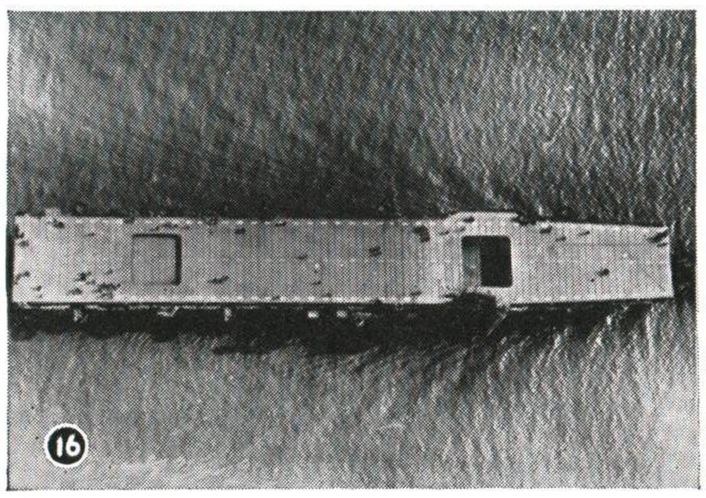
Length: 623 ft. Beam: 110 ft. (extreme).

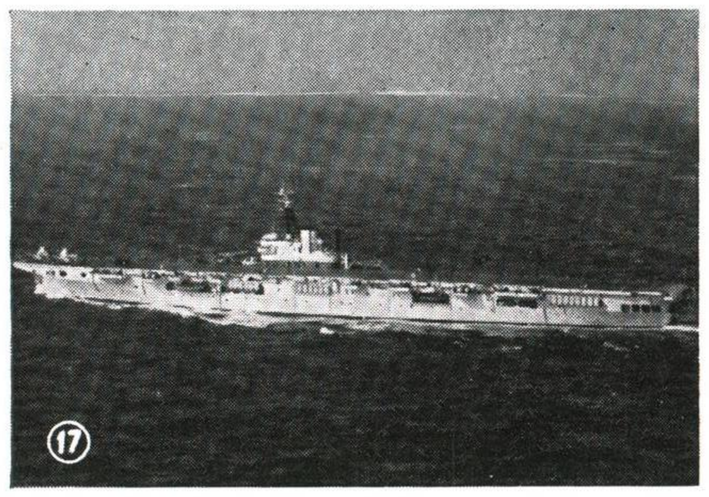
Aircraft : 36.

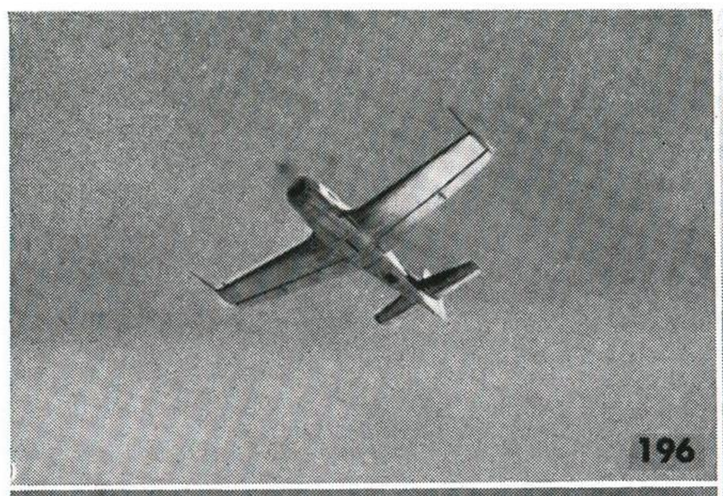
Armament : numerous 40 and 20 mm. AA.

Ships of INDEPENDENCE CLASS were originally converted from Cleveland Class cruisers, giving rise to the main recognition feature of a " cruiser hull " specially noticeable in the side view and in the bows. Other features include four separate rectangular-section " crank-handle " funnels set in pairs, small island and low beam/length ratio. In relation to the deck plan the square aircraft lifts are large. Ships of this class are as follows : *Belleau Wood* (CVL 24), *Cowpens* (CVL 25), *Monterey* (CVL 26), *Langley* (CVL 27), *Cabot* (CVL 28), *Bataan* (CVL 29) and *San Jacinto* (CVL 30). The U.S.S. *Independence* was atom-bombed at Bikini.





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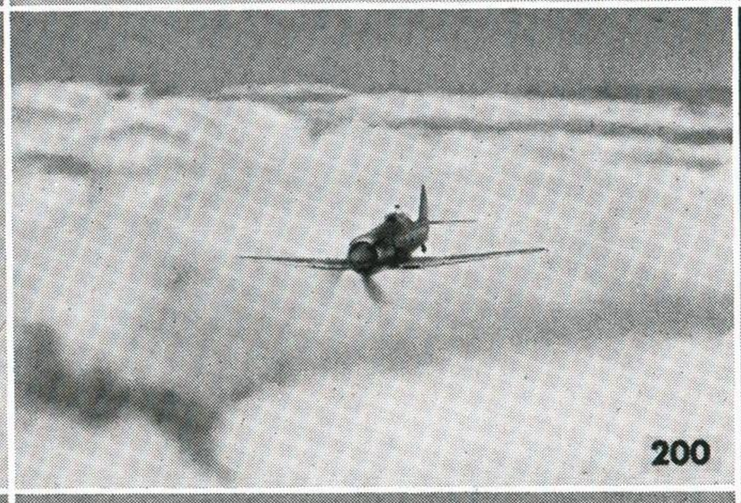
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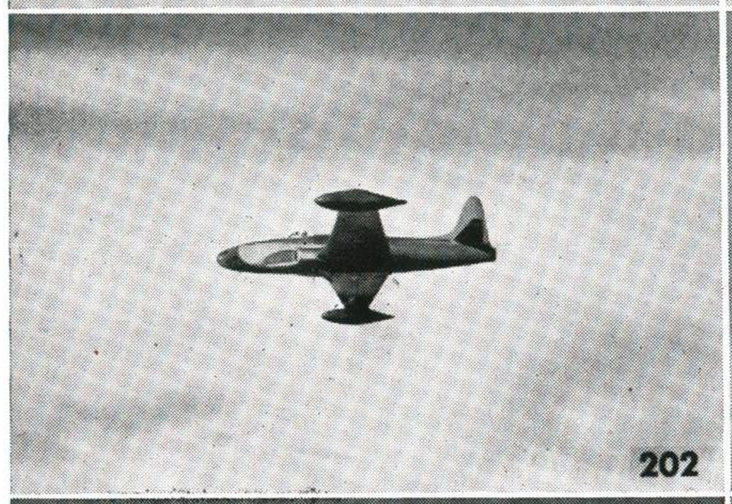
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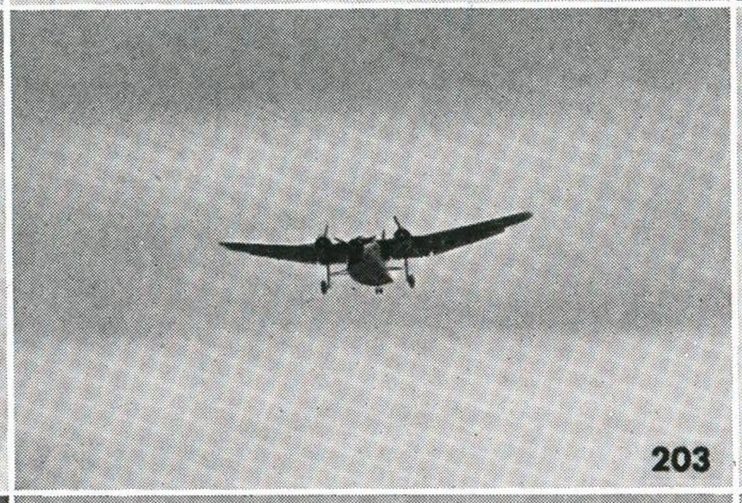
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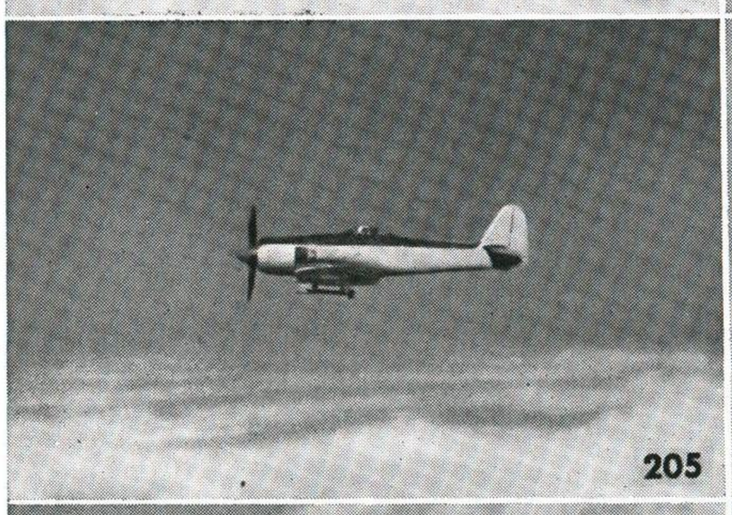
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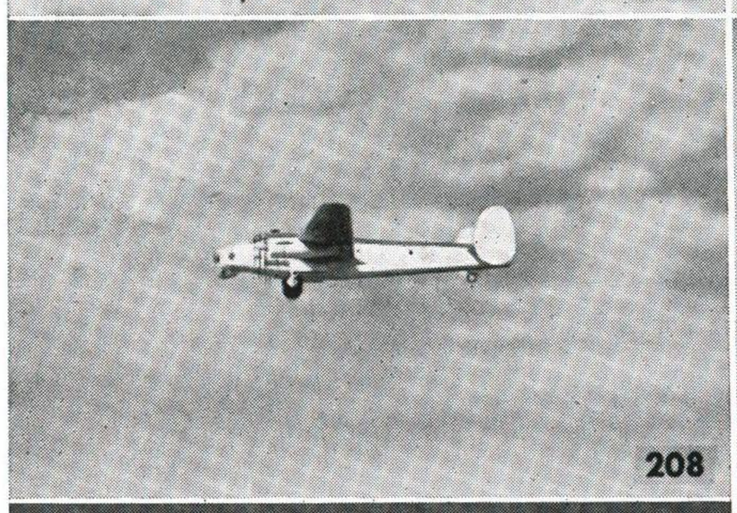
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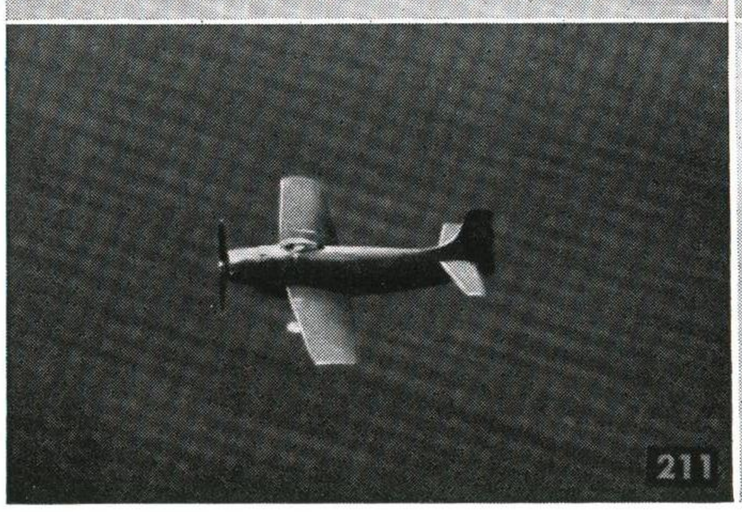
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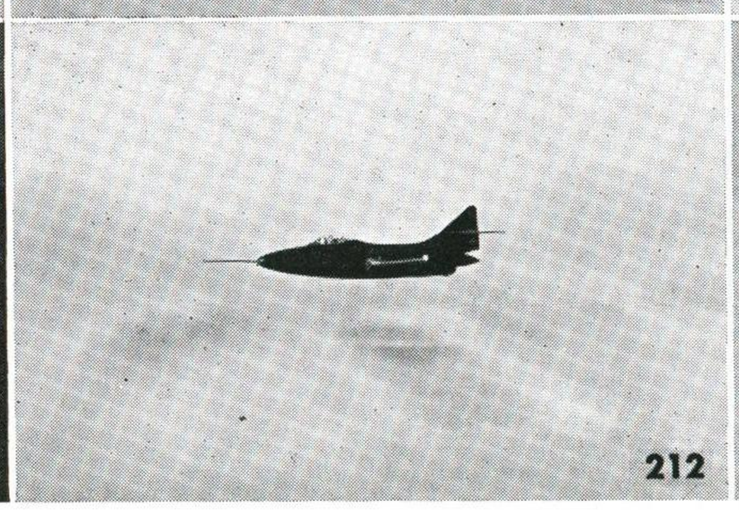
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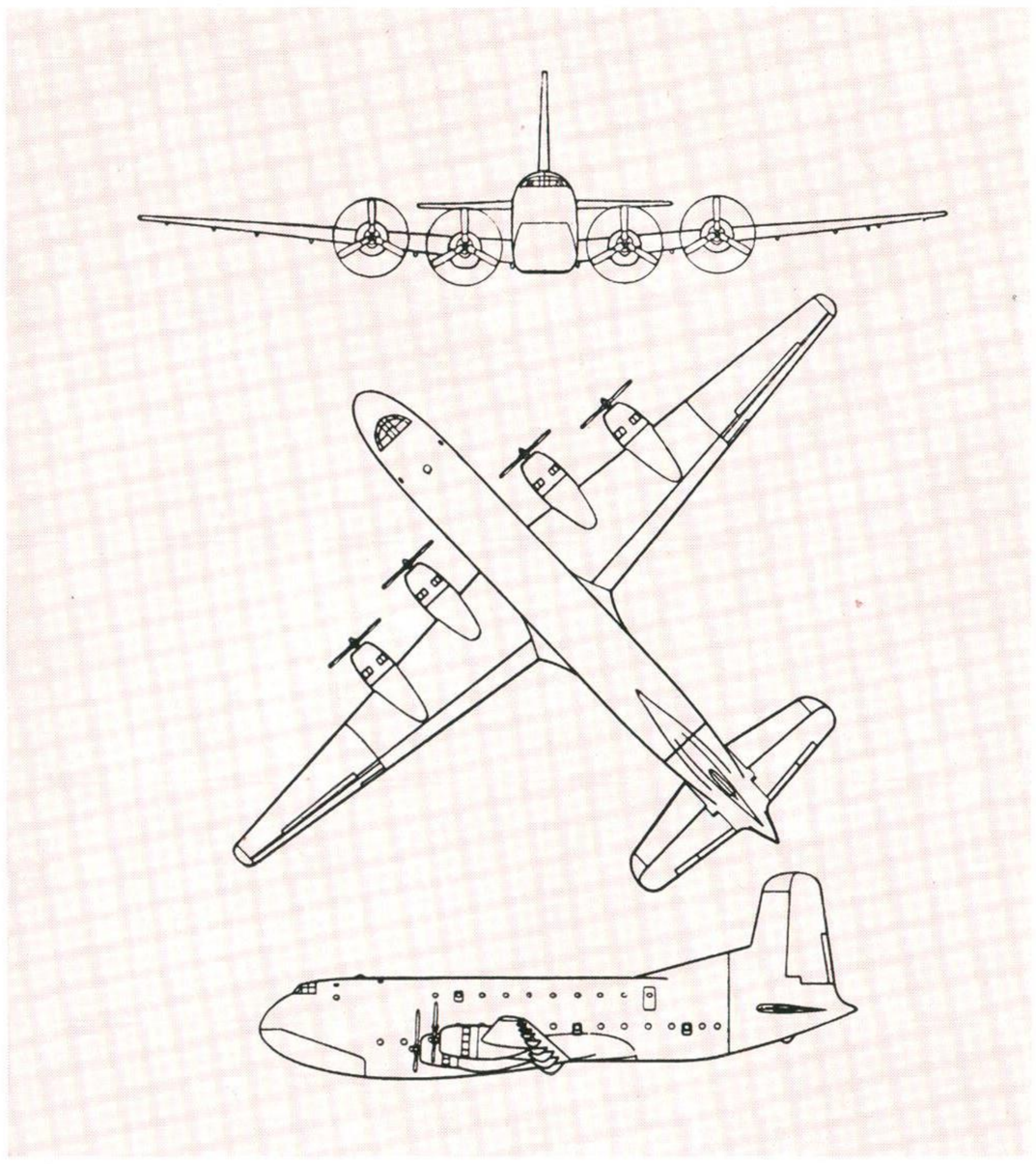
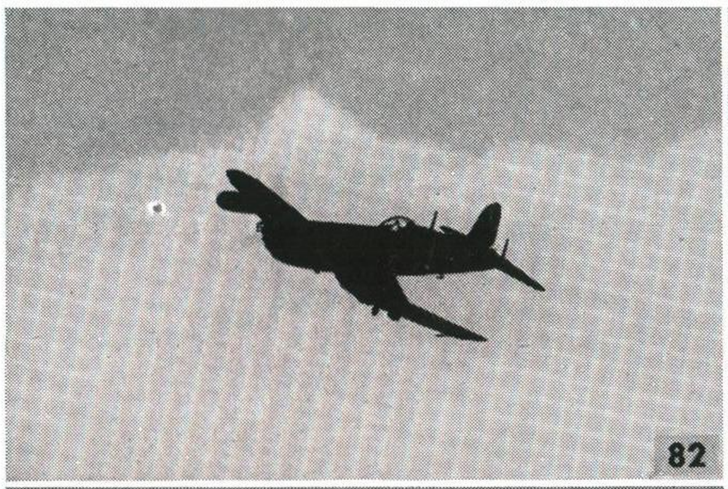
ADVANCED SPOTTING

GLOBEMASTERS IN SERVICE



The Douglas C-124A Globemaster 2 is the largest transport aircraft in production for U.S.A.F., and numbers of them are now in service. This cargo/troop transport is a development of the C-74 Globemaster 1 and utilizes the same wing and tail unit to support a larger double-deck fuselage. Huge clam-shell doors in the nose provide for the easy entrance and exit of many types of cargo. Capacity can be judged from the picture below and on the front cover. Alternatively the Globemaster 2 can carry over 200 fully-equipped troops. Recognitionally, the Globemaster often looks as if it were bursting with indignation. But its bulging forward fuselage achieves a visual balance with its gigantic fin area.

Span : 173 ft. 3 ins. Length : 127 ft. 1 in.
Engines : four P. & W. Wasp Major radials.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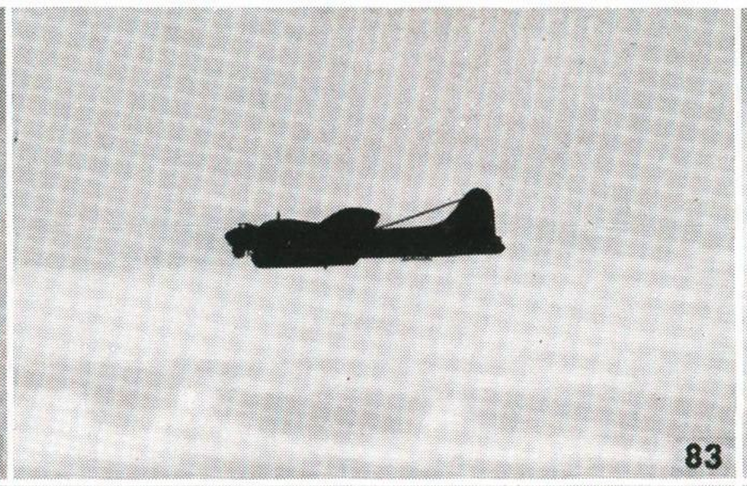
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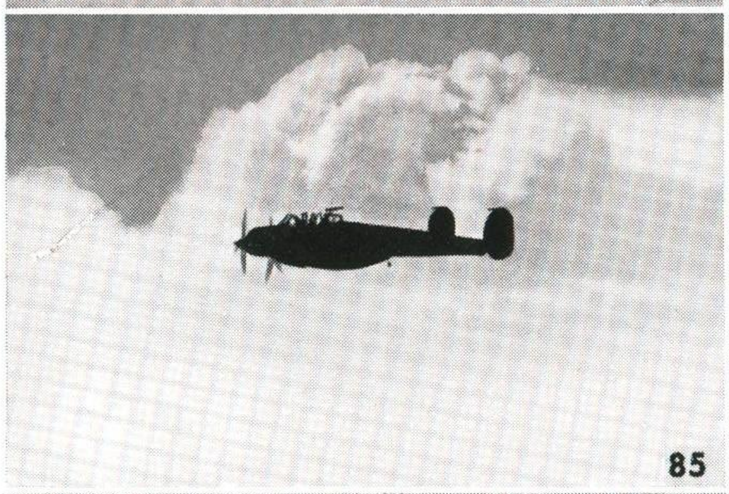
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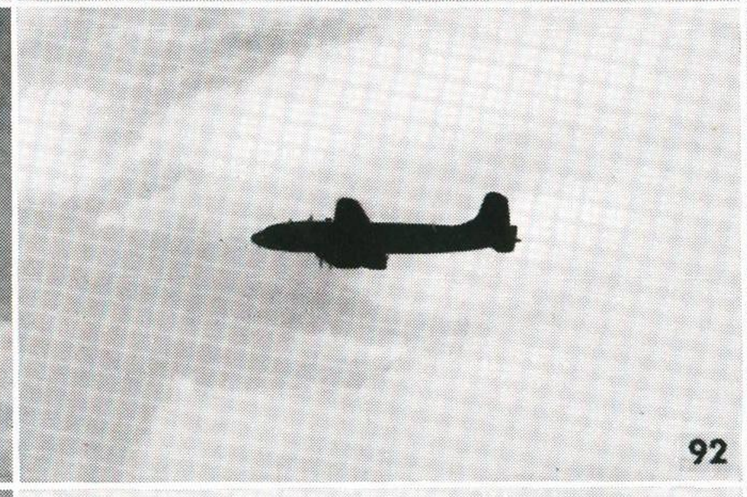
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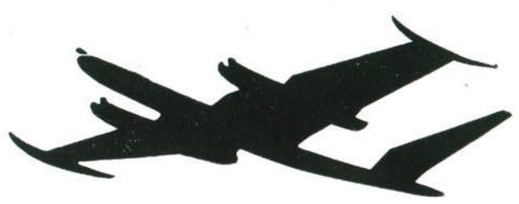
SILLOGRAPHS



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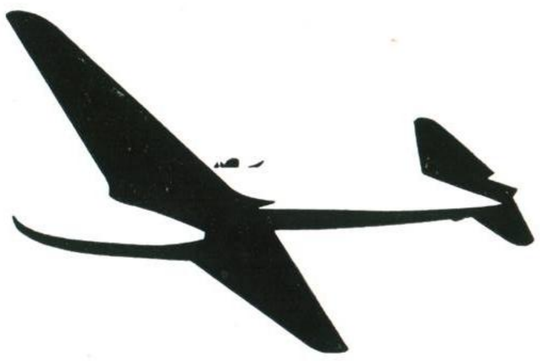

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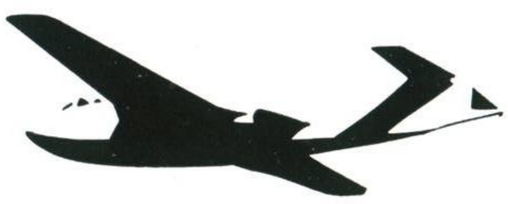

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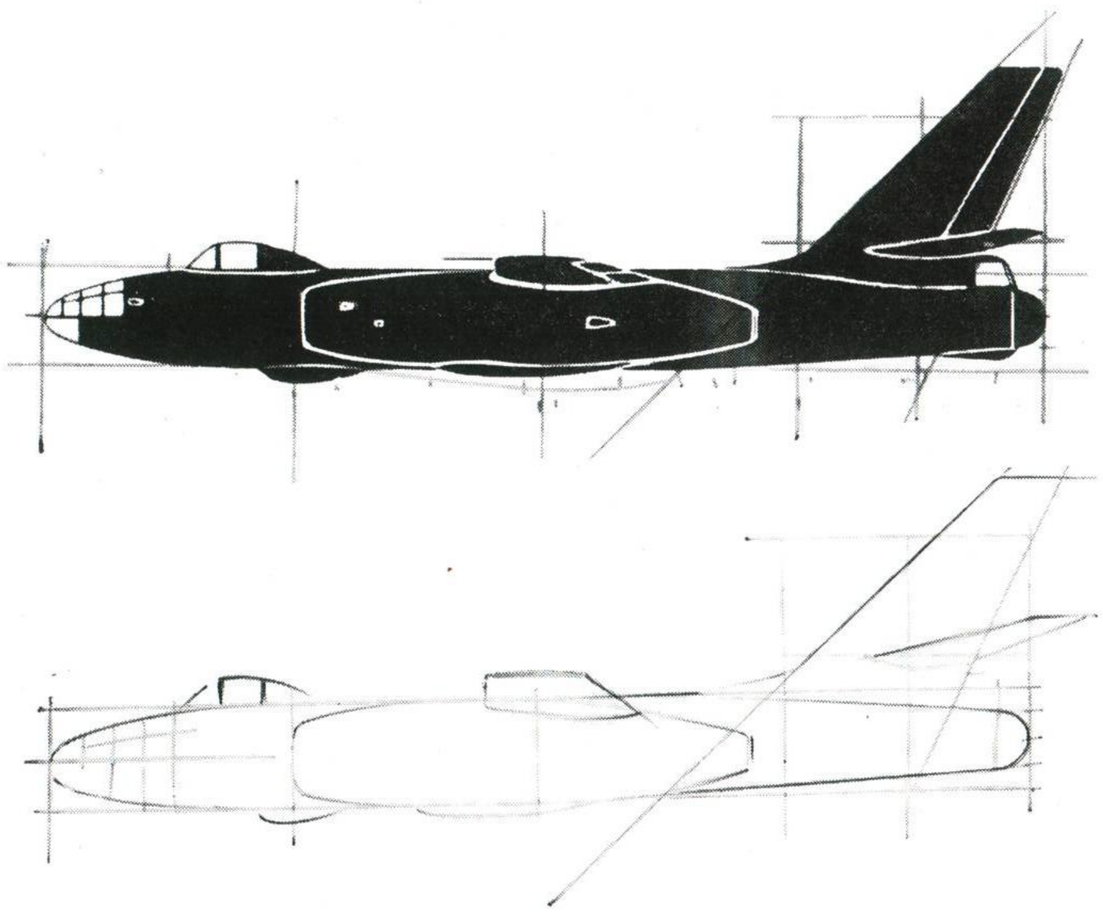
SEMI-SILLOGRAPHS

The character of a shape is more easily appreciated if drawn out into exaggerated form. This can be done by the use of vivid word pictures or by sketching. The new Twin-Jet Russian Bomber has an attractive shape; it tempts the pen and the pencil, inviting exaggeration and stimulating ideas. This group of sketches follows

"THE ADVENTURES OF AN IDEA"



WE can get an insight into the aeroplane's character by drawing out the side view from the silhouette (as above). This tells us much about the proportions and relationships of component parts. We then proceed to rough out some angular views with the object of emphasizing proportions. In Fig. 1 we exaggerate body length, size of engines and the size and sweep of the fin, but the result does not somehow catch the idea which we

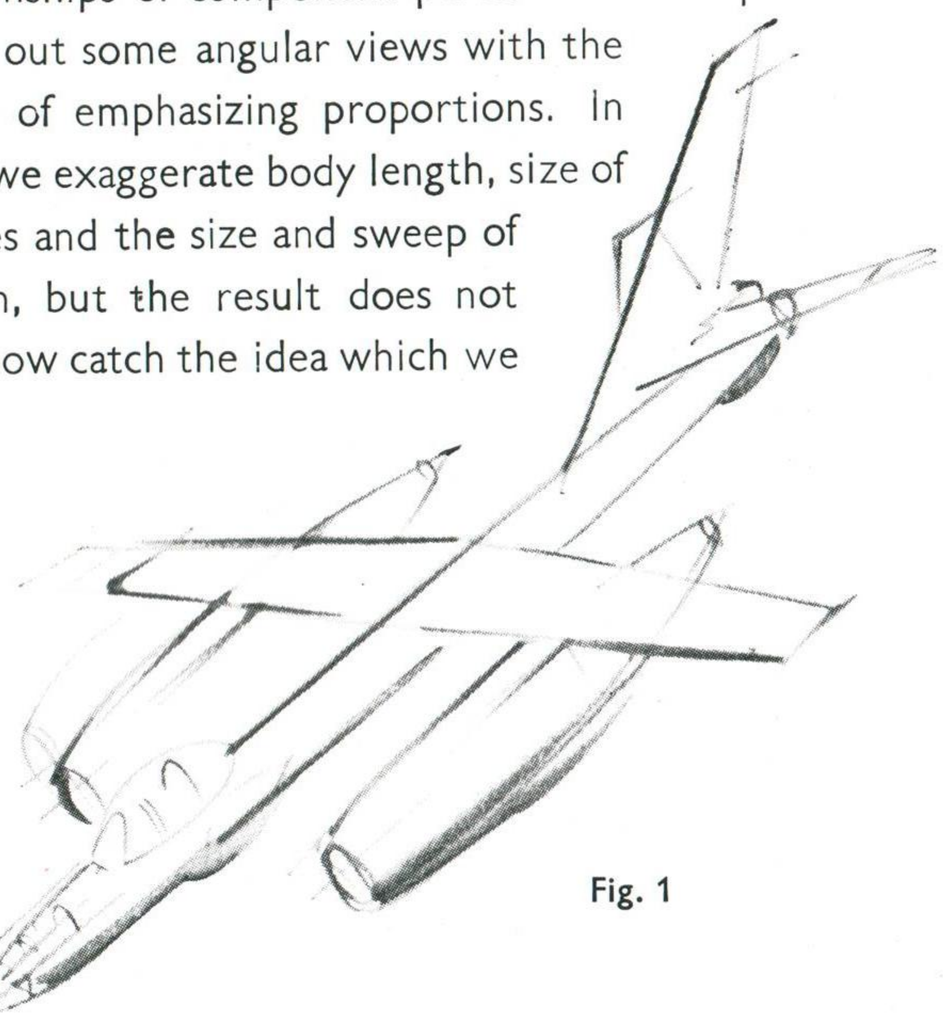


Fig. 1

have in mind. So we try another one (Fig. 2). The "racy lines" idea here is good but the aeroplane is too near its true proportions: the engines are not emphasized enough and the tail neither large enough nor sufficiently swept to underline character. We try

again. Fig. 3 looks promising: engines are stretching out nicely, but the fuselage is not exaggerated enough and the wing is too far from the tail. However, we now begin to see what makes this extraordinary character—we

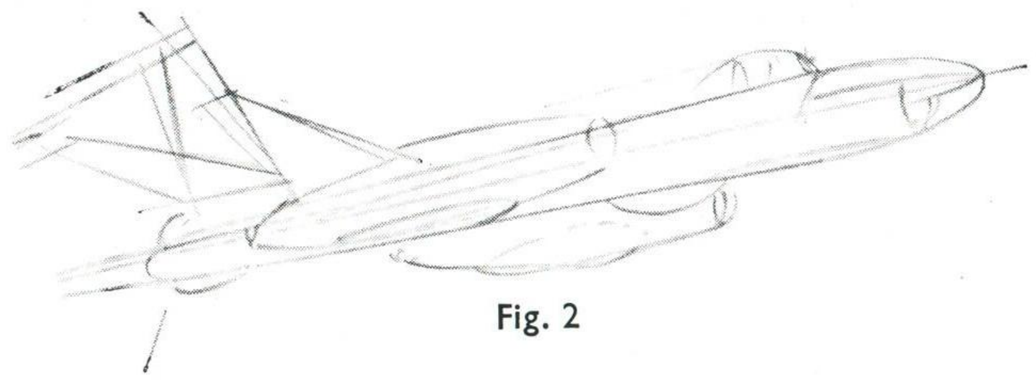


Fig. 2

begin to "feel" into its form. It is not only a question of exaggerated shapes but of shifting them about. The wing, for example, should be at the base of the fin. The nose and cockpit form a sharp "inquisitive head" to this

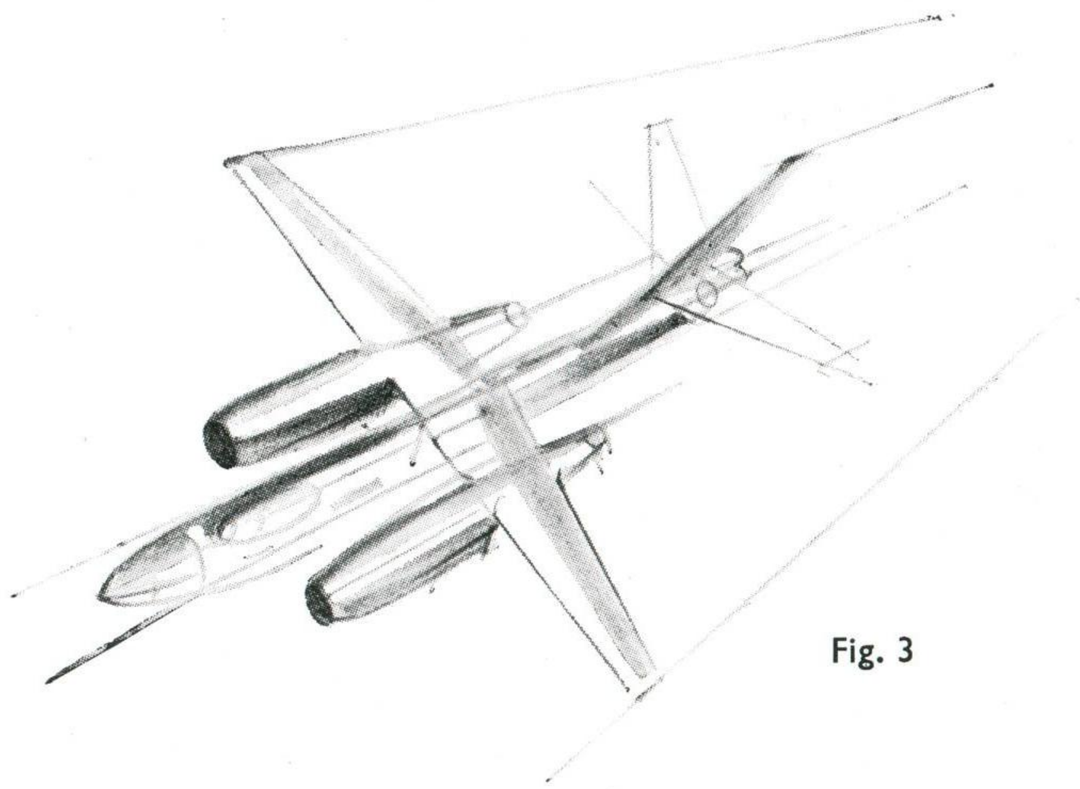


Fig. 3

creature. We add all these points up in one more drawing. Yes, this is more like it—this is more like the aeroplane should be! Taking this as a basis we complete the drawing which you see on page 197.

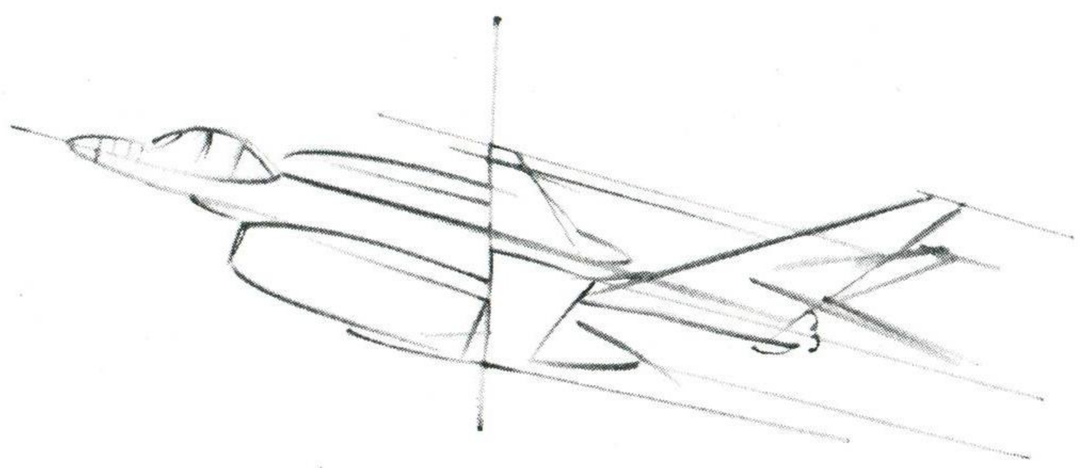
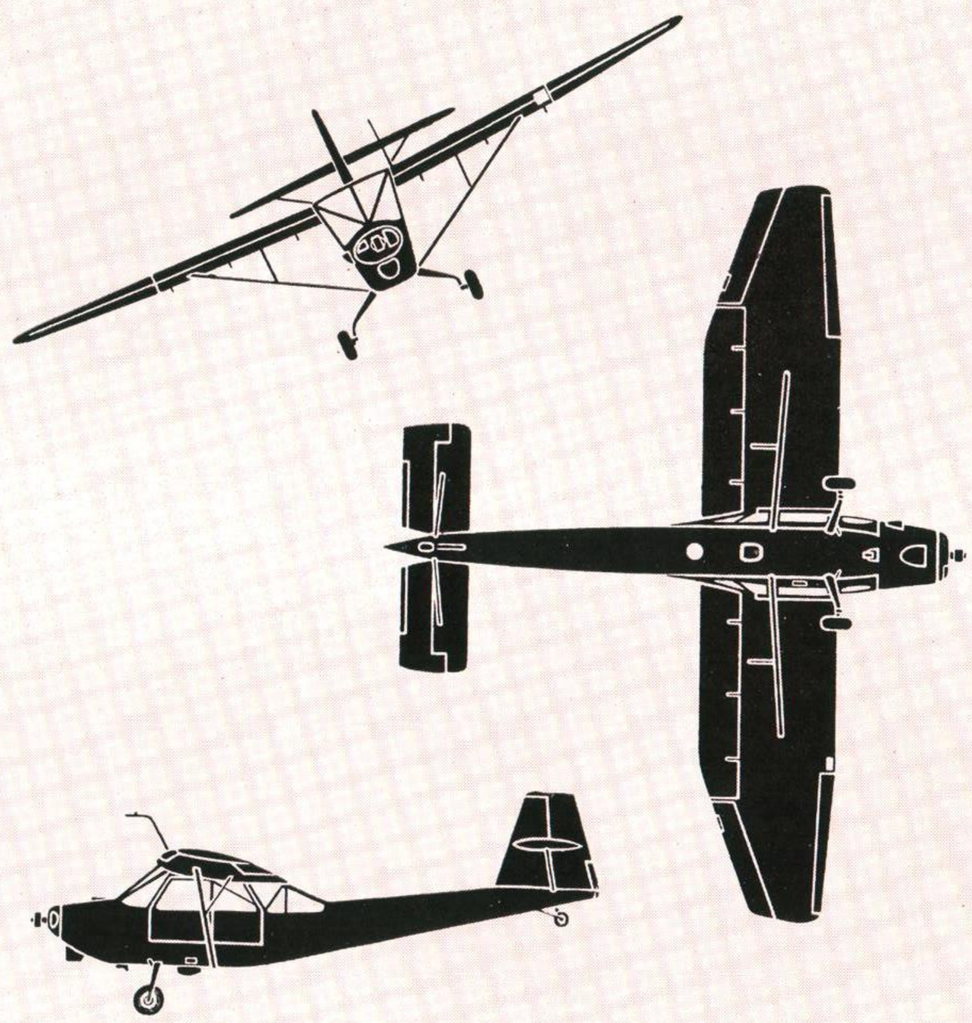


Fig. 4.

L-13 IN SERVICE

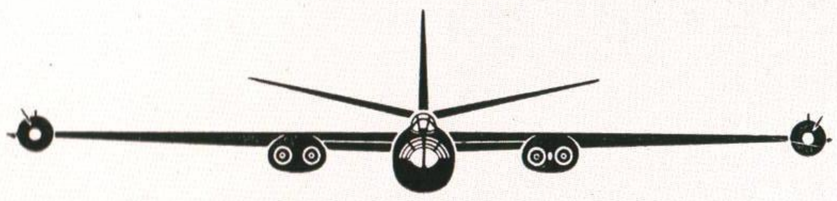


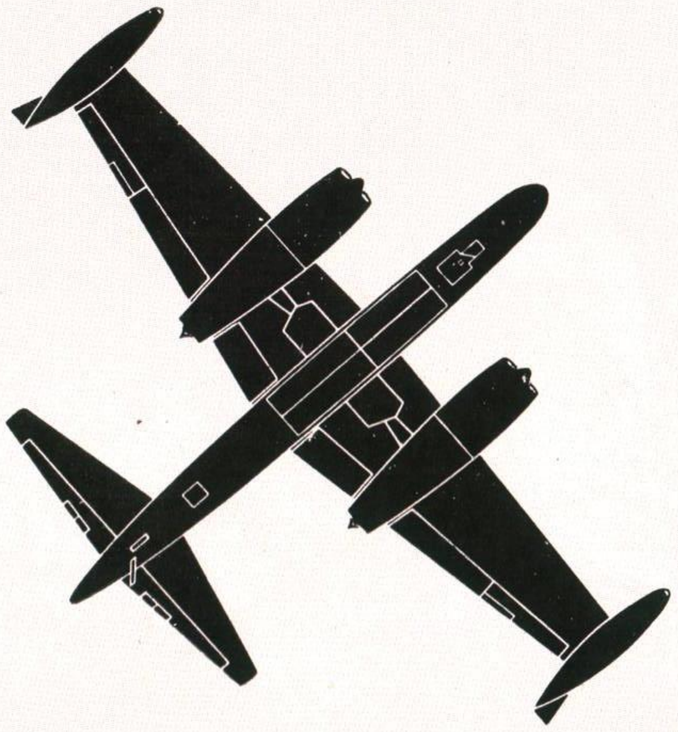
The character of the Convair L-13 (ambulance, liaison and observation aircraft) is a mixture of harsh lines and sharp corners which obtrude at every angle of view. The build of the body suggests that the aeroplane is about to break its back at any moment. Large cylindrical containers beneath the wing may add to the complicated outline but fail to disguise its true character.

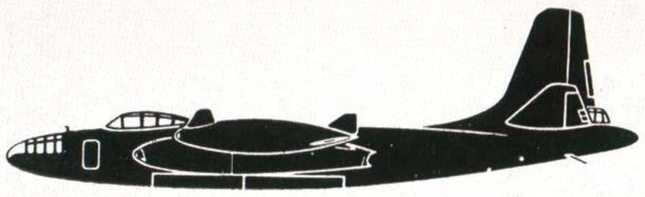
Span : 40 feet. Length : 31 feet.
Speed: (cruising) 92 m.p.h. (may be towed at 150 m.p.h.)

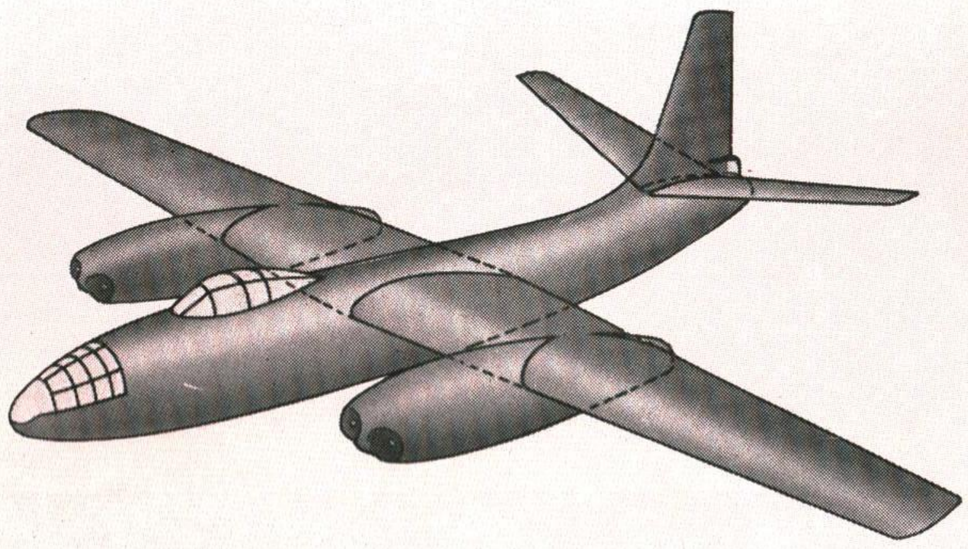
SILHOUETTE TO SOLID

TORNADO (B-45C)





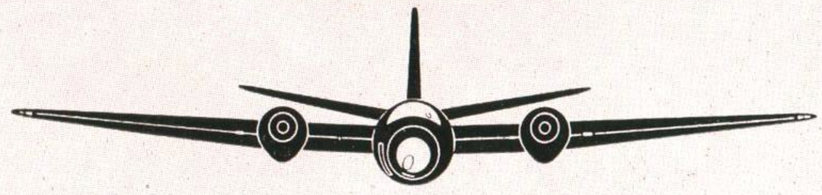


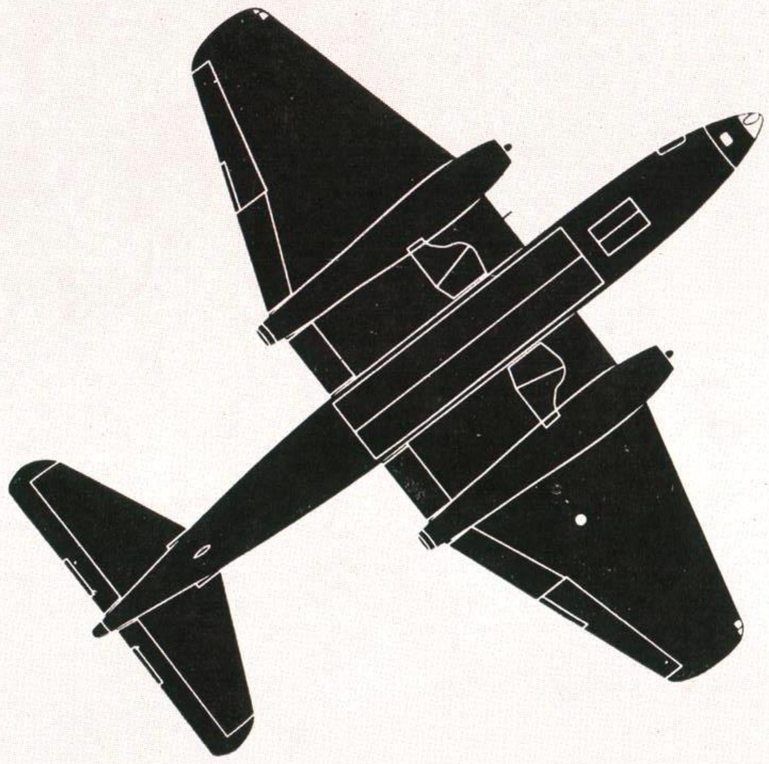


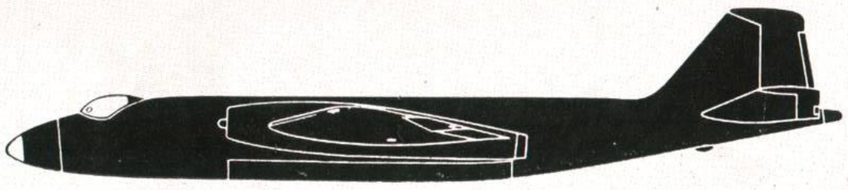
Span: 89 ft.

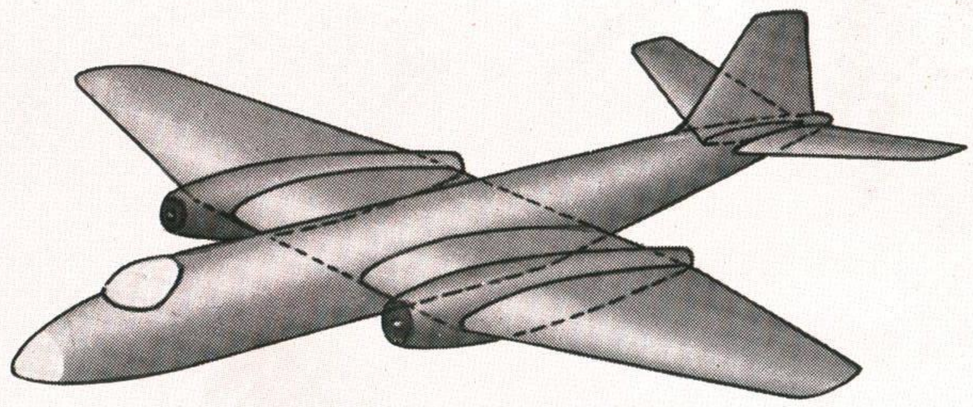
Length: 76 ft.

CANBERRA (B. Mk.2)





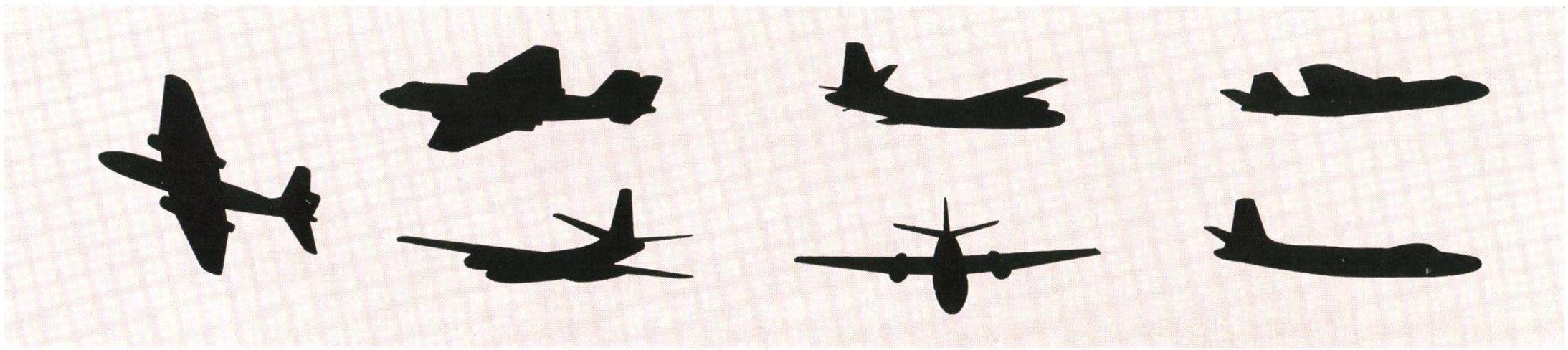




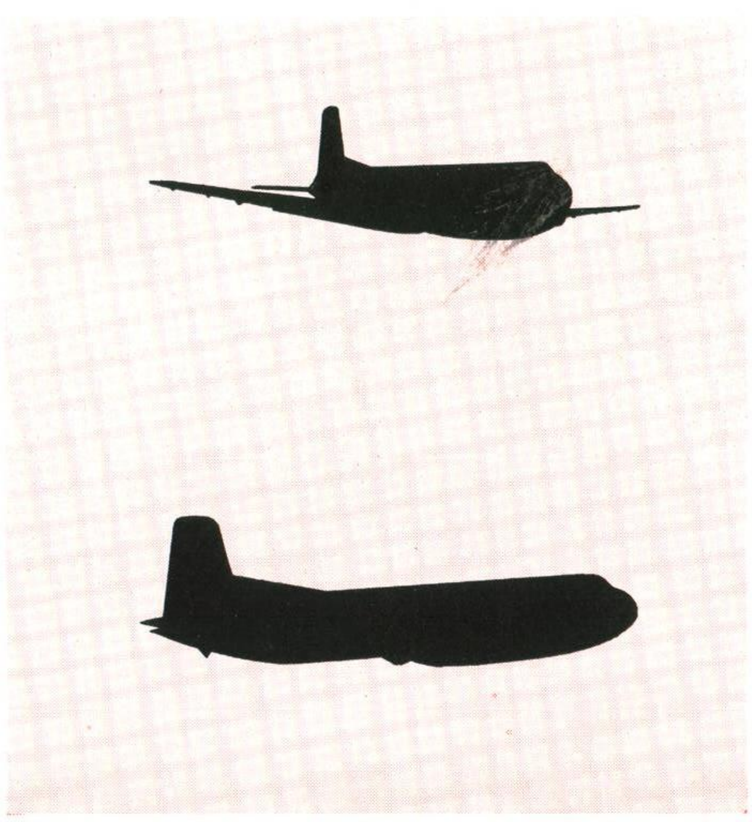
Span: 63 ft. 11 ins.

Length: 65 ft. 6 ins.

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



Cover Photo: 'Chaffeater' suggests itself as a title for this aeroplane. Our cover shows a Chaffee tank emerging from a Douglas C-124 Globemaster 2. Sillographs of the Globemaster are below.



CANBERRA AND TORNADO SILLOGRAPHS

Top: **Canberra, Tornado, Canberra.**

Bottom: **Canberra, Tornado, Canberra, Tornado**

PERPLEXING PAIR

Left: **MIG-15 ;**
Right: **Ouragan**

ERRATA

July *Journal* p. 165 Tank Test, No. 6 read M.36 B.2, No. 7 read Cromwell, No. 9 read Daimler Armoured Car, No. 14 read Cromwell, No. 17 read Cromwell. August *Journal* p. 192 Advanced No. 193 read RB-45C Tornado, Semi-Sillographs No. 37 read AF-2W Guardian.

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

73. **Superfortress** (B-50D)
74. **Sea Vampire** (FB Mk. 20)
75. **Scorpion** (F-89A)
76. **Vampire** (FB Mk. 5)
77. **Cutlass** (F7U-1)
78. **Sabre** (F-86A)
79. **Seafury** (T Mk. 20)
80. **Seahawk** (F Mk. 1)
81. **Provost** (T Mk. 1)
82. **Sea Prince** (C Mk. 1)
83. **Raider** (C-125)
84. **B-36D**
85. **Sea Venom** (NF Mk. 20)
86. **Breguet** 763
87. **Savage** (AJ-1)
88. **Skyraider** (AD-2)
89. **Meteor** (NF Mk. 11)
90. **T-28**

ADVANCED

196. **T-28**
197. **Sealand**
198. **Packet** (C-119)
199. **Neptune** (P2V-4)
200. **Seafury** (T Mk. 20)
201. **Sabre** (F-86D)
202. **Shooting Star** (F-80A)
203. **Raider** (C-125)
204. **Pirate** (F6U-1)
205. **Seafury** (F Mk. 10)
206. **Albatross** (UF-1)
207. **Noratlas** (Nord 2500)
208. **Shackleton** (MR Mk. 1)
209. **Sturgeon** (TT Mk. 2)
210. **Sea Prince** (C Mk. 1)
211. **Skyraider** (AD-2)
212. **Panther** (F9F-5)
213. **Ambassador**

SILLOGRAPHS

82. **Corsair** (F4U-5N)
83. **Fortress** (SB-17H)
84. **Firefly** (FR Mk. 4)
85. **Brigand** (B Mk. 1)
86. **Panther** (F9F-5)
87. **B-36**
88. **Banshee** (F2H-2)
89. **Hastings** (C Mk. 1)
90. **Shackleton** (MR Mk. 1)
91. **Anson** (T Mk. 20)
92. **Hermes 4**
93. **Guardian** (AF-2S)
94. **Martin 404**
95. **Superfortress** (RB-50B)
96. **Gannet**
97. **Comet**
98. **Dakota**
99. **Constellation**

'TRANSPORT TYPE' TUTOR

1. **Hermes**
2. **Stratocruiser**
3. **DC-6**
4. **Hastings**
5. **Stratocruiser**
6. **Hastings**
7. **DC-6**
8. **Skymaster**
9. **Hermes**
10. **Stratocruiser**
11. **Hastings**
12. **Stratocruiser**
13. **Skymaster**
14. **Hermes**
15. **DC-6**
16. **Hastings**
17. **Skymaster**
18. **DC-6**
19. **Skymaster**
20. **Hastings**
21. **Skymaster**
22. **Stratocruiser**
23. **Skymaster**
24. **Hermes**
25. **Stratocruiser**
26. **Hermes**
27. **Skymaster**
28. **Hermes**
29. **Skymaster**
30. **Hastings**
31. **Skymaster**
32. **DC-6**
33. **Stratocruiser**
34. **Hermes**
35. **Skymaster**
36. **DC-6**
37. **Skymaster**
38. **Hastings**
39. **Stratocruiser**
40. **DC-6**
41. **Hastings**
42. **Hermes**
43. **DC-6**
44. **Skymaster**
45. **Hastings**
46. **Hermes**
47. **Skymaster**
48. **Stratocruiser**
49. **Hastings**
50. **Hermes**
51. **DC-6**
52. **Stratocruiser**

TANK TEST

1. **Comet** (British)
2. **Daimler Armoured Car** (British)
3. **Chaffee** (American)
4. **Centurion** (British)
5. **Cromwell** (British)
6. **Centurion** (British)
7. **Joseph Stalin** 1 (Russian)
8. **T 34-85** (Russian)
9. **Sherman** (American)
10. **JSU 122** (Russian)
11. **T 34-76** (Russian)
12. **Comet** (British)
13. **Comet** (British)
14. **Joseph Stalin** 3 (Russian)
15. **Churchill Bridgelayer** (British)
16. **T 34-85** (Russian)
17. **Chaffee** (American)
18. **Centurion** (British)

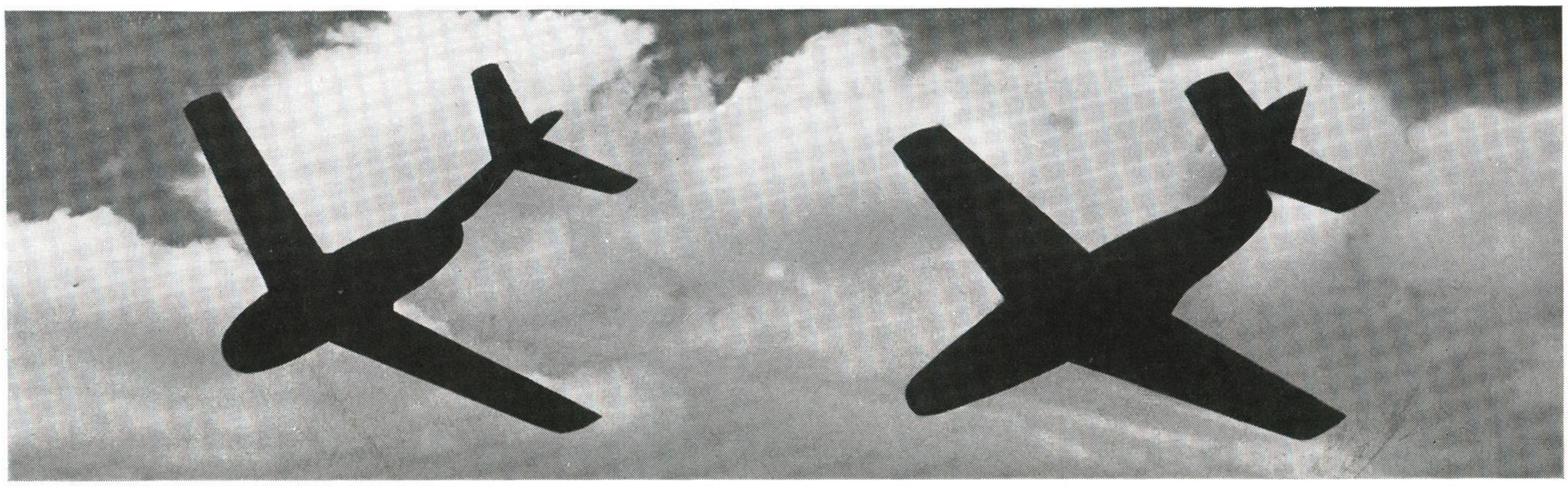
SEMI-SILLOGRAPHS

40. **Tornado** (RB-45C)
41. **Ouragan** (MD 450)
42. **Wyvern** (TF Mk. 2)
43. **Goeland**
44. **Saab J 21A**
45. **Sea Hornet** (PR Mk. 22)
46. **Athena** (T Mk. 2)
47. **Ambassador**
48. **Lockheed F-94**
49. **Superfortress** (RB-50B)
50. **Meteor** (NF Mk. 11)
51. **Attacker** (F Mk. 1)
52. **YAK-15**
53. **Canberra** (B Mk. 2)
54. **Avitruc** (C-123)
55. **Seahawk** (F Mk. 1
56. **Canuck**
57. **Viscount**

LIGHT FLEET CARRIERS

Independence Class		Colossus Class	
1	13	2	10
4	15	3	11
5	16	6	12
8		7	14
		9	17

PERPLEXING PAIR



47,145 9/51 38-241-0

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