

THE ROYAL



OBSERVER CORPS

RECOGNITION

Journal
and R.O.C. GAZETTE



Vol. 4 JANUARY 1962 No. 1

They Failed to Recognise . . .

The Catalina, an American-built flying boat used by the R.A.F. was one of the most distinctive of maritime reconnaissance aircraft, yet, in 1941, they were fired upon by friendly forces on at least two occasions. A convoy opened fire on AH568 returning from a training flight to No. 4 Operational Training Unit at Invergordon, causing it to limp the rest of the way on one engine and friendly fighters attacked AH538 of No. 202 Squadron off Gibraltar. The question is—would you recognise current maritime aircraft? Test yourself and see. Solutions are on the back page. And incidentally versions of the Catalina are still in service in South America.





The Royal Observer Corps Recognition Journal and Gazette is a monthly publication produced in the Department of the Assistant Chief of the Air Staff (Training), Air Ministry, and prepared in collaboration with the Ministry of Aviation (Air Technical Publications). Applications for copies must be submitted through the normal official publications supply channels—not to the Editorial Office or direct to the Air Ministry.

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*Identification Lessons

Is it a Crackpot?

It has been emphasised in this space before that it is not sufficient that aircraft are recognised, but that they are identified, and that means giving without hesitation a current name to a particular aircraft type. Unfortunately current names are not always brief and some almost defy pronunciation.

During the last war, more difficulty was at first experienced in giving the correct names to Japanese aircraft than in recognising them. Under their own system of nomenclature, an aircraft was designated according to its year of introduction which was based in the foundation of the Japanese Empire, not the Christian Year. This could cause confusion since the Navy's 97 (Japanese Year 2597) was a four-engined flying boat and the Army's 97 was a twin-engined bomber. The manufacturer's name could clinch the matter, but neither Kawanishi nor Mitsubishi were split-second words, quite apart from the fact that, in the barking of ack-ack guns, Kawanishi might be taken for another manufacturer—Kawasaki.

Thus, in the early years of the Pacific War, only the experts who had a good background knowledge of Japanese aircraft could accurately identify—and experts were few and far between. In the rough and tumble of the island hopping war in the Pacific, it was the average soldier, sailor and airman that often had the vital need to know. Inevitably they stumbled over names. Action at the highest level was taken for a code-word system to be universally adopted throughout the Allied Forces in the Pacific Area. It became known as the McArthur Code after General McArthur the Supreme Commander. Fighters were given boys' names, bombers and transports girls' names, trainers were named after trees and gliders after birds. This naming system proved effective and was used until the end of the war in August, 1945.

There had always been difficulty in giving a clear-cut name to Russian aircraft. To complicate matters, Sikorsky whose aircraft were the most well-known of Russian types in World War One, was later designing successful aircraft in America. After the revolution of 1917, when aircraft were built only in State factories, there was a complete lack of information, in contrast to private enterprise in other countries where products were internationally advertised. From 1917 in fact there has been a "curtain," even though it may not have become "iron" until 1948.

Since there is only one "firm" in the U.S.S.R., the State,

aircraft are built in various State factories, of which two or more may be producing identical types and they are designated, as a rule, according to the chief designer. Mig-19 for example indicates the 19th design of Mikoyan and Gurevich, two designers who have collaborated for many years. While this system is simple it falls down, from our point of view, when a new type Russian aircraft is seen, for which a design prefix and number is not known. At the Tushino Air Show, Western observers were invited to see the latest Russian types in the air, but the commentator did not oblige with designations. However, they can be identified by the issue of names from this side of the Iron Curtain.

Earlier examples of types without a known name or designation, gave rise to a need for a naming system by NATO countries. The adoption of such a system was promulgated by the Military Secretariat of NATO late in 1954. It ensures that a name, not likely to be confused with any other, can be given to each Russian type and, moreover, the name is significant of the class of aircraft. The system is far more subtle than the earlier one devised for Japanese aircraft, for the initial letter of the name is the initial letter of the class of aircraft—Fighter, Bomber, Cargo-carrying, Helicopter or Miscellaneous and single or two-syllable words denote propeller-driven or jet-propelled respectively.

One confusing aspect should be mentioned. It sometimes happens that the Press give a wrong name to an aircraft, and this has happened over types seen at the 1961 Tushino display. The new bomber with rear-mounted jet engines, became Beauty in the Press, although officially it was allotted the name Blinder, and Blinder (suggesting bomber) was the name given in the Press to Fiddler (fighter). This does emphasise the difficulty today in classifying certain aircraft; the American Thunderchief for example is designated F-105 in the U.S.A.F.'s fighter series, yet it can carry a 7-ton bomb load.

Apart from this drawback of wrong names assumed, such naming systems are vital to efficient identification. The names are clear-cut, easily pronounced and give some indication of the type.

However, naming systems do not, of themselves, teach one to identify the aircraft and the fact that a new (hypothetical) Aeroflot jet transport might be given the highly unlikely name of Crackpot would not obviate the need for most of us to undergo identity training on Crackpots. To ensure that you did, we should, of course, produce lessons on Crackpots.

A Place Of One's Own

Alan Hall tells how two posts have built their own Headquarters

THE ROYAL OBSERVER CORPS has always been known for its ingenuity and adaptability. This became particularly evident during the last war when members on full-time duty had to make the best of things. Since then the self-help spirit has been kept alive on many posts in a variety of different ways.

This can be seen in the way that several posts have overcome the difficulty of obtaining the ideal sort of accommodation for post meetings. How many Head and Leading Observers have said to themselves over the last few years "If only we could get our own exclusive post meeting place . . . what a difference we would see in the efficiency and morale of the crew!" All of us know that meeting in the local pub, with the temptation of a ready pint in the next room, tends to lead the crew members away from the subject under instruction and a great deal of interest and time can be lost as a result.

Two posts to my knowledge have overcome this problem. Admittedly they were both fairly keen crews to start with but to say that they hadn't got a chance to improve *their* lot would be asking for trouble as they have both built their own post headquarters. By talking to their Head Observers I am now convinced that the posts concerned are amongst the best in their own particular Group as a direct result of taking the initiative in this way.

Dane's Hall

One of the best examples is the post at Little Waltham near Chelmsford in No. 4 Group, Colchester. Dissatisfied with their pub back room in 1953 they decided "to take the law into their own hands" and build their own post meeting place next door to the post lookout which is situated on some allotments near the village. Led by Chief Observer S. J. Smith a discussion took place at one of the meetings and they discovered in their midst a number of chaps who knew all about the job—at least they had sufficient knowledge to get started and the project was set in hand. The initial problem of obtaining the finance for the job was overcome by the offer of some £200 by George Dane, one of the crew members, and the post fund took care of the smaller items.

They started completely from scratch. One of their number was a wood worker by profession and the parts of the 35 foot long hut were prefabricated in his workshop and taken up to the site on a coal lorry belonging to another member. They adapted the small hut already on the site into a kitchen to add further space to the building and bought up as much second-hand material as they possibly could to make the job a little cheaper. Boarding for the floors and walls, for example, came from a manufacturer who had been using the wood for experimental purposes and the corrugated iron for the outside and roof was also "liberated". Curtains, electric fires, cupboards and lighting were all made from the members' own resources, much of the installation being done by Observer White who is a wireless mechanic by trade.

The eleven members of the post at that time spent some 1,800 man hours in completing the project which took from



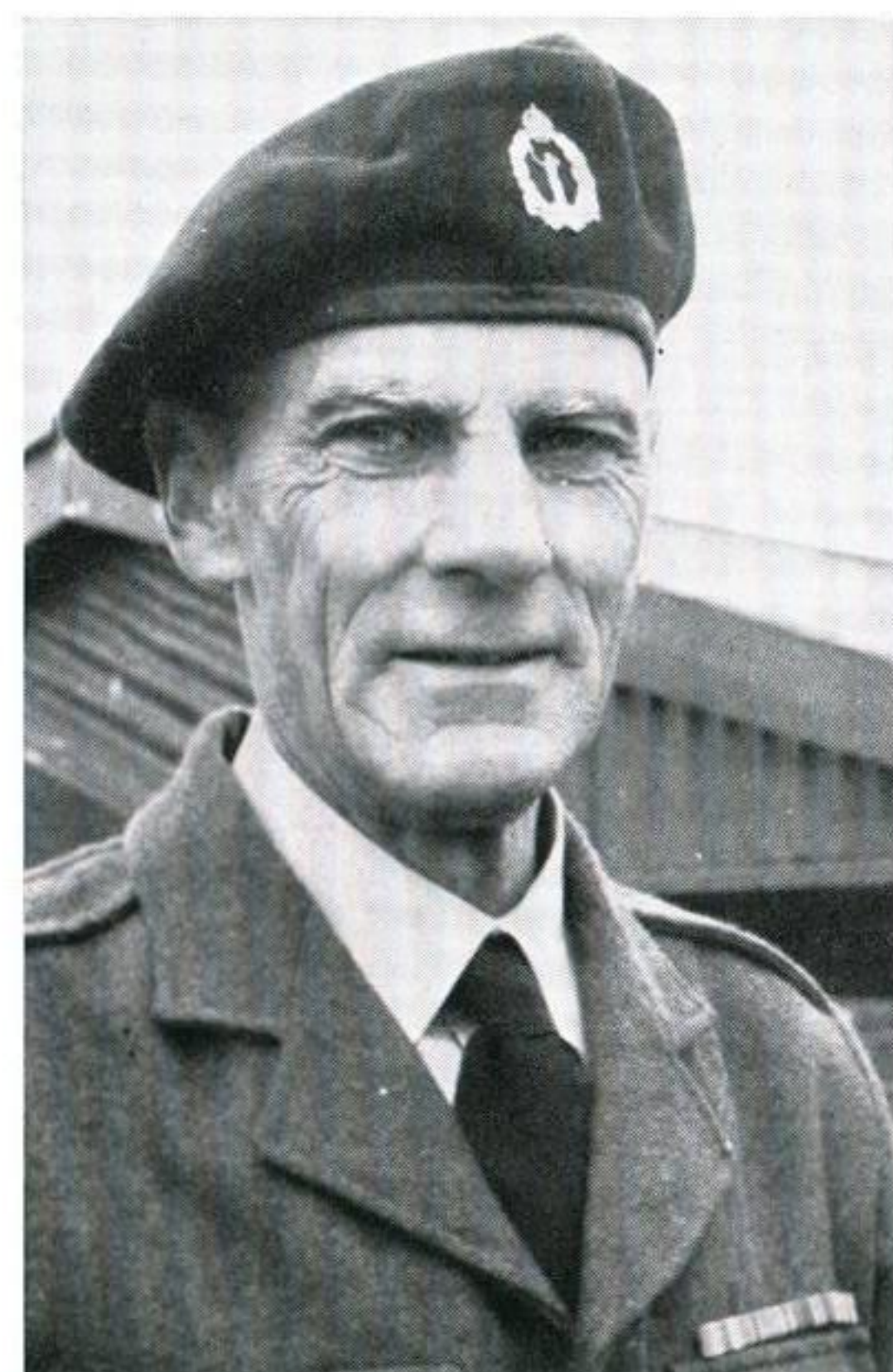
"Dane's Hall," 35 feet long, built from wooden framing and clad in corrugated iron.

July 1953 to May 1954 to finish. It is a magnificent effort but could not have been done unless the members themselves took the law into their own hands! The new meeting place was formally opened by the Metropolitan Area Commandant on 5th May 1954 and has from that time forward been known as "Dane's Hall."

When I saw the post a few weeks ago I found a neat lawn, spick and span lecture room with models and training aids everywhere, a kitchen that boasts an electric stove and all mod cons., mains lighting both in the lecture room, underground post and lookout and flowers around the perimeter of the compound. It was the sort of place that one longed for on one's own post and by publicising the efforts of 4/L2 I hope that other crews throughout the country will follow the example they have set.

In the Head Observer's back garden!

One post on a neighbouring cluster in No. 4 Group has already done so. Later in the day I saw their new post headquarters recently completed, this time in the Head Observer's back garden! Led by the terrific enthusiasm of Chief Observer Harry Osbourne, 4/K1



Chief Observer S. J. Smith

Kelvedon faced the same problems as their colleagues not far away. Unlike Little Waltham, they did have some financial problems as none of the crew were millionaires. This little setback didn't deter them though. What they couldn't scrape together themselves they borrowed from friends in the village and to save time they had a contractor build their hut for them. It cost a little over £200 and is a great credit to their enthusiasm.

"One of the difficulties after getting the money was how to pay it all back again," said Harry Osbourne when I interviewed him. "The crew had the answer to that though, don't worry," he added. They all pay a shilling a week into the post fund and the one with the biggest stake in the hut has been paid back first. Needless to say they have increased their membership recently and this is entirely due to the provision of a proper meeting place. To cap it all another post not far away has asked if they can come over on an alternative night to Kelvedon's meeting to make use of the accommodation! Each post member has a key and can come and go as he pleases—just as well the building is some way from the Head Observer's house or otherwise there would be complaints from the family as they're always there.

What about you?

These are just two examples of posts using their own initiative to better their lot. Have *you* thought what might be done on *your* post site? Yes, I know there are a lot of things to be considered. Where's the money coming from? Is it indeed possible to use our own post site or do we have to find another? What about Town and Country planning, rates and taxes? Will we need concrete foundations? Have we got any specialists on the post who can help? . . . and



The kitchen at "Dane's Hall" was made from the old hut that used to be on the site before the present one was built.

a host of other questions that have to be answered before a start can be made. Let the sceptics remember, too, that both Little Waltham and Kelvedon are country posts. They have at the moment an average post strength of 14 members each which is quite good—many posts who haven't could still build their own meeting place if they were keen enough and really wanted to improve their conditions.

"A place of one's own" to a newly married couple starts the companionship of the years ahead off on the right footing. "A place of one's own" to a Royal Observer Corps post means much the same thing when you come to think about it, doesn't it? So why not discuss the possibilities on your post at the next crew meeting. The results shown in Essex are well worth while!

Comment by H.Q., R.O.C.

Alan Hall, who is himself an enthusiast and has done a lot to make his own post more comfortable and consequently more efficient, paints an interesting picture of these praiseworthy efforts and rightly offers them as examples of what can be done where circumstances permit. It must, however, be emphasised that financial assistance cannot be obtained from Public Funds, neither can material be supplied by A.M.W.D.

Care should also be taken to ensure that such construction does not obstruct the G.Z.I. visibility.



A general view of the 4/L2 Little Waltham post site.



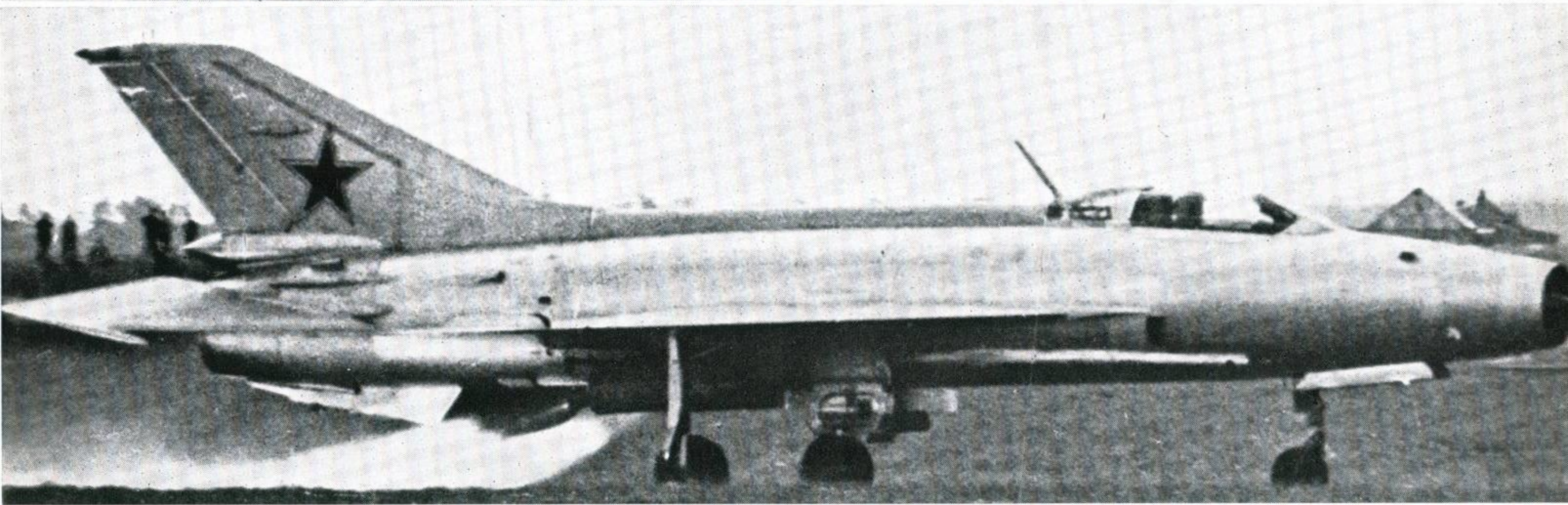
Soviet Circus

The Red Air Force Aviation Day Display in July at Tushino, near Moscow, made public a number of new Russian aircraft types. From transient glimpses of the display on television and fleeting seconds on newsreels, the display may have appeared brief; in fact it lasted four hours.

Here we present some of the fighter types that appeared at Tushino, but in addition to those shown, Fishpots, Fitters and Frescos also took part as well as a new fighter, code-named Flipper, which is similar to a Fishpot, but believed to be twin-engined.

Flashlights are still much in evidence and the basic design has been considerably modified. Flashlight B fighters (right) are seen with larger nacelles, suggesting afterburners, and saw-tooth wings, and below yet another variant known as the Firebar with a modified nose. An improved version of the Flashlight C was also observed at the display.



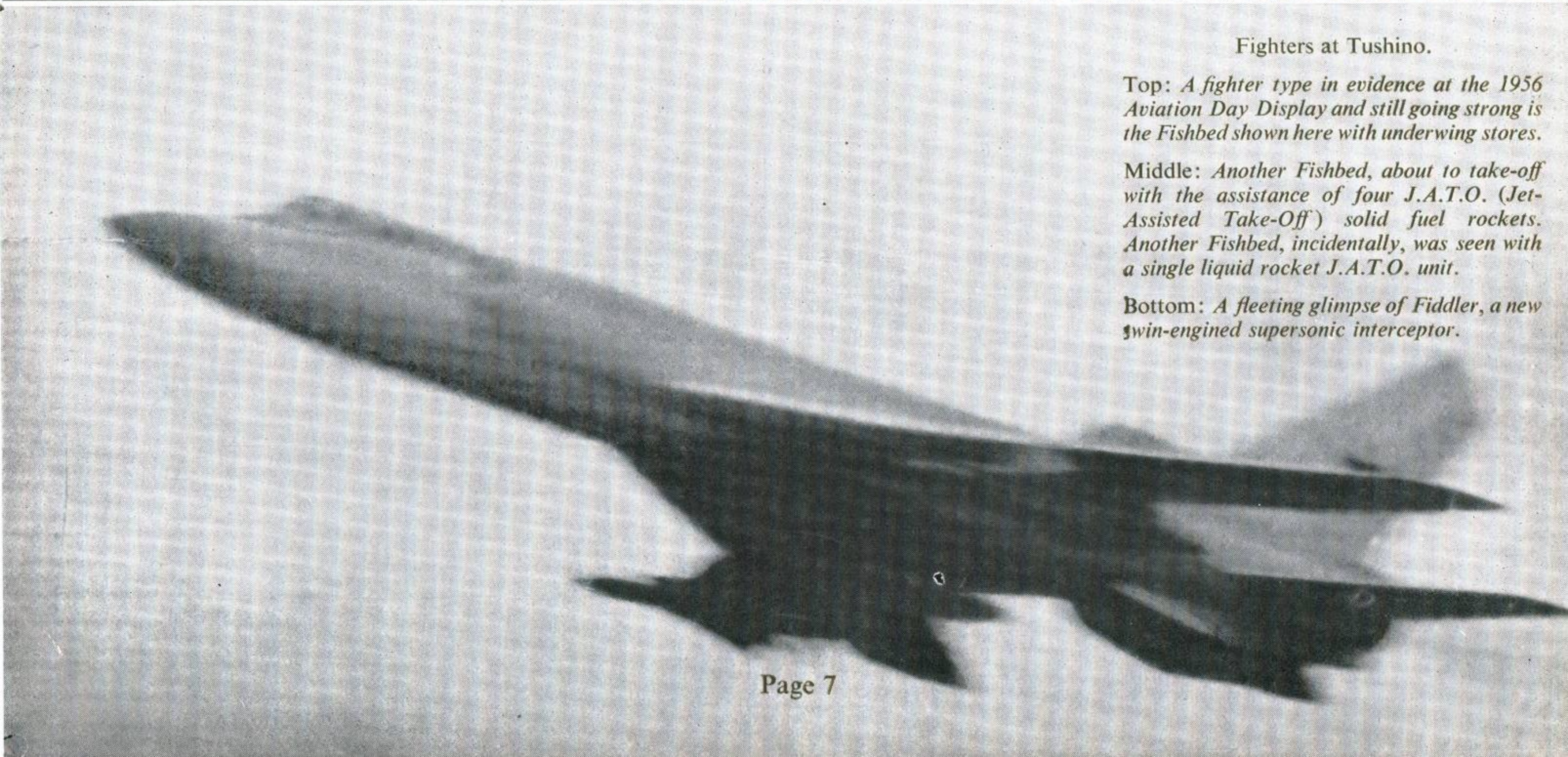


Fighters at Tushino.

Top: A fighter type in evidence at the 1956 Aviation Day Display and still going strong is the Fishbed shown here with underwing stores.

Middle: Another Fishbed, about to take-off with the assistance of four J.A.T.O. (Jet-Assisted Take-Off) solid fuel rockets. Another Fishbed, incidentally, was seen with a single liquid rocket J.A.T.O. unit.

Bottom: A fleeting glimpse of Fiddler, a new twin-engined supersonic interceptor.

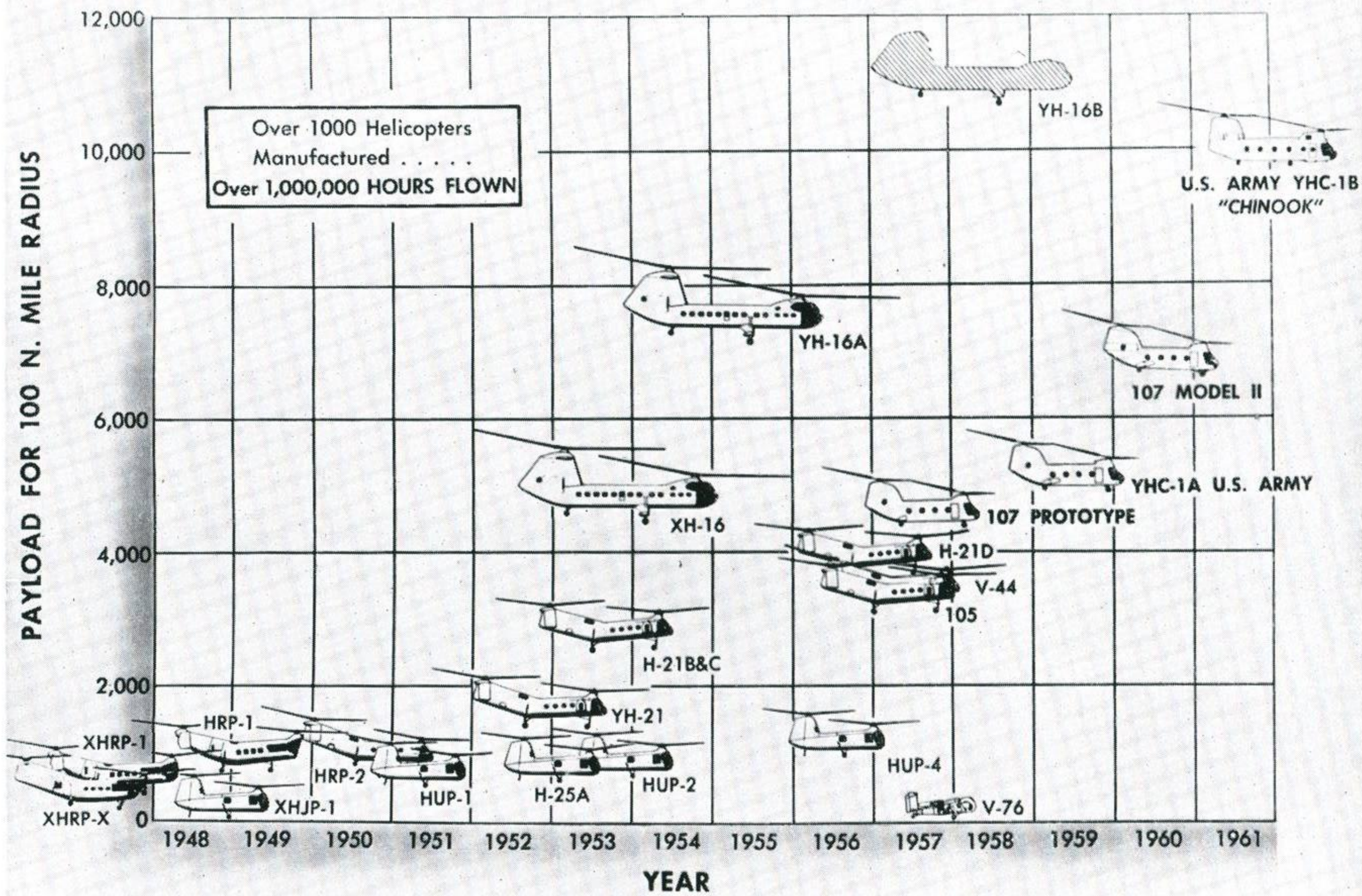


Parisian Panorama 1961

- | | |
|-------------------------|-------------------------|
| 1. Étendard IV-P | 17. AO-1 Mohawk |
| 2. Mirage IV | 18. Gulfstream |
| 3. Javelin F.A.W. Mk. 9 | 19. F8U-2 Crusader |
| 4. M.H. 152 Broussard | 20. F4H-1 Phantom II |
| 5. Britannia C. Mk. I | 21. B-58A Hustler |
| 6. F-105D Thunderchief | 22. Nord 3202 |
| 7. Vulcan B. Mk. 2 | 23. Pilatus Porter |
| 8. Victor B. Mk. I | 24. Potez 840 |
| 9. A3J-1 Vigilante | 25. Fouga Magister |
| 10. Cleat (Tu-114) | 26. Albatross |
| 11. C-130C Hercules | 27. U-1A Otter |
| 12. F-104C Starfighter | 28. D.H. Heron Series 2 |
| 13. Nord 1150 Griffon | 29. F4D-1 Skyray |
| 14. Argosy C. Mk. I | 30. Airedale |
| 15. WF-2 Tracer | 31. C-133A Cargo-master |
| 16. A4D Skyhawk | 32. Fiat G.91 |



VERTOL MODEL DEVELOPMENT



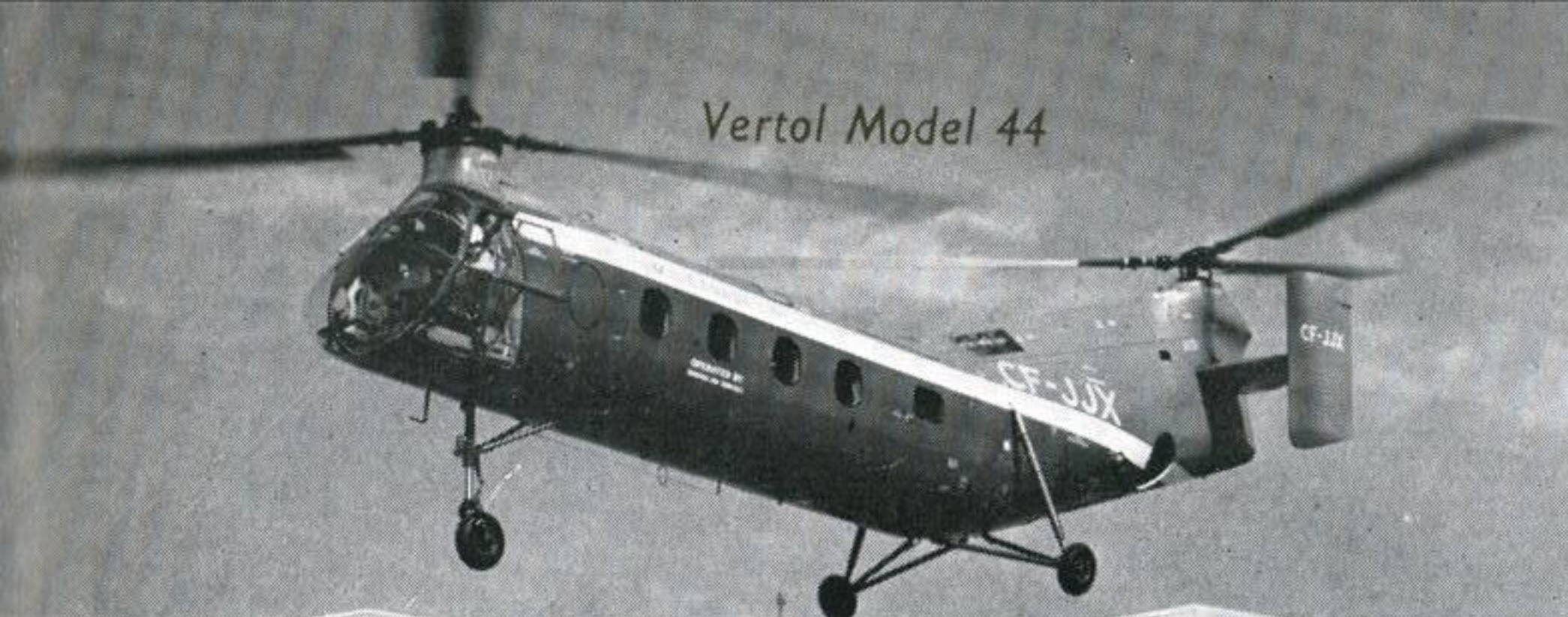
Vertol Helicopters

The identification of individual Vertol helicopters is complicated by the difficulties in putting the right name to each familiar shape. Types used by civilian operators are known by the manufacturers' designations and military types by service designations and names. Not only that, but the company itself changed its name from the Piasecki Helicopter Corporation in 1956 and it is now a division of the Boeing Company.

The chart above shows Piasecki/Vertol/Boeing-Vertol helicopter development up to last year. Below are representative Piasecki types. The giant YH-16A Transporter (centre) has been abandoned but the H-21 Shawnee (left) and HUP Retriever (right) are still in U.S. Army and U.S. Navy service respectively.

Whether or not you recognise the particular type of Vertol is not so important so long as you identify it as of Vertol type and these helicopters all have a characteristic "tilt up" at the tail.





Vertol Model 44



Vertol Retrieve
(U.S. Navy—HUP/U.S. Army—Army Mule)



Vertol Work Horse (U.S. Army Shawnee)

Vertol Vortices

From these key pictures, using the technique described on page 12, try identifying the targets below. It so happens that all our key pictures show these American Vertols in Canadian service and varying insignia on the targets indicate how widely these helicopters are used. Do not be fooled by the bulges under, for example, the Swedish Vertol (No. 15) which constitute flotation gear or auxiliary fuel tanks (as in No. 22). Since there is little detail difference between the Work Horse and the Model 44, note that the latter appears rather more squat. The number and position of windows is not a true guide as these vary with models of the same type.



In Passing...

Instructions for Carrying Out Identification Lessons in the *Journal*.

To obtain the maximum benefit from the identification lessons in the *Journal*, the procedure set out below should be followed carefully.

1. Read all the text associated with the lesson. This may contain special lesson instructions and background information on the aircraft, ship or tank concerned.

2. List the target numbers on a piece of paper. This is important as targets need not be tackled in numerical order.

3. Use the main key pictures to identify the target pictures, starting with the easy ones first so as to gain experience. Use identified targets to help with the more difficult ones.

4. When certain of the identity of a target, write down its name immediately against the target number on your list. This is an important part of the procedure which ensures training in identification.

5. Lessons should not be hurried or given a time limit. So far as beginners are concerned, it is more important to identify accurately rather than quickly. Speedy identification will come with experience.

6. Don't try to memorise anything.

* * *

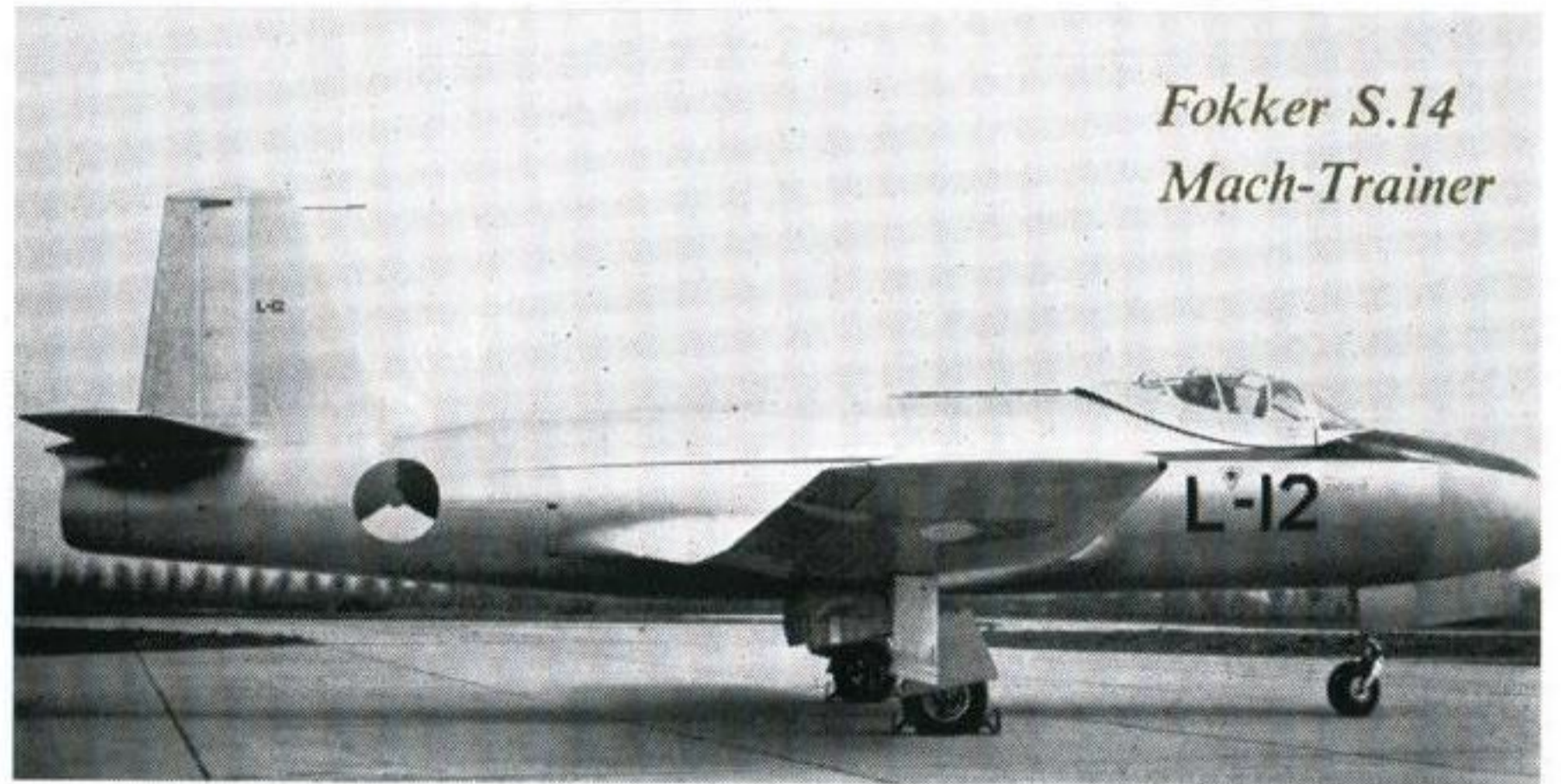
Book Review

"The Observer's World Aircraft Directory" by William Green. Published by Frederick Warne & Co. Ltd. Price 15s. (\$3.50).

Here for the first time is a comprehensive, up-to-date directory of world aircraft; in compact form, it is packed with over 800 illustrations and some 200,000 words of text.

Apart from a directory of world aircraft types, features include insignia of World Air Forces, a World Airline Directory, a Guide to Soviet Aircraft, a Glossary of Aeronautical Terms, an Air-Launched Missile Directory, etc.

The scope of the coverage can be gauged from the fact that not only do photographs of up-to-the-year aircraft appear, but also photographs of such pre-war types as the D.H. Dragonfly, Ford 5-AT-B and Junkers Ju52/3M which are still in service in various parts of the world. This book fully justifies the use of the word Directory in the title. Two illustrations from this book appear opposite.—D. B. R.



* * *



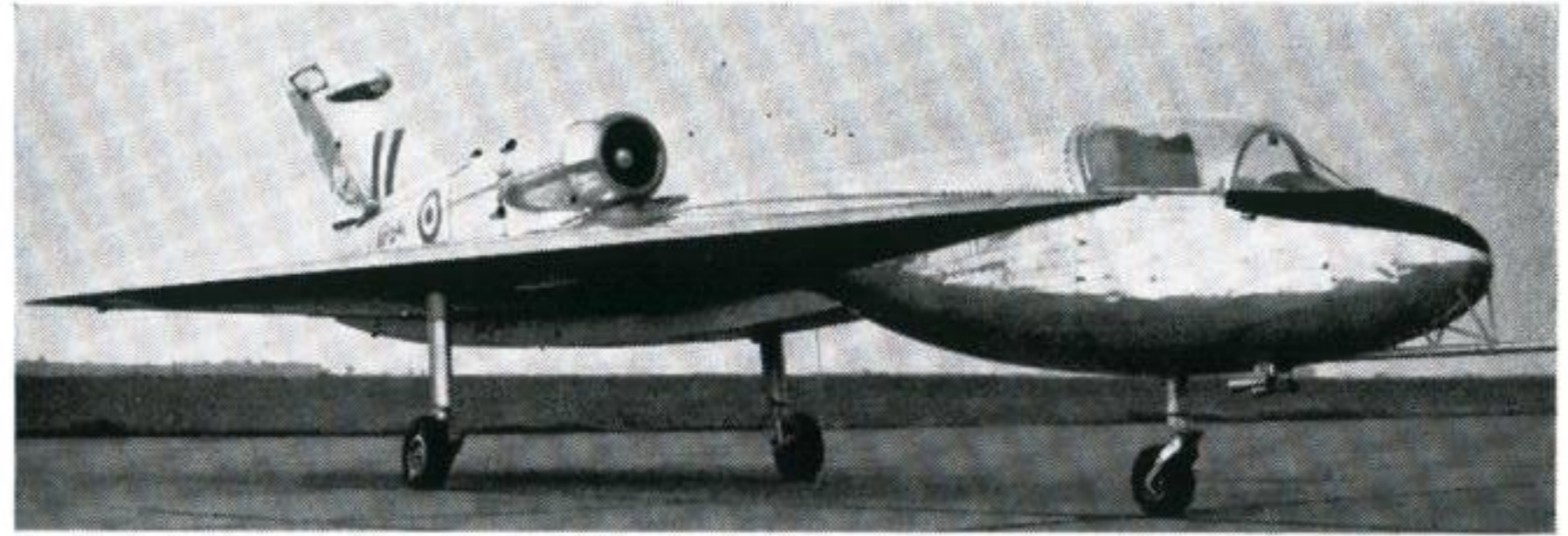
Undeclared Joker!

The solution for Target No. 12 on page 120 of the August 1961 issue of the *Journal* should read "DC-8" not "VC-137A (M.A.T.S. of U.S.A.F.)" as given. For those who would ask how a Douglas DC-8 can be identified from a Boeing 707 from that angle; the answer is intakes—nostrils appropriately under the nose—can be clearly seen on the DC-8 and are absent on the Boeing 707 as shown (left).

* * *

Briefs

A collection of items
of news and interest.



Dainty Delta

The world's slenderest delta, with a more pronounced sweep-back on the wing than any other aircraft, characterises the new Handley Page H.P.115 research aircraft. It has a span of only twenty feet compared with its length of forty-five feet.

* * *



Military Conversion

Canberra P.R. Mk. 9 XH132 converted by Short Bros. and Harland Ltd., at Belfast for conducting trials on the de Havilland Red Top missile guidance system. It is known as the Short and Harland SC.9.

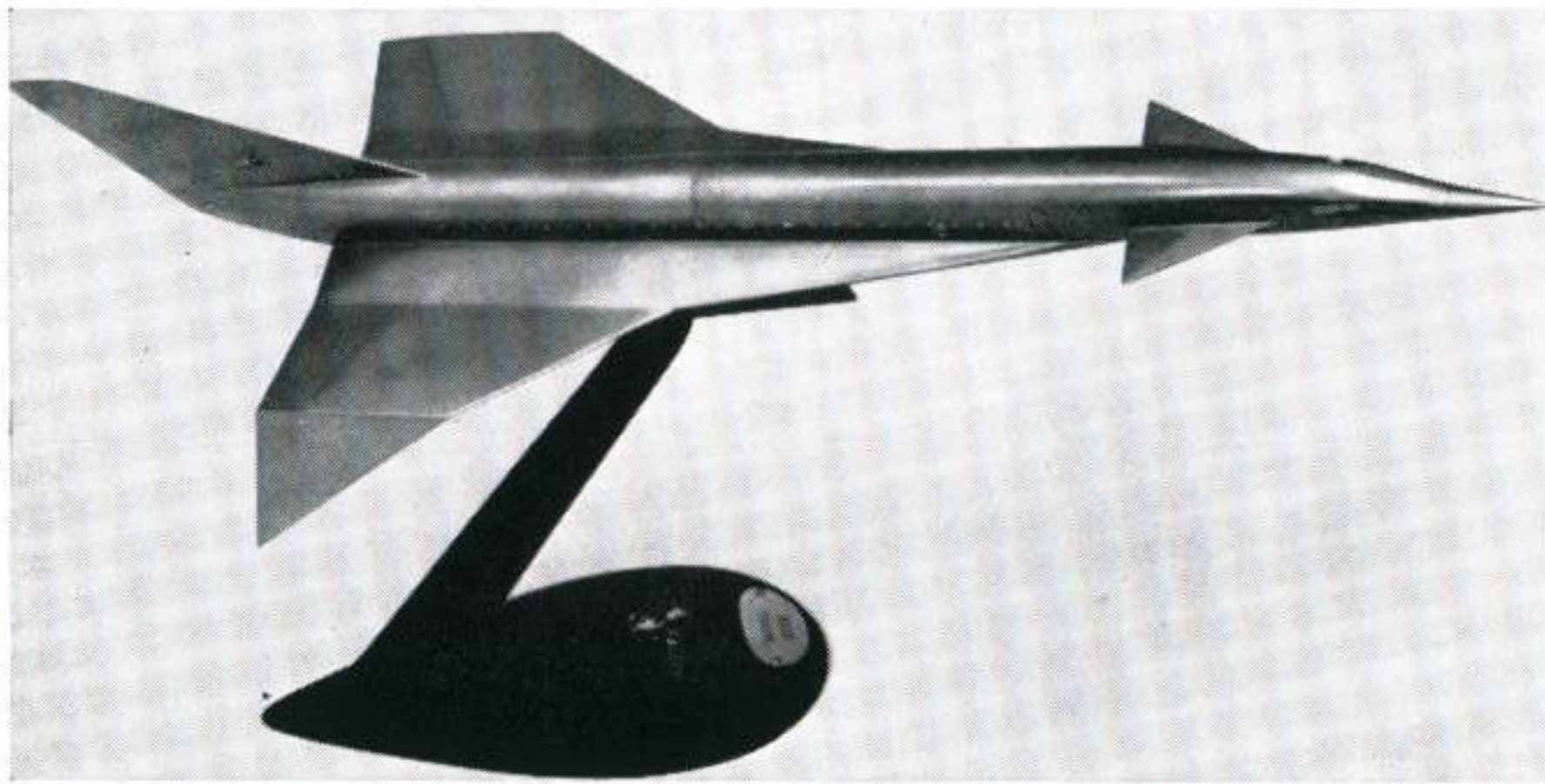
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Civil Conversion

A Douglas DC-4 converted to a car-ferry produces the Aviation Traders ATL.98 Carvair of which the first, G-ANYB, is shown on its test flight.

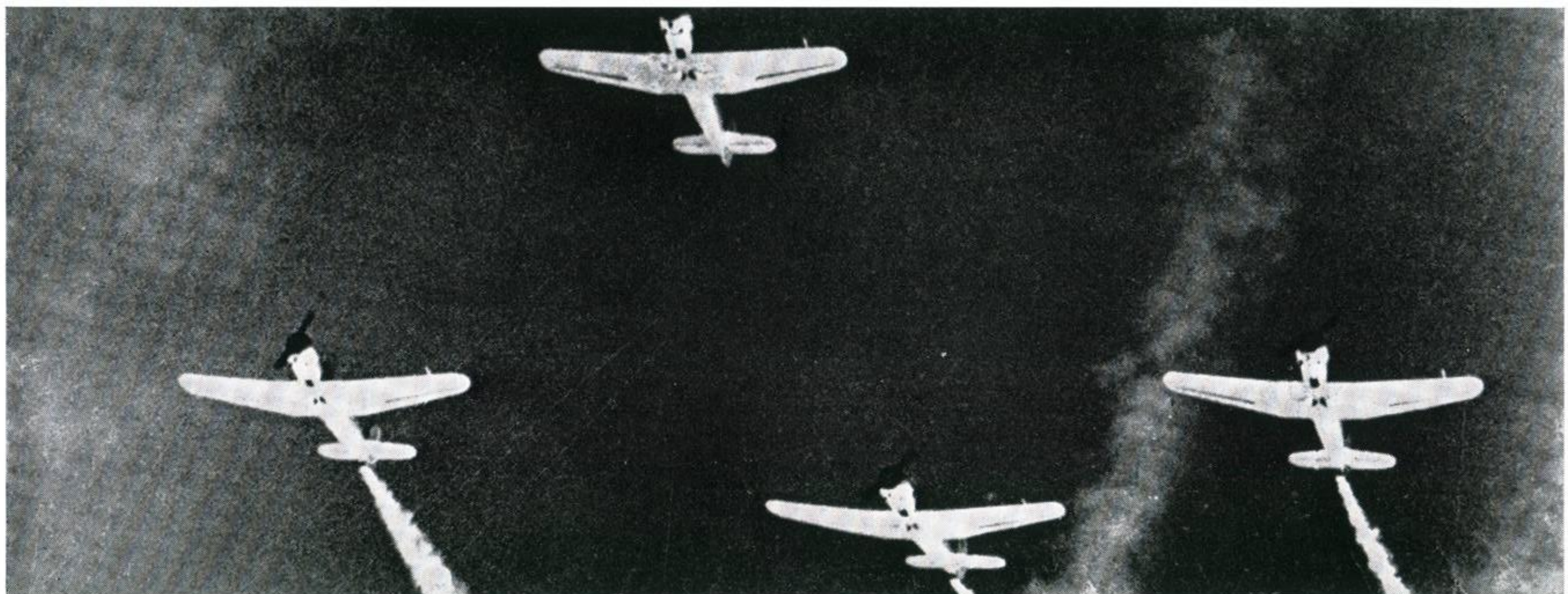
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Douglas Dart

A model of a Douglas project to carry 100 plus passengers at three times the speed of sound and so bridge the Atlantic in two hours in 1970.

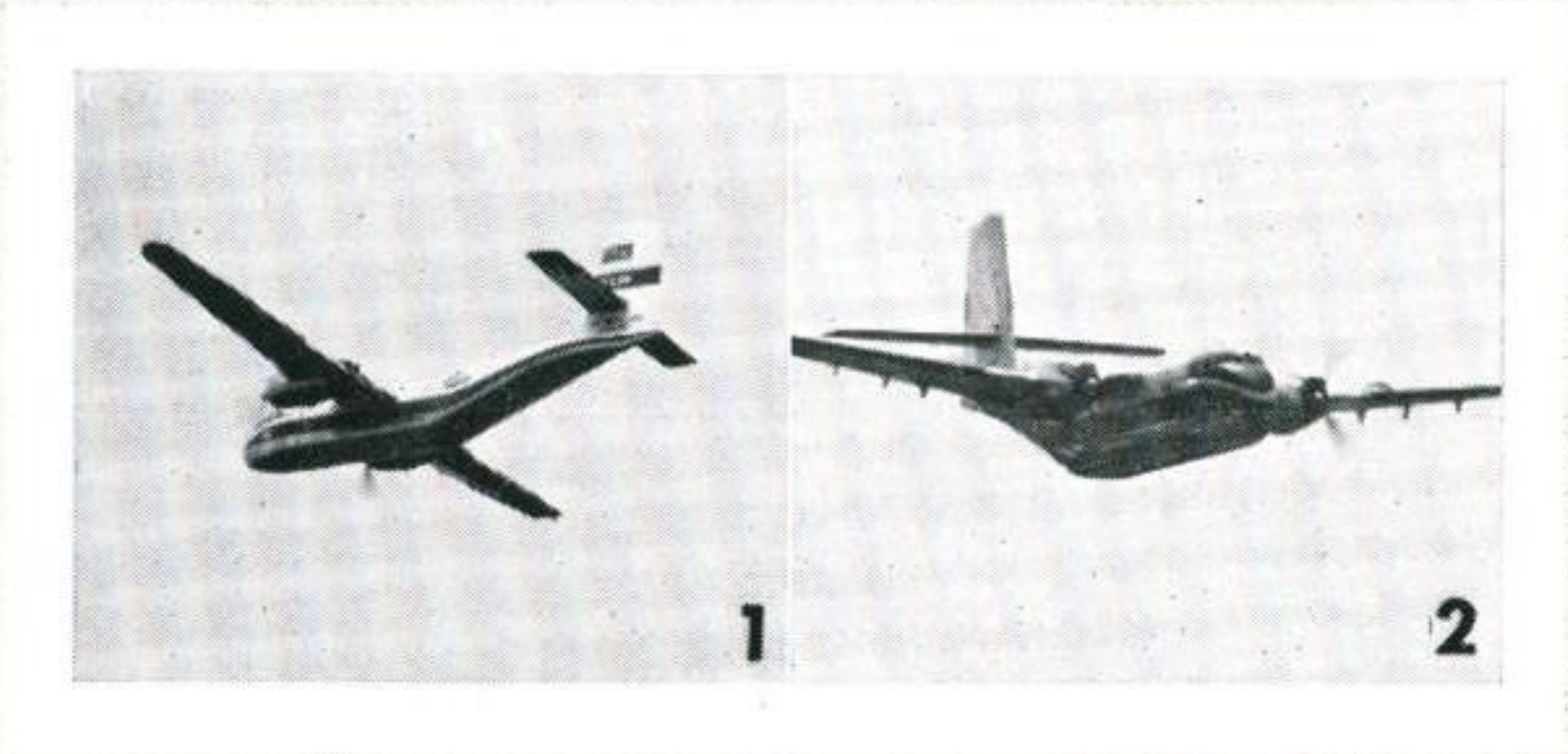
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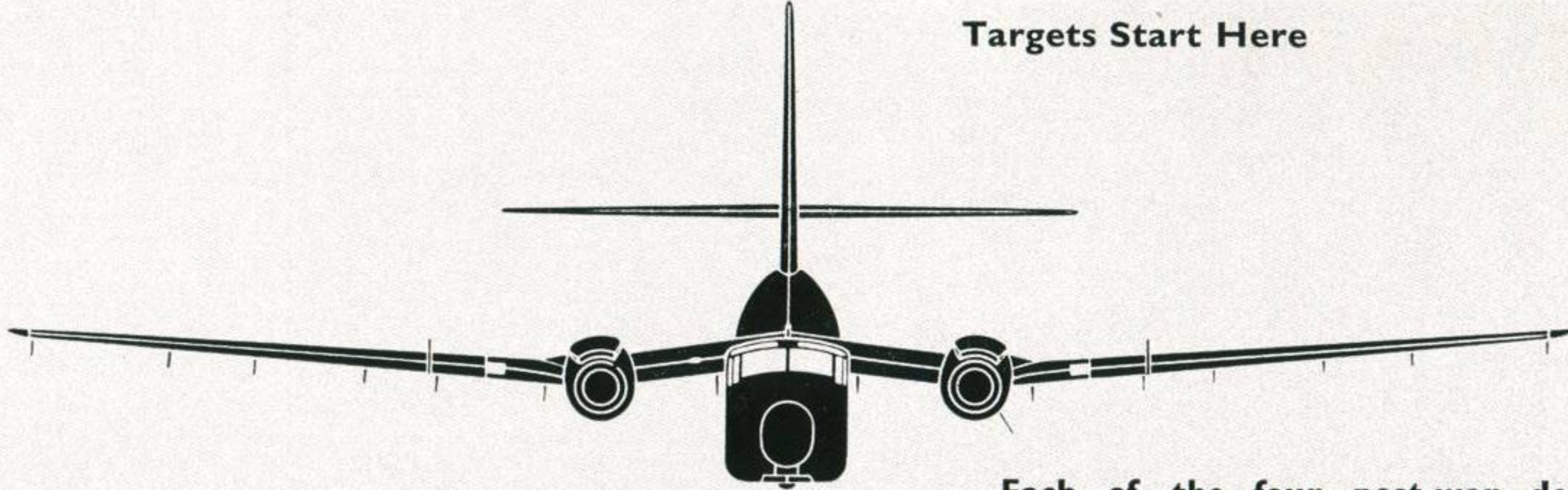
Max over Moscow. A picture taken during the Russian Aviation Day at Tushino near Moscow of Yak-18A (MAX) trainers giving an aerobatic display.

(U.S. Army YAC-IDH, R.C.A.F. CC-108)

De Havilland DHC-4 Caribou

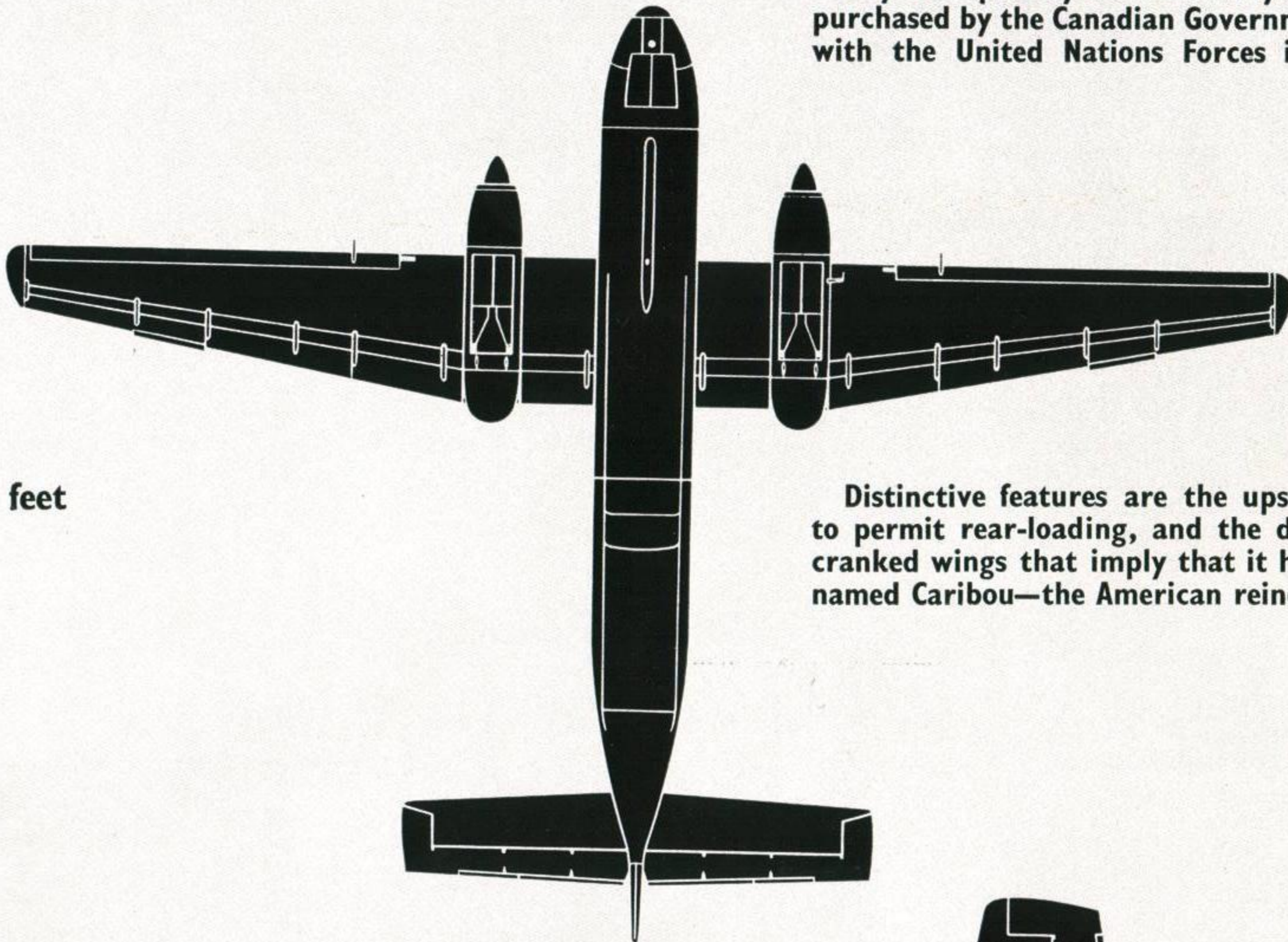


Targets Start Here



Each of the four post-war designs of de Havilland Aircraft of Canada has had a marked success, from the DHC-1 Chipmunk, through the DHC-2 Beaver and DHC-3 Otter to their latest, the DHC-4 Caribou, featured here.

The Caribou has been ordered as an all-weather utility transport by the U.S. Army and four were purchased by the Canadian Government for work with the United Nations Forces in the Congo.



Span 96 feet

Distinctive features are the upswept fuselage to permit rear-loading, and the deep nose and cranked wings that imply that it has been aptly named Caribou—the American reindeer.

The Caribou is a piston-engined aircraft, but one R.C.A.F. aircraft has been experimentally fitted with turboprop engines, and experiments are being conducted with a U.S. Army Caribou to develop a combined wheel/ski undercarriage.



Full lesson instructions appear on page 12 and these should be carefully carried out if maximum benefit is to be derived from this lesson.



Solutions appear on the cover.

SOLUTIONS TO TESTS AND EXERCISES

CARIBOU

Page 14

All targets are of the Caribou except No. 23 which is a Friendship.



Cover photo: A Buccaneer S.1 (previously known as the Blackburn N.A.39) of the initial production order for twenty flying along the coast. In typical Royal Navy aircraft colours of white and extra-dark sea grey, it is understood that later production aircraft, like the R.A.F.'s 'V' Bombers, will be all-white. The Buccaneer S.1 is powered by two D.H. Gyron Junior turbojets, and a new version, known as the S.2, with two Rolls-Royce Spey turbofans, has been announced.

VERTOL VORTICES

Page 10

All targets are of Vertol helicopter types as given except No. 3 which is a HORSE (Yak 24). The additional information in brackets is not part of the test, but is included to show the wide use made of these Vertols.

- | | |
|--|--|
| 1. Work Horse (R.C.A.F. H-21C type) | 20. Work Horse (U.S.A.F. H-21B Shawnee) |
| 2. Work Horse (R.C.A.F. H-21C type) | 21. Work Horse (U.S. Army H-21C Shawnee) |
| 3. HORSE (Yak 24 Russian) | 22. Work Horse (U.S.A.F. H-21B Shawnee) |
| 4. Vertol 44A (U.S. Civil) | 23. Work Horse (U.S. Army H-21C Shawnee) |
| 5. Work Horse | 24. Work Horse (French Army) |
| 6. Vertol 44B (French Air Force) | 25. Vertol 44B (Swedish Navy) |
| 7. Work Horse (U.S.A.F. H-21B Shawnee) | 26. Work Horse (U.S.A.F. H-21B Shawnee) |
| 8. Work Horse (U.S.A.F. H-21B Shawnee) | 27. Work Horse (U.S.A.F. YH-21 Shawnee) |
| 9. Vertol 44B (Spartan Air Services) | 28. Retriever (U.S. Navy HUP) |
| 10. Work Horse (U.S. Army H-21D Shawnee) | 29. Work Horse (U.S.) |
| 11. Vertol 44B (New York Airways) | 30. Work Horse (U.S.) |
| 12. Work Horse (U.S.A.F. H-21B Shawnee) | 31. Work Horse (U.S.A.F. H-21B Shawnee) |
| 13. Work Horse (French Army) | 32. Vertol 44B (Swedish Navy) |
| 14. Work Horse (U.S.A.F. H-21A Shawnee) | 33. Work Horse |
| 15. Vertol 44B (Swedish Navy) | 34. Work Horse (U.S.A.F. H-21B Shawnee) |
| 16. Work Horse (U.S.A.F. H-21A Shawnee) | 35. Work Horse (R.C.A.F. H-21C type) |
| 17. Work Horse (U.S. Army H-21A Shawnee) | 36. Work Horse (U.S.A.F. H-21A Shawnee) |
| 18. Vertol 44B (New York Airways) | |
| 19. Retriever (U.S. Navy HUP) | |

Page 2

THEY FAILED TO RECOGNISE

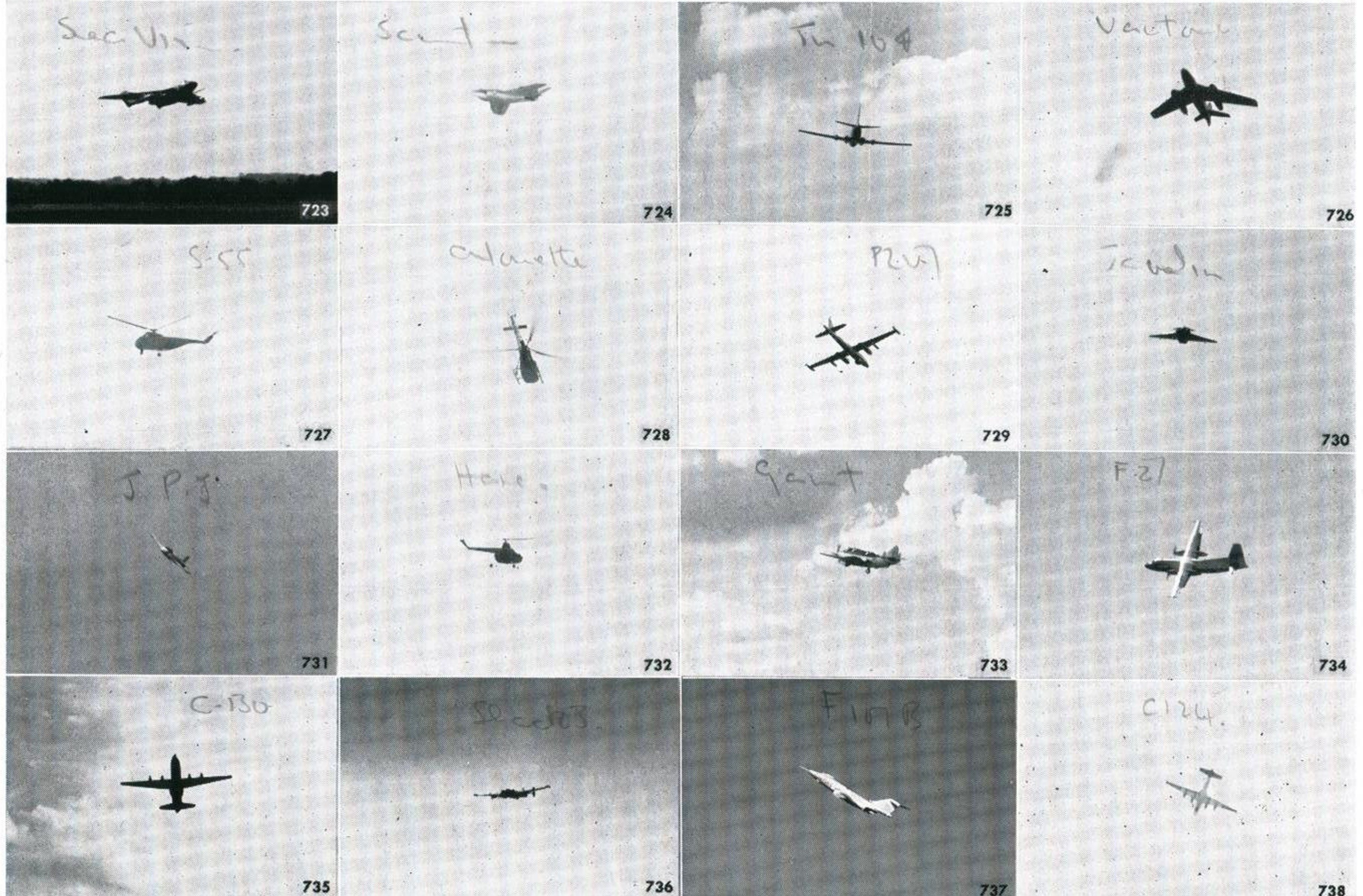
- | | |
|--|-------------------------------|
| 1. P3V-1 Orion (U.S. Navy) | 16. P3V-1 Orion (U.S. Navy) |
| 2. P5M-2 Marlin (U.S. Navy) | 17. Shackleton M.R.3 (R.A.F.) |
| 3. P2V-7 Neptune (U.S. Navy) | 18. P5M-2 Marlin (U.S. Navy) |
| 4. P2V-7 Neptune (Japanese Air Self Defence Force) | 19. CL-28 Argus (R.C.A.F.) |
| 5. CL-28 Argus (R.C.A.F.) | 20. P2V-7 Neptune (R.C.A.F.) |
| 6. Shackleton M.R.3 (R.A.F.) | 21. CL-28 Argus (R.C.A.F.) |
| 7. P2V-7 Neptune (U.S. Navy) | 22. CL-28 Argus (R.C.A.F.) |
| 8. CL-28 Argus (R.C.A.F.) | 23. P2V-Neptune (U.S. Navy) |
| 9. P5M-2 Marlin (U.S. Navy) | 24. Shackleton M.R.3 (R.A.F.) |
| 10. Shackleton M.R.3 (R.A.F.) | 25. P5M-2 Marlin (U.S. Navy) |
| 11. CL-28 Argus (R.C.A.F.) | 26. P5M-1 Marlin (U.S. Navy) |
| 12. P3V-1 Orion (U.S. Navy) | 27. P3V-1 Orion (U.S. Navy) |
| 13. Shackleton M.R.3 (R.A.F.) | 28. P2V-7 Neptune (U.S. Navy) |
| 14. P3V-1 Orion (U.S. Navy) | 29. P5M-1 Marlin (U.S. Navy) |
| 15. Shackleton M.R.3 (R.A.F.) | 30. P3V-1 Orion (U.S. Navy) |

Solutions to Airborne Headaches No. 78 in the November 1961 issue:—

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|----------------------|-----------------|-----------------|
| 708. Vigilante | 713. Tiger | 718. Flashlight |
| 709. Neptune | 714. Mirage | 719. Lightning |
| 710. DC-8 | 715. Phantom 2 | 720. Skyhawk |
| 711. Vulcan B. Mk. 2 | 716. Vautour | 721. Fishbed |
| 712. DC-6 | 717. Skywarrior | 722. Badger |

AIRBORNE HEADACHES

No. 79



Submission dates for answers to Airborne Headaches No. 79 will be notified at Group Headquarters.