

JOINT



SERVICES

RECOGNITION

Journal



Vol. 20 APRIL 1965 No. 4



Helicopters built by Sud-Aviation displayed at Merignane. These types are, front to rear: Djinn, Alouette II, Alouette Astazou, standard and armed versions of the Alouette III and Super Frelon. Aircraft in the background are (left) a Martinet—a version of the German wartime Siebel Si204D built in France in the early postwar years, a Sikorsky S-58 helicopter (centre)—Wessex in British service and the rest are Alouette III helicopters of which one is in Dutch military markings.



JOINT SERVICES

RECOGNITION JOURNAL

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ROTARY WINGS

IN spite of the fact that rotary-wing aircraft are restricted, as yet, to speeds much less than those of many aircraft during the last war—thereby increasing the chances of successful identification—there is a definite trend towards the helicopter to replace the aeroplane in roles where speed and range are not prime considerations.

The British Army, having already discarded its earlier marks of Auster, will phase out the Auster A.O.P.9 now that delivery of the Sioux A.H.1 (the official name now given to the Bell 47G Trooper to accord with the U.S. Army's name) is assured, first from Italian production from which deliveries are proceeding and then by licence production in this country. Although the Army did not apparently adopt the Beagle-Wallis one-man helicopter, the Wallis helicopters are going into production at Cambridge to meet an expected civil market.

Westland Aircraft, who now have almost the monopoly of helicopter production in this country by building to their own designs and by holding licence for the production of several American types, stated in their annual report that they believed the rotor will dominate the short-range civil transport field. They are now preparing a version of the Wessex, like the Whirlwind before it, for the civilian market, and are delivering the Scout A.H.1 and Wasp A.S.1 to the Army and Navy respectively, the Wessex A.S.1 and H.U.5 to the Royal

Navy and the H.C.2 to the Royal Air Force. Additionally there are orders for the Wessex from Iraq and an A.S.3 version is under development with new submarine detection equipment.

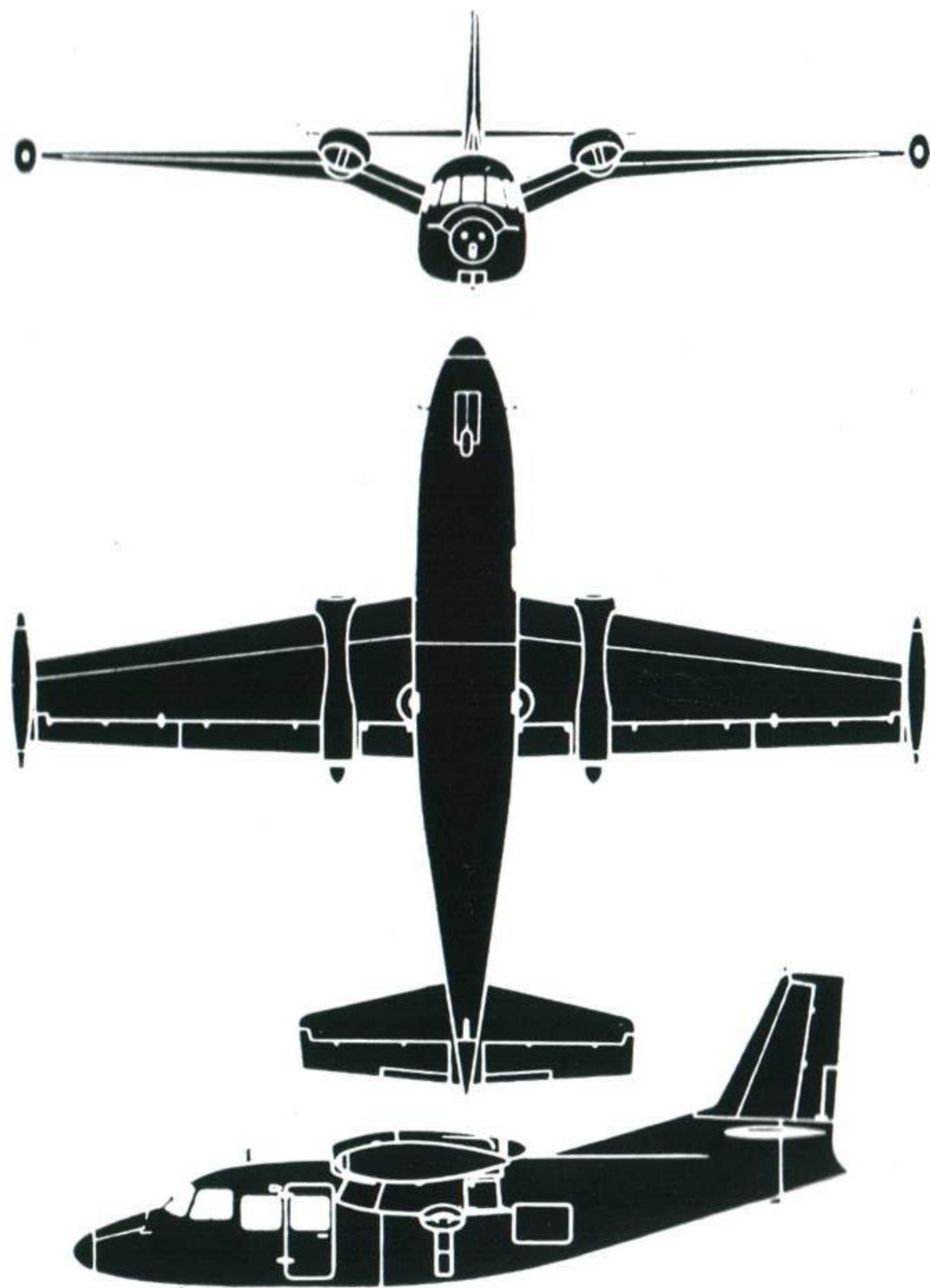
In the United States Army the trend towards the helicopter has been widely advertised by American manufacturers tendering designs for competitive evaluation to meet expected Army orders totalling some 3,000, for a light observation helicopter.

France has the Frelon, Alouette III and II in production as large, medium and light helicopters respectively. Italy has the Agusta firm which produces mainly Bell designs under licence including the Bell 47G for the British Army as the Sioux. Both these countries are not only meeting the need for helicopters in their armed forces by home production, but are also finding export markets.

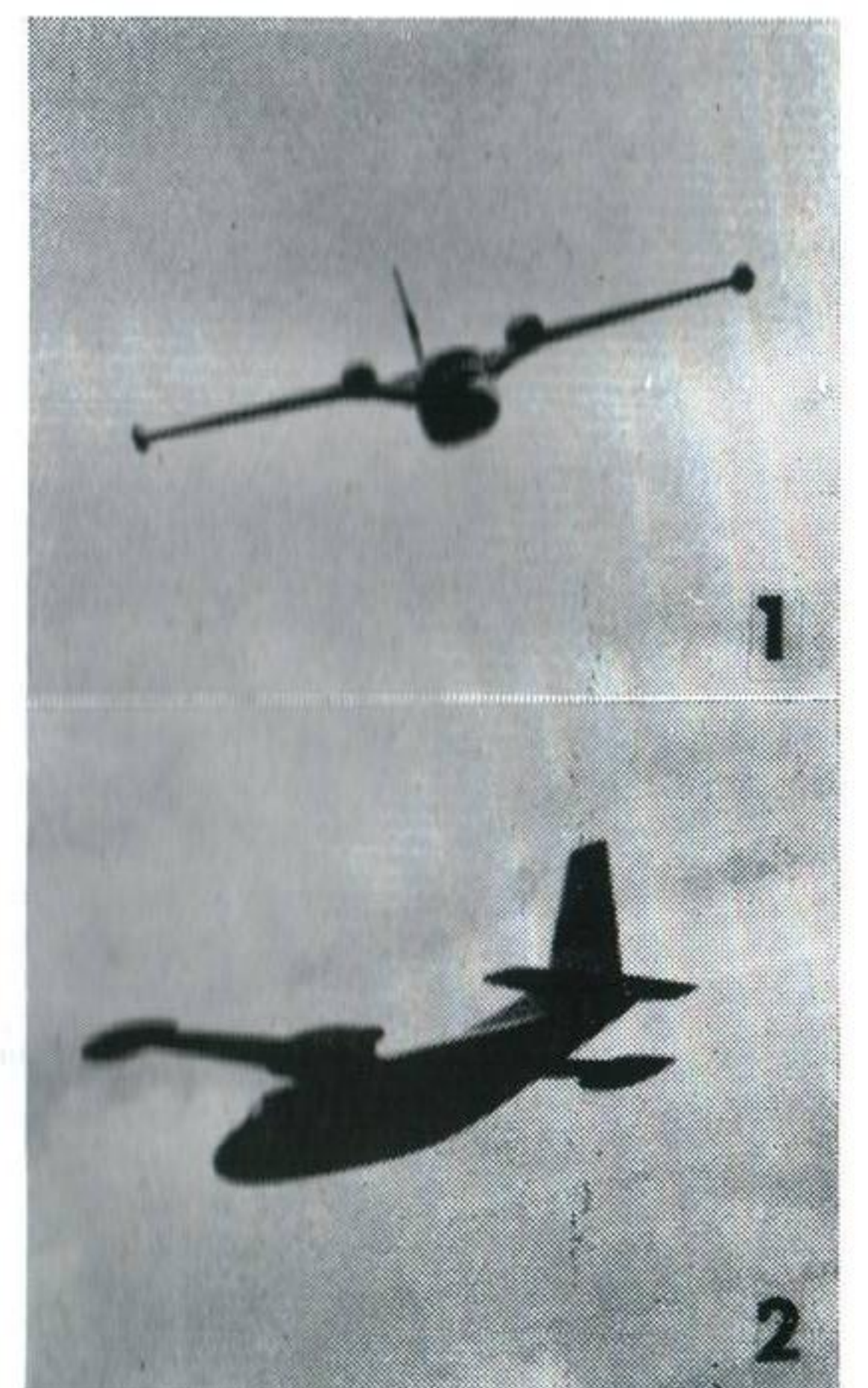
At present there are limitations to the capabilities of the helicopter especially in speed and range and the recent successes with VTOL aeroplanes may ultimately provide a serious challenge, but for the next five years at least, the importance of the helicopter in both military and civil roles will increase and in the *Journal* this will be reflected by devoting to them more space.

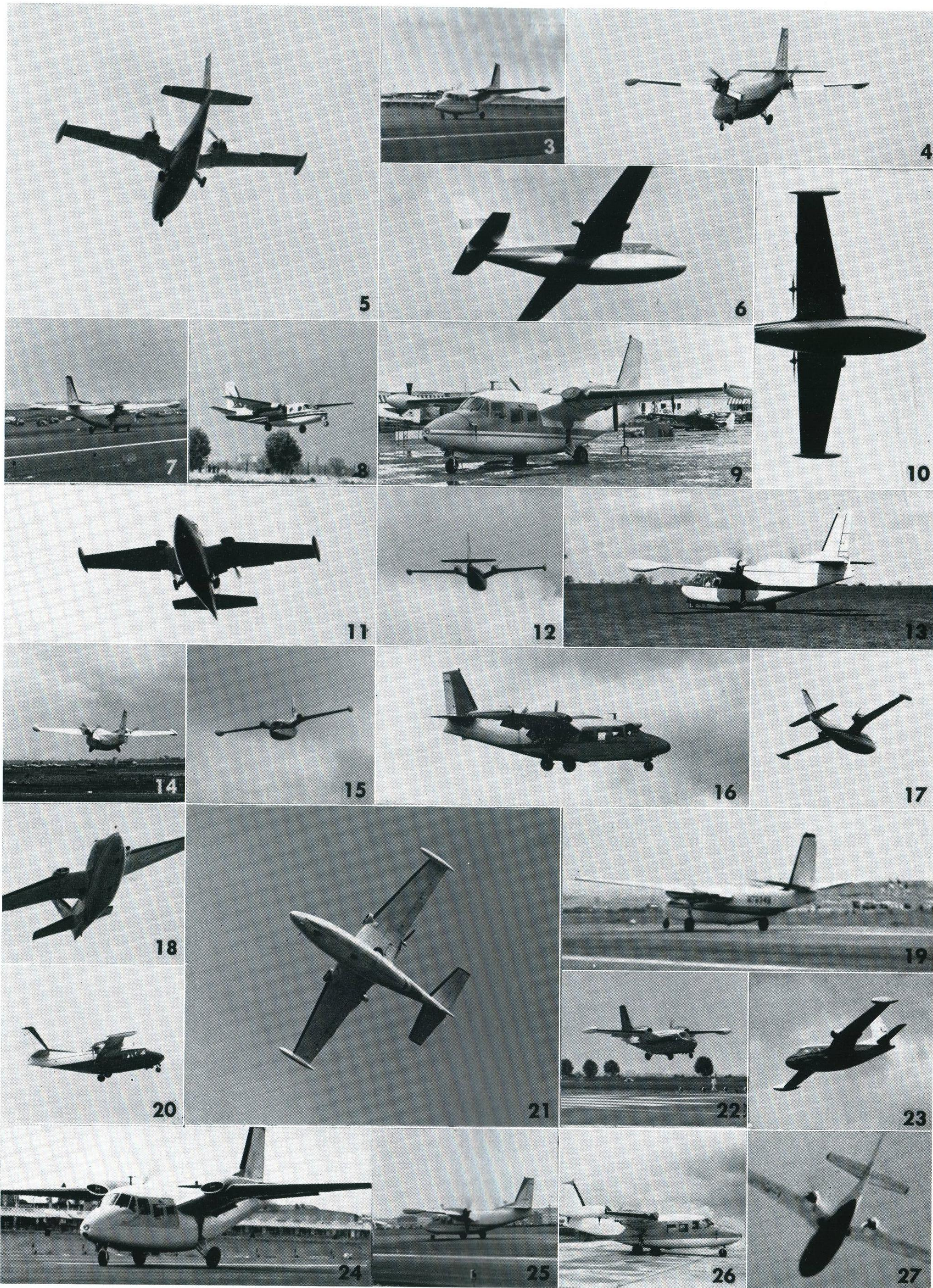
PORTOFINO

Piaggio P166B



This is an extension of the Piaggio P166 lesson of August 1962 to cover the P166B version, with a longer nose, which has been named Portofino. A new P166C version to accommodate 12, to the P166B's 6 to 10, is also being produced. The original P166 is in Italian Air Force Service and since the name Portofino correctly refers only to the P166B, Piaggio 166 may be used for reporting on all versions. Work to the instructions on page 100. *Solutions on the cover.*





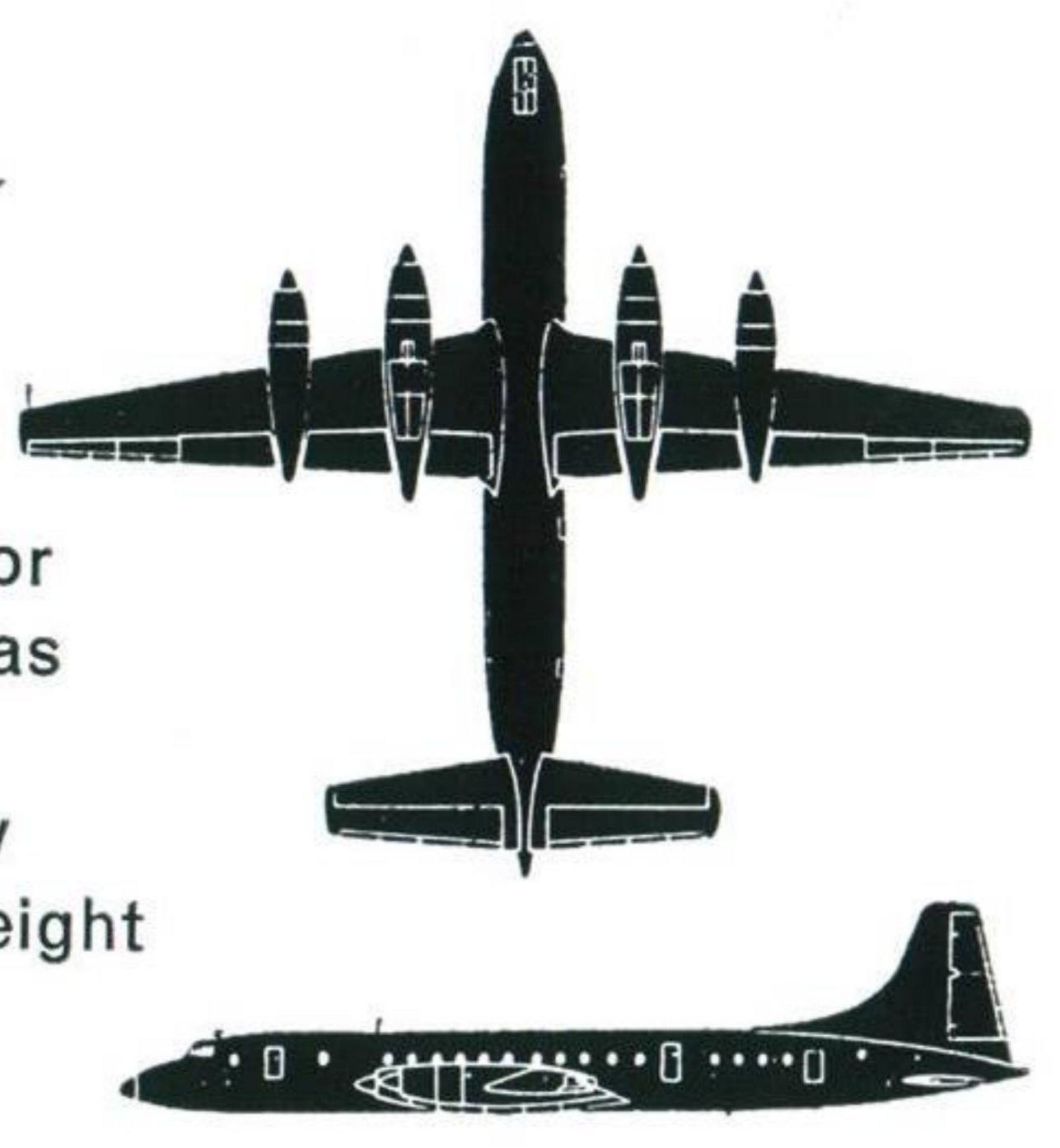
Solutions on the cover.





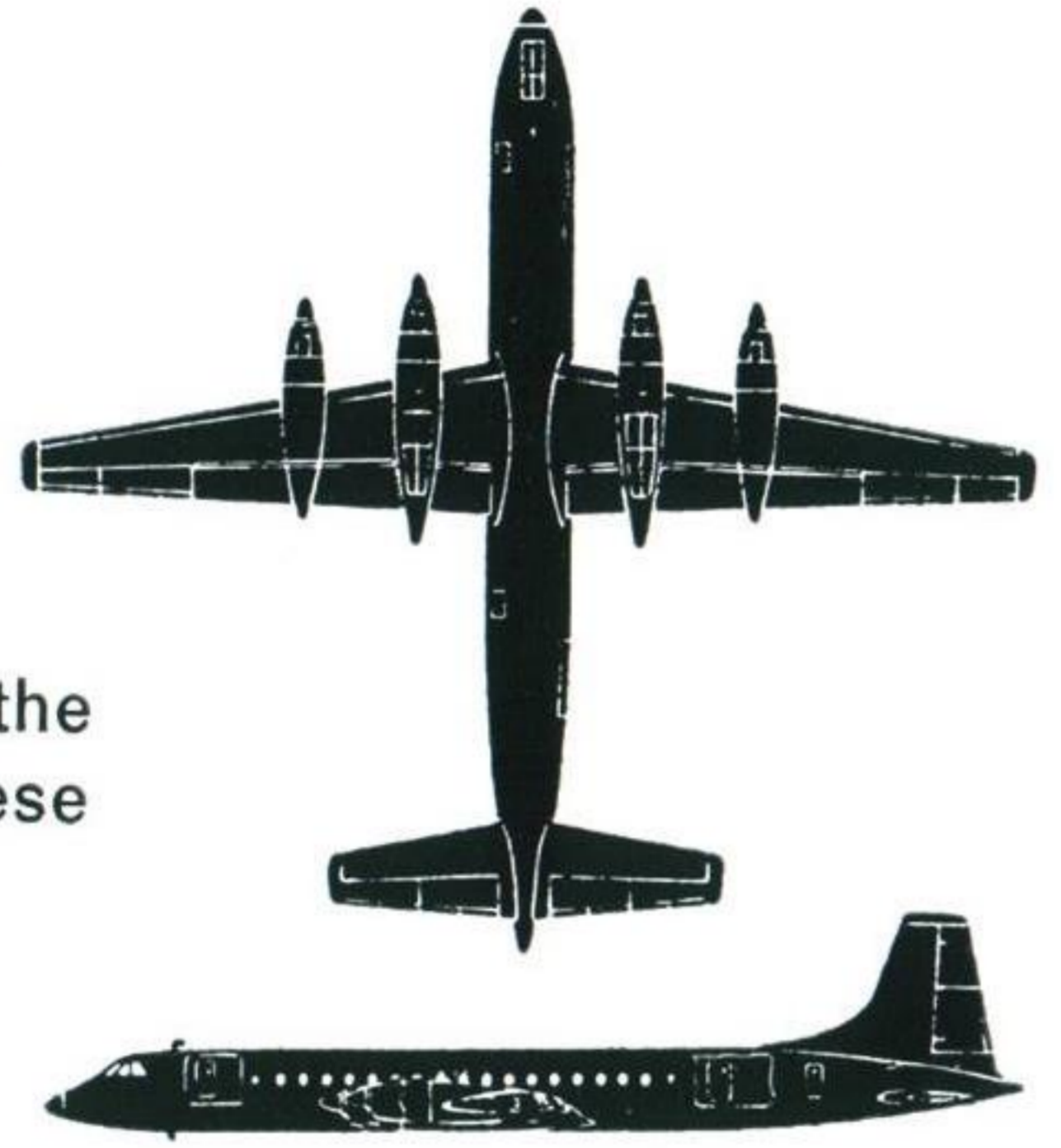
BRITANNIA C1/C2
(Britannia 253/252 series)

Twenty C1's were acquired for R.A.F. Transport Command as transports fitted with large freight doors and additionally three C2 mixed passenger-freight Britannias were obtained.



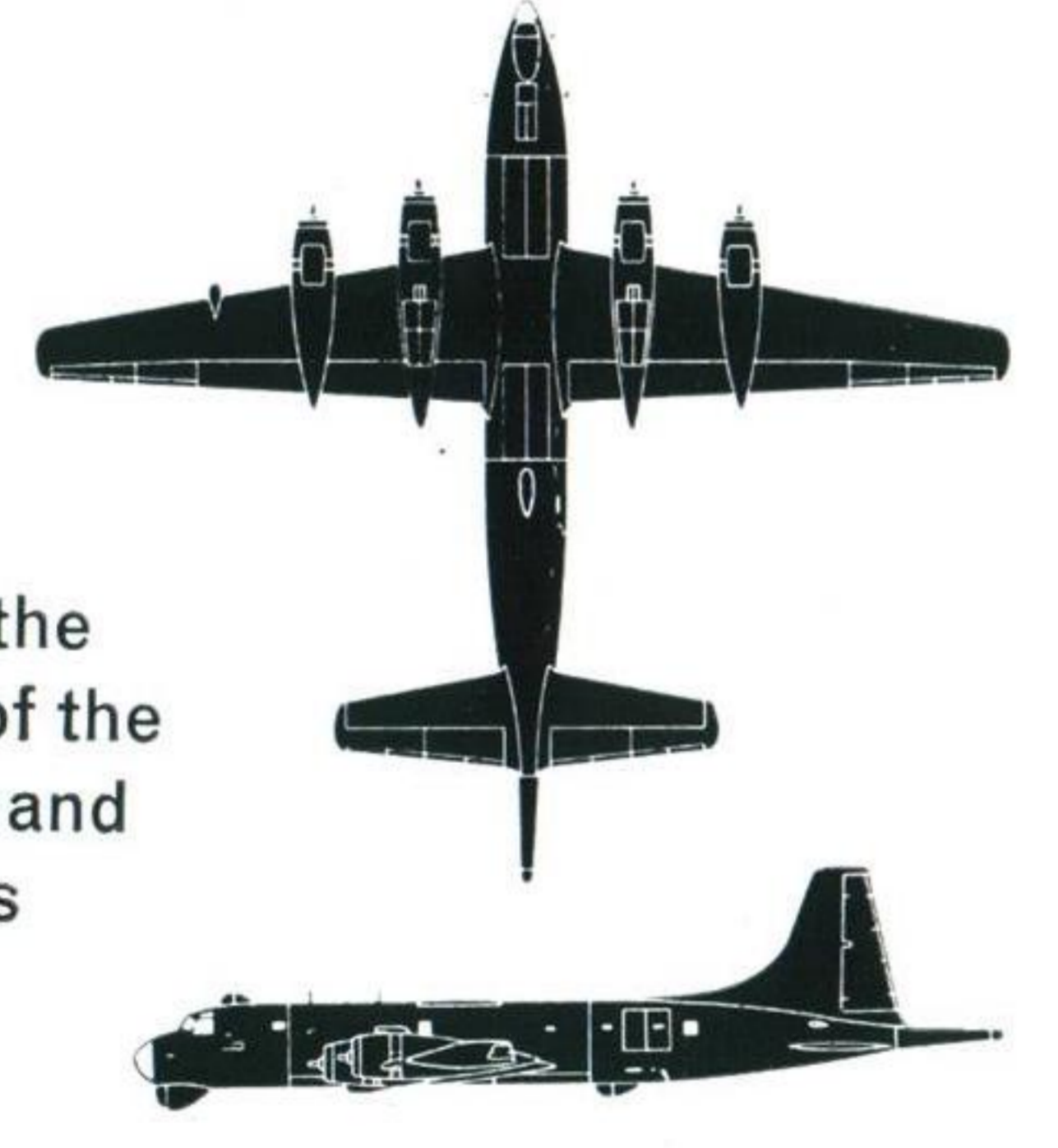
YUKON
(Canadair CL-44-6)

Twelve Canadair CL-44-6 acquired for the R.C.A.F. as the CC-106 Yukon. Basically these were military versions of the Forty-Four (see below) but without the swing-tail.



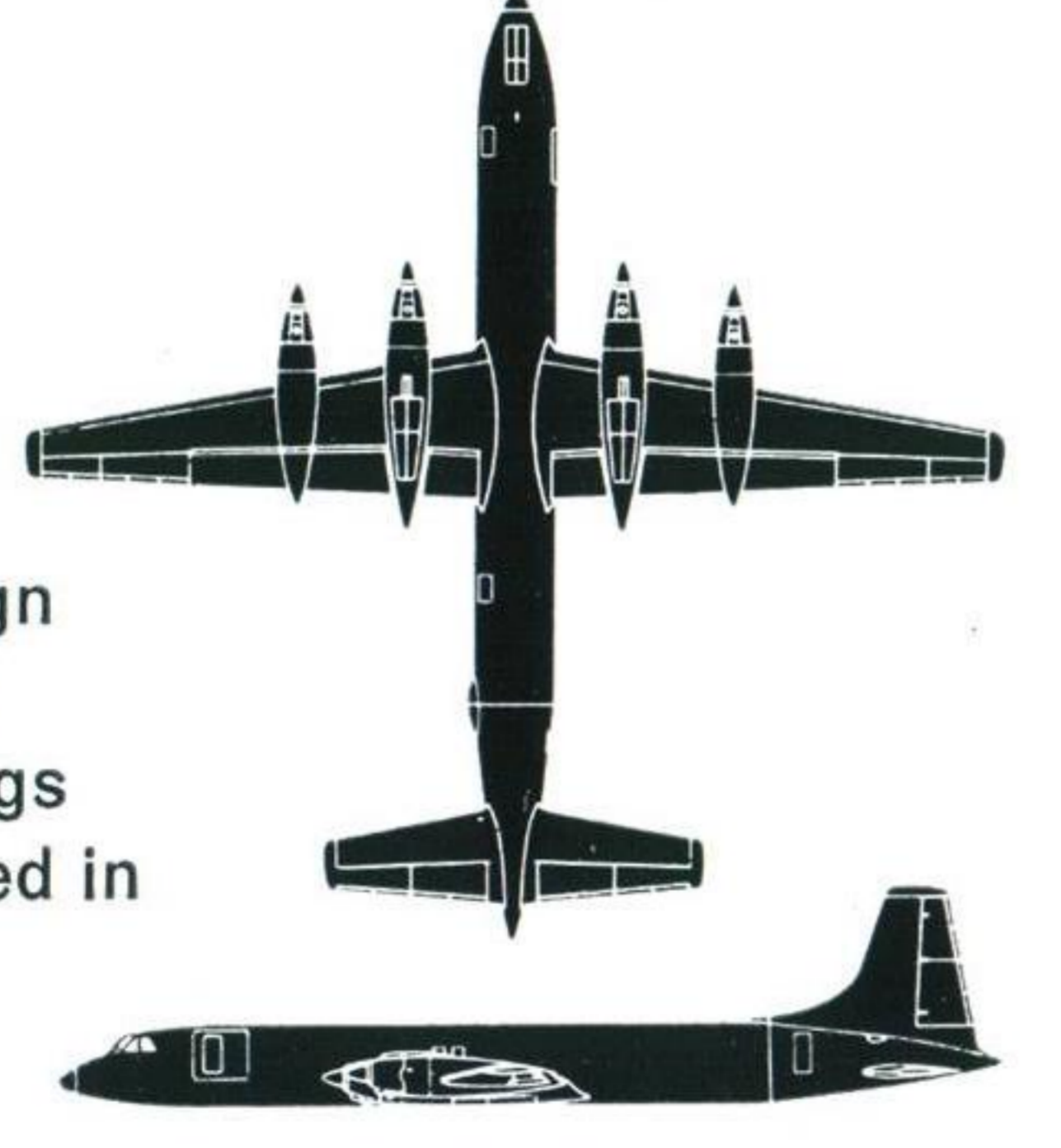
ARGUS
(Canadair CL-28)

The R.C.A.F.'s equivalent of the Shackleton is an adaptation of the Britannia, designated CP-107 and named Argus. The 13 Mk. 2s have a larger chin radome than the 20 Mk. 2s.



CANADAIR FORTY-FOUR

A stretched-fuselage re-design of the Britannia incorporating a swing-tail (note hinge fairings in photo) for loading, produced in Canada to the requirements of various civil operators.



BRITANNIA

Produced in several versions according to accommodation and payload, and by several airlines. Photo is of Britannia series 318.



BRITANNIA A total of 82 Britannias were built in five main versions and the majority are still in airline and R.A.F. service. In addition, modified designs have been produced by Canadair to meet both civil and military requirements in Canada. The main differences are in fuselage length which varies 114 to 124 feet on Britannias, up to the 137 feet of the Yukon. In this lesson you are required to identify the individual types by name as far as possible.

Span 142 feet (all versions)

Work to the instructions on page 100. Solutions on the cover.

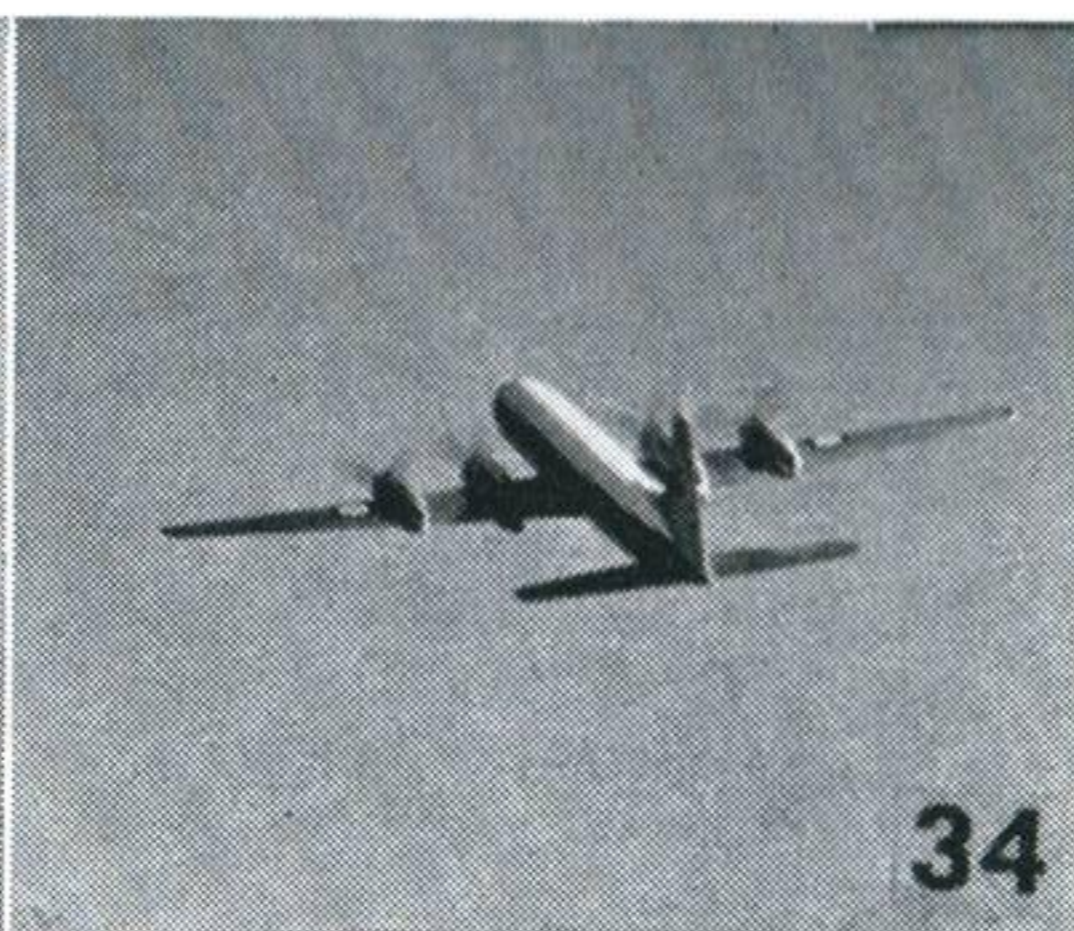


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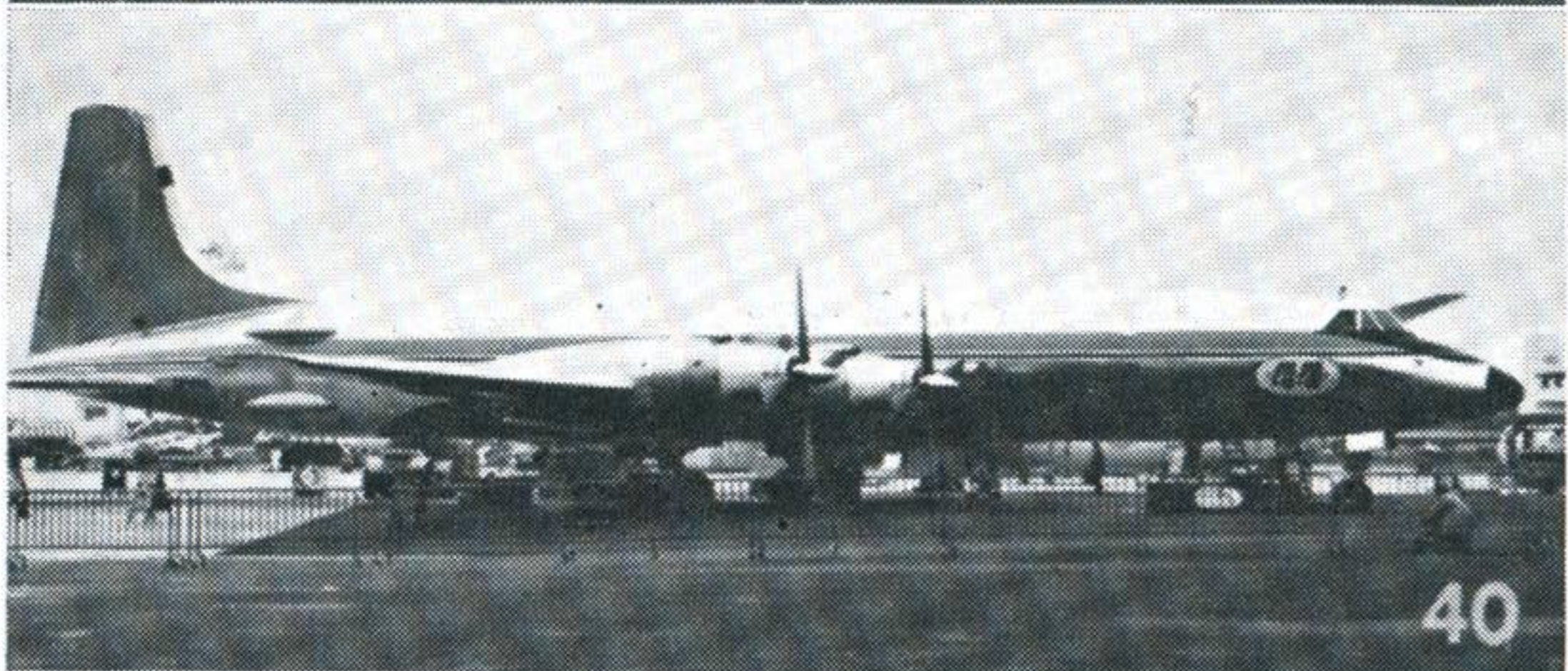
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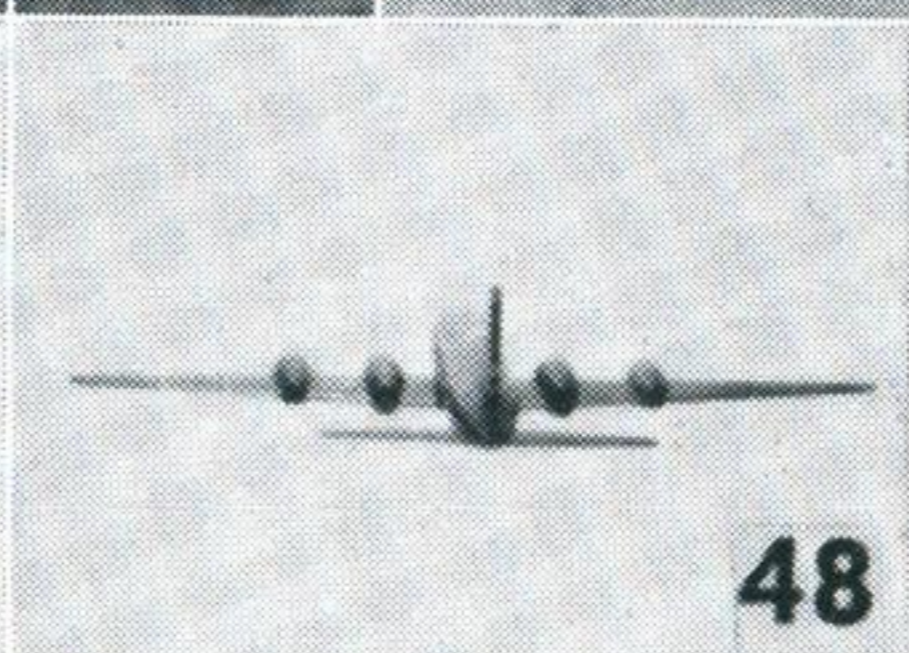
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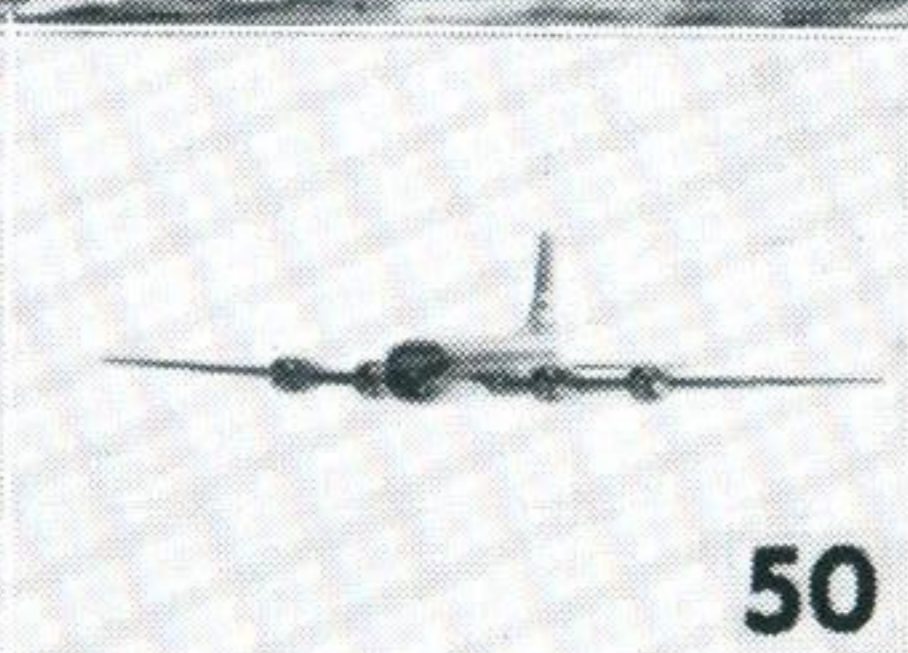
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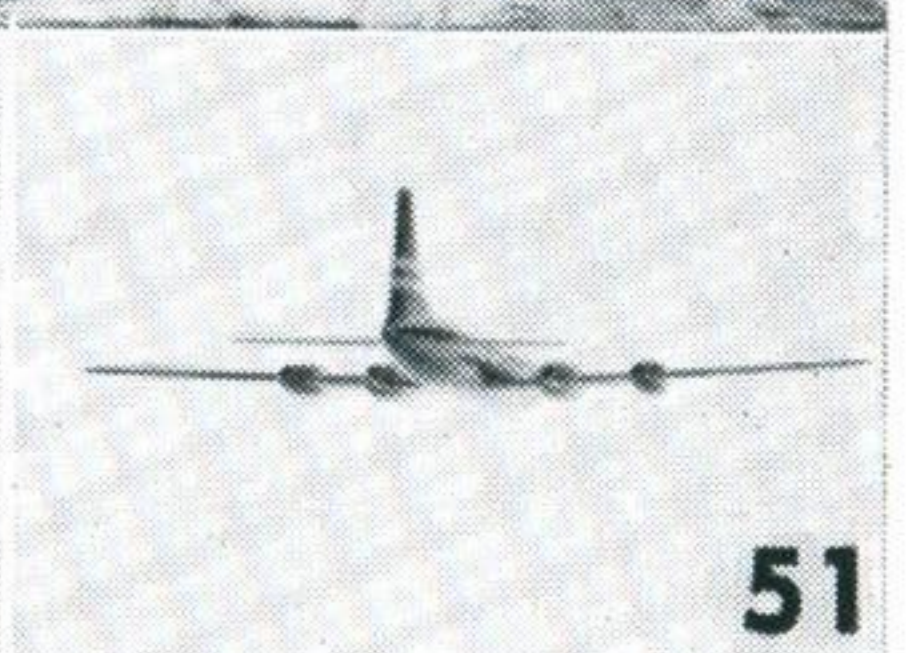
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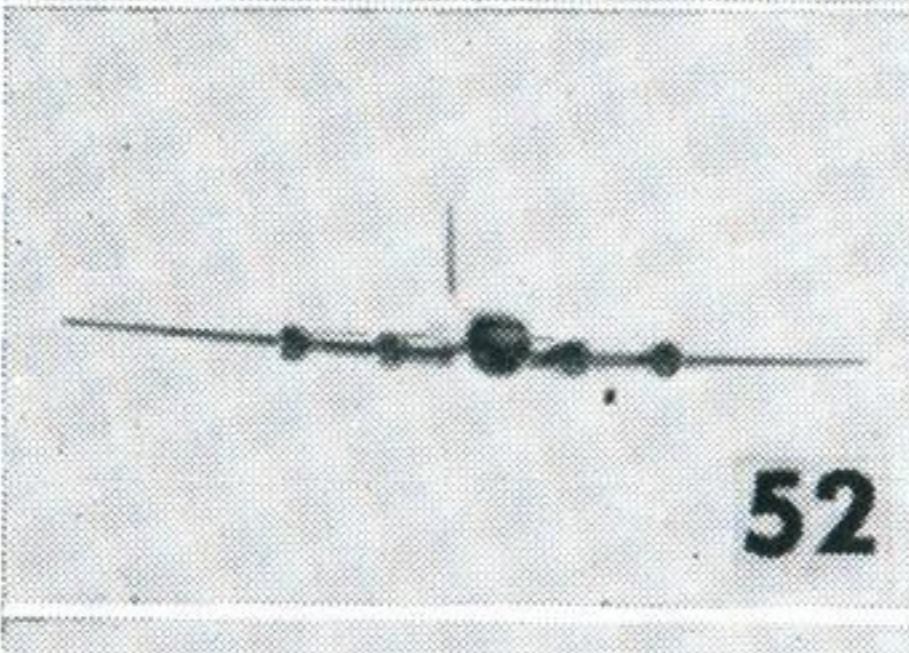
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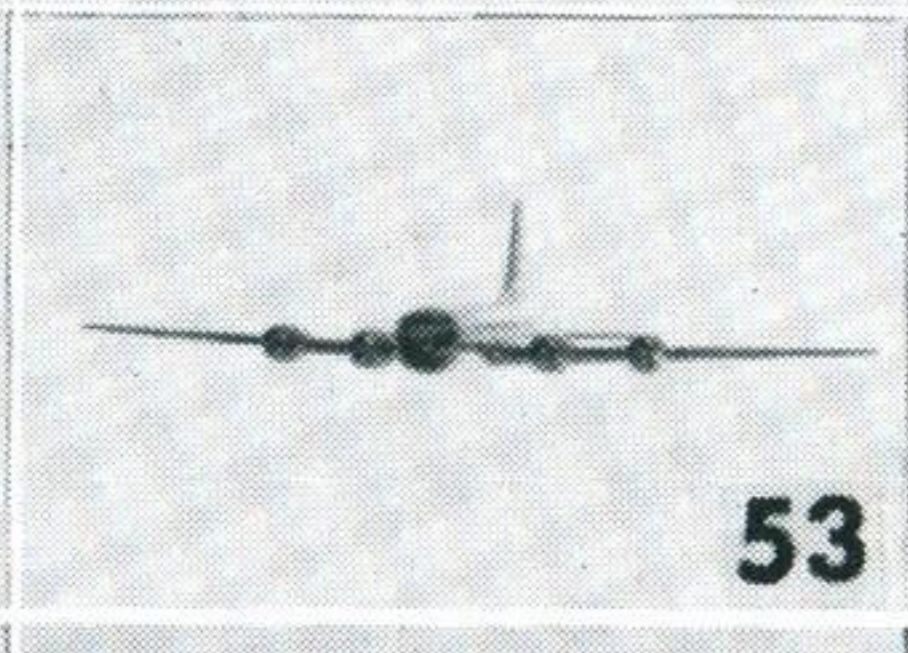
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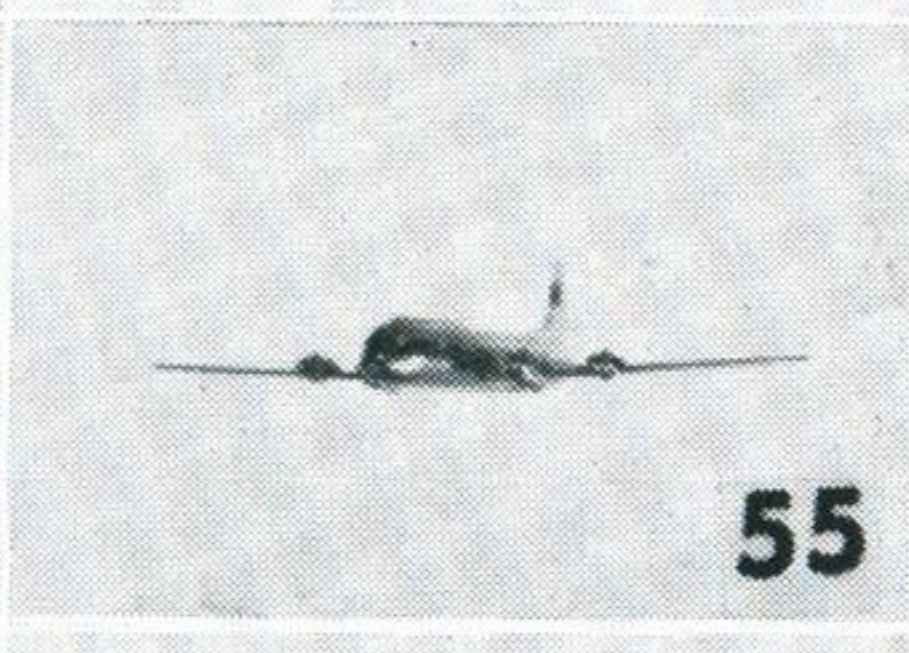
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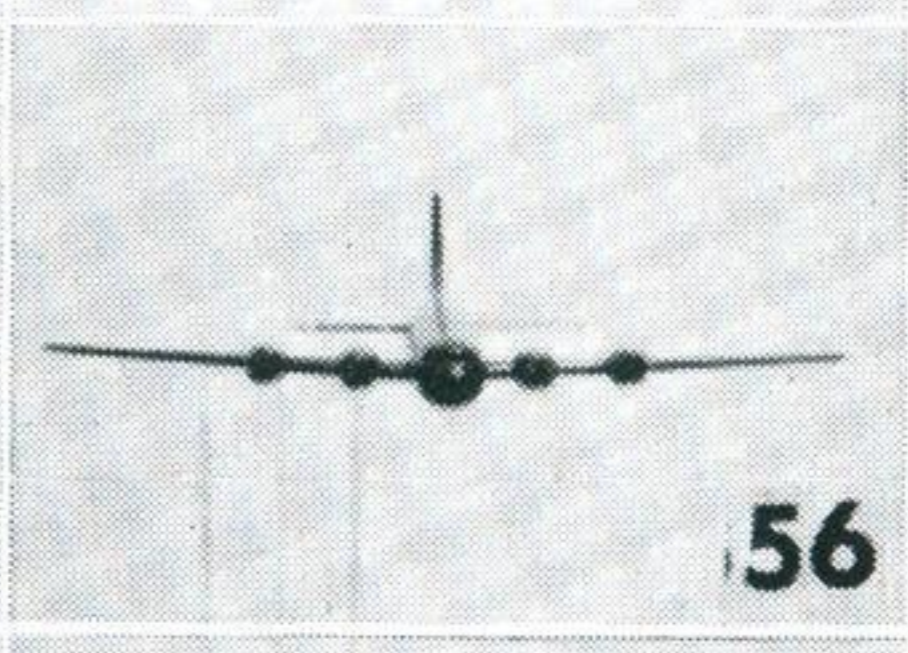
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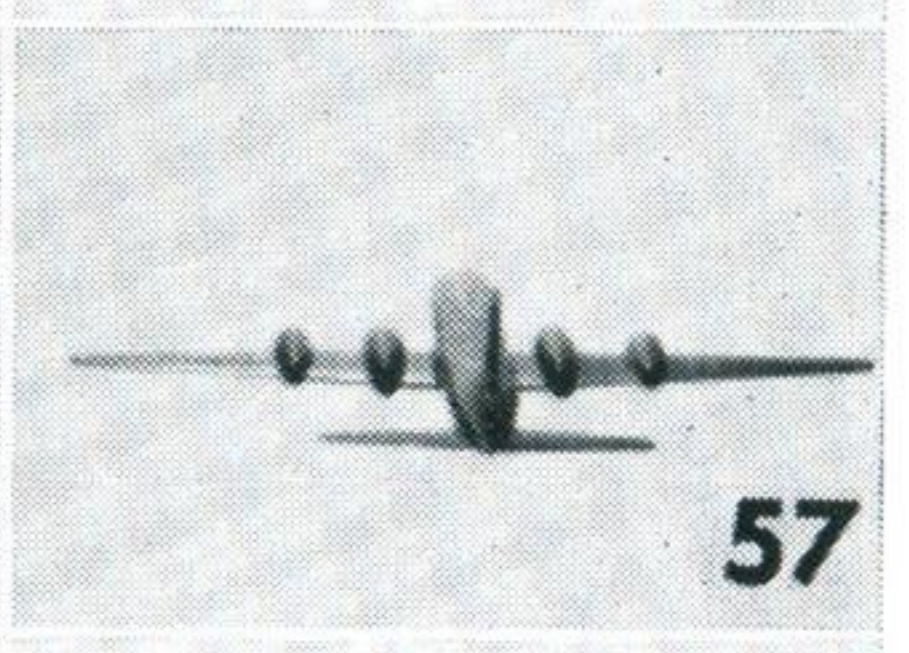
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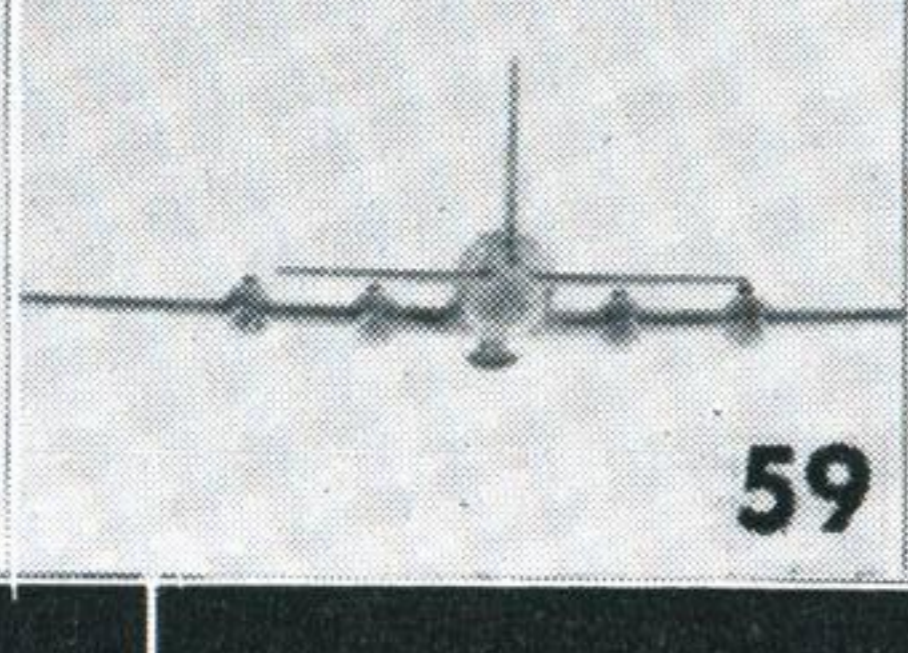
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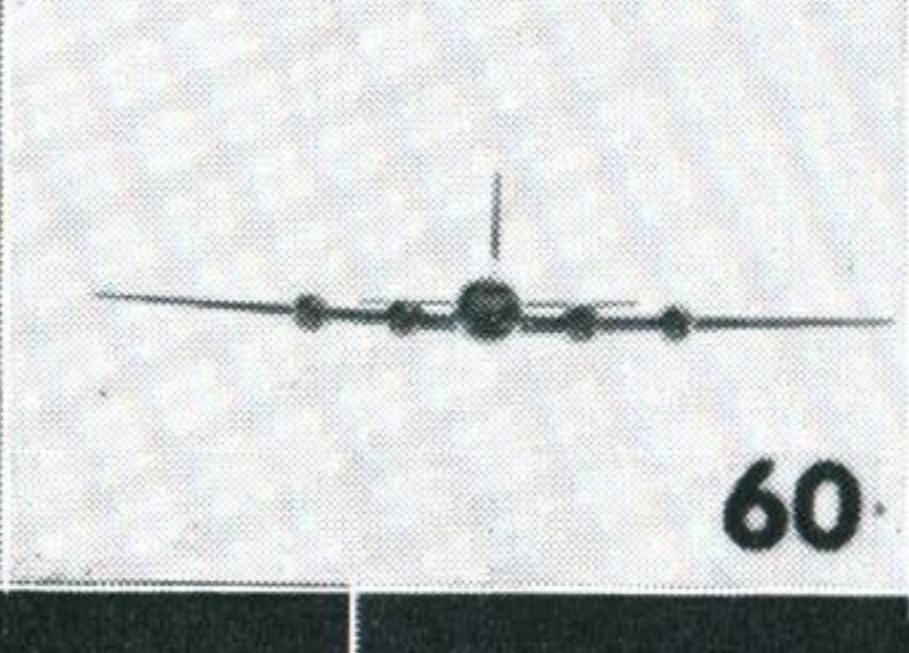
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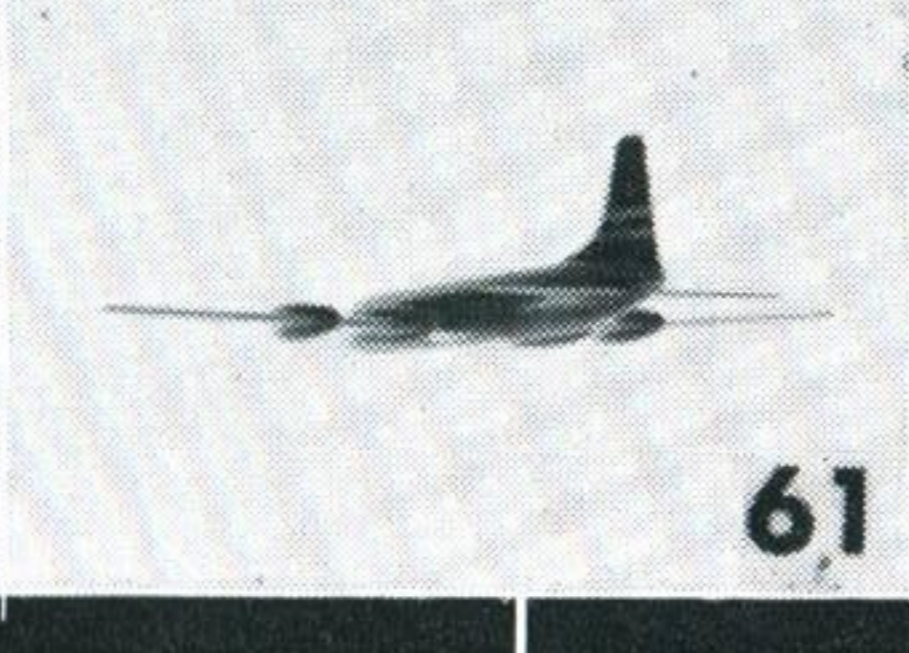
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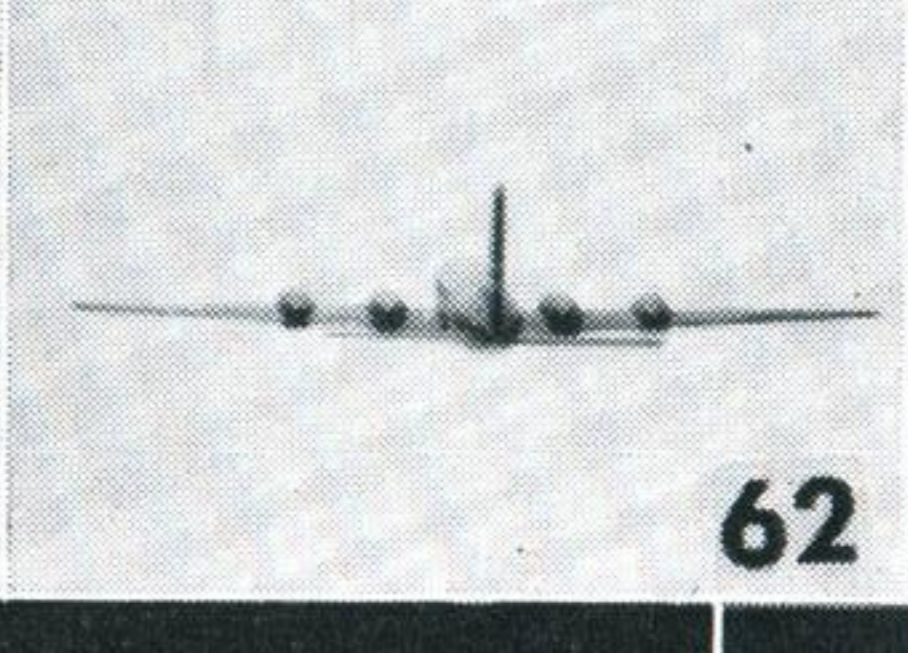
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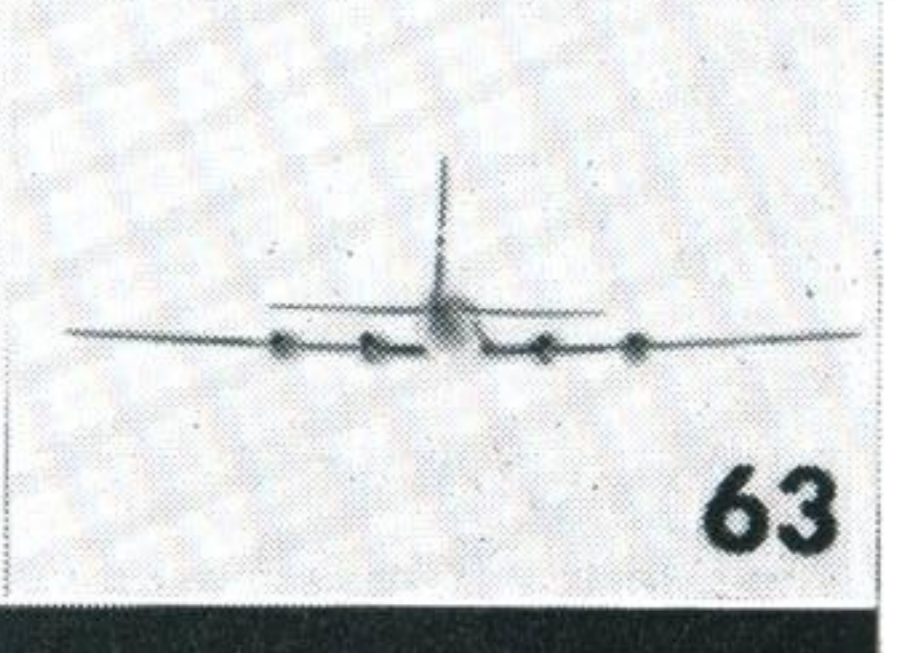
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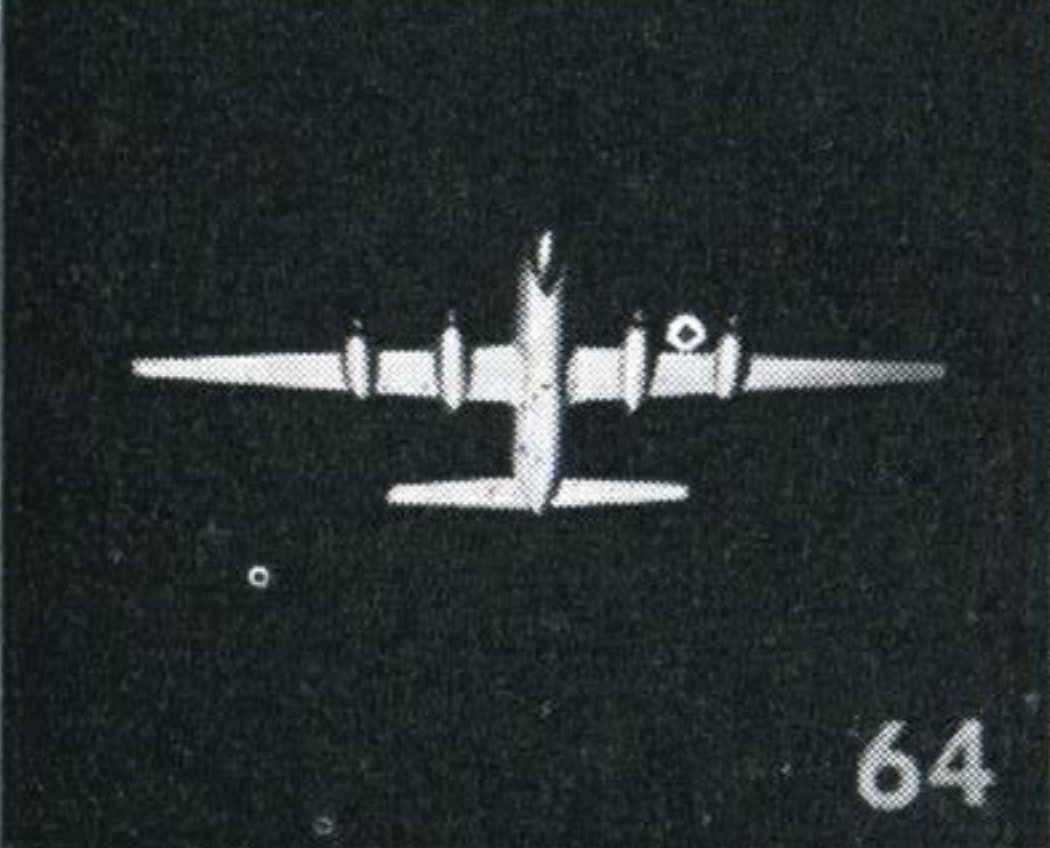
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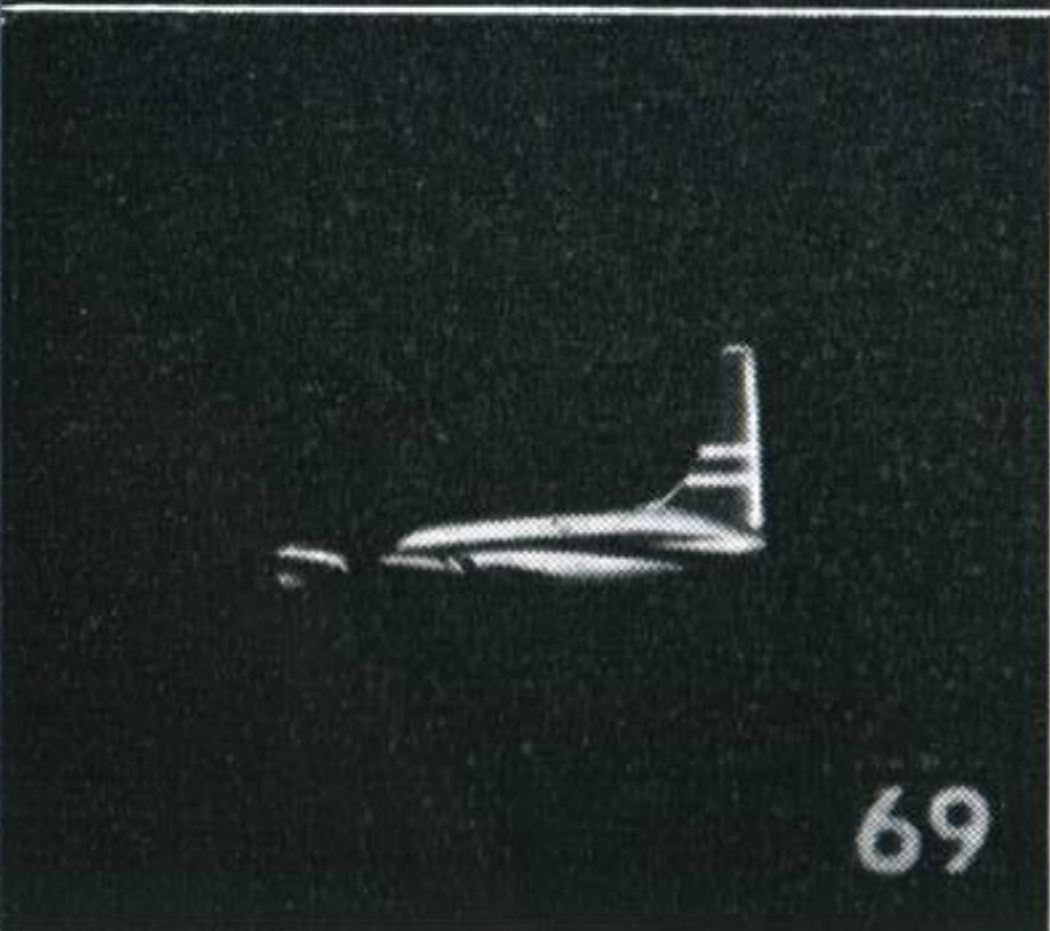
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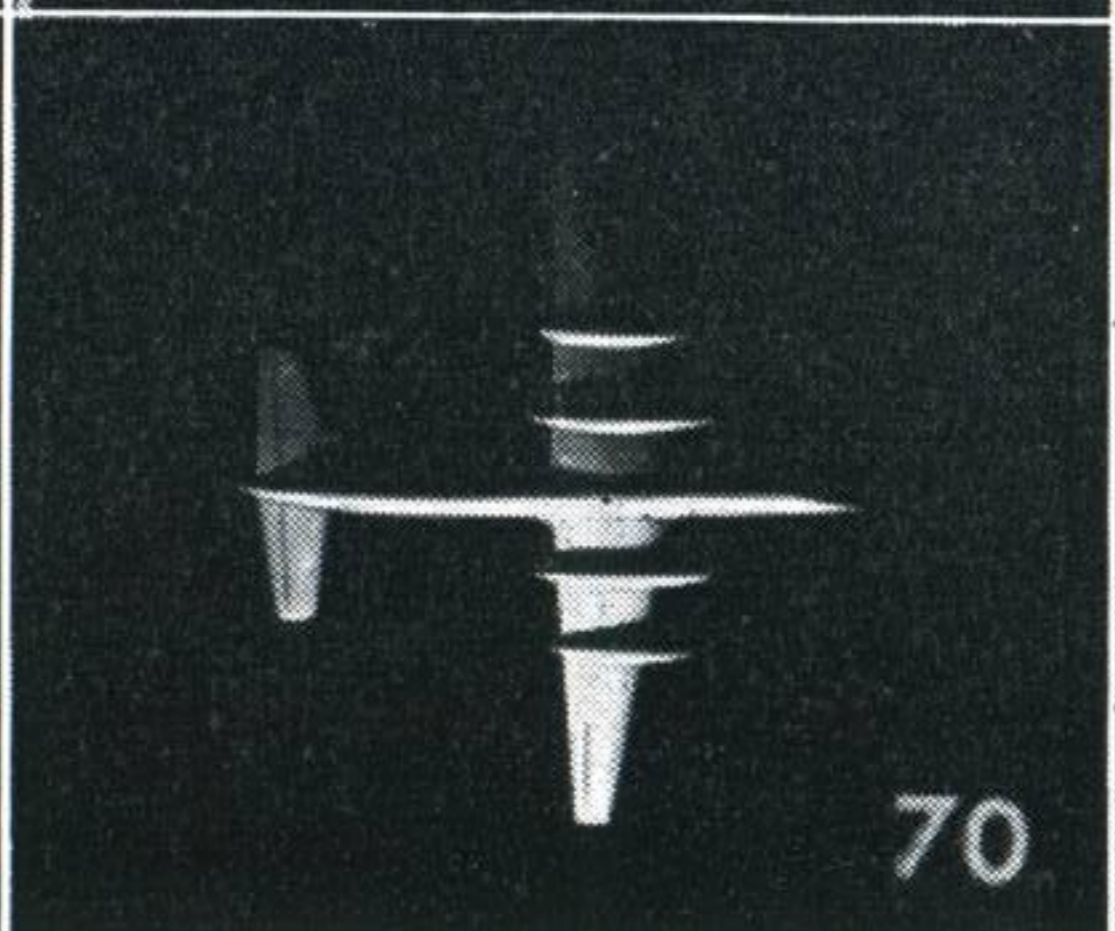
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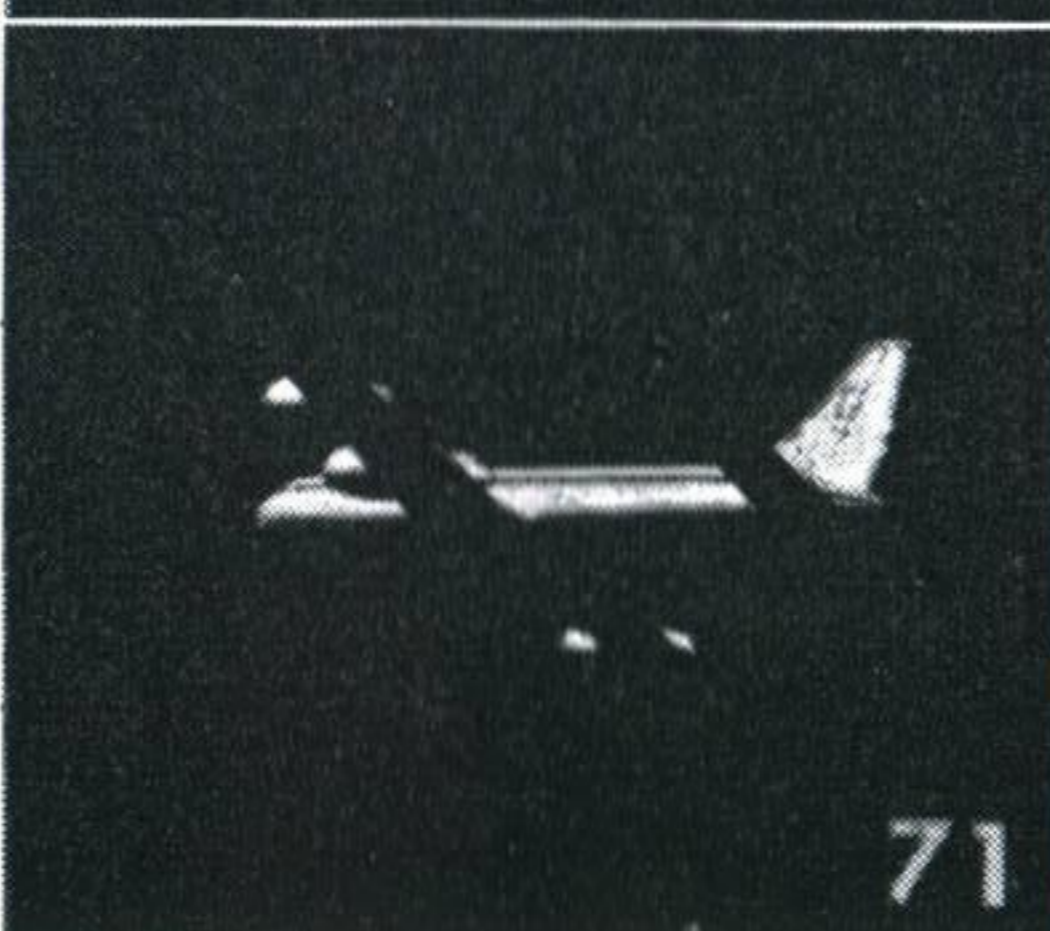
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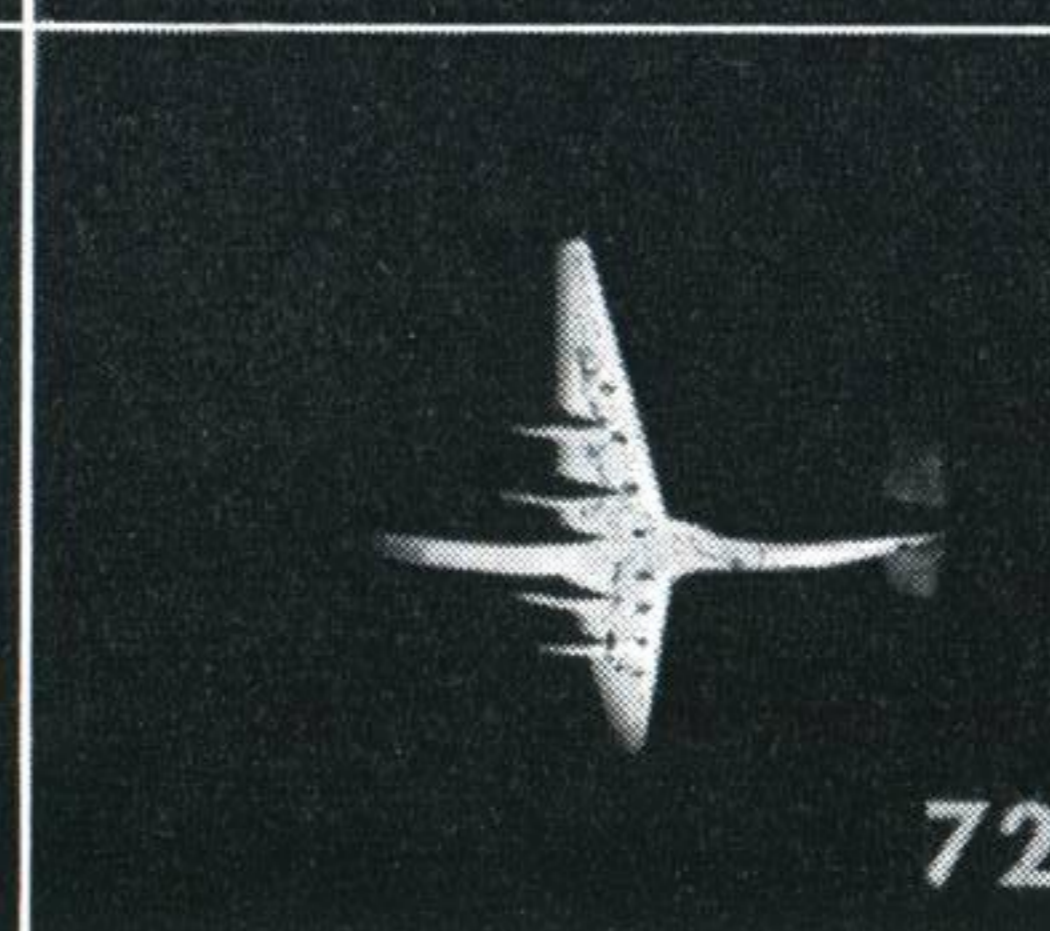
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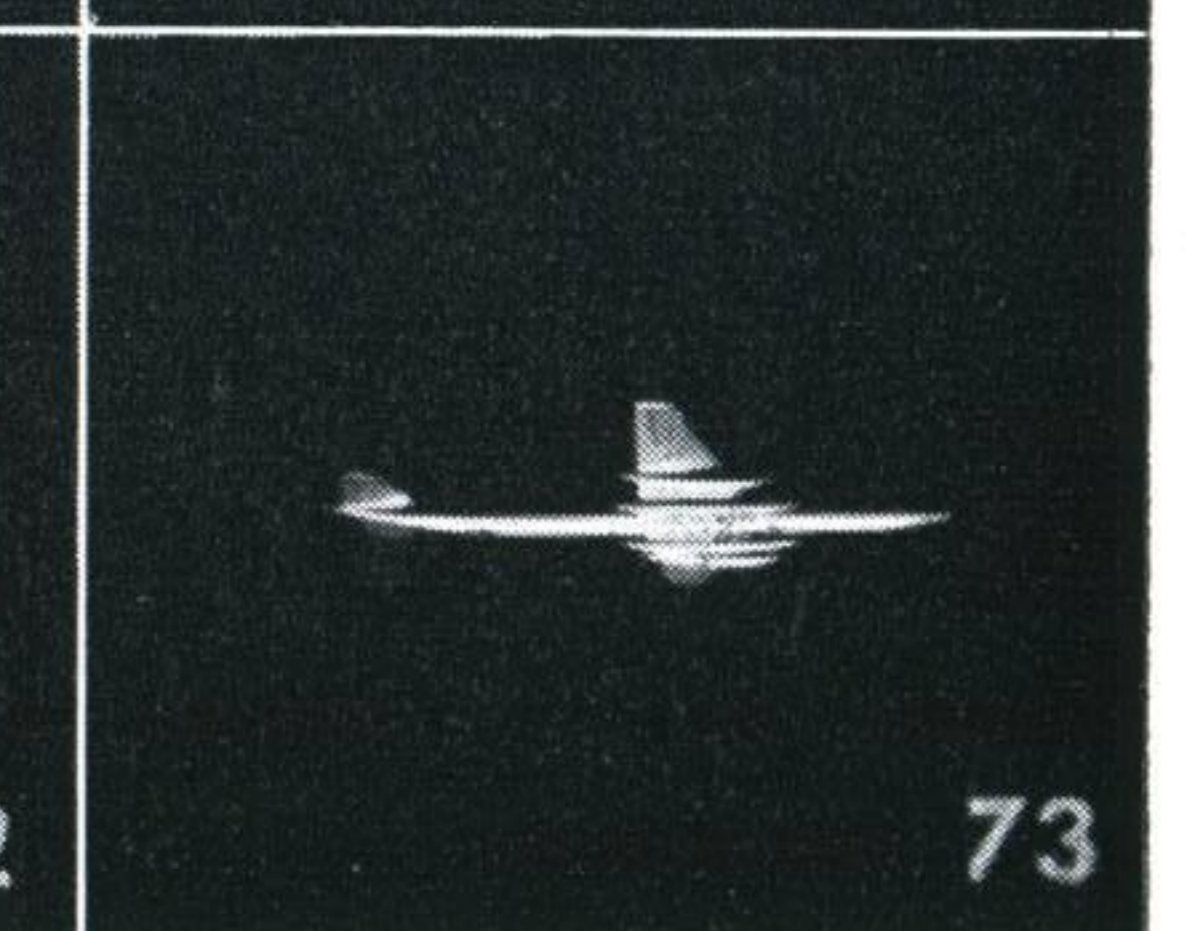
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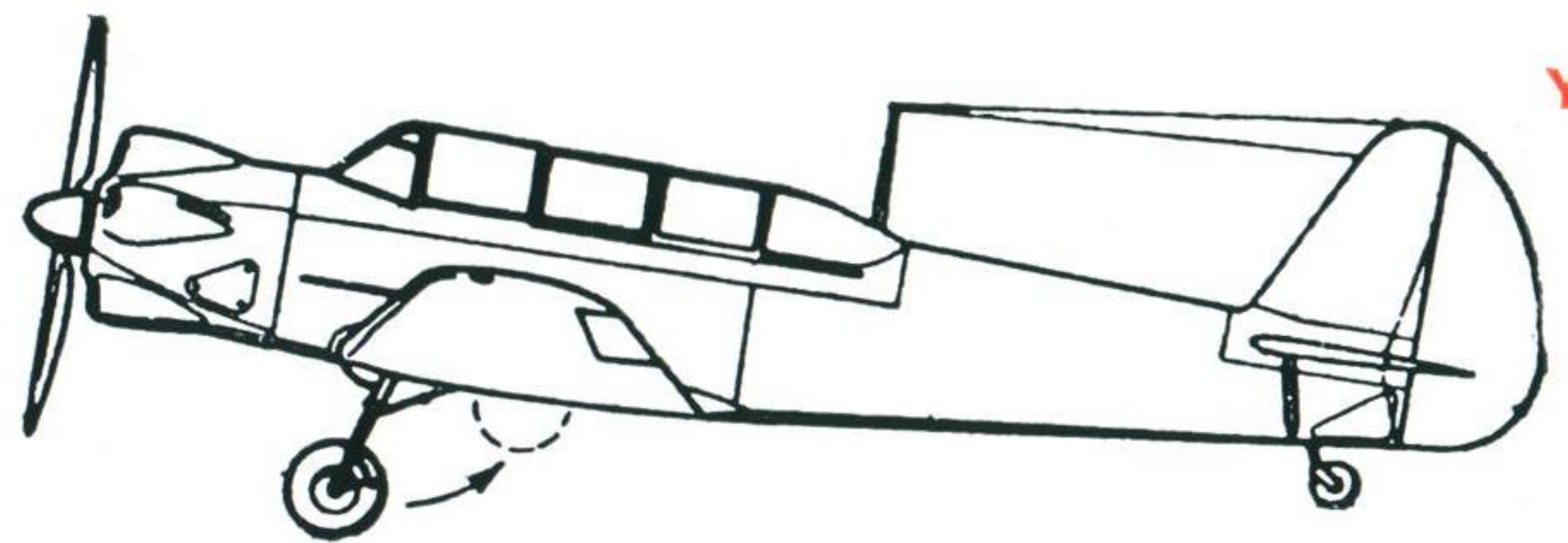
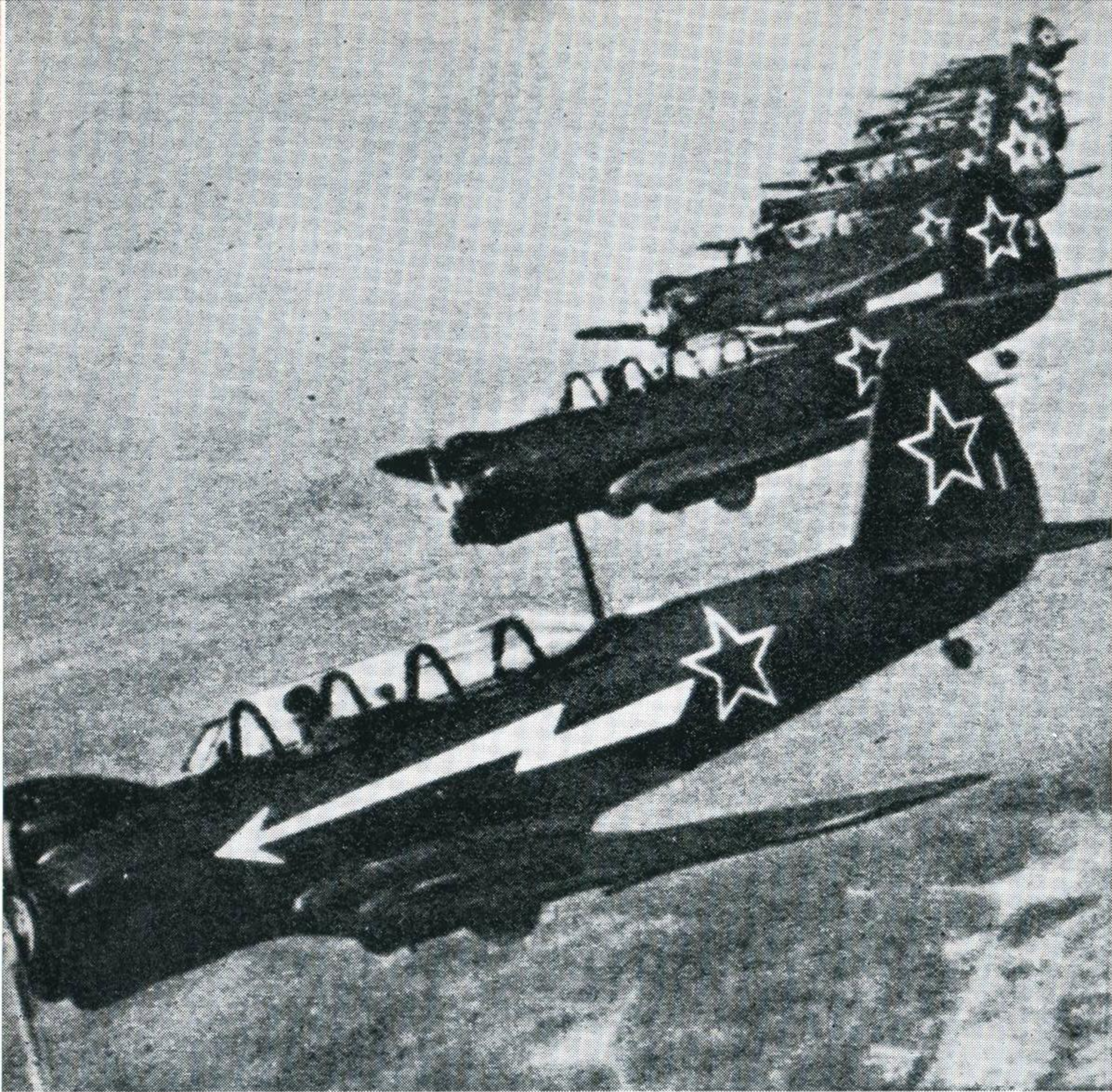
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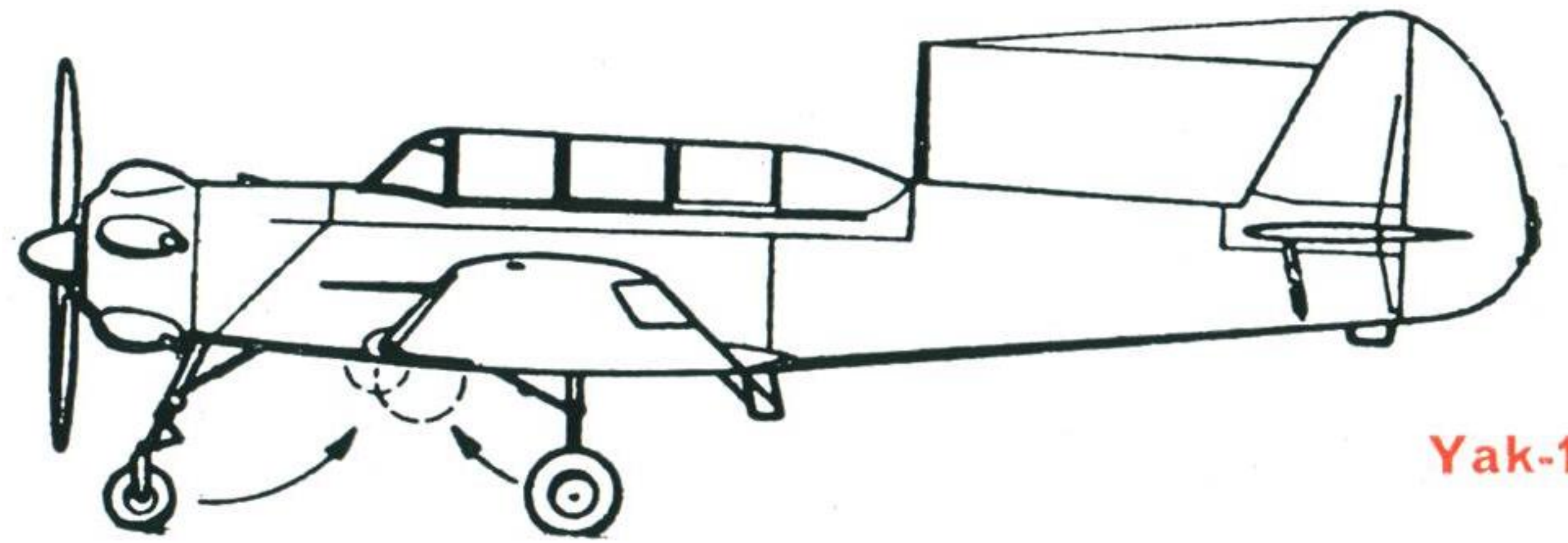
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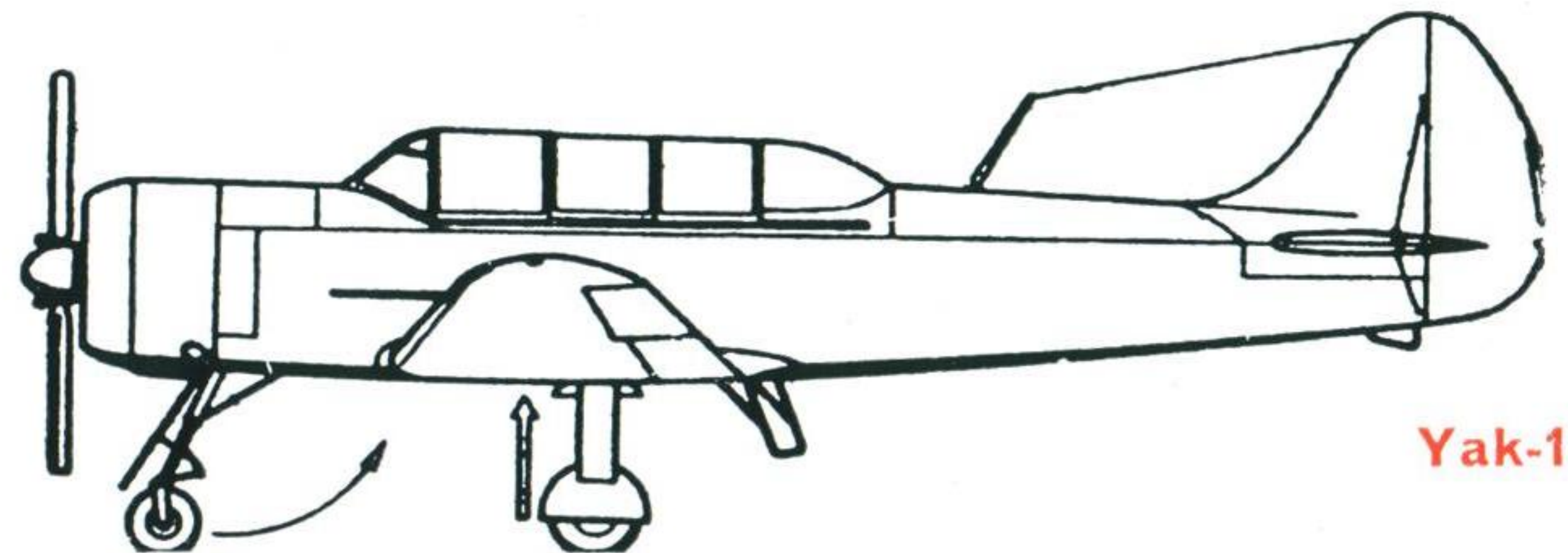
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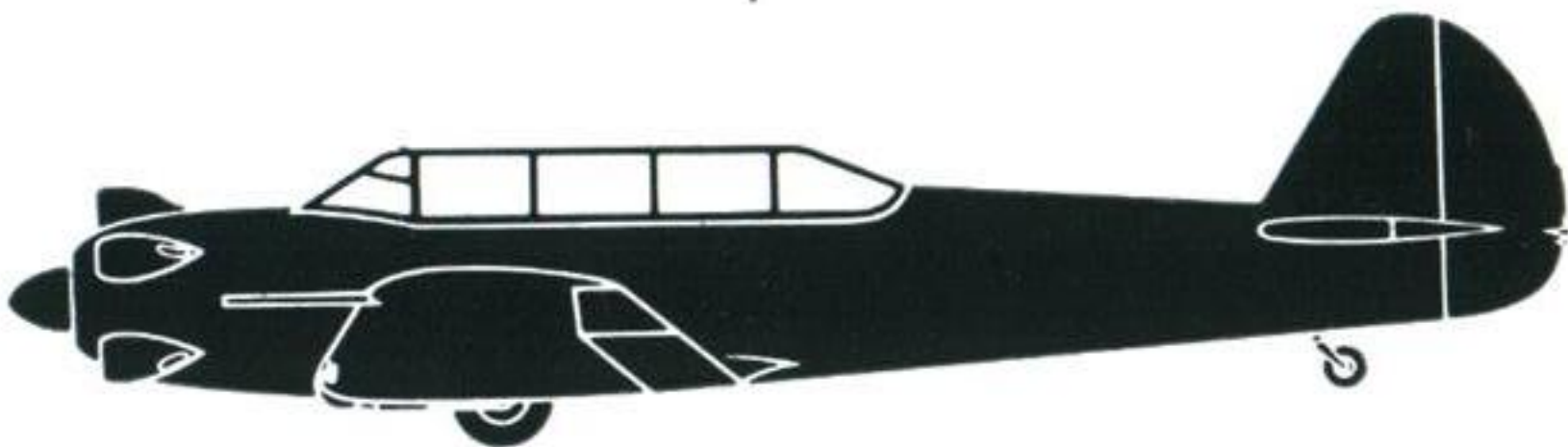
Yak-18



Yak-18U



Yak-18A

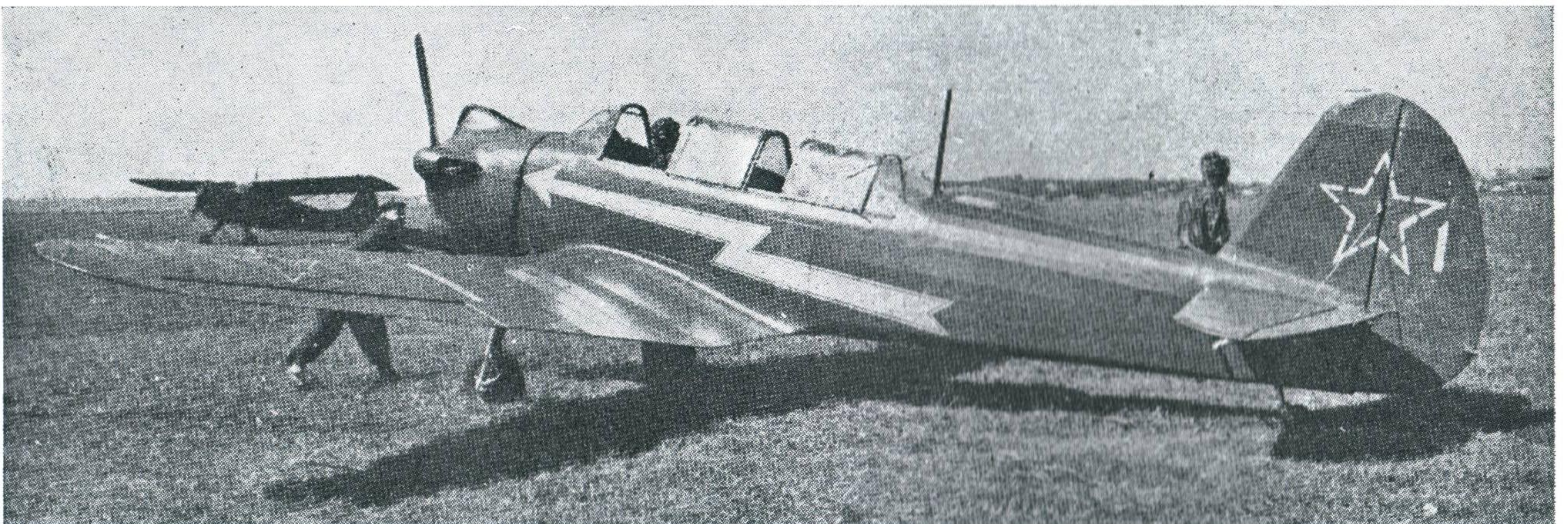


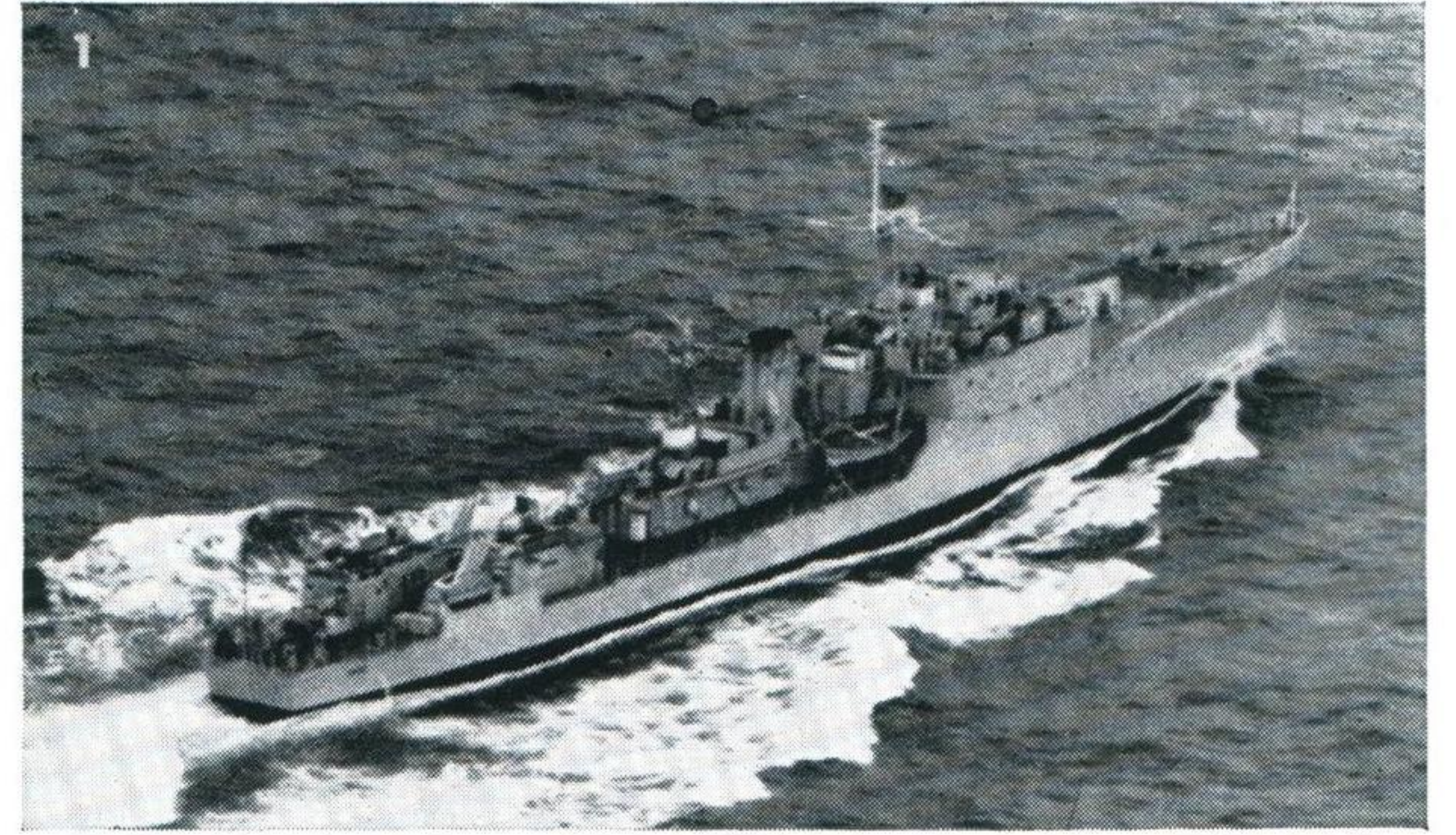
MAX

FOR nearly twenty years Max, the Yak-18, has been the standard primary trainer of the Soviet Air Force and it is used by most of the Soviet Satellite countries as well as by several others, including Egypt.

Several versions have been produced all characteristically similar—as shown with the main differences in the undercarriage arrangement which, because the wheels do not fully retract, show below the wing's surface in varying positions. Cowlings vary according to the engine fitted and fin shapes vary slightly. A single-seat version of this two-seat aircraft for aerobatic training, the Yak-18P, will be featured separately in a later edition. Work to instructions on page 100. Solutions on the cover.

Span 34-35 feet according to version





BLACKWOOD CLASS

Anti-submarine Frigates

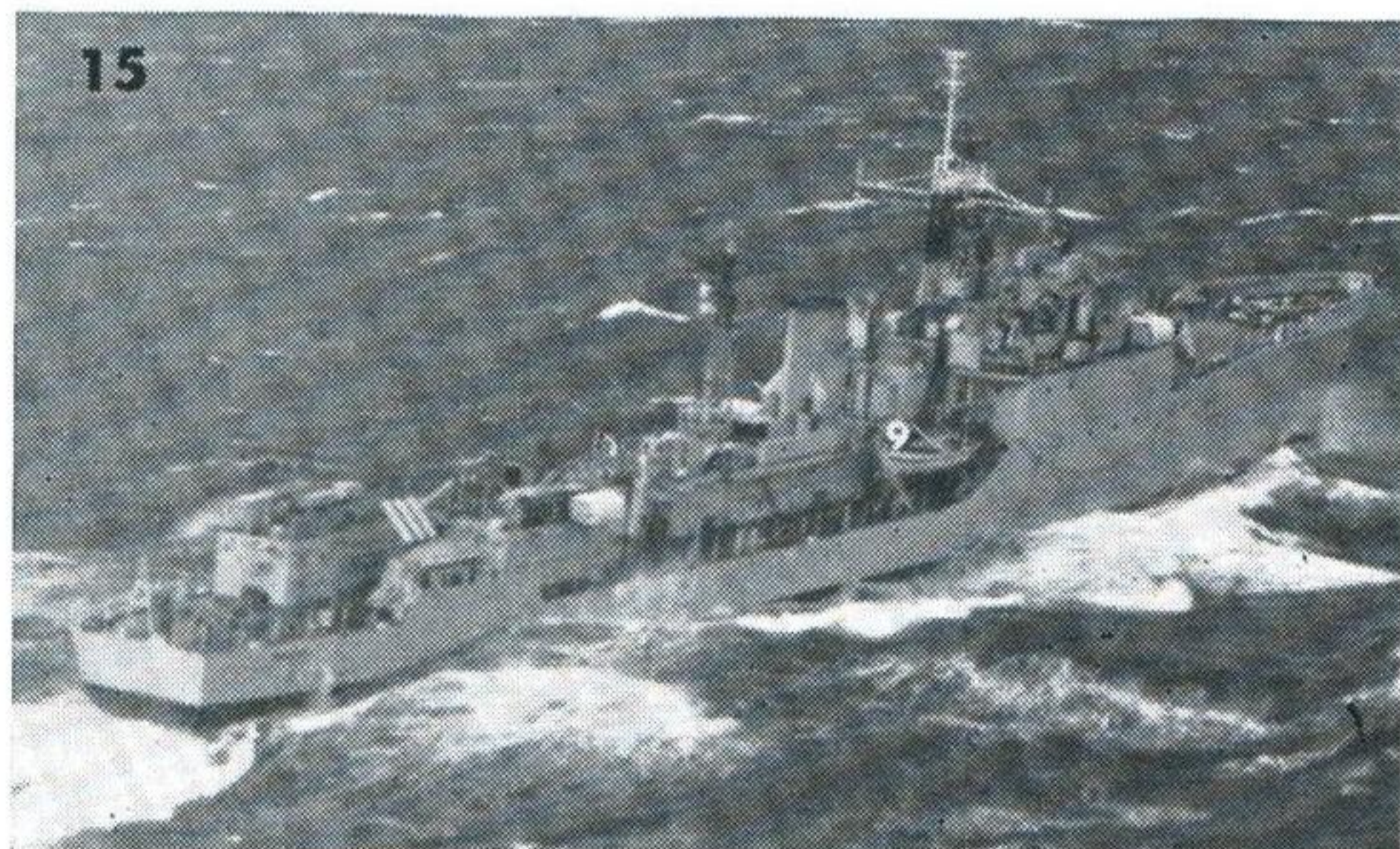
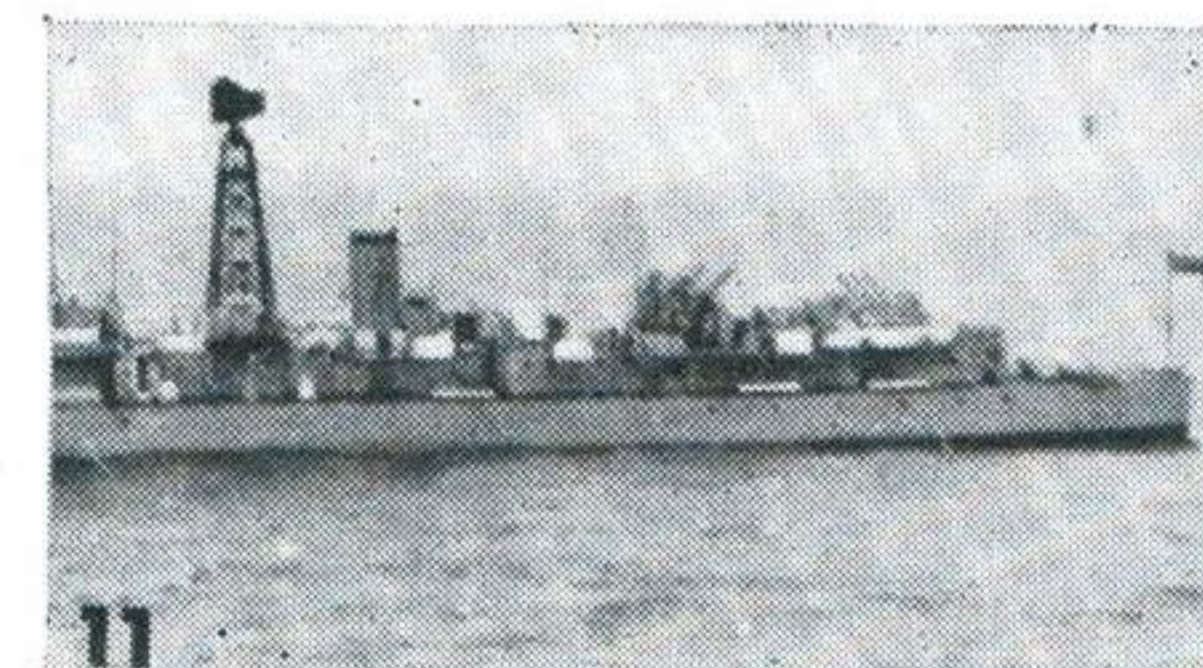
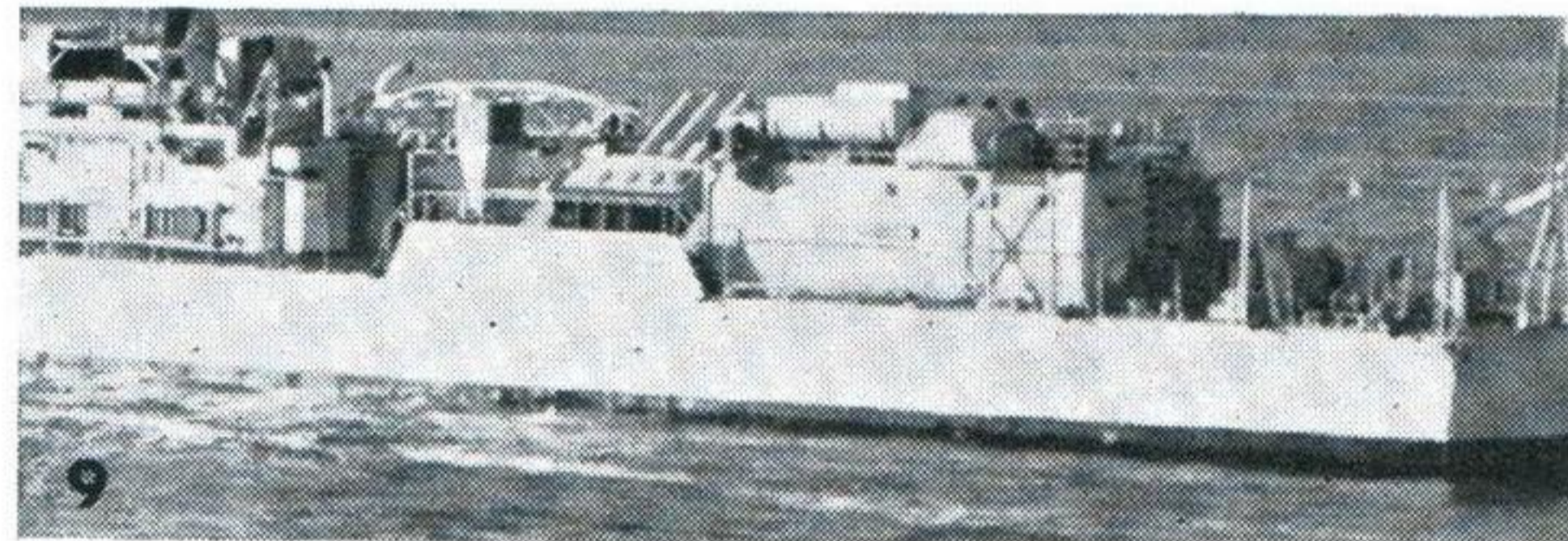
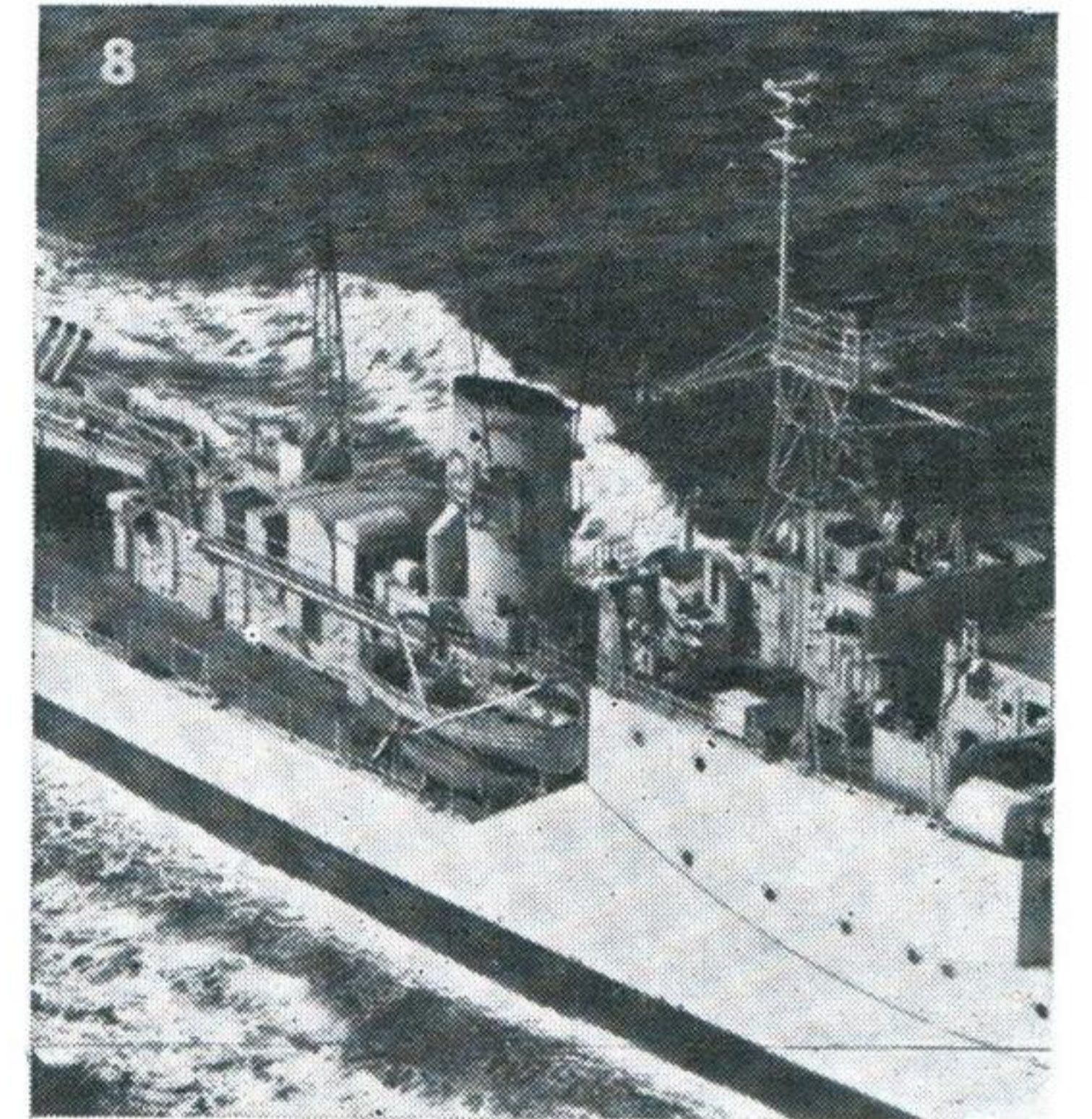
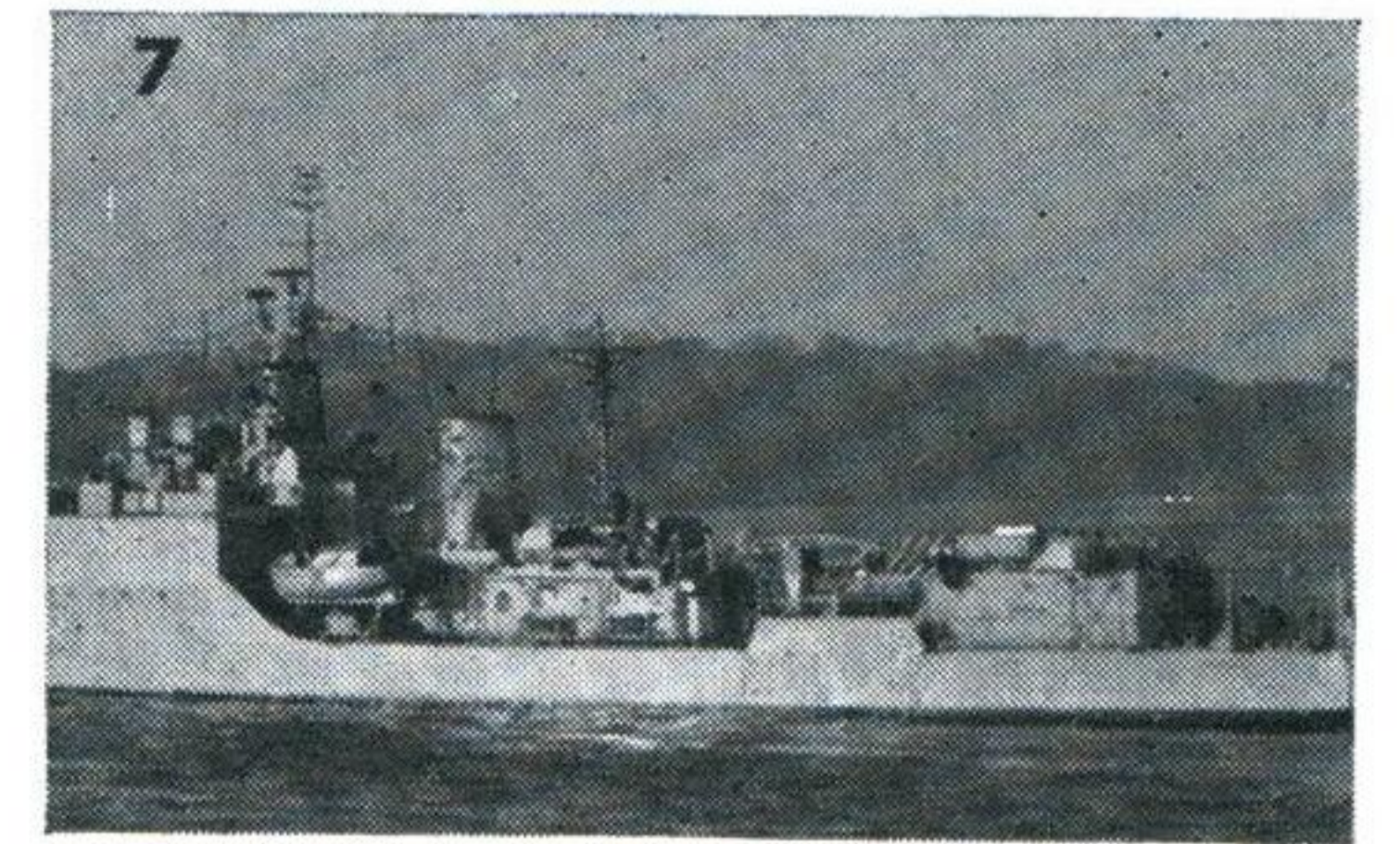
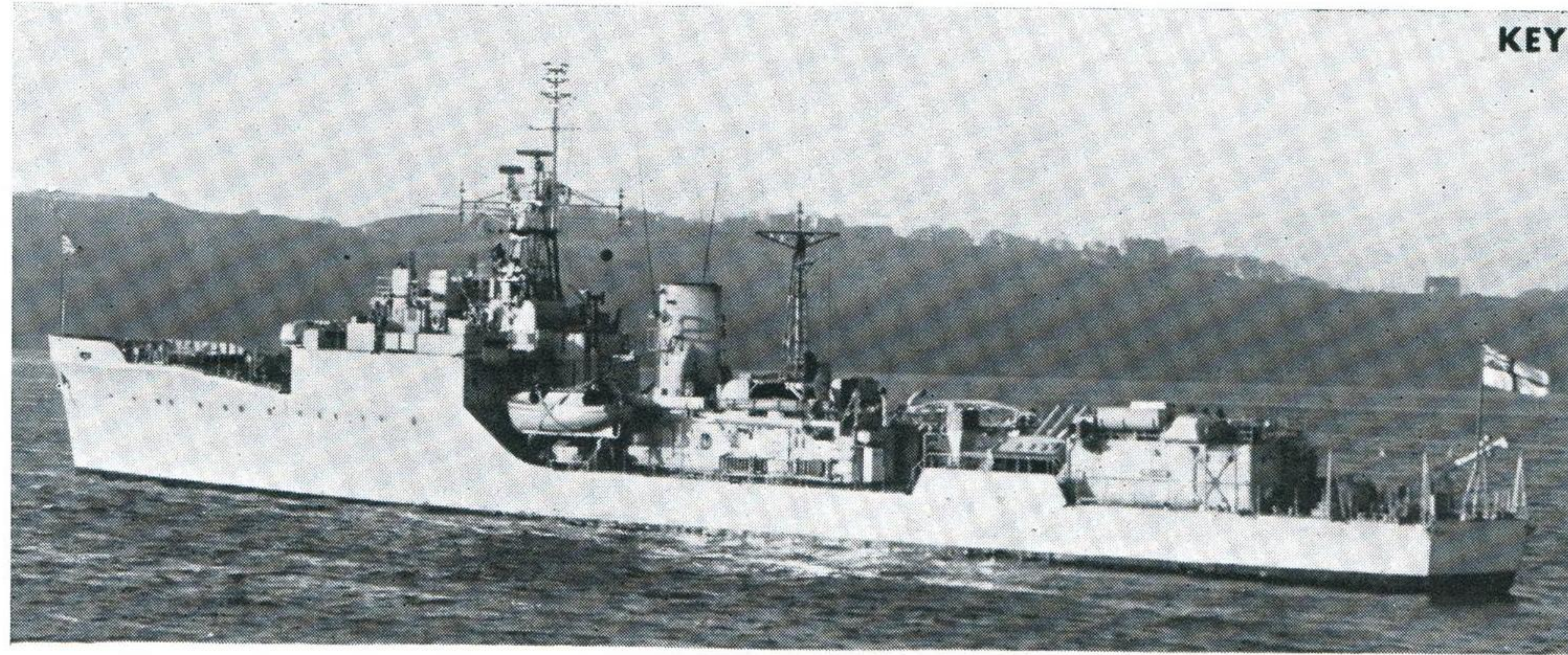


THE twelve ships of this class, named after Nelson's captains, are lightly armed, utility-type anti-submarine frigates. They are of 1,180 tons displacement and have an overall length of 310 feet.

Features of the class are vertical funnels mid-way between the masts and clear of the superstructure, the absence of turrets and a sharp break of the upper deck abaft the bridge.

The main armament consists of Limbos which can fire a pattern of charges over a wide area.

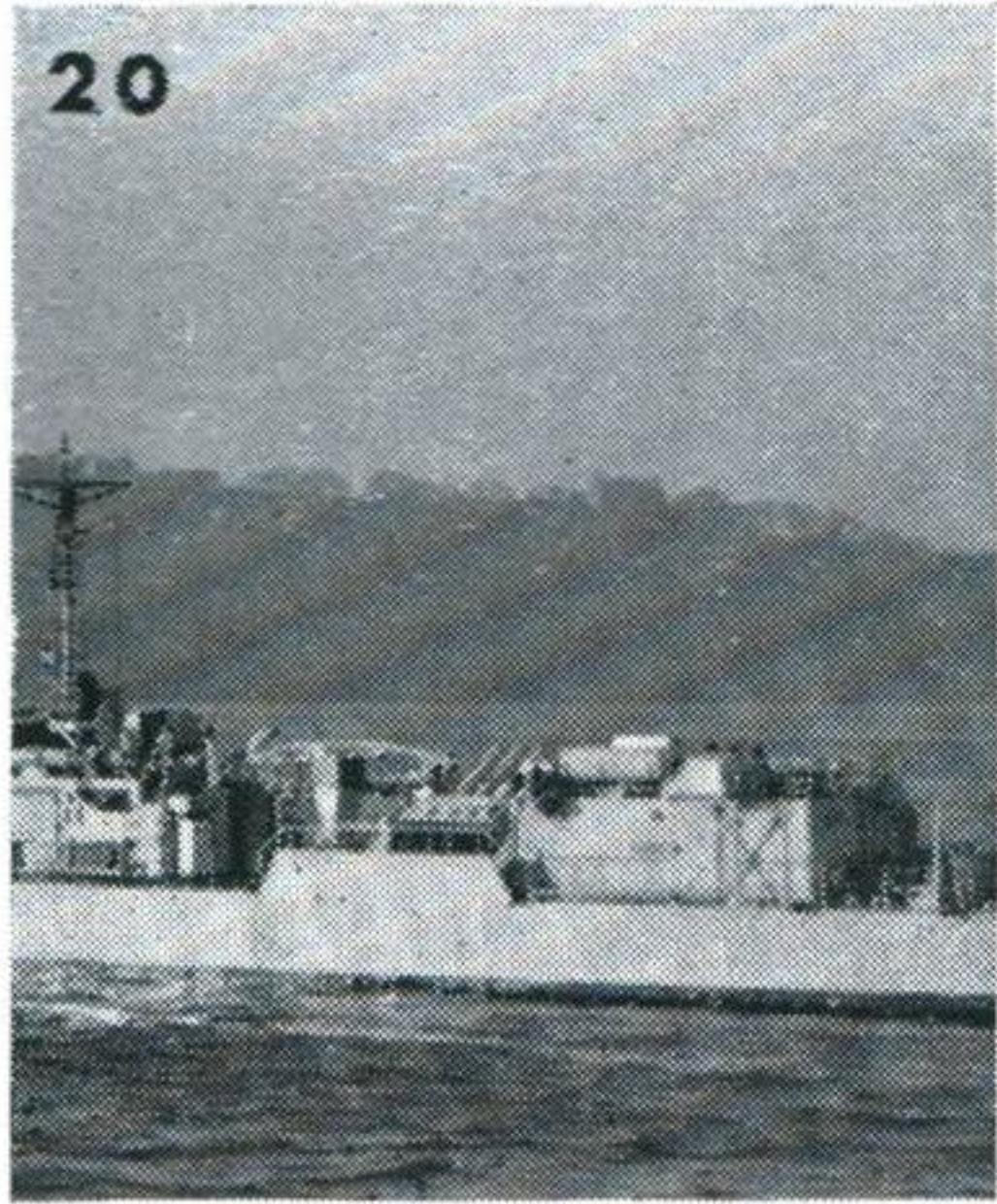
Work to instructions on page 100. Solutions on the cover.



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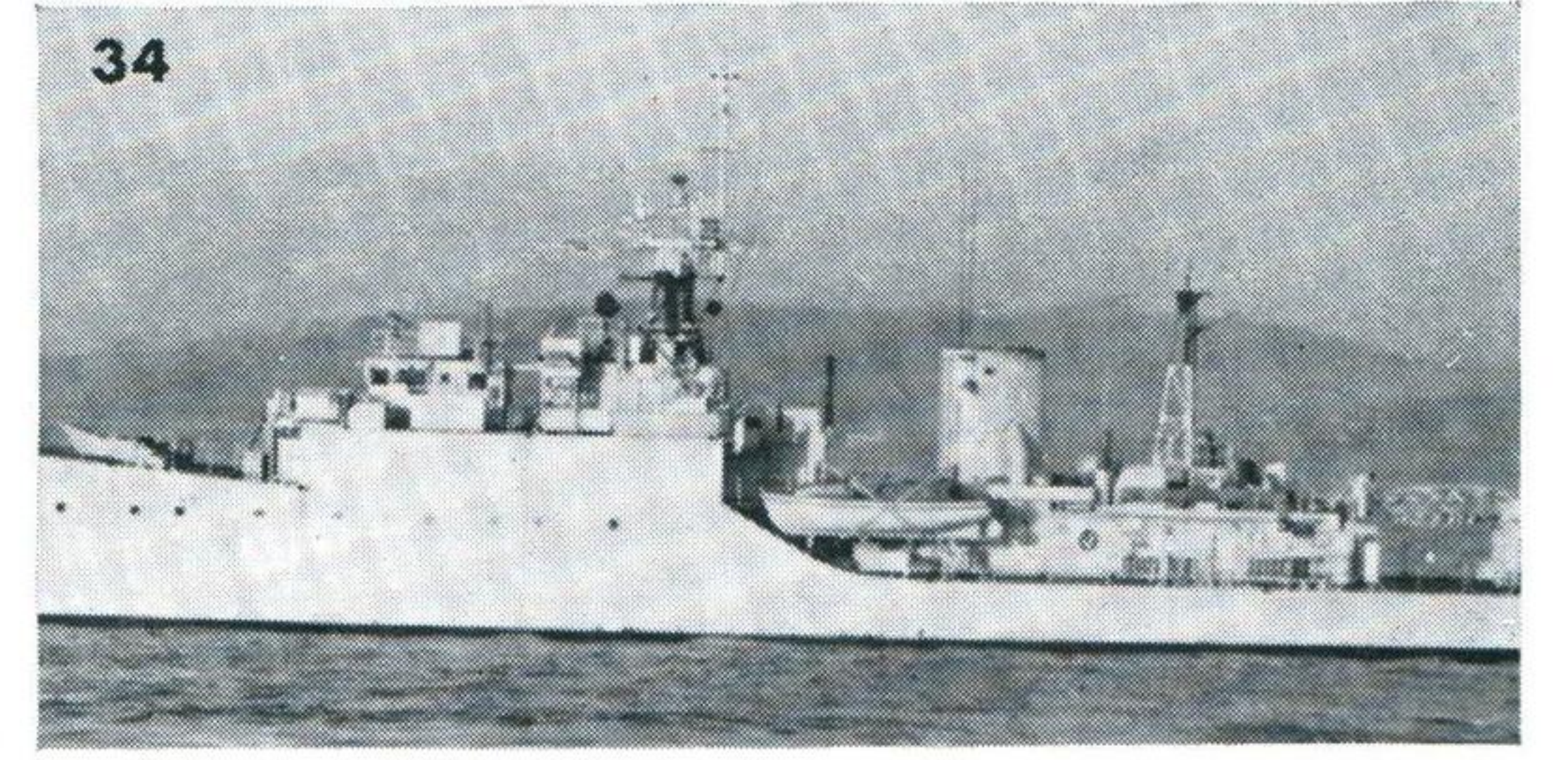
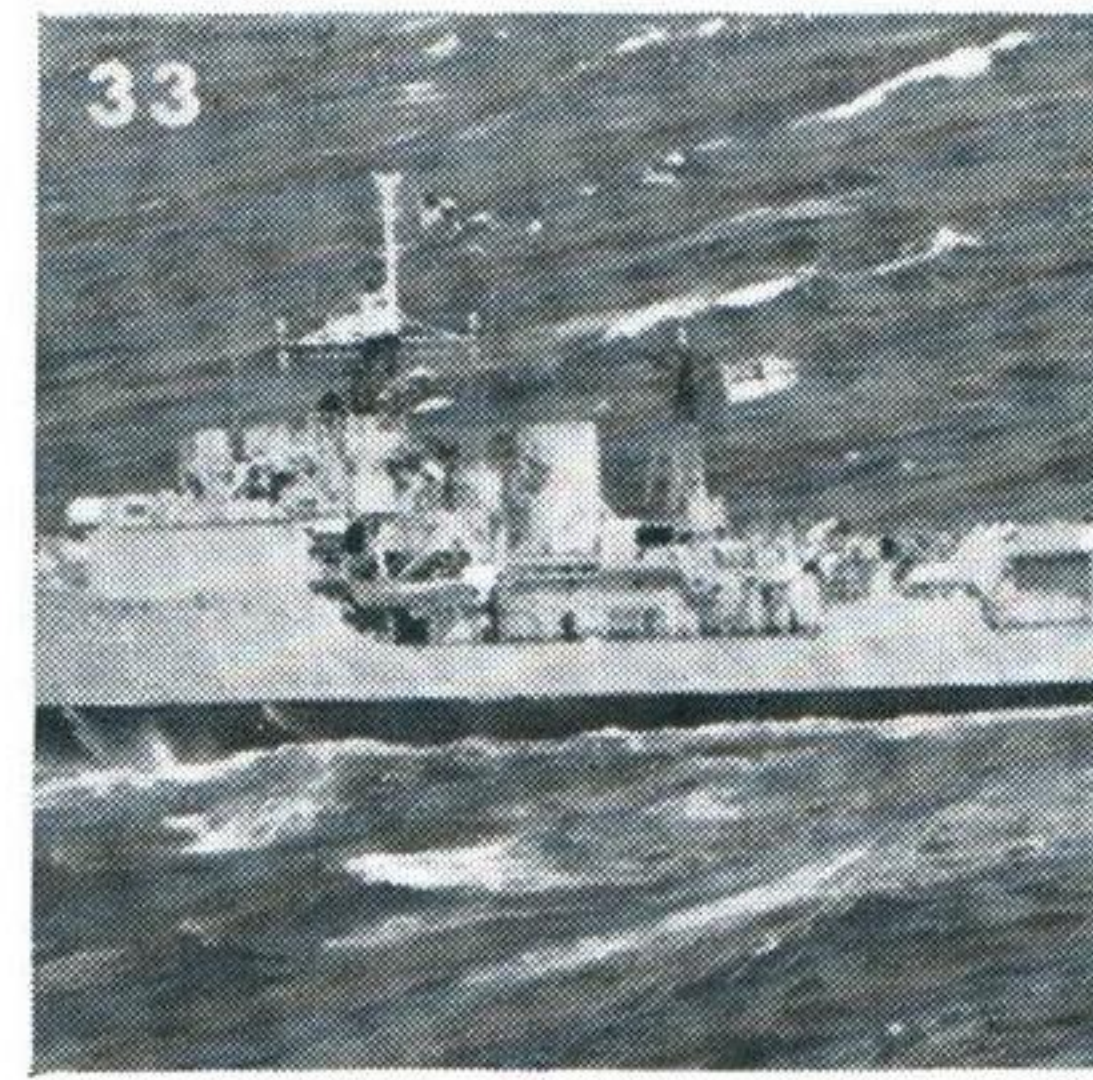
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April 1965



BLACKWOOD CLASS ANTI-SUBMARINE FRIGATES





Britannias Trooping

Stills from the film "Strategic Reserve" taken at Lyneham by day and Aden by night.



IN PASSING

BOOK REVIEW

Bristol Aircraft Since 1910 by C. H. Barnes.
Published by Putnam & Co. Price 63/-.

Uniform with "Hawker Aircraft Since 1920" and "De Havilland Aircraft Since 1915" this too is an important work of reference, particularly as the author, with a long and active association with the Company he records, is exceptionally well qualified for this task.

As with the earlier works in this series, a history of the company is followed by a type-by-type review of all the aircraft designed by the company which has now become the Filton Division of the British Aircraft Corporation. It is pointed out that of the 214 Freighters/Wayfarers built, some sixty of the later marks are still in service. Mention is made of a projected Britannia alternative for modified Constellations to be built at Filton, but the Treasury at that time could not accept the dollar expenditure involved.

Bristol have allotted to each and every one of their aircraft a sequence number in numerical order. These are listed up to No. 13521 the existing BAC221 research aircraft. An appendix tables the sequence numbers allotted for each type, together with their service or civil identities.

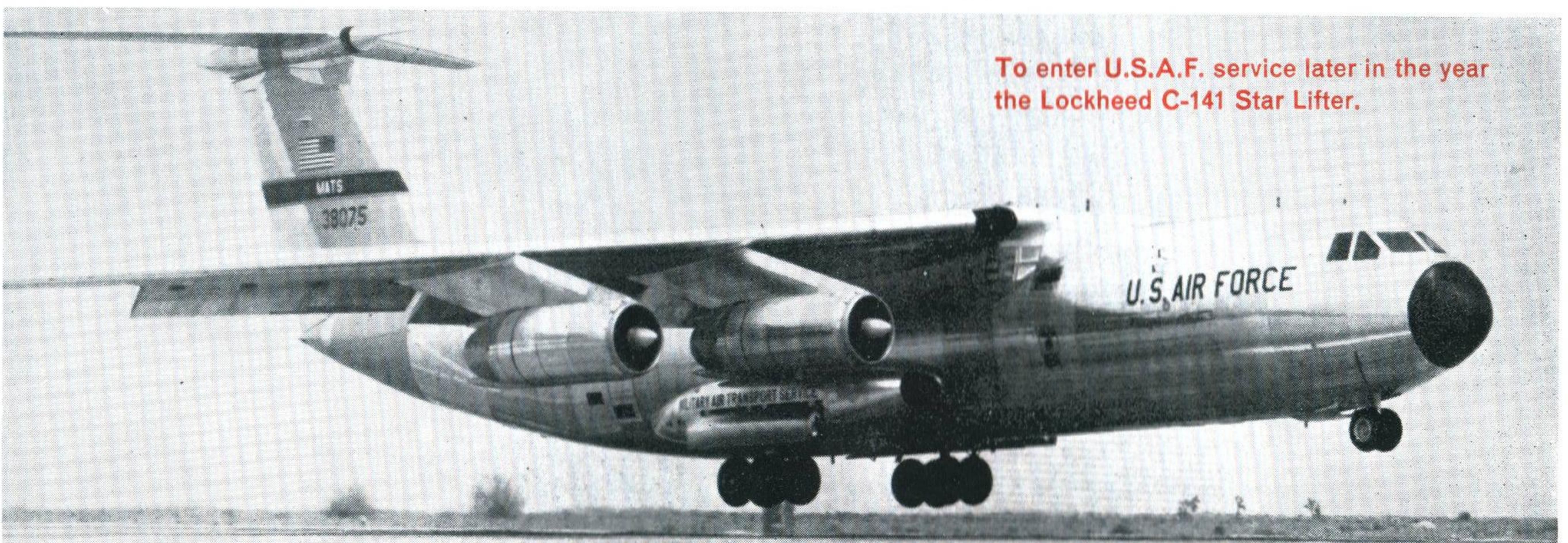
Three-view general arrangement drawings are given for most types, but the standard of draughtsmanship is not high compared to other volumes in the series.

B.R.

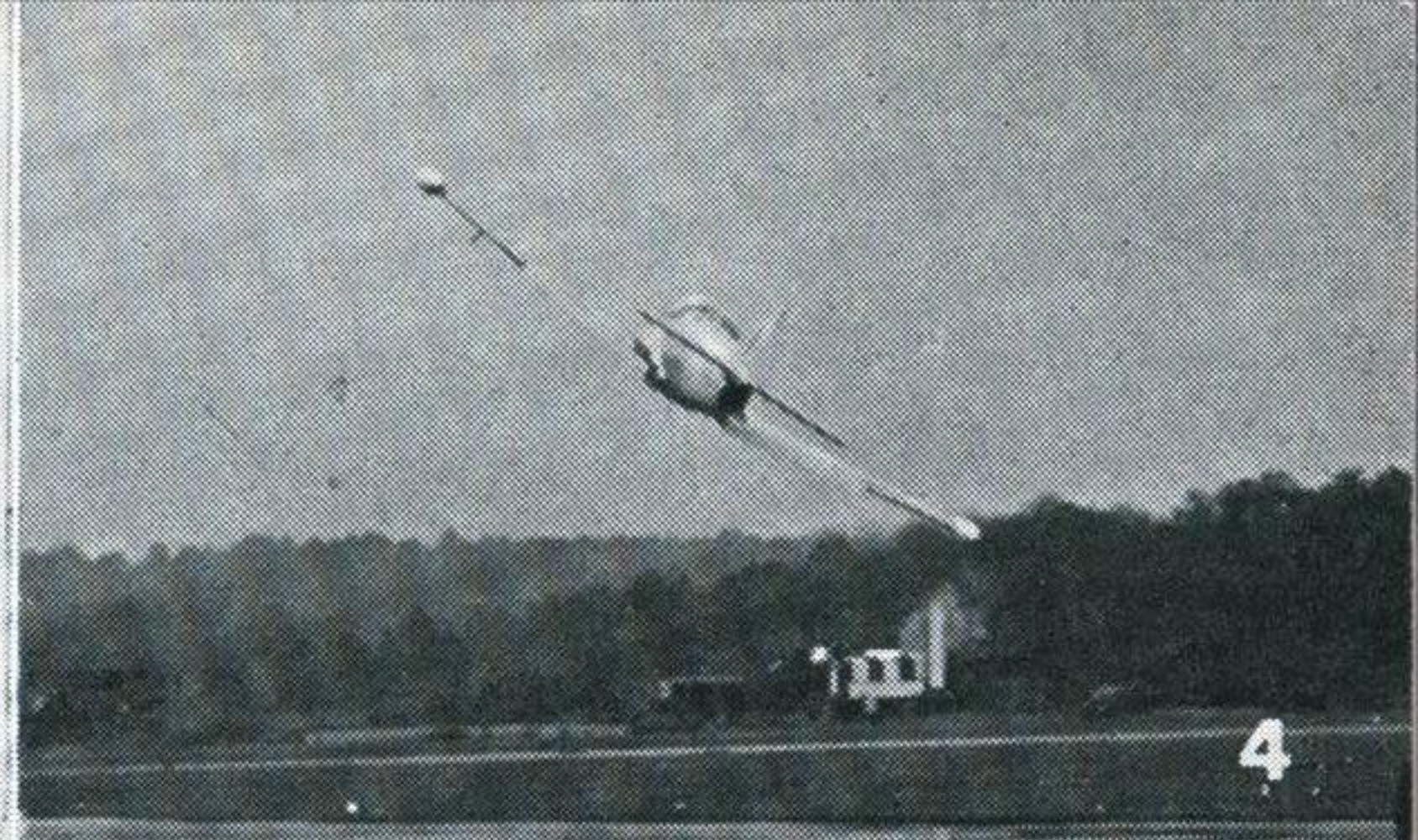
LESSON INSTRUCTIONS

To obtain the maximum benefit from the training devices published in this Journal, the following procedure should be adopted.

1. Read the text associated with the lesson.
2. Prepare a list of target numbers so as to be able to tackle the targets in any order.
3. Identify the target pictures by comparing them with the key views: start with the easy ones so as to gain experience: also use targets already identified to solve the more difficult ones.
4. When certain of the identity of a target write down its name **IMMEDIATELY** against the appropriate number on your list. **THIS IS IMPORTANT.**
5. Lessons should not be hurried or given a time limit. So far as beginners are concerned, it is more important to identify accurately than quickly.
6. Do not attempt conscious memorising of details, shapes, or names.



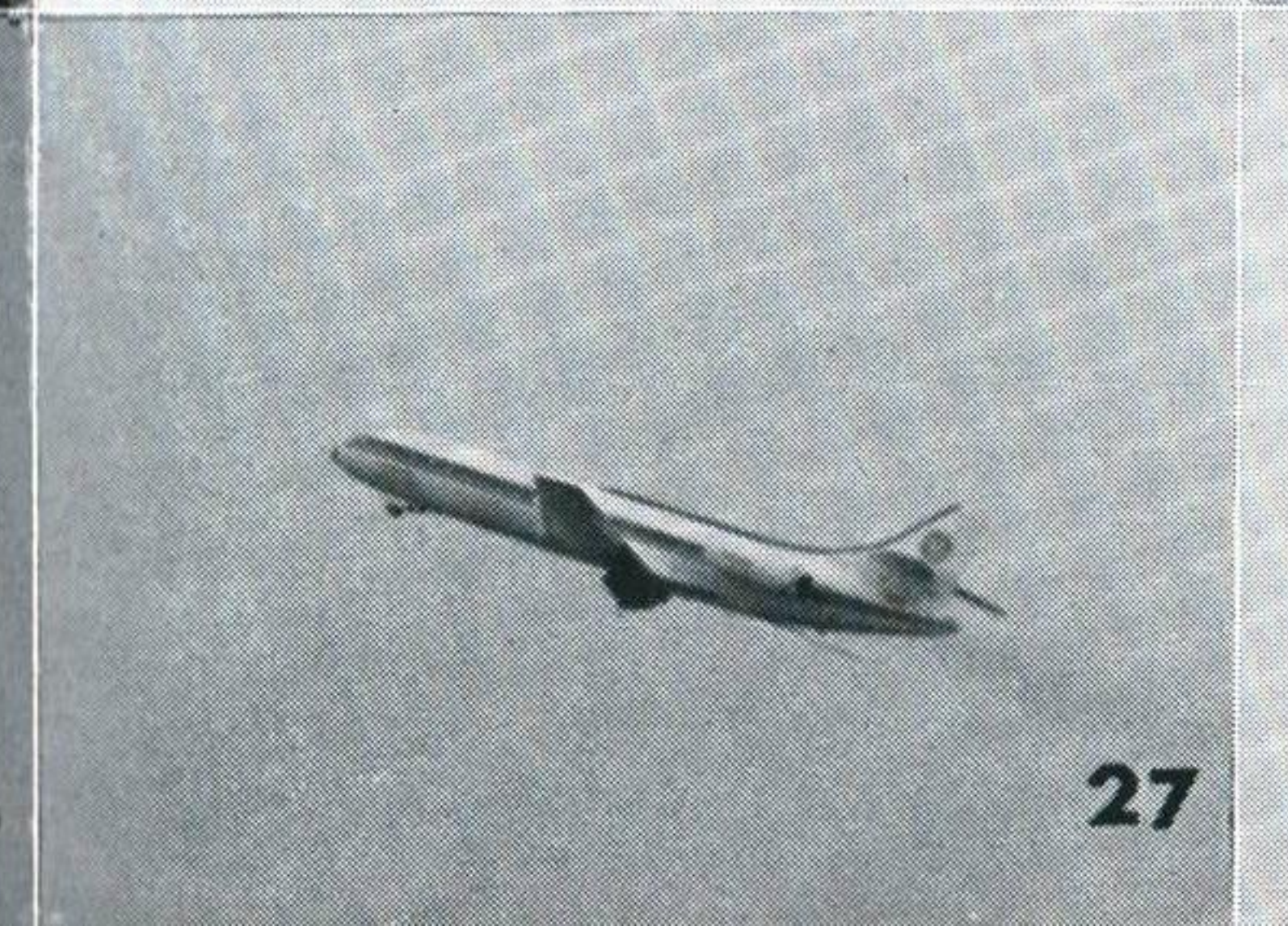
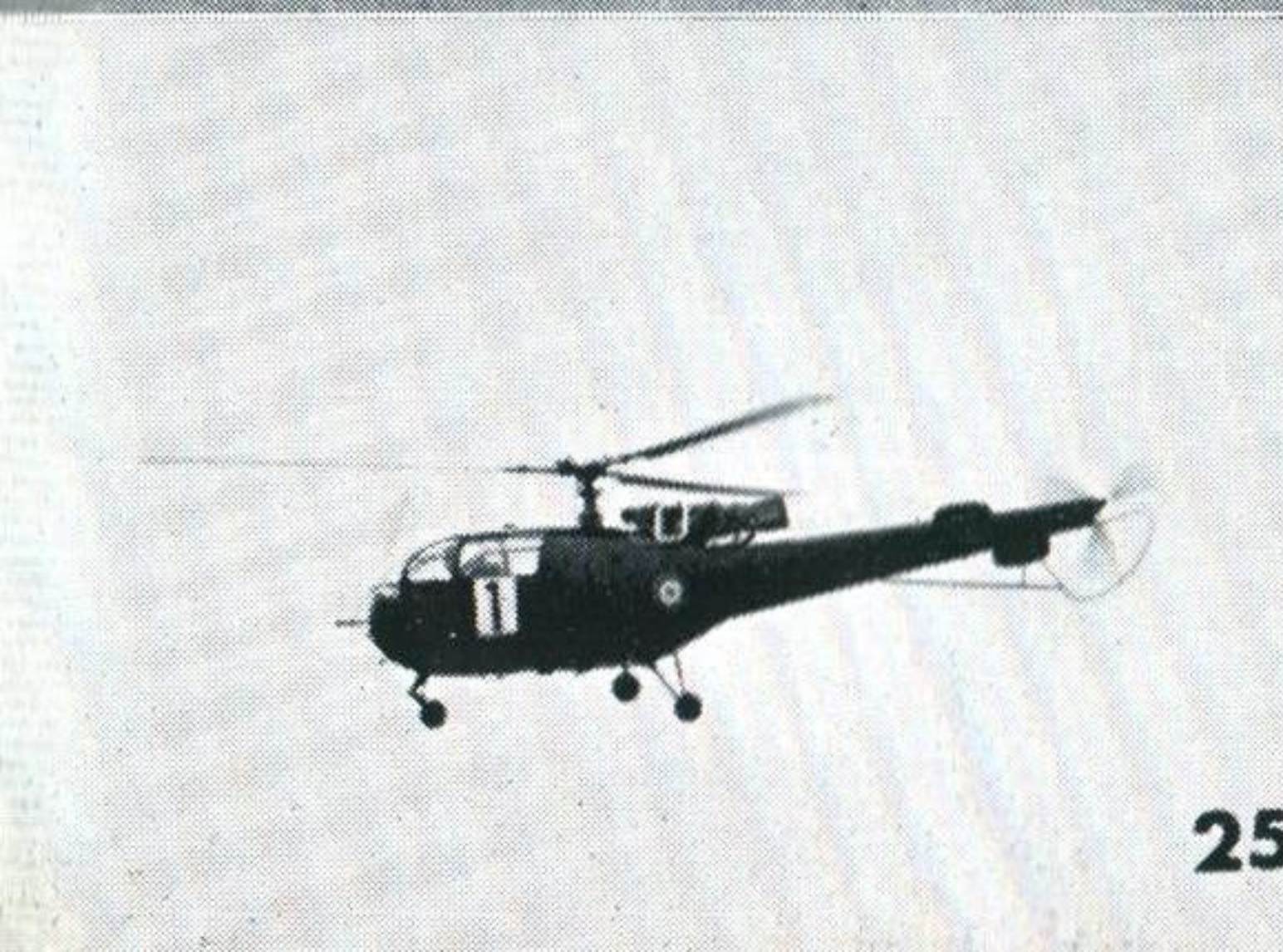
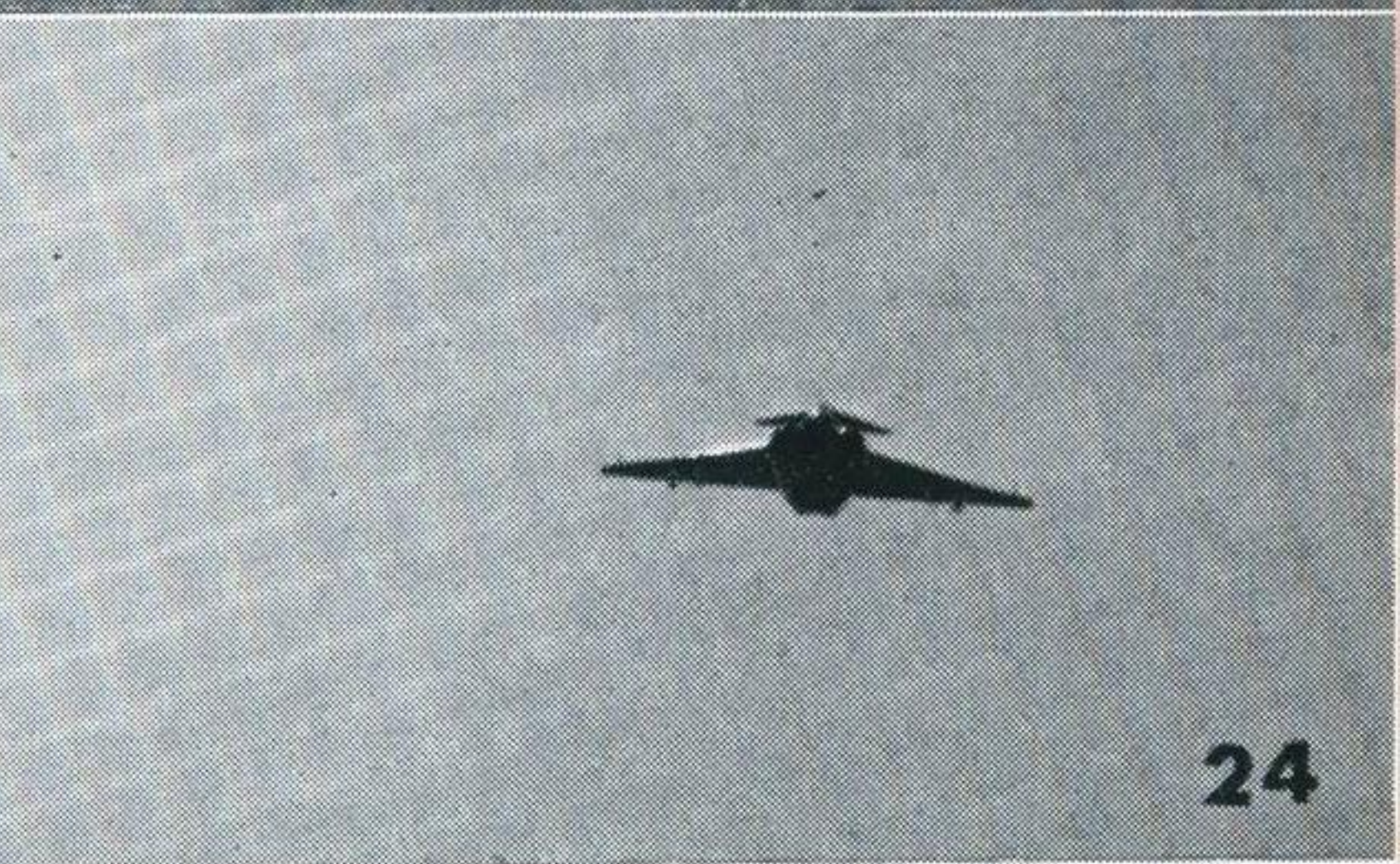
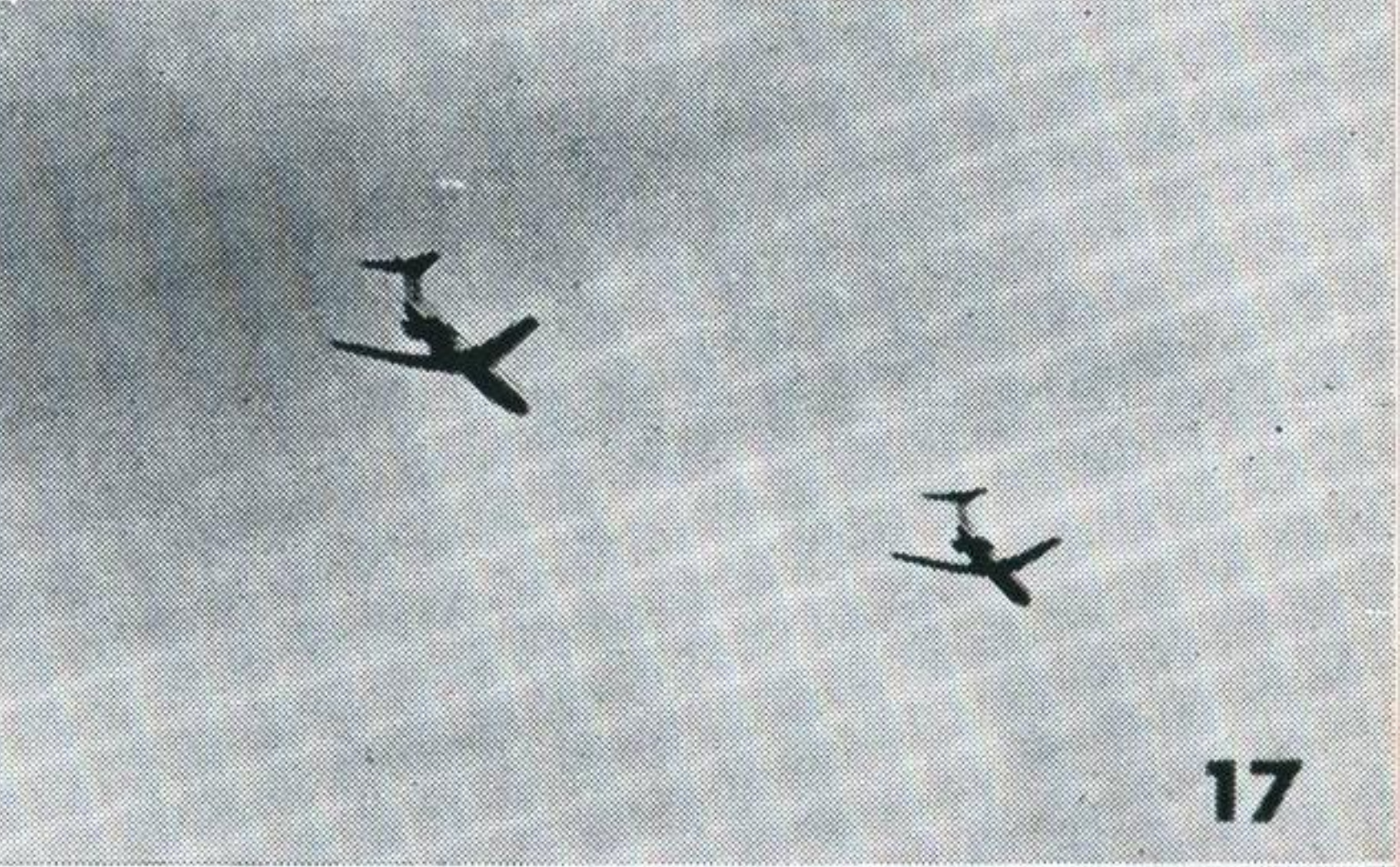
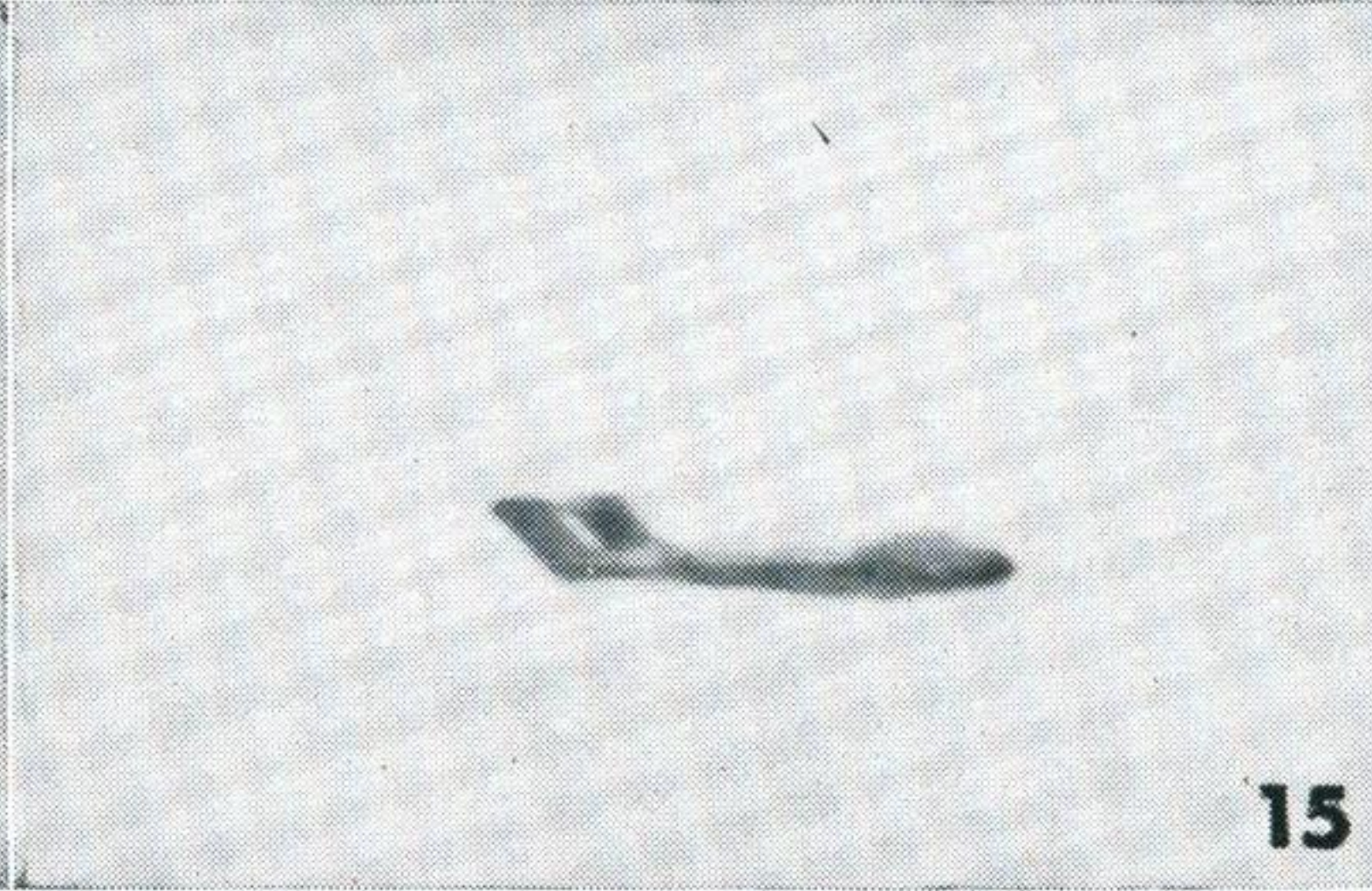
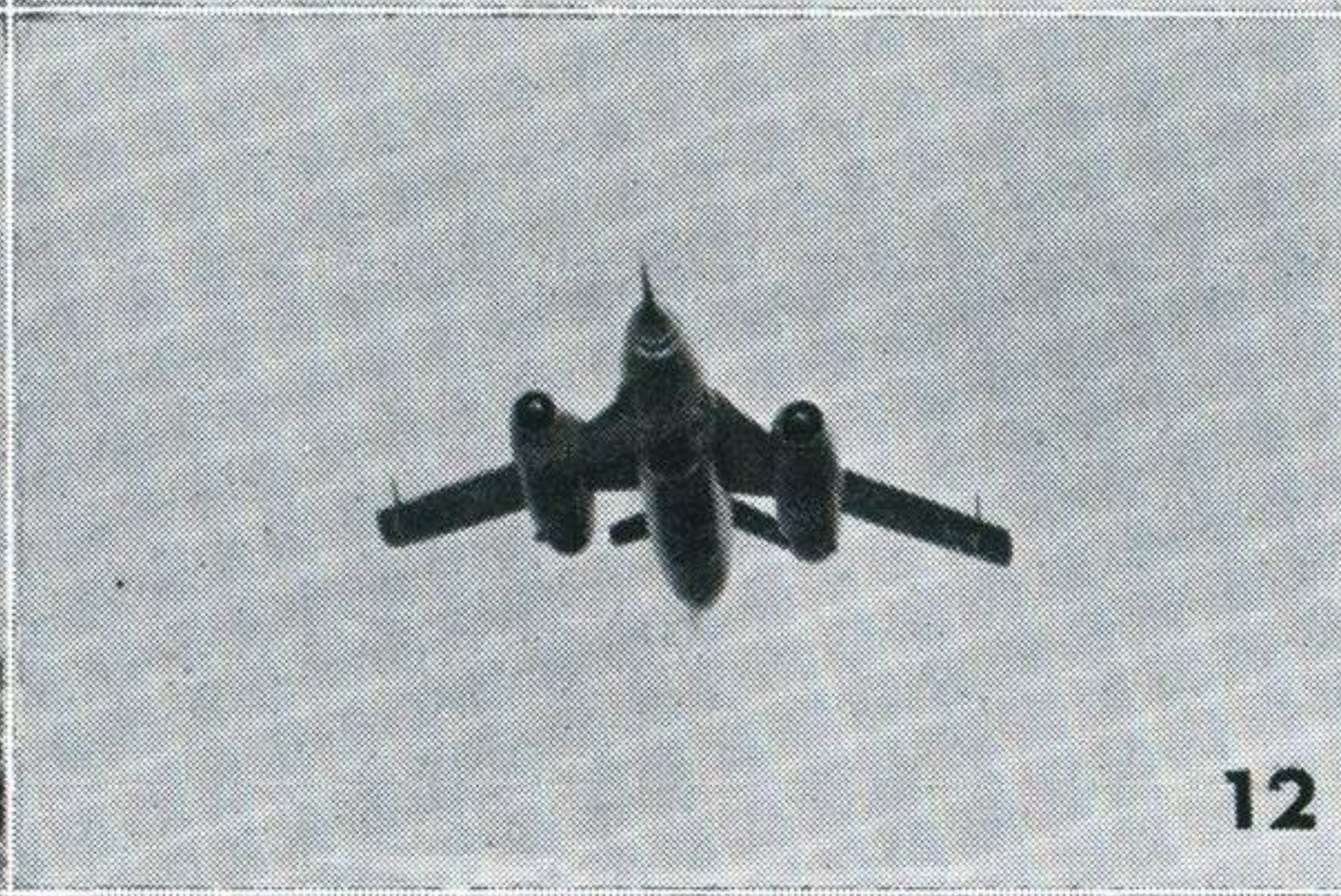
To enter U.S.A.F. service later in the year the Lockheed C-141 Star Lifter.

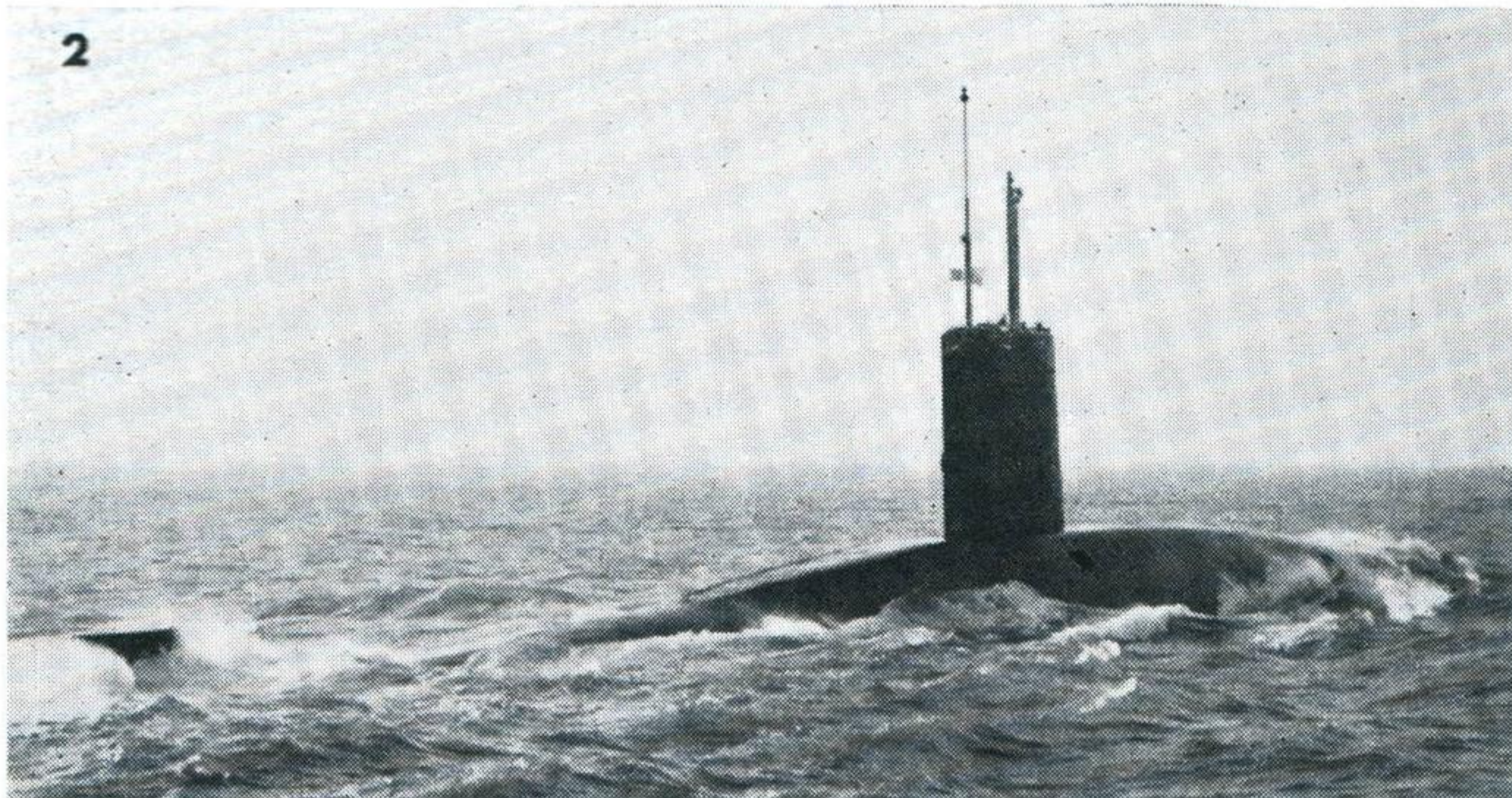
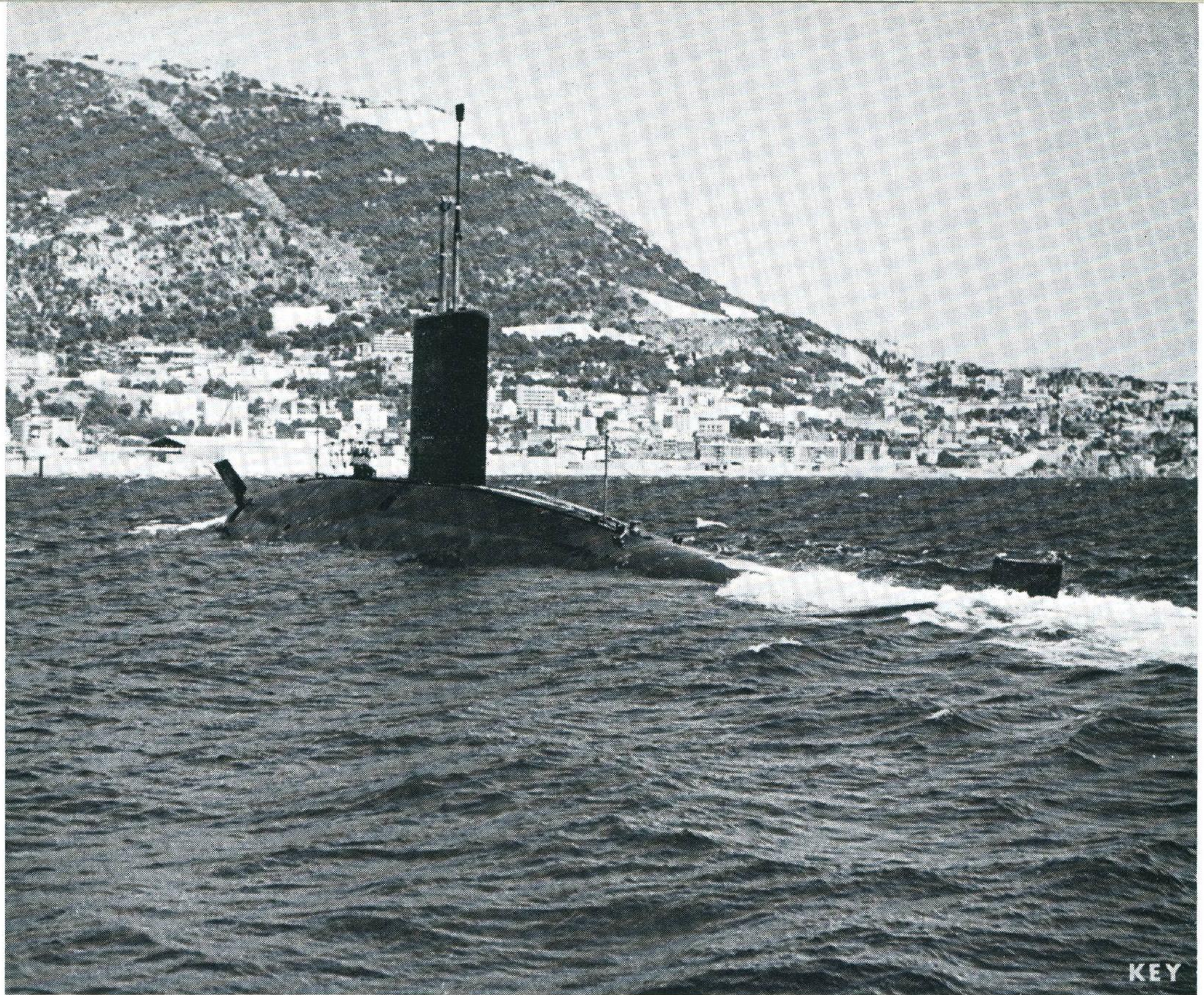


**TESTING
TIME**

A test of
your ability to
identify aircraft.

Solutions on
the cover.





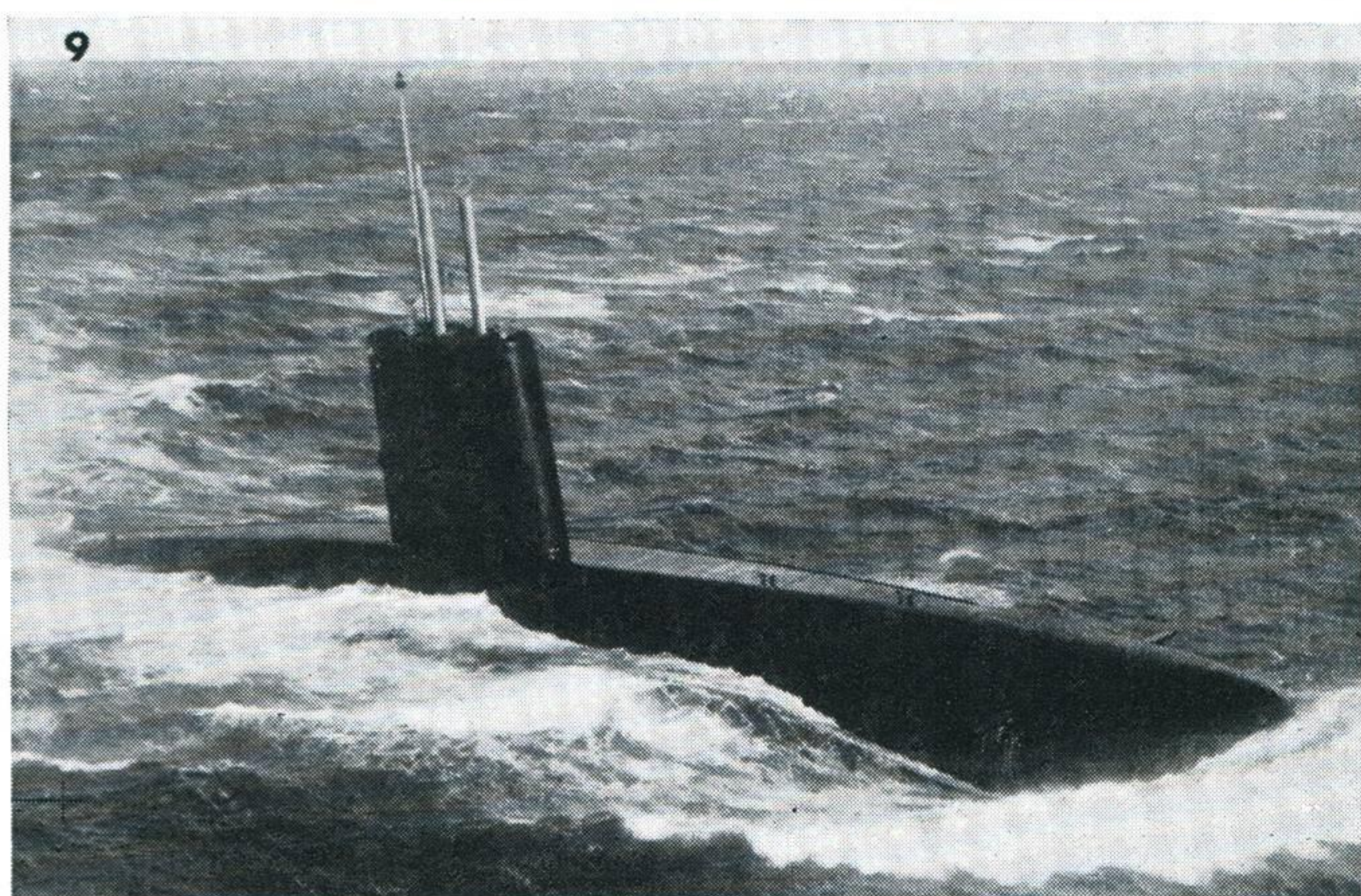
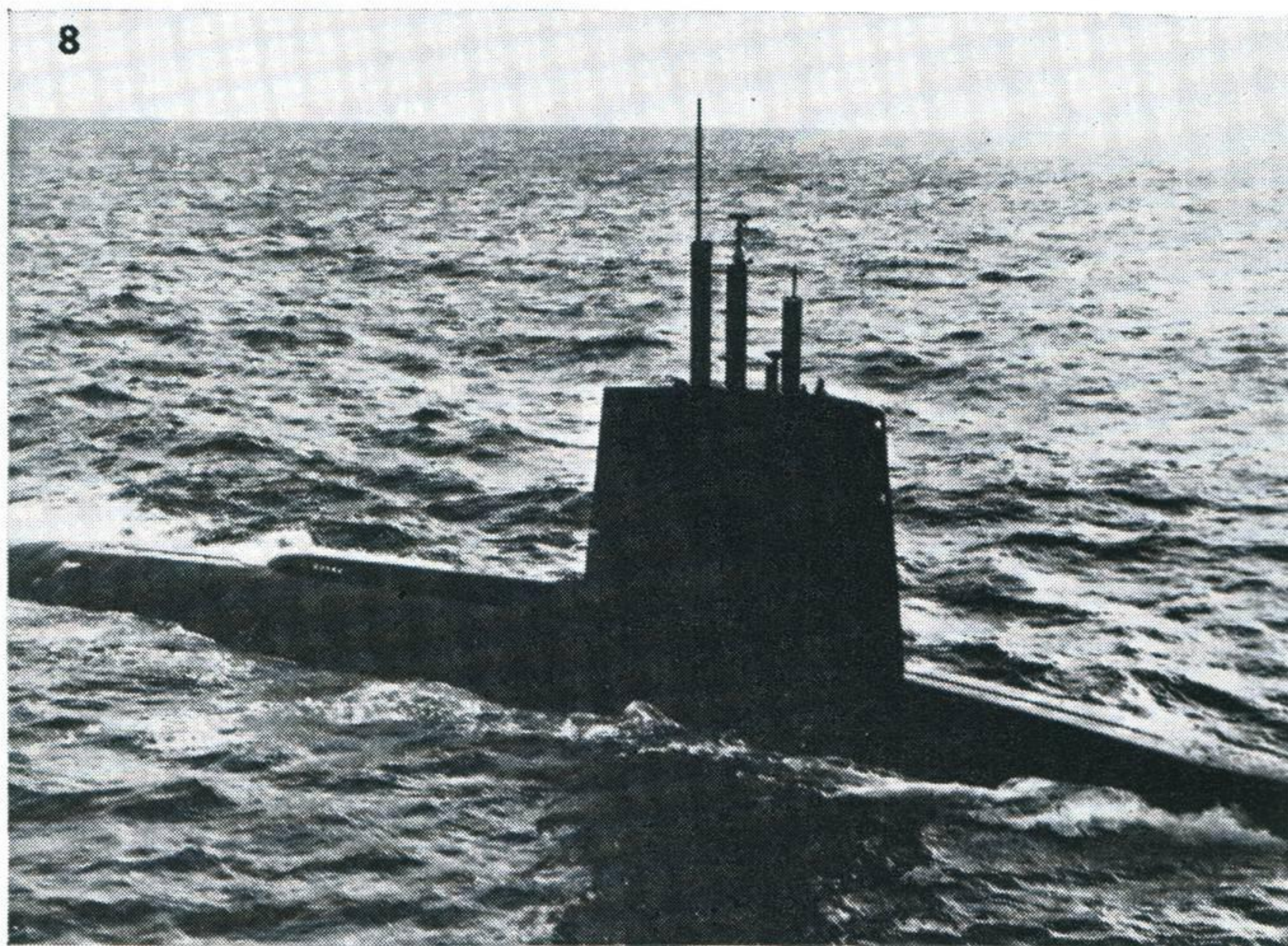
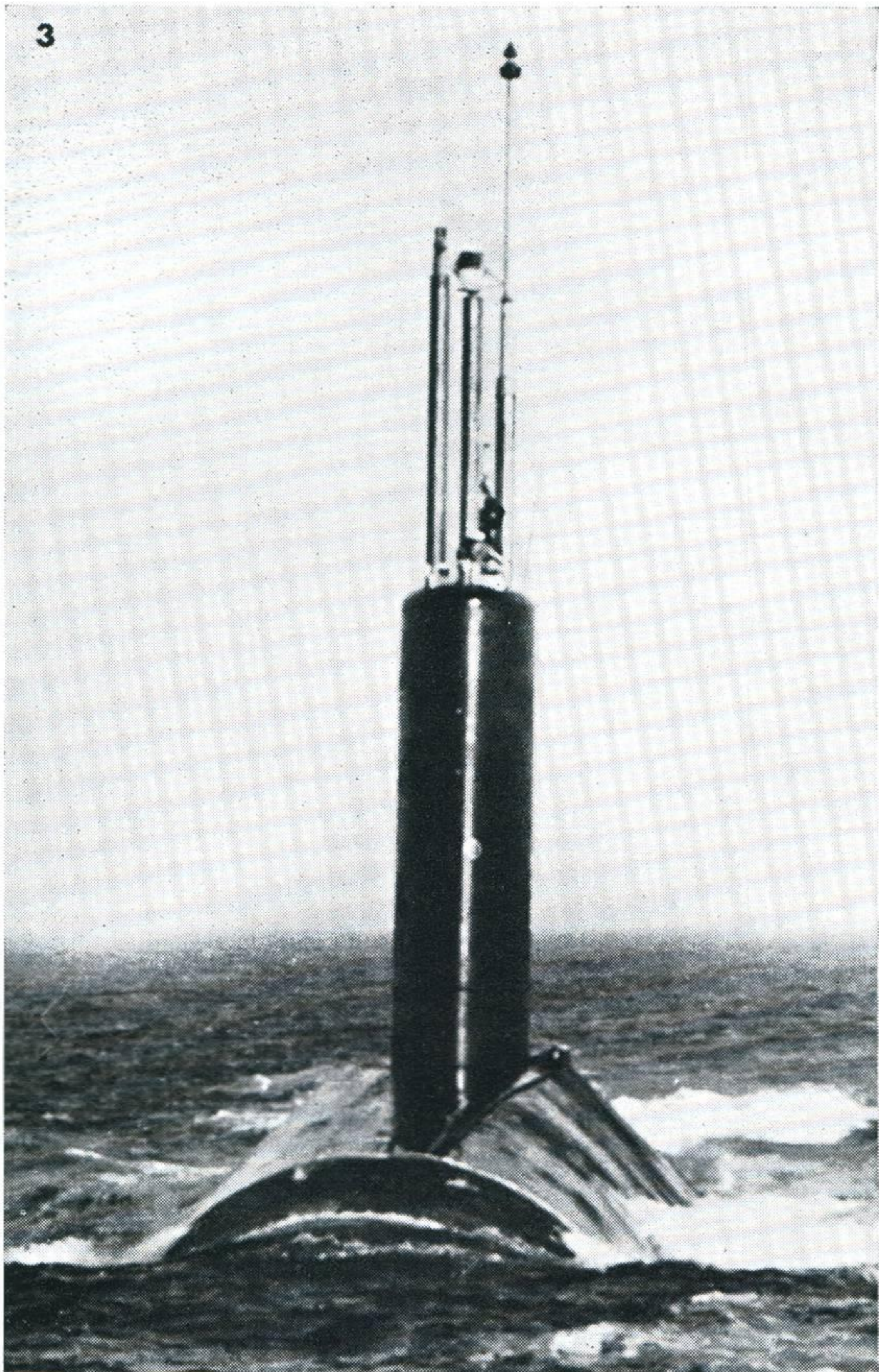
HMS DREADNOUGHT

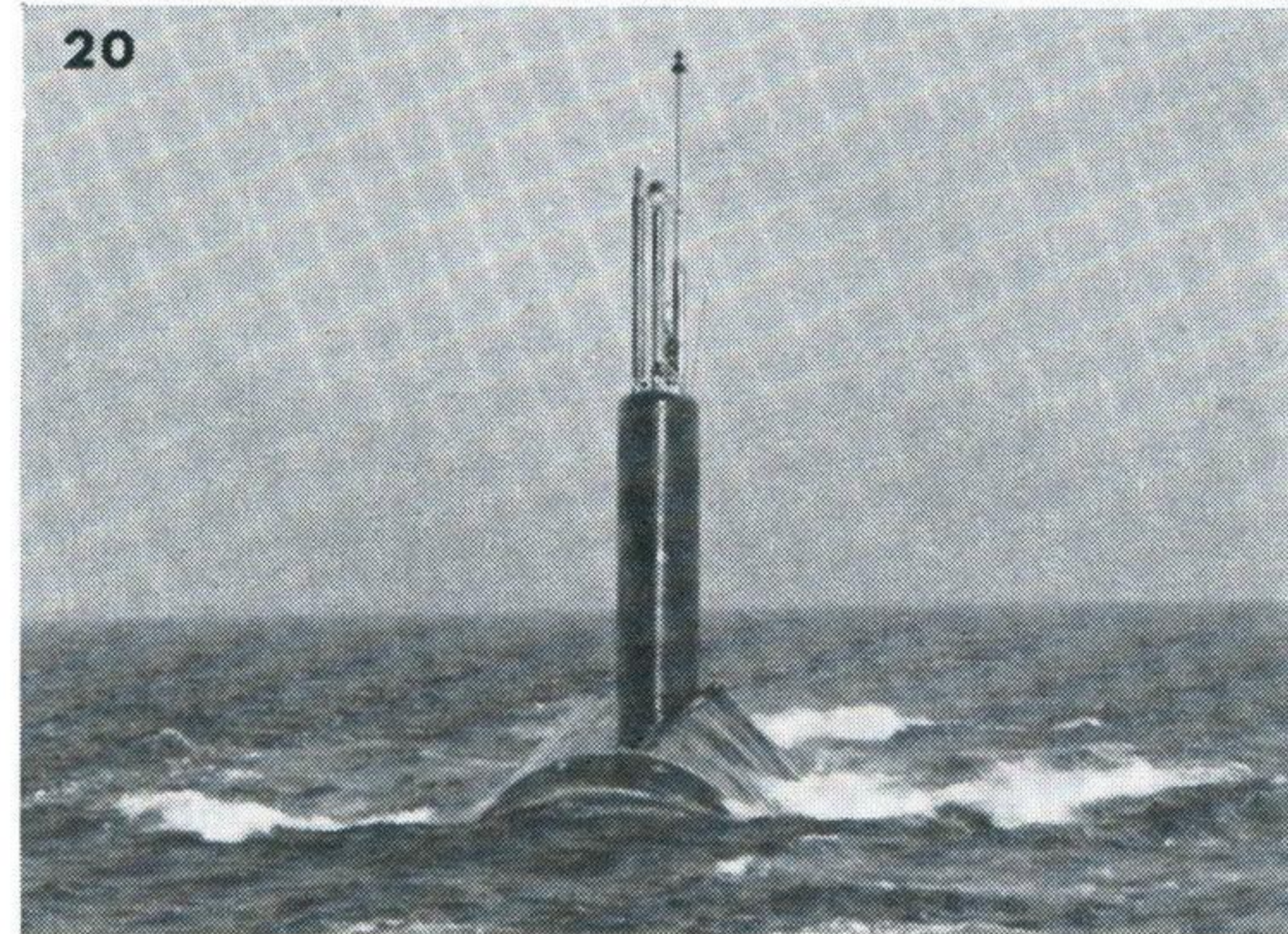
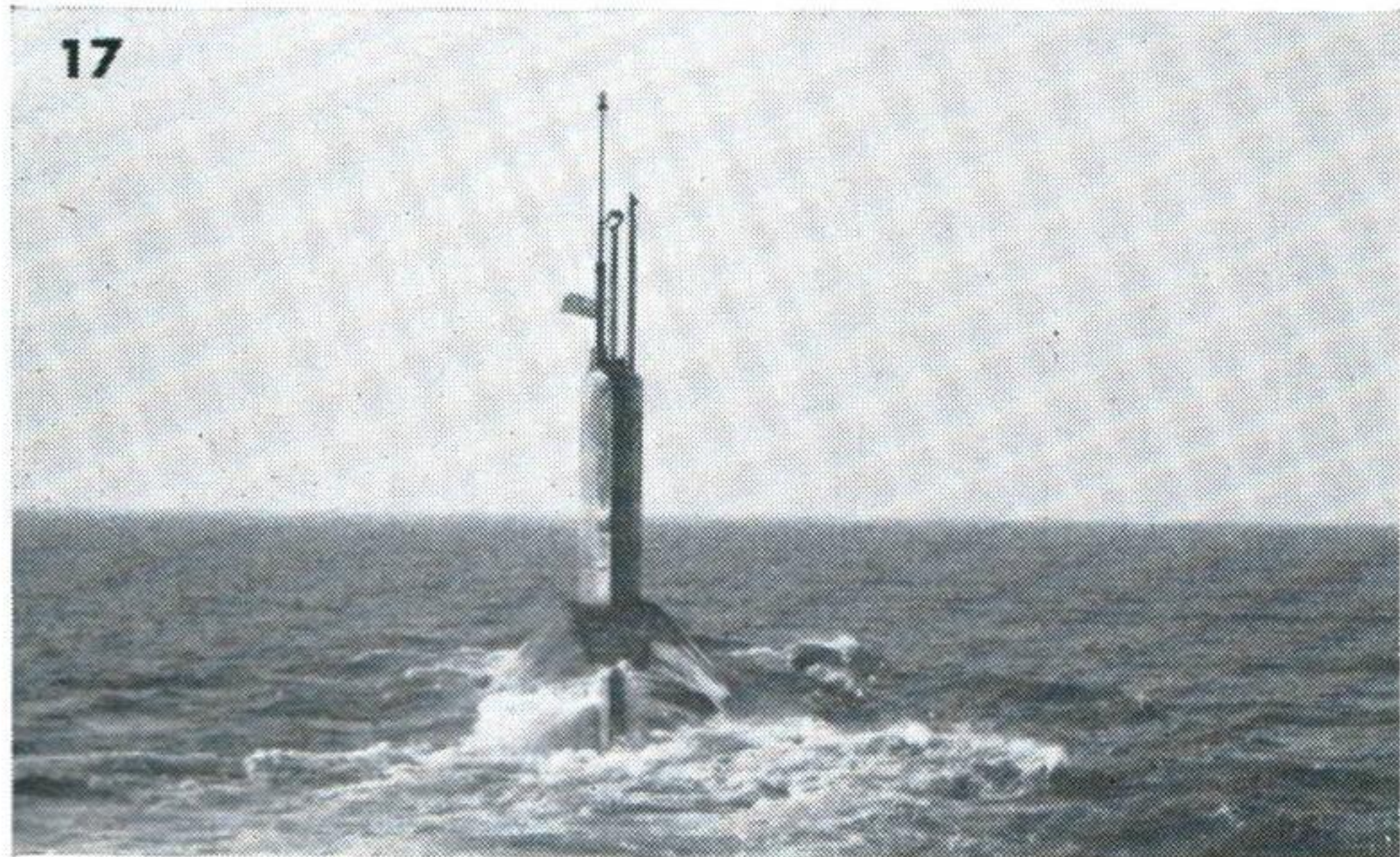
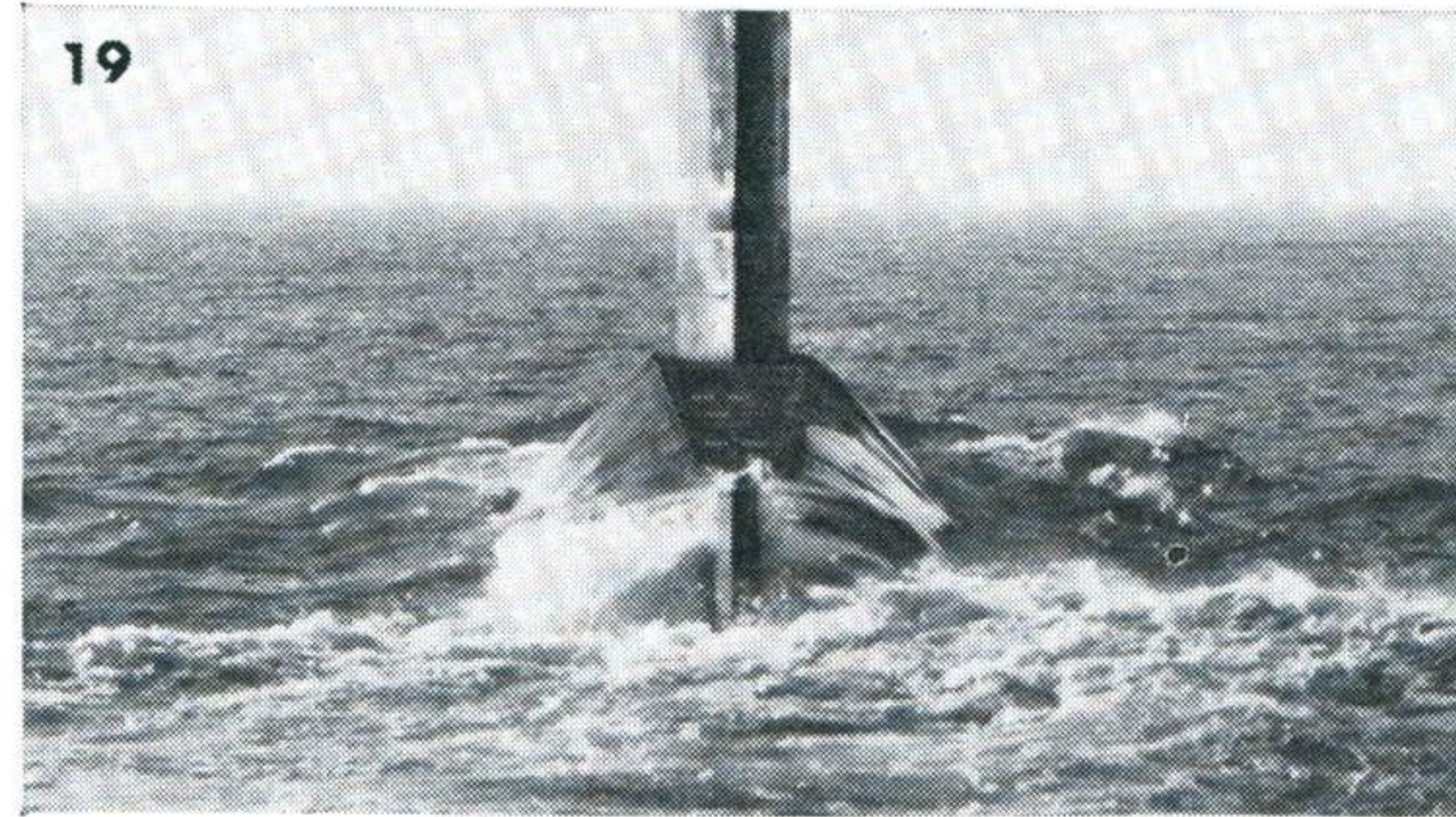
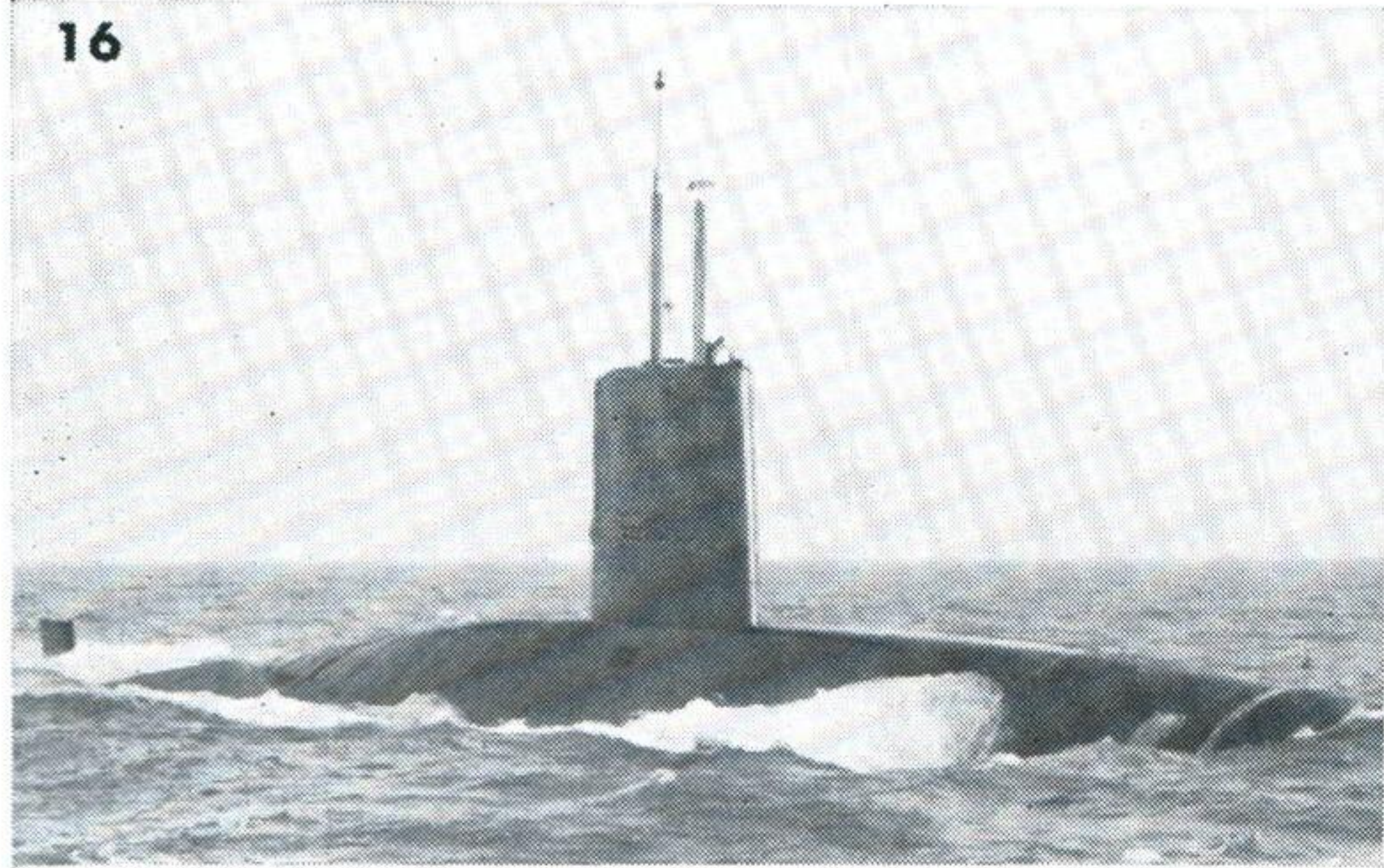
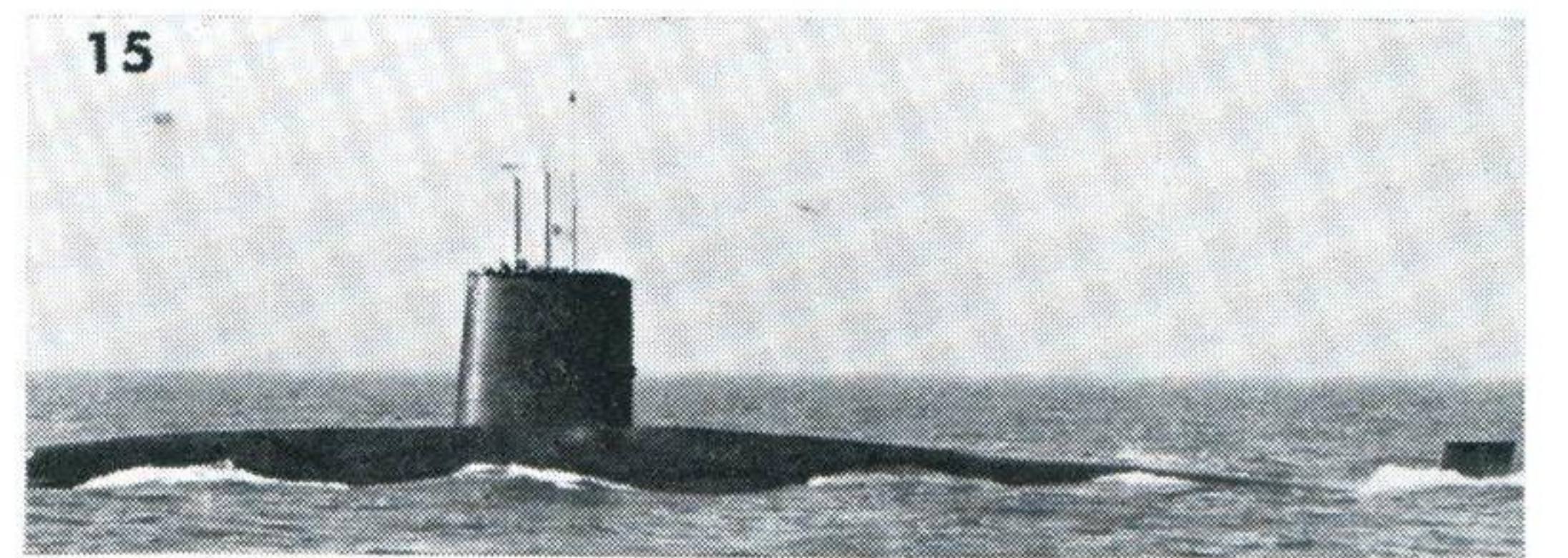
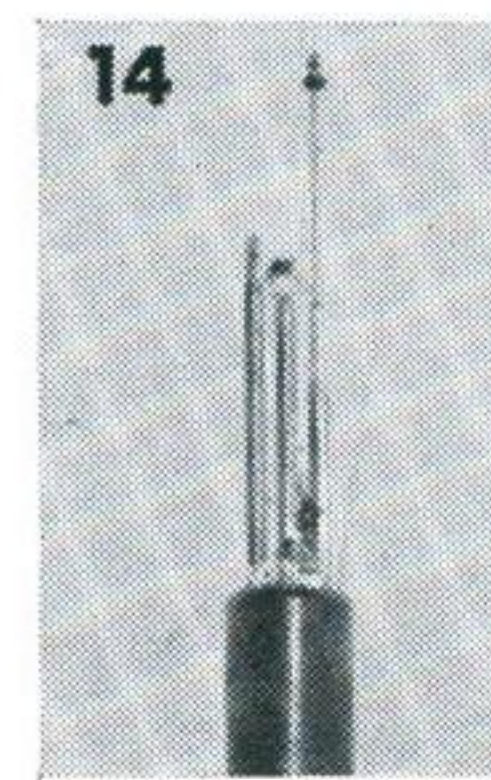
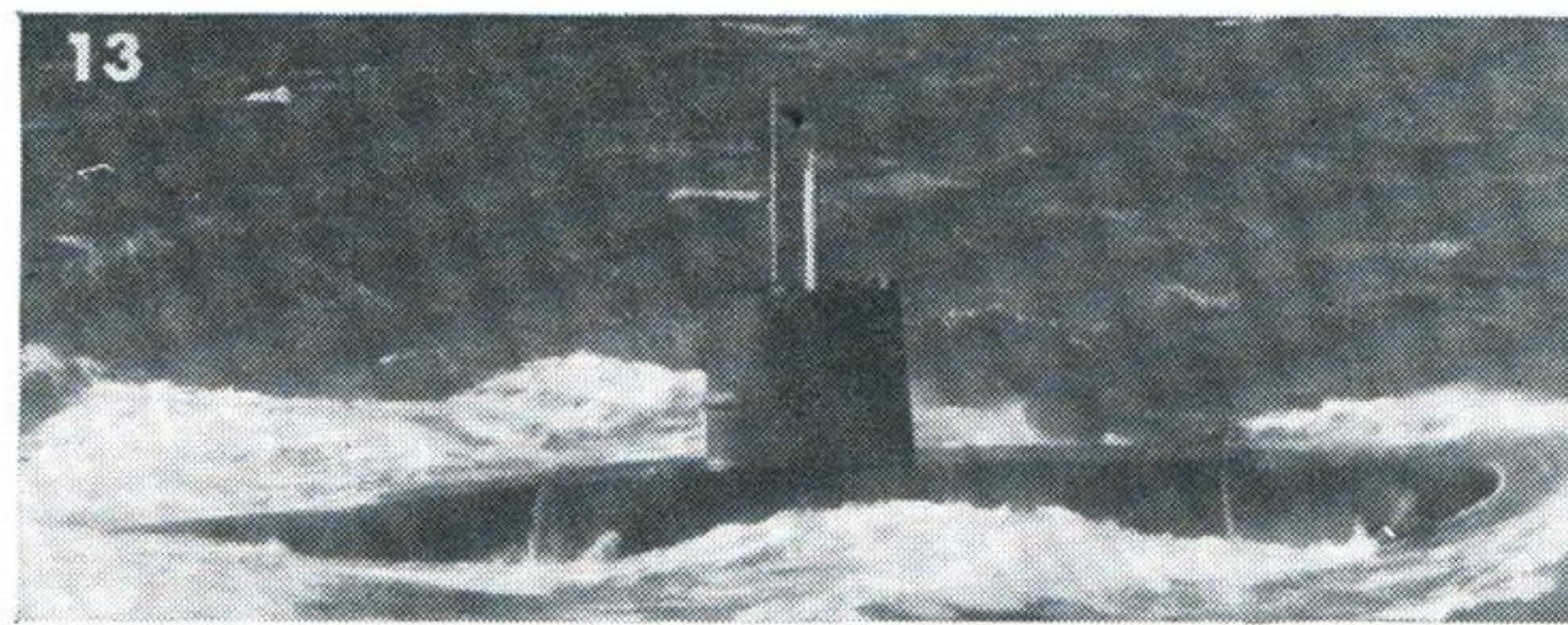
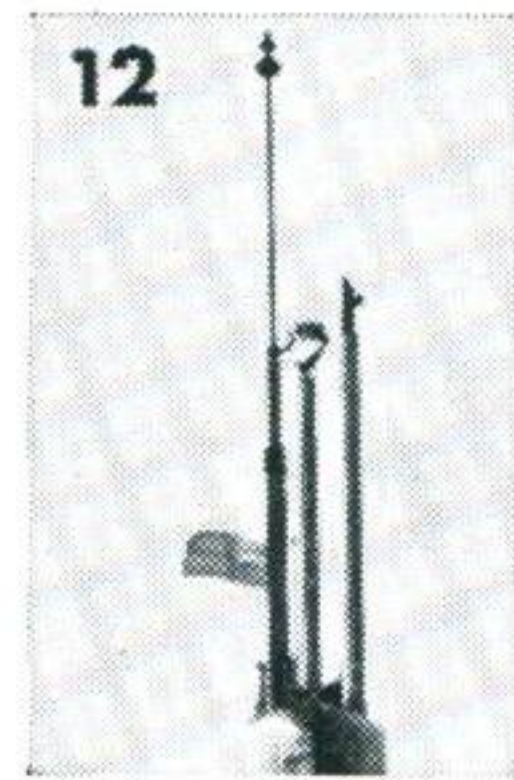
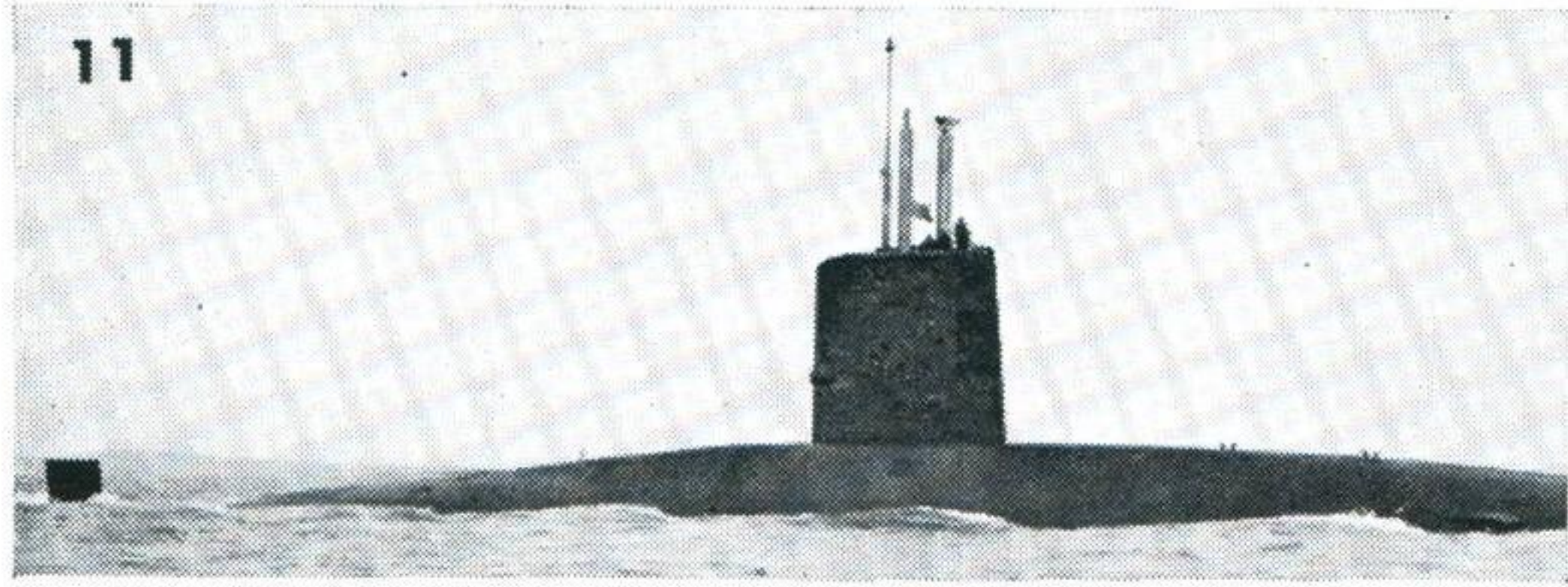
It is fitting that Britain's first nuclear submarine should have been given the name Dreadnought because she is as revolutionary in concept and design as the famous "all-big gun" battleship of 1906.

She was completed in 1962 and intended principally to be hunter-killer. She is distinctive among British submarines by reason of her streamlined whale-back appearance

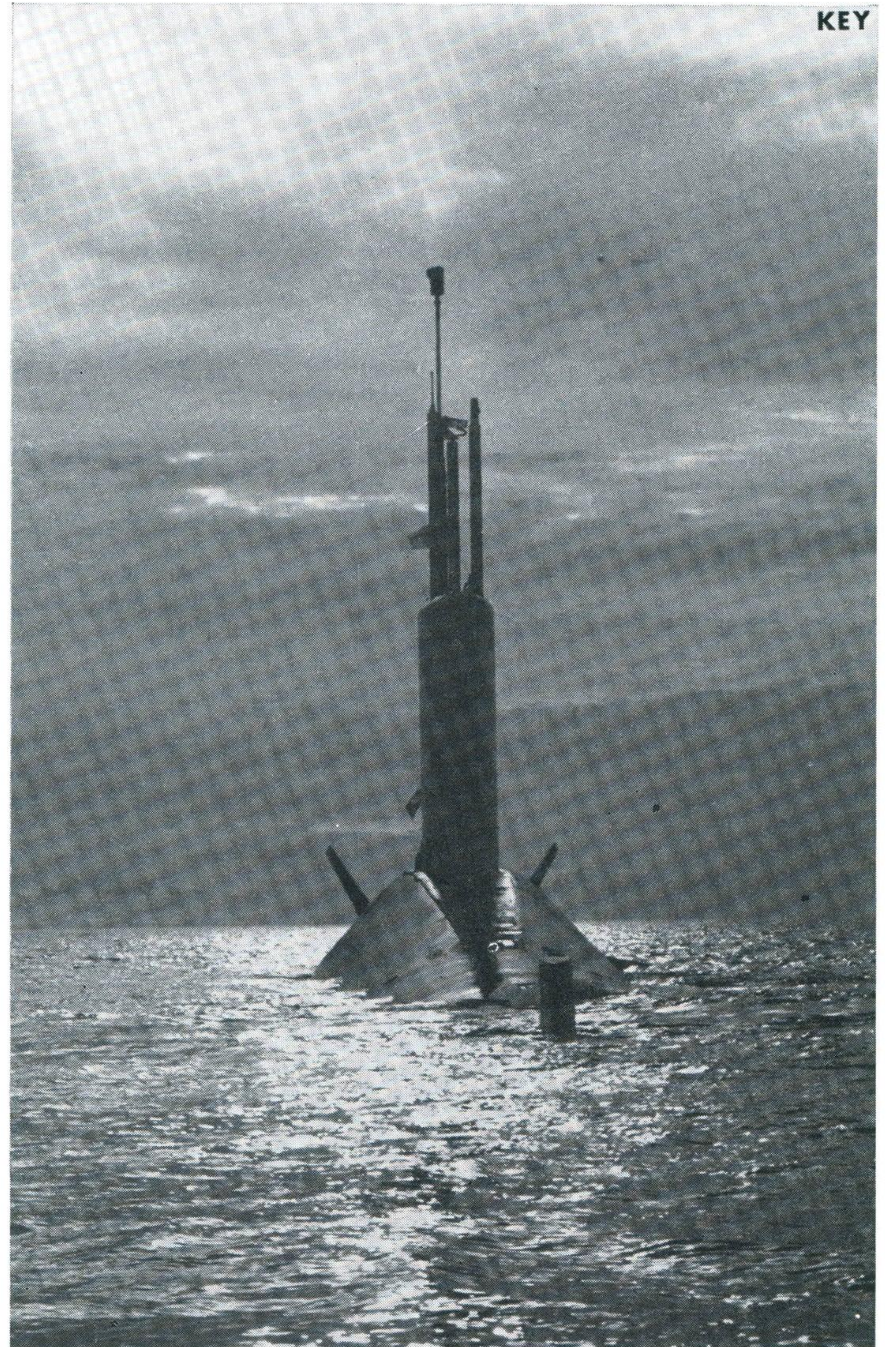
and tall thin fin or conning tower, which seems to have a backwards slope. Incidentally her hull was built in the United Kingdom but she is powered by a nuclear plant manufactured in the United States. She has a surface displacement of 3,500 tons and a length of 266 feet and is armed with 6 x 21 inch bow torpedo tubes. Instructions on page 100, solutions on the cover.







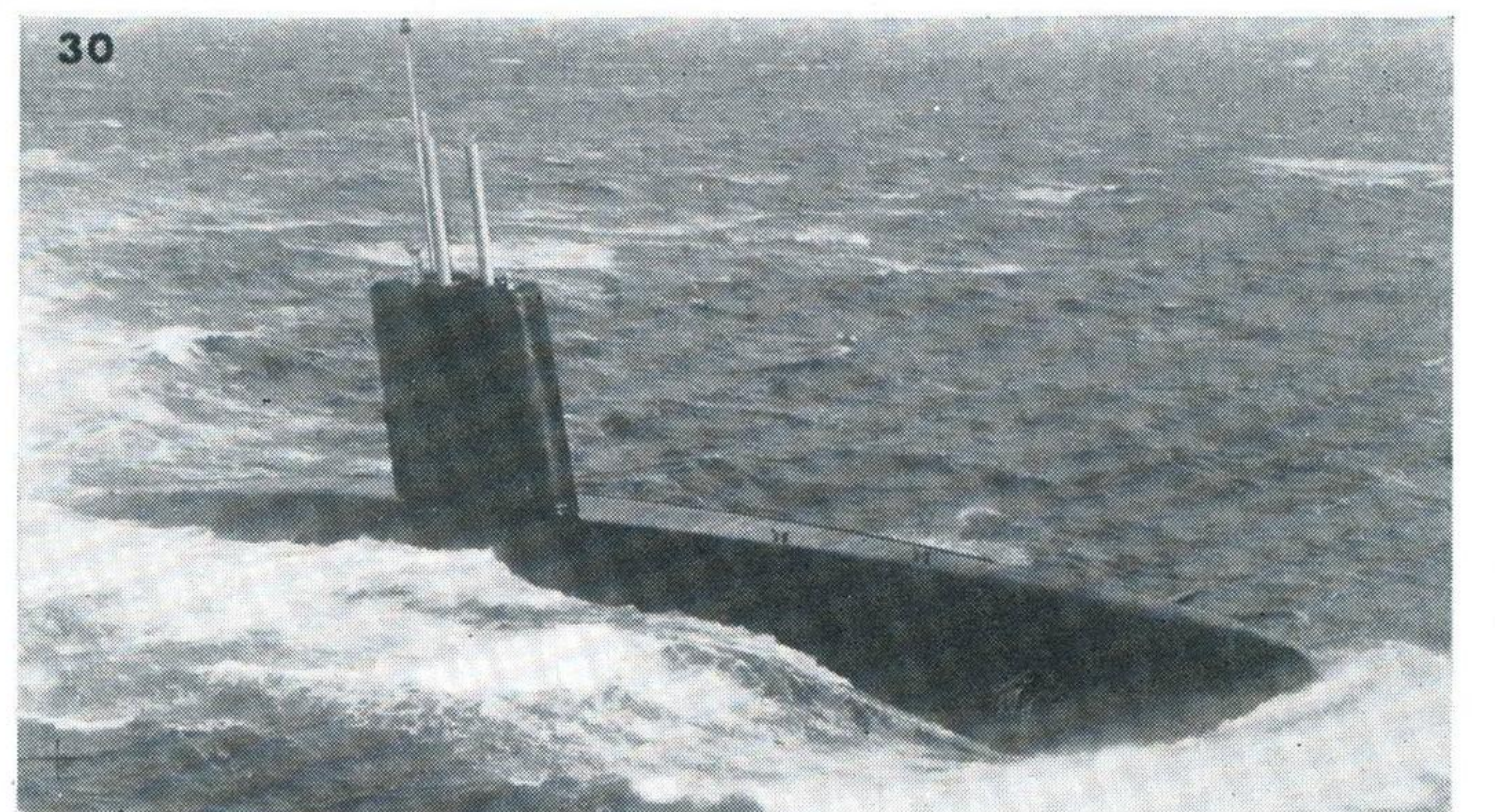
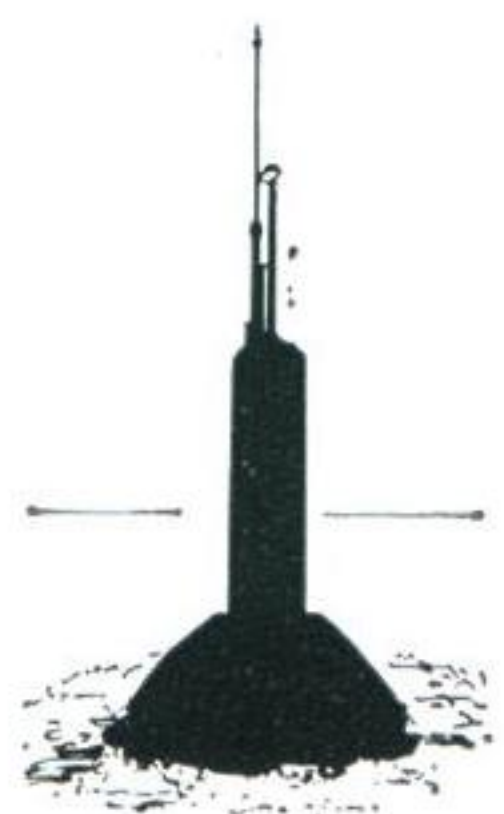
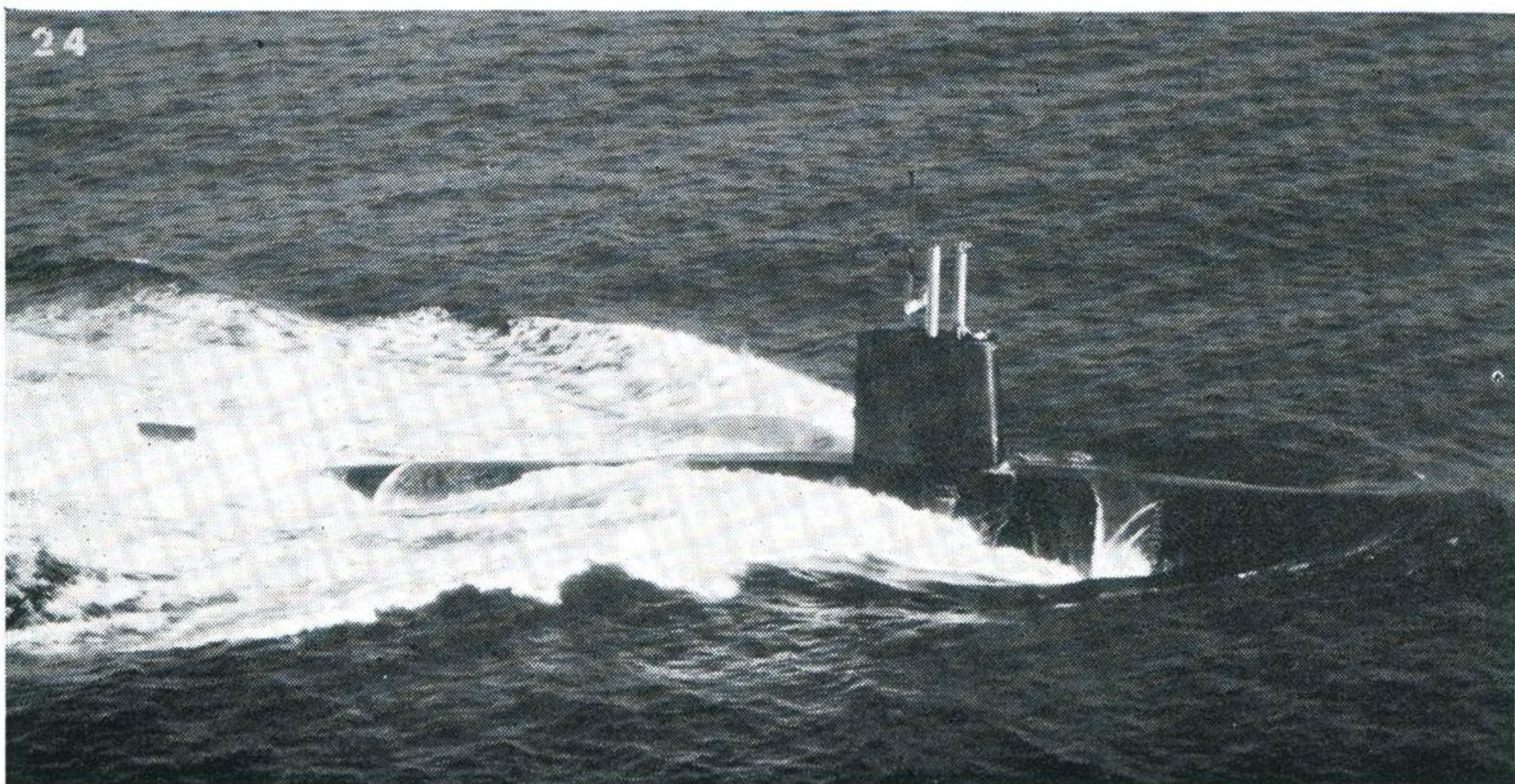
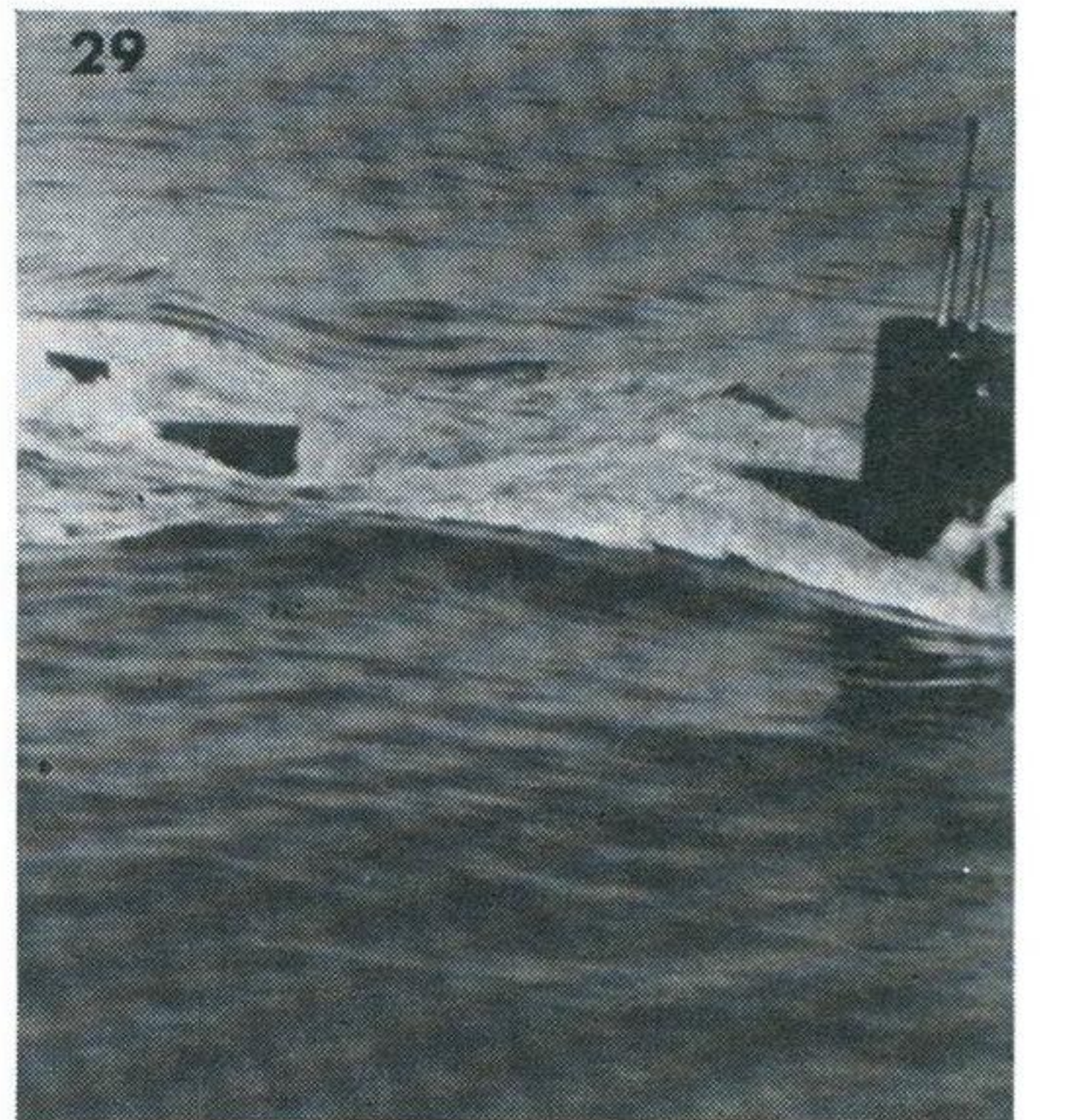
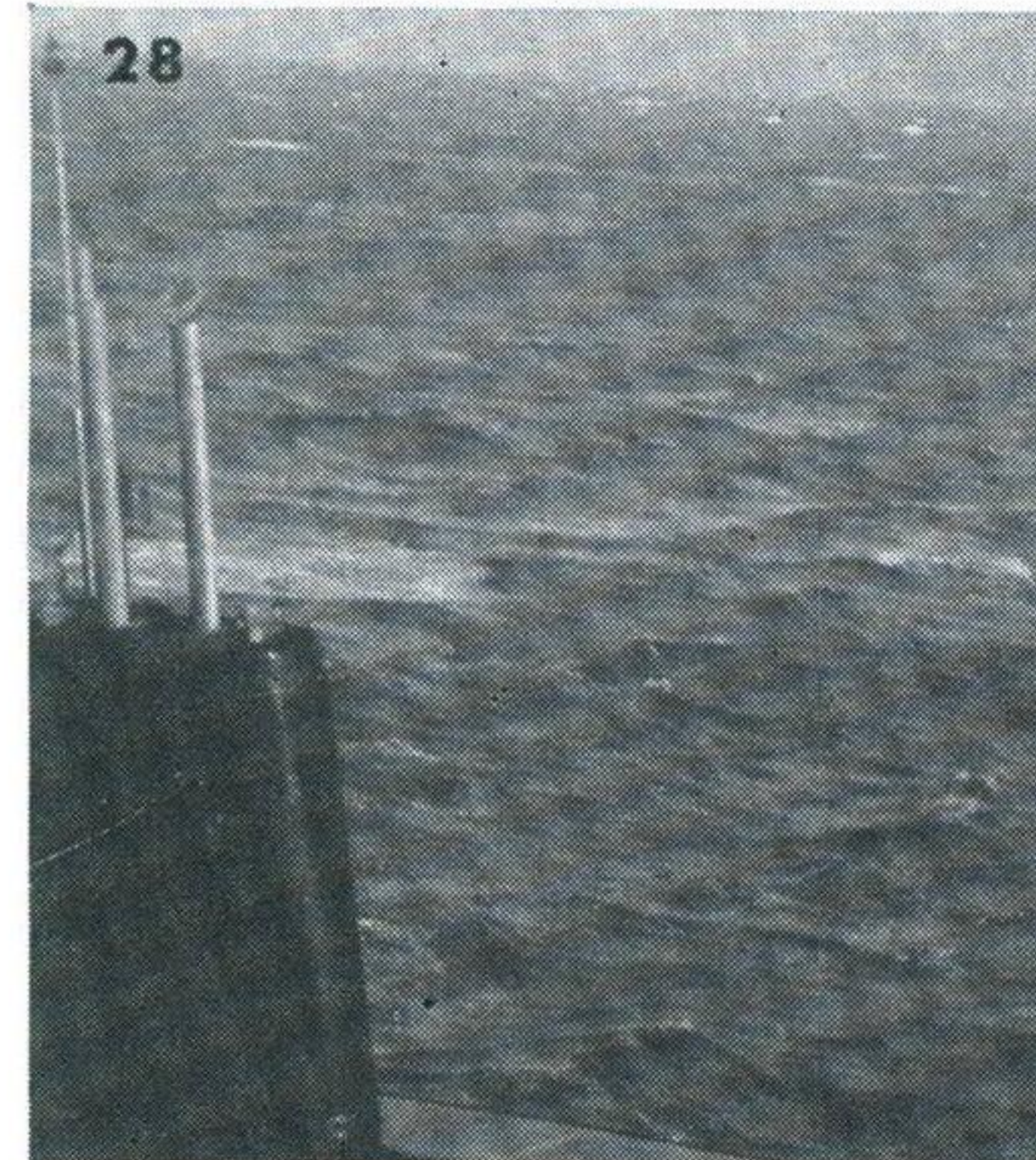
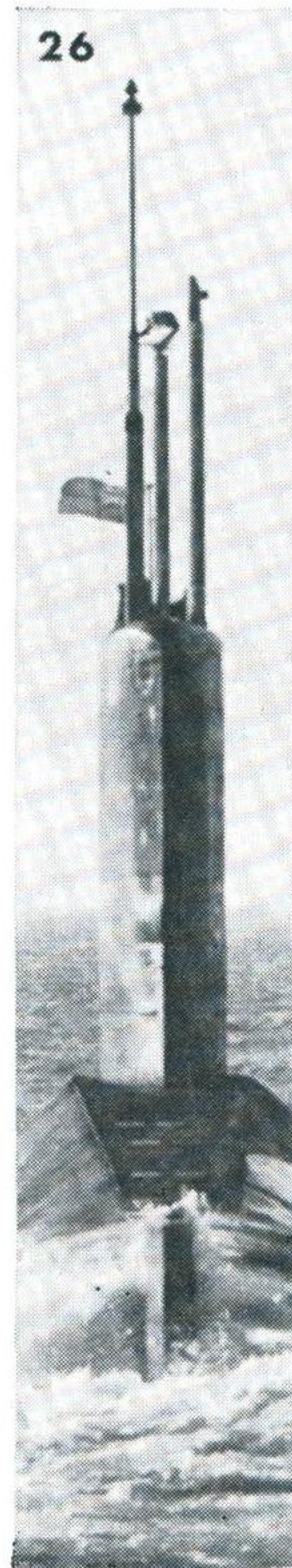
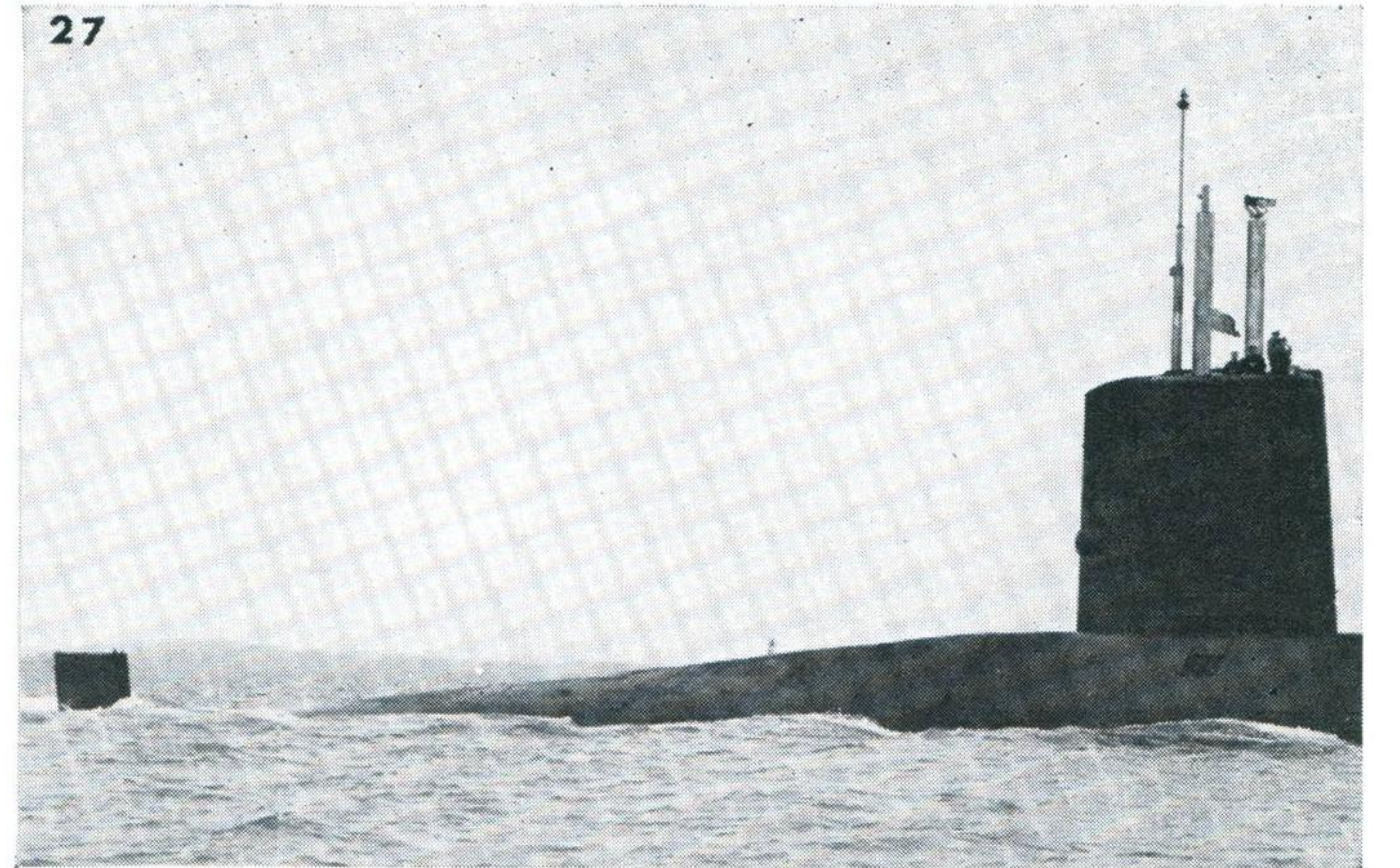
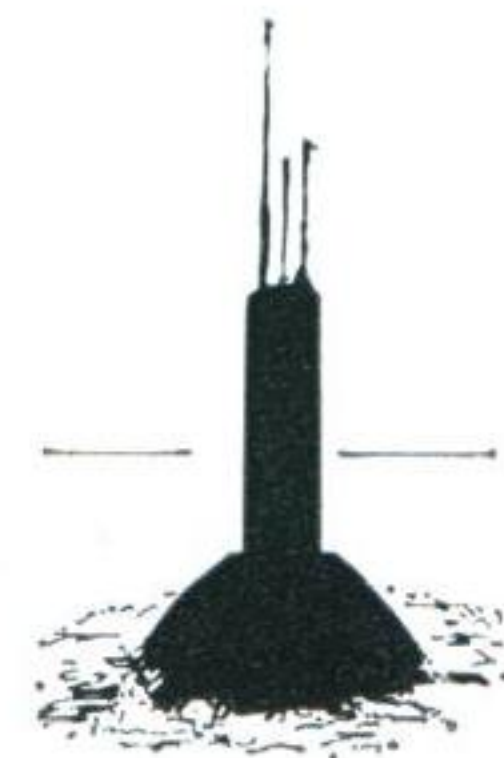
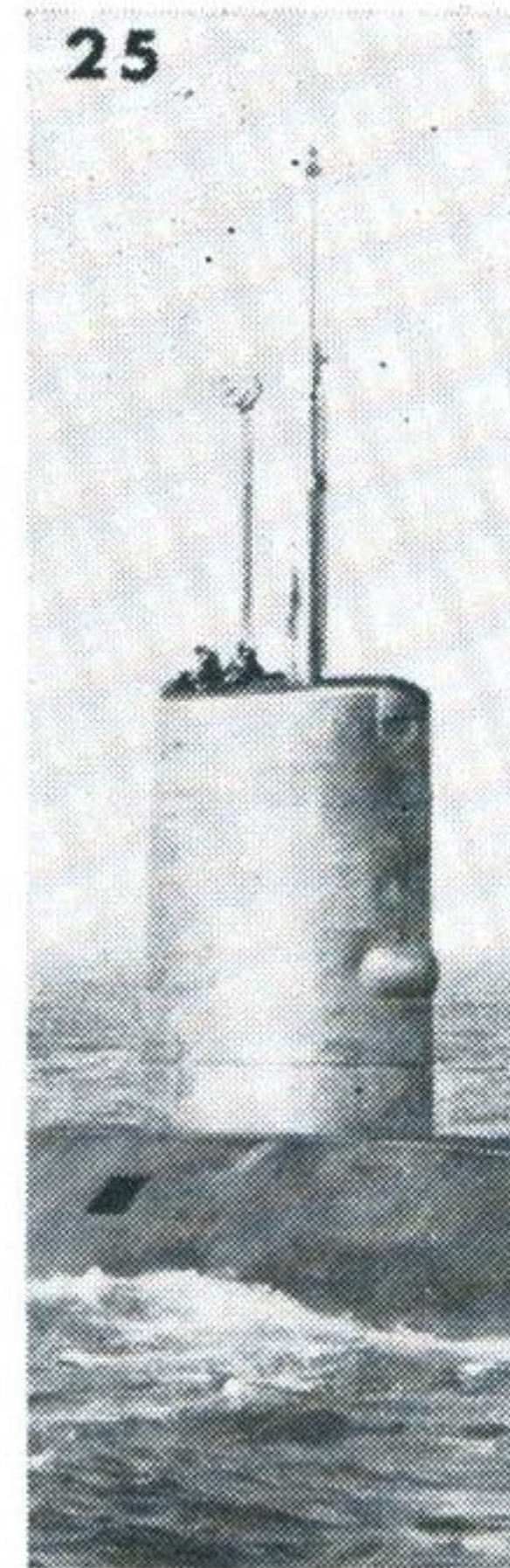
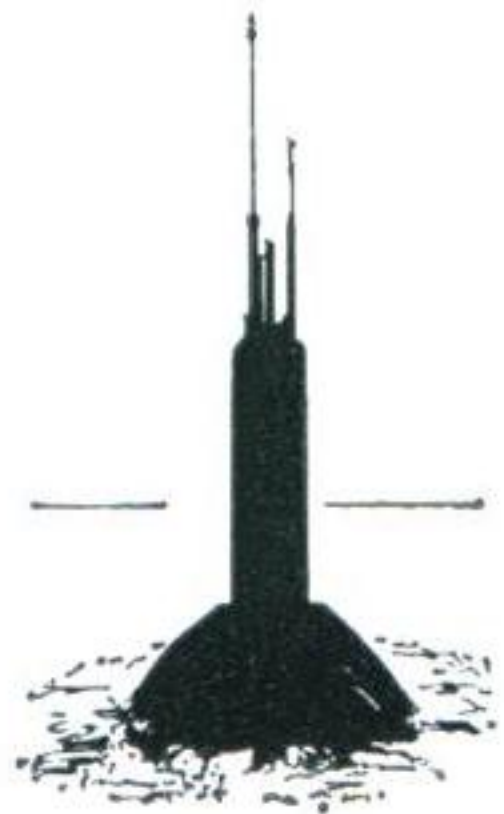
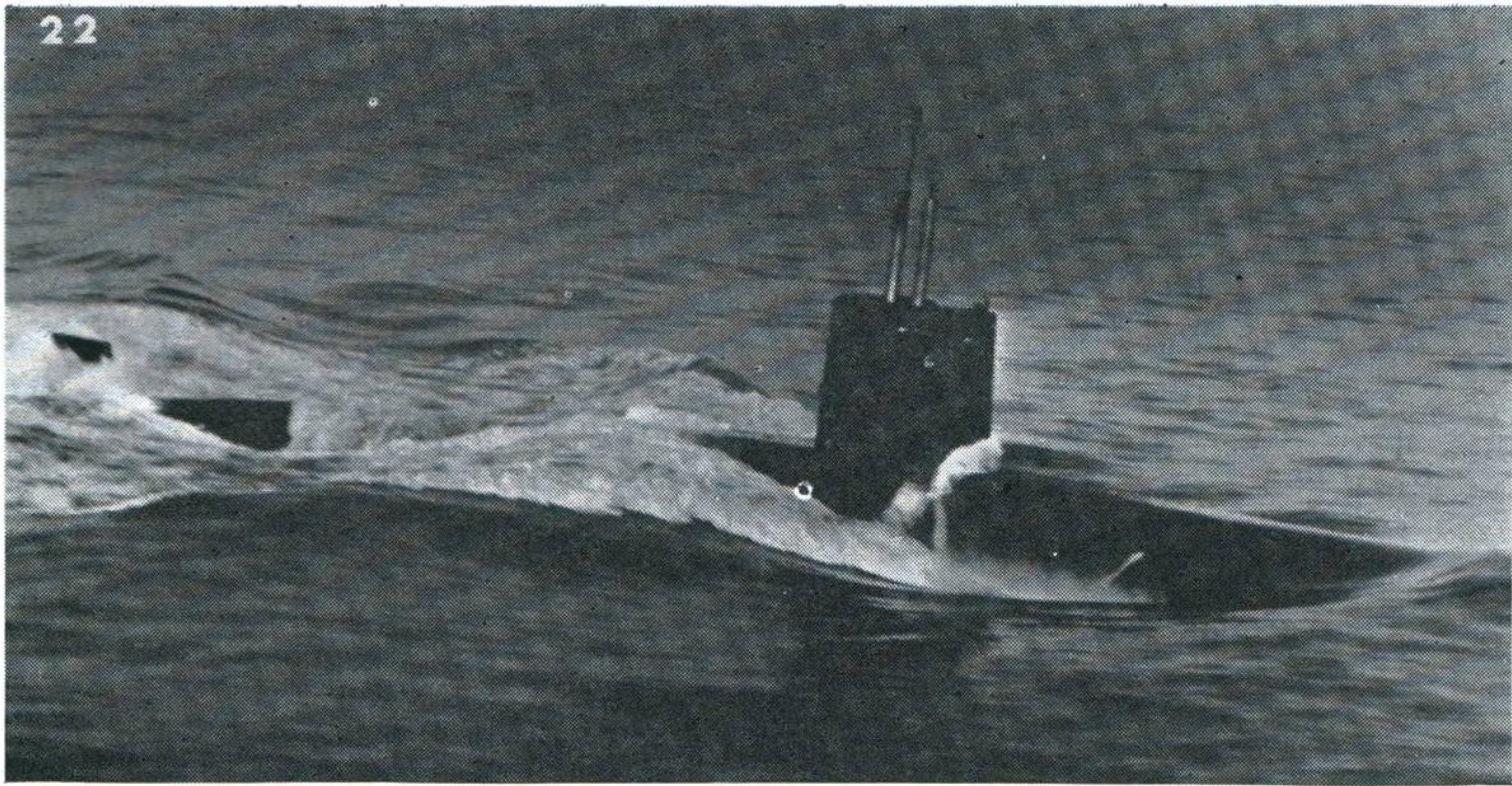
KEY



HMS DREADNOUGHT

CONTINUED







A F V — PICK OF THE PAST

Issues of the *Joint Services Recognition Journal* from 1958 onwards contain a considerable number of training devices which are current and are held in stock at APFS, Kidbrooke, for issue on demand through the usual channels. Trainers worthy of note are listed below. Take your pick.

Vol. 13 No. 2 February 1958

Saladin. In service in numbers with the Royal Armoured Corps and also the armed forces of Australia, Ghana, Indonesia, Jordan, Kuwait, Libya and Tunisia.

Vol. 13 No. 3 March 1958

Centurion 7. Although largely superseded by later marks armed with a 105-mm. gun, it is still to be seen in British units and with the armies of several other countries.

Vol. 13 No. 5 May 1958

AMX-13. One of the most widely used tanks, this French light tank is in Indian, Israeli and Swiss service as well as in numbers in the French Army.

Vol. 13 No. 9 September 1958

Although this American **M-40** self-propelled gun is no longer in British service some are held in store and it is still in French service.

Vol. 13 No. 10 October 1958

M-44. This self-propelled howitzer of United States origin is still in American, British and German service.

Vol. 13 No. 11 November 1958

Although the Soviet **T-34/85** medium tank is no longer with front-line units of the Soviet Army it still exists in large numbers and continues in service with the armies of the Communist bloc and elsewhere including Egyptian Forces in the Yemen.

Vol. 14 No. 4 April, 1959

A "Skyline" lesson on the **T-54** (the basic tank of the Soviet and Satellite armed forces) and **JS-3** (still to be found in Soviet and Satellite armoured formations) is in this issue.

Vol. 14 No. 8 August 1959

A reference feature covering over 40 A.F.V.s with photo, silhouette and brief details of which all but a dozen are still currently in use world-wide.

Vol. 14 No. 9 September 1959

This issue deals jointly with the British **Conqueror**, American **M-48 Patton** and Soviet **T-54**. Although the British tank is being phased out many examples of the American and Soviet tank are still serving. To consolidate this lesson, also order Vol. 16 No. 3 March 1961.

Vol. 14 Nos. 10-12 October to December 1959

In a series of three lessons entitled "Operation Lowdown" the **Ferret** and **Daimler** armoured cars and the **Saracen** armoured personnel carrier are given a dozen pages in a most comprehensive identification lesson. Although the Daimler armoured car has virtually disappeared from service in the British Army, it is still to be found in parts of the Commonwealth.

Vol. 15 No. 1 January 1960

The American **M-103** tank is still in service with the U.S. Army and U.S. Marine Corps.

Vol. 15 No. 6 June 1960

The **M-48 Patton** although partly replaced by the **M-60** in the U.S. Army is still used by the German Army. Here there is a four-page lesson.

Vol. 15 No. 12 December 1960

The **M-41** is still the standard light tank of the U.S. Army and it is also used by the Federal German Republic.

Vol. 16 No. 1 January 1961

The **T-54**, the basic tank of the Soviet armed forces and used by several other countries of the Communist bloc, is also used by Egypt and Iraq.

Vol. 16 No. 2 February 1961

If you require the **M-40** self-propelled gun given in the September 1958 issue, you should also apply for this issue.

Vol. 16 No. 3 March 1961

This issue is a substitute for, not a addition to, the British **Conqueror**, American **M-48 Patton** and Soviet **T-54** lesson in the September 1959 issue.

Vol. 16 No. 4 April 1961

The **ZSU-57** remains the standard self-propelled anti-aircraft equipment of the Soviet armoured formations.

Vol. 16 No. 6 June 1961

The Soviet **JSU-152** self-propelled gun is still to be found in the armies of the Communist bloc.

Vol. 16 No. 8 August 1961

The **PT-76**, standard reconnaissance tank of the Soviet and satellite armoured formations, is the subject of a four-page lesson in this issue.

Vol. 16 No. 10 October 1961

The Soviet **BTR-152** continues to be used in large numbers by the Soviet Army and it is also used in Egypt, Iraq and elsewhere. This is still a useful lesson with the proviso that it should be taken into account that the more recent models are provided with overhead protection.

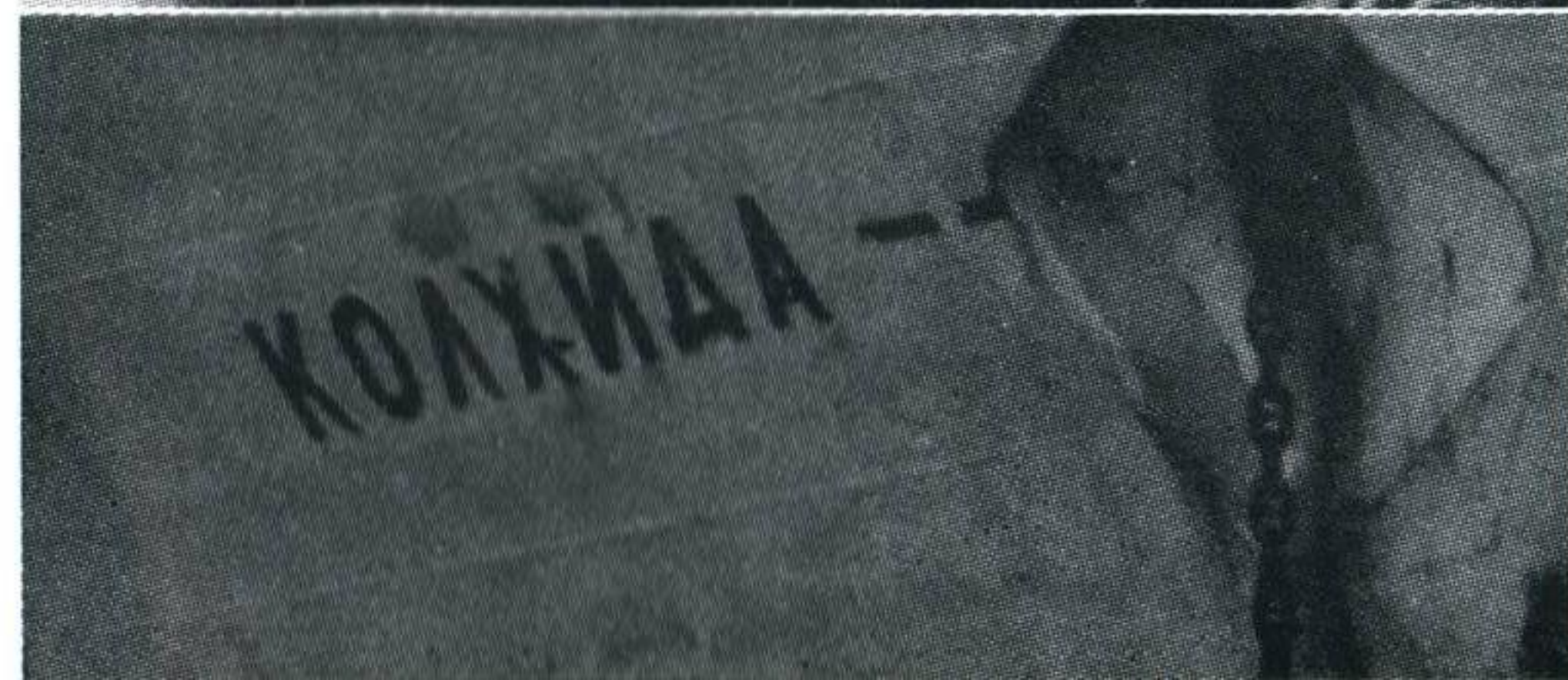
Vol. 16 No. 11 November 1961

Like the Soviet **JSU-152** (June 1961 edition) the **JSU-122** is also still to be found in the armies of the Communist bloc.

Vol. 16 No. 12 December 1961

Rather an old design, but still used by the Soviet army, this lesson on the **BTR-40** is still valid with the proviso that more recently models have been provided with overhead cover.

An index appears in the December issue of each year. Use these for a guide to past lessons which are, in the main, still current back to January 1958. This applies equally to ship and aircraft lessons.



Russian Steppes

One problem of learning Russian is getting to know the Cyrillic script. Transliteration is one way of becoming familiar with it, being no more than an identity exercise in which the symbols replace aircraft, ships or tanks. Use the key below to transliterate the names of the vessels opposite and the names set out below. The key is in three groups: the first is of characters of the same appearance in both languages: the second *look* Roman but are Cyrillic: the third group is of characters not in the Roman alphabet.

Russian Letters	Roman Equivalent	Phonetic Pronunciation
А а	a	in <i>bath</i>
Е е	ye, e	in <i>yet</i> (*)
К к	k	in <i>king</i>
М м	m	in <i>mind</i>
О о	o	in <i>stop</i>
Т т	t	in <i>total</i>
<hr/>		
В в	v	in <i>valid</i>
Н н	n	in <i>none</i>
Р р	r	in <i>rocket</i>
С с	s	in <i>silver</i>
У у	u	in <i>boot</i>
Х х	kh	in <i>loch</i> (Scottish)
<hr/>		
Б б	b	in <i>bar</i>
Г г	g	in <i>gull</i>
Д д	d	in <i>day</i>
Ж ж	zh	in <i>vision</i>
З з	z	in <i>zebra</i>
И и	i	in <i>keen</i>
Й й	y	in <i>boy</i>
Л л or Л л	l	in <i>wall</i>
П п	p	in <i>pipe</i>
Ф ф	f	in <i>fine</i>
Ц ц	ts	in <i>rats</i>
Ч ч	ch	in <i>church</i>
Ш ш	sh	in <i>short</i>
Щ щ	shch	in <i>Ashchurch</i>
Ы ы	y	in <i>rhythm</i>
Ь ь	'	no sound (**)
Ь ь	'	no sound (***)
Э э	e	in <i>bed</i>
Ю ю	yu	in <i>yule</i>
Я я	ya	in <i>yard</i>

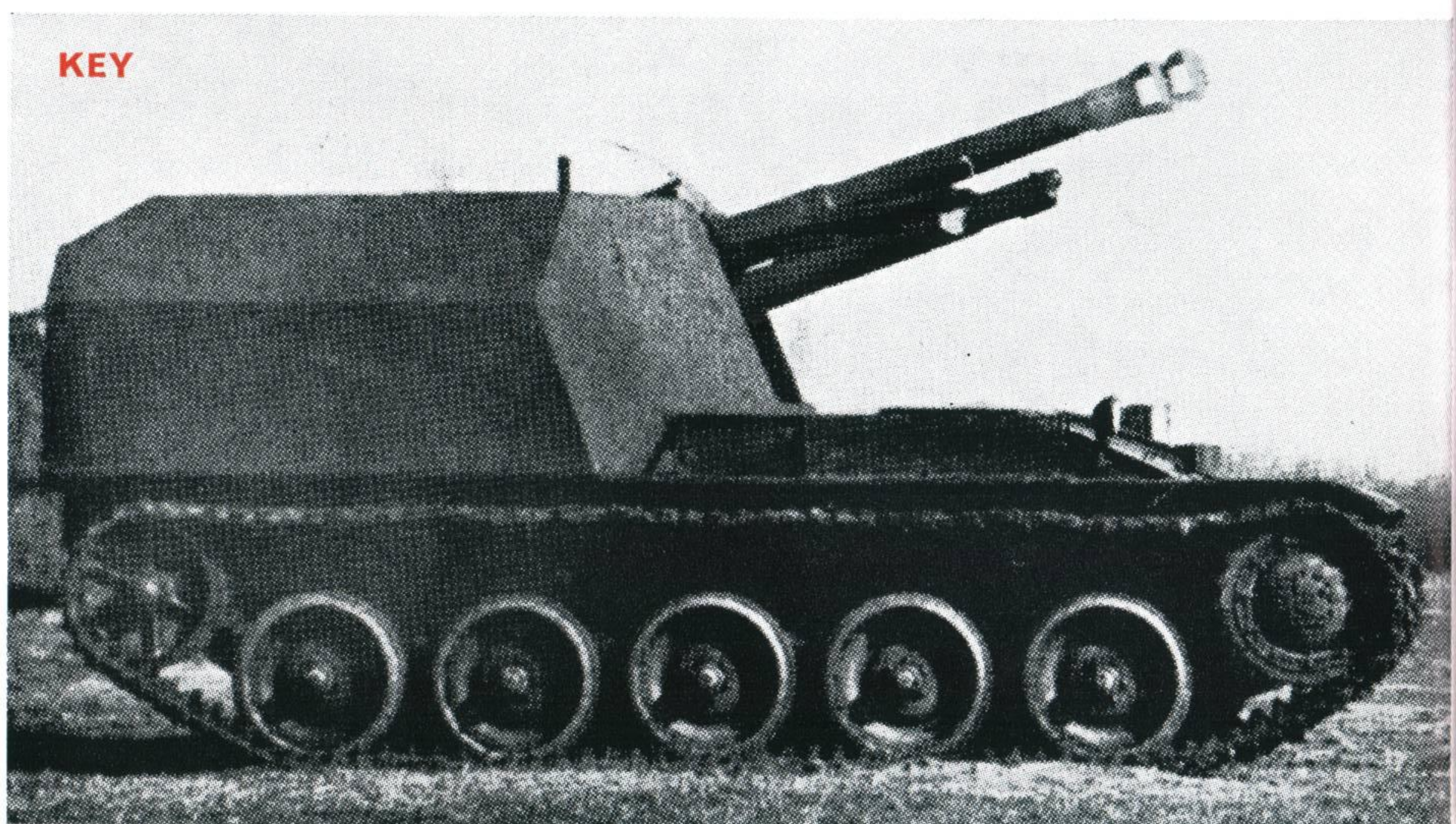
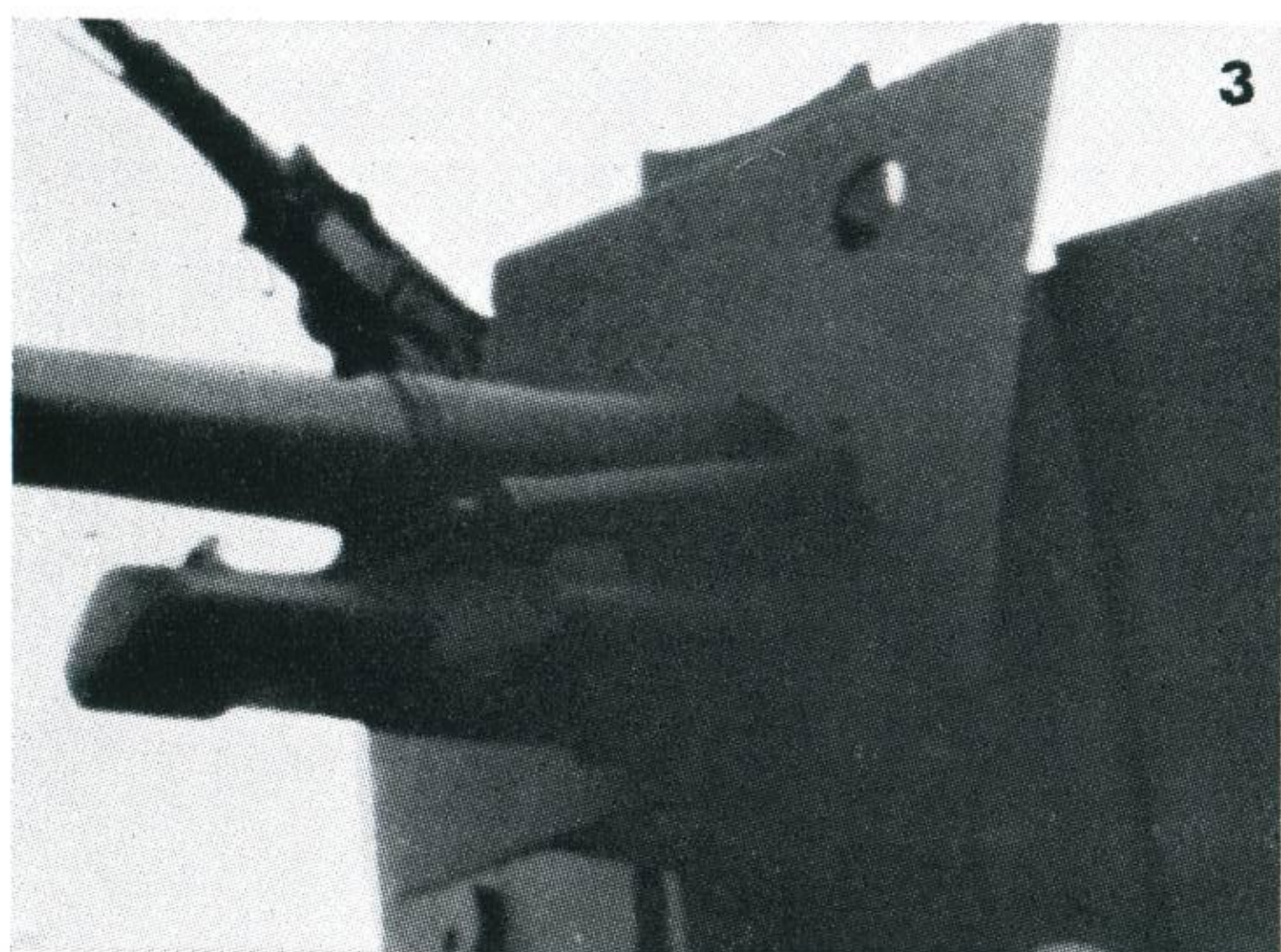
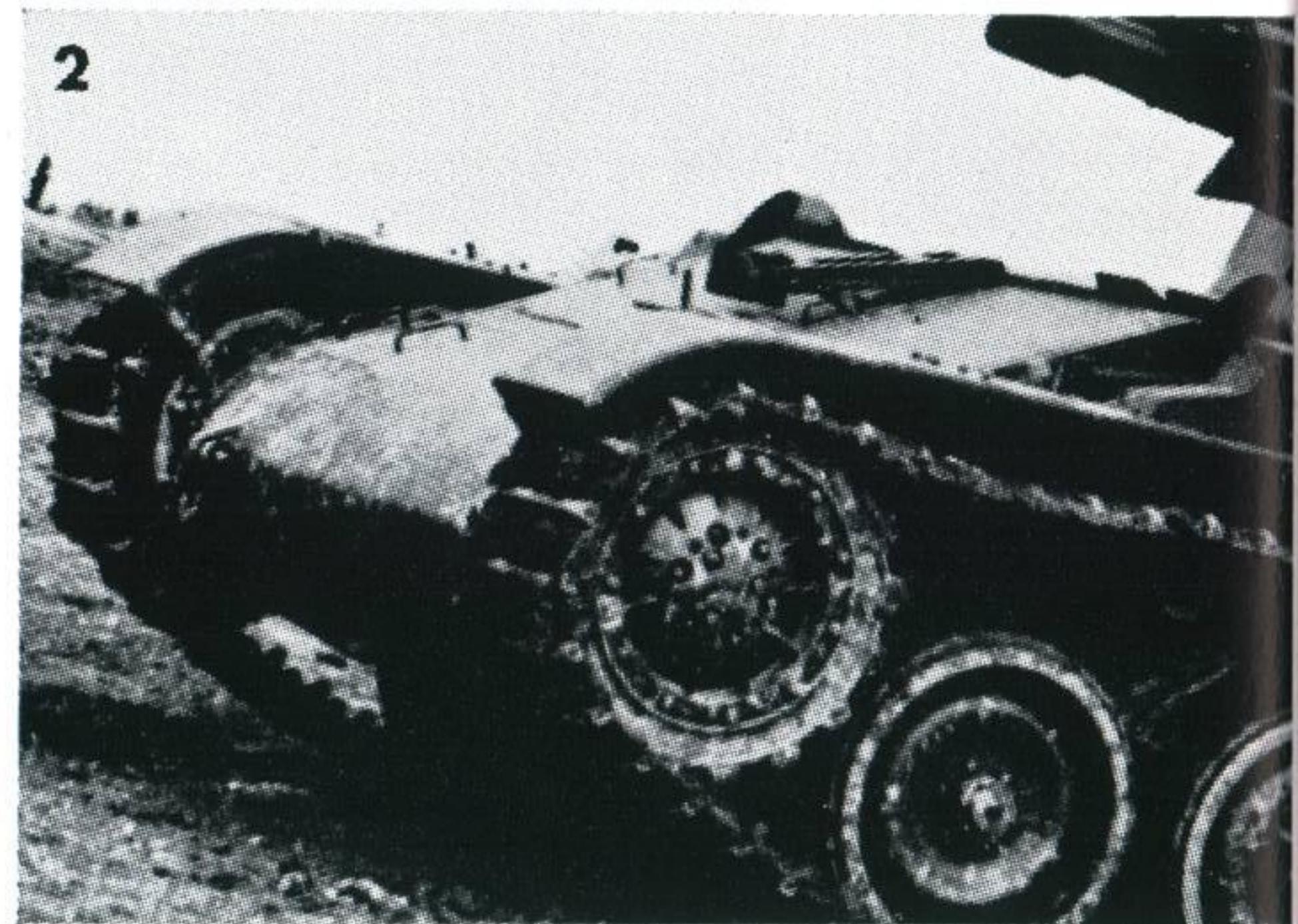
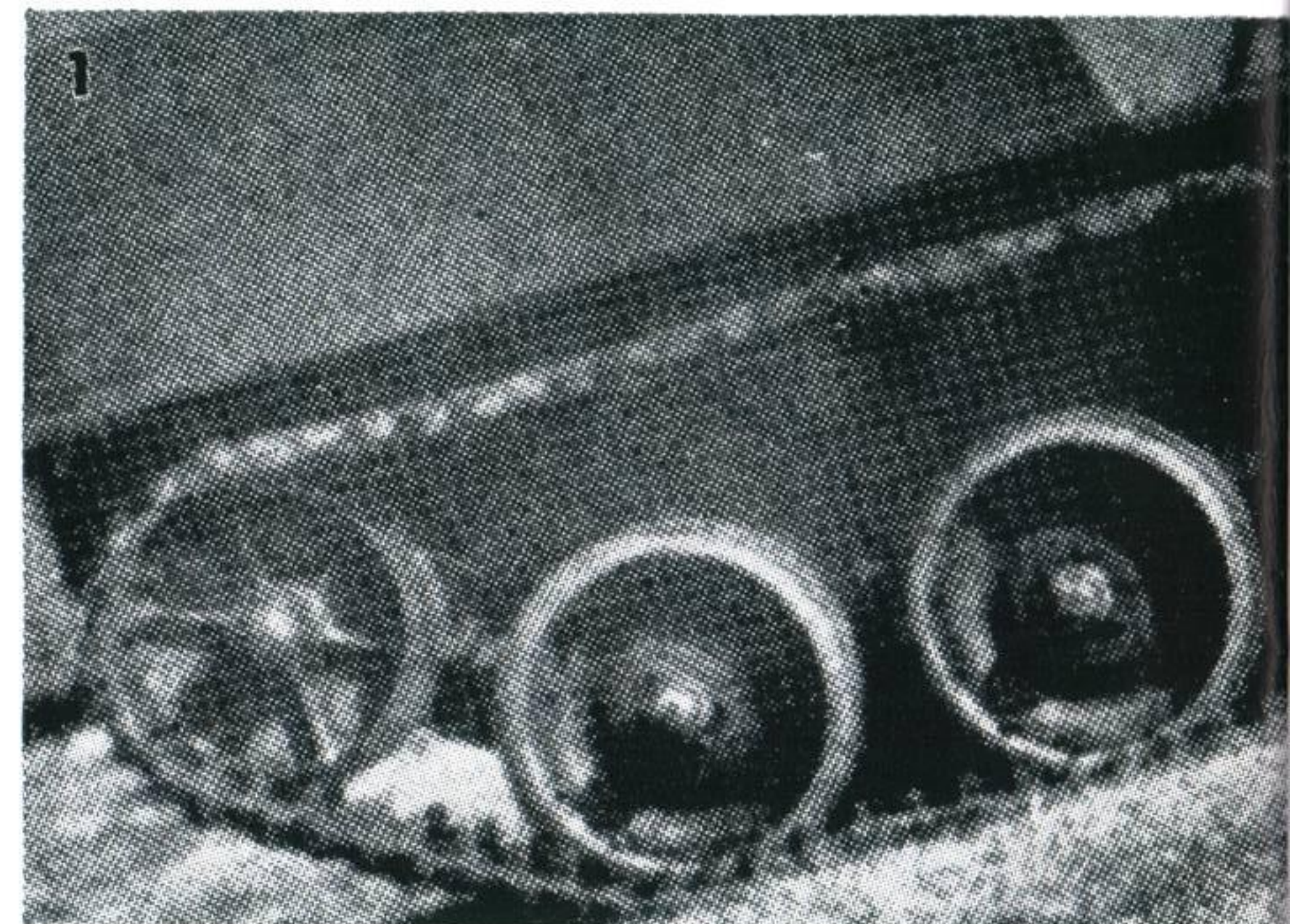
(*)—ye initially, after vowels, and after ь, ь; e elsewhere; when written as ë in Russian, transliterate ye or ë (and pronounce yo in York).

(**)—hard sign, used after consonant to separate it from a vowel (expl.: объект—ob'yekt).

(***)—soft sign, used after a consonant to soften it expl.: мадьчик—mal'chik).

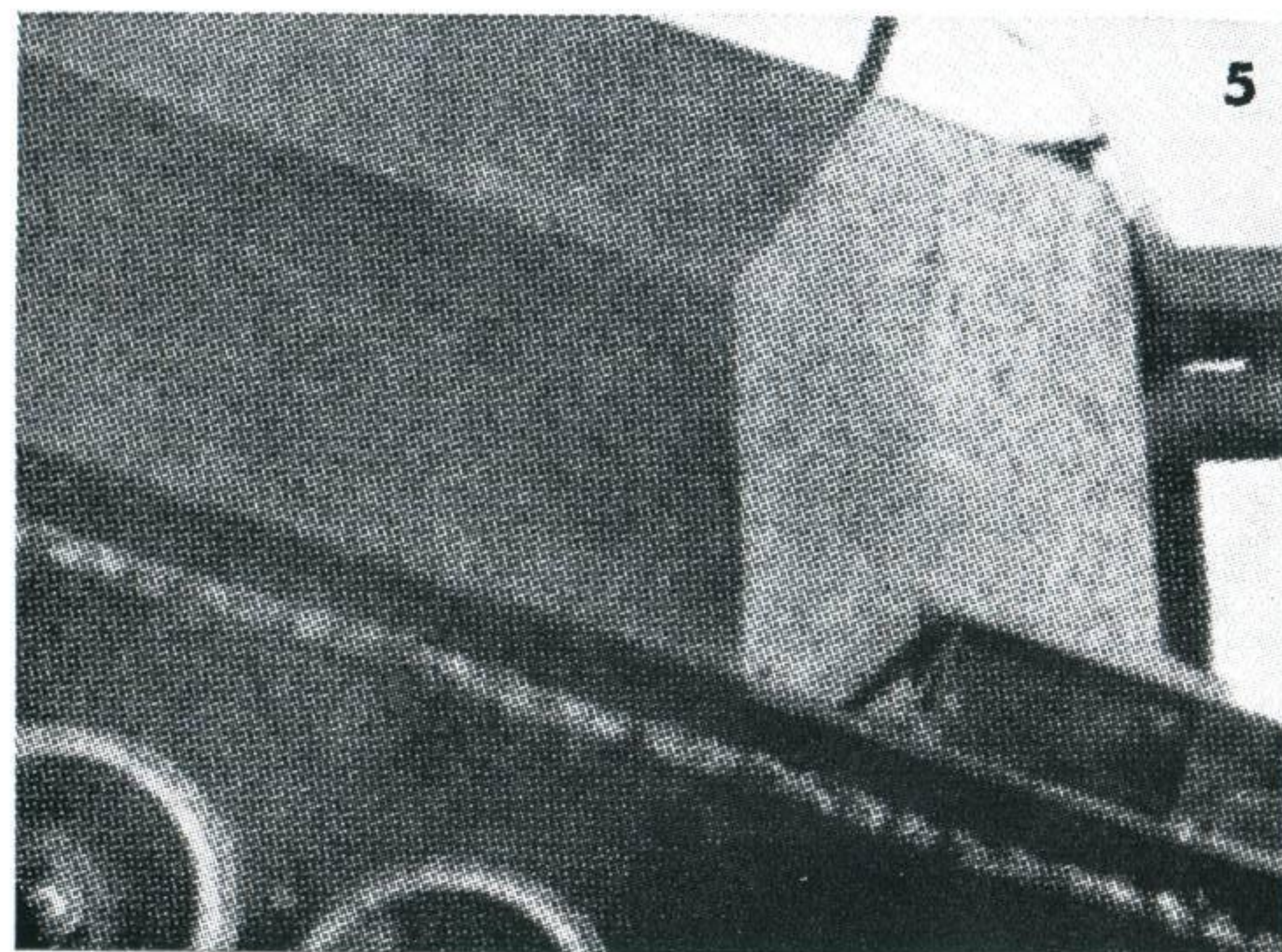
Order of Russian Alphabet

А Б В Г Д Е Ж З И Й К Л М Н О П Р С Т У Ф Х Ц Ч Ш Щ Ъ Ы Ь Э Ю Я



AMX 105mm S.P. Howitzer

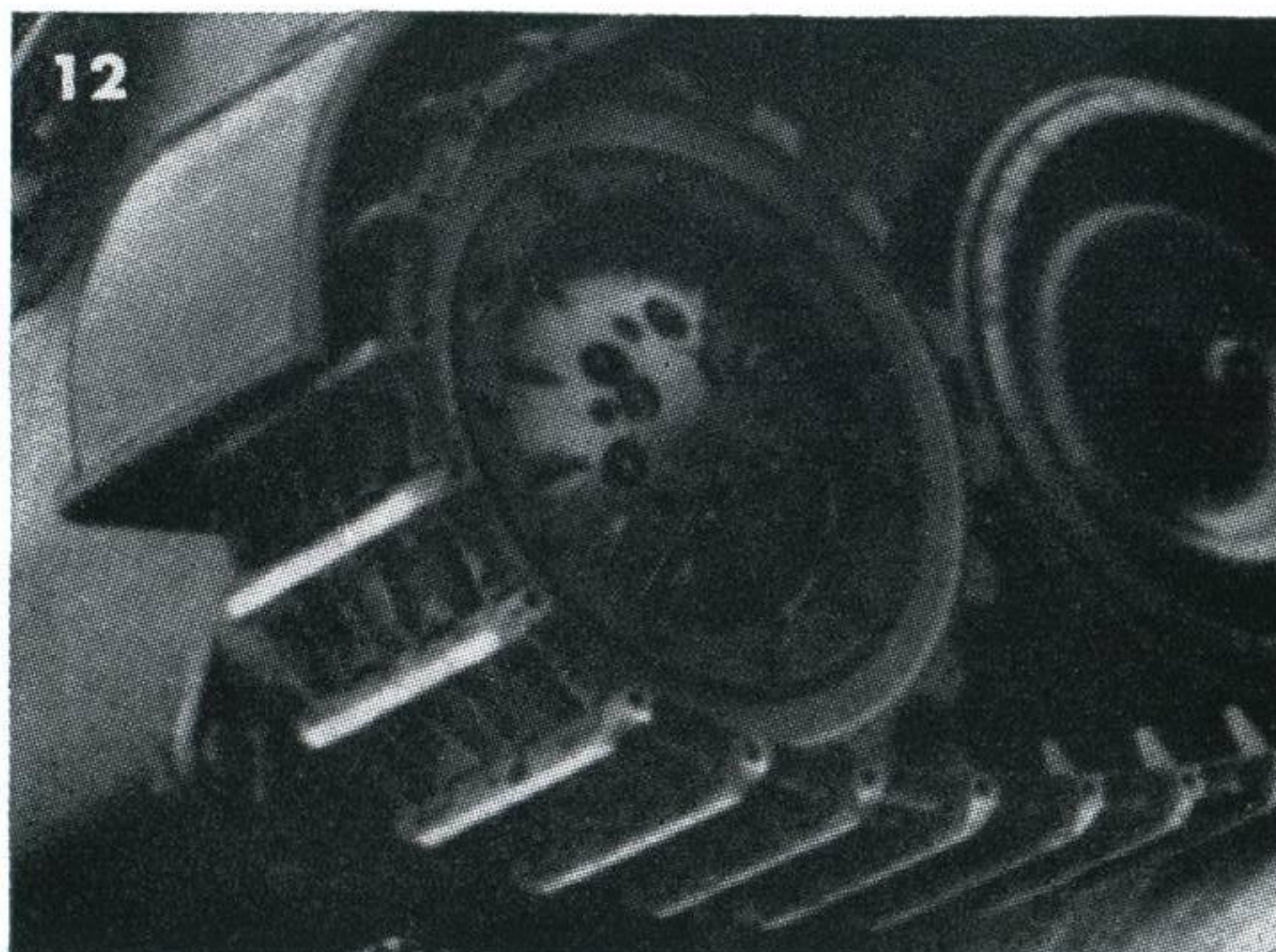
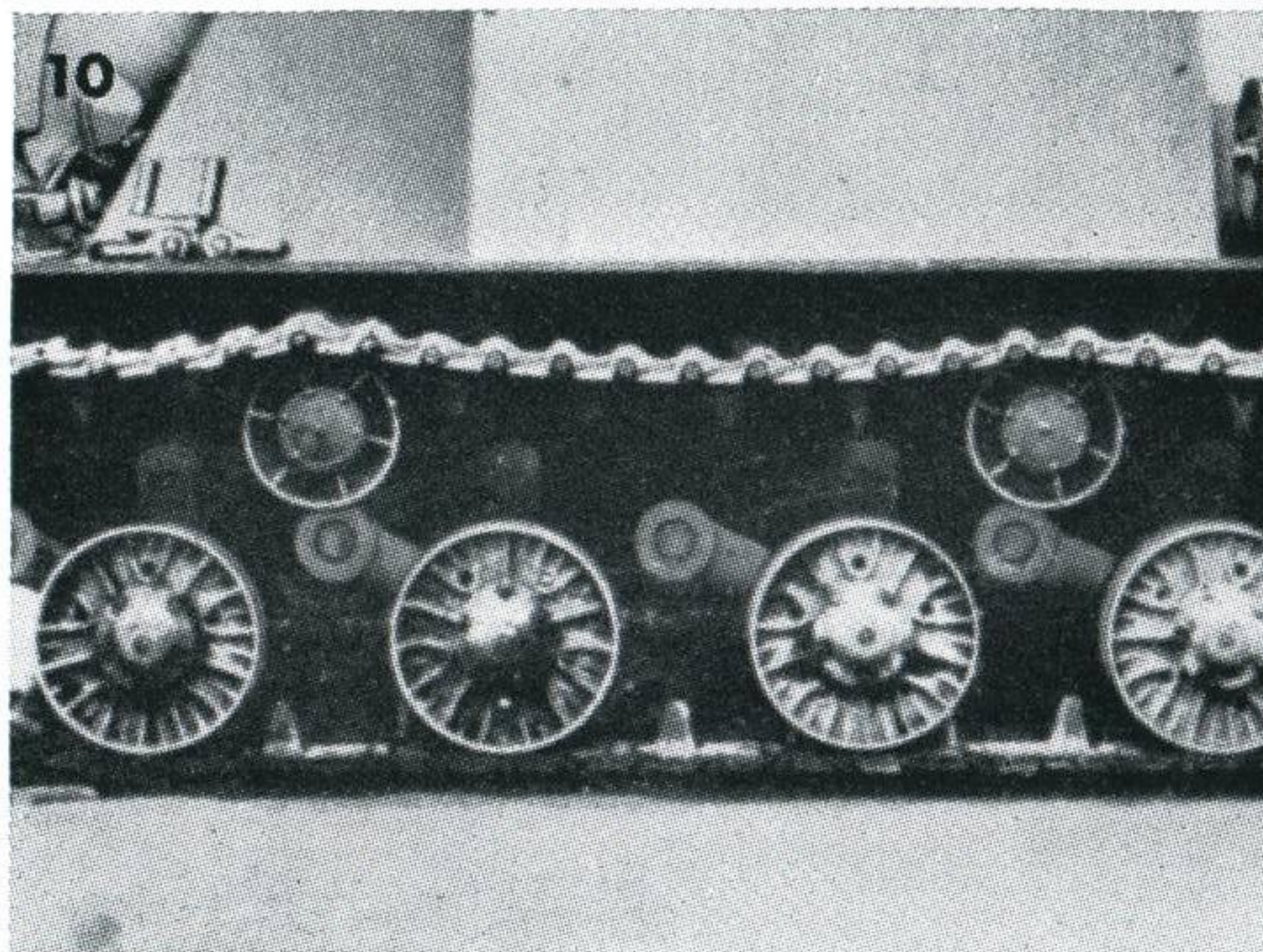
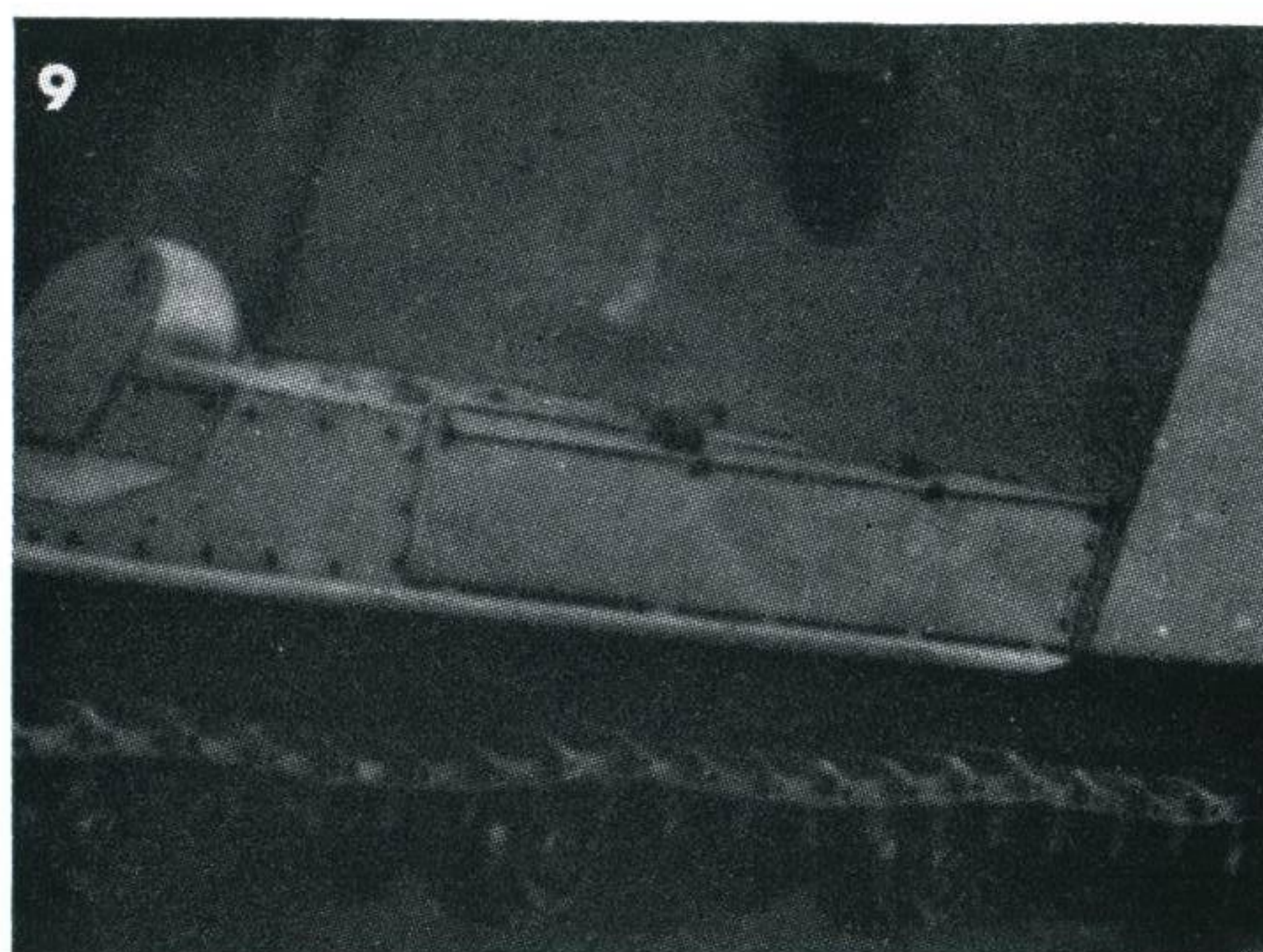
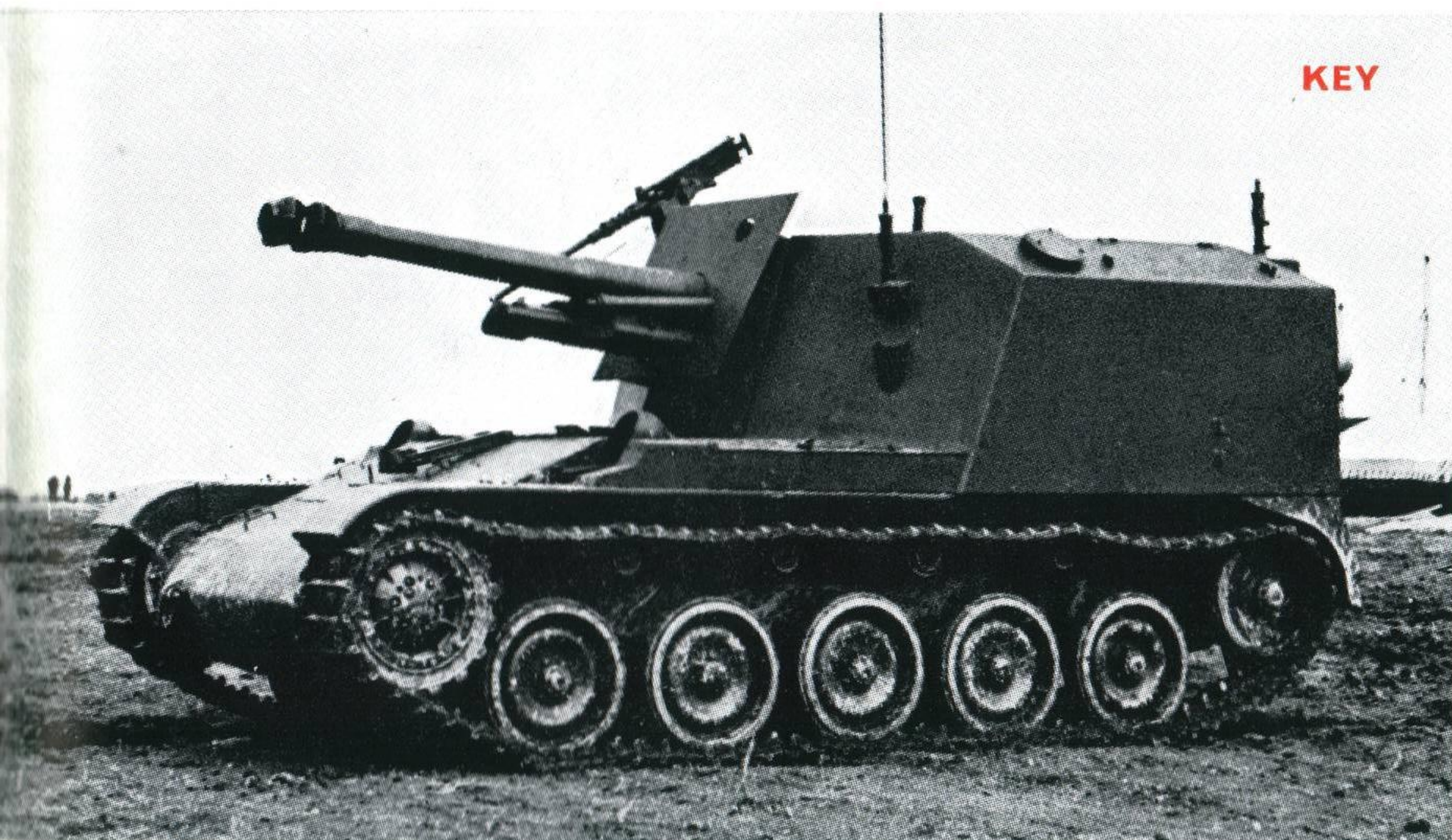
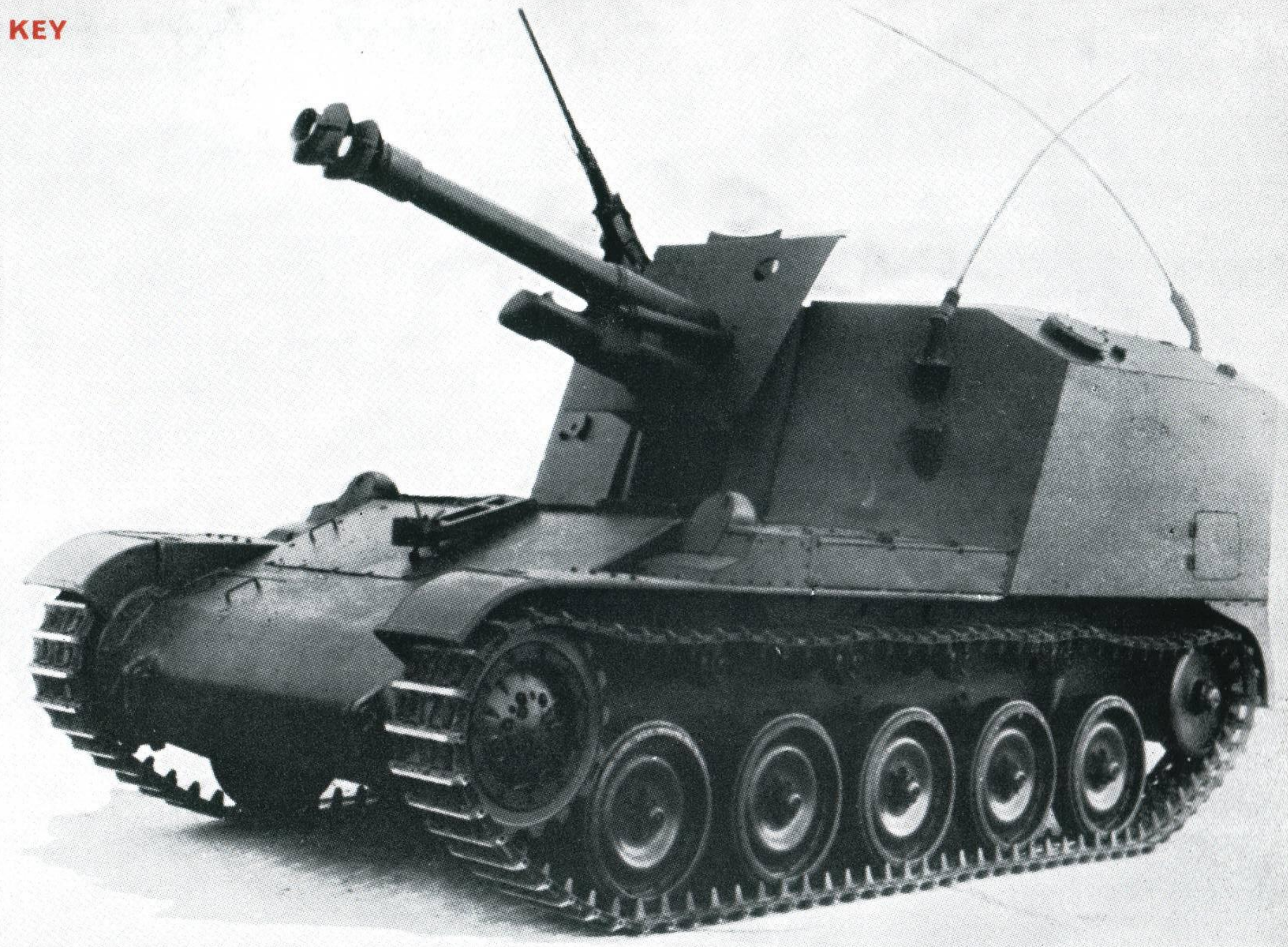
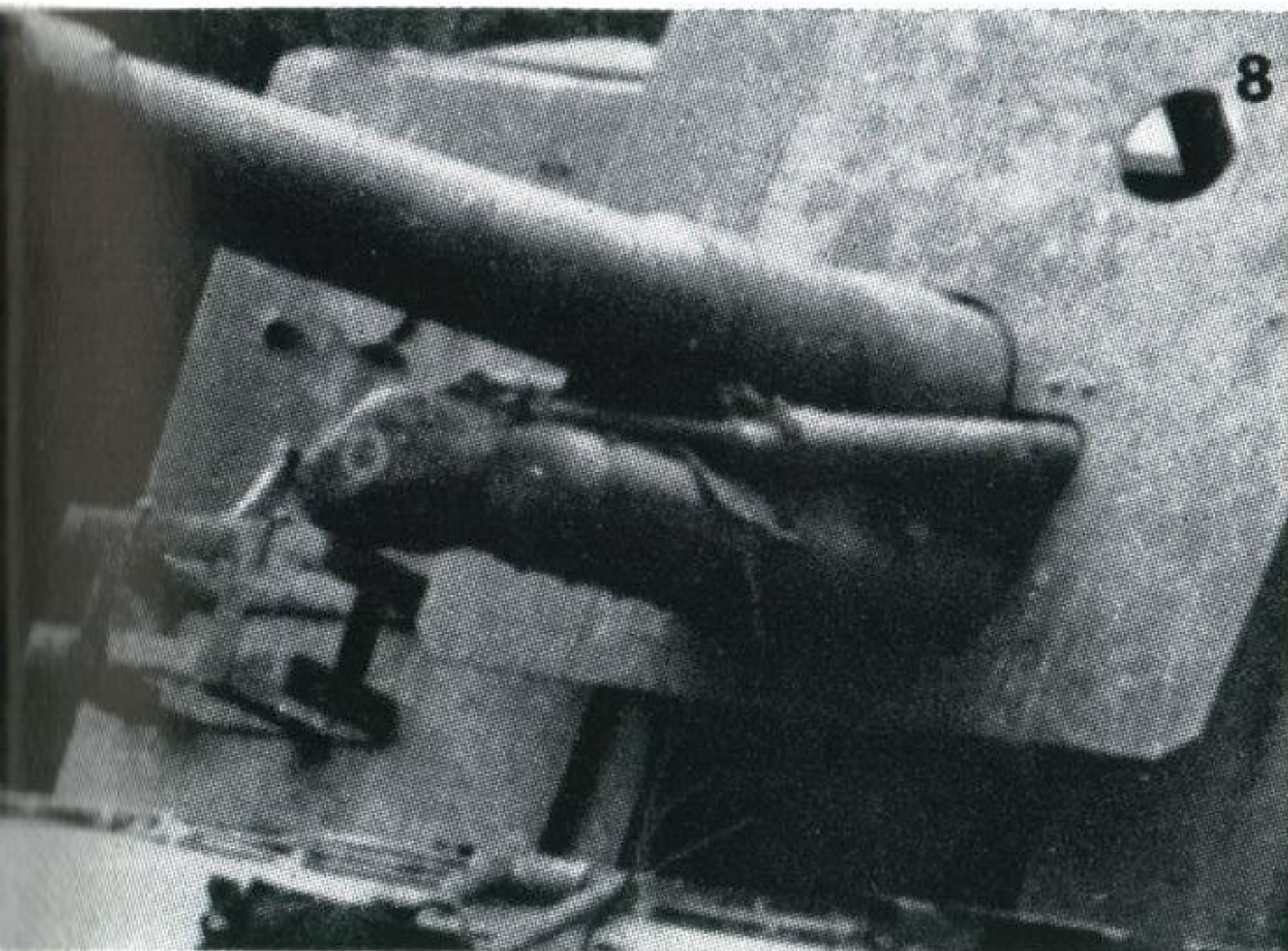
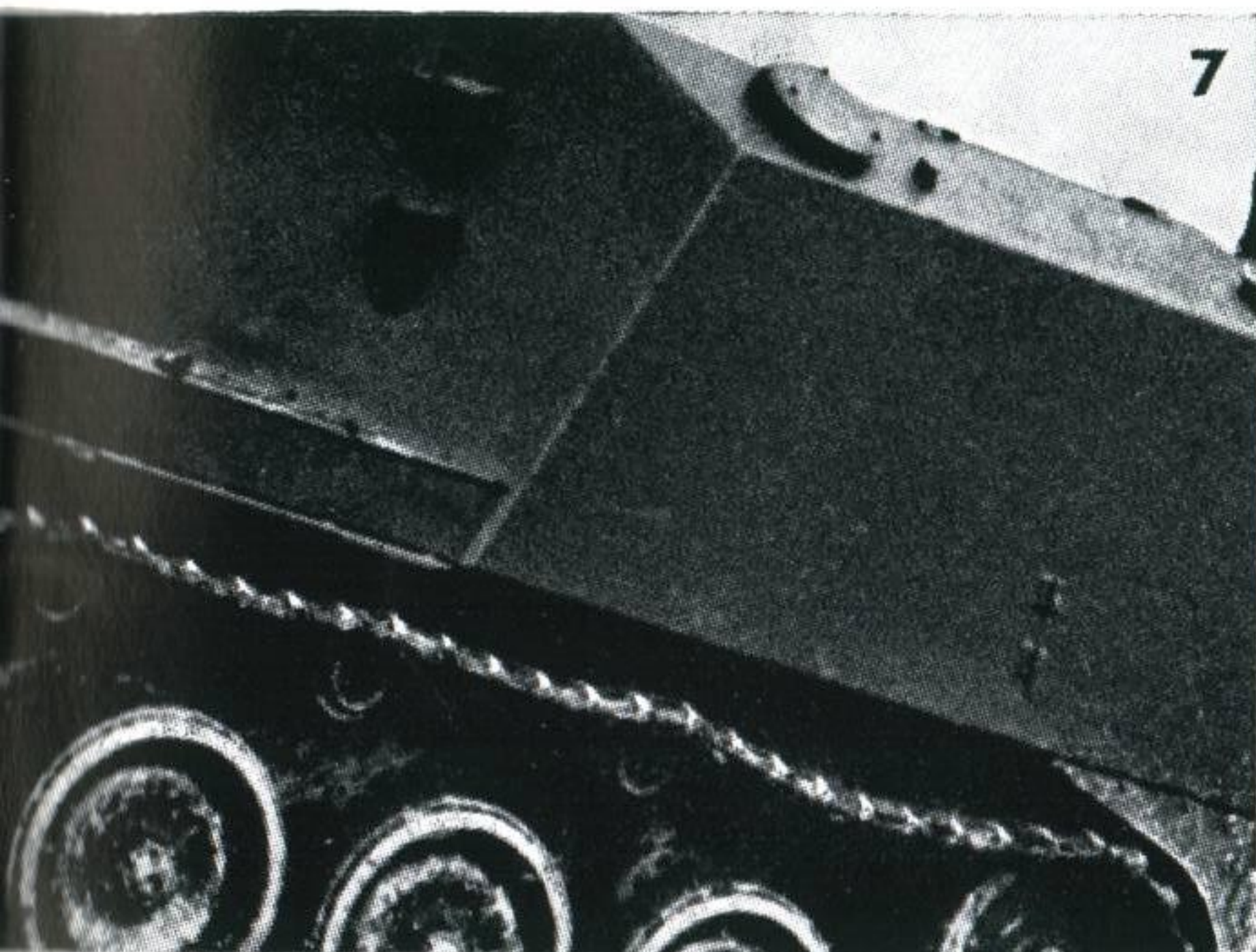
Lesson instructions page 100.
Solutions on the cover.



*Obusier de 105 Modele 50 automoteur sur chassis A.M.X. 13 t., or AMX 105-mm. s.p. howitzer for short, is one of several French armoured vehicles based on the AMX 13 light tank. Together with the latter, and the AMX-VCI armoured infantry carrier which was the subject of a lesson in the November/December 1964 issue of the *Journal*, it is used extensively by the French Army which first acquired it more than ten years ago.*

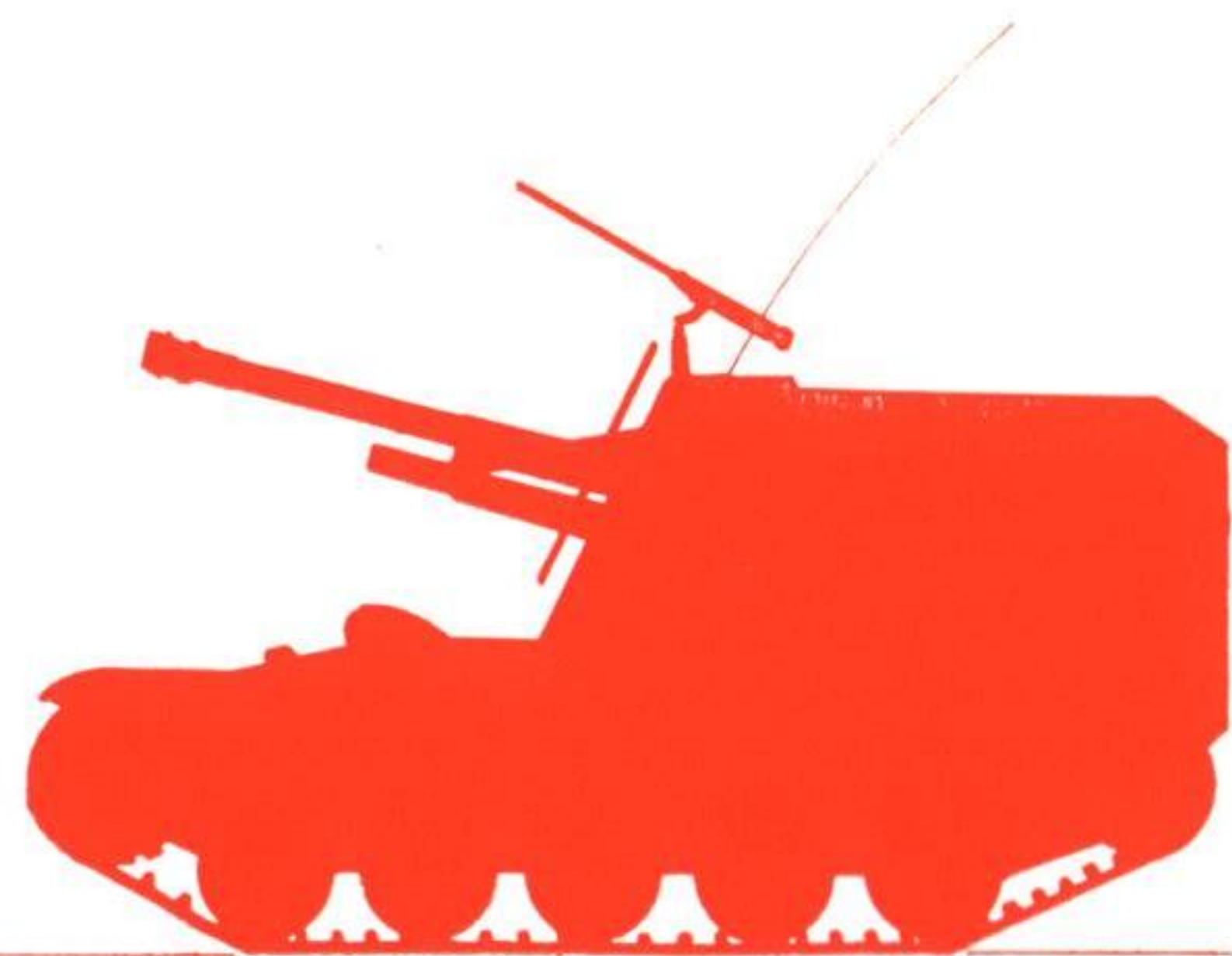
Because it was developed from the AMX 13 tank, the AMX 105-mm. s.p. howitzer resembles it in many ways and is very similar mechanically. For instance, the tracks with their double guide horns and other parts of the running gear are the

KEY

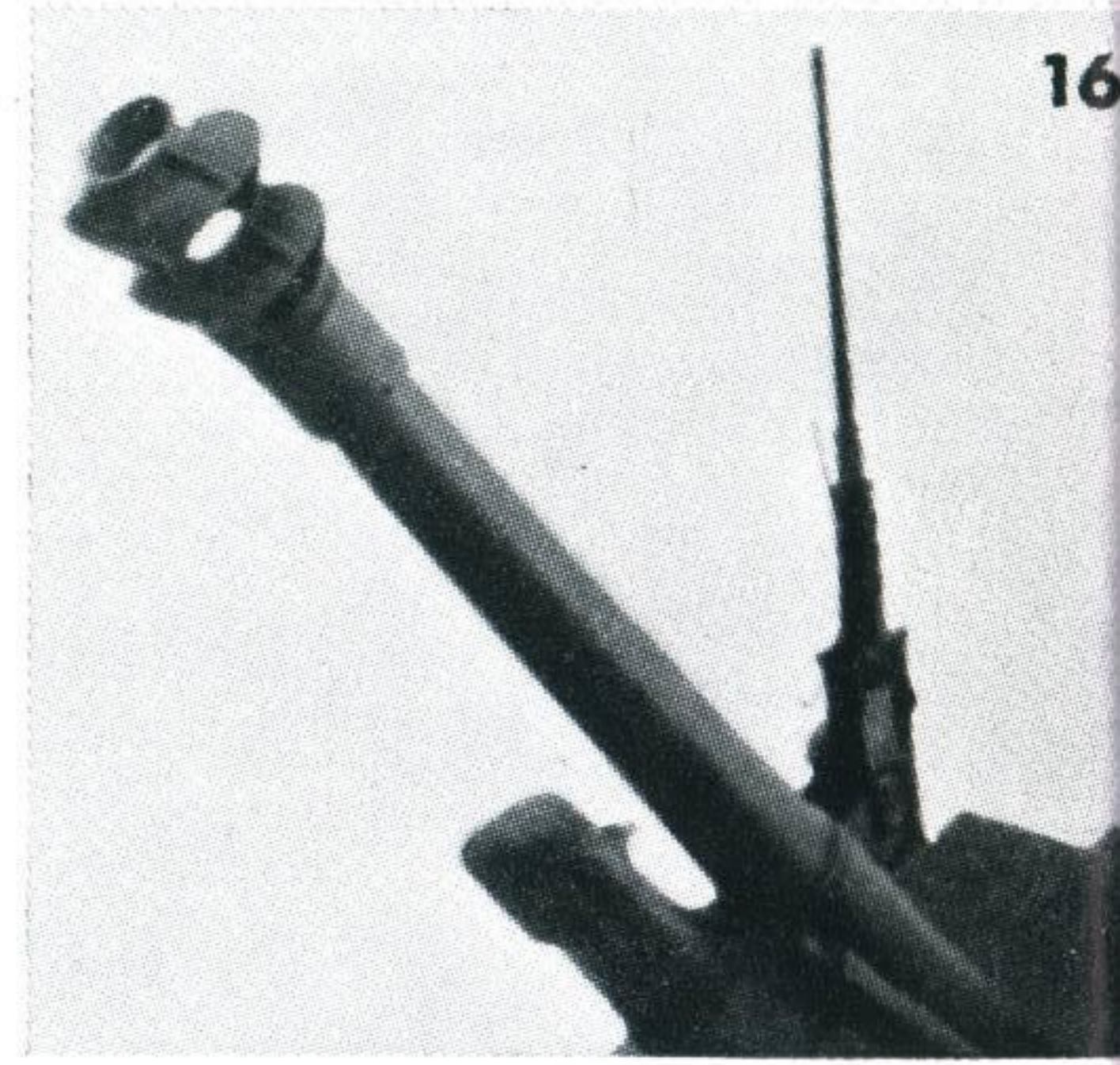
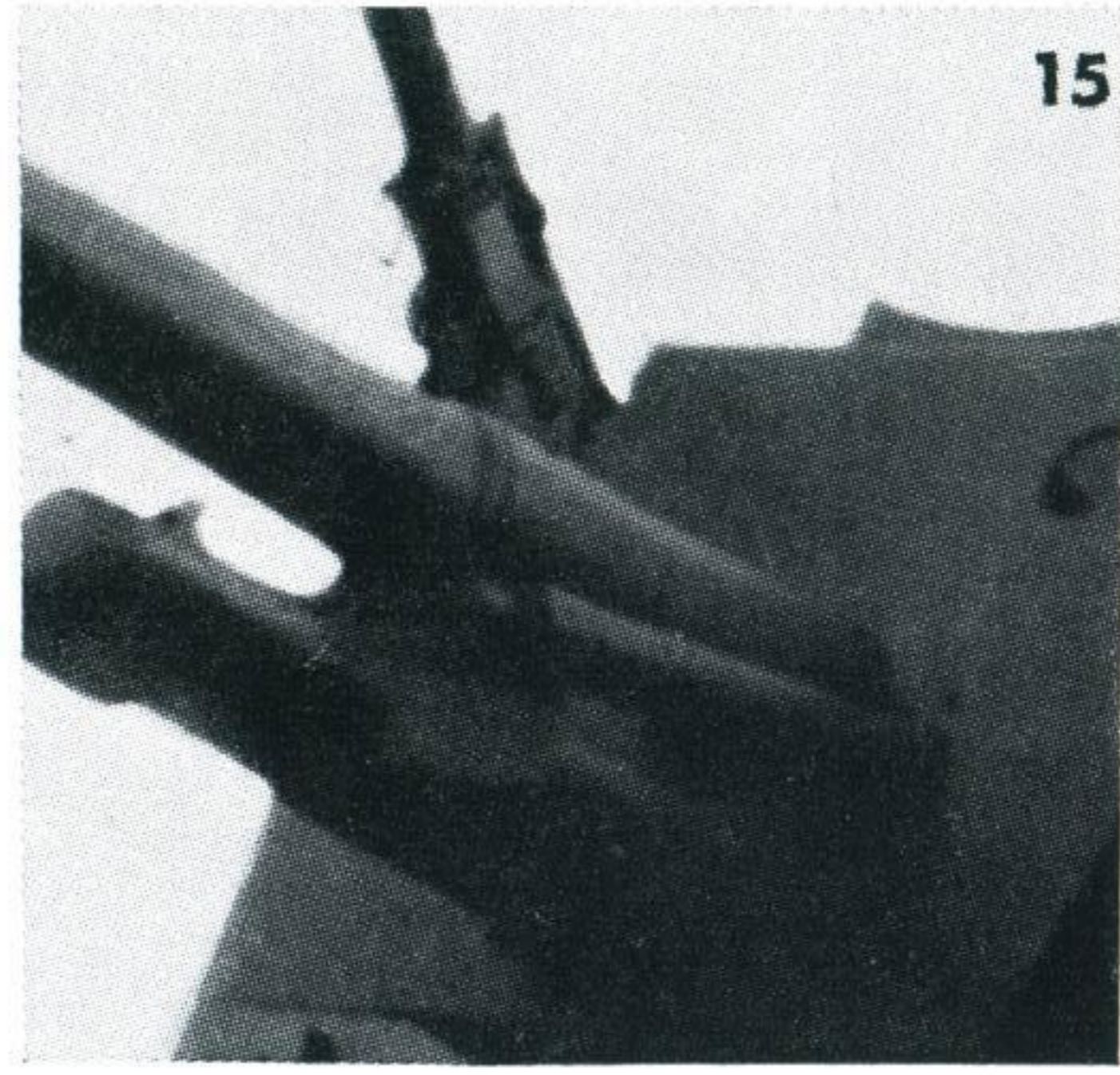
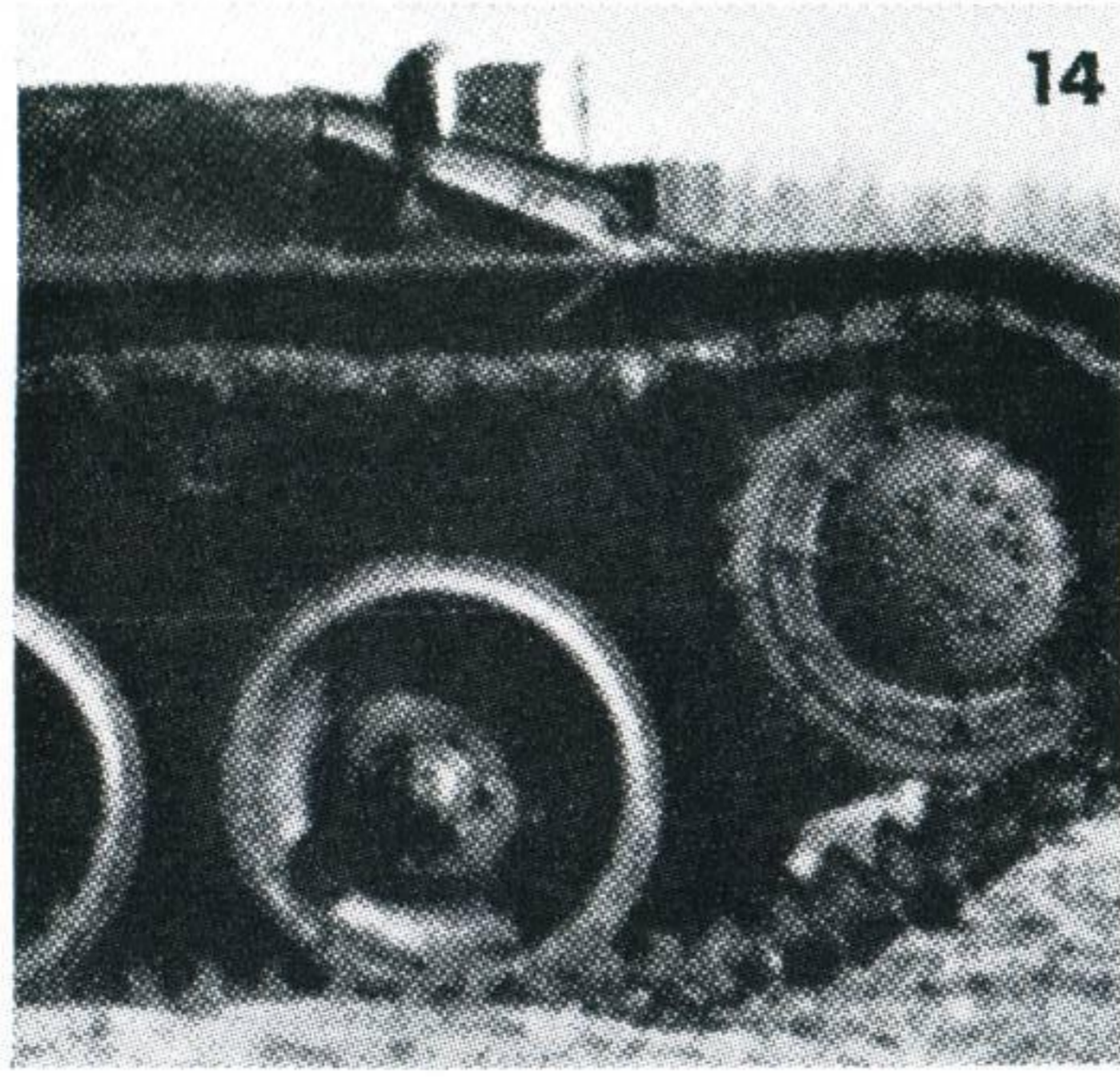
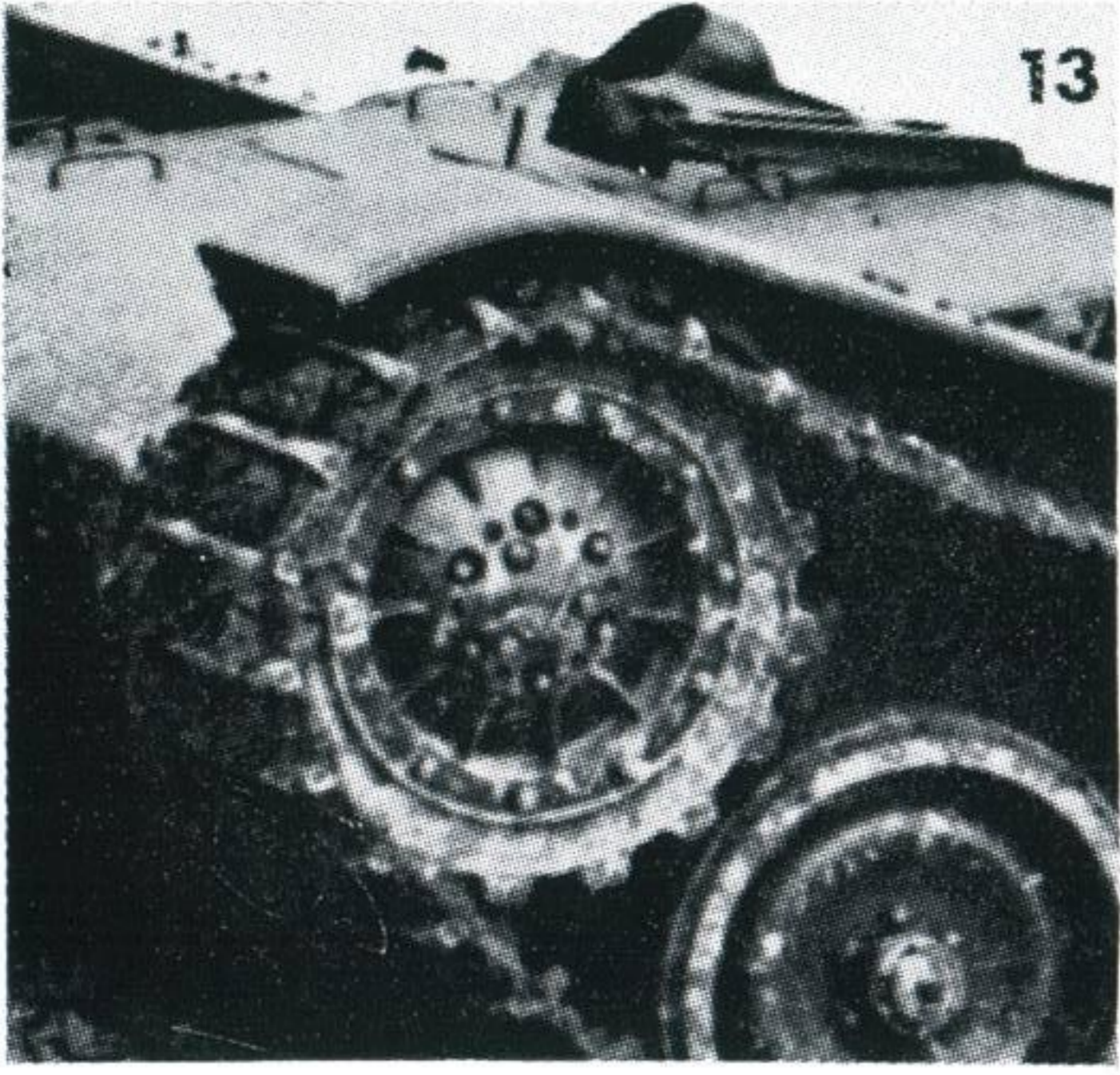


same as those of the AMX 13 tank. So, to a very large extent, is the rest of the chassis with its forward engine location on the right of the driver. However, instead of a turret the hull is surmounted by a fairly tall, fully enclosed, fixed superstructure. From this protrudes the barrel of the 105-mm howitzer together with part of its recoil gear, which forms a characteristic feature of the vehicle.

Over the howitzer aperture there is also a characteristic shield which was not fitted, however, on some of the earliest vehicles and the howitzer is fitted with a double baffle muzzle brake. Lesson instructions on page 100.



Continued overleaf



AMX 105mm S.P. Howitzer

Continued from previous page

