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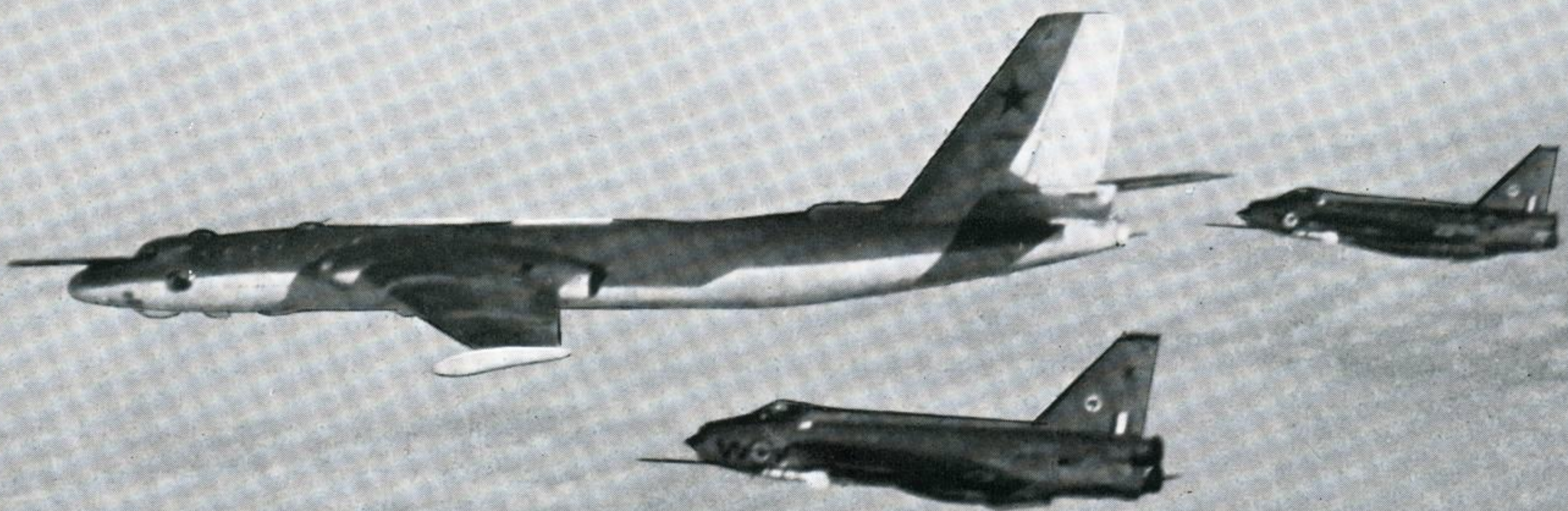


JOINT

SERVICES

RECOGNITION

Journal



Vol. 23 MAY 1968 No. 5



HMAS HOBART



HMAS PERTH

GUIDED MISSILE DESTROYER "HOBART" of the Royal Australian Navy

Early in 1962 it was announced that the Royal Australian Navy had contracted for the building of two destroyers in the United States. A year later, a third ship was ordered.

The three ships are of the "Charles F. Adams" class with certain modifications and with certain features to bring them into line with Australian requirements. *Hobart* was the second ship of this programme to be built and she was laid down in October 1962 and completed just over three years later.

They are the first guided missile ships in the Australian Fleet and are designed with a view to ocean convoy escort and protection.

Each has a standard displacement of 3,370 tons: a length overall of 437'; a beam of 47' and a draught of 20', which is very much greater than that of conventional destroyers.

Armament consists of two single-mounting 4.5-inch guns,

one forward and the other aft; long range "Ikara" anti-submarine missiles are discharged from two triple-torpedo tubes. A "Tartar" single-launcher anti-aircraft weapon completes the armament.

Geared turbines of 70,000 s.h.p. connected to twin shafts give a speed of 35 knots. All superstructure is of aluminium and all living spaces are air-conditioned for the crew of 21 Officers and 312 Ratings.

In appearance these ships are distinctive by virtue of their flush decks which have very pronounced sheer forward; stems are very raked. Two tall widely spaced funnels have deep cowl tops and the single heavy tripod mast is distinctive. This mast and the broad deckhouse between the funnels which encloses the "Ikara" missile system distinguish *Hobart* and her sisters *Perth* and *Brisbane* from the ships of the "Charles F. Adams" class in the United States Navy.



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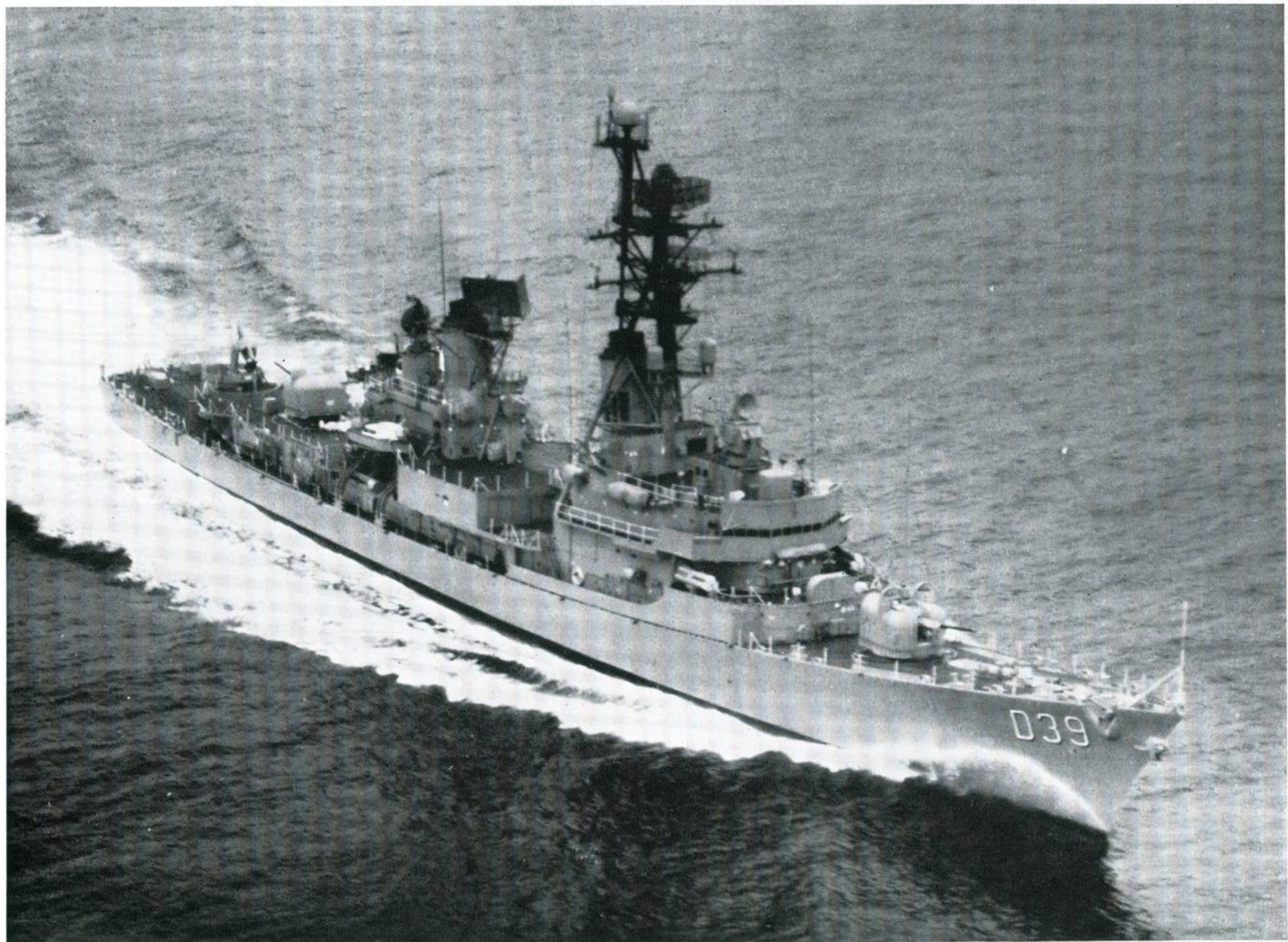
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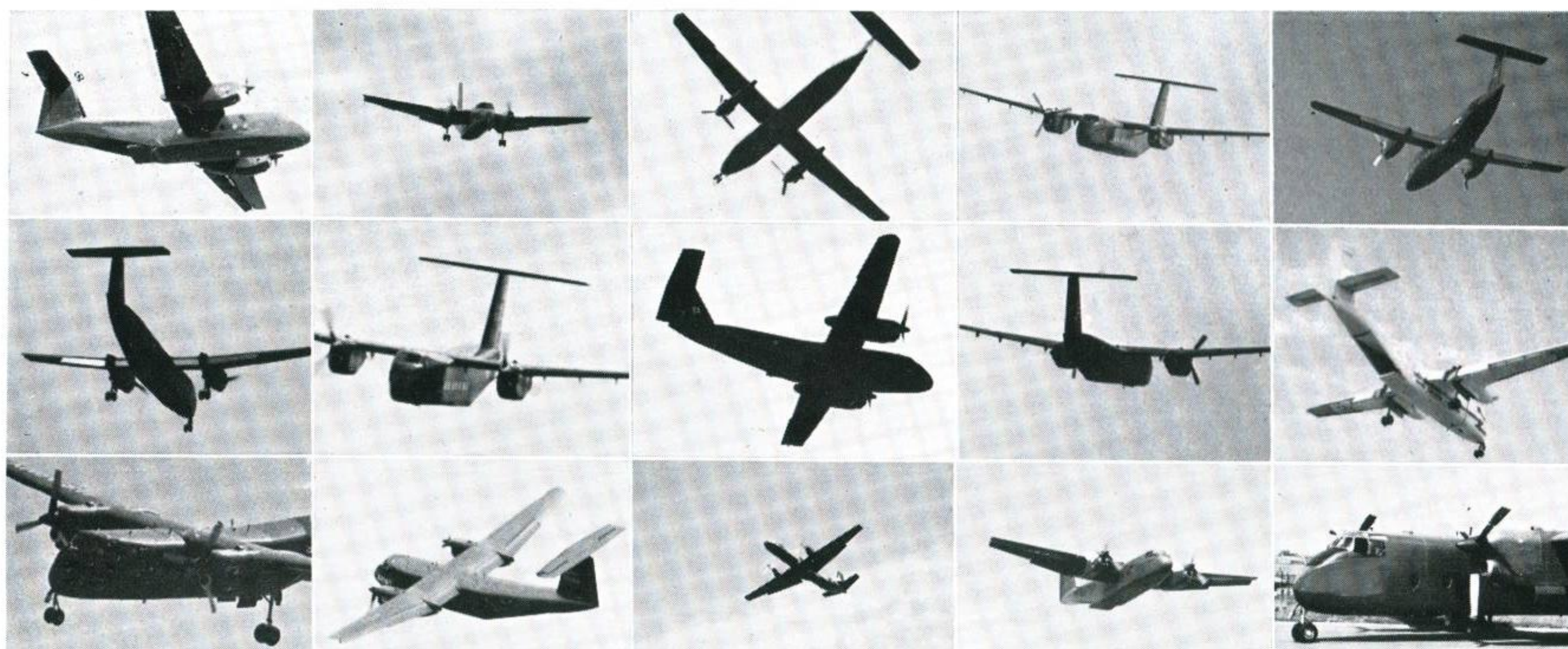
The **Journal is produced solely for official use and must not be sold to members of the public.** Contributions and correspondence should be addressed to the Editor, *Joint Services Recognition Journal*, Ministry of Defence, Room 409, Old War Office Building, Whitehall, London, S.W.1.

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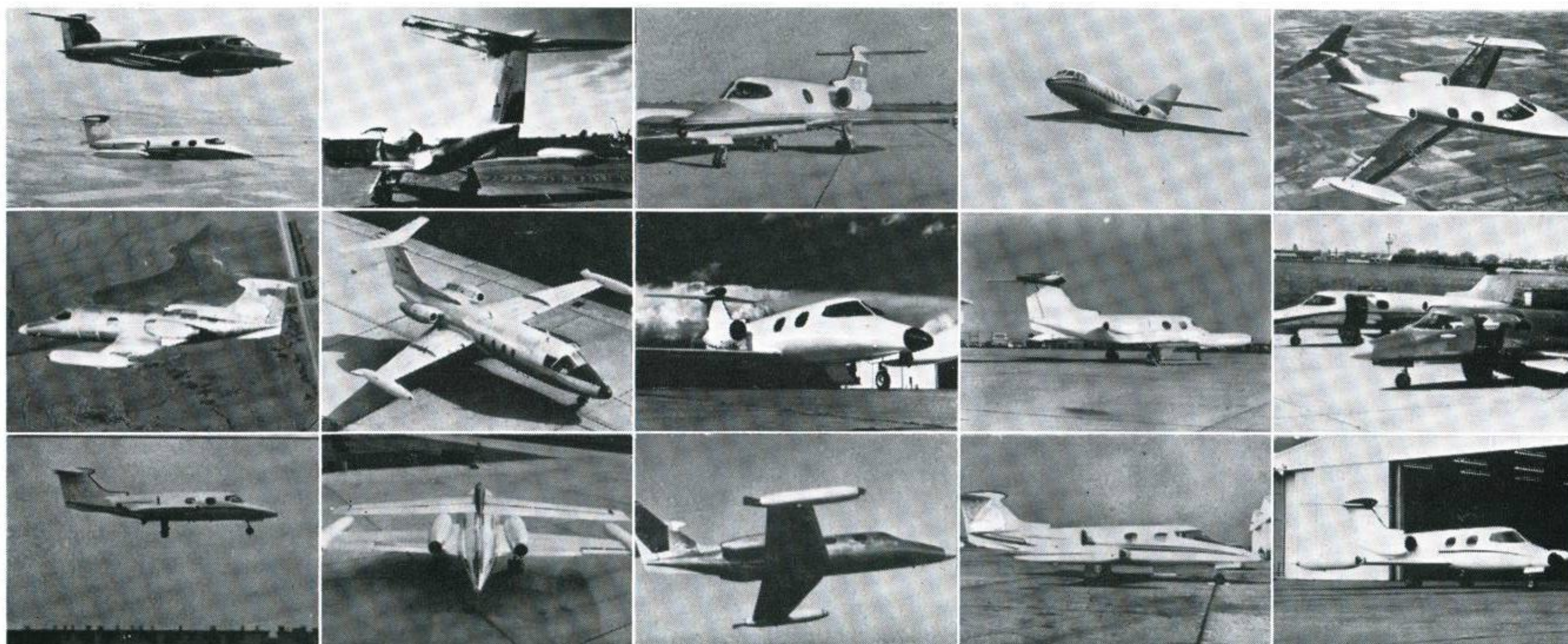
* *Identification Lessons*

HMAS HOBART





LEAR JET?



Lesson Instructions Identity Training is a matter of "doing", not of gathering information. Submit to the instructions given below in every lesson and the ability will become automatic.

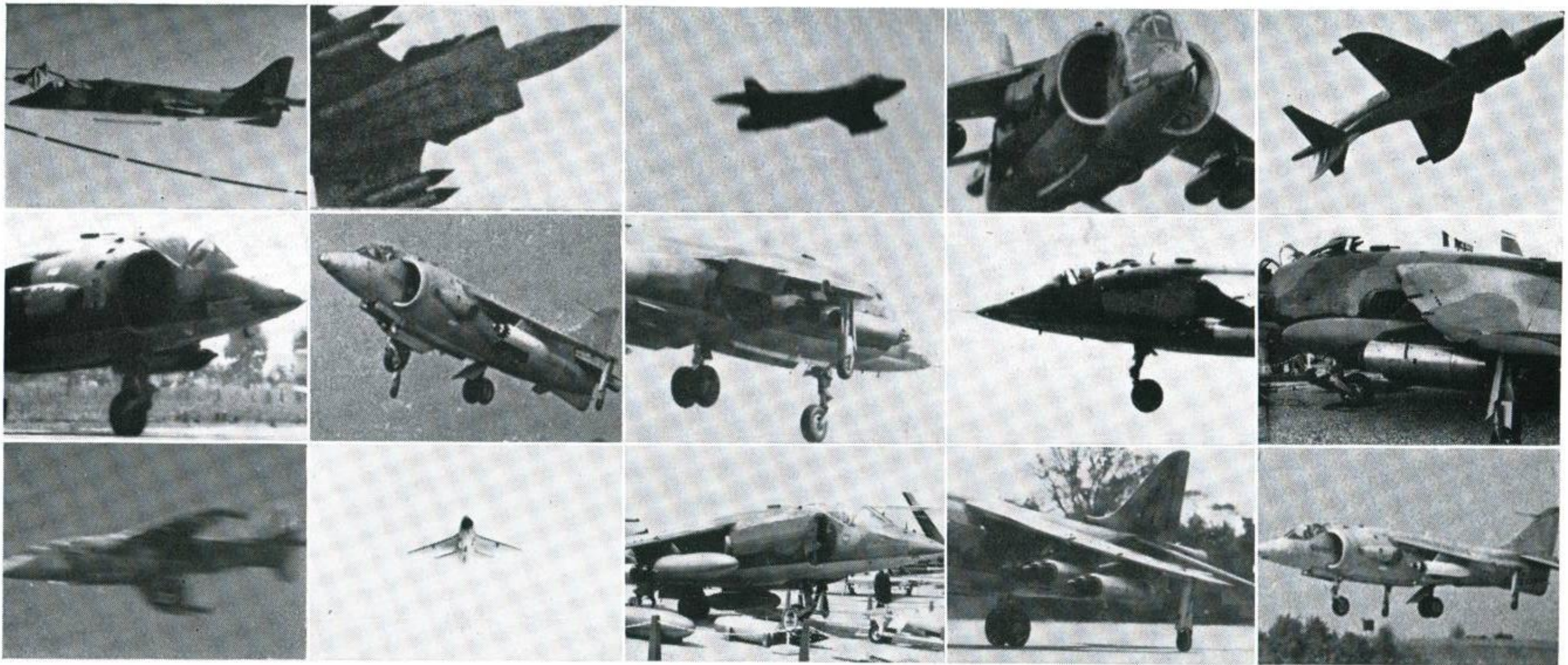
1. Read the text associated with the lesson.
2. Prepare a list of target numbers so as to be able to tackle the targets in any order.
3. Identify the target pictures by comparing them with the key views: start with the easy ones so as to gain experience: also use targets already identified to solve the 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. The procedure will take care of that. Do not attempt to do it without the key too soon, wait until it is self-evident.

1. Den zur Lehre gehörigen Text lesen.
2. Eine numerierte Typenliste vorbereiten, in der angesprochene Typen in eine gewisse Ordnung gebracht werden können.
3. Typen ansprechen durch Vergleich mit den Hauptansichten (von oben, von unten, von vorne, von hinten und von der Seite). Anfangen mit den einfachen Bildern, um Erfahrung zu bekommen. Die angesprochenen Typen zur Ansprache der schwierigeren benutzen.
4. Wichtig: Sobald ein bestimmtes Flugzeugbild mit Sicherheit richtig angesprochen ist, sofort die Typenbezeichnung in die entsprechende Stelle der Liste eintragen.
5. Bei der Übung nicht beeilen oder eine zeitliche Begrenzung festlegen. Für Anfänger ist es wichtiger, richtig anzusprechen als schnell.
6. Nicht mit Einzelheiten, Umrissen, Namen aufhalten.

HARRIER?

TEST PAPERS

Solutions on the cover



HANSA HFB 320?



MU-2?



SP-2H NEPTUNE



LOCKHEED NEPTUNE

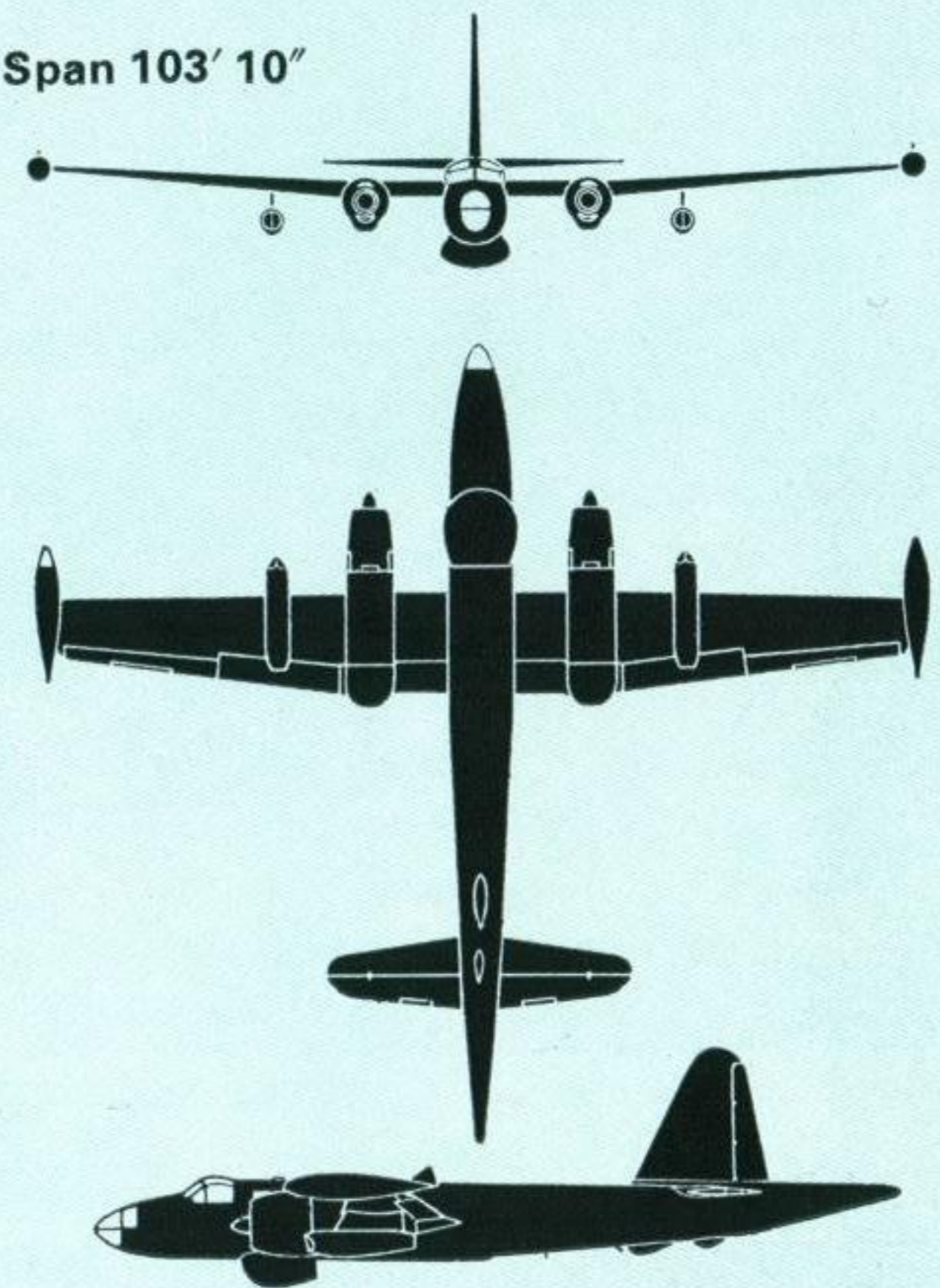
This maritime reconnaissance and patrol bomber was in production at Lockheed for 19 years and still equips about half of the U.S. Navy's land-based patrol squadrons in its SP-2E and SP-2H versions. No fewer than 1,099 Neptunes were manufactured by Lockheed—including 359 of the final basic P-2H version—and a further 48 by Kawasaki in Japan. Early P-2A to D versions are no longer in service, having been replaced by the P-2E and P-2H models.

In addition to being used by the U.S. Navy and the Japanese Maritime Self Defence Force, Neptunes also serve with France's *Aéronavale*, the R.A.A.F., the R.C.A.F., the *Koninklijke Marine*, the *Força Aérea Portuguesa*, Argentina's *Aviación Naval* and the *Fuerza Aérea Brasileira*.

Kawasaki is now building a developed version of the Neptune fitted with T-64 turboprops and designated P-2J. One example has already been supplied to the JMSDF and 68 more are due to be delivered from August 1969 onwards.

The normal lesson instructions as given on page 116 apply. The solutions are on the cover.

Span 103' 10"



P-2J NEPTUNE







KEY

M107 175-mm. SELF-PROPELLED GUN

The M107 175-mm. self-propelled gun is an American-built weapon in service with the Royal Artillery, as well as the United States, German and Italian Armies. It is intended for long-range fire, which accounts for its exceptionally long barrel. The long barrel, in turn, makes the M107 relatively easy to recognise.

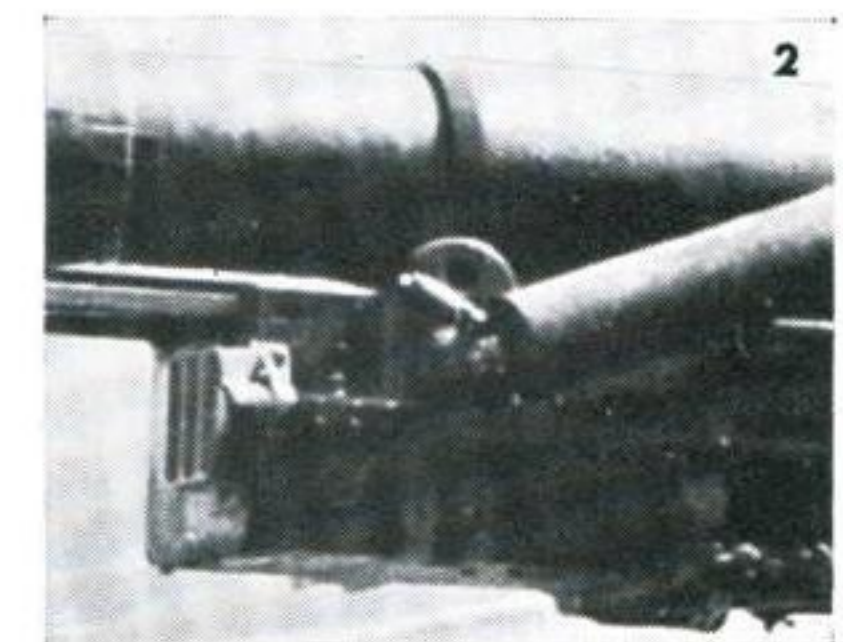
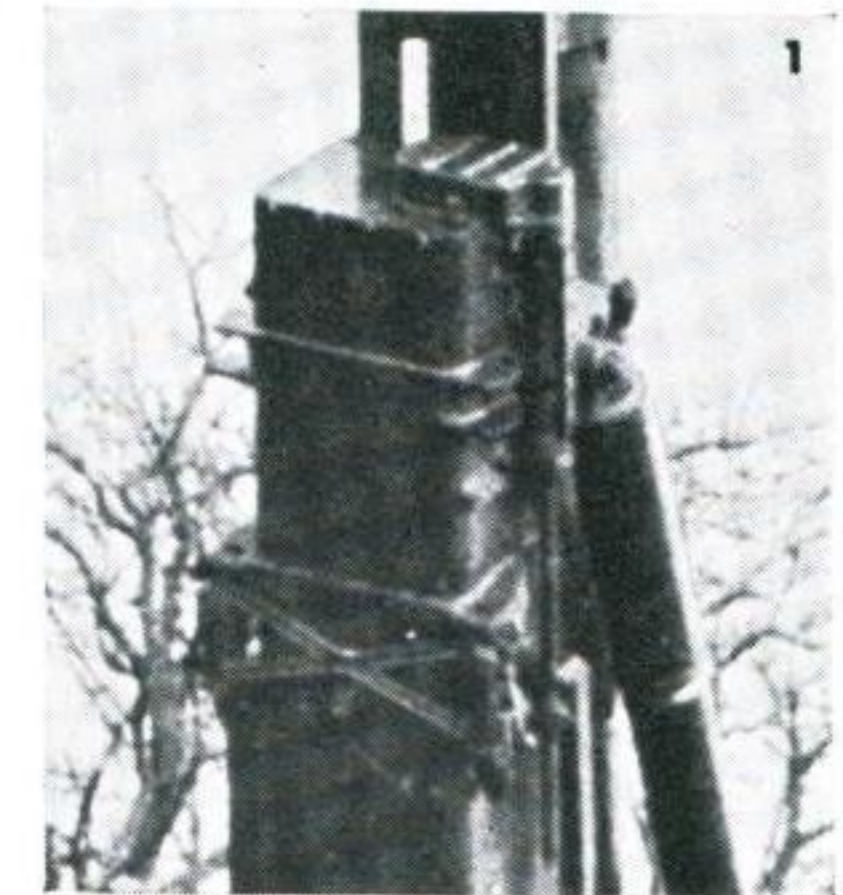
Another recognition feature of the M107 is that it has no armoured superstructure. This feature is, however, shared by the M107 with its companion vehicle, the M110 8 in. self-propelled howitzer. The two are almost identical, in fact, and the only obvious distinguishing feature of the M110 is that it has a much shorter and thicker barrel.

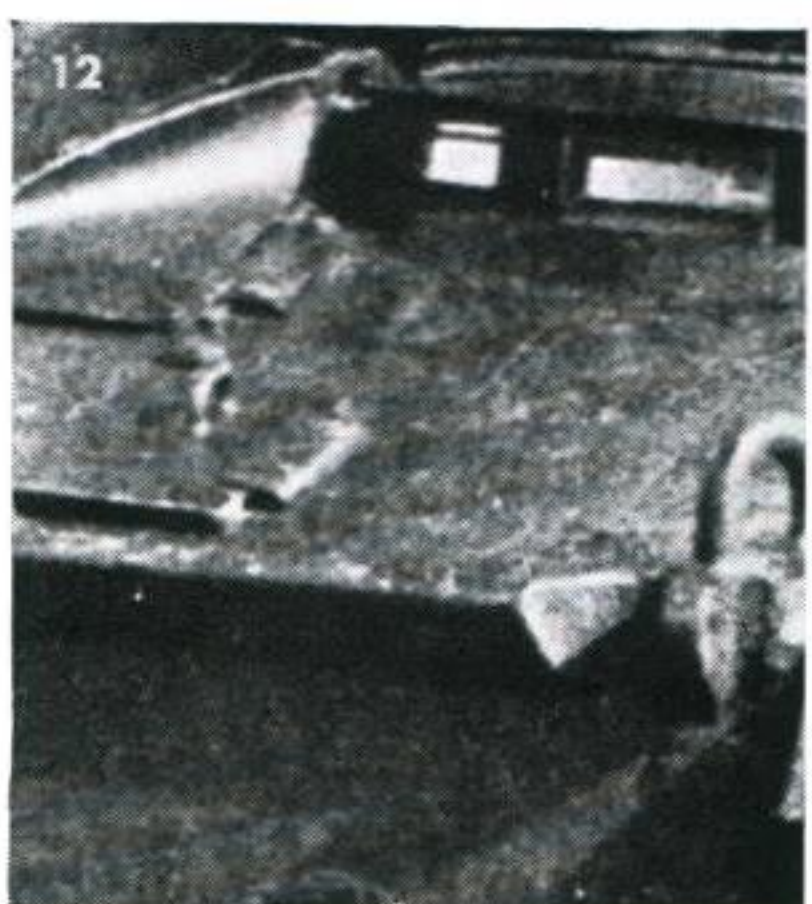
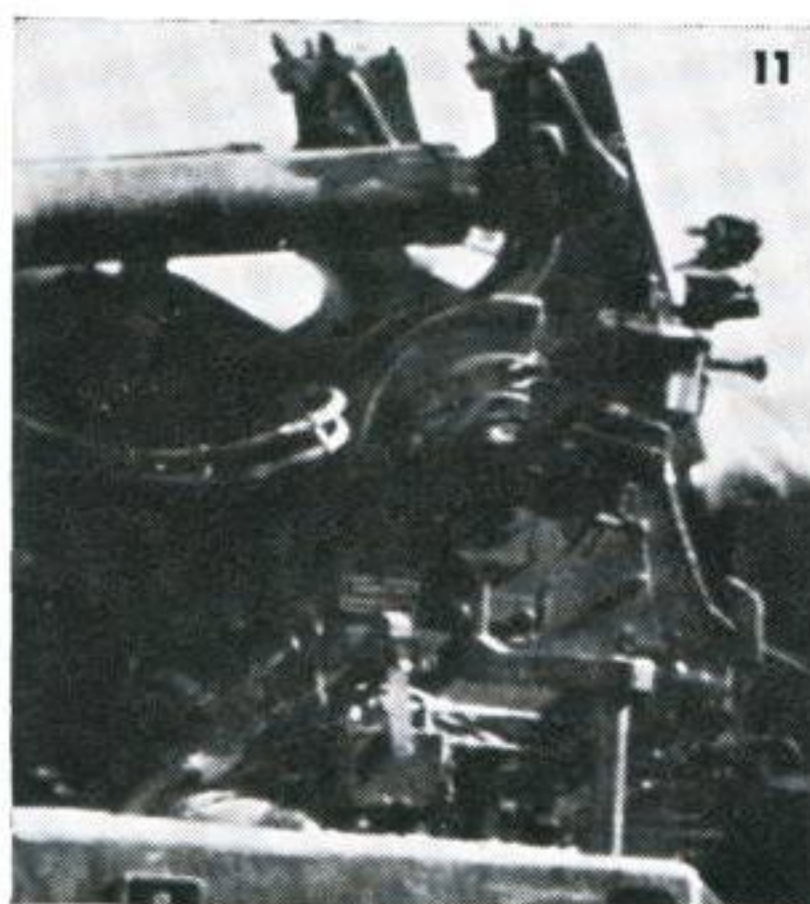
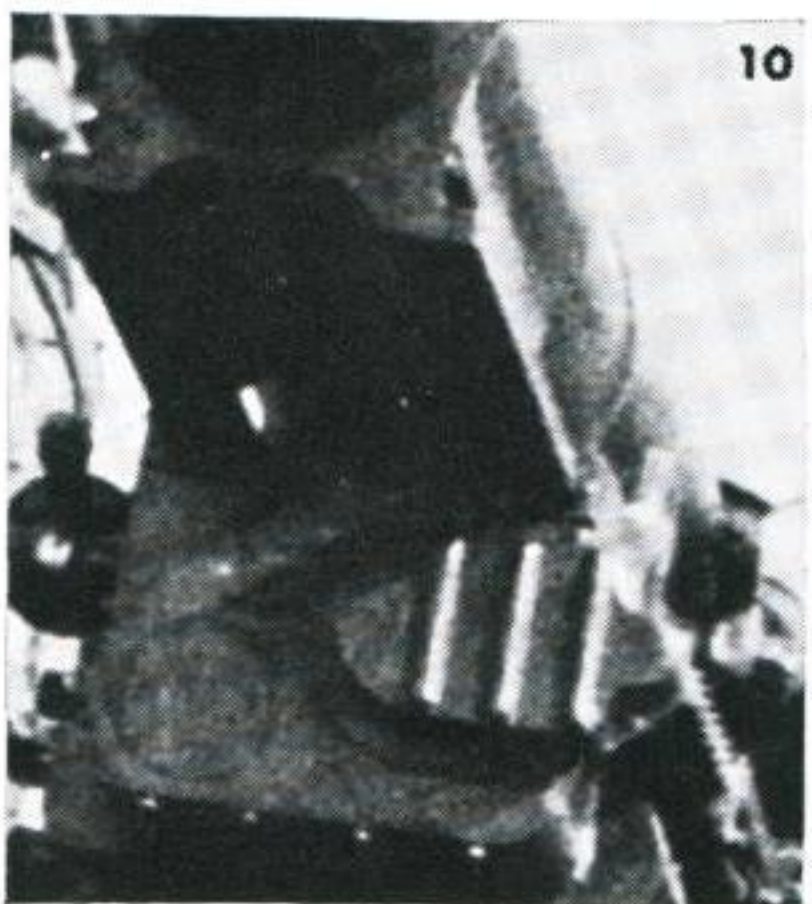
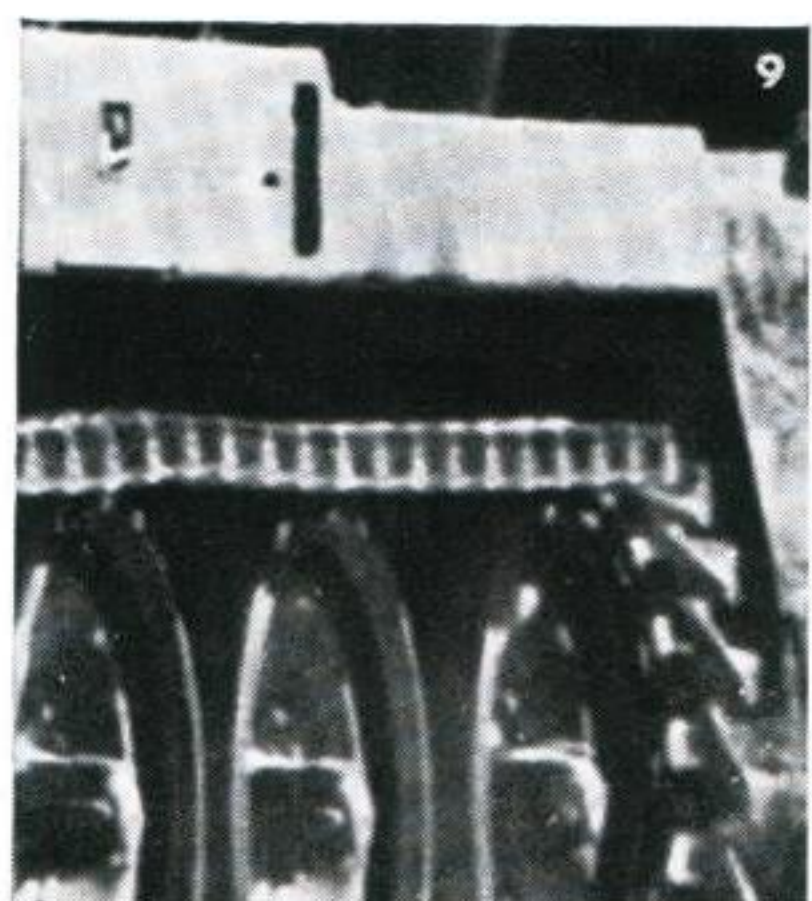
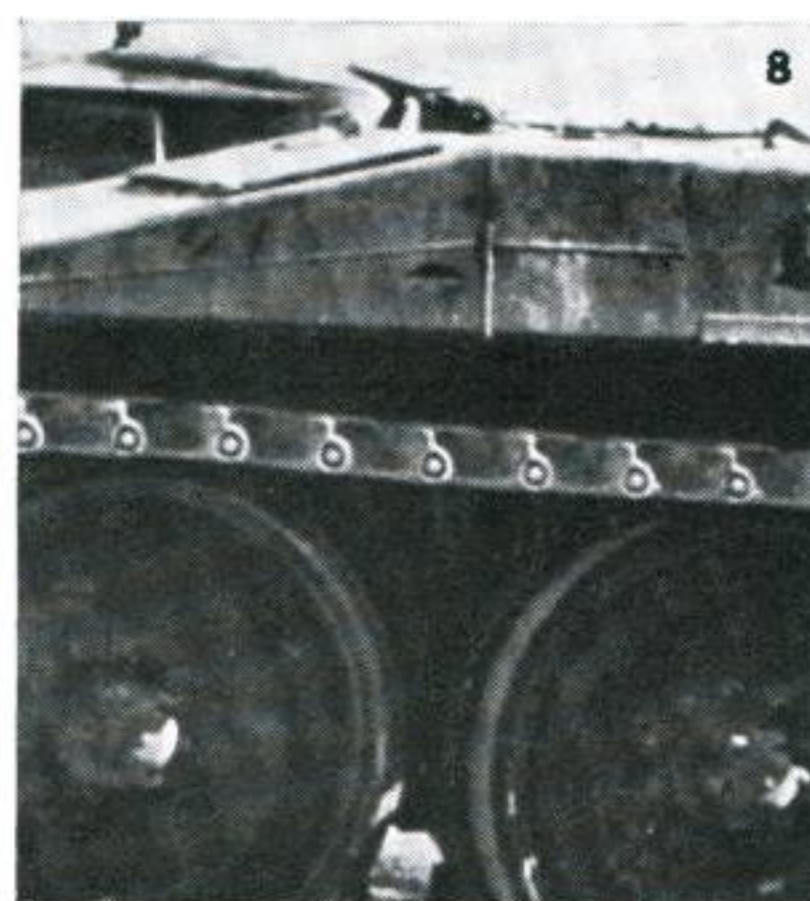
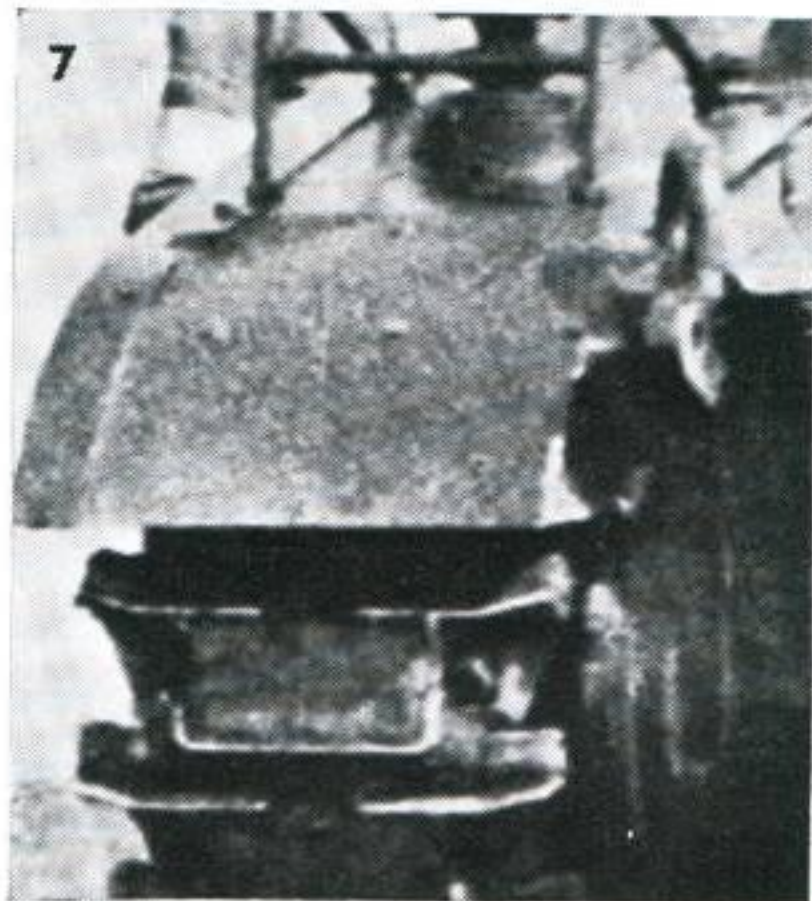
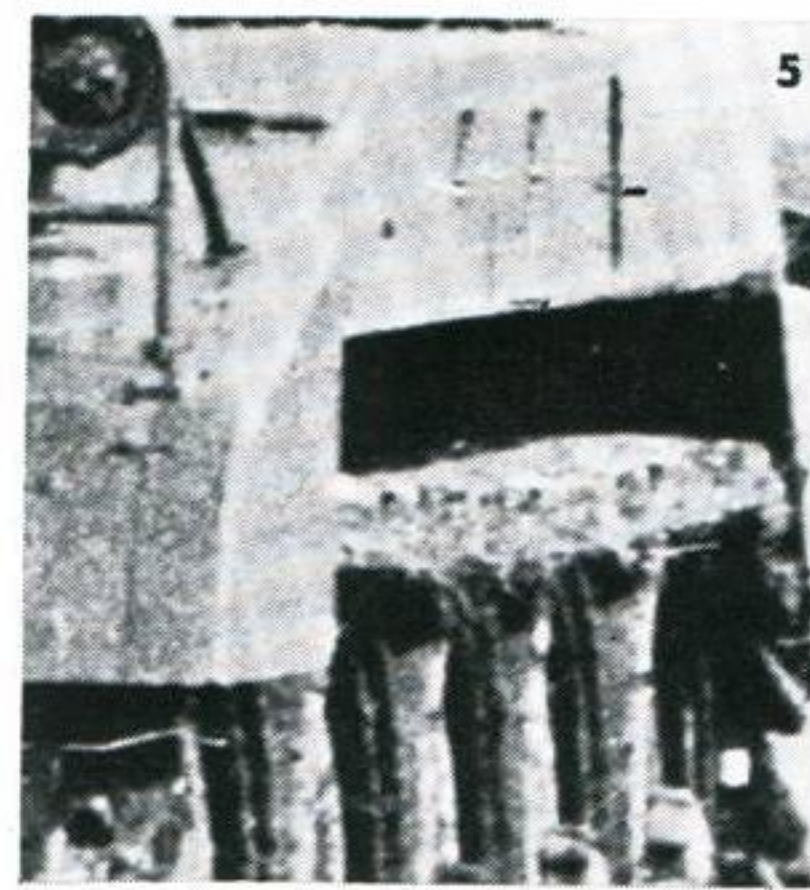
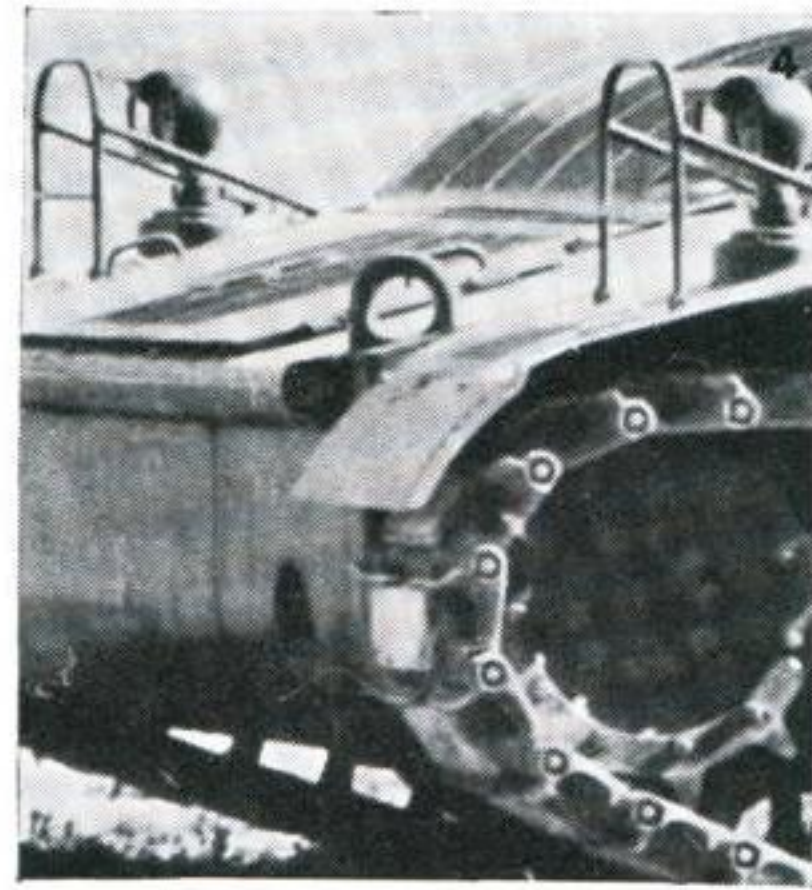
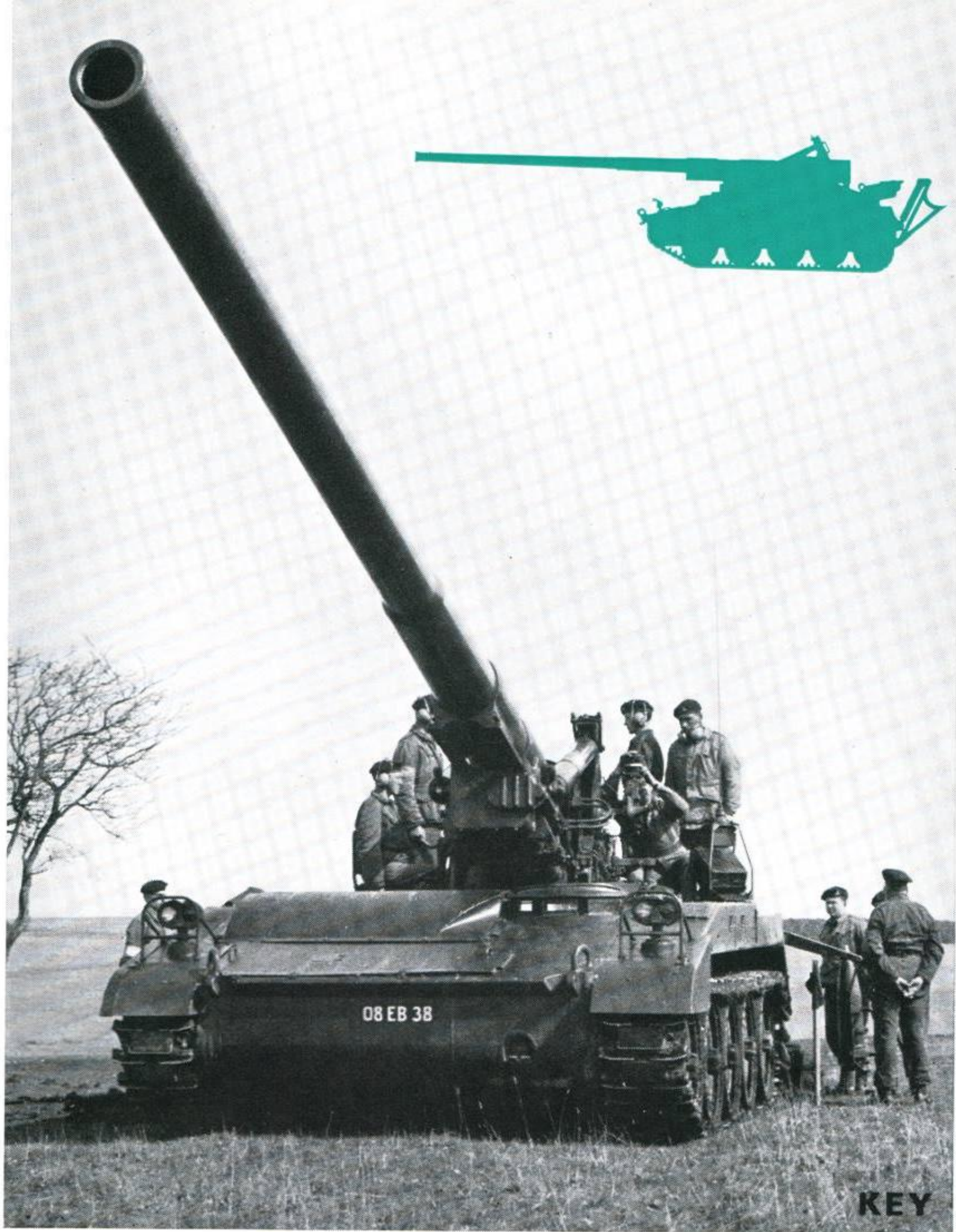
The absence of an armoured superstructure has helped to keep the weight of the M107 down to 28 tons, in spite of the powerful weapon which it carries. However, it has also left the crew unprotected, except for the driver who sits low on the left front side of the hull. On his right is the engine and transmission compartment which

continued overleaf



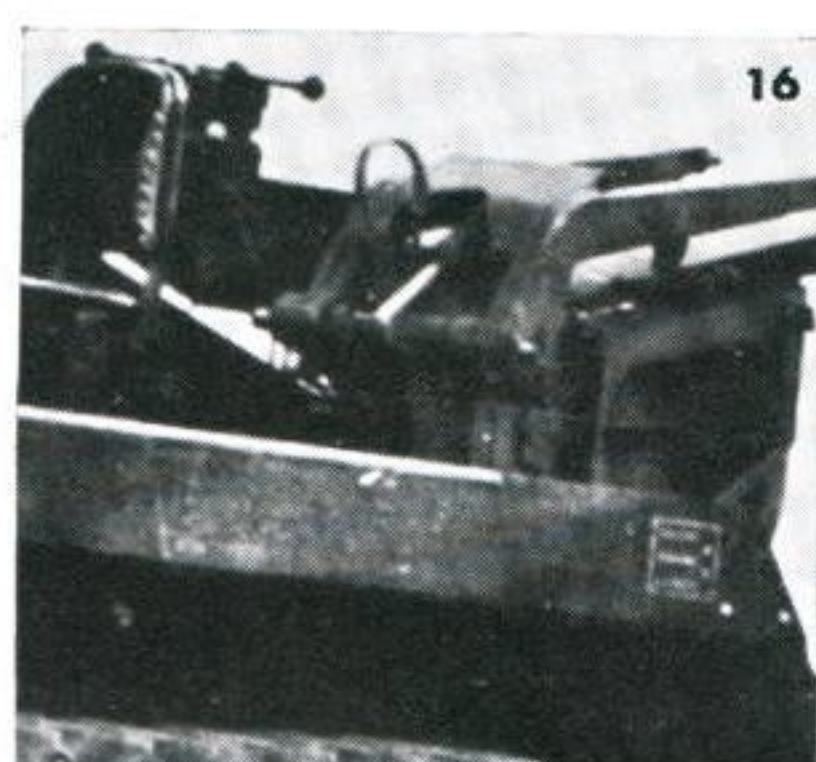
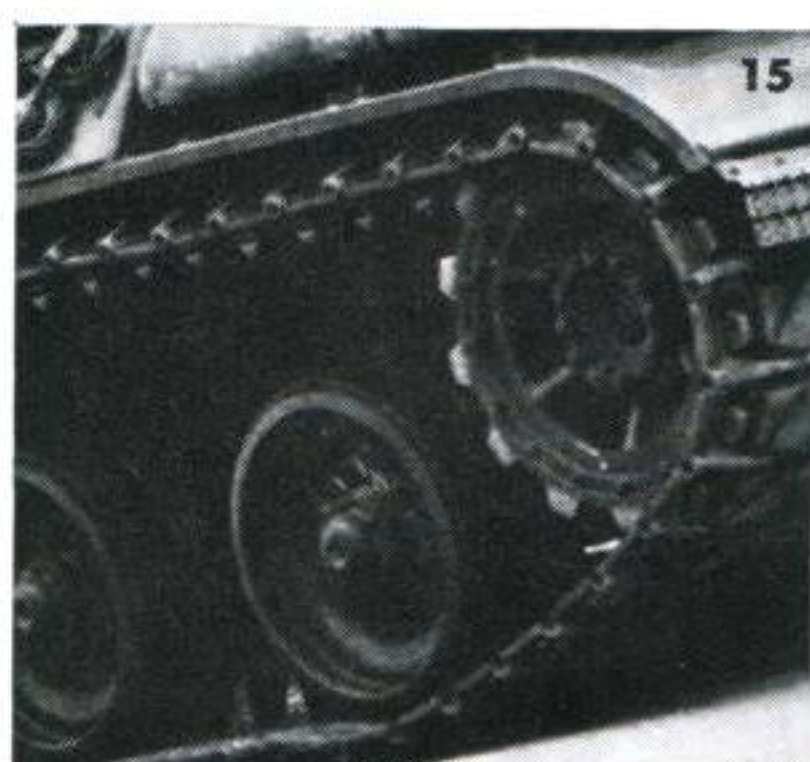
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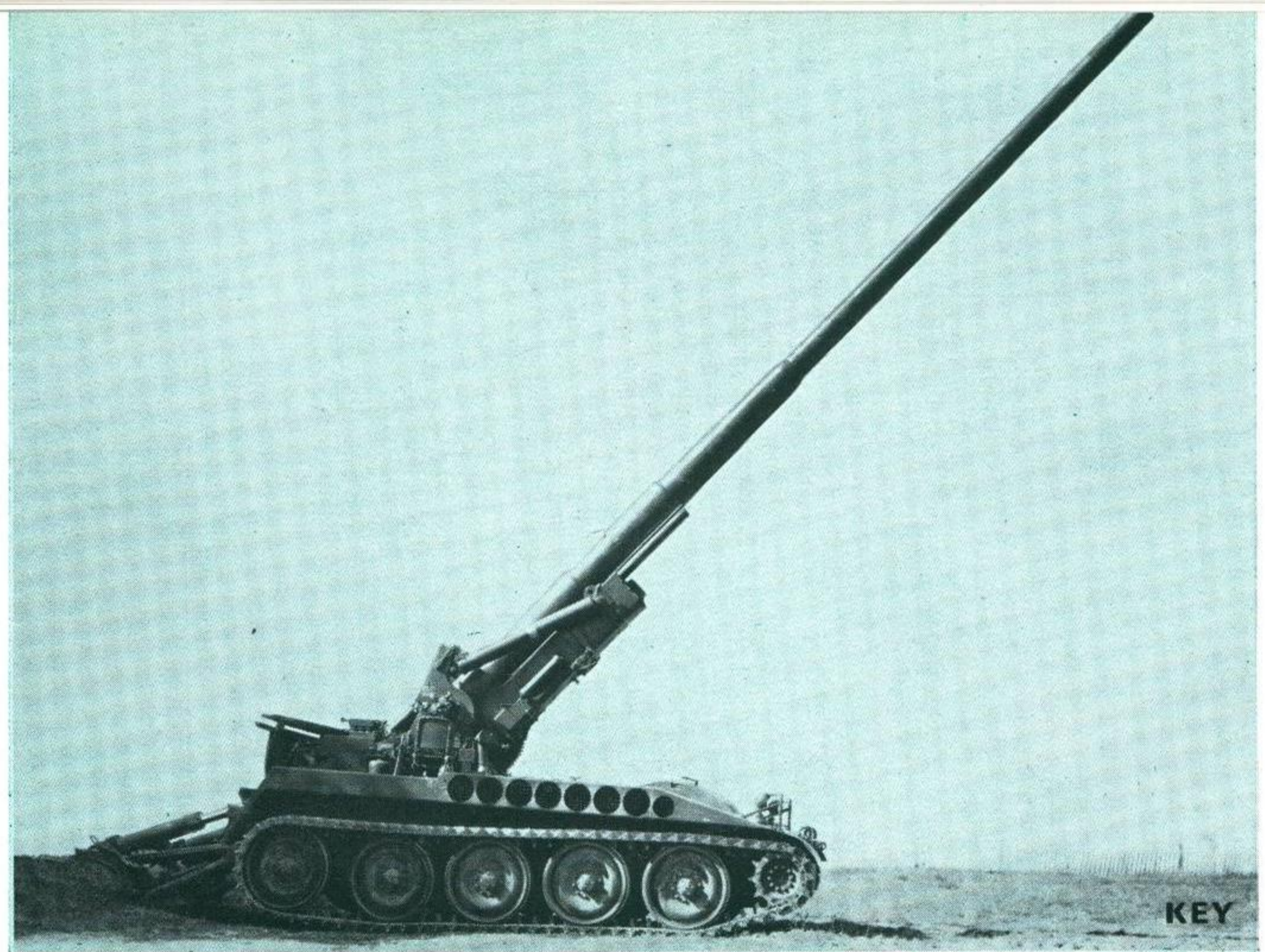
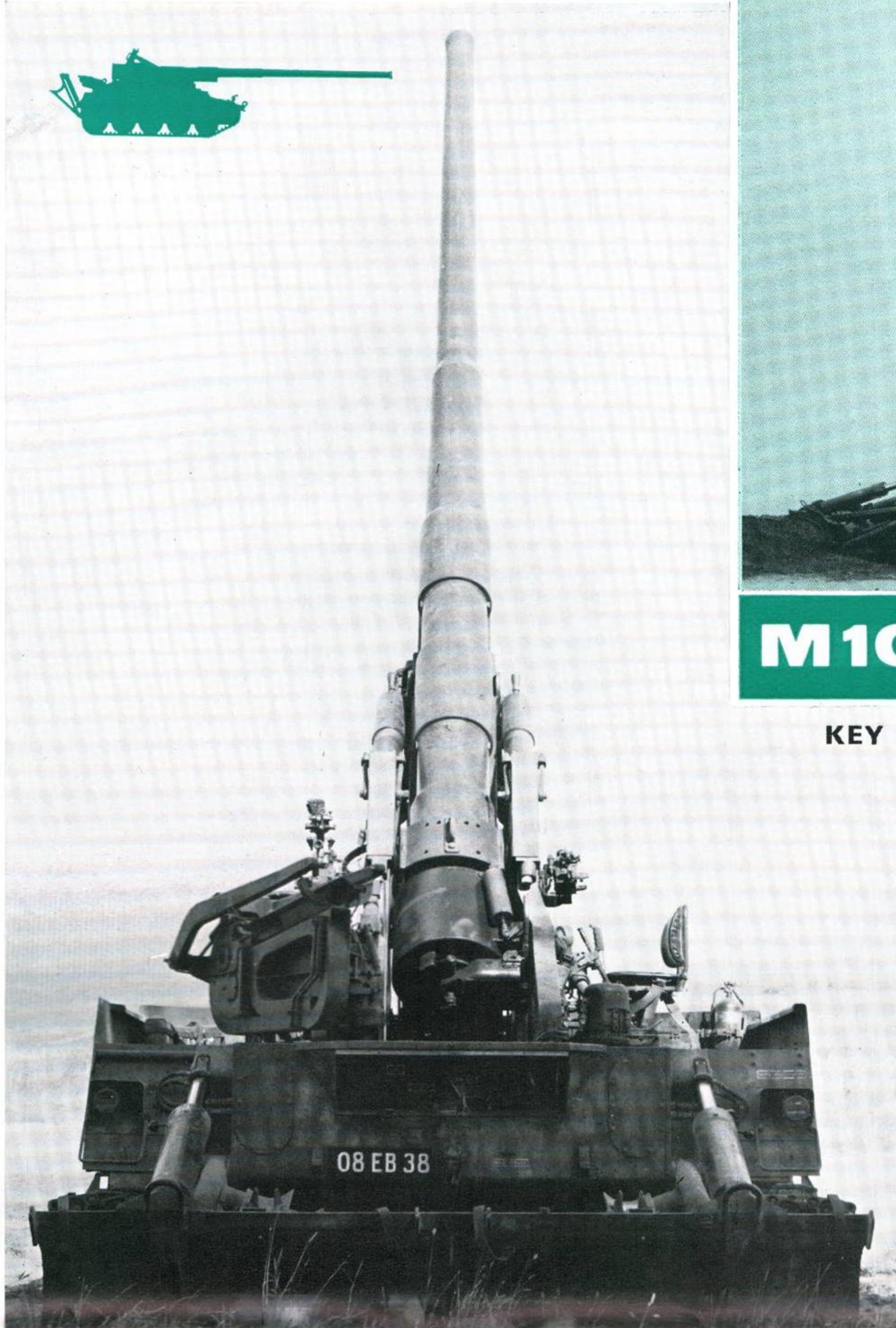


Lesson instructions are on page 116

Solutions on the cover



continued



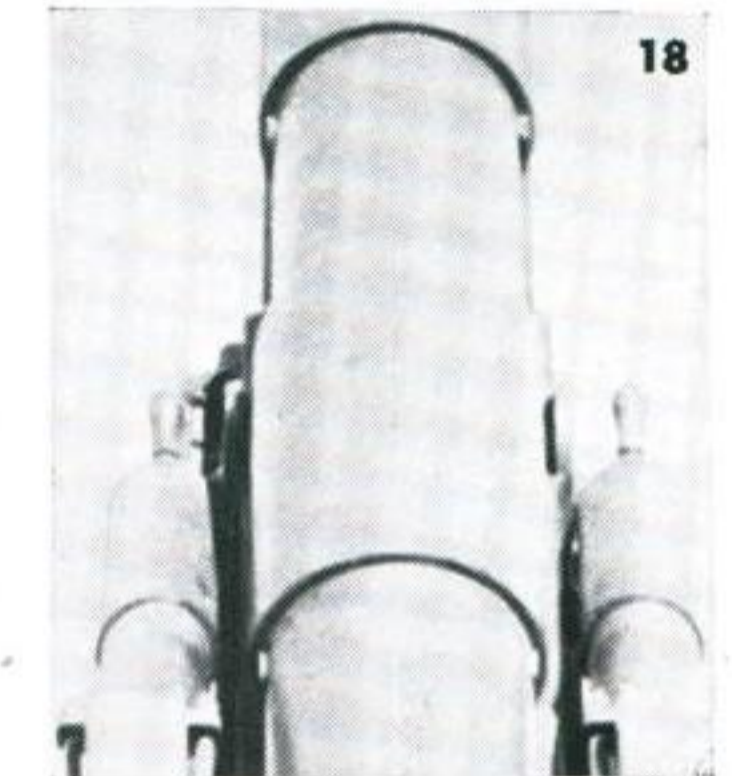
M107 175-mm. SELF-PROPELLED GUN

KEY

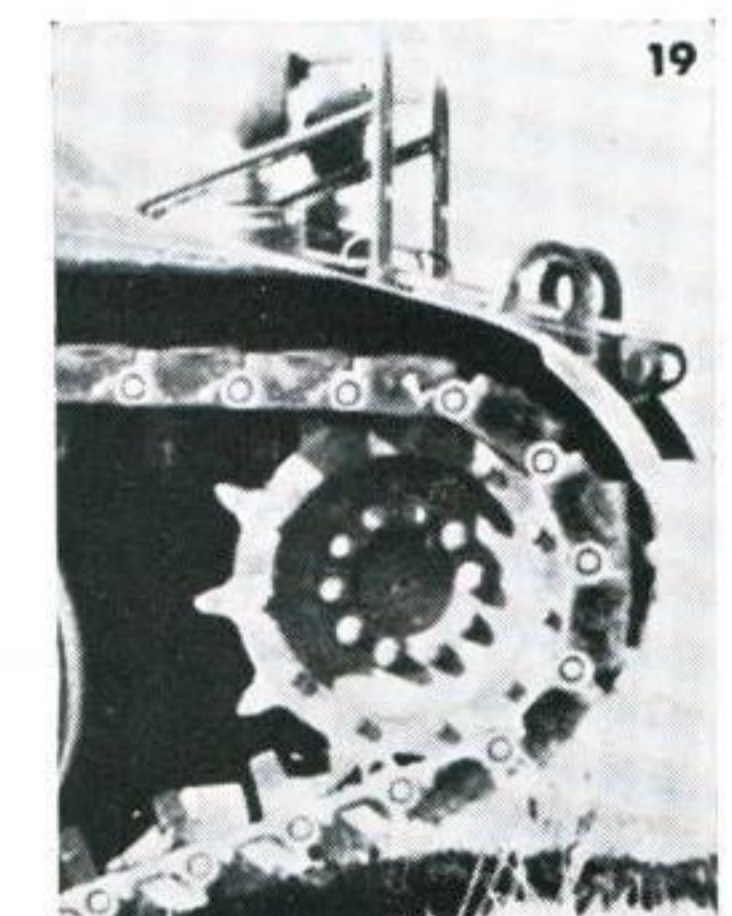
houses a 450-b.h.p. General Motors diesel. The rear half of the hull is taken up by the gun mounting and at the rear there is a spade, which is lowered to the ground when the M107 is in a firing position, to help absorb the recoil loads.

The M107 has an unusual running gear assembly with no track return rollers and the sixth road wheel on each side acting also as a trailing idler. The tracks of the M107 are of the single-pin, rubber-bushed type and have rectangular rubber road pads.

*Lesson instructions on page 116
Solutions on the cover*

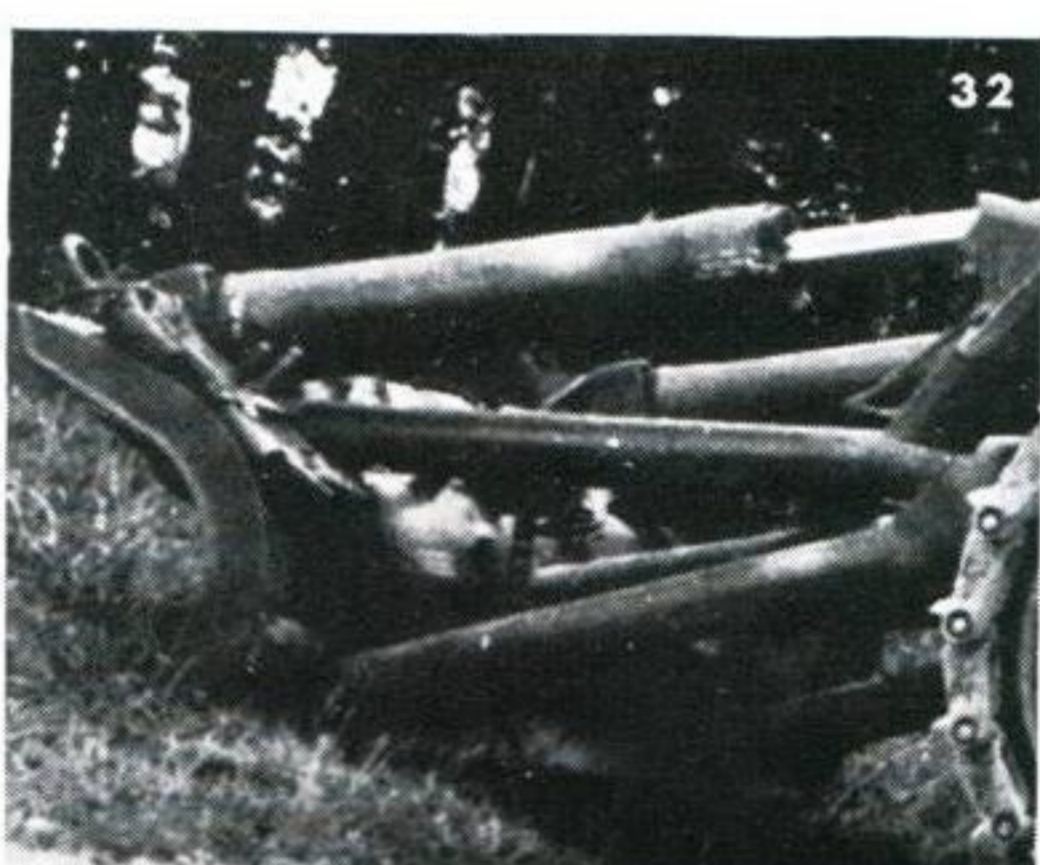
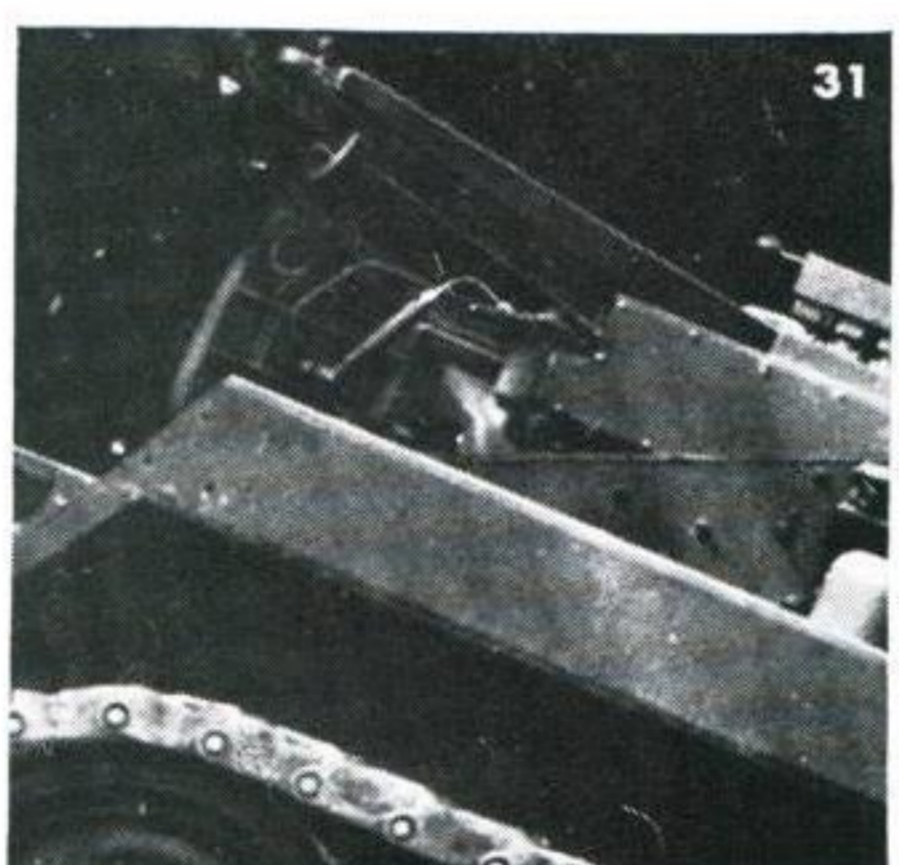
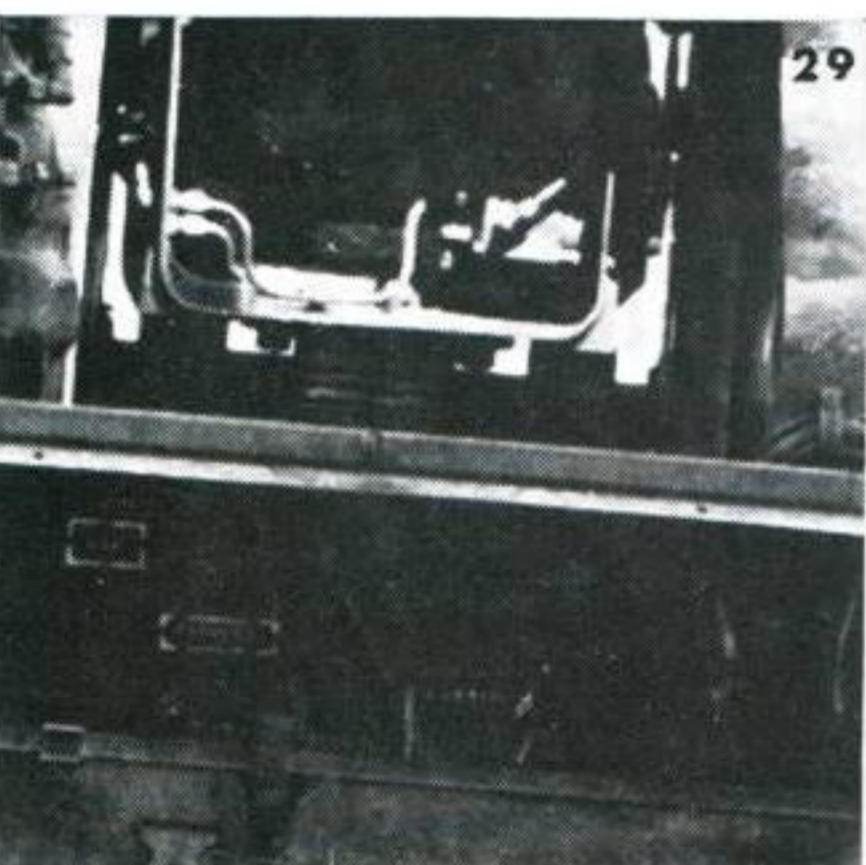
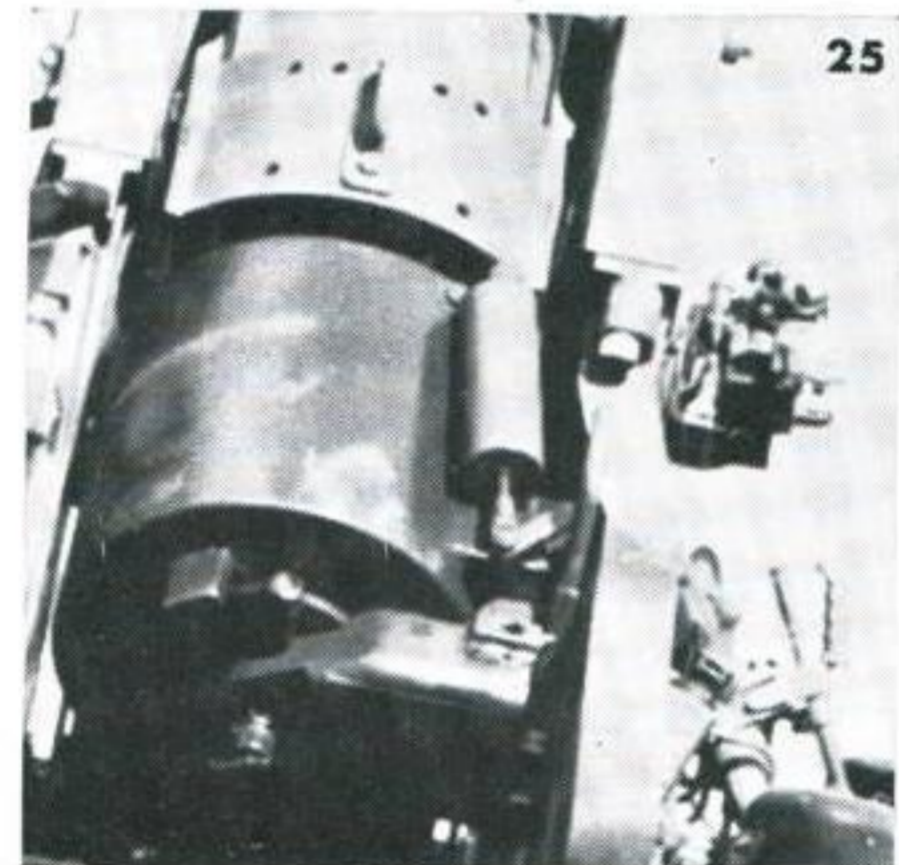
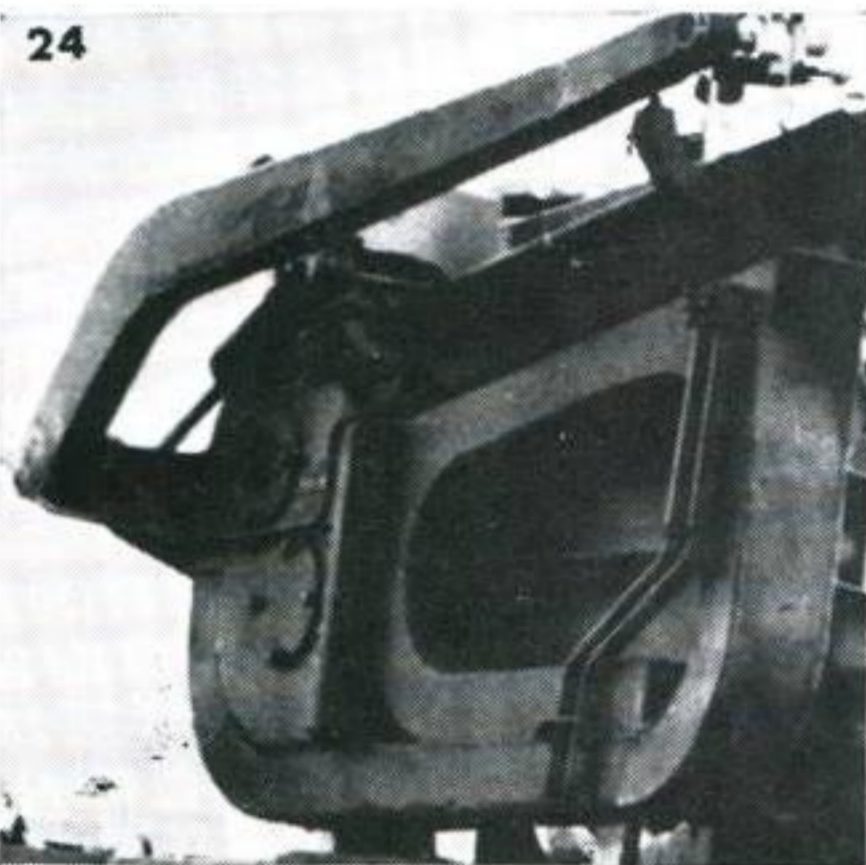
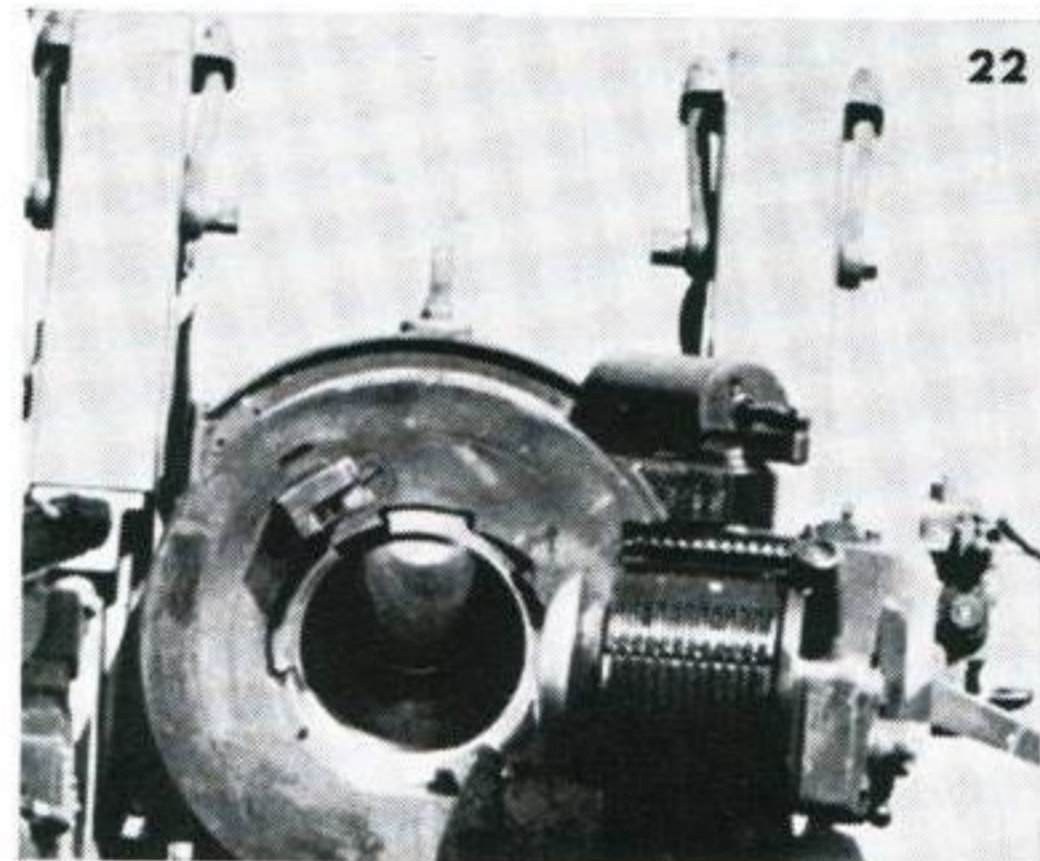
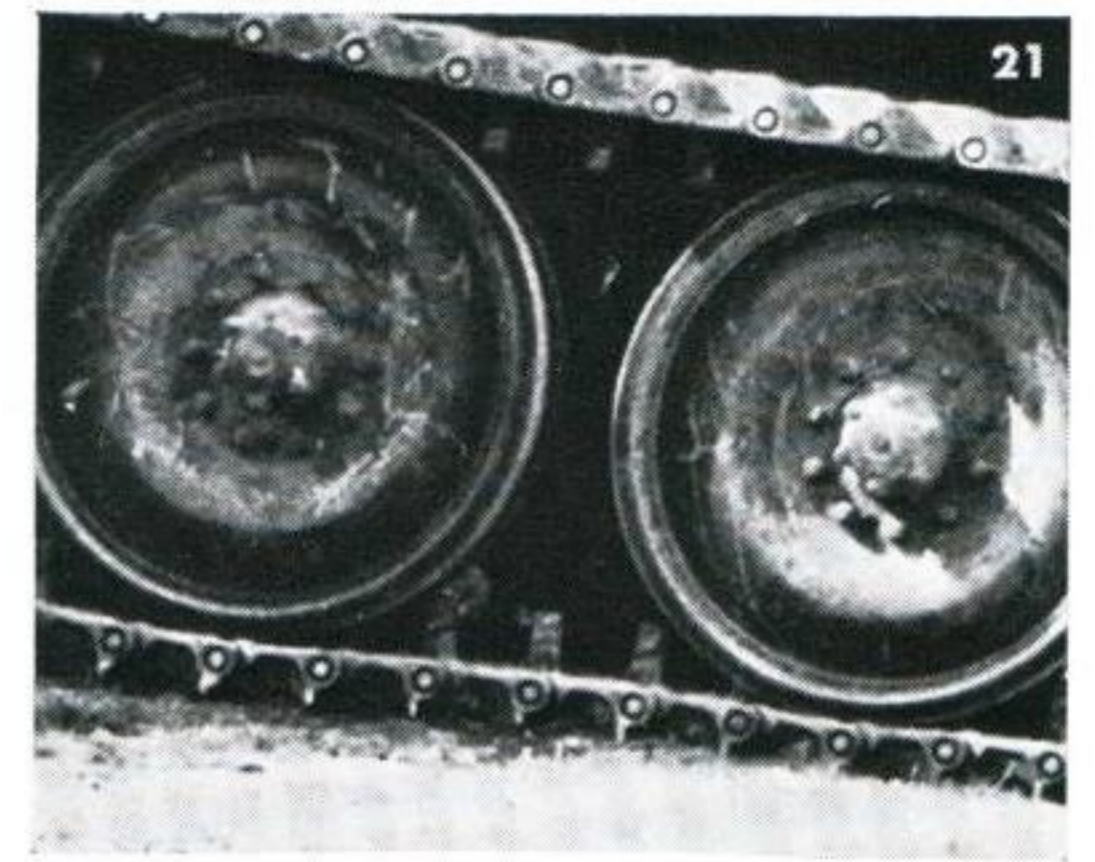
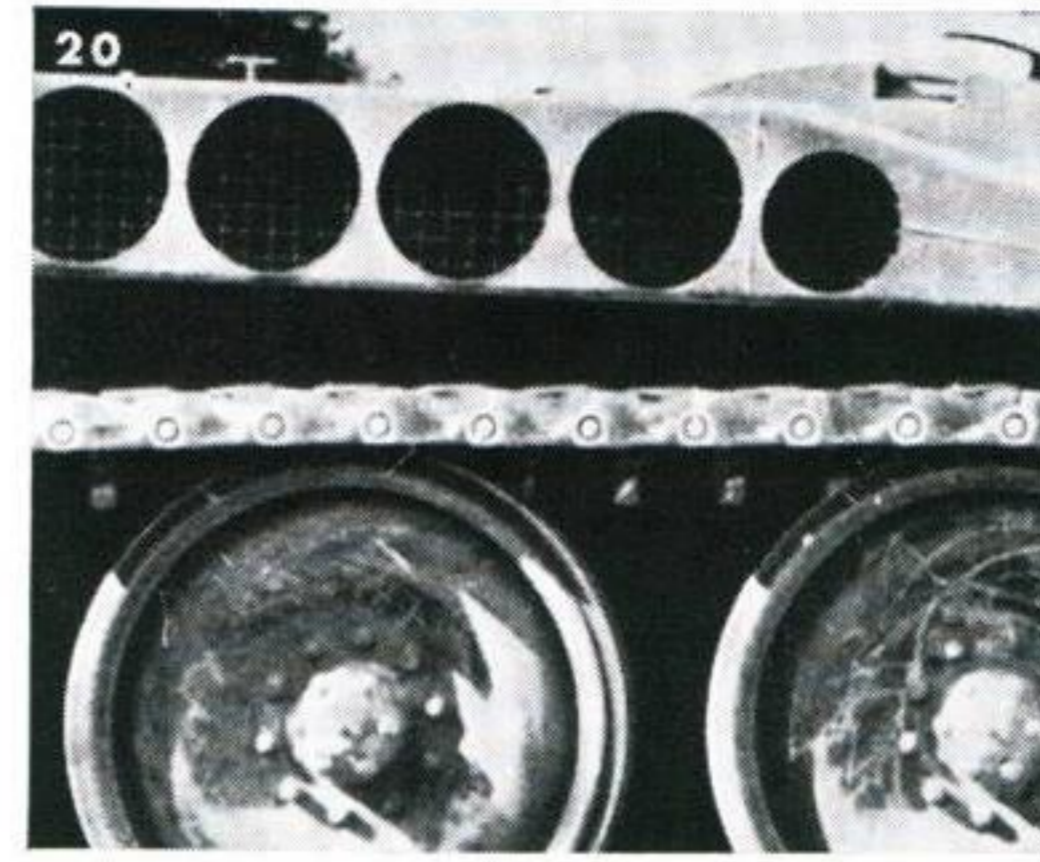
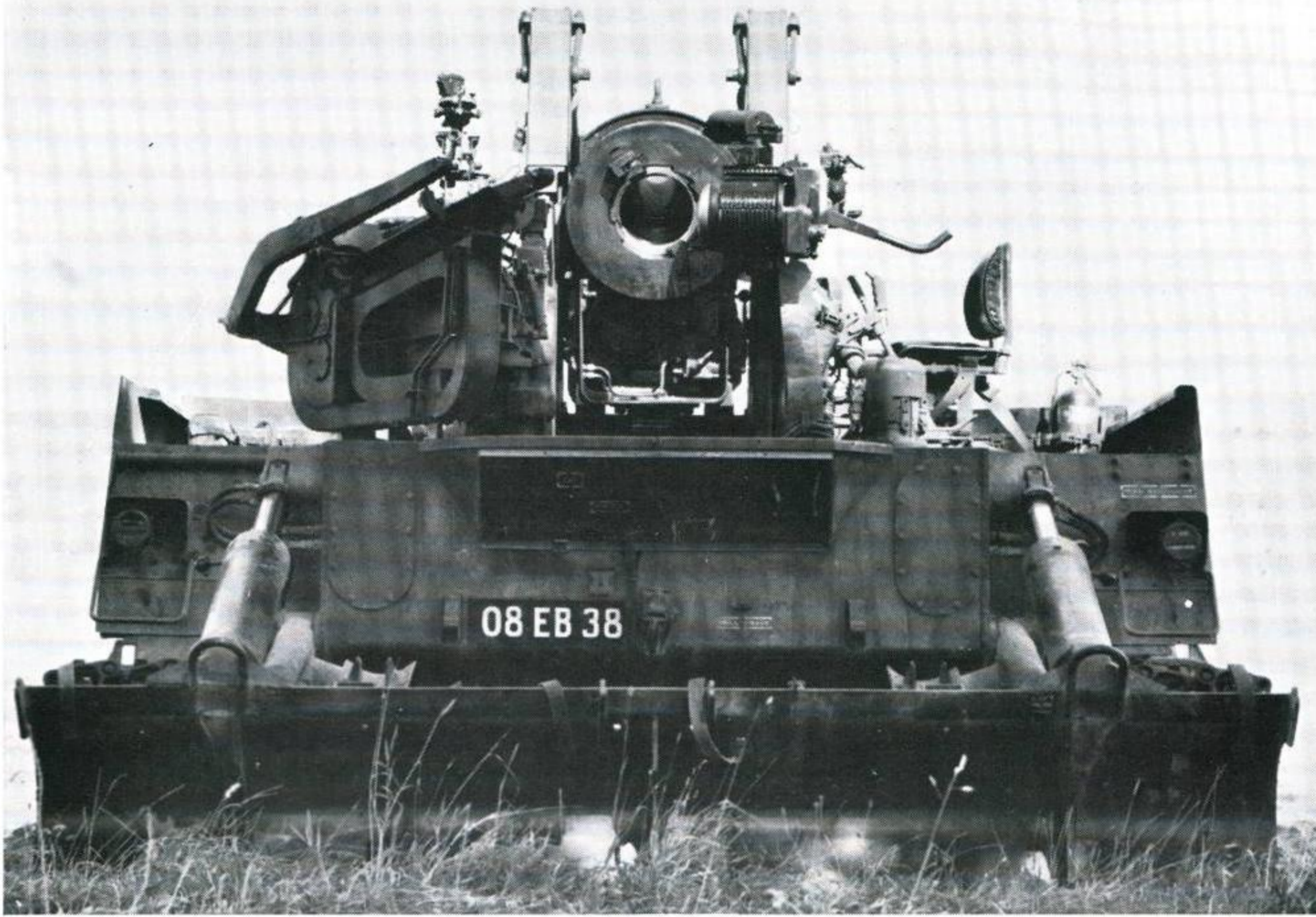


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19

KEY



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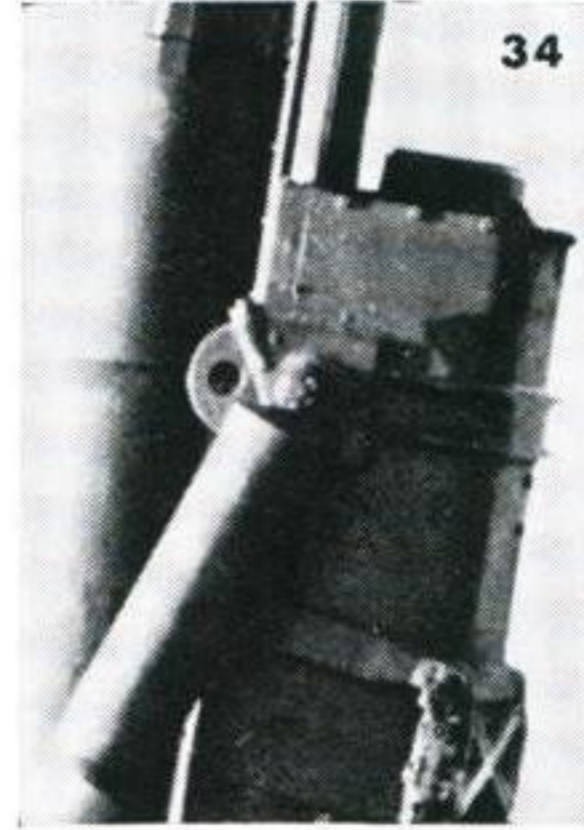
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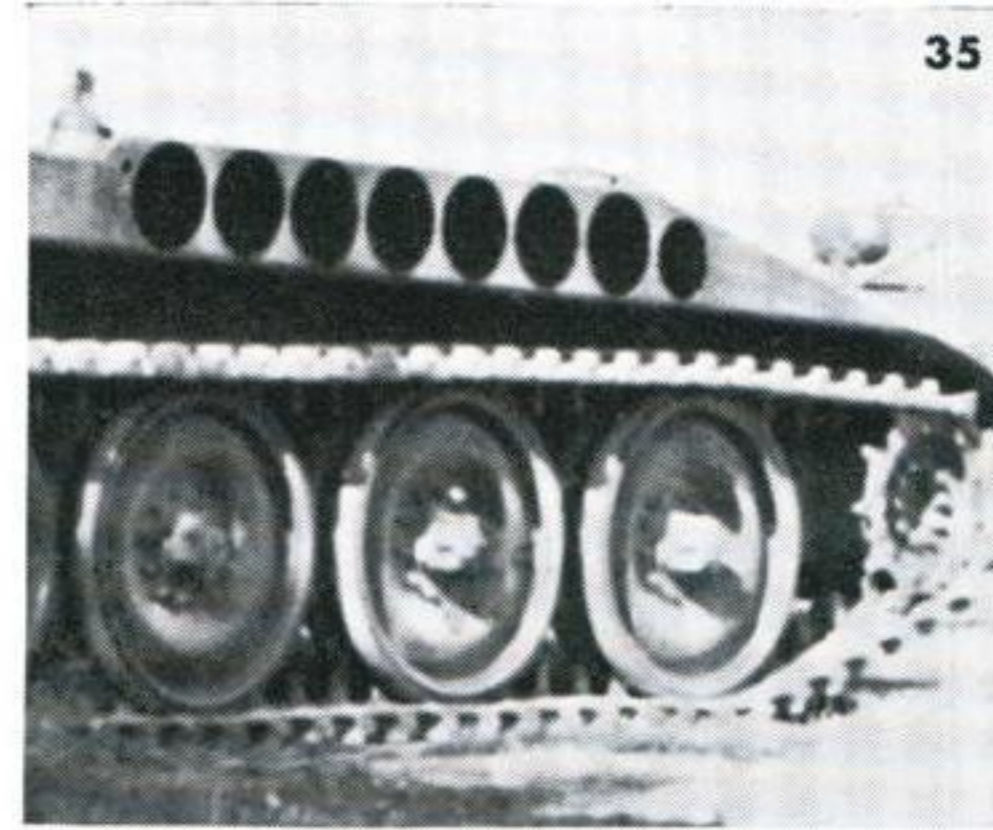


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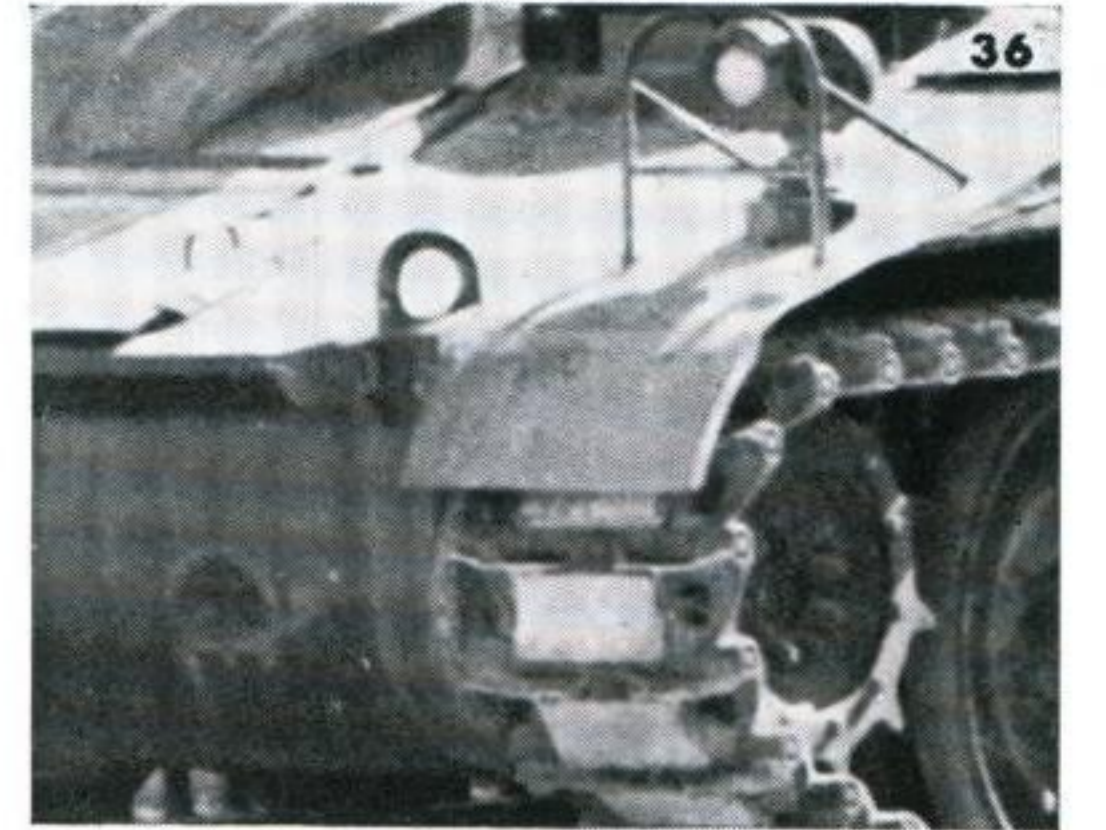
M107 175-mm. SELF-PROPELLED GUN



34



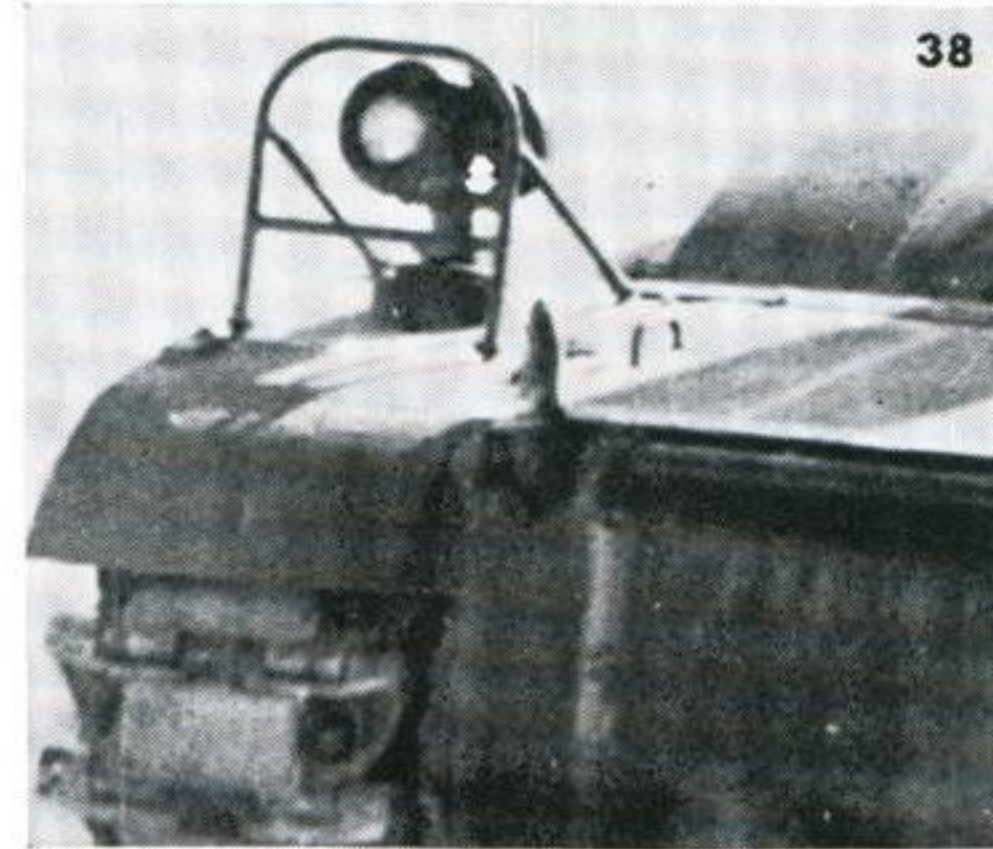
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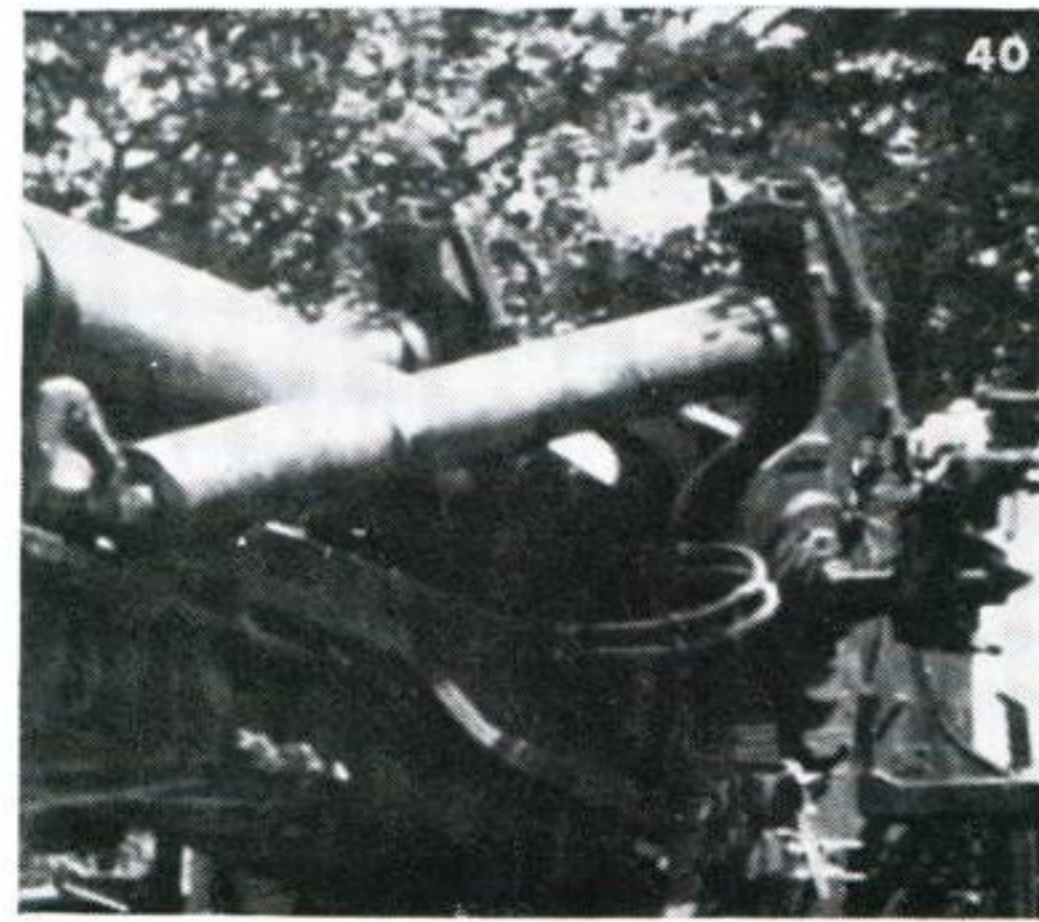
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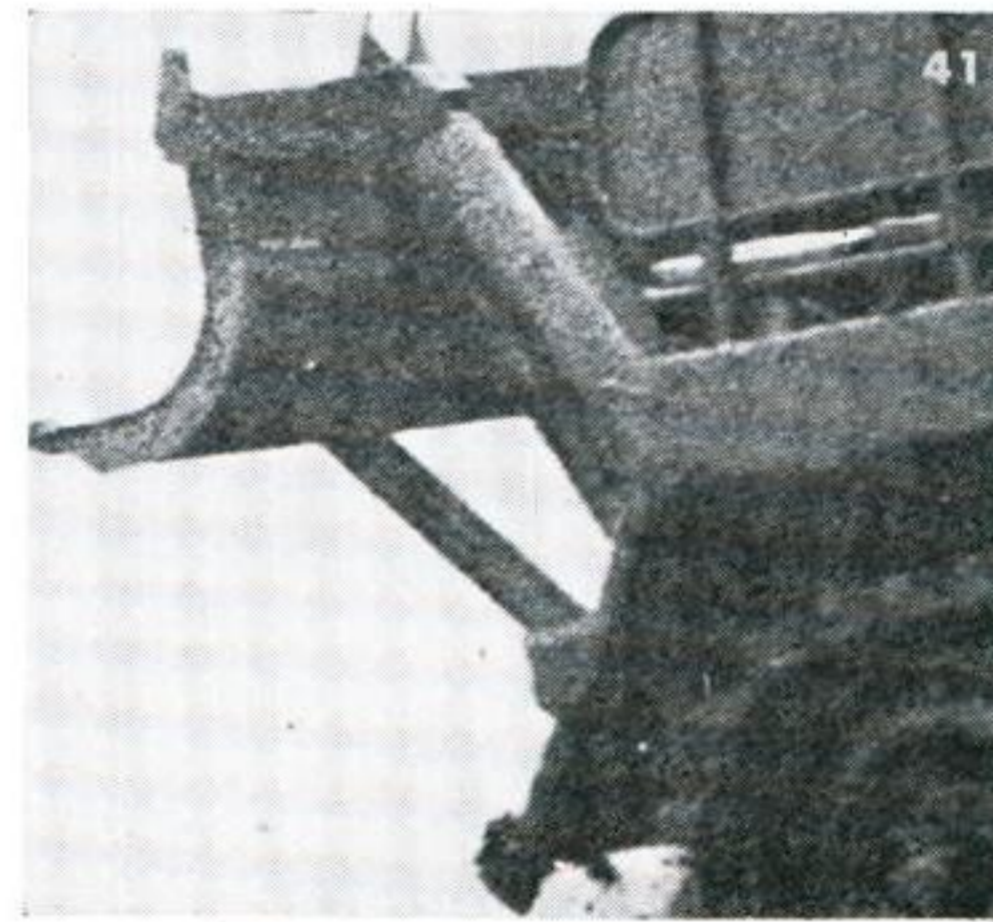
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KEY



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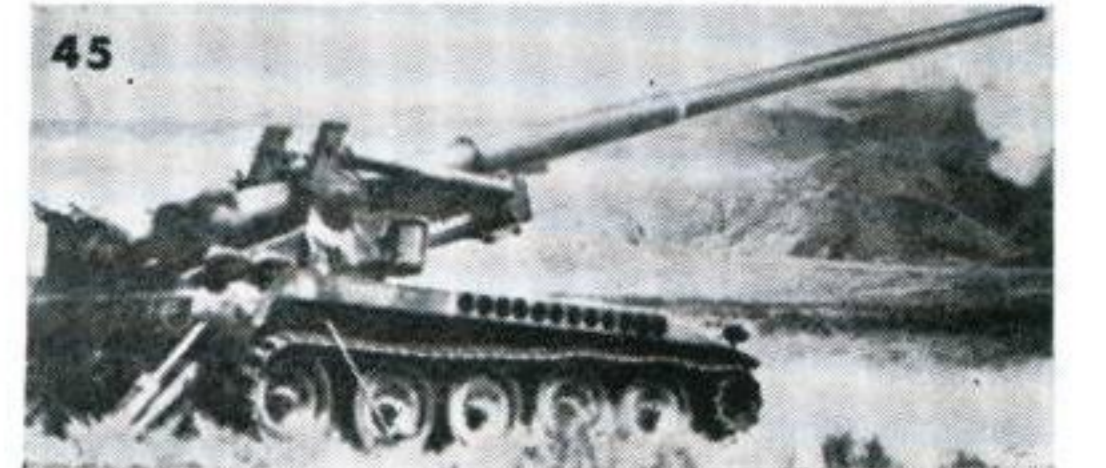
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43



44



45

Lesson instructions on page 116

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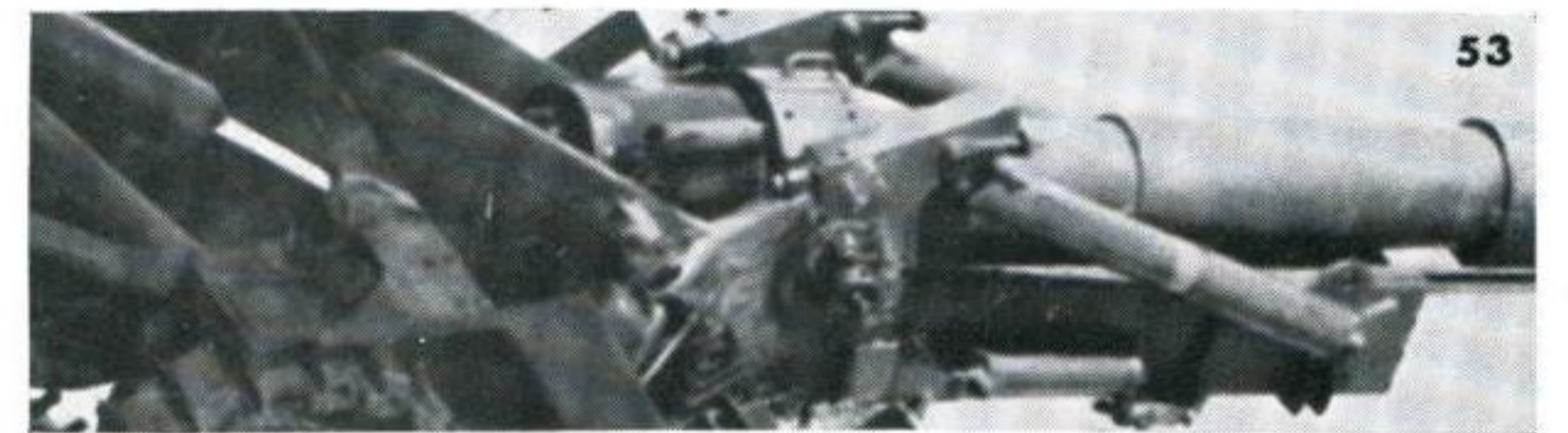
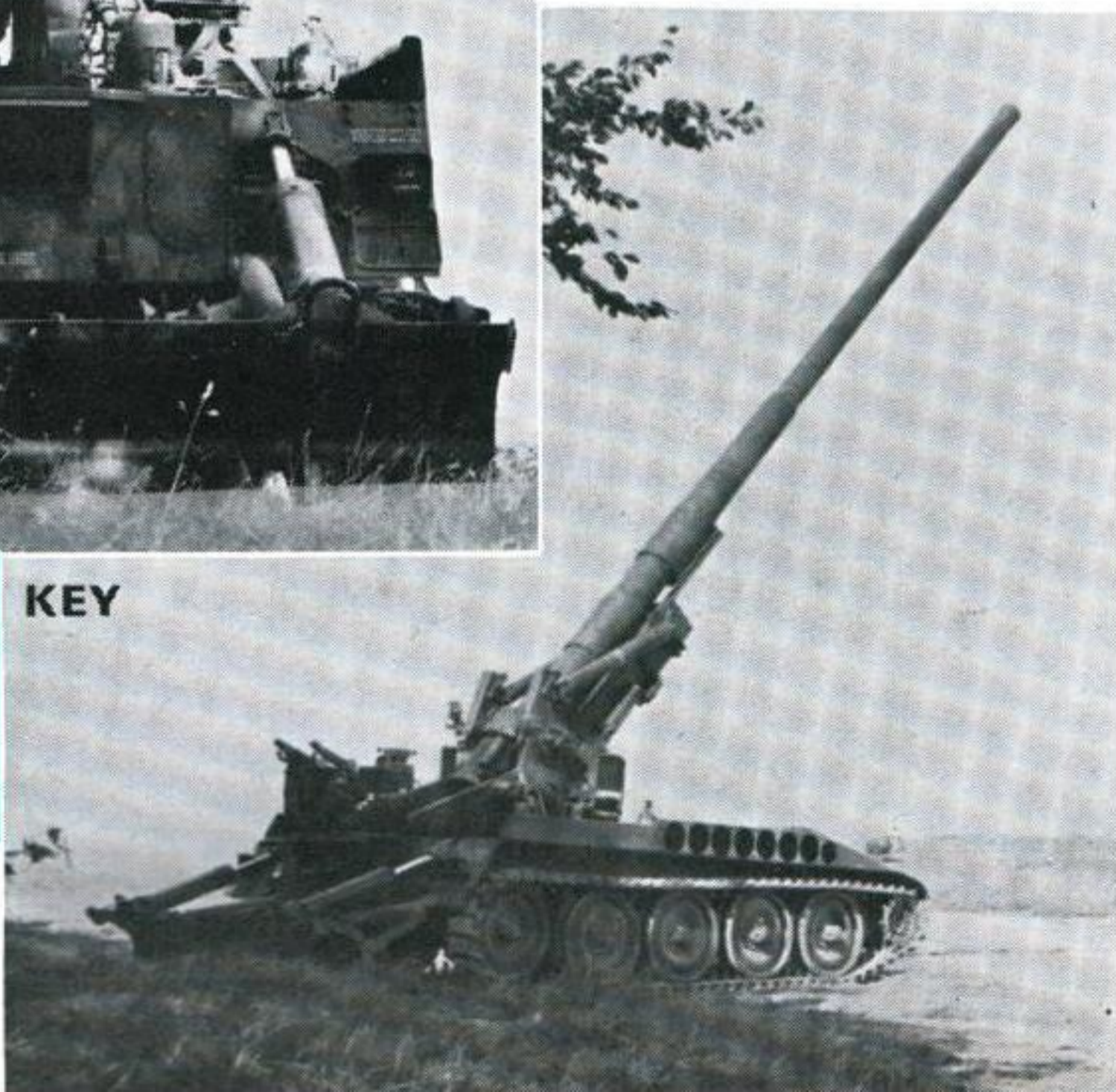
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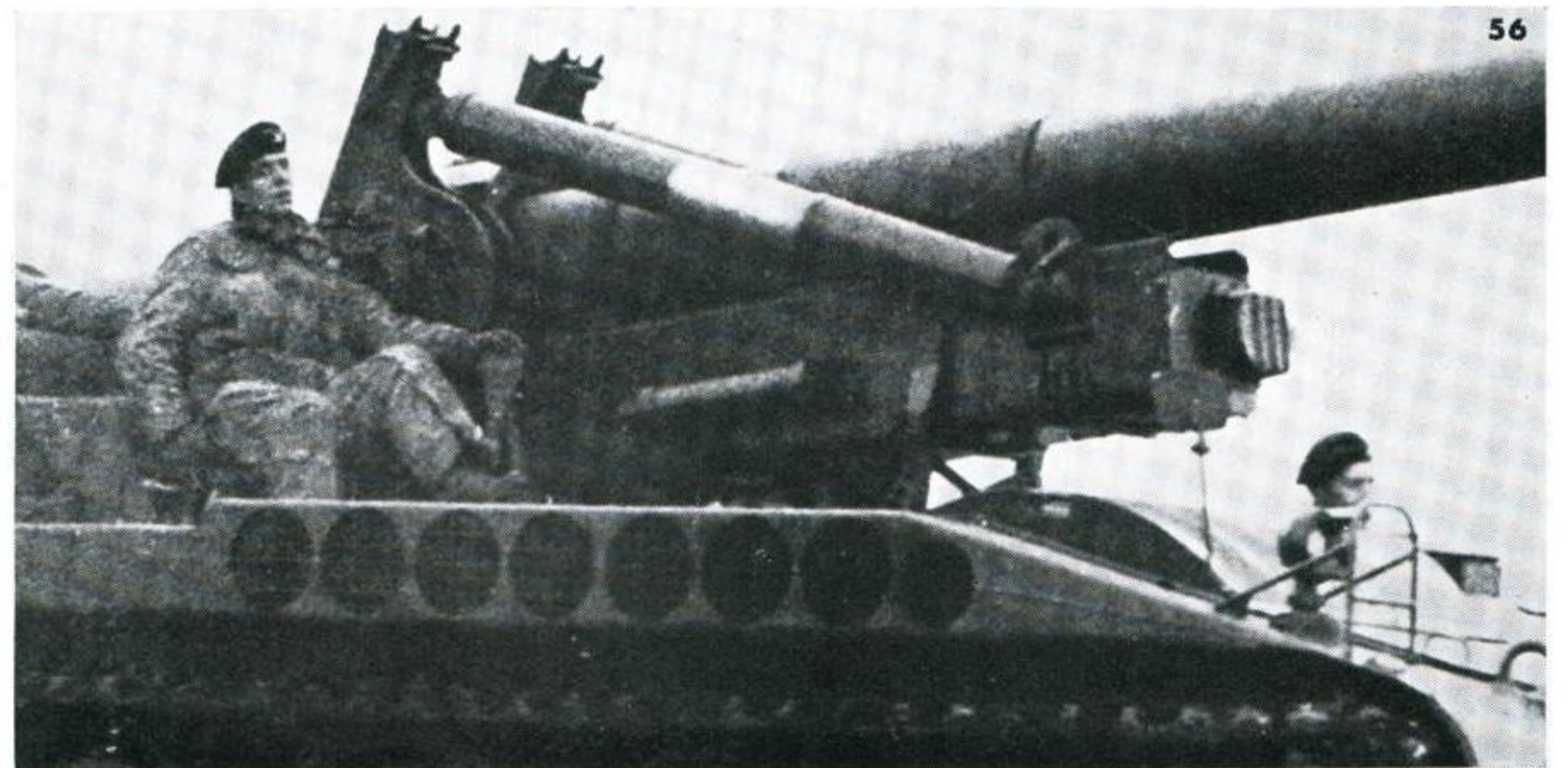
KEY



KEY



Solutions on the cover



STERN TRAWLERS OF THE U.S.S.R.

The giant Fishing Kombinats that the Russians have built up present one of the most formidable challenges to the Western world.

The deep-sea trawler fleets are in every sea and ocean and in very great numbers. The entire fleet is organized and run on disciplined semi-naval lines.

It is well balanced with small trawlers of the conventional type and others of a more sophisticated nature, up to large 10,000 ton factory ship, mother ships, tankers, tugs and giant whale-factory craft. Fish processing and fish carrying vessels all help to make up this giant fleet.

By far the most numerous, however, and the most distinctive in appearance are the hundreds of vessels of about 2,700–3,000 tons stern trawlers. There are several distinct classes but in appearance each differs from another only in small features, such as types of mast.

The pioneer ship of this type was the "Puschkin" or "Sverdlovsk" class. Of 3,500 tons deadweight they were built in East Germany at the Kieler-Howaldtswerke yard. The *Puschkin* herself was completed in 1954. She is 225 feet in length and had a speed of 11 knots.

Over 30 were built by this yard followed by about 50 from Russian builders.

As mentioned above, these prototypes were followed and are still being followed by very similar classes of vessels, some built in the USSR, others in Poland and still more from East Germany.

In turn, ships of slightly differing appearance have been and are being built but all having the same general characteristics.

So efficient are these vessels that they have been described as "fishing Kombinats"—or Industries—in themselves, combining the function of catching, processing, canning and so on.

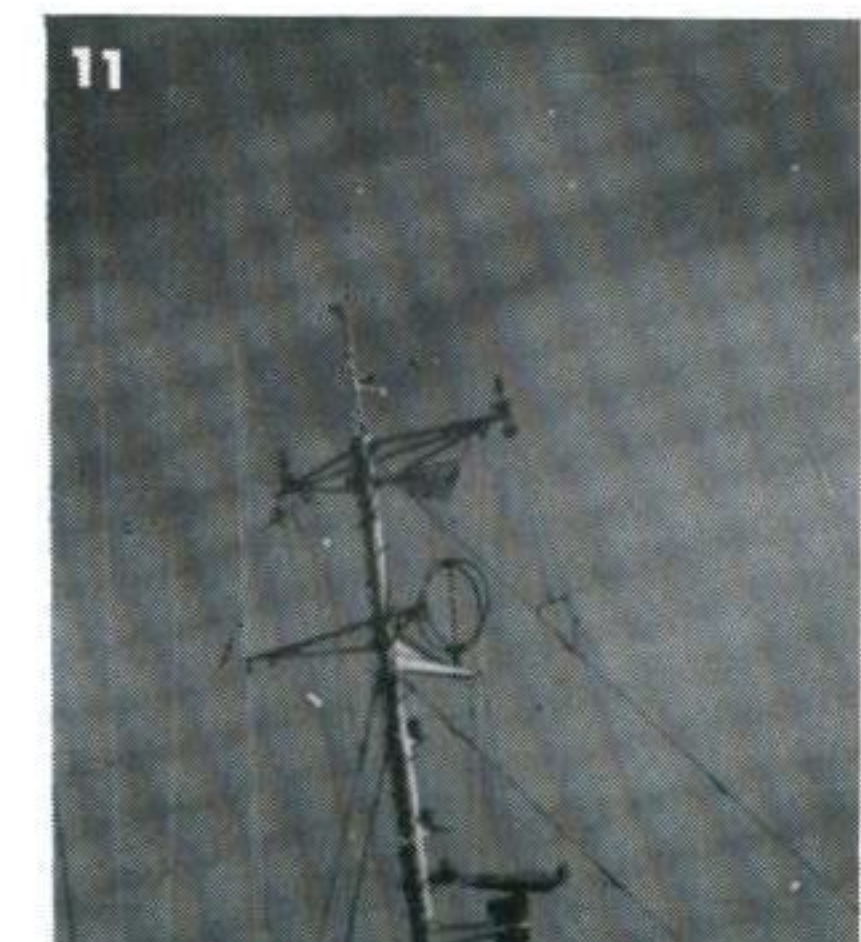
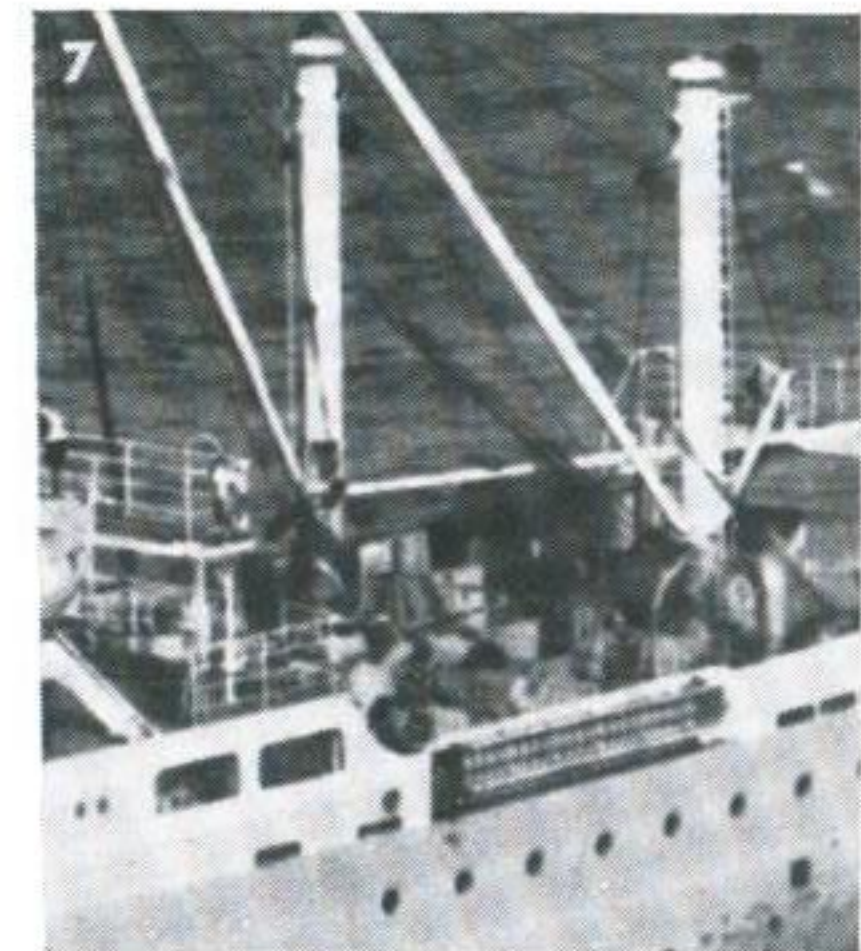
The ships illustrated in the accompanying lessons are all of one or more of the "Puschkin" or succeeding classes.

The main recognition features are the large high-freeboard hull low superstructure and very small funnel, sometimes looking even shorter by having the large lifeboats raised above the deck.

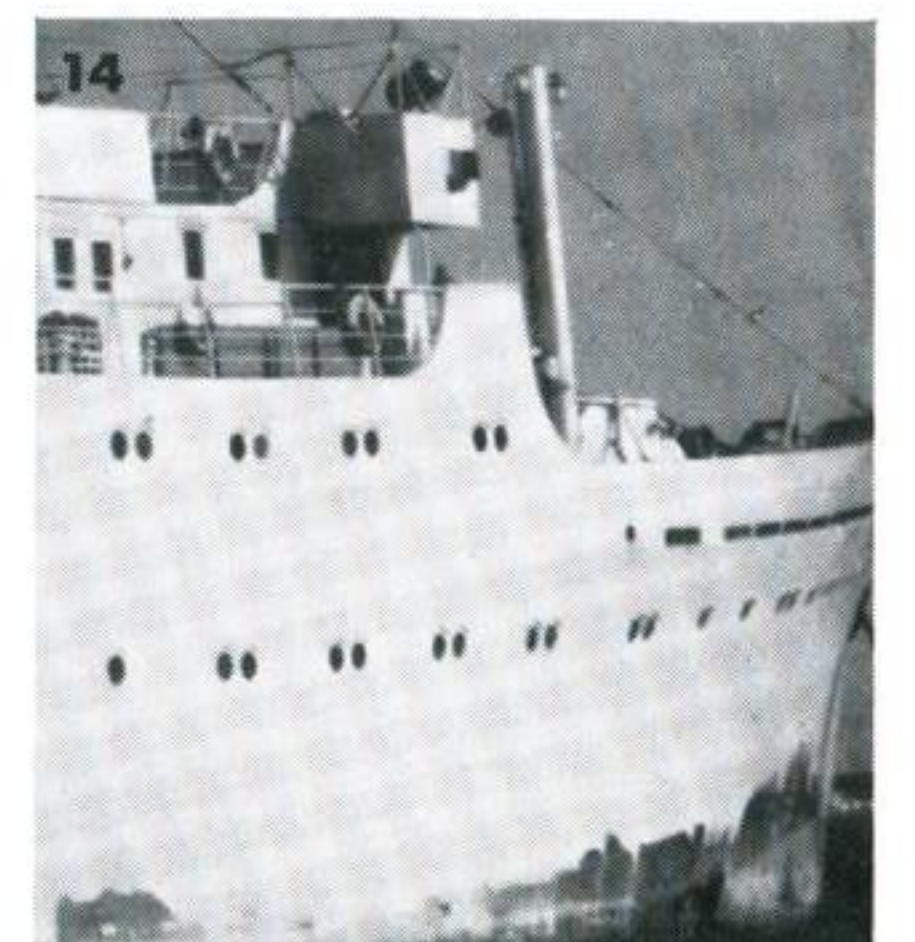
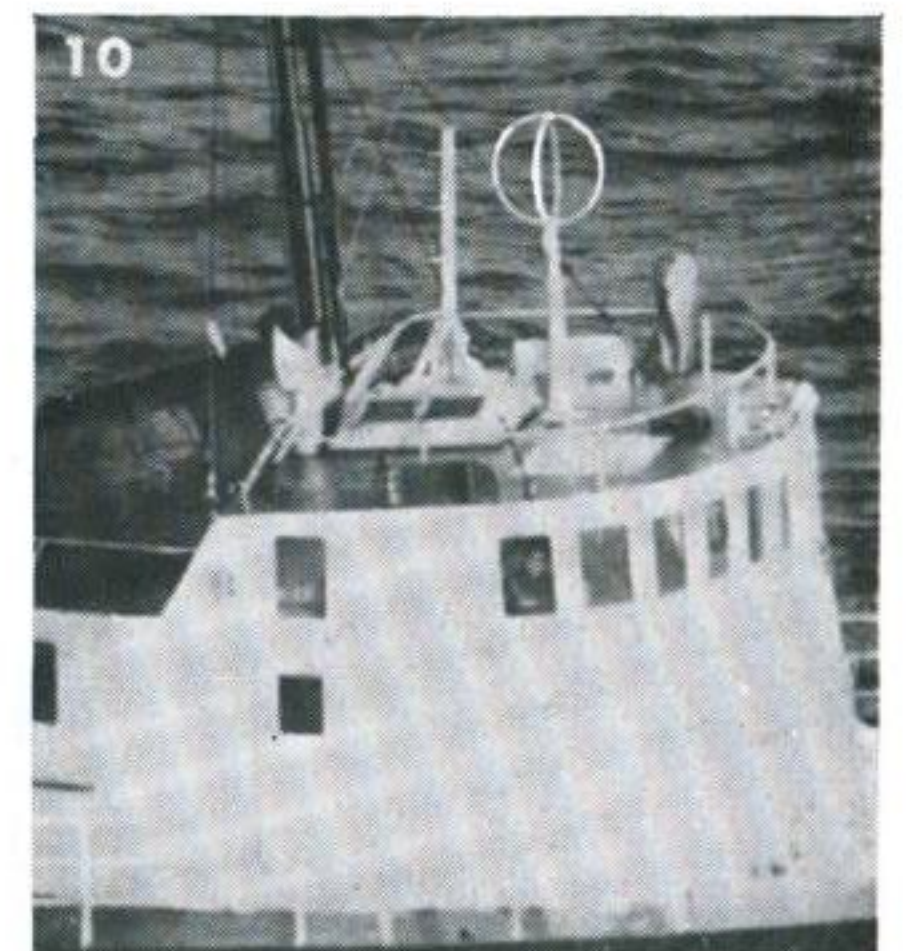
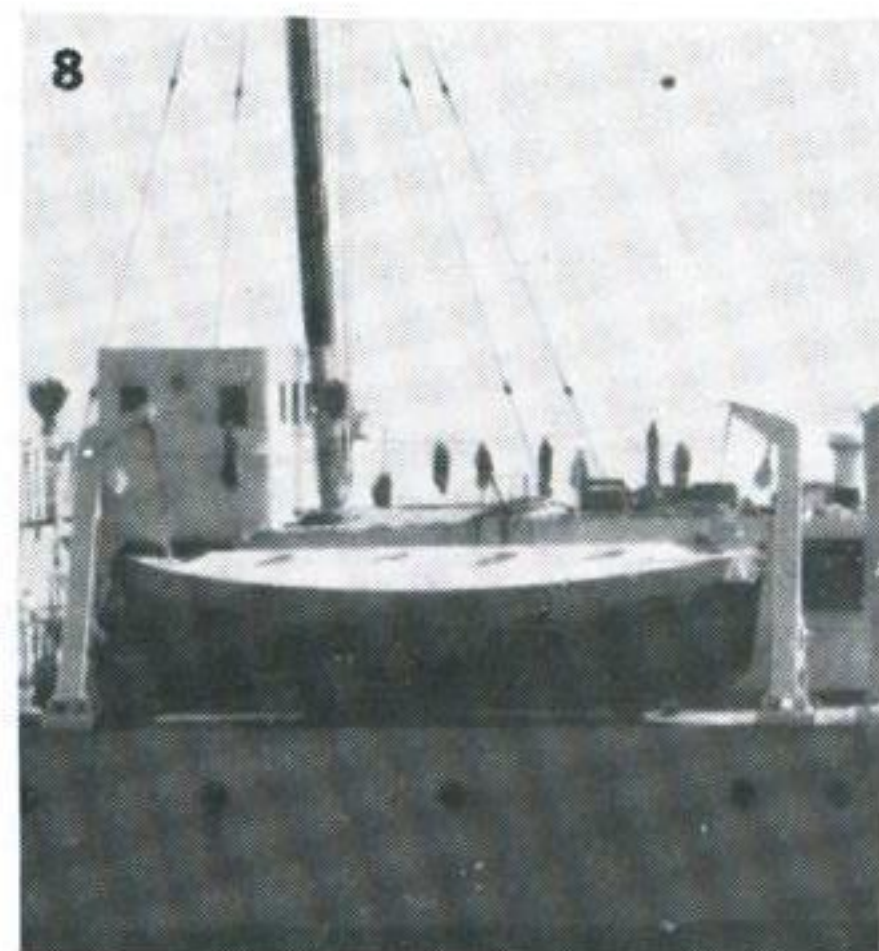
The bridge fronts are flat or very slightly rounded and the masts vary from pole to one, or both, tripods. *Puschkin* herself has a "goalpost" foremast and the king-posts aft may be twin or on the centre line.

All classes have short king-posts forward. All are motor-vessels.





Lesson instructions on page 116 Solutions on the cover



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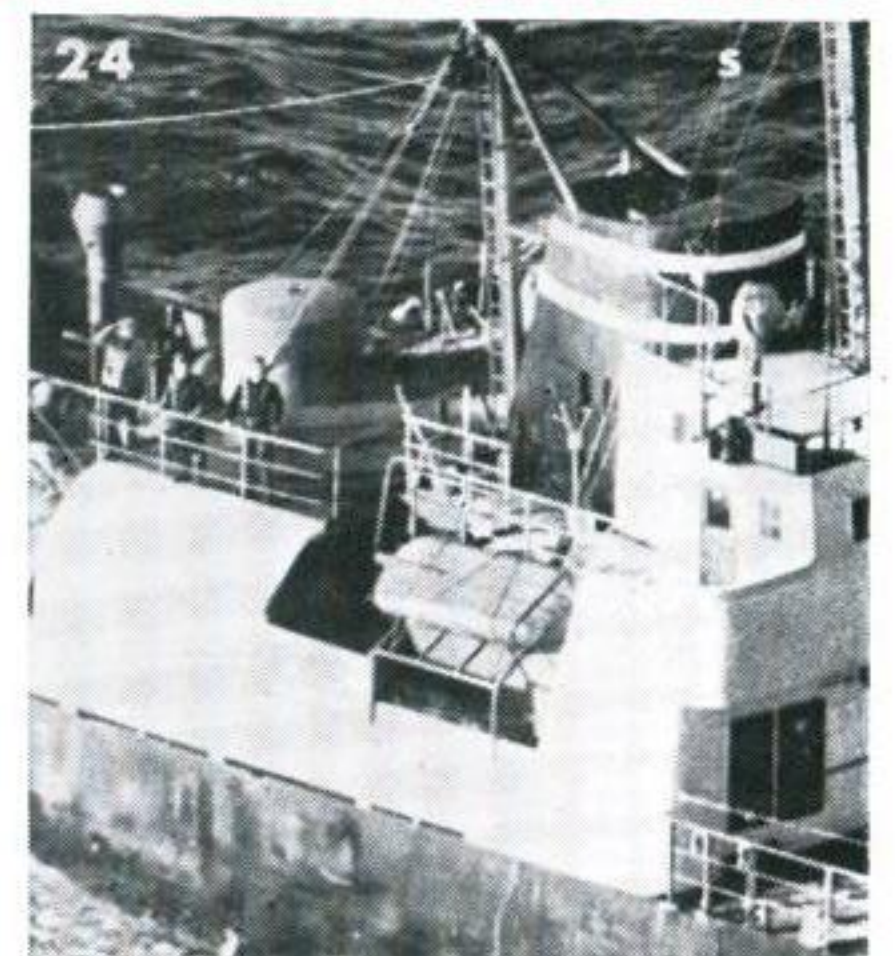
RUSSIAN TRAWLERS

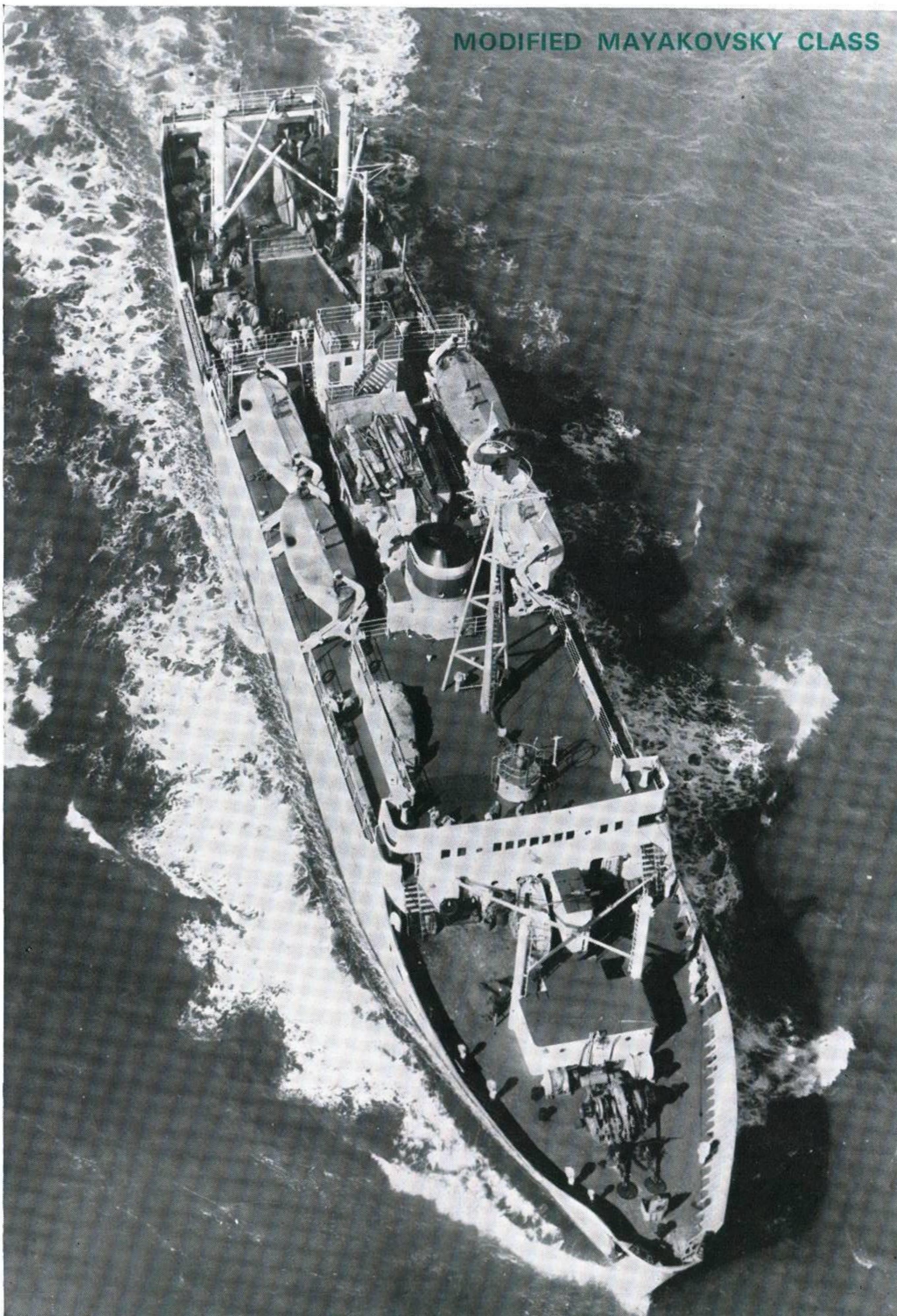
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USSR LERMONTOV



Lesson instructions on page 116 Solutions on the cover



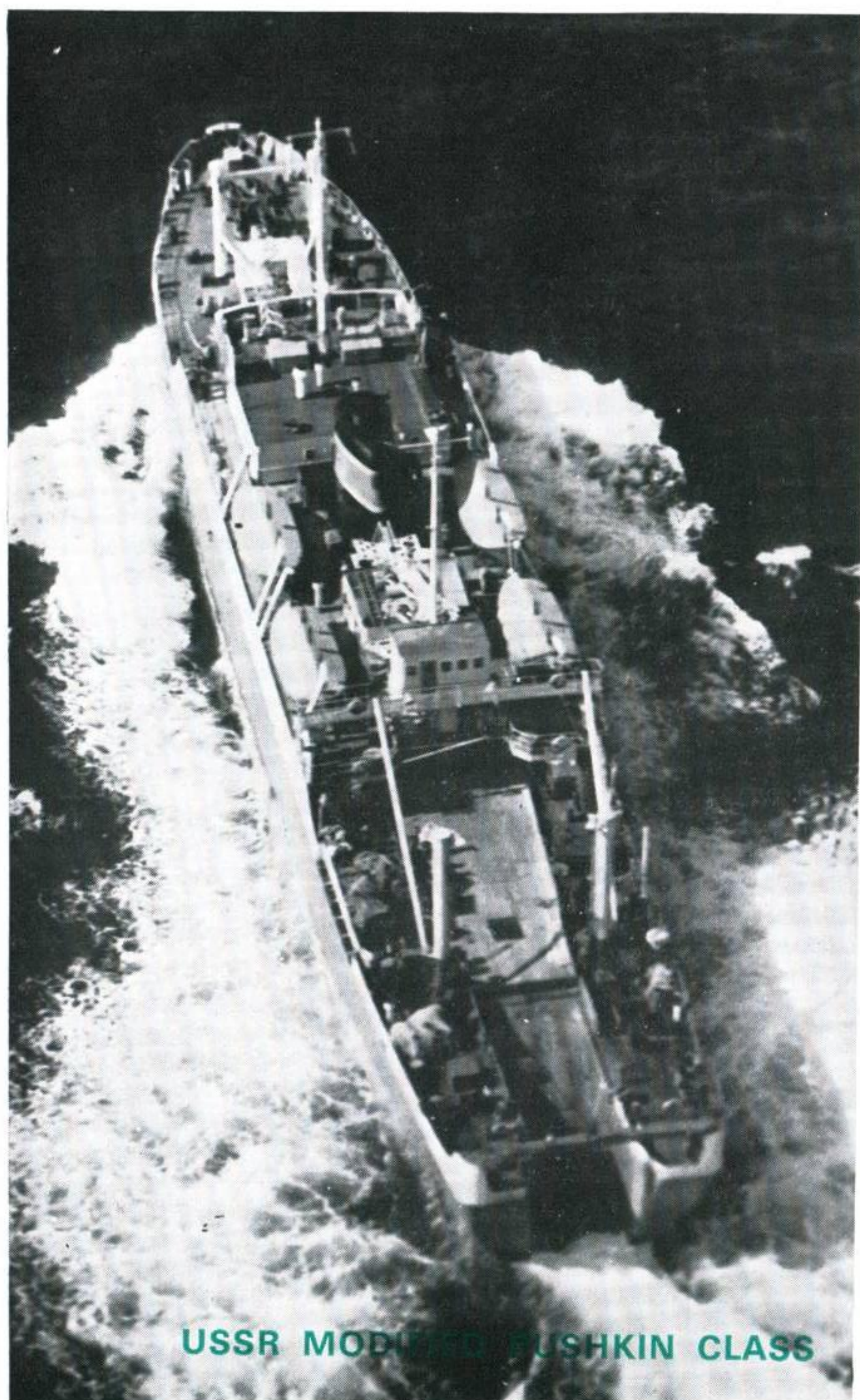
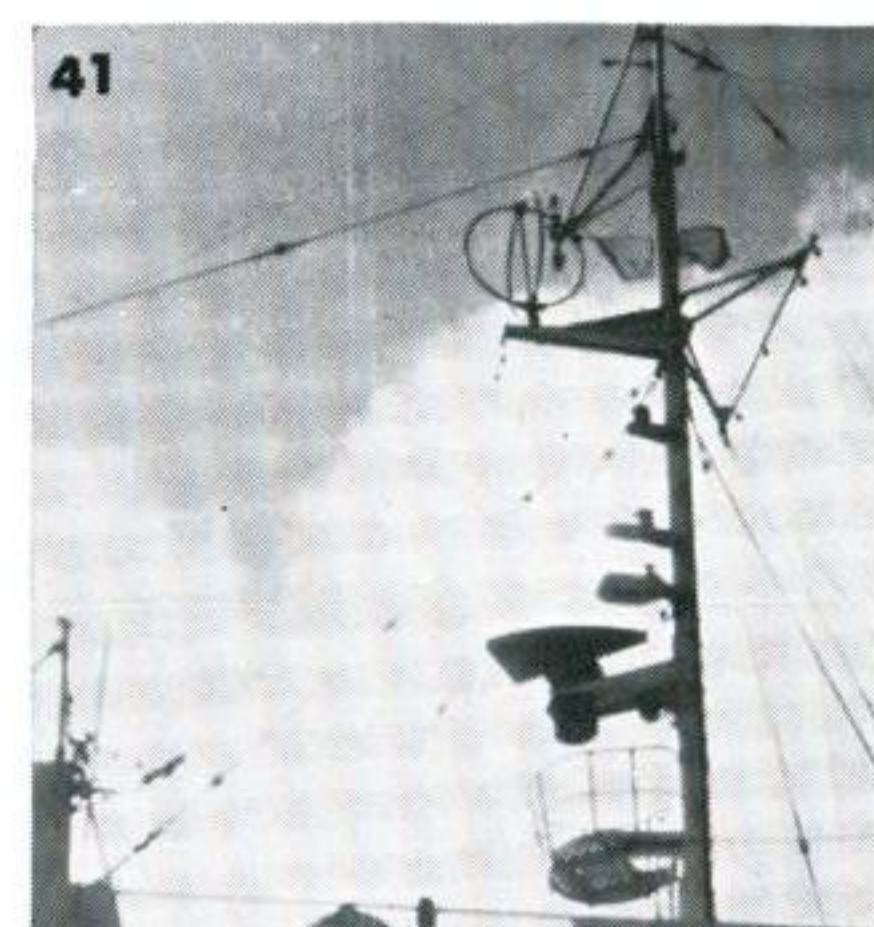
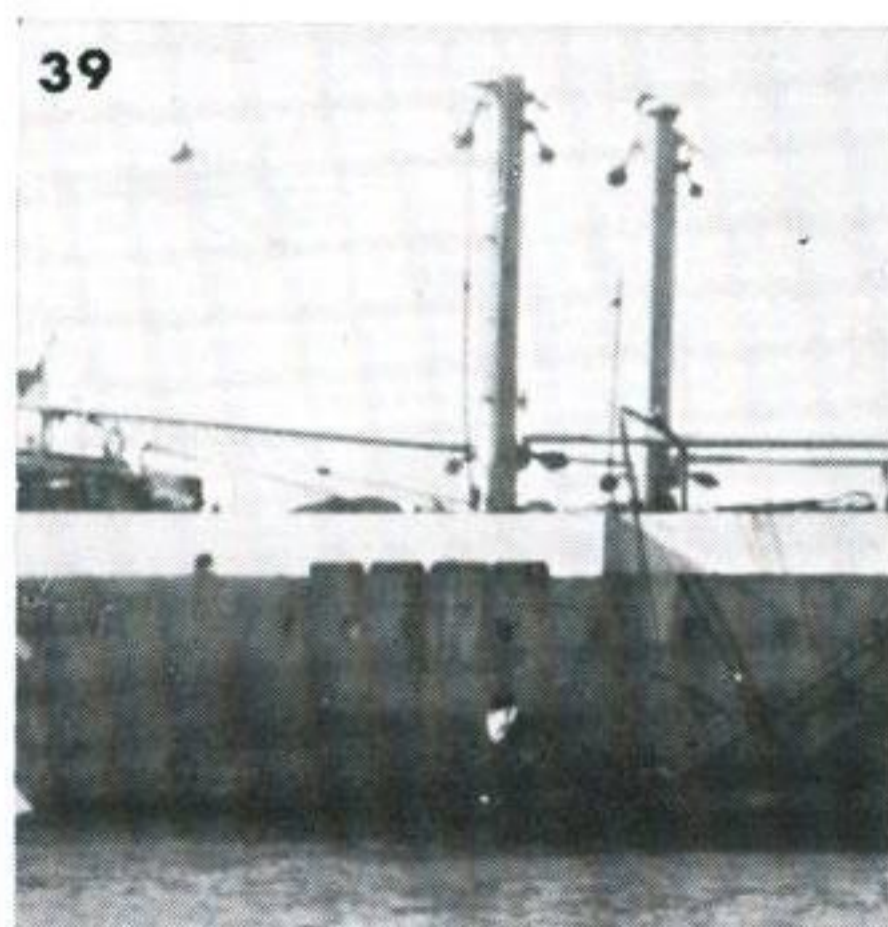
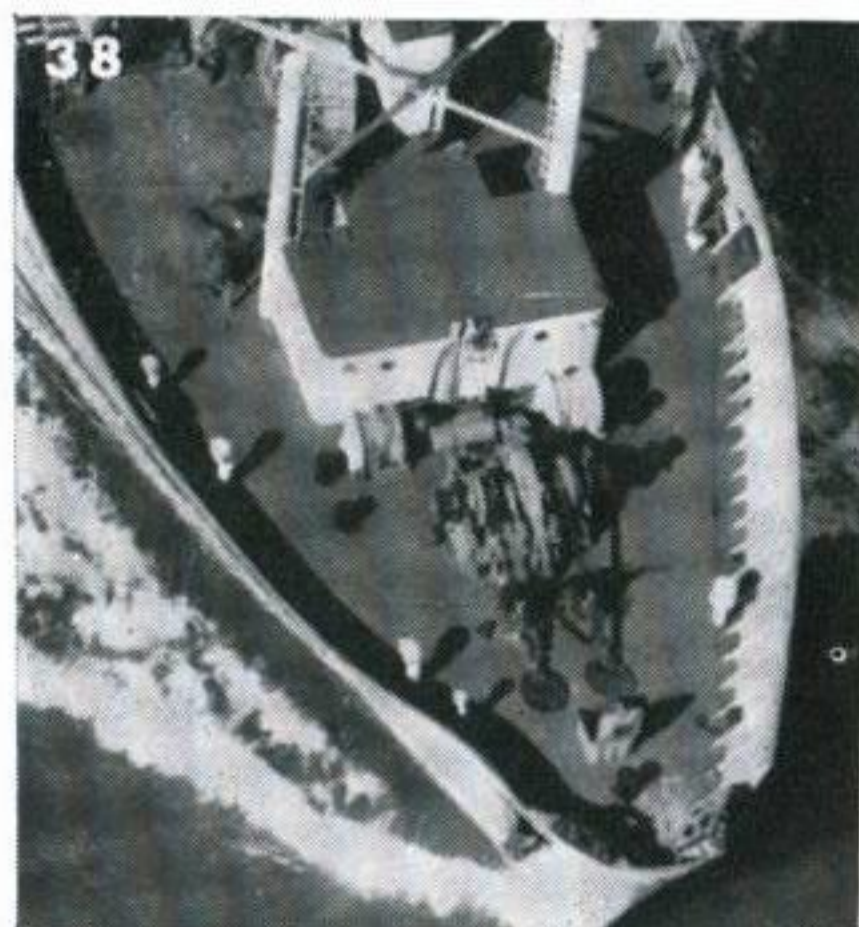


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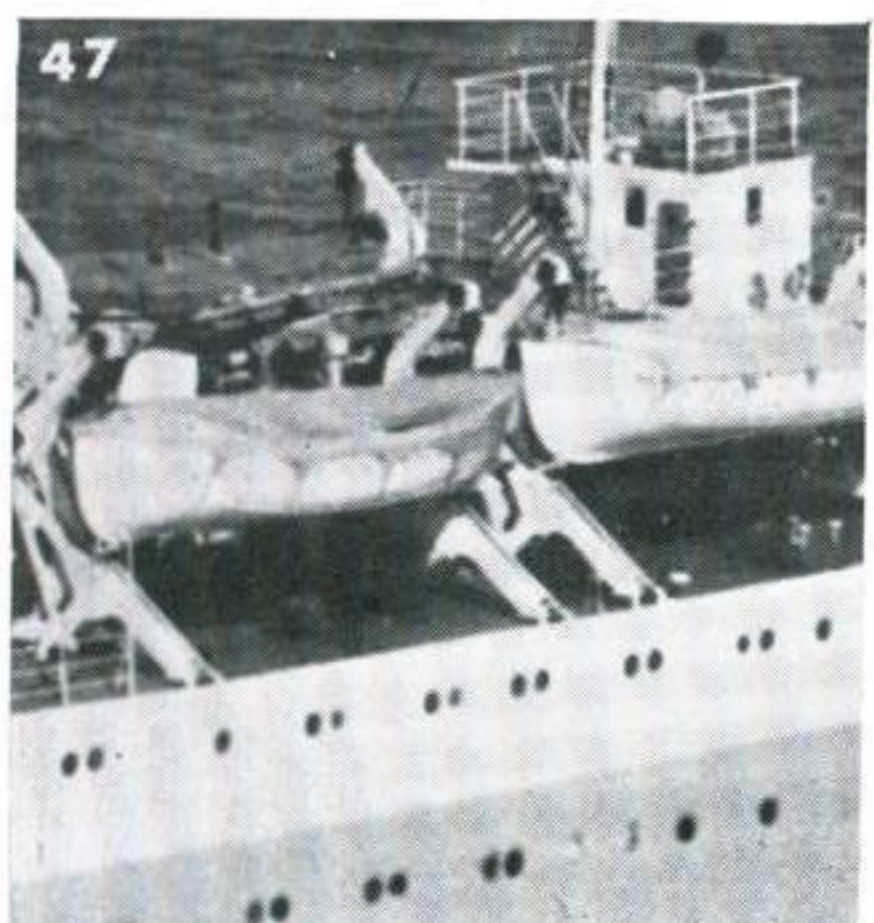
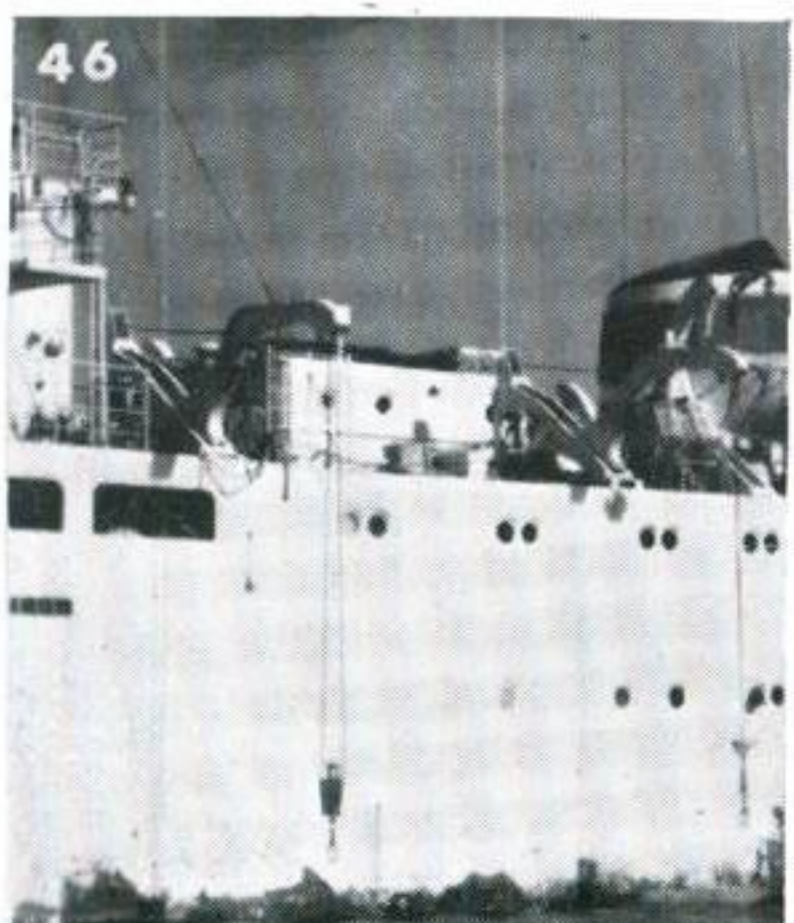
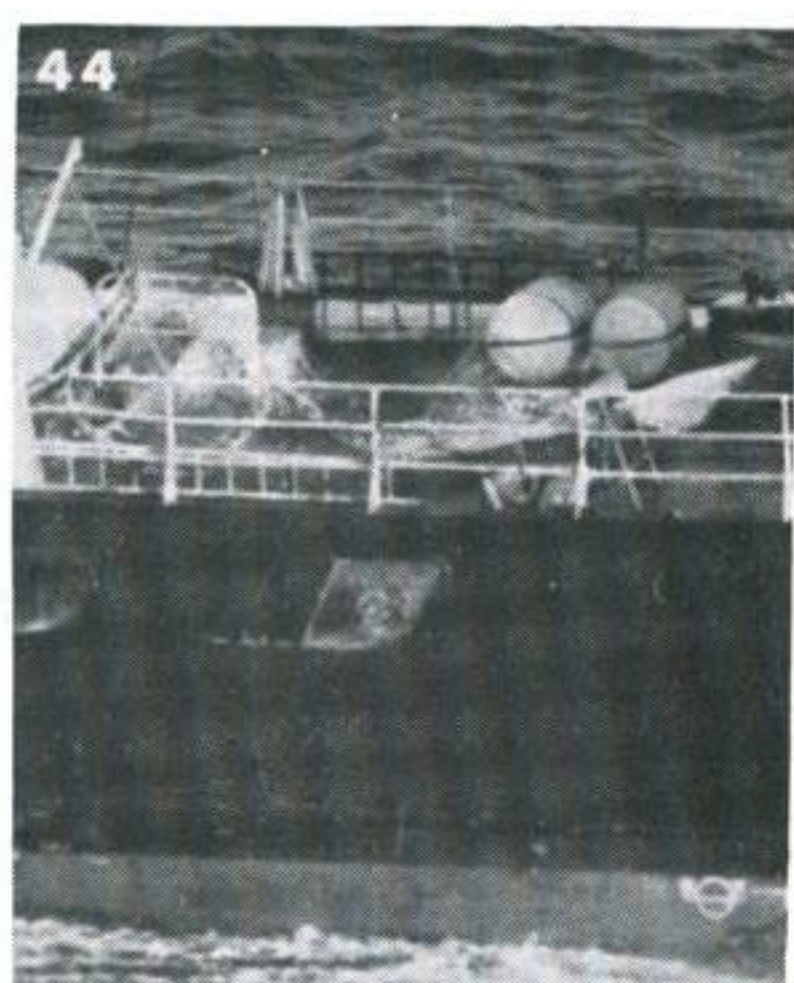


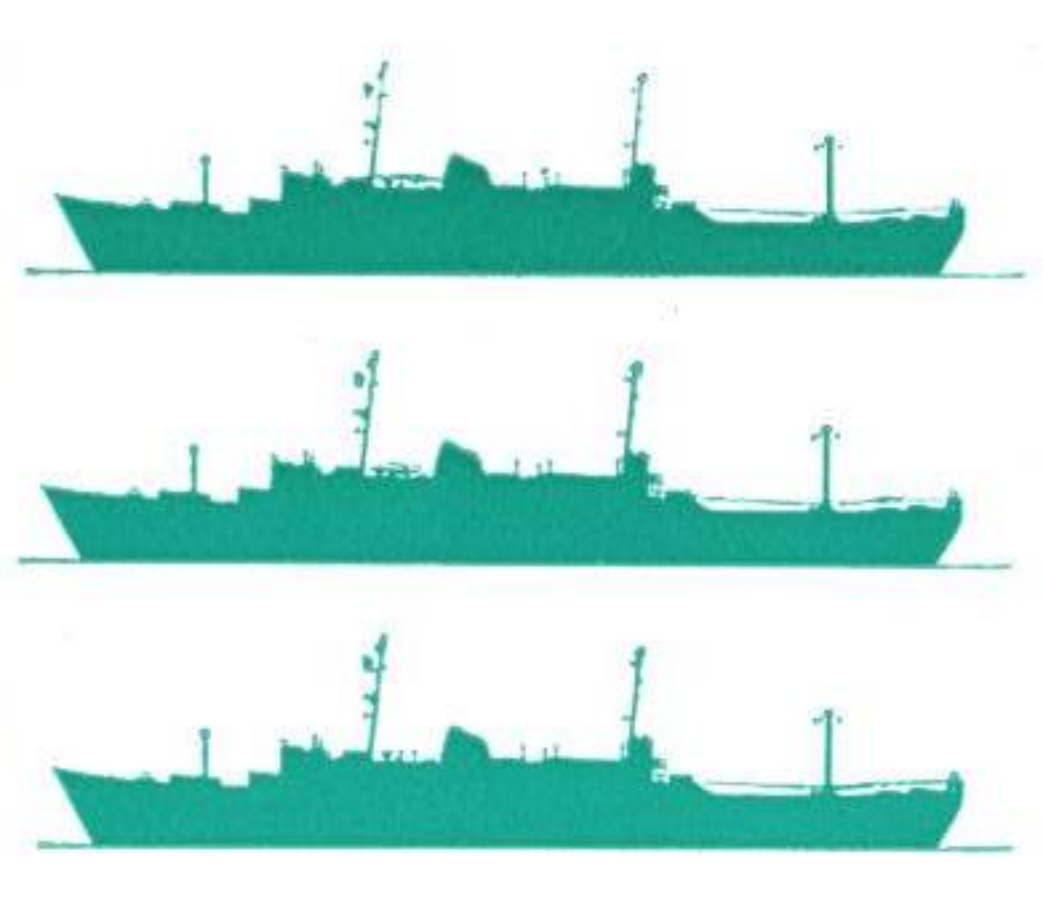
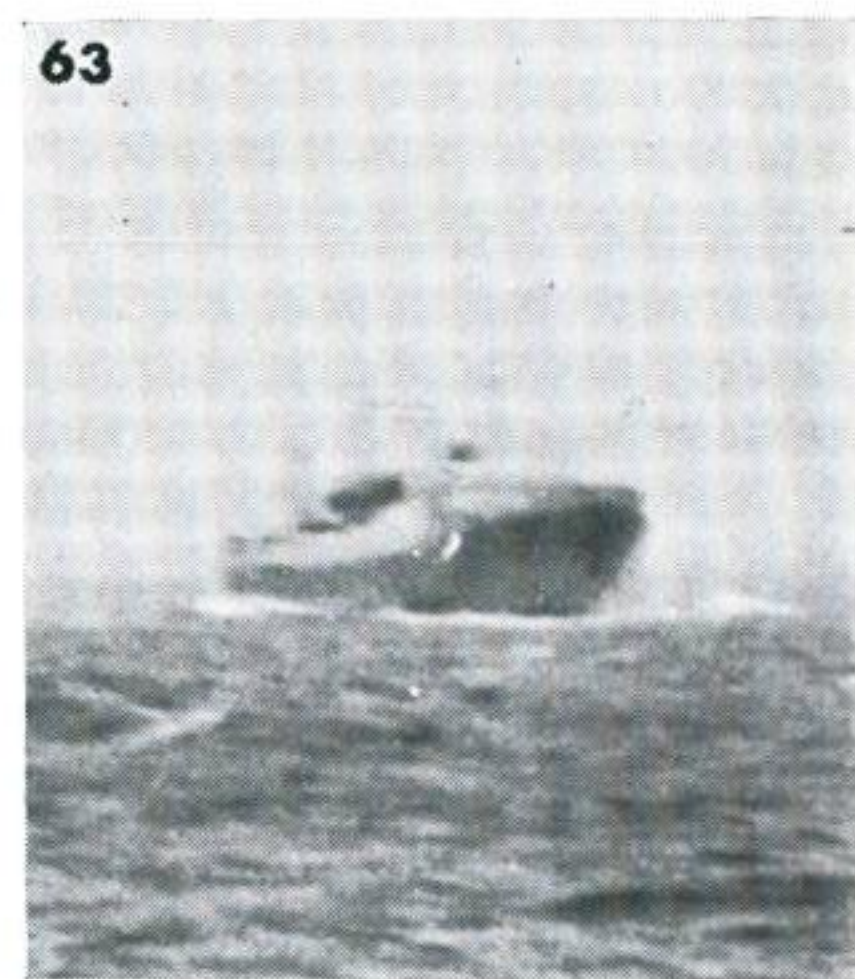
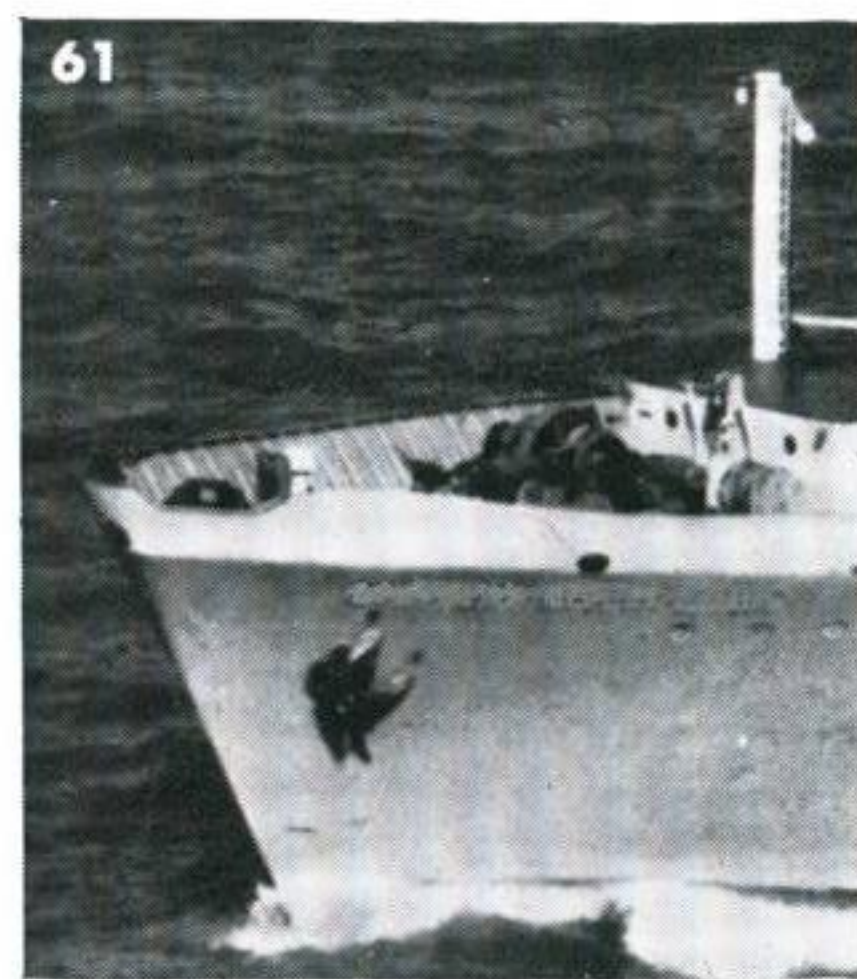
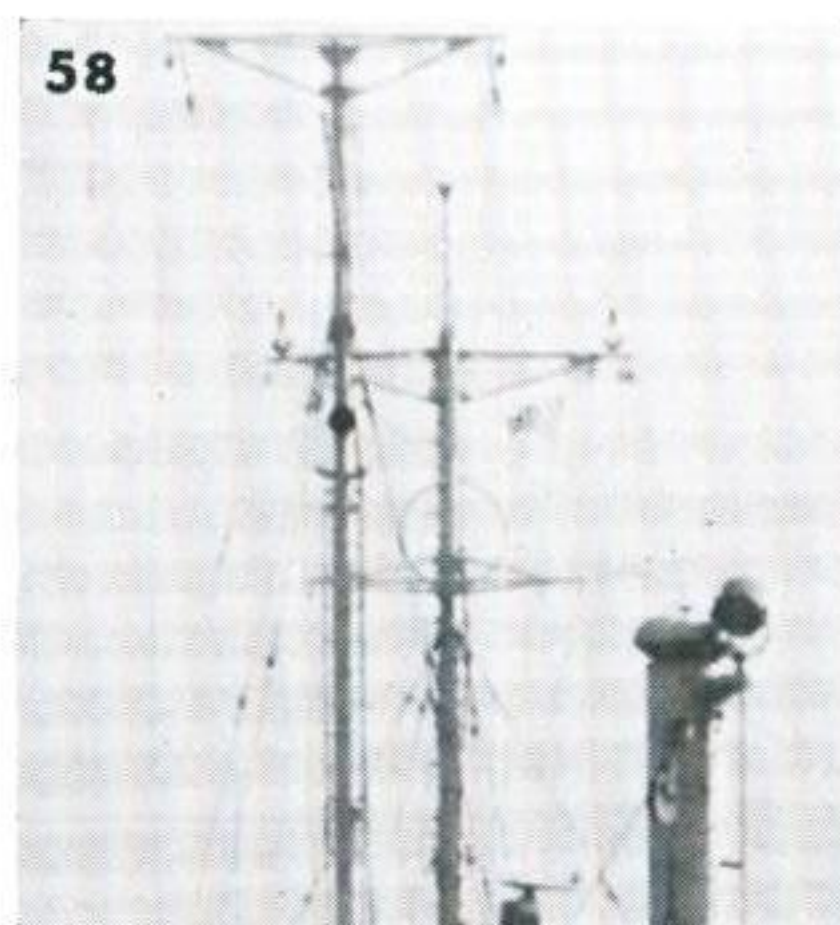
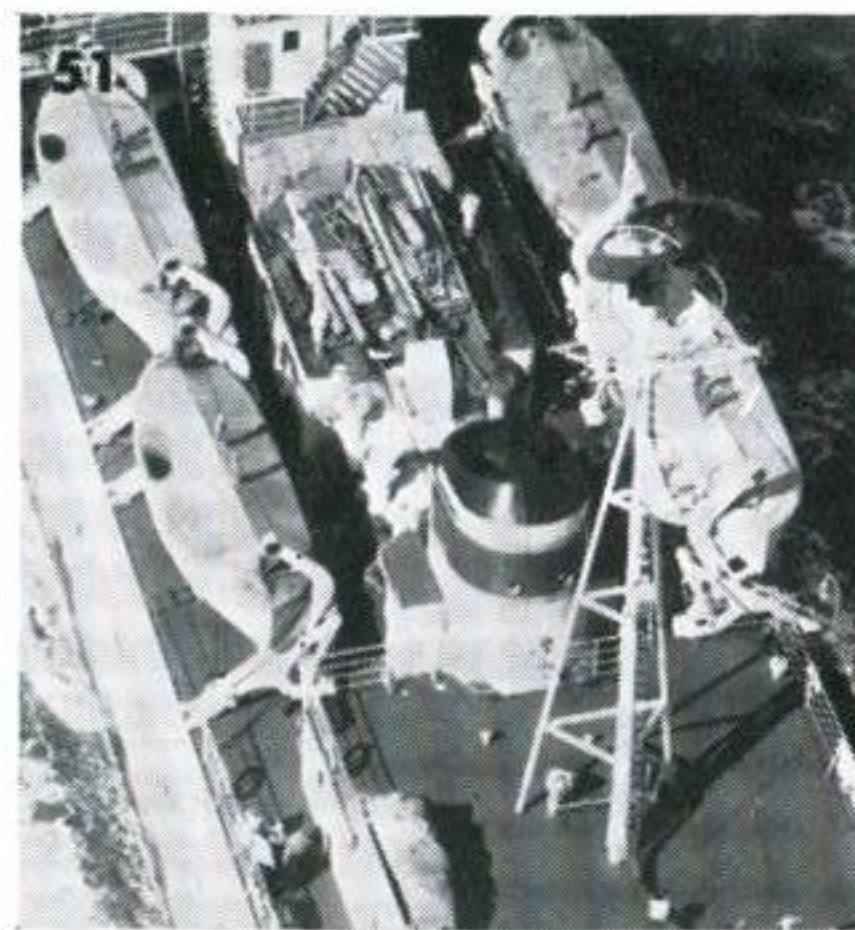
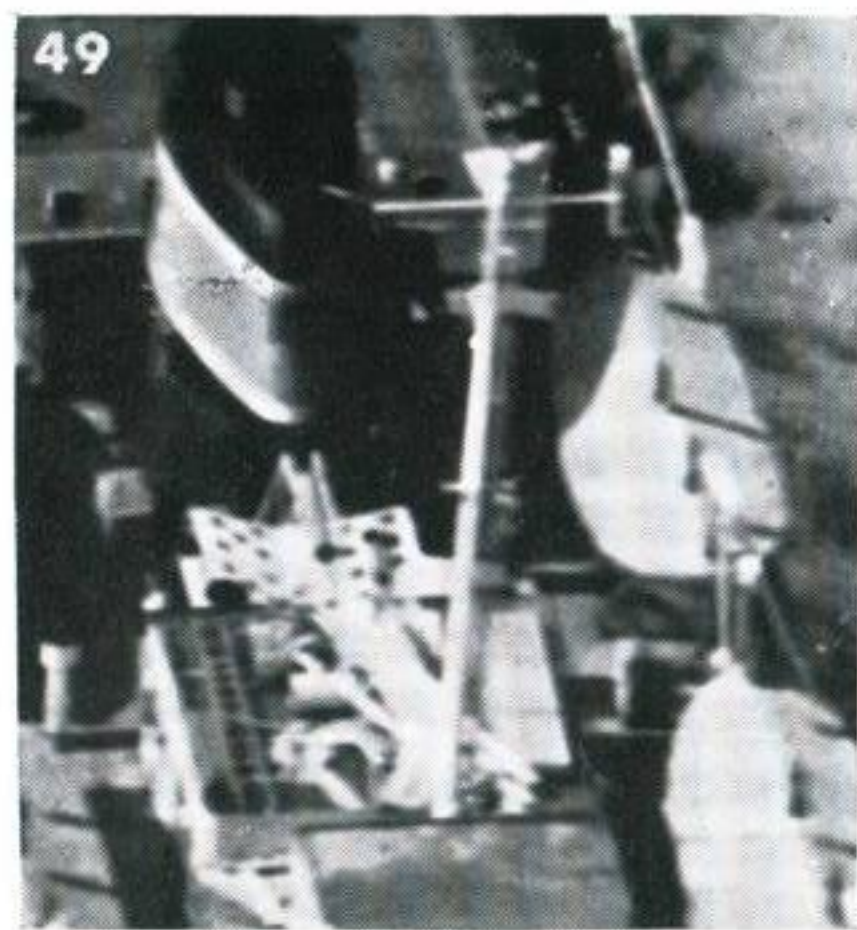
RUSSIAN TRAWLERS *continued*

Lesson instructions are on page 116 Solutions on the cover



USSR MODIFIED BUSHKIN CLASS







"TRIBAL" CLASS FRIGATES

There are seven ships in this class—"Type 81"—of general purpose frigates. They were intended to be versatile in their functions so as to produce an economic type capable equally of both anti-submarine and anti-aircraft duties. They were the first frigates designed to carry a helicopter for anti-submarine purposes.

The outstanding feature of this class, however, is in their machinery. This combines steam and gas turbines geared to the same shafts. Known as COSAG (Combined Steam and Gas), this has the merits of being comparatively light, thus allowing more space for fighting equipment and more particularly allowing full power from cold in a matter of minutes. The gas turbines boost the steam turbines for long periods of high speed work.

The first three of the class were authorised under the 1955-56 Navy Estimates, *Ashanti* being laid down in January 1958 and completed in November 1961. Each is believed to have cost about £5,250,000. The vessels are all-welded and they have good sea-keeping qualities. A high standard of living accommodation is a feature and all such has fluorescent lighting.

In appearance they are distinctive by reason of the second funnel. This, however, is rather shorter than

the first funnel and being placed abaft the midship line gives a somewhat unbalanced look. The hull sheers steeply forward but as far as the back of the first funnel they might be mistaken for ships of the "Blackwood" class. The bridges are completely enclosed.

The seven ships comprising this class are *Ashanti*, *Eskimo*, *Gurkha*, *Mohawk*, *Nubian*, *Tartar* and *Zulu*. Except for minor details the outward appearance is the same.

Their displacement is 2,300 tons standard or 2,700 tons full. Length overall is 360 feet, beam 42 feet and draught 17½ feet.

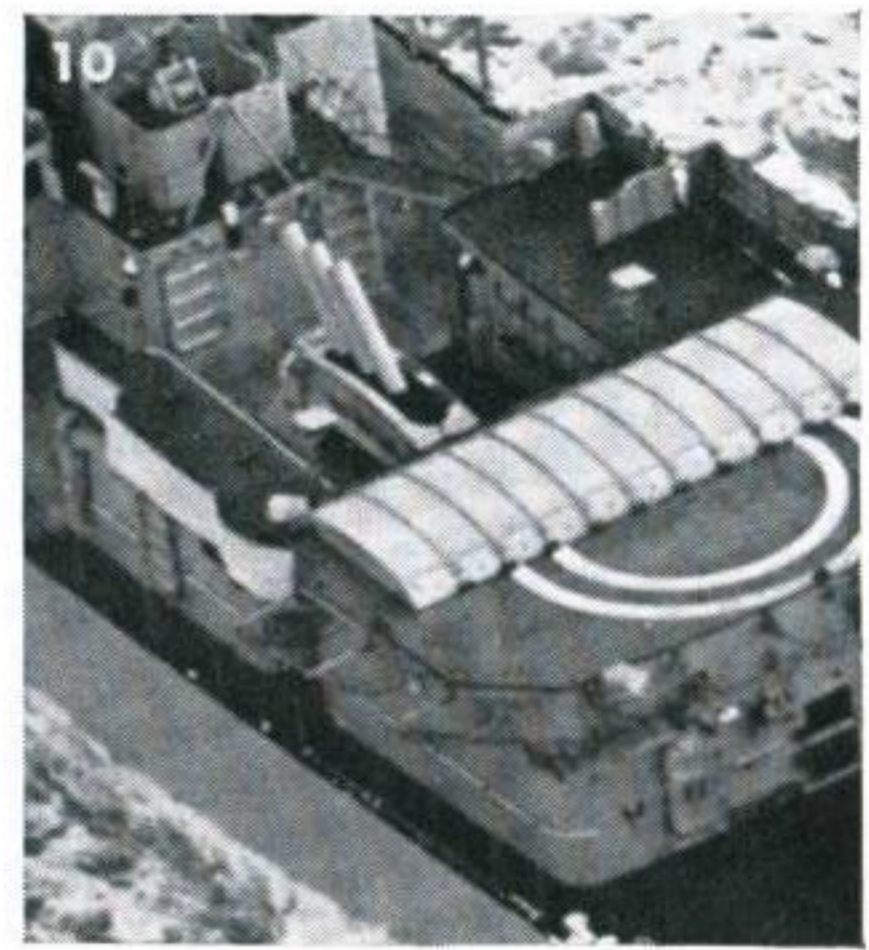
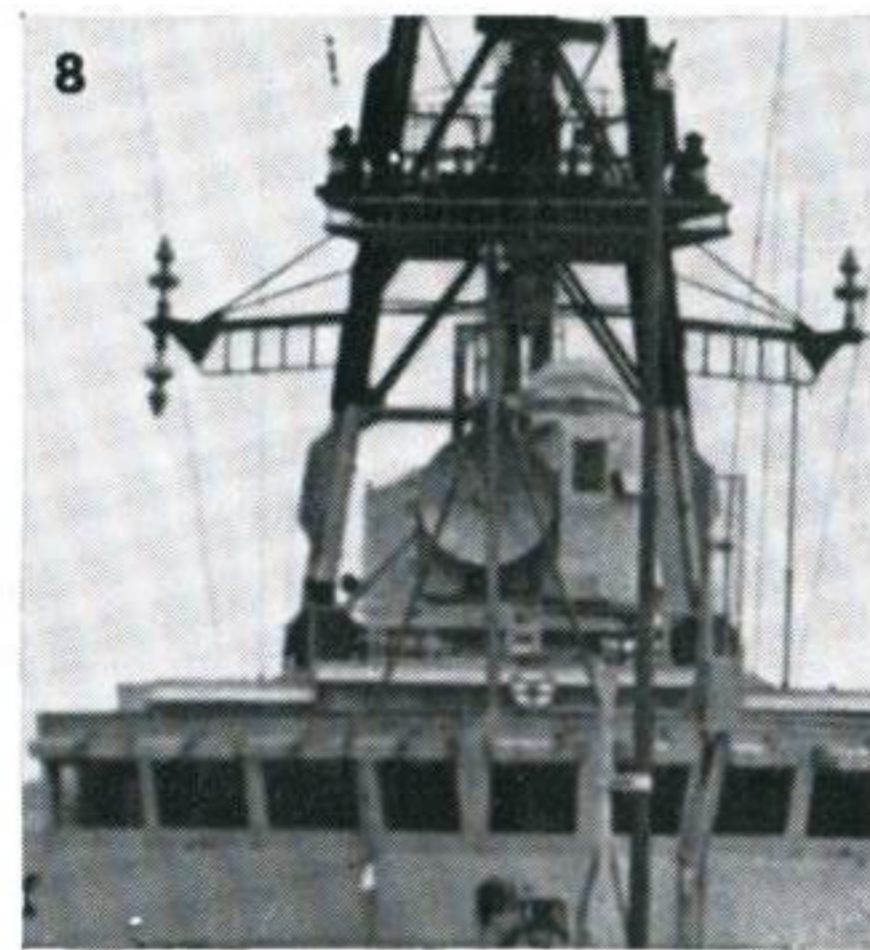
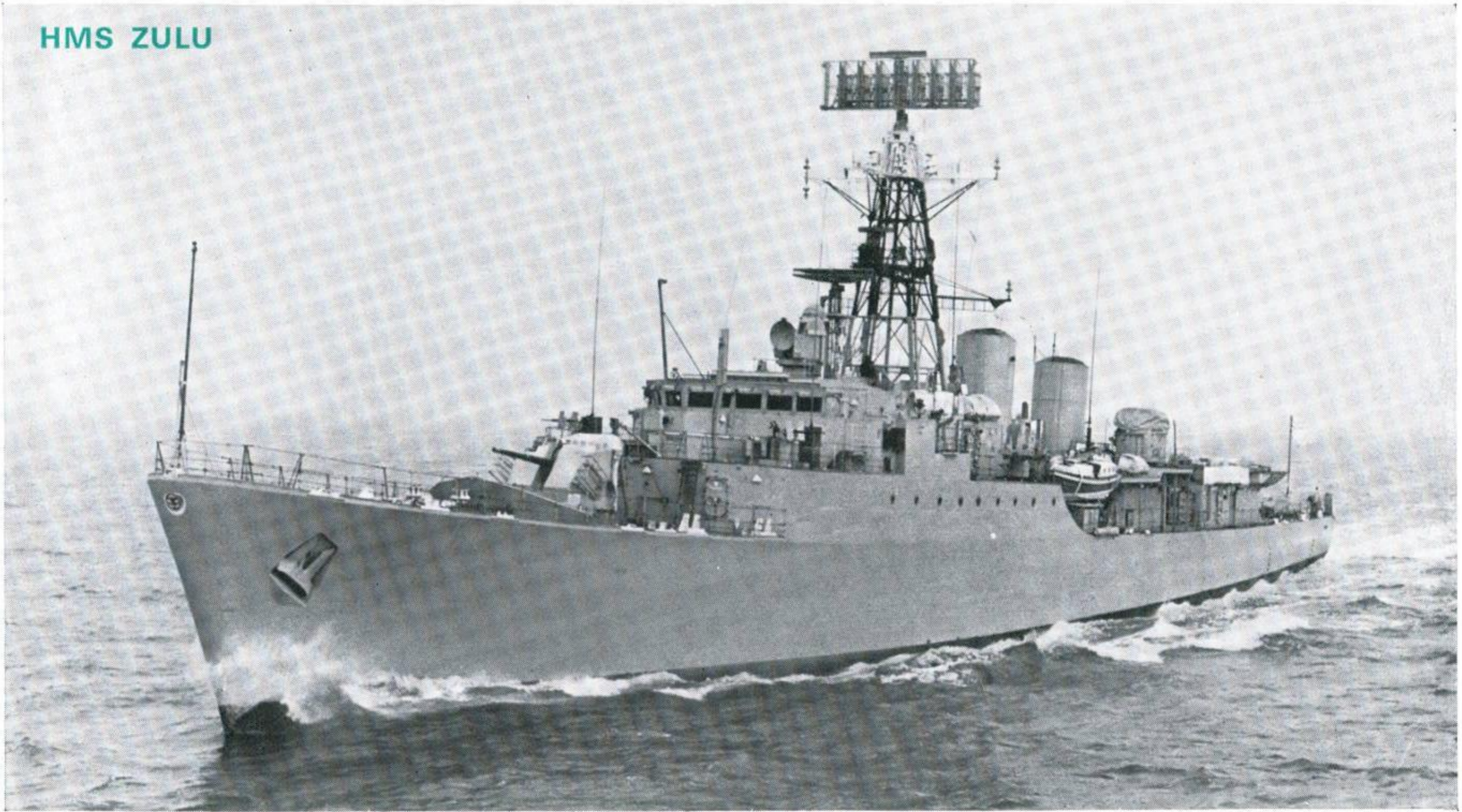
The main armament consists of two single-mounting 4.5-inch guns. Anti-Submarine weapons are one three-barrelled Limbo D.C. mortar. In addition they each have one Westland Wasp helicopter and *Zulu* has a "Seacat" quadruple missile launcher. Other ships will probably be equipped with them later.

The speed is 28 knots and the complement, 13 Officers and 240 Ratings.

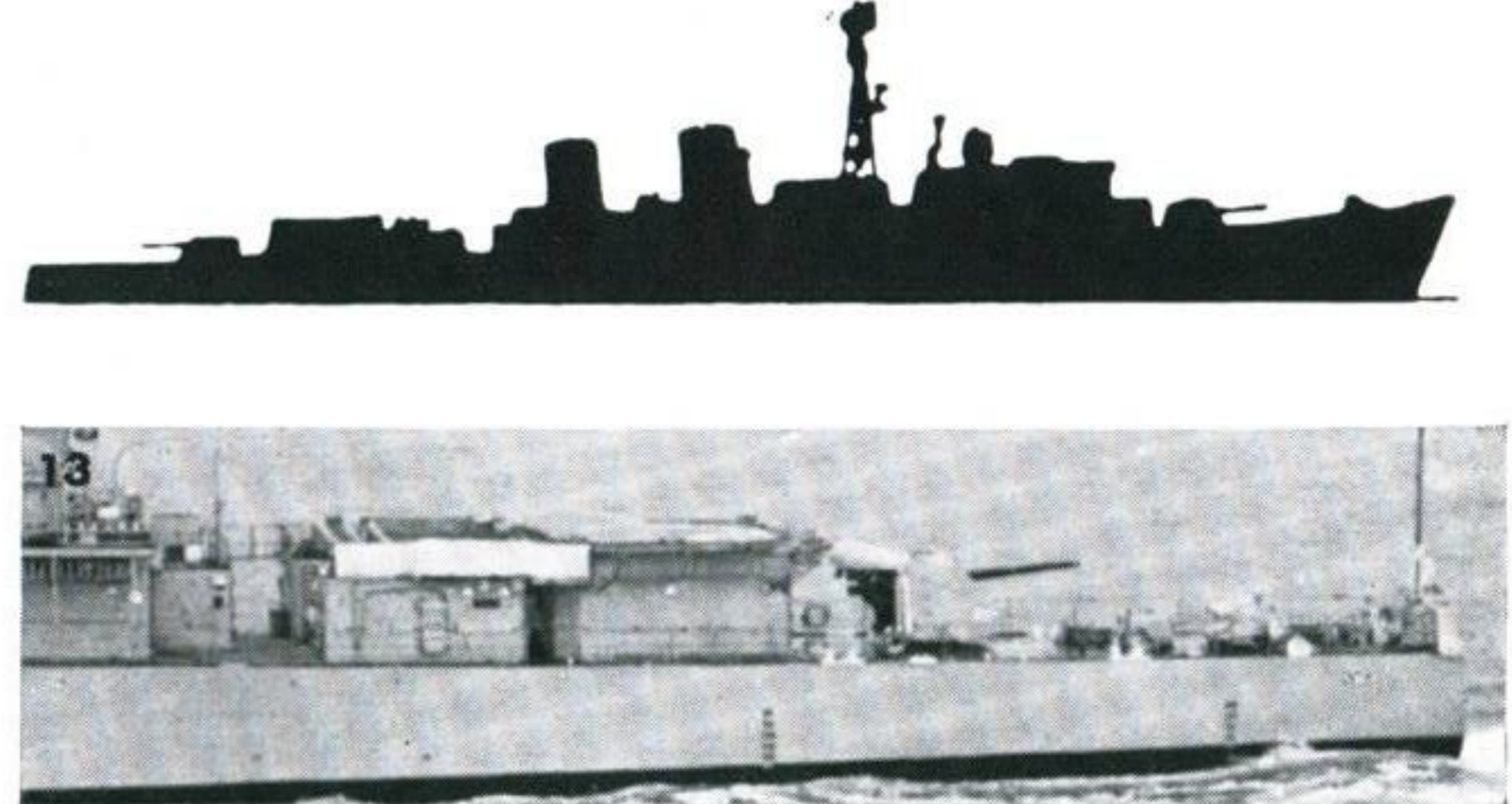
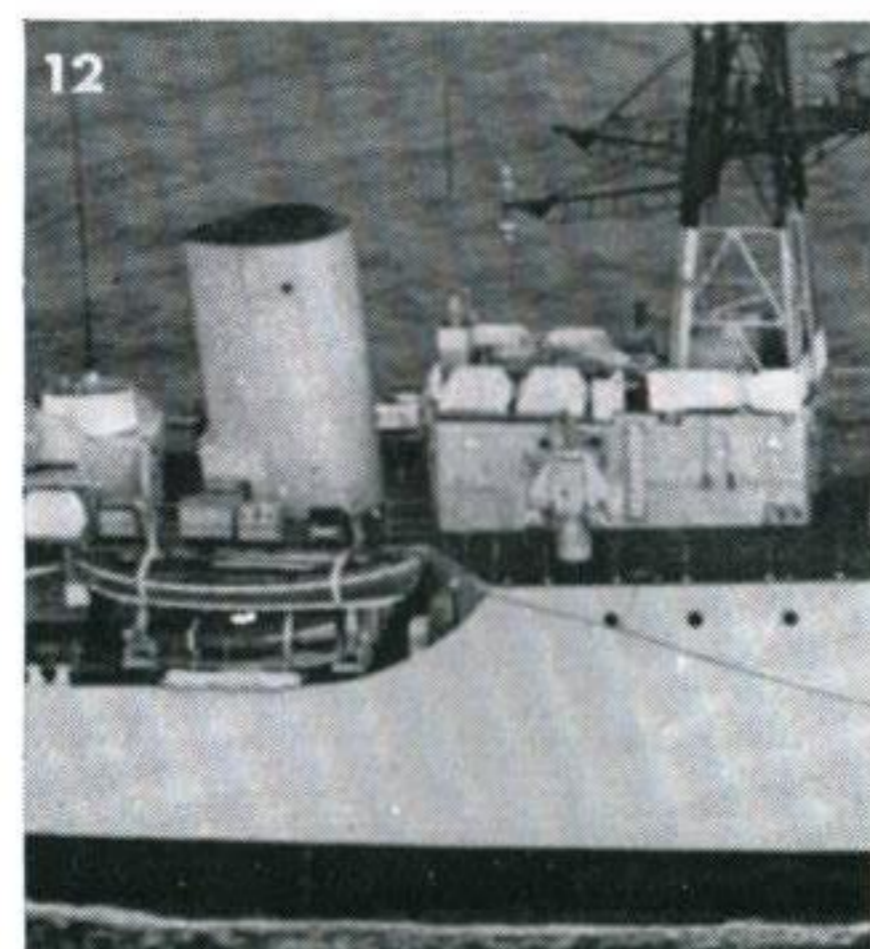
A very successful class of ship and experience gained with the gas-turbines has led to their adoption in other ships of the Royal Navy.

Follow the lesson instructions on page 116.



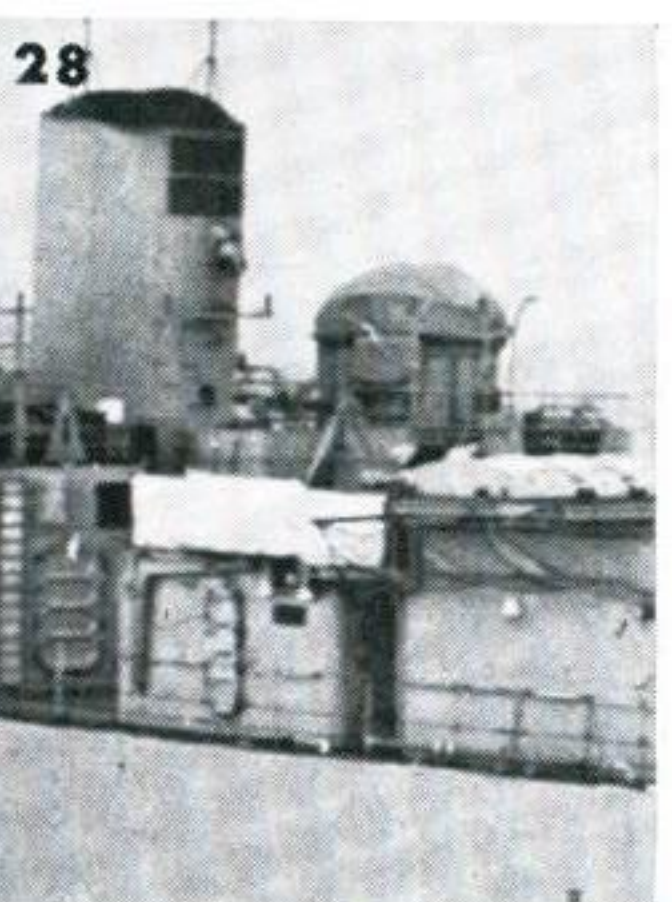
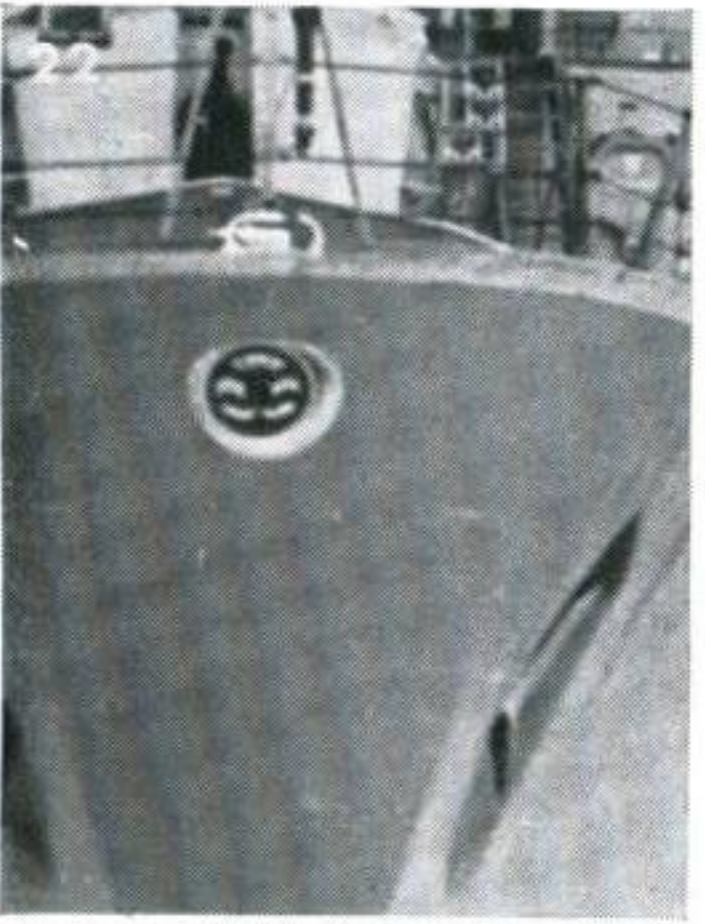
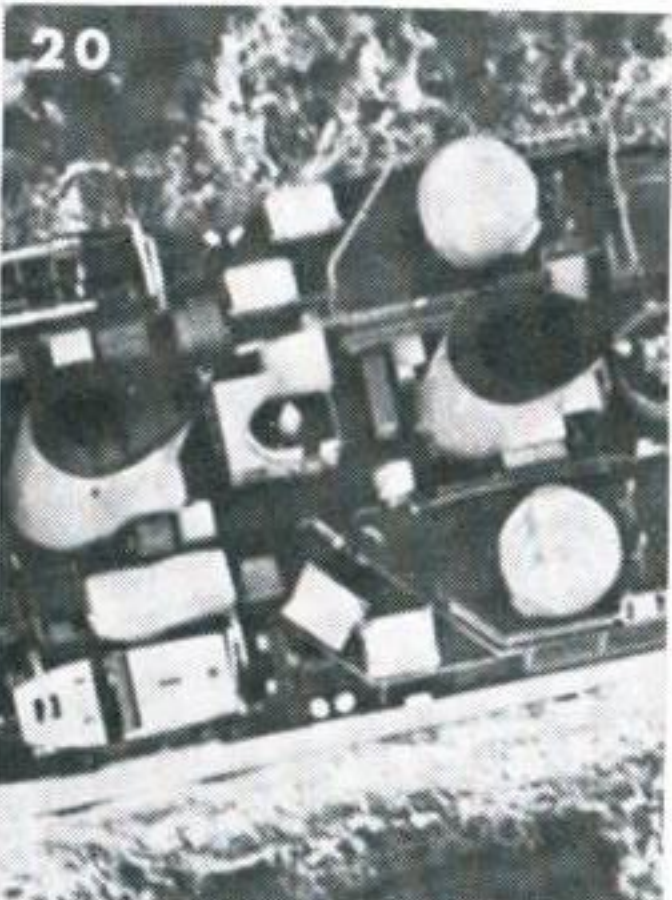
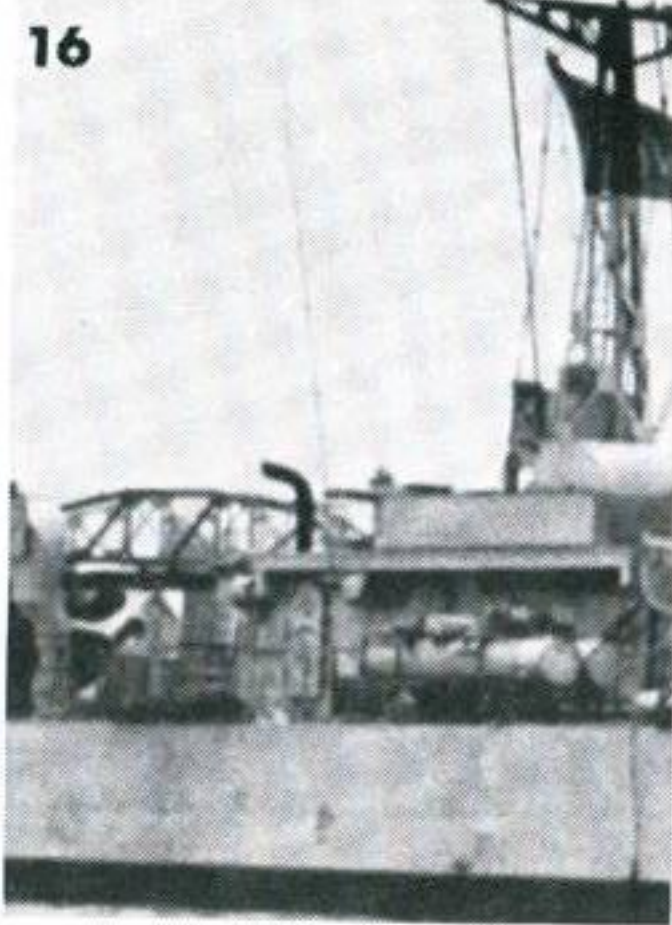
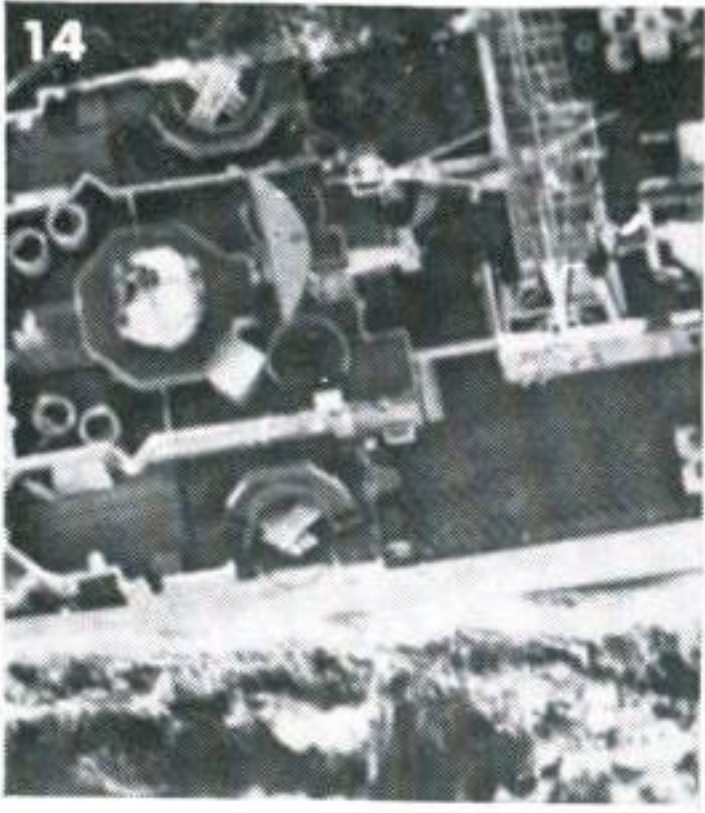


Solutions on the cover

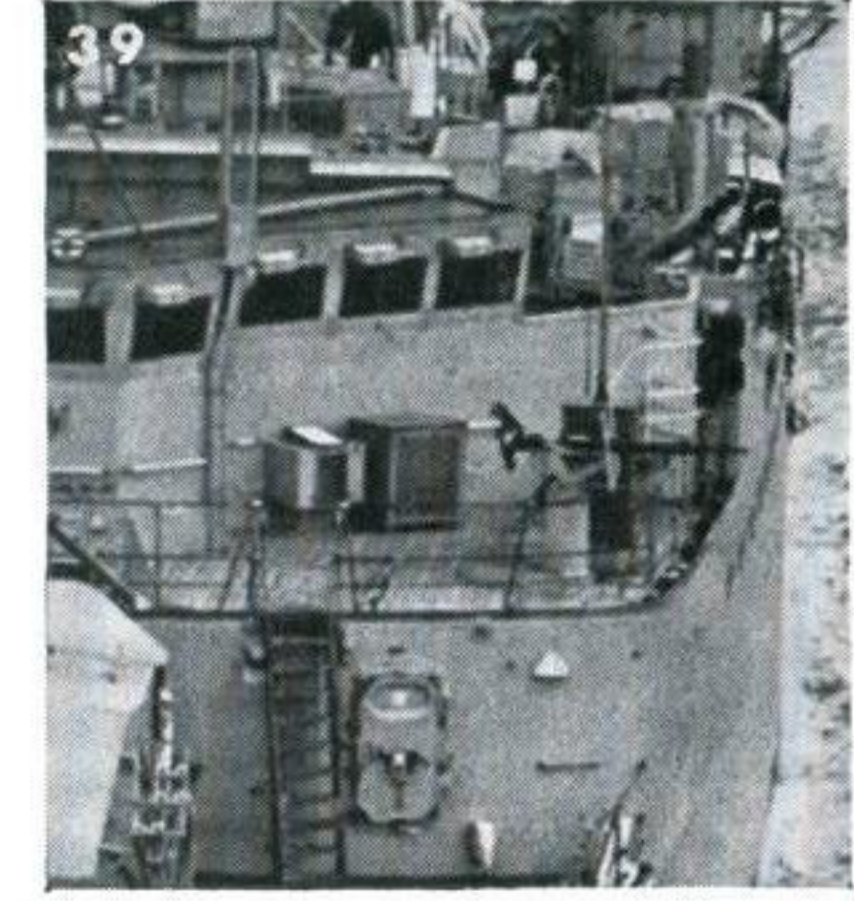
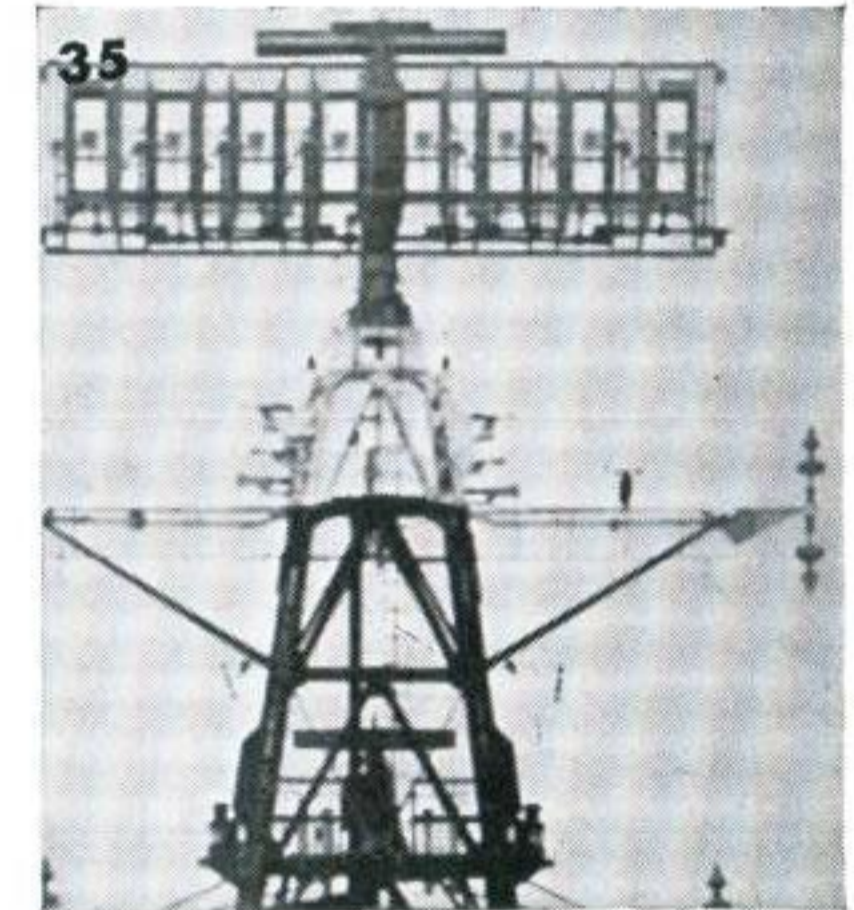


Continued overleaf

TRIBAL CLASS *continued*



HMS ZULU



Lesson instructions are on page 116



Solutions on the cover



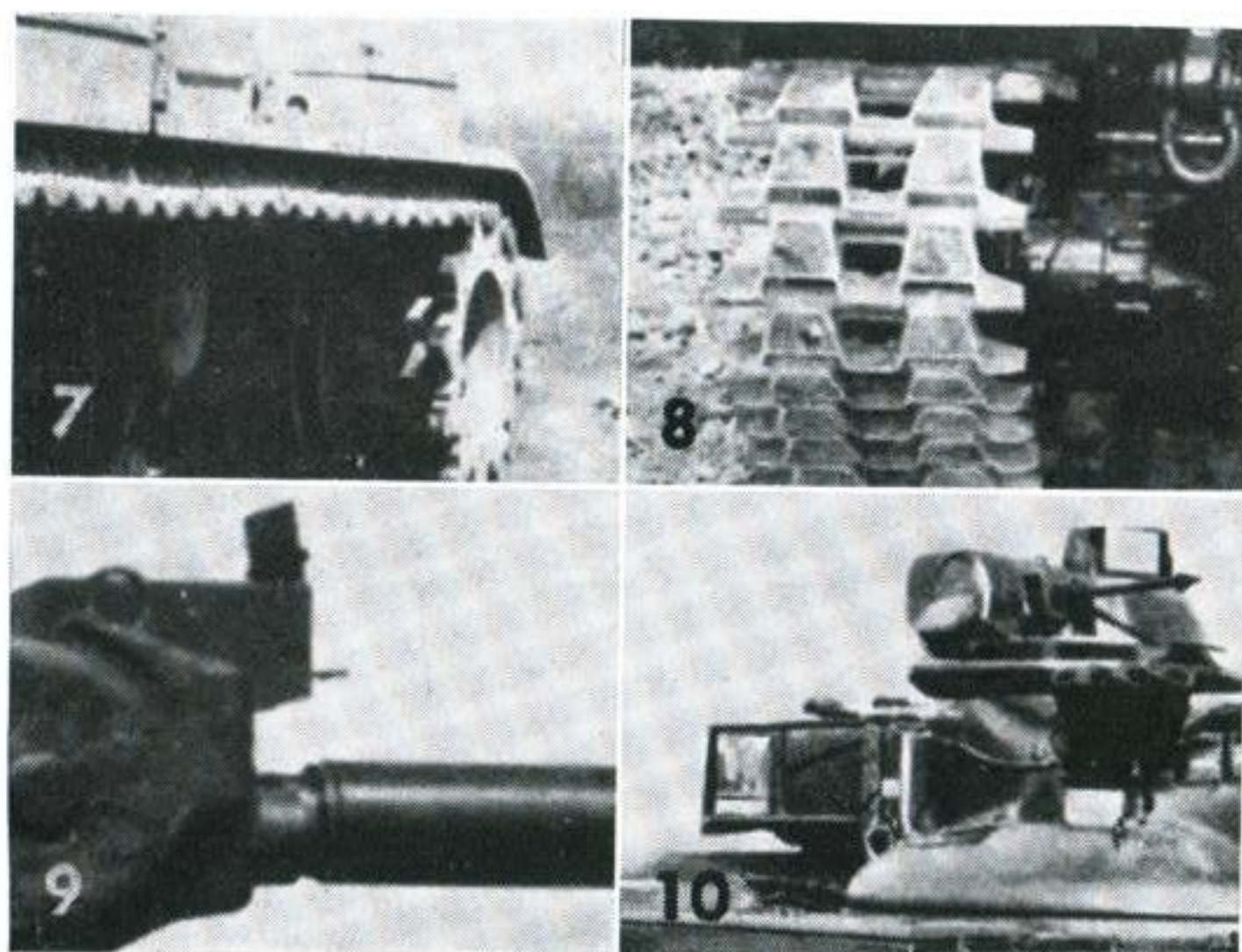
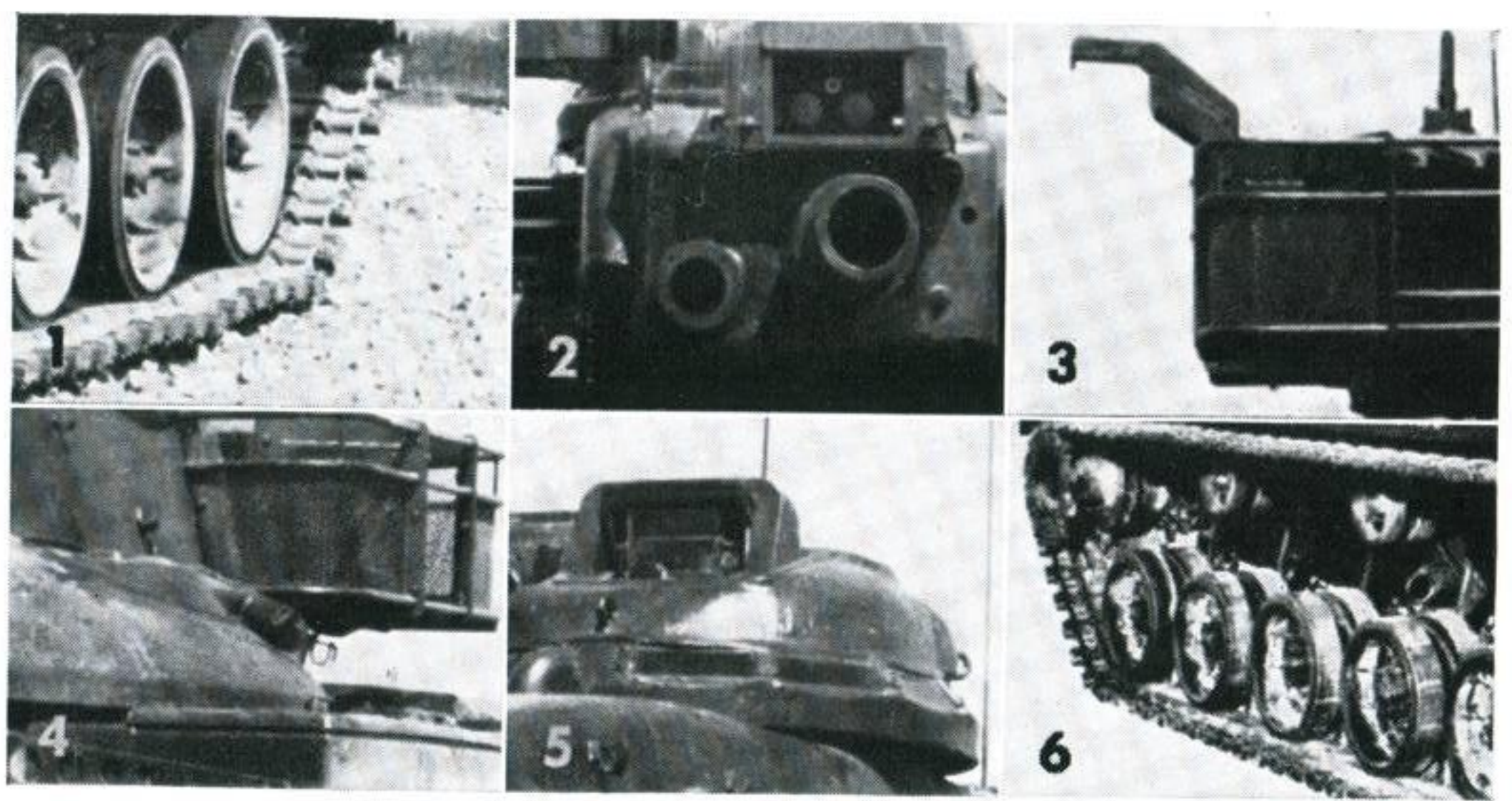
M60 A1E1

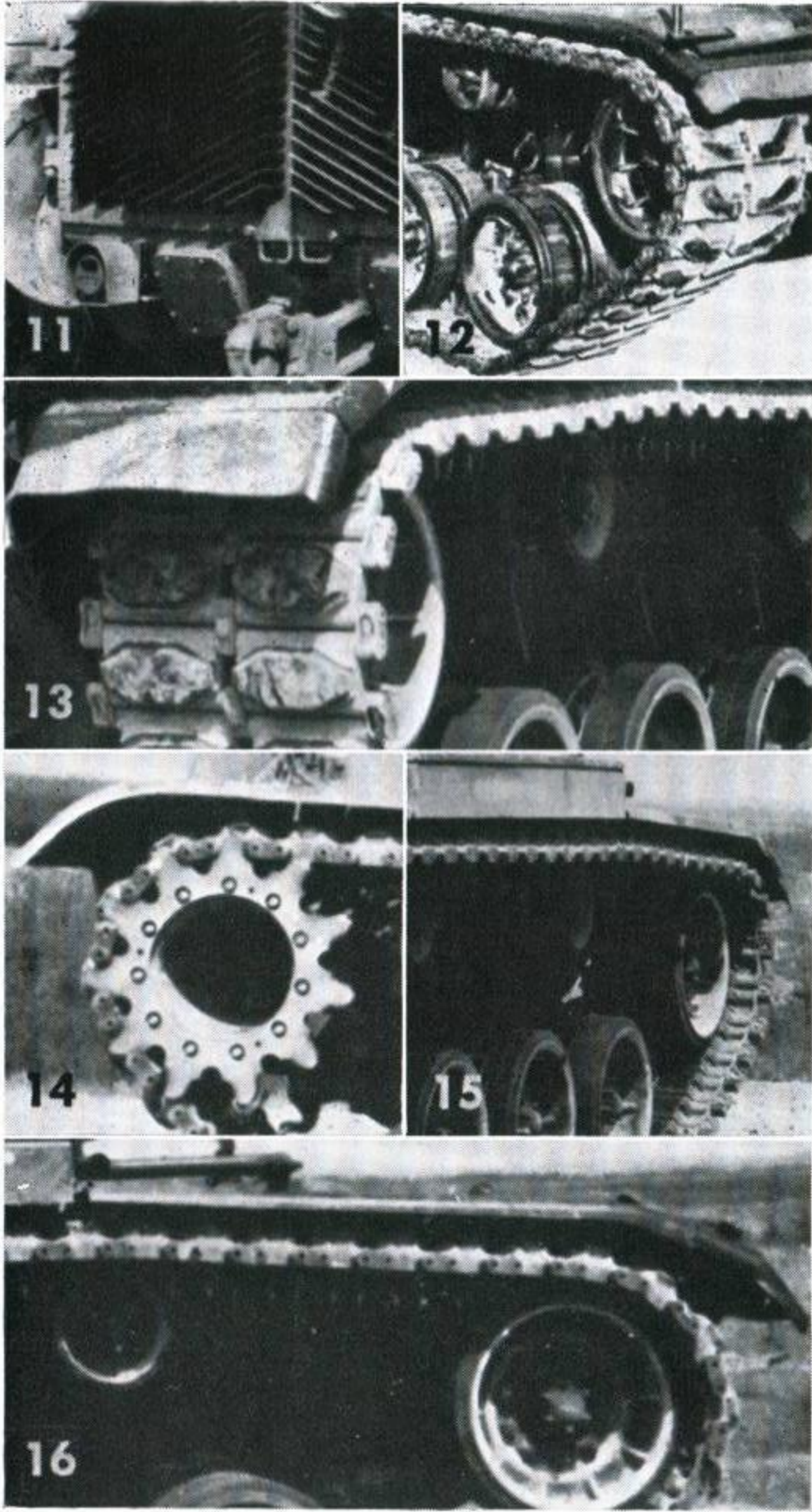
battle tank



The M60A1E1 is the latest and much modified version of the United States M60 main battle tank, which was the subject of a lesson in the March 1964 issue of the *Journal*. From the recognition point of view the principal difference between it and the earlier models lies in the turret and main armament.

The turret of the M60A1E1 is of a characteristic and entirely novel pattern. Its principal feature is that it has a much reduced frontal area, which makes it less vulnerable—to frontal attack at least. The reduction in the frontal area has been achieved by lower-





ing the positions of the gunner and loader, who sit on either side of the main armament, and placing the commander immediately behind the main armament.

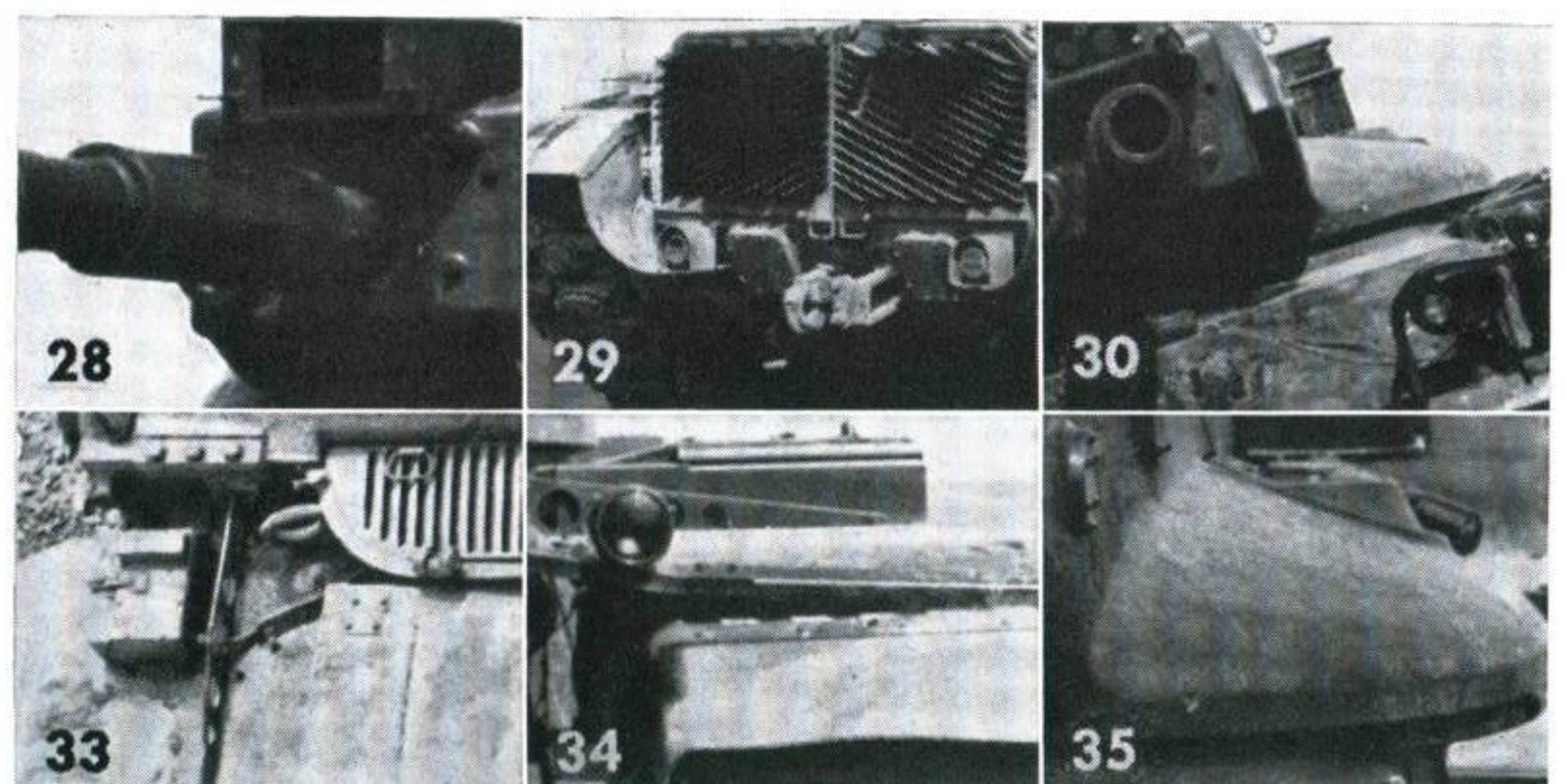
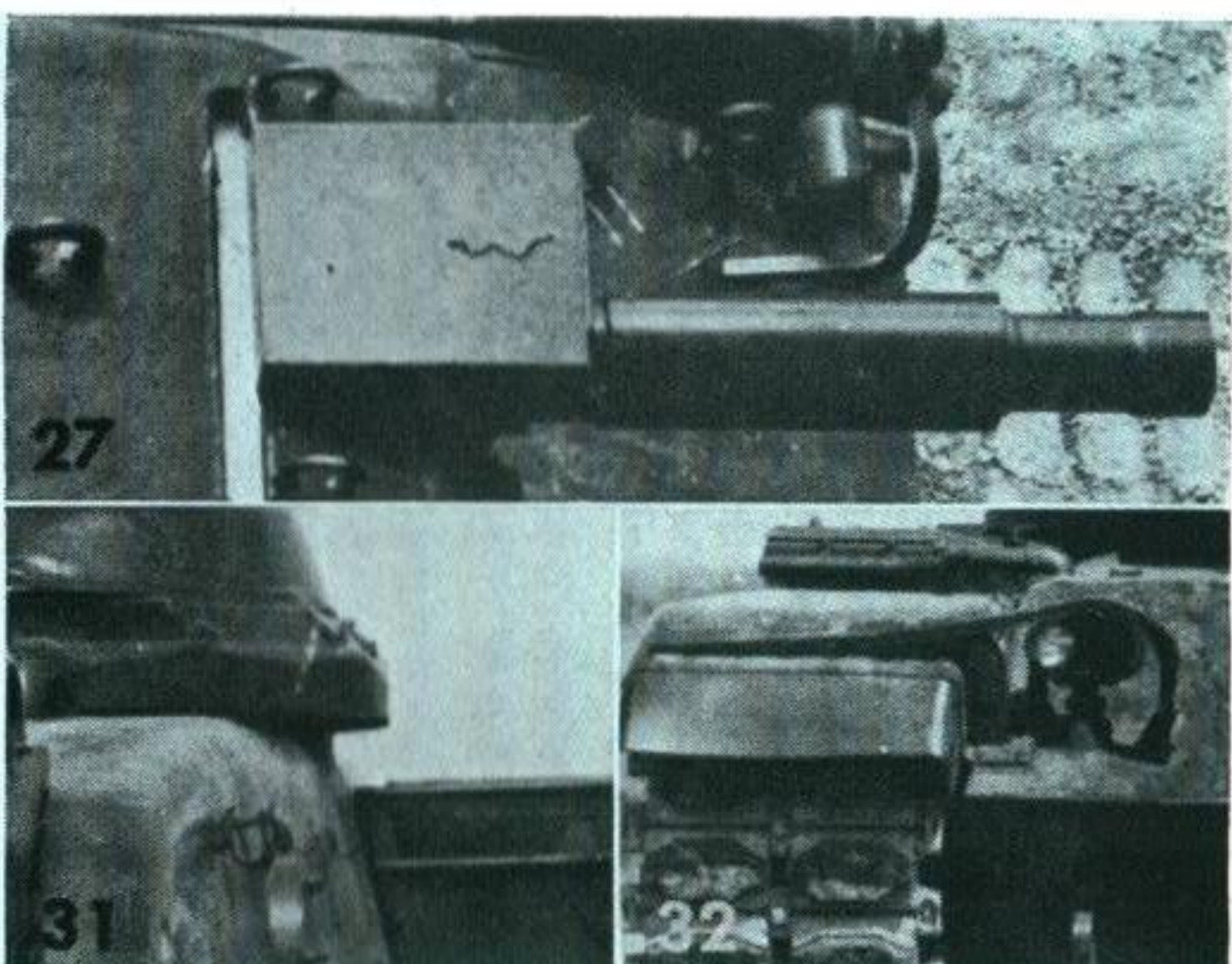
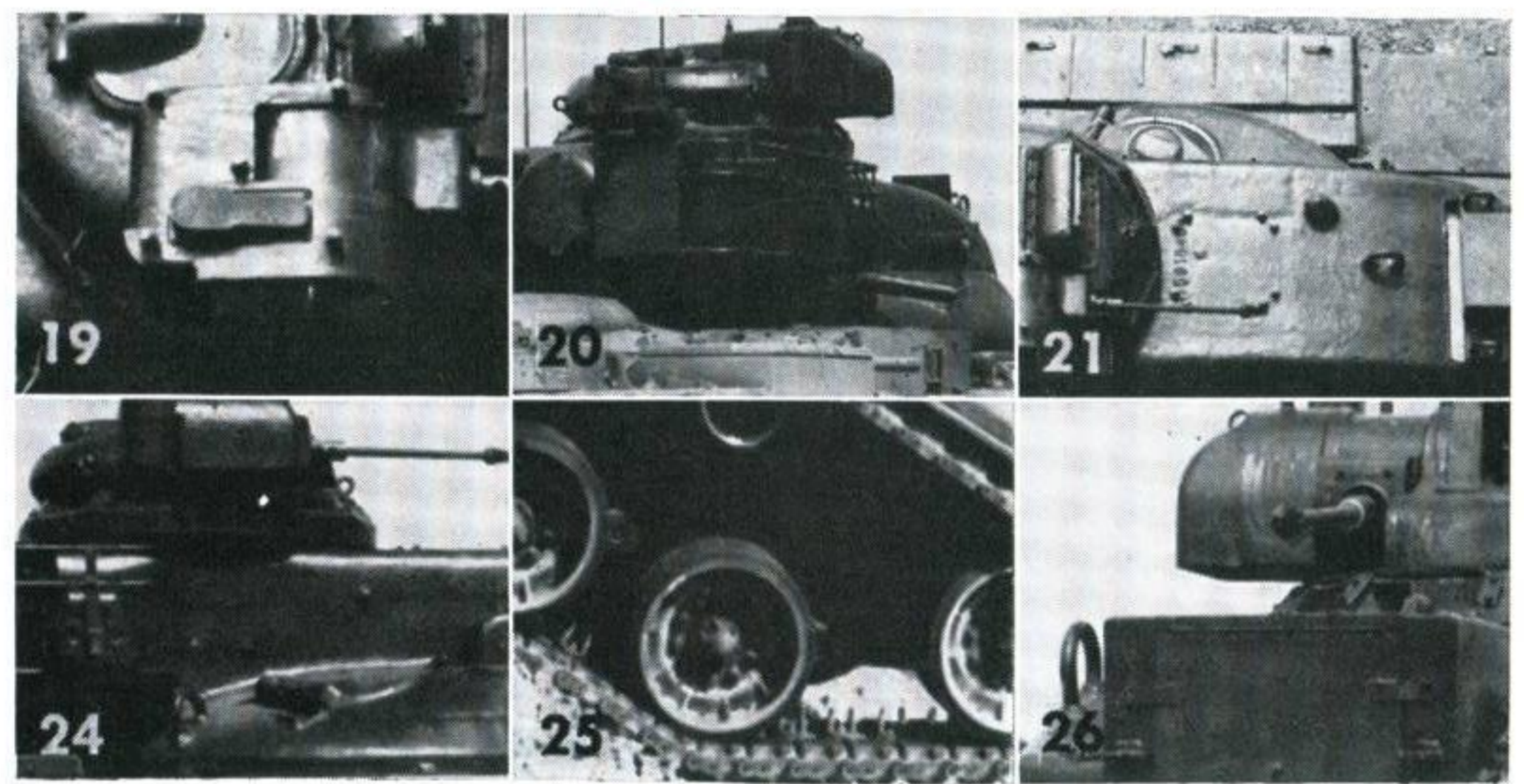
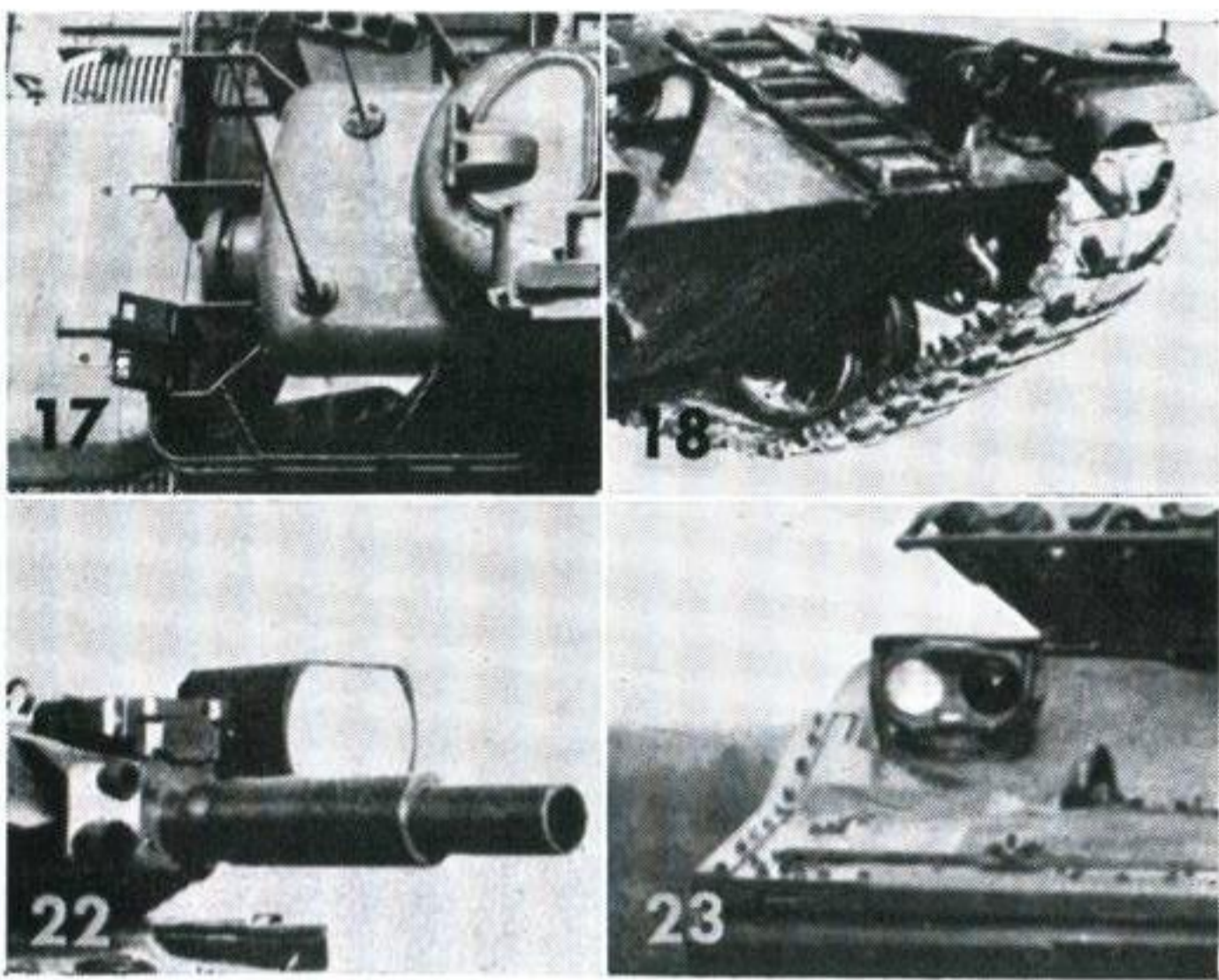
The main armament consists of a short-barrelled 152-mm gun-launcher instead of the long-barrelled 105-mm gun of the M60 and M60A1. The gun-launcher is similar to that mounted in the M551

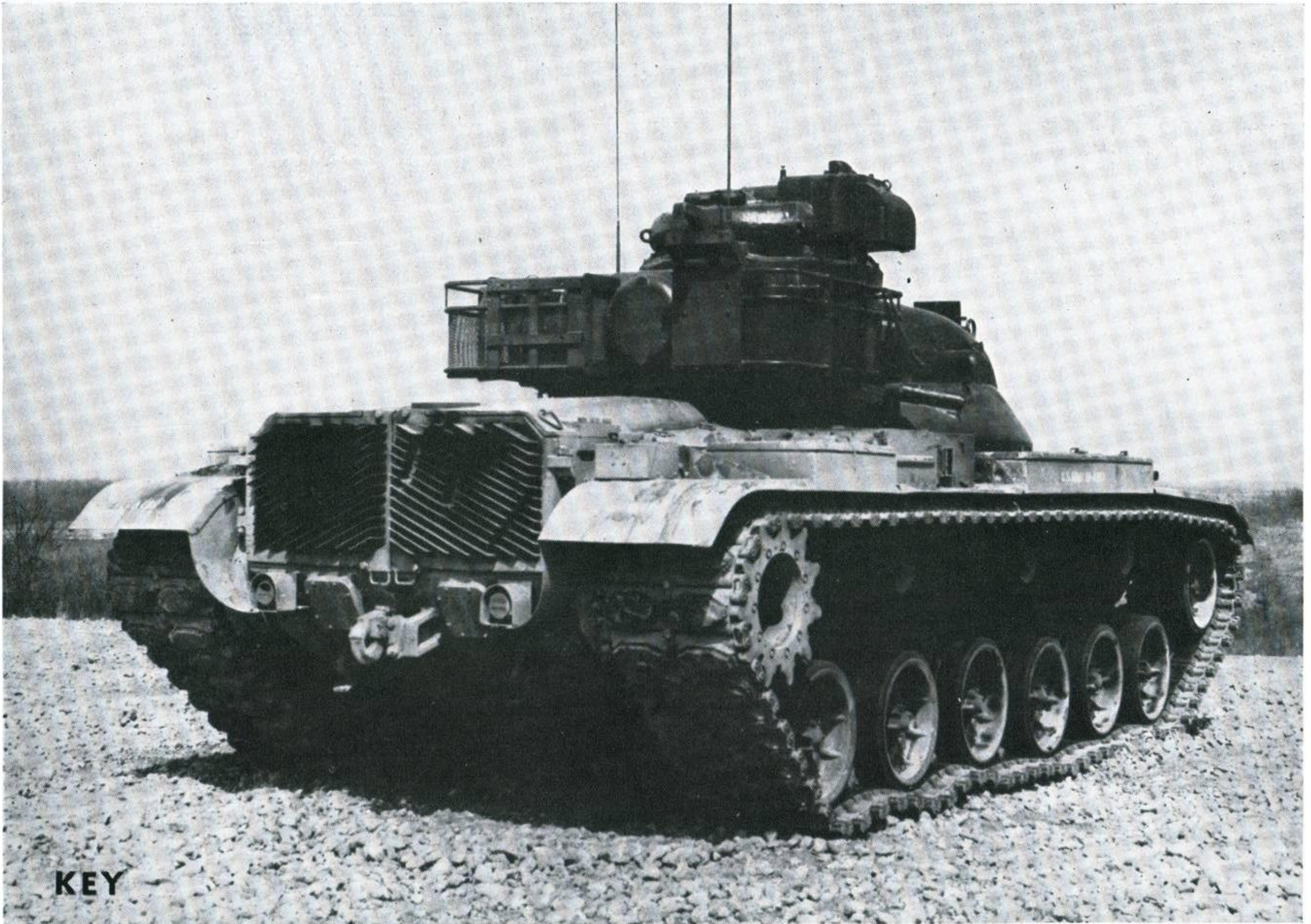
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Lesson instructions are on page 116

Solutions on the cover





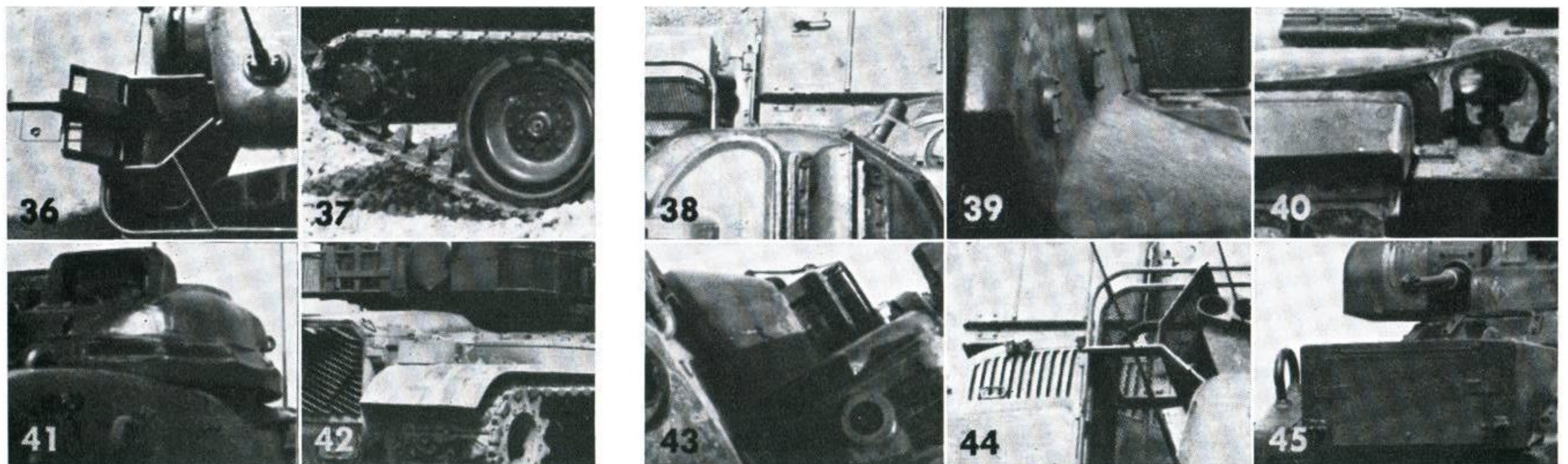
M60
A1E1
battle tank

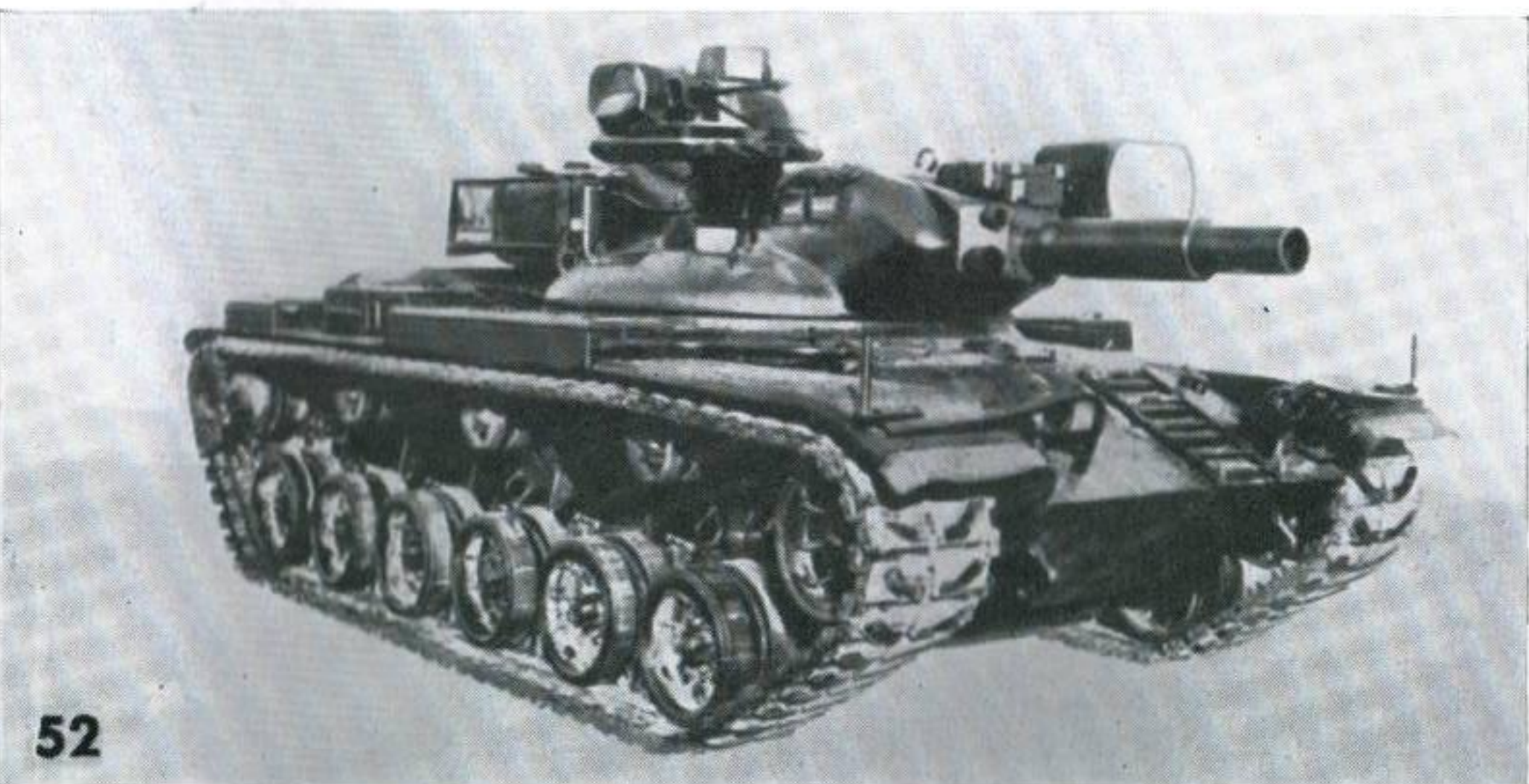
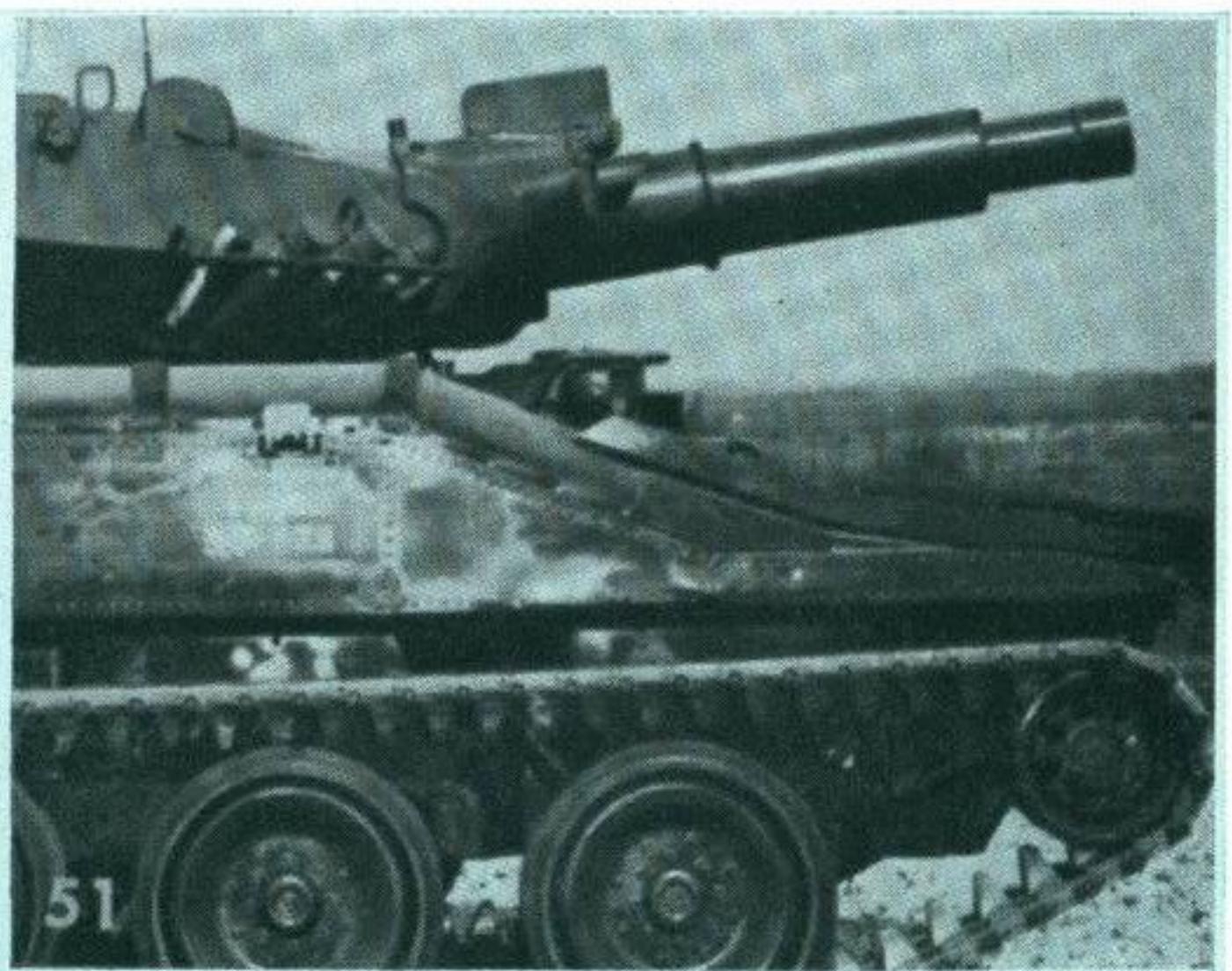
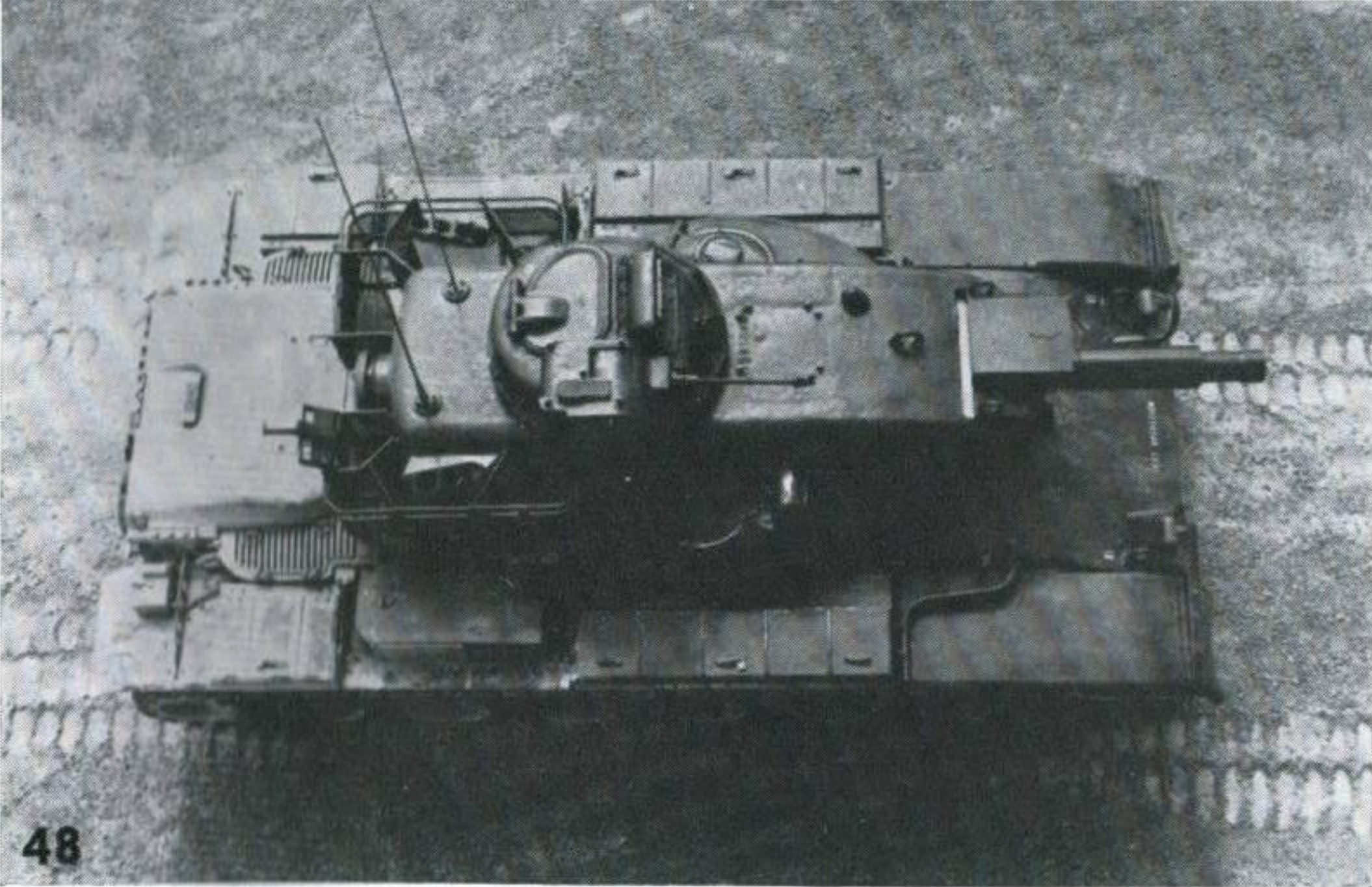
Sheridan light tank and is capable of firing Shillelagh guided missiles as well as conventional, spin-stabilised, medium-velocity projectiles. The ability of the M60A1E1 to fire Shillelagh guided missiles makes it capable of fighting the heaviest hostile tanks at long range and, therefore, to complement the 105-mm. gun armed models but it is not intended to replace the latter.

A minor distinguishing feature of the M60A1E1 is its commander's cupola, which is of a new pattern. The chassis, on the other hand, is much the same as that of the earlier models. In particular, the track and road wheels, of which there are six per side, are the same but the latest type of track has rubber road pads of a different pattern than that used previously.

Lesson instructions are on page 116

Solutions on the cover







Cover Photo: The Russian **Bison** often visits the coastal regions of Great Britain. When it does it is intercepted by R.A.F. **Lightnings**. Here, **Lightnings** of 74 Squadron are keeping formation with one of these visitors.

HOW TO OBTAIN BACK NUMBERS OF THE JOURNAL

Copies of back issues of the *Journal* are available, dating from 1960 up to the present day, with the following exceptions:

- 1960 June
- 1962 February, April
- 1963 January, May and December
- 1964 February, June, July, August and September
- 1965 January

Applications for extra copies of the *Journal* should be submitted through normal official publication channels—not to the editorial office or direct to the Ministry of Defence. It should be noted that applications will only be accepted from the Services or other official bodies.

SOLUTIONS TO TESTS AND EXERCISES

Pages 116 and 117

TEST PAPERS

- BUFFALO:** Jokers are first line 2nd picture. Second line 5th picture and third line 3rd picture.
- LEAR JET:** Jokers are first line 4th picture and second line 2nd picture.
- HARRIER:** Jokers are first line 3rd picture and third line 2nd picture.
- HANSA HFB320:** Jokers are first line 5th picture, second line 2nd picture and third line 3rd picture.
- MU-2:** Joker is third line 2nd picture.

Page 140

- DC-8:** Jokers are second line 3rd picture and third line 5th picture.

Page 118

NEPTUNE

All targets are **Neptune** except No. 15 which is **Orion**.

Page 120

M107

All targets are **M107** except Nos. 15, 52 and 54.

Page 126

RUSSIAN STERN TRAWLERS

All targets are **Russian Stern Trawlers** except Nos. 10, 24, 33, 44 and 57, which are jokers.

Page 132

TRIBAL CLASS

All targets are **Tribal Class** except Nos. 9, 16, 26, and 38 which are jokers.

Page 136

M60 AIEI

All targets are **M60 AIEI** except Nos. 8, 23, 37 and 51.