

JOINT



SERVICES

RECOGNITION

Journal



Vol. 24 MARCH 1969 No. 3

DOUGLAS DC-9

The basic Douglas DC-9 Series 10 prototype twin-jet airliner first flew in February 1965 and since then a wide range of DC-9 variants has been produced. These include the Srs 20 combining the long-span wings of the Srs 30 with the short fuselage of the Srs 10; the Srs 40, generally similar to the Srs 30 but with a longer fuselage; and the C-9A, an aeromedical version of the DC-9 Srs 30 for the U.S.A.F. Military Airlift Command.



DC-9 SERIES 30



C-9A



DC-9 SERIES 10



Spans (DC-9 Srs 10) 89 feet 5 inches
(DC-9 Srs 20, 30 and 40) 93 feet 5 inches





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* Identification Lessons

The *Joint Services Recognition Journal* is a monthly publication produced by the Directorate of Flying Training (R.A.F.), Ministry of Defence, and prepared in collaboration with the Admiralty Board, the Army Department and the Ministry of Technology. Applications for copies can only be accepted from the Services or other official bodies, and must be submitted through the normal official publications supply channels—not to the Editorial Office or direct to the Ministry of Defence.

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.

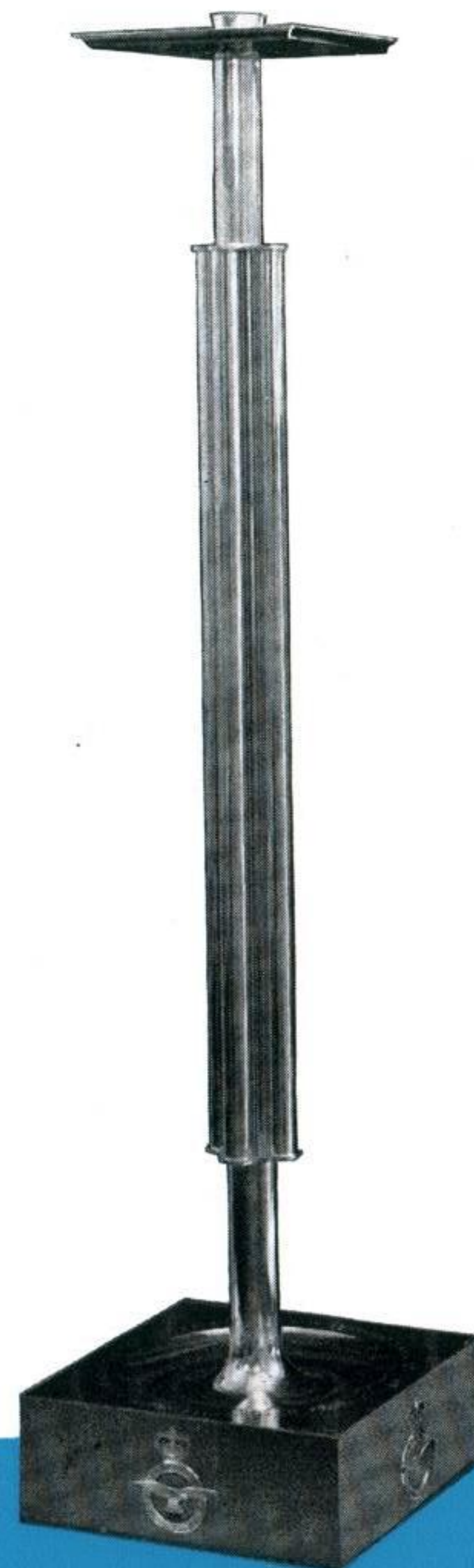
RAF CANDLESTICKS FOR THE QUEEN

A personal gift of a pair of silver candlesticks was presented to the Queen last December to mark the 50th Anniversary of the formation of the Royal Air Force. At the same time a donation in her name is to be made to the Star and Garter Home for Disabled Sailors, Soldiers and Airmen, Richmond, Surrey, of which the Queen is Patron, where a new physiotherapy centre is being planned.

The candlesticks have been placed at the nave altar in St. George's Chapel, Windsor, inscribed "To Her Majesty Queen Elizabeth II from the Royal Air Force, 1918-1968, for St. George's Chapel".

Designed by Mr. Paul Paget, surveyor to St. George's Chapel, and executed by Mr. Leslie Durbin, the well-known silversmith, they are 4 feet 6 inches high, mounted on blue plastic blocks, and carry the R.A.F. badge in silver.

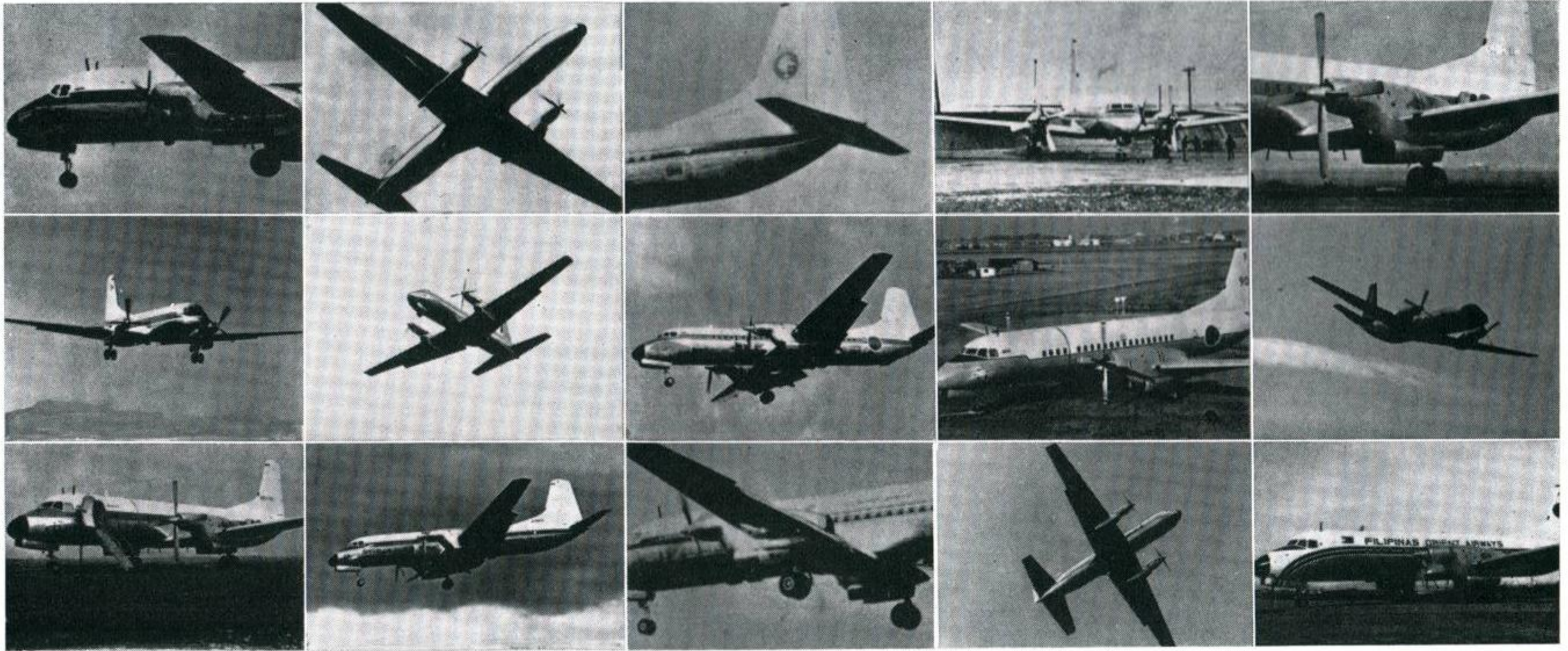
Four wide silver tubes form the main length of the pieces, repeating the effect of the flutes in the slender pillars which line the Chapel nave.



TEST PAPERS

Something to show how good you are—or are not—
at identifying these aircraft. Solutions on the cover

YS-11?



BRONCO?



Lesson Instructions Identify training is a matter of "doing", rather than of gathering information. Submit to the instructions given in every edition of the *Journal* and your ability will become automatic.

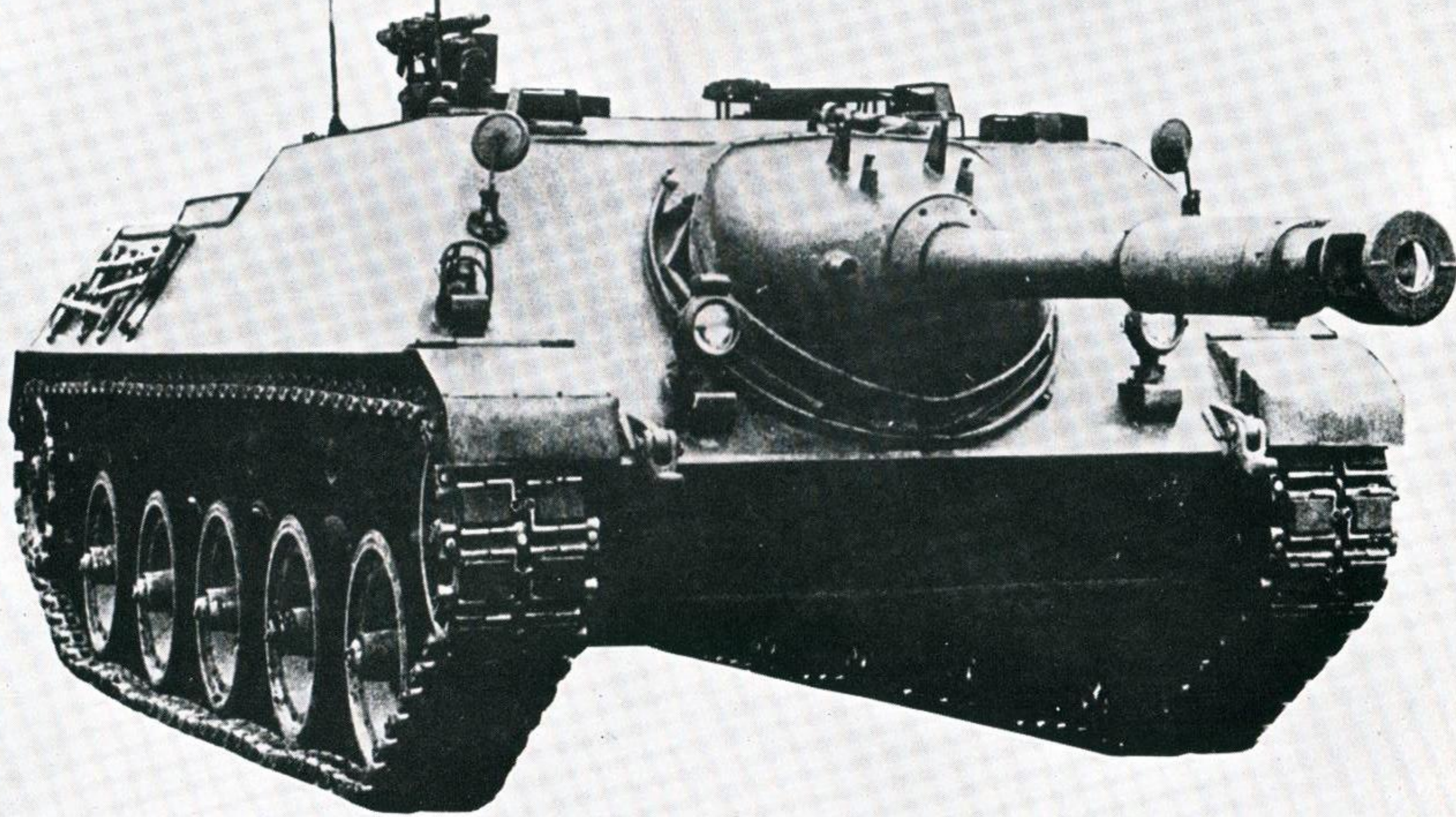
1. Read the text associated with the lesson.
2. Prepare a list of target numbers so as to be able to tackle the targets in any order.
3. Identify the target pictures by comparing them with the key views: start with the easy ones so as to gain experience: also use targets already identified to solve the 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 the lesson without the key too soon, wait until your ability to do so is self-evident.

1. Lire le texte correspondant à la leçon.
2. Préparer une liste de numéros de cible, de façon à pouvoir prendre les cibles dans n'importe quel ordre.
3. Identifier les photos de la cible en les comparant avec les vues-clé: commencer par les plus faciles de manière à gagner de l'expérience: se servir aussi de cibles déjà identifiées pour trouver les plus difficiles.
4. Quand vous serez certain de l'identité d'une cible, notez son nom immédiatement en face du numéro correspondant sur votre liste. **CECI EST IMPORTANT.**
5. Les leçons ne devront pas être précipitées ou d'une durée limitée à l'avance. En ce qui concerne les débutants, il est plus important d'identifier avec précision que rapidement.
6. Ne pas s'efforcer d'apprendre par cœur les détails, les formes ou les noms.

AFVs of the West German Republic

Note: In training to distinguish between the JPz 4-5, the JPz, Rak, and the SPz (neu) each should be learned separately from the other two

Lesson instructions are on page 60

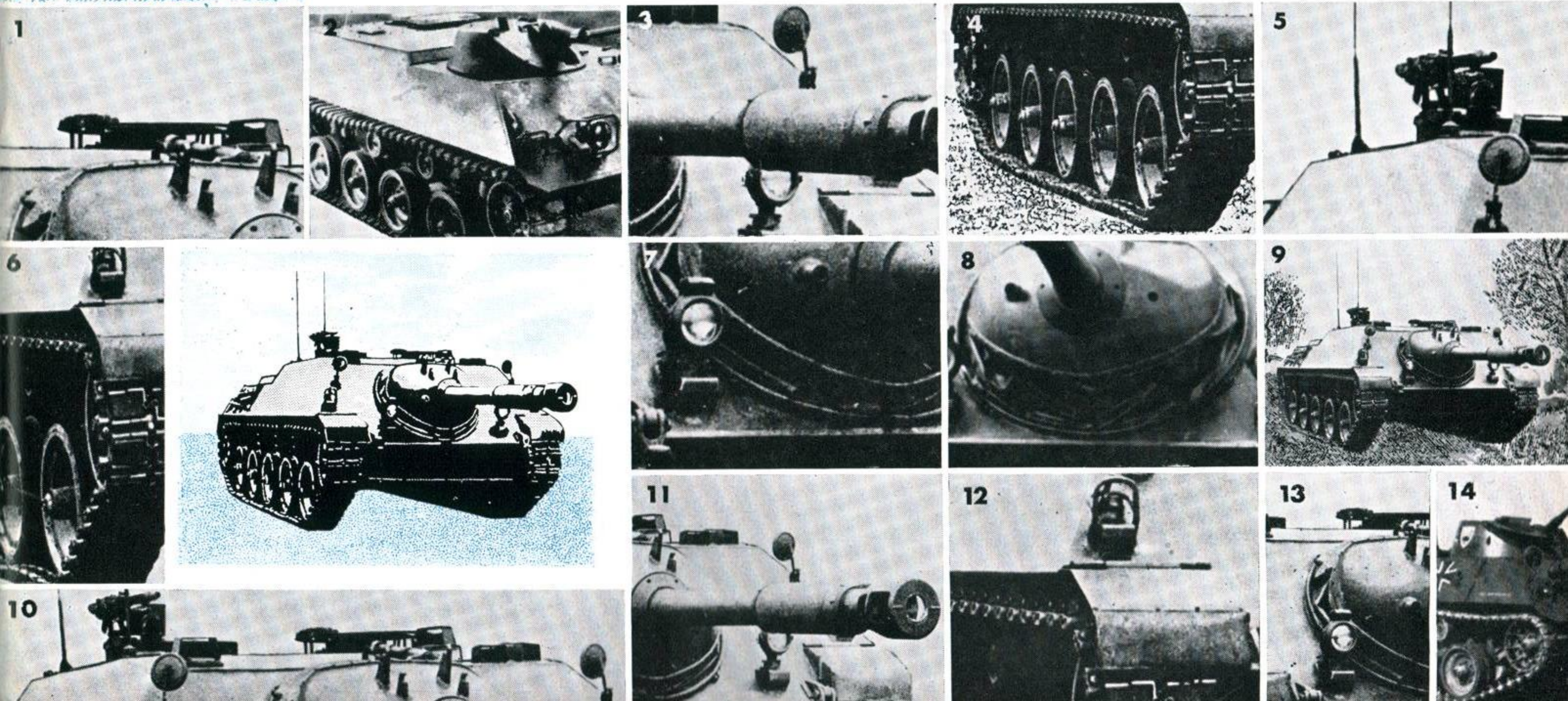


Jagdpanzer, Kanone

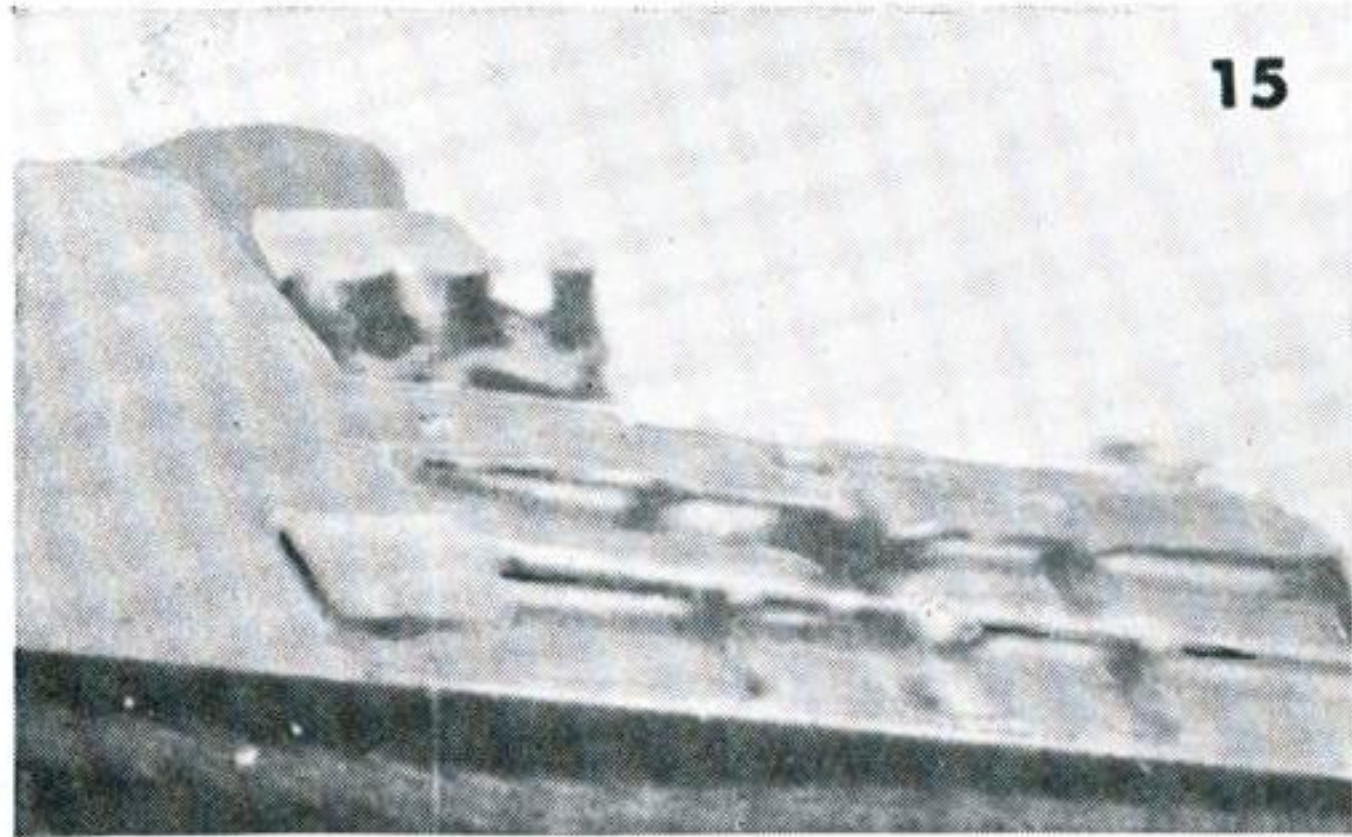
or more specifically JPz 4-5, is a new armoured vehicle which carries on the tradition of the German "assault guns" of World War II. A low, turretless vehicle it is intended to act mainly as a tank destroyer. To fulfil this role it has a 90-mm. gun which fires the same ammunition as the guns of the U.S. M47 and M48 medium tanks. It also has a 7.62-mm. machine-gun in the same limited traverse mounting as the main armament and another machine-gun of the same calibre on a ring mount over the com-

mander's hatch. Although there are only one or two comparable turretless gun-vehicles in service with the Soviet bloc forces, the JPz 4-5 is very similar to two other new German vehicles. The two vehicles are the Jagdpanzer, rakete, and the Schutzenpanzer (neu). The JPz, Rak, to give the first its abbreviated designation, is a tank destroyer armed with SS-11 anti-tank guided missiles and the SPz (neu) is a new armoured infantry combat vehicle. The two and the JPz 4-5 form a family of armoured vehicles based on a common chassis and as a result share a number of features, such as hulls, suspensions, tracks and so on.

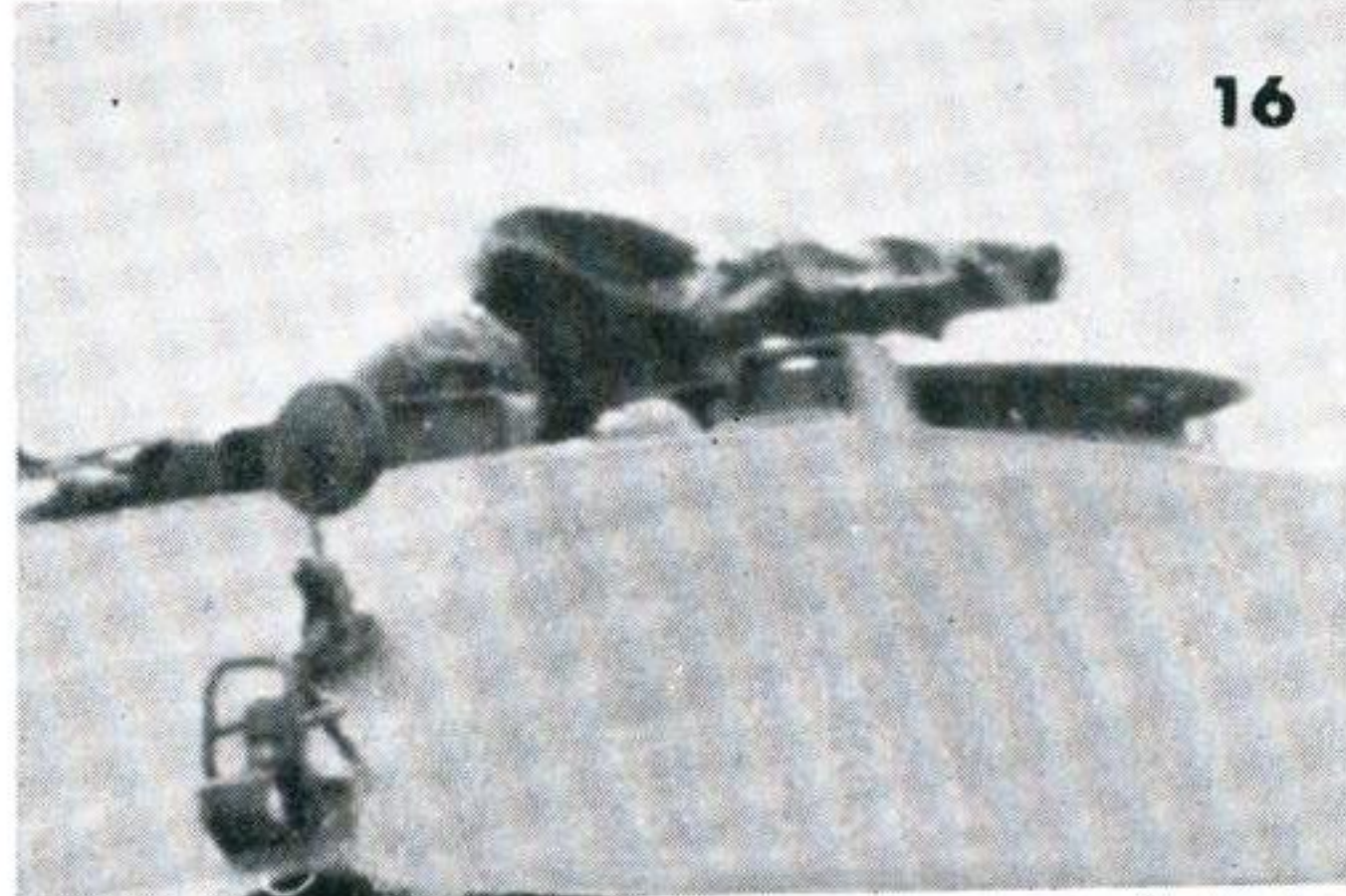
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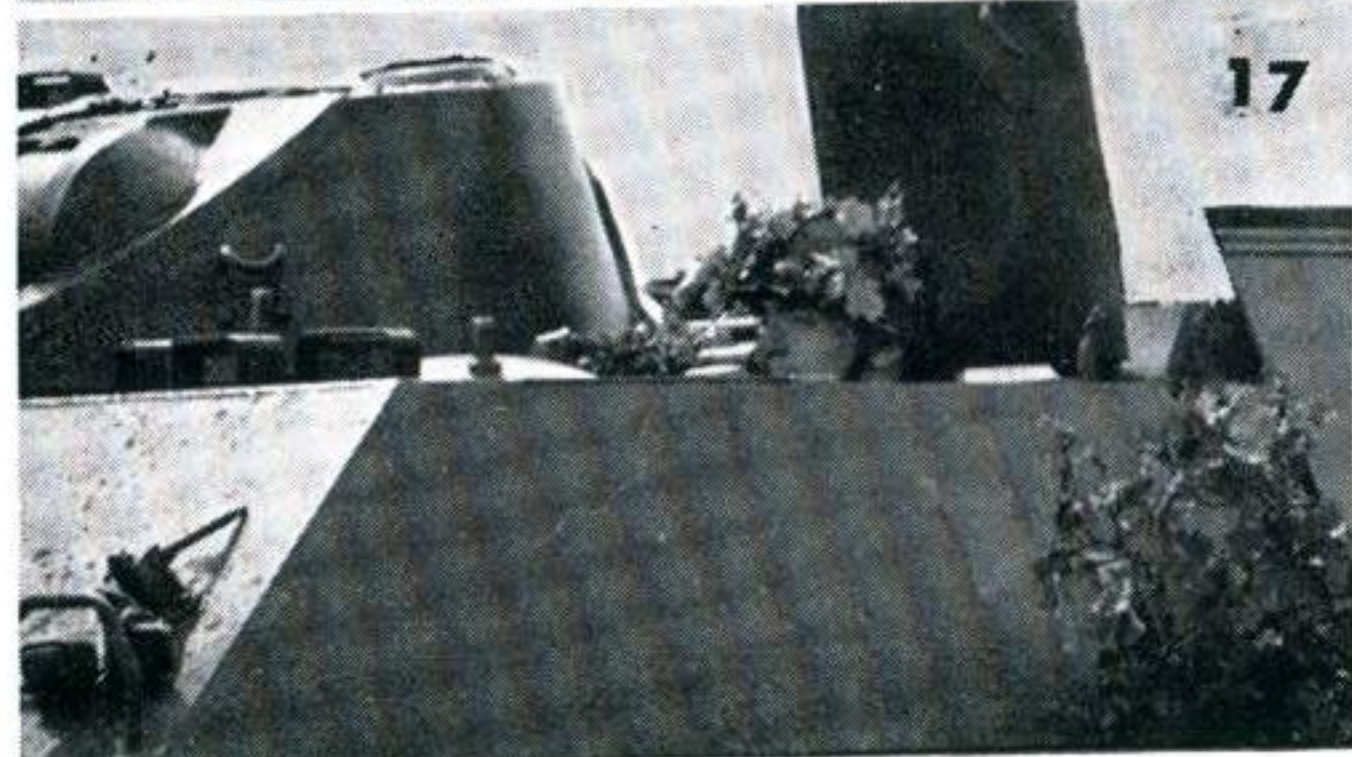
JAGDPANZER KANONE



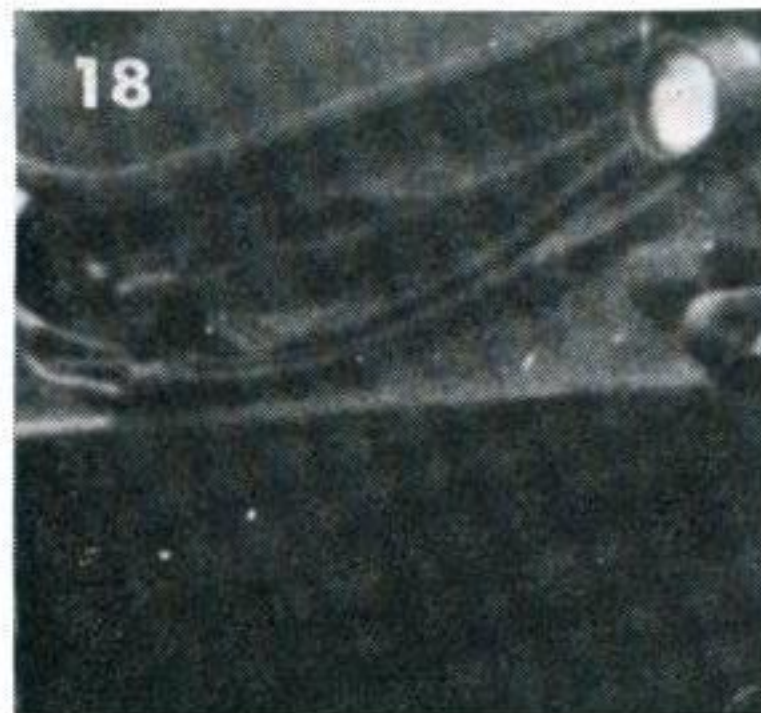
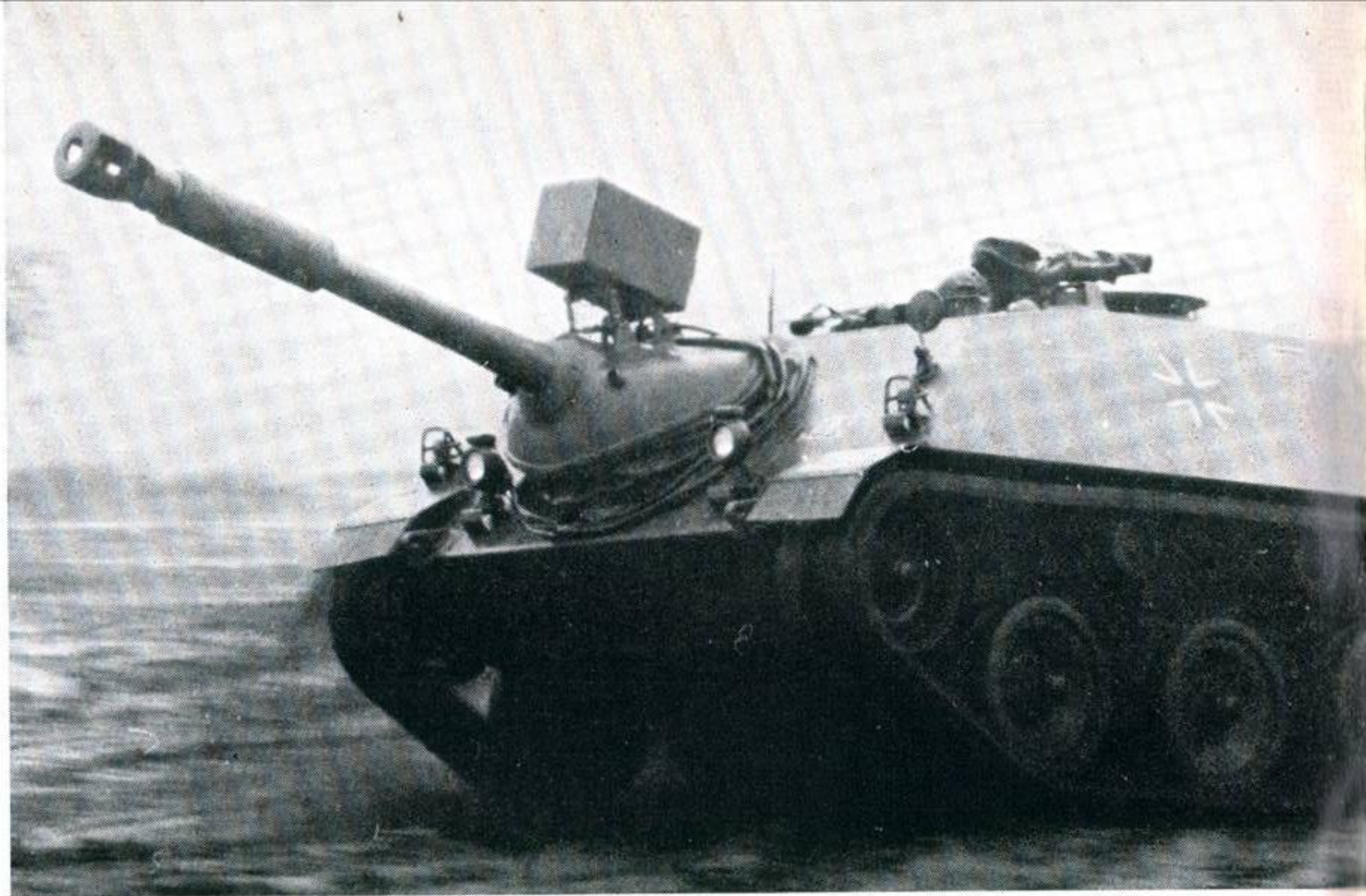
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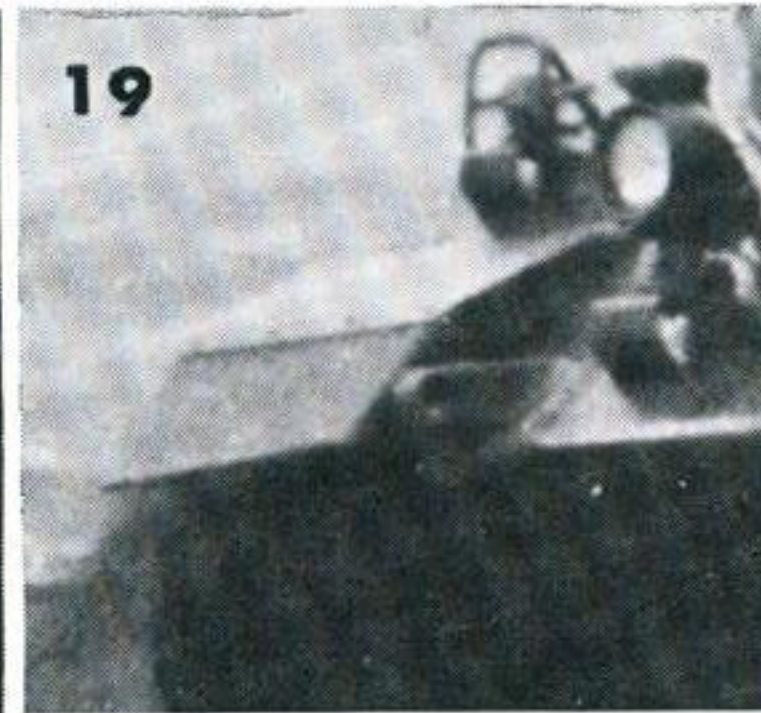
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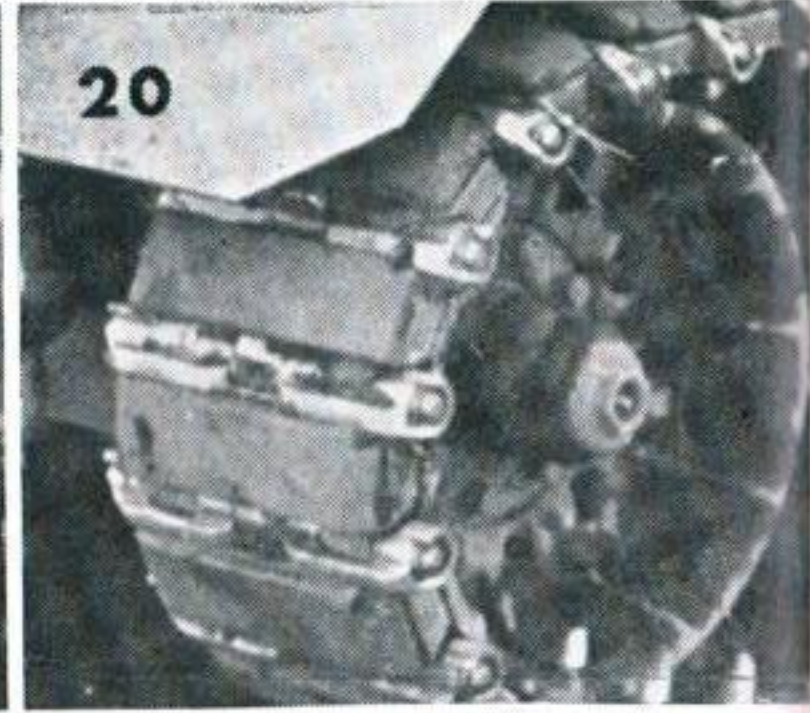
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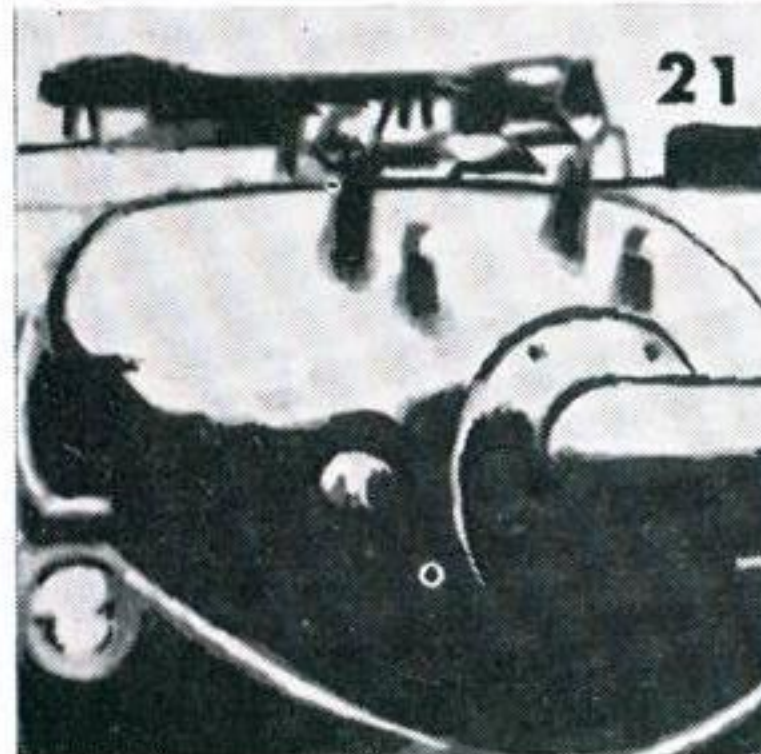
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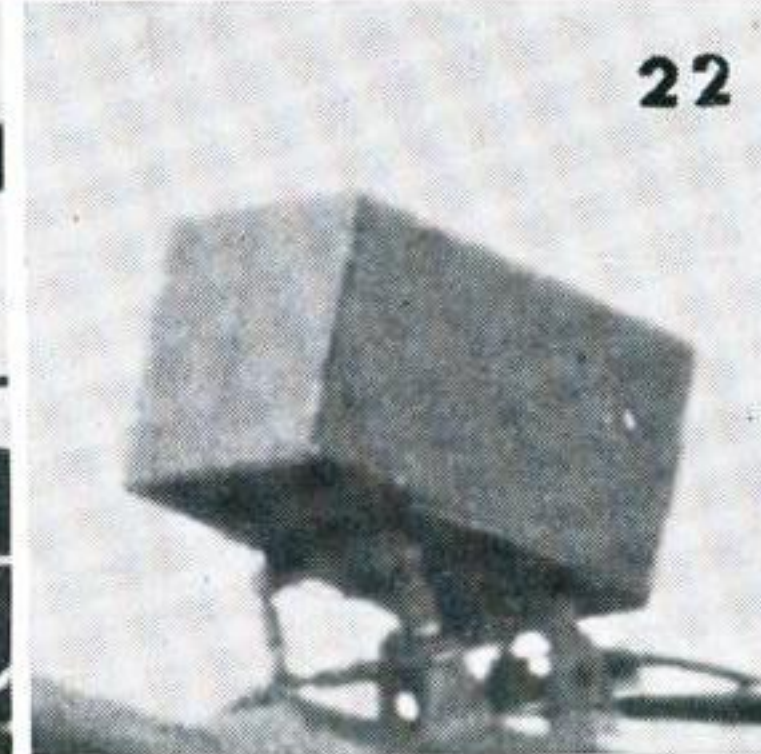
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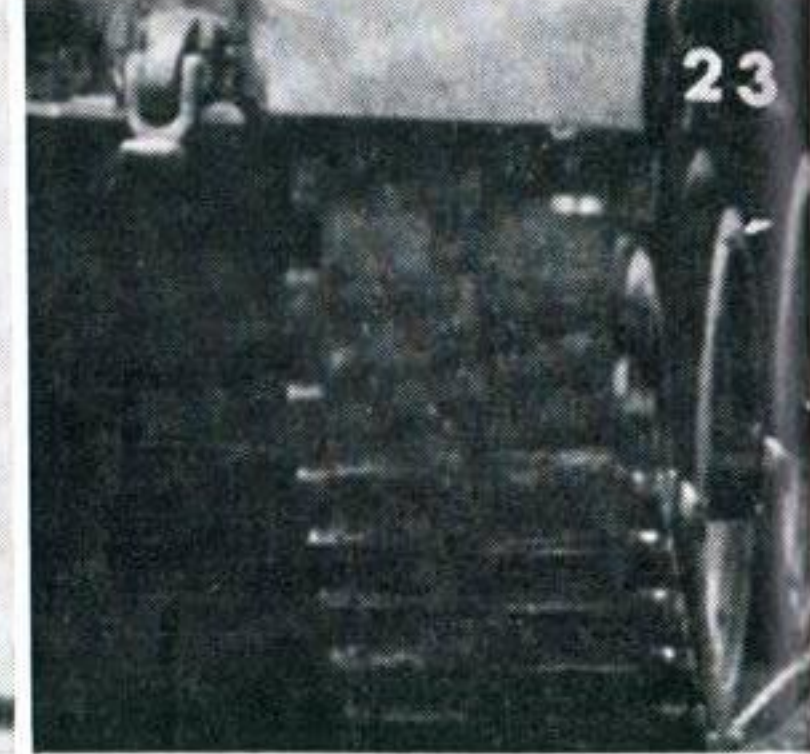
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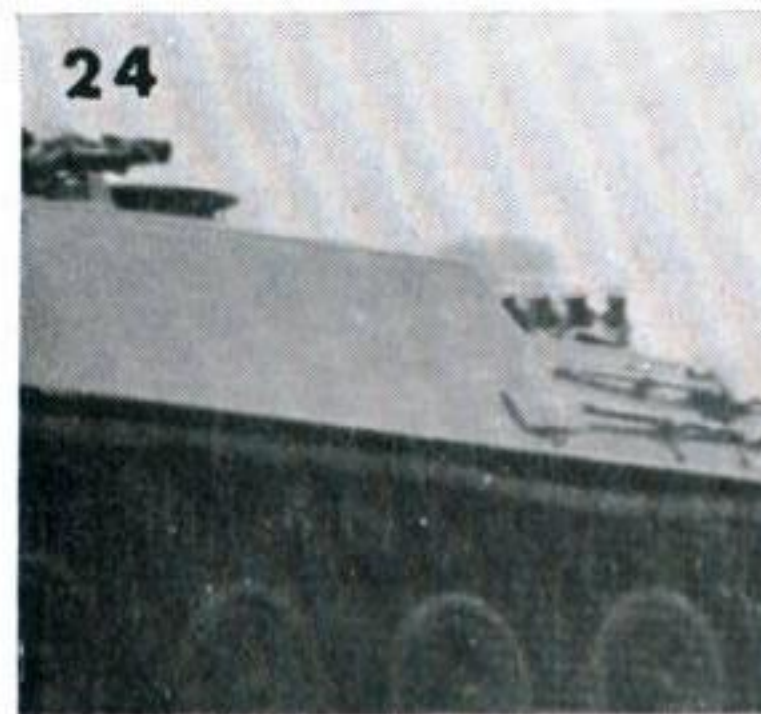
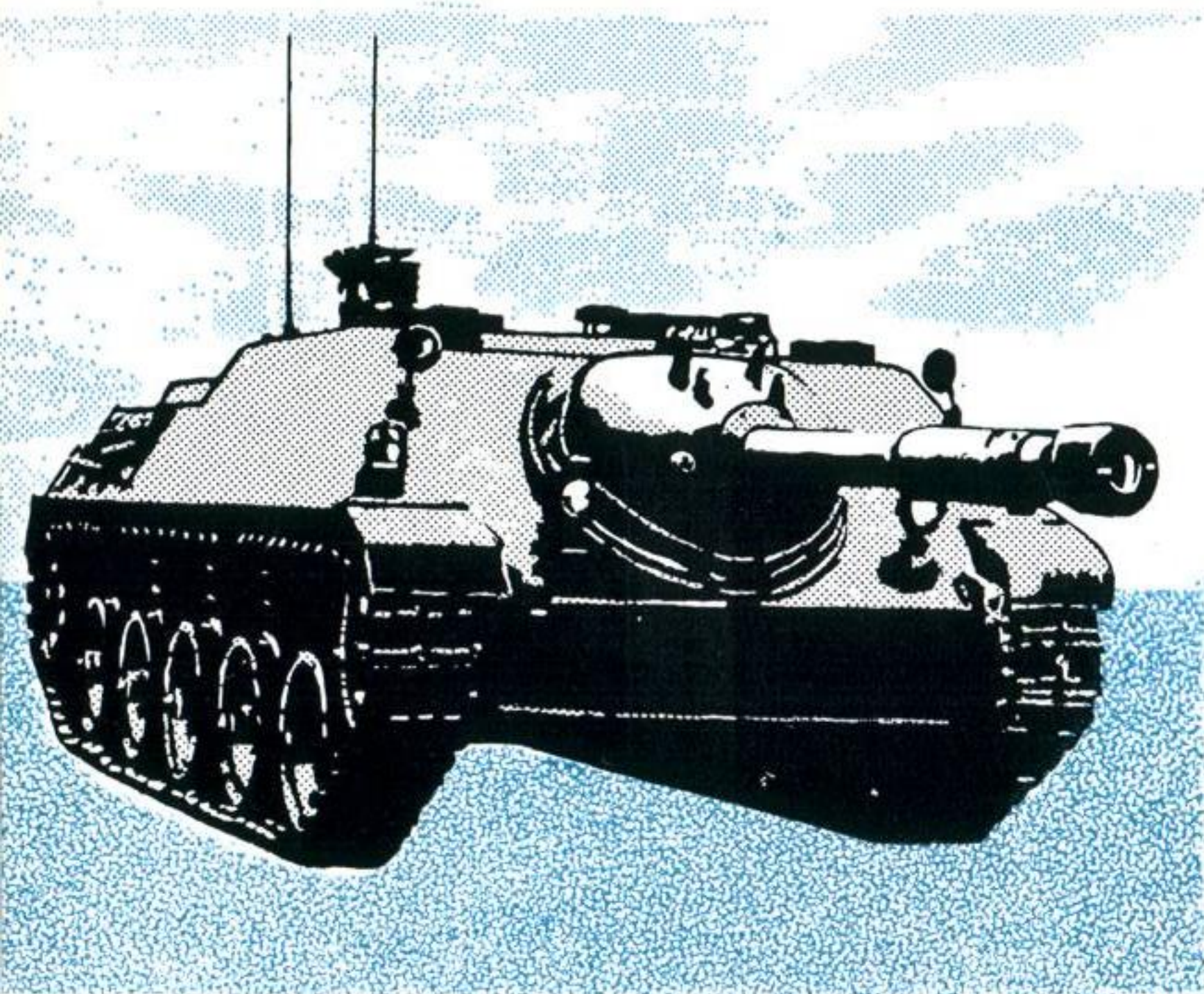
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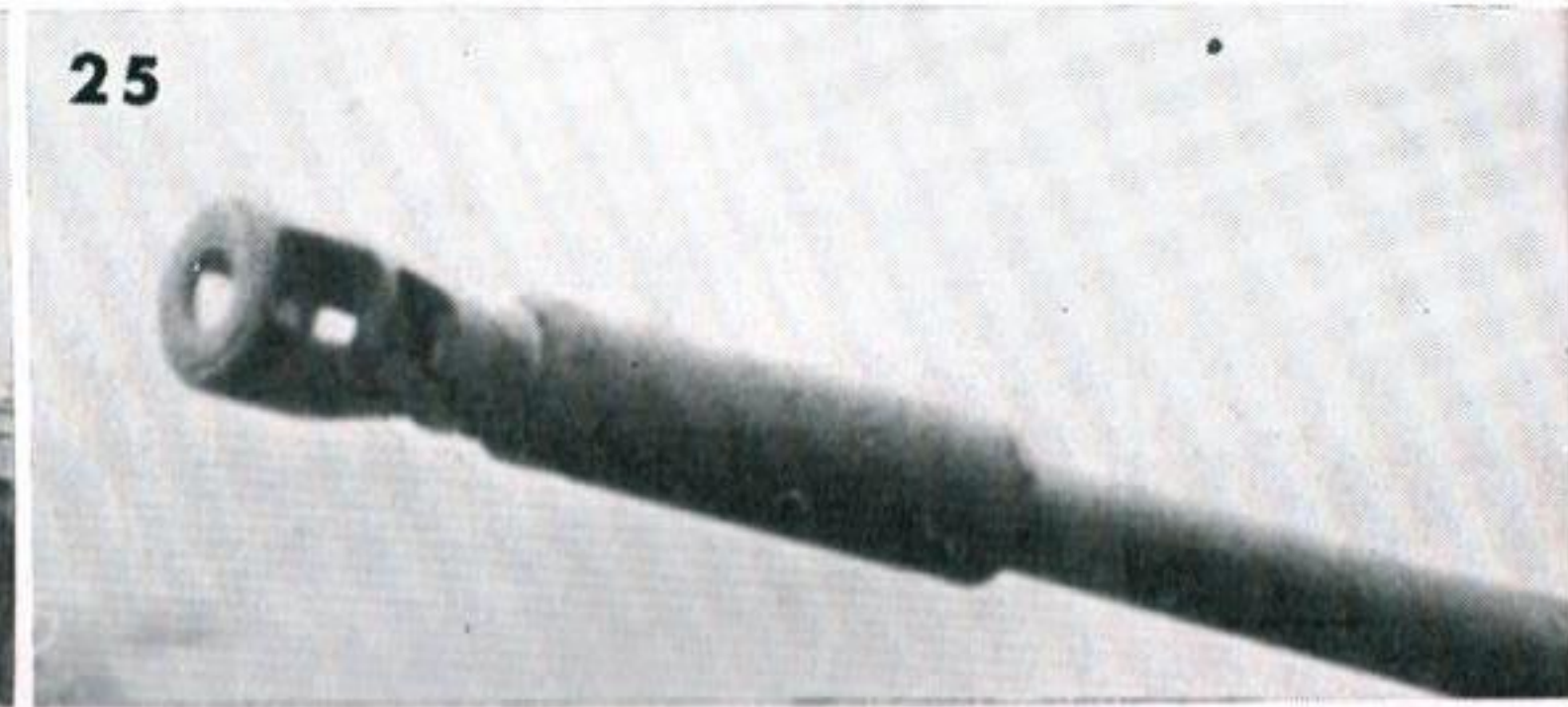
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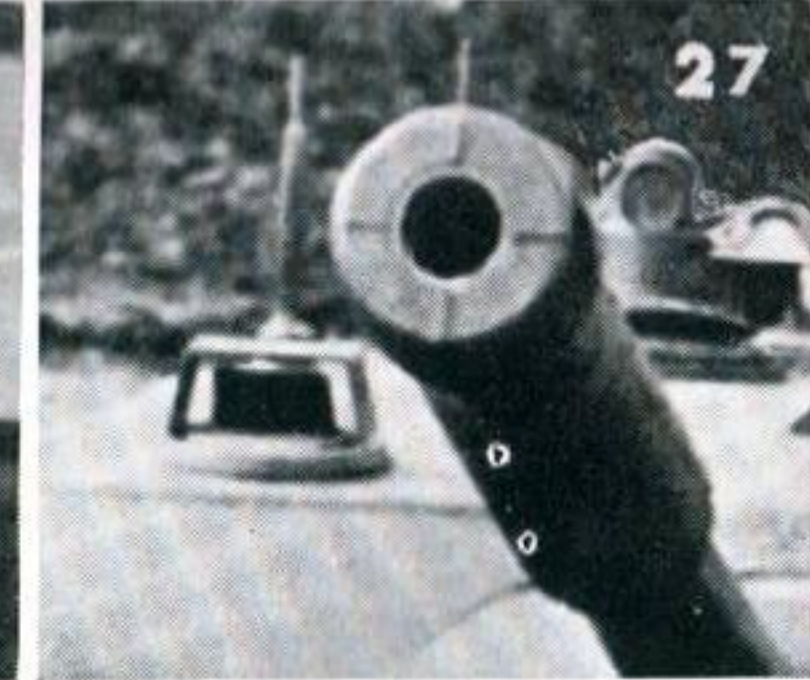
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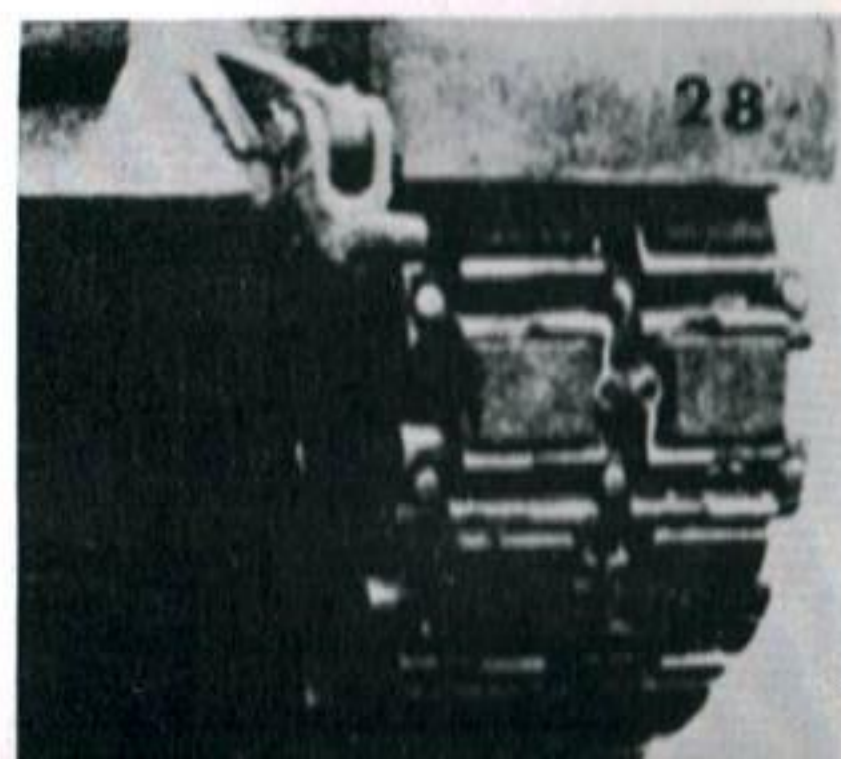


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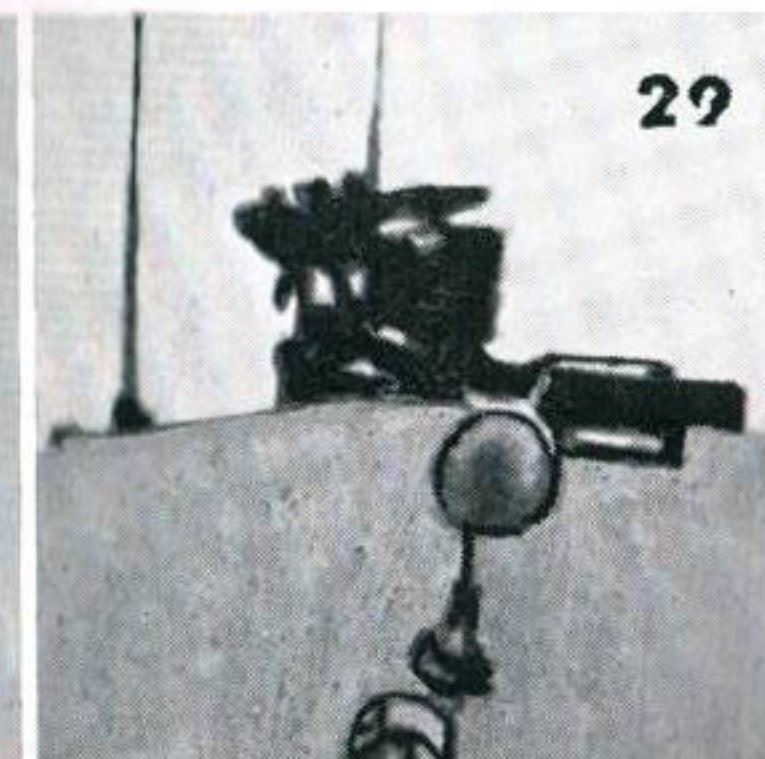


27

Including the commander, the crew of the JPz 4-5 consists of four men. Fully laden it weighs 25.7 tons but its 500 b.h.p. Mercedes Benz diesel gives it a maximum road speed of 50 m.p.h.



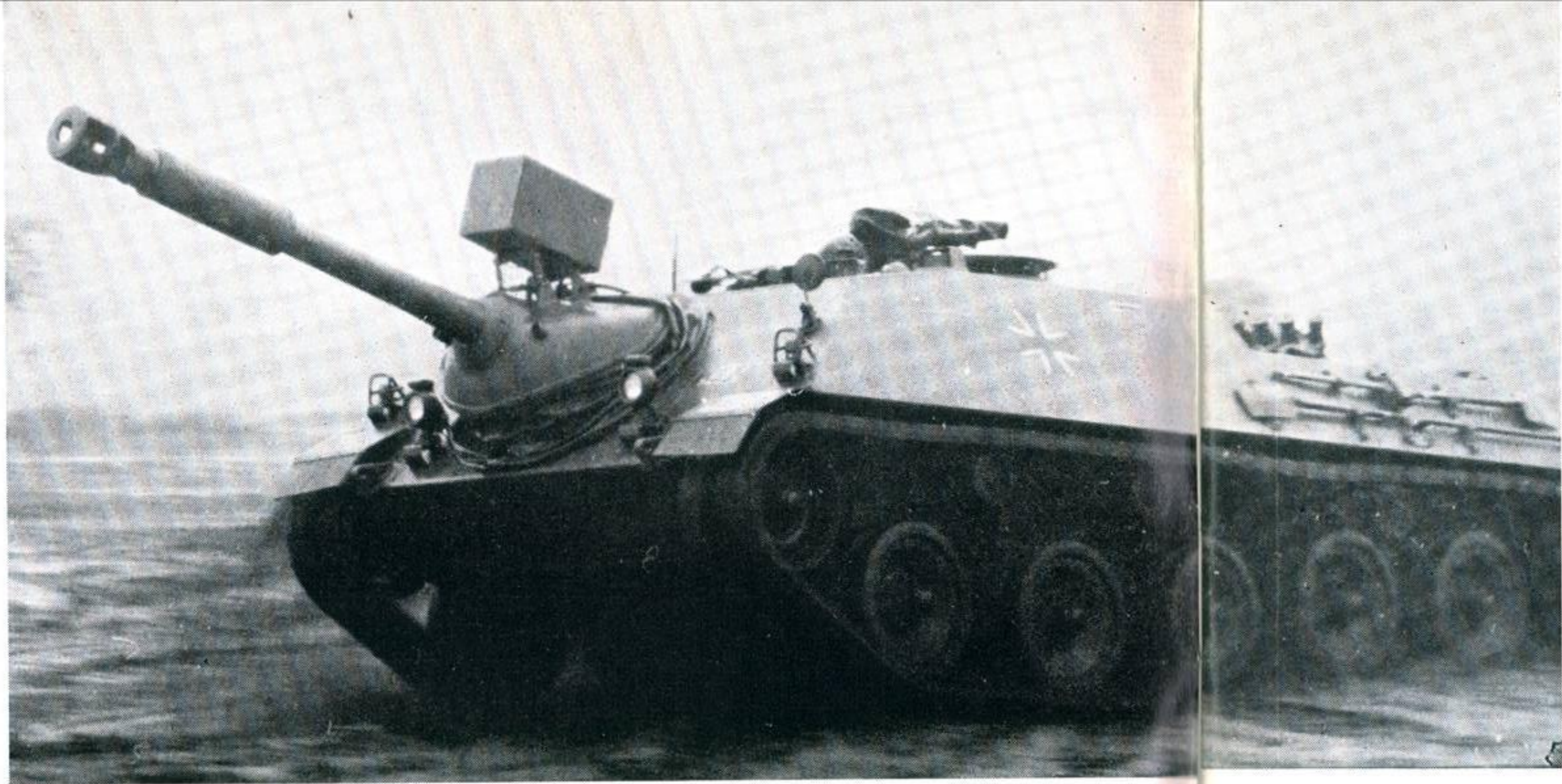
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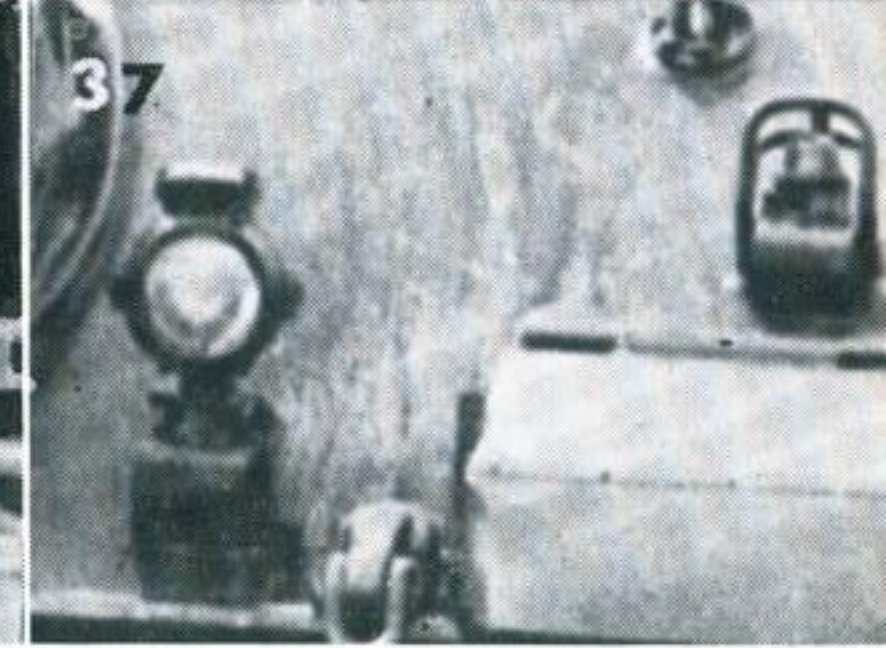
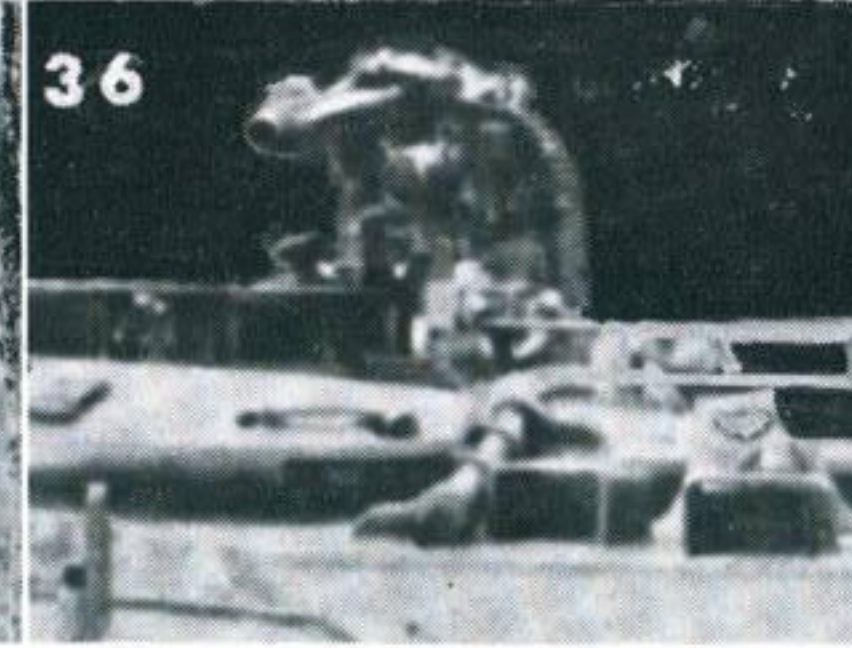
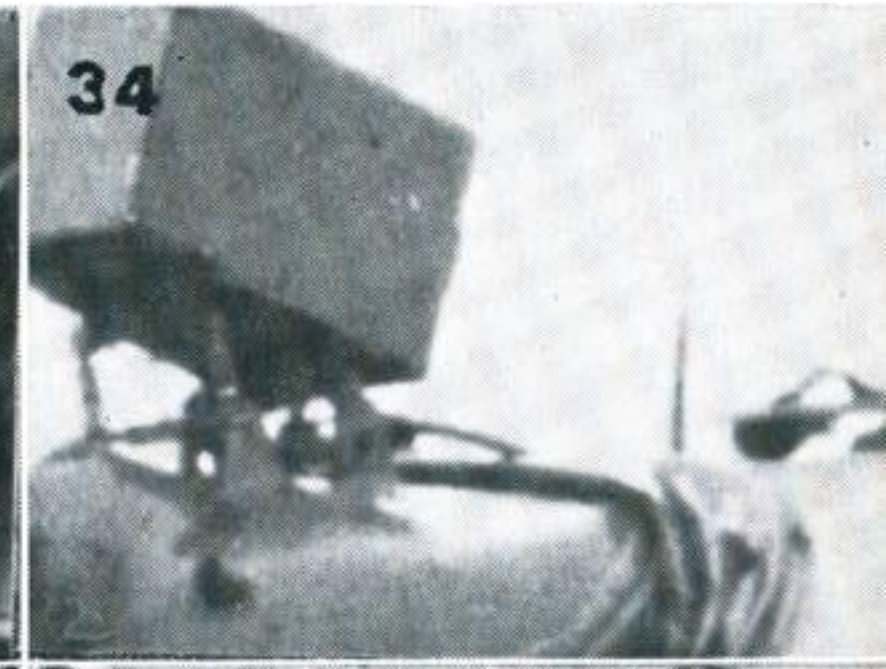
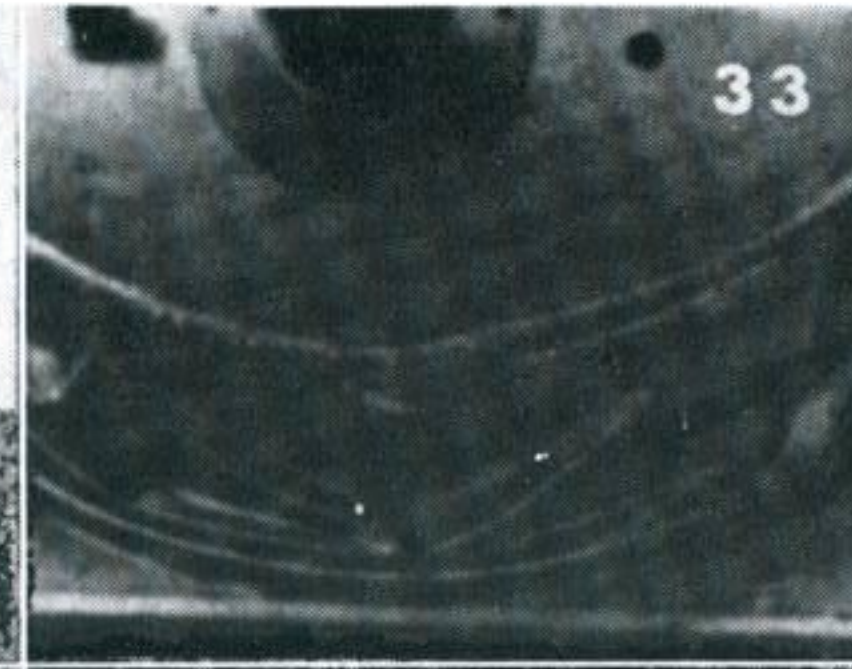
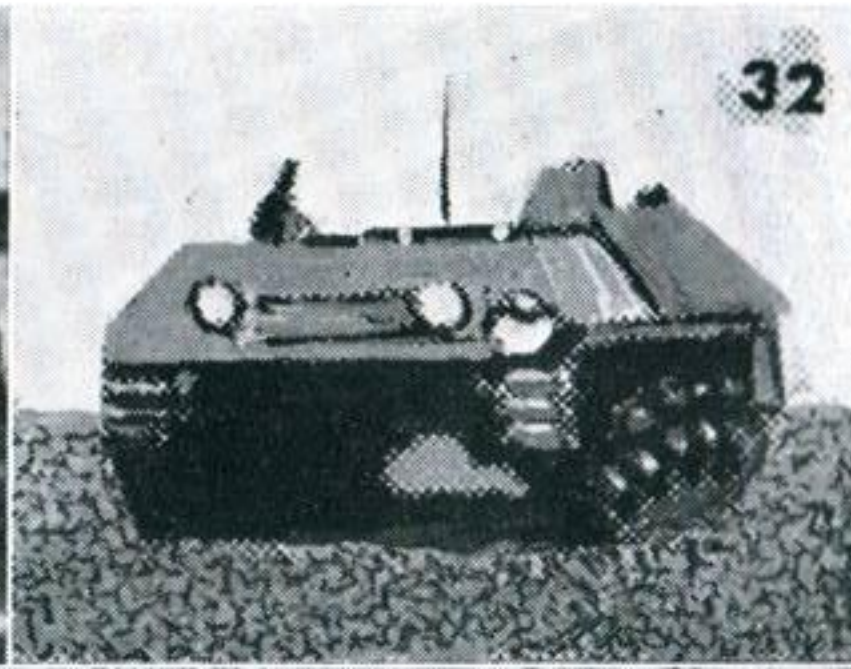
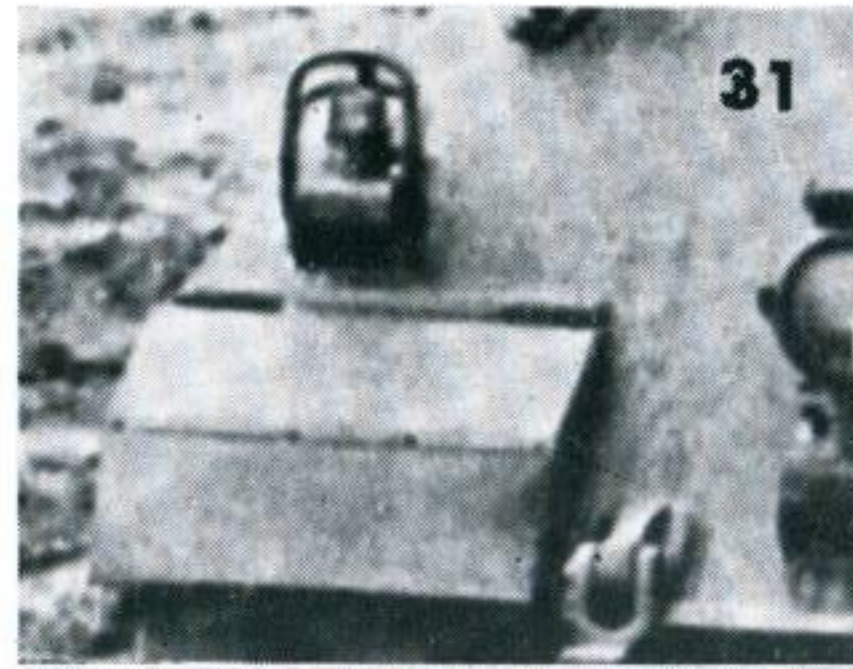
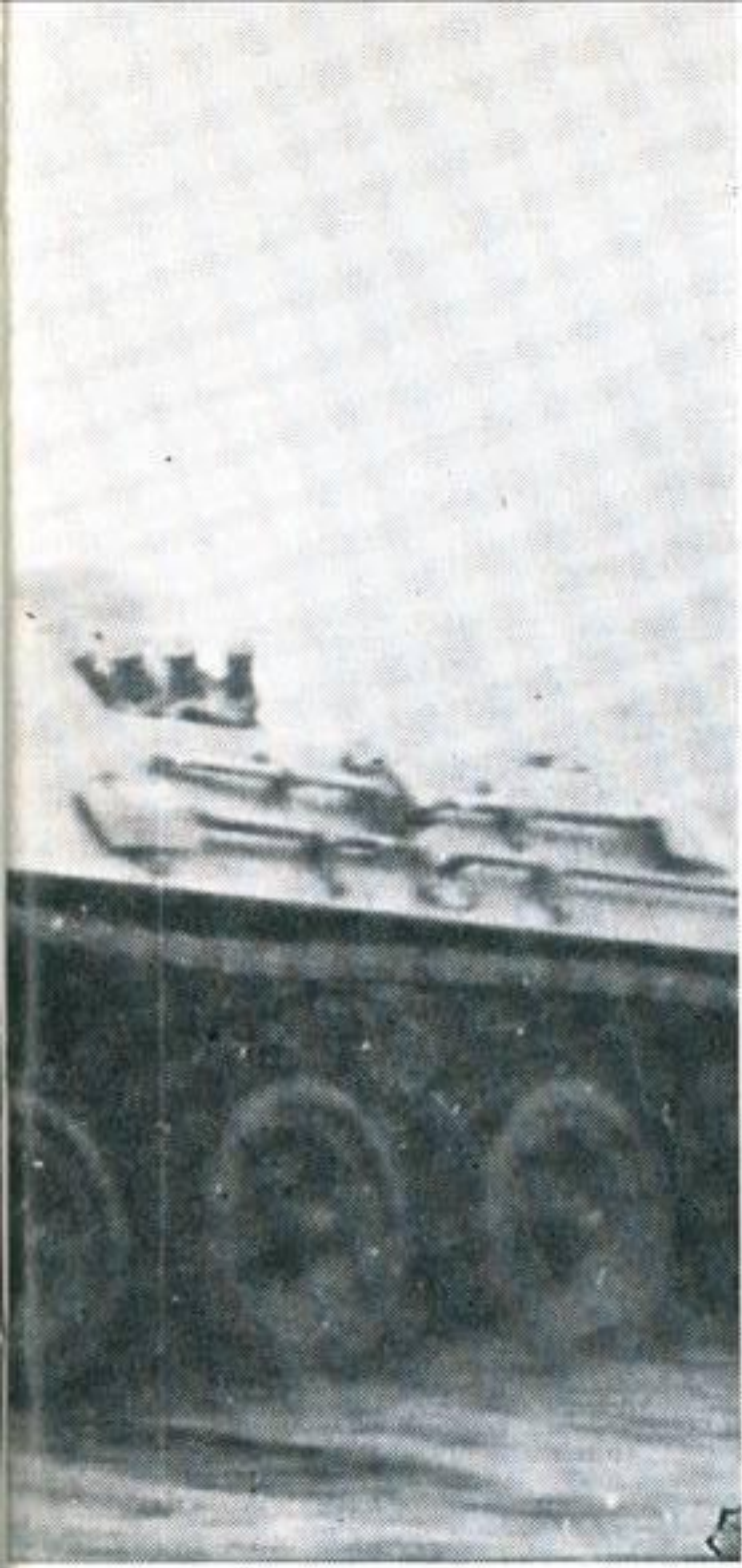


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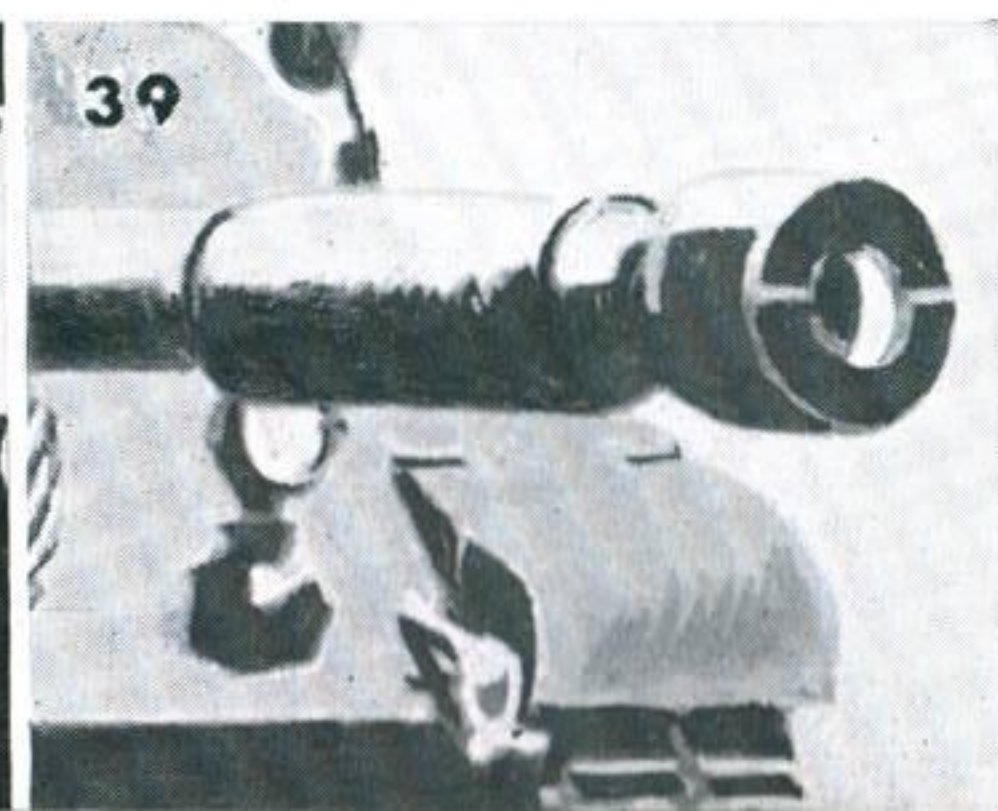
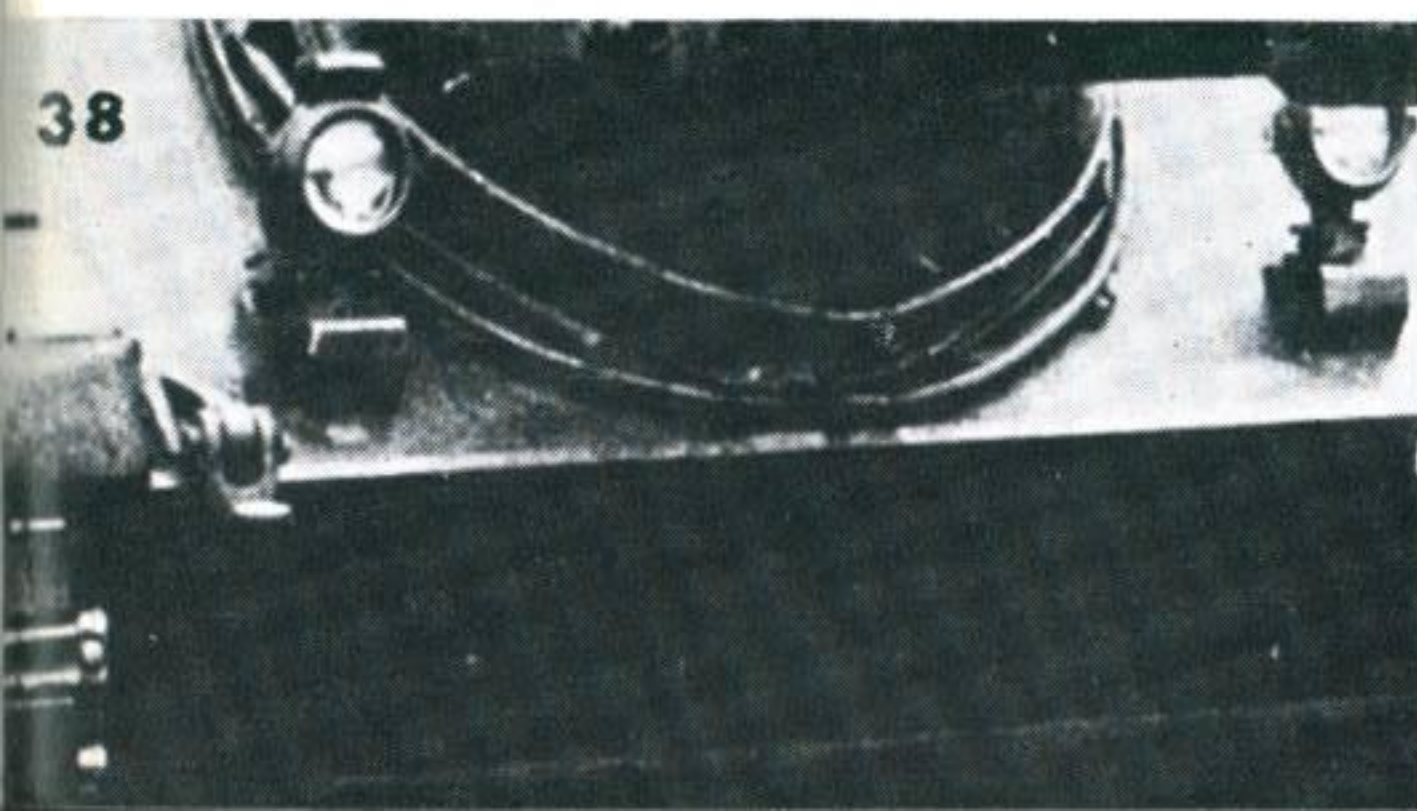
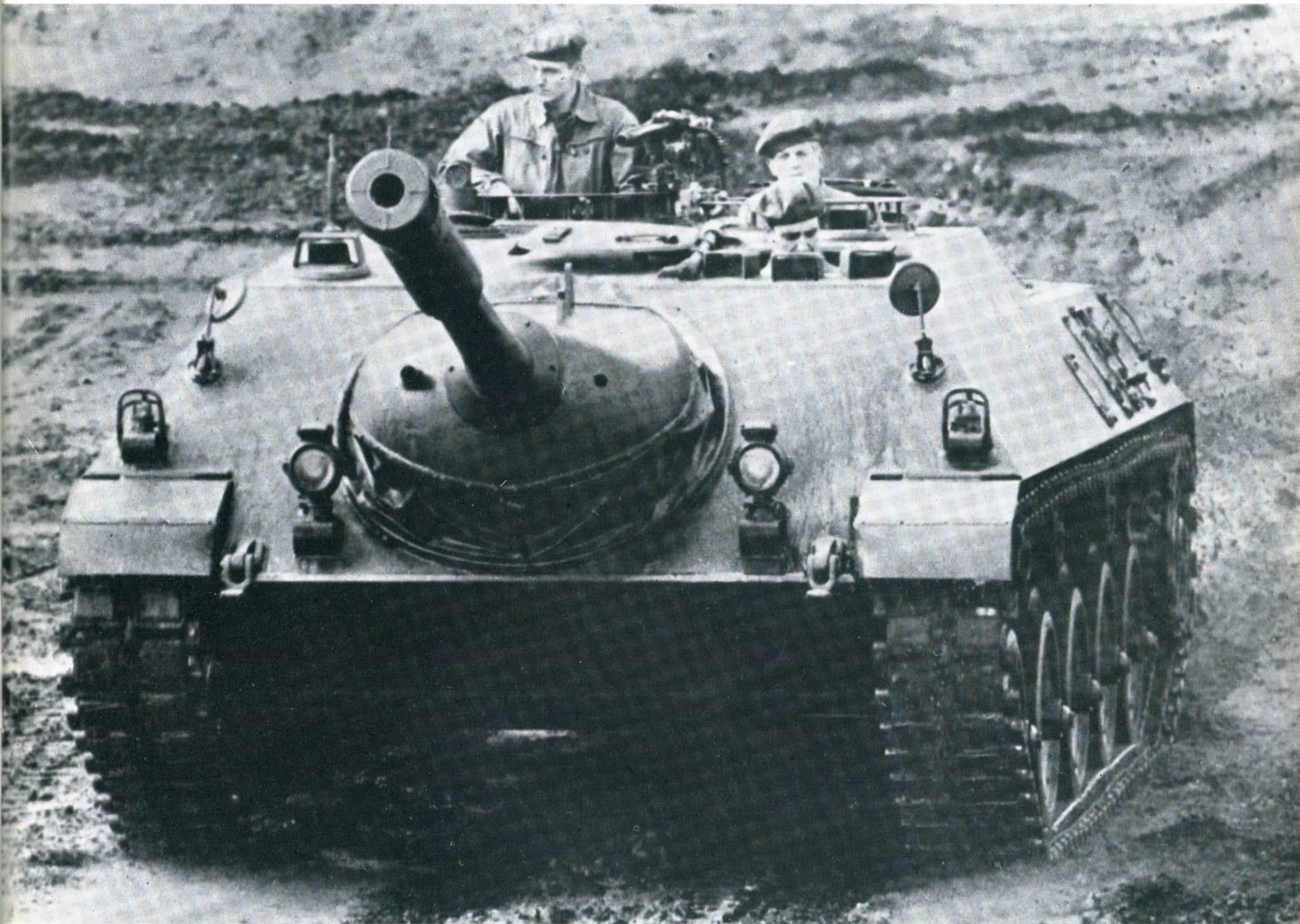


30





Lesson instructions are on page 60 Solutions on the back cover



KEY



RA-5C

VIGILANTE

Lesson instructions are on page 60

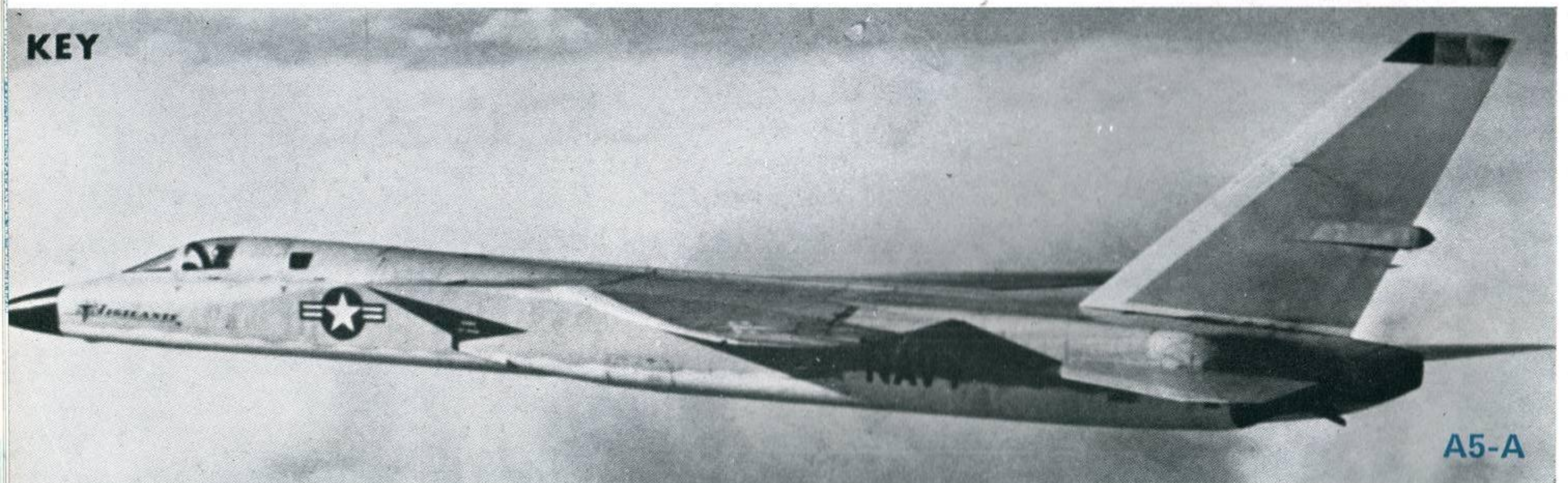
Three versions of the North American Vigilante twin-jet 2-seat carrier-based all-weather combat aircraft have been built—the A-5A (formerly A3J-1) attack bomber; the A-5B (formerly A3J-2) interim long-range version with an extra fuel tank in the form of a hump fairing above the fuselage aft of the cockpit fairing and a raised rear cockpit; and the RA-5C (formerly A3J-3) airborne unit of Integrated Operational Intelligence System (IOIS). The Vigilante serves exclusively with the U.S. Navy and all the remaining A-5As together with the 20

or so Bs that were built have now been converted to RA-5C configuration, which latter has also a hump-back fuel tank.

In plan view in particular the Vigilante bears a remarkably close resemblance to Foxbat (MiG-23) and for this reason it must be learned thoroughly: as indeed must Foxbat. Comparison of the two is valueless until both are well known. Check your answers with the solutions on the back cover.

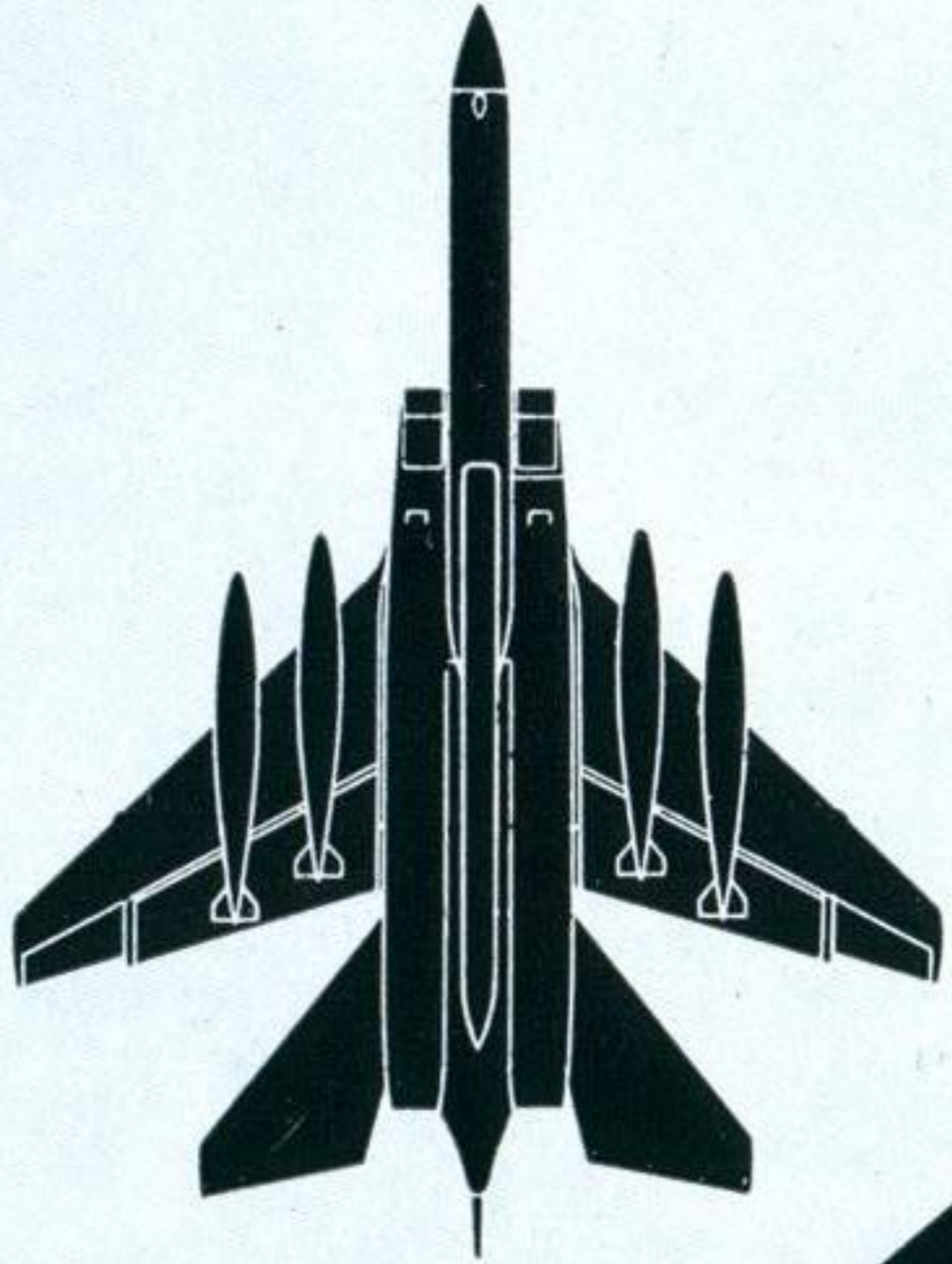
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KEY



A5-A

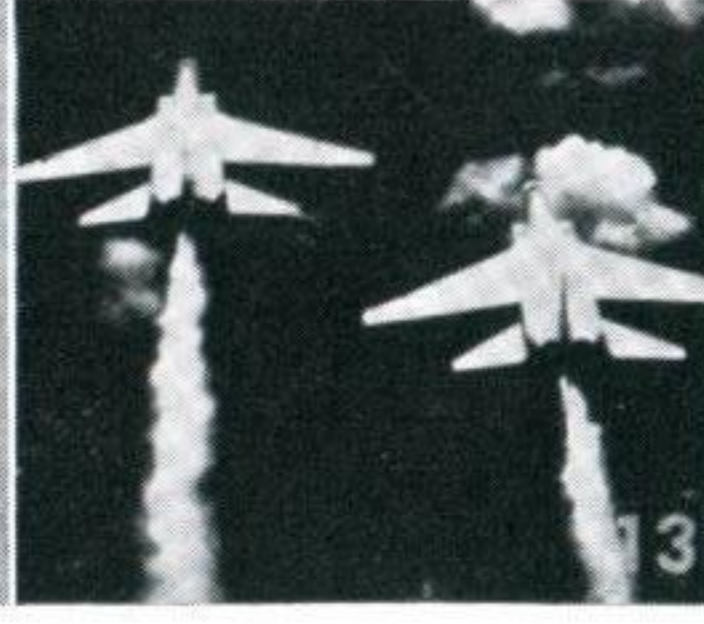
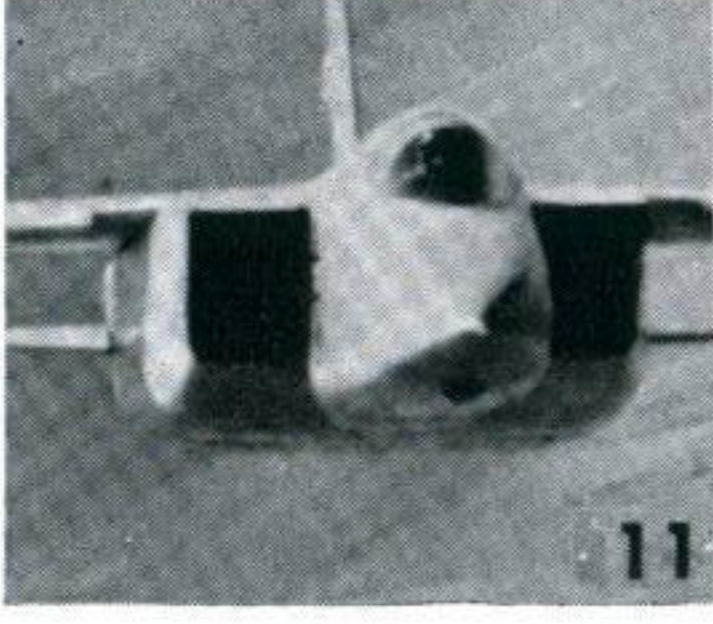
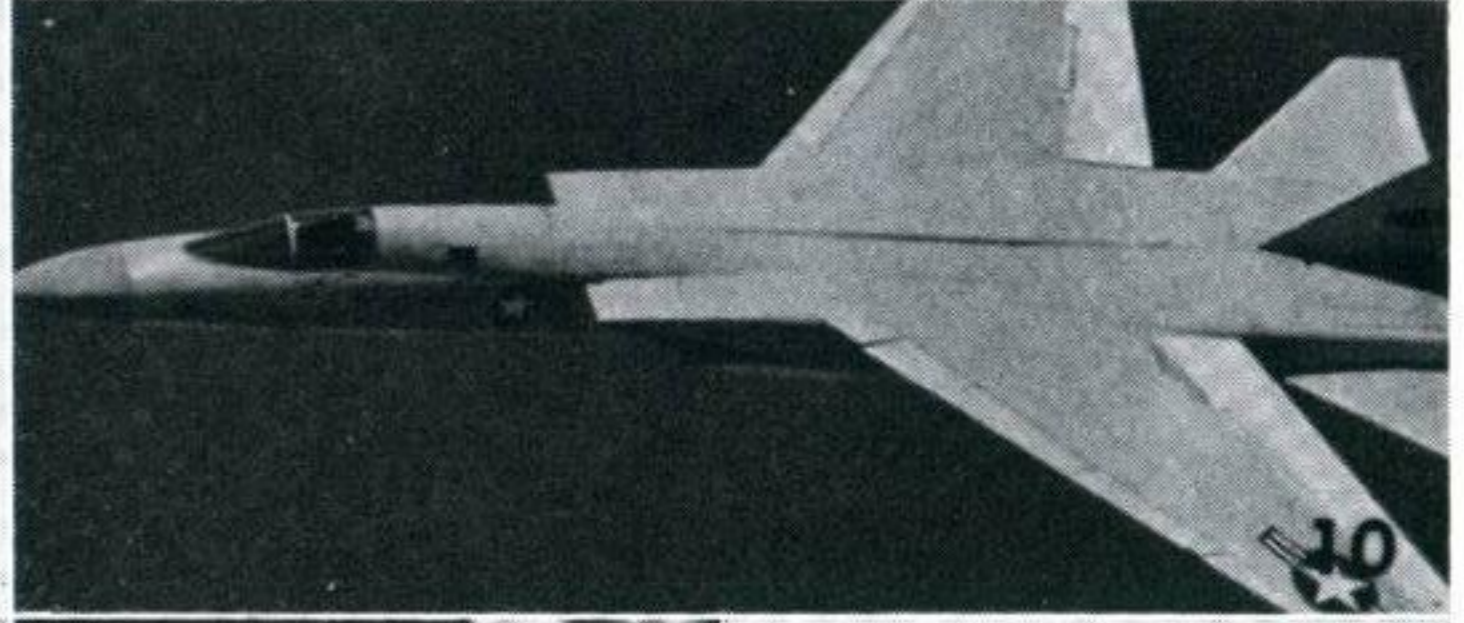
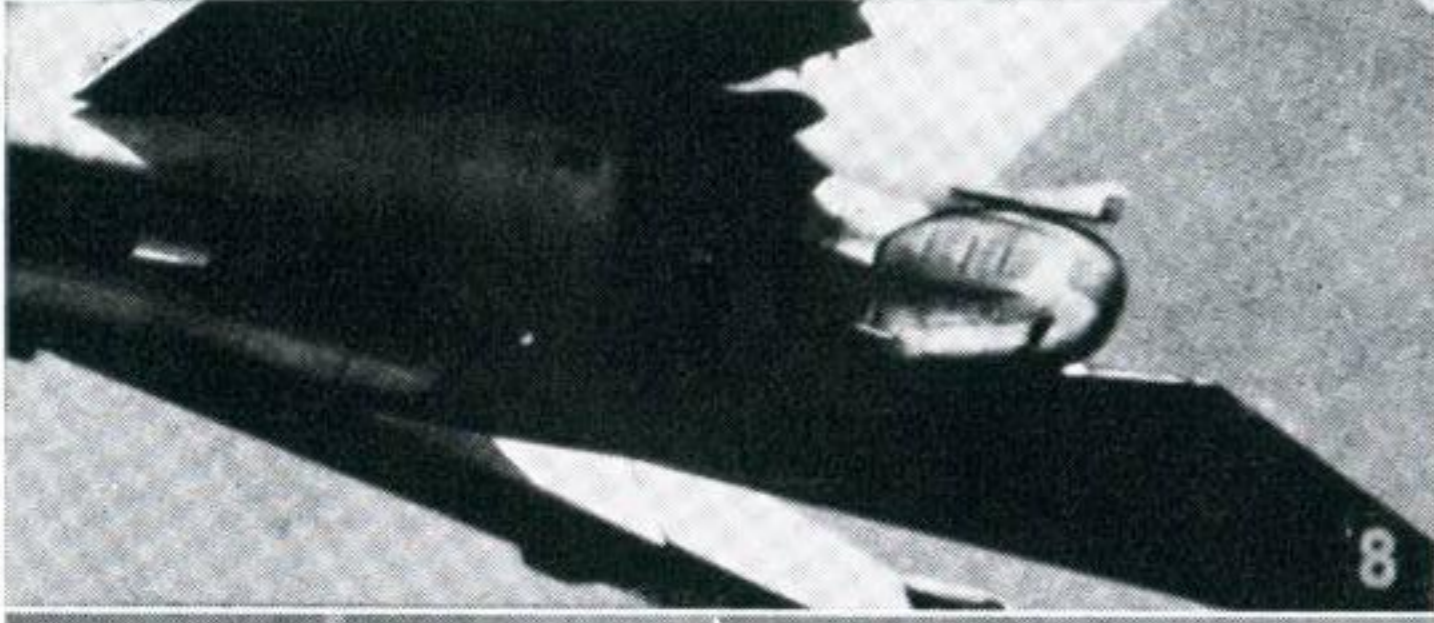
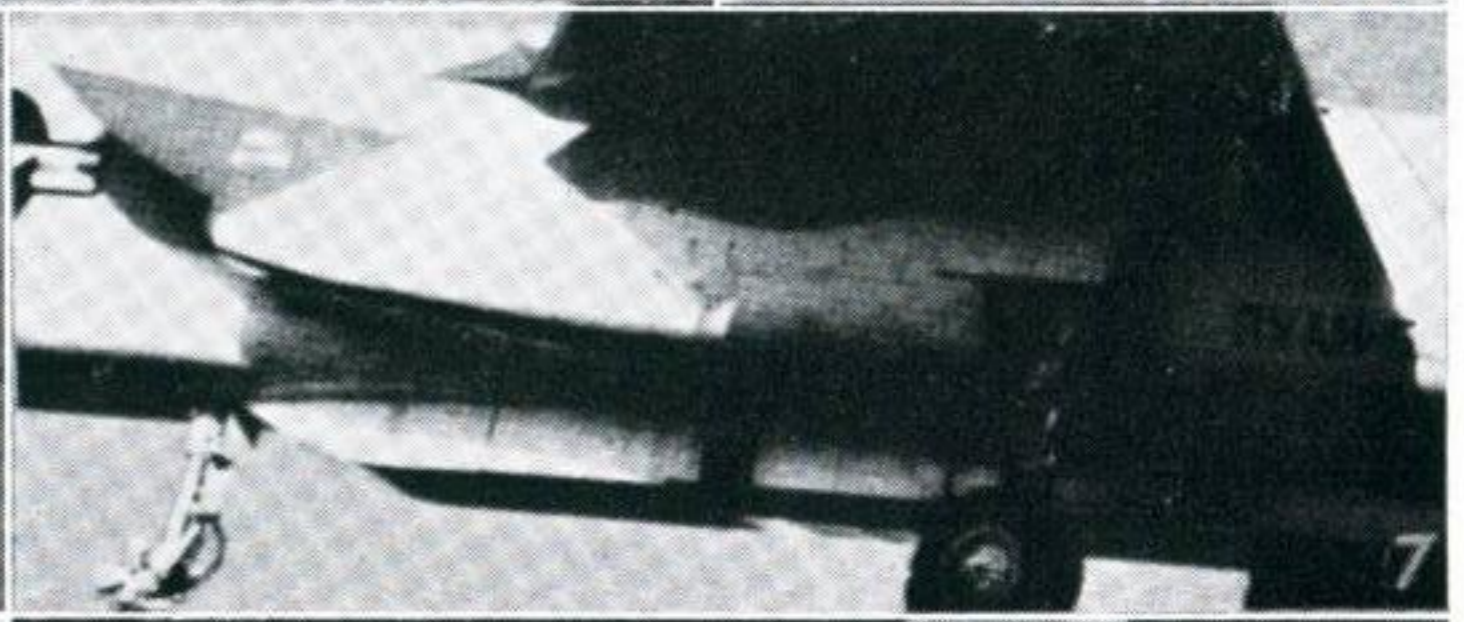
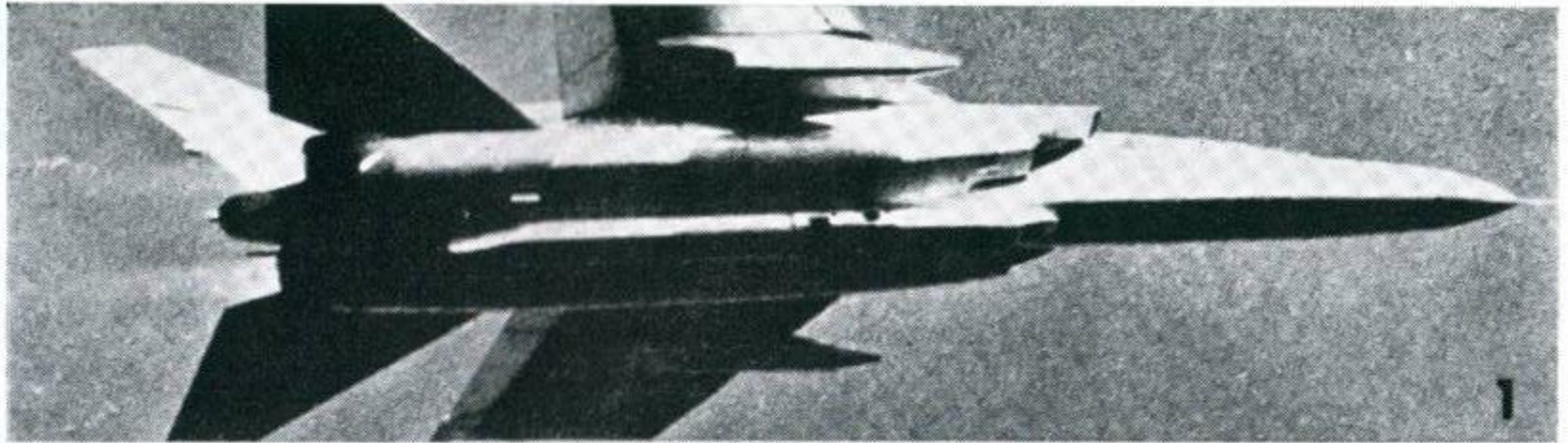
Span 53 feet



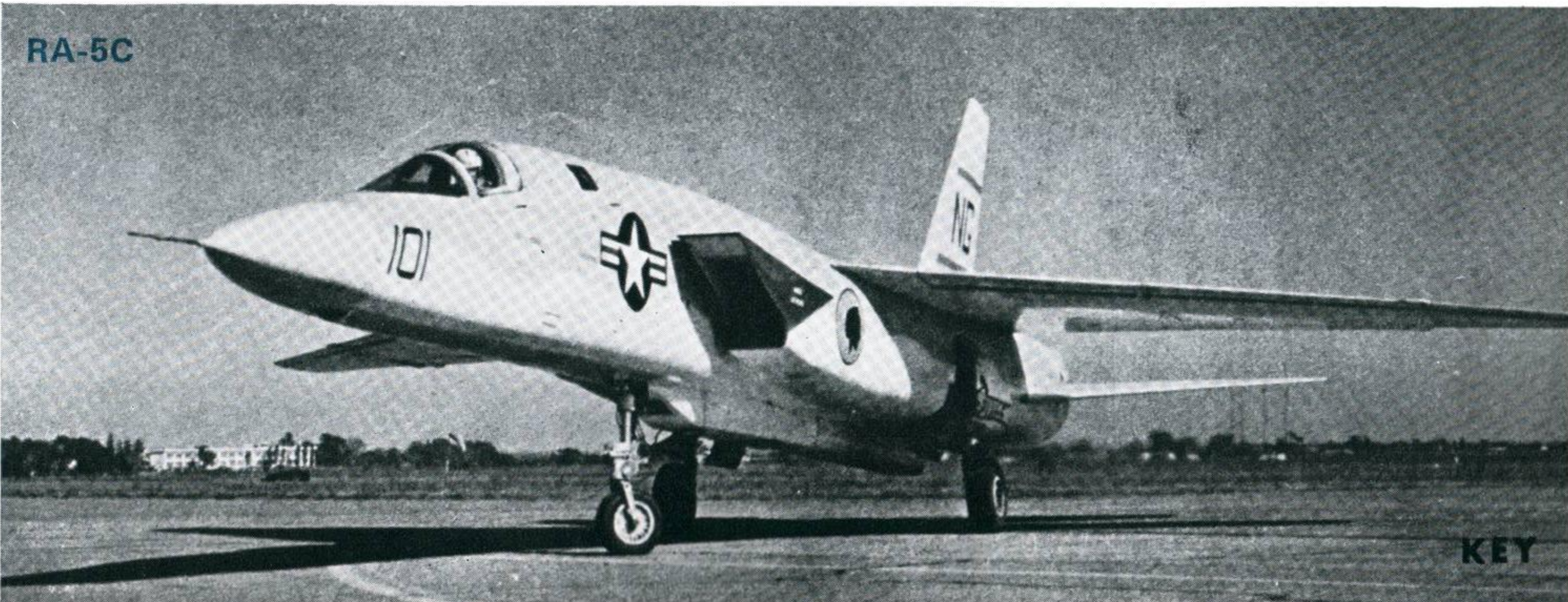
RA-5C



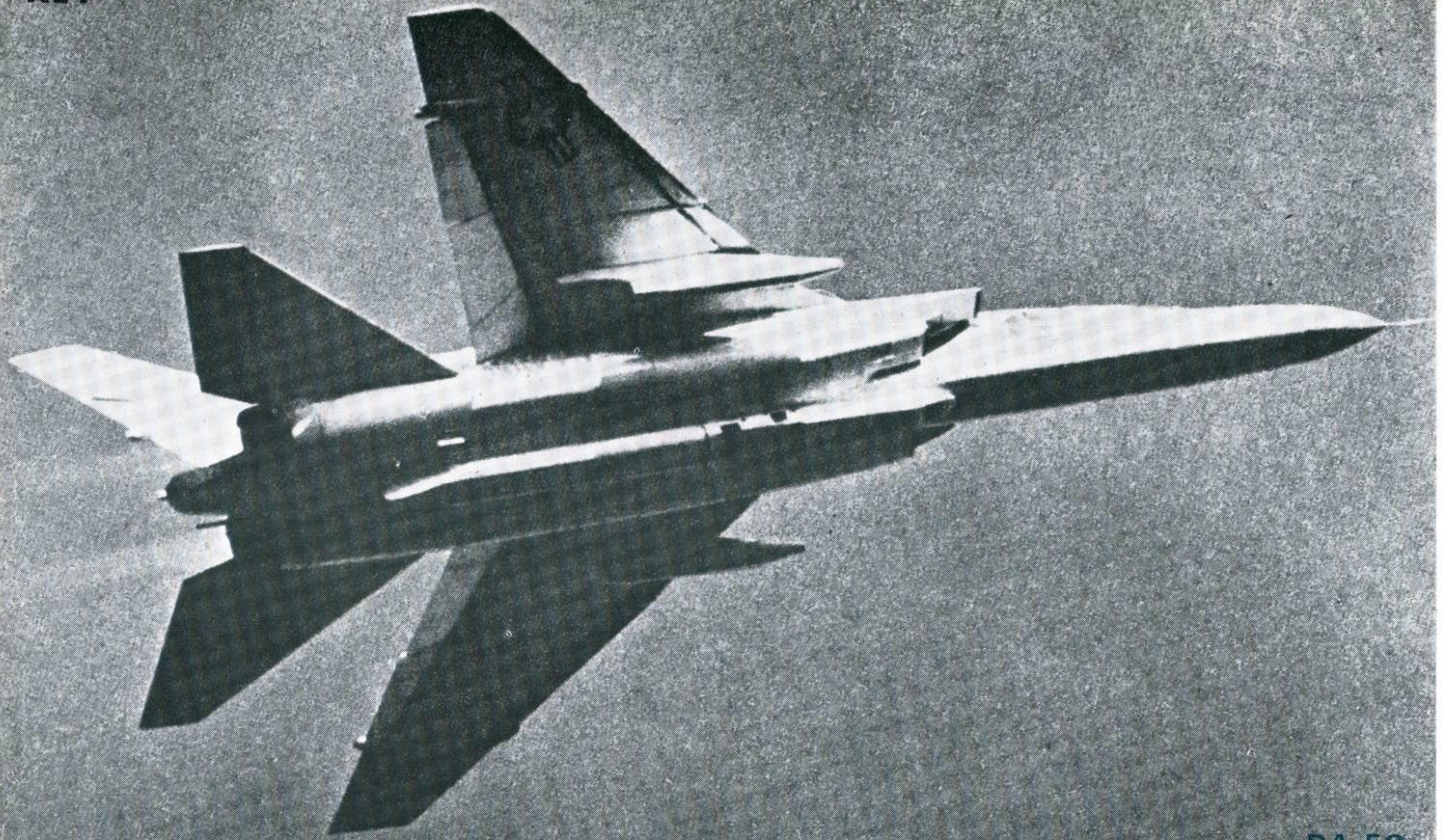
A-5A



RA-5C



KEY



RA-5C

VIGILANTE *continued*



15



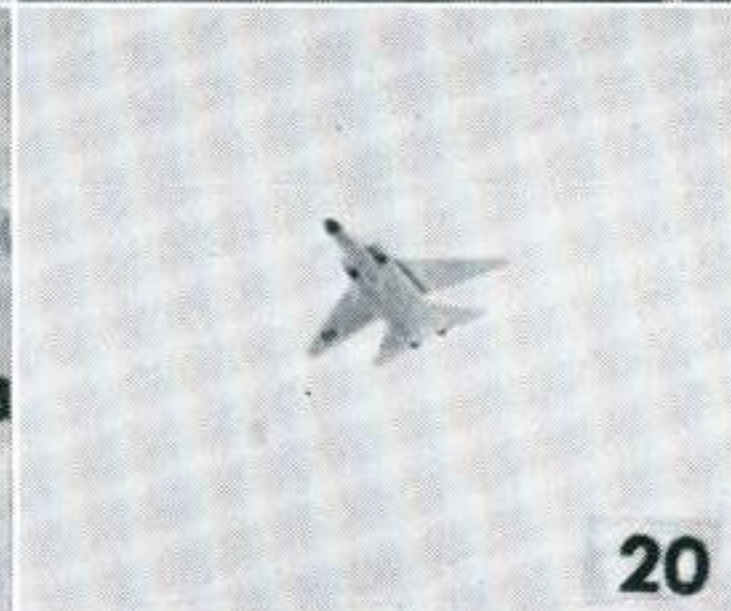
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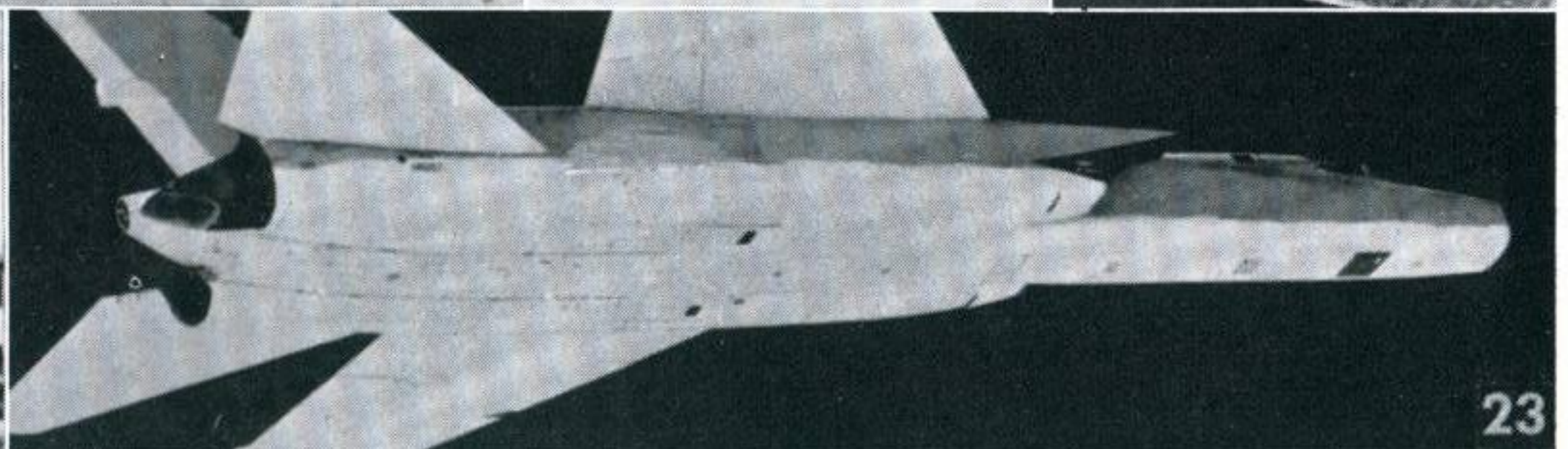
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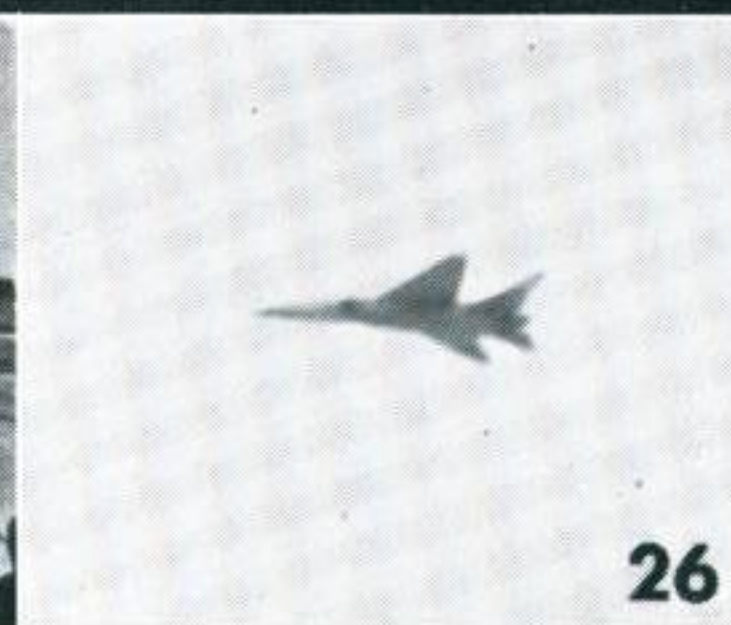
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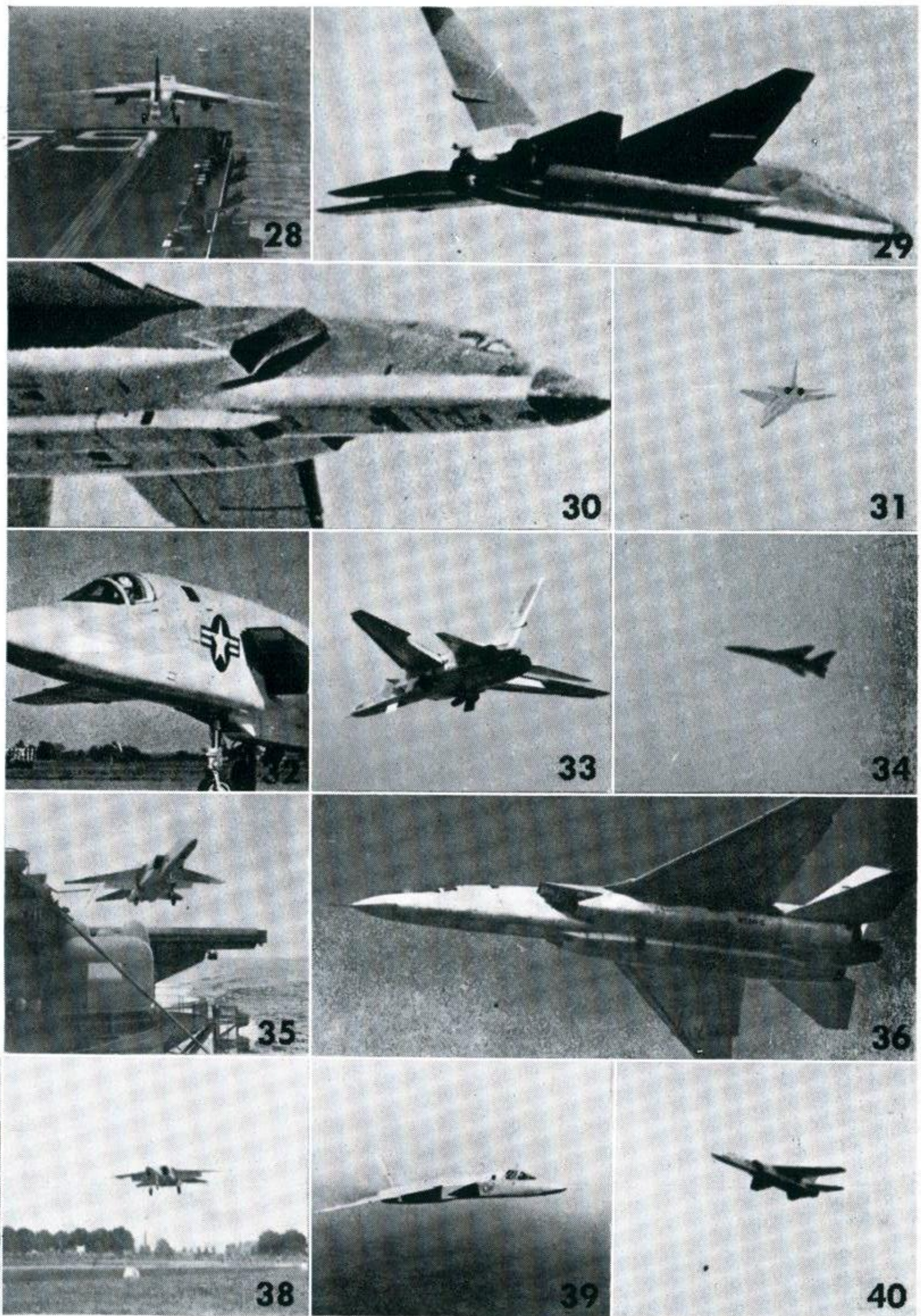


26



27

Span 53 feet



Lesson instructions are on page 60 Solutions are on the back cover

KEY



A-5A



KEY

HOOK

First announced in late 1957, Russia's Mi-6 Hook remains the largest helicopter currently flying anywhere in the world. It has lifted payloads of up to 44,350 lb. and apart from carrying bulky freight and vehicles internally it can carry freight externally; when used in this flying crane role the stub wings are removed. A fire-fighting version, carrying several tons of water in tanks inside its cabin also exists, and on this version

the stub wings are deleted, a feature to be noted.

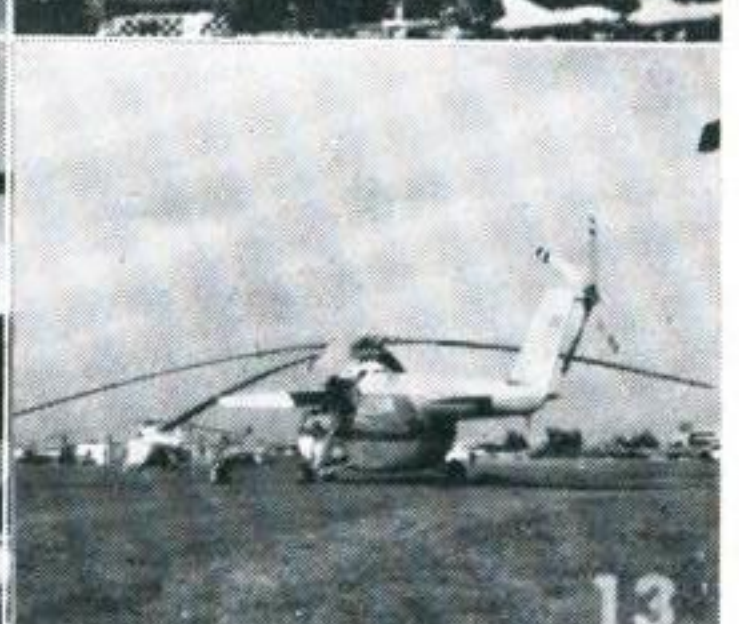
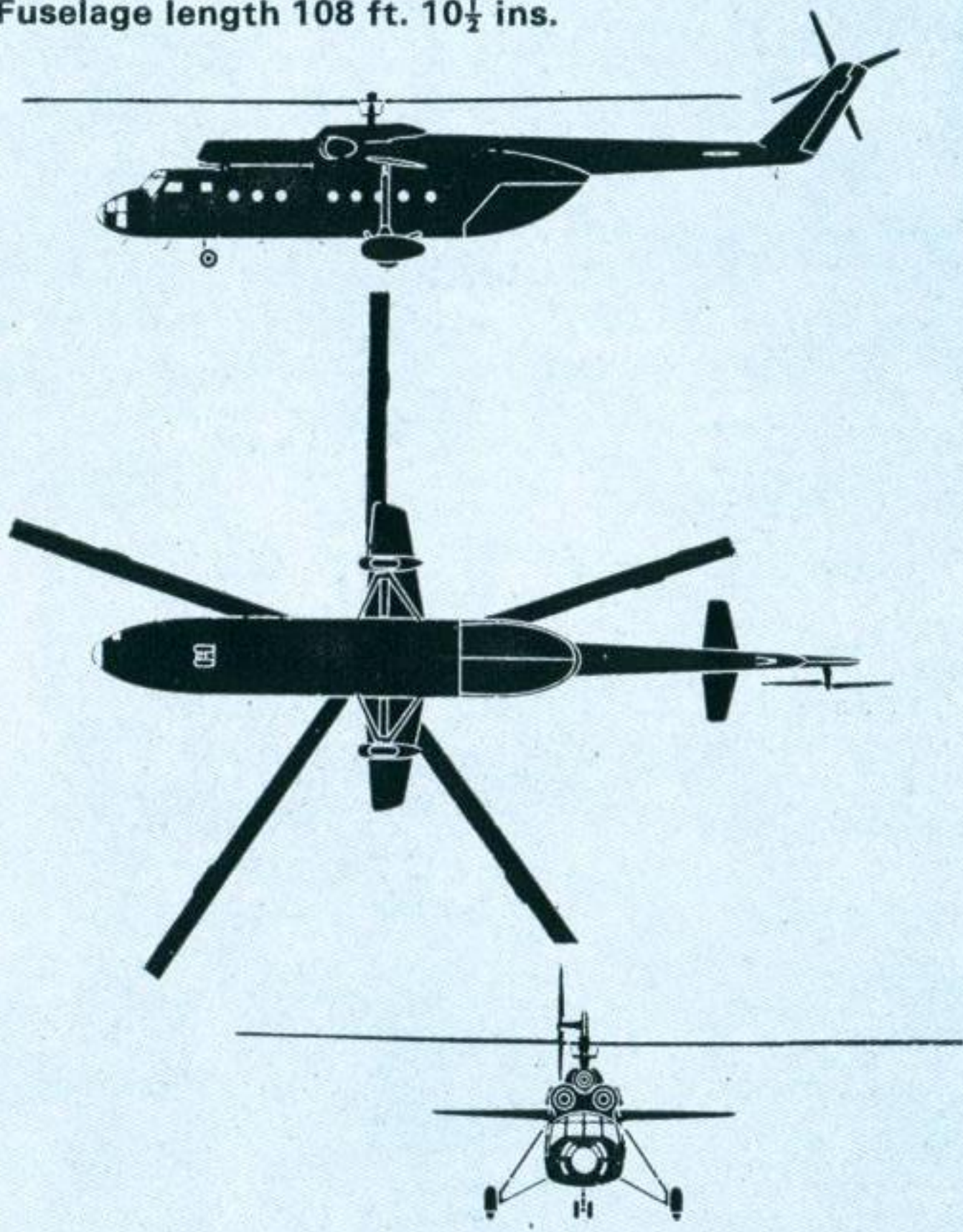
In addition to being in service in Russia, Hook is used by the Egyptian and North Vietnamese Air Forces and at least one has been supplied to the Indonesian Air Force.

Work to the lesson instructions on page 60 and report all targets as Hook—or otherwise if jokers. Solutions are on the back cover.



continued overleaf

Fuselage length 108 ft. 10½ ins.



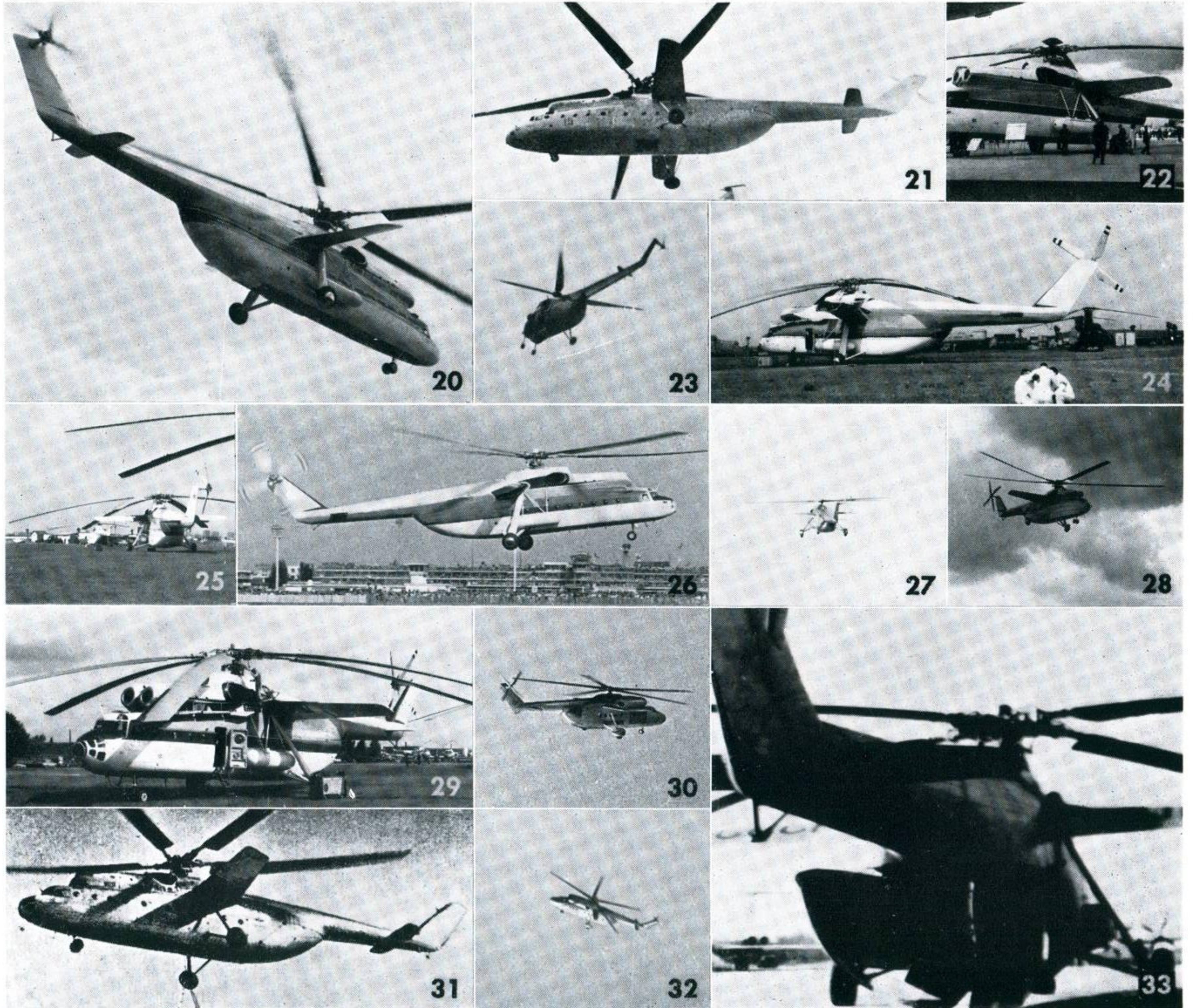
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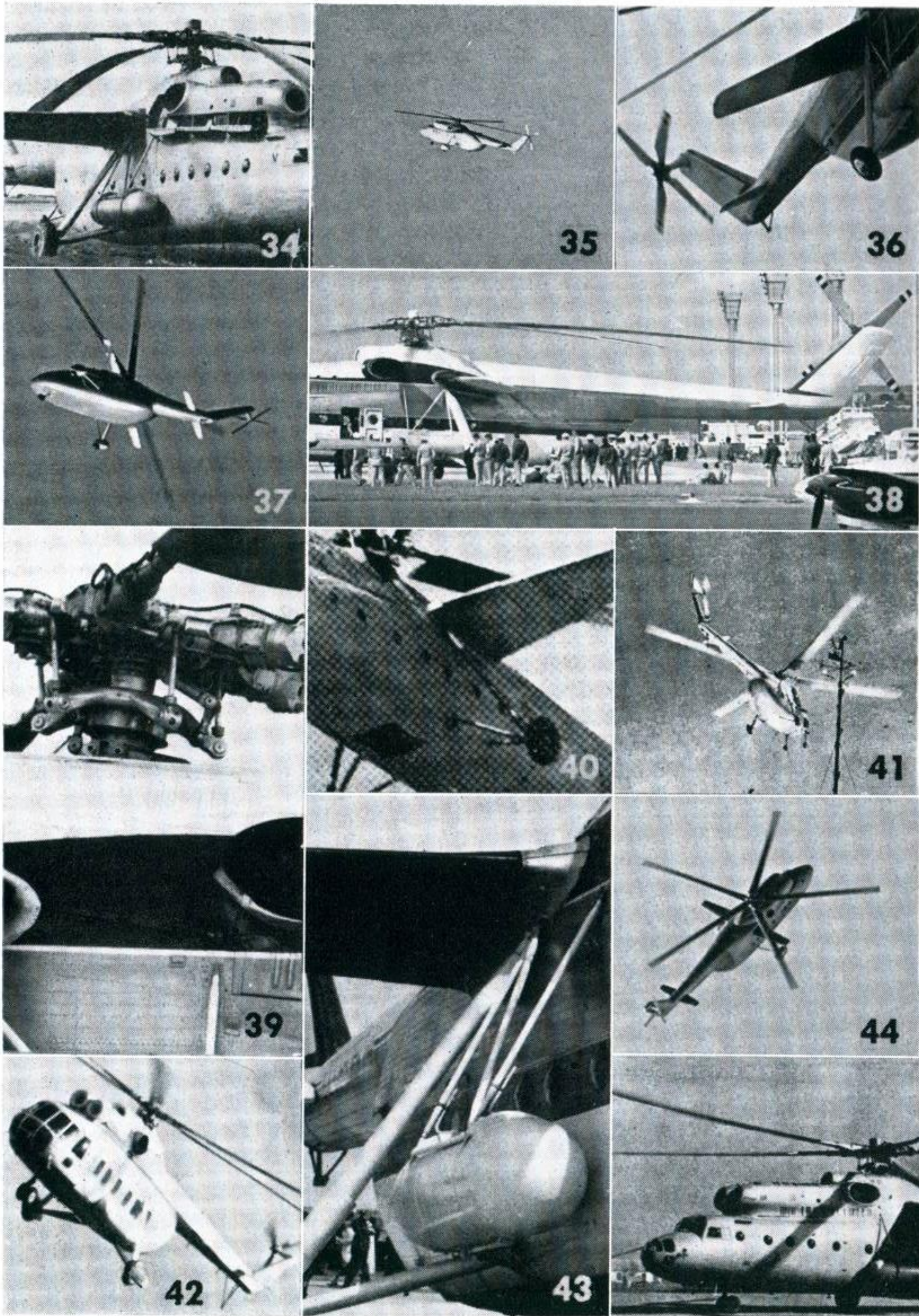




KEY

HOOK *continued*





Fuselage length 108 ft. 10½ ins.



Lesson instructions are on page 60 Solutions on the back cover



RN BRAVE CLASS FAST PATROL BOATS

These two craft (built by Vosper at Portsmouth) joined the fleet in 1960. They can serve as torpedo boats or gunboats or even as minelayers, and high speed raiding craft for Commandos.

In August 1962 both were attached to the Fishery Protection Squadron in British waters, to achieve greater surprise in areas where poaching was likely, a role for which with their high speed they were eminently suitable.

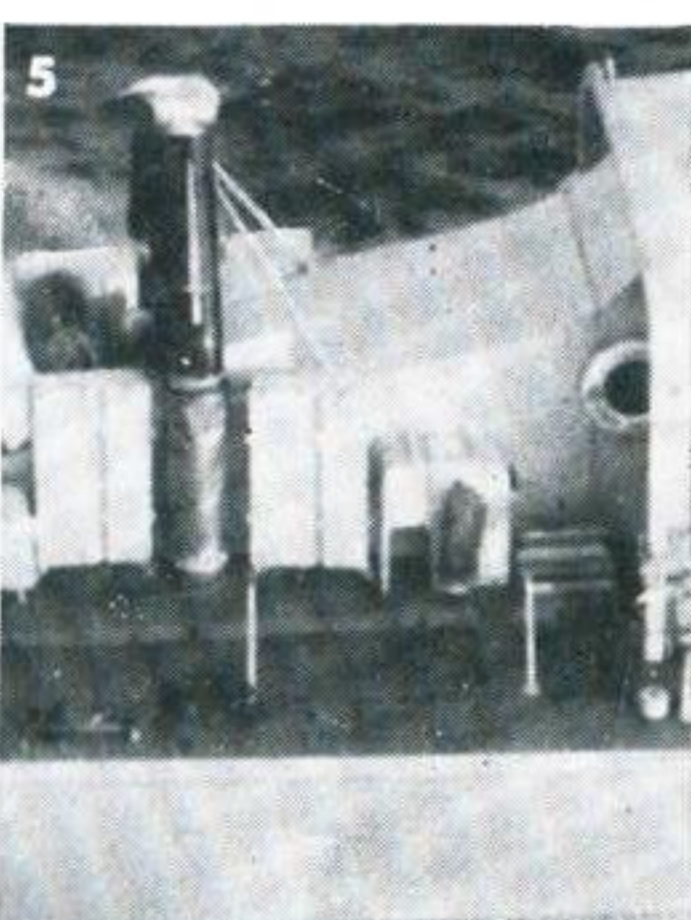
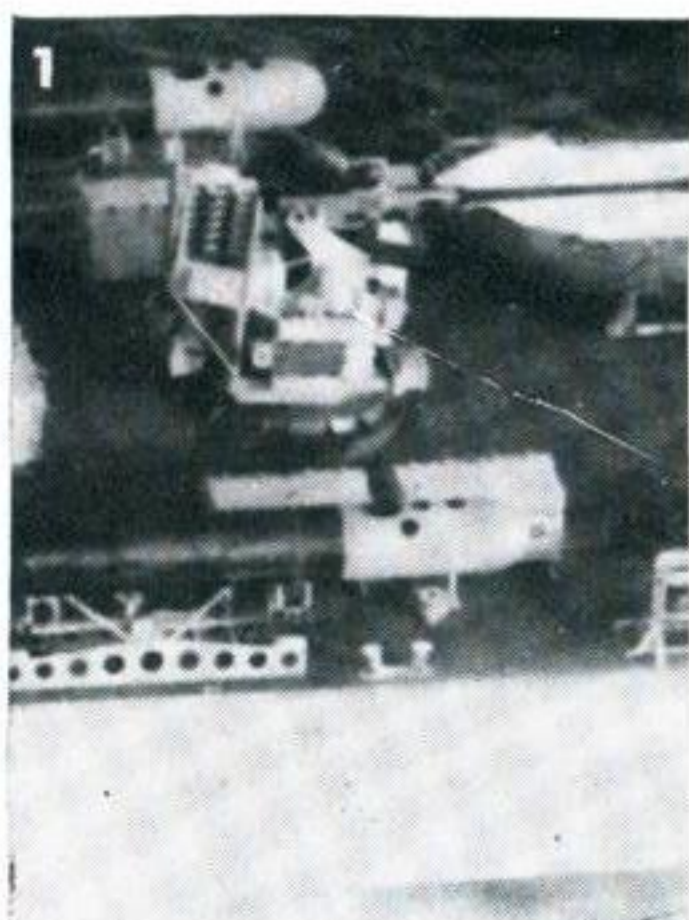
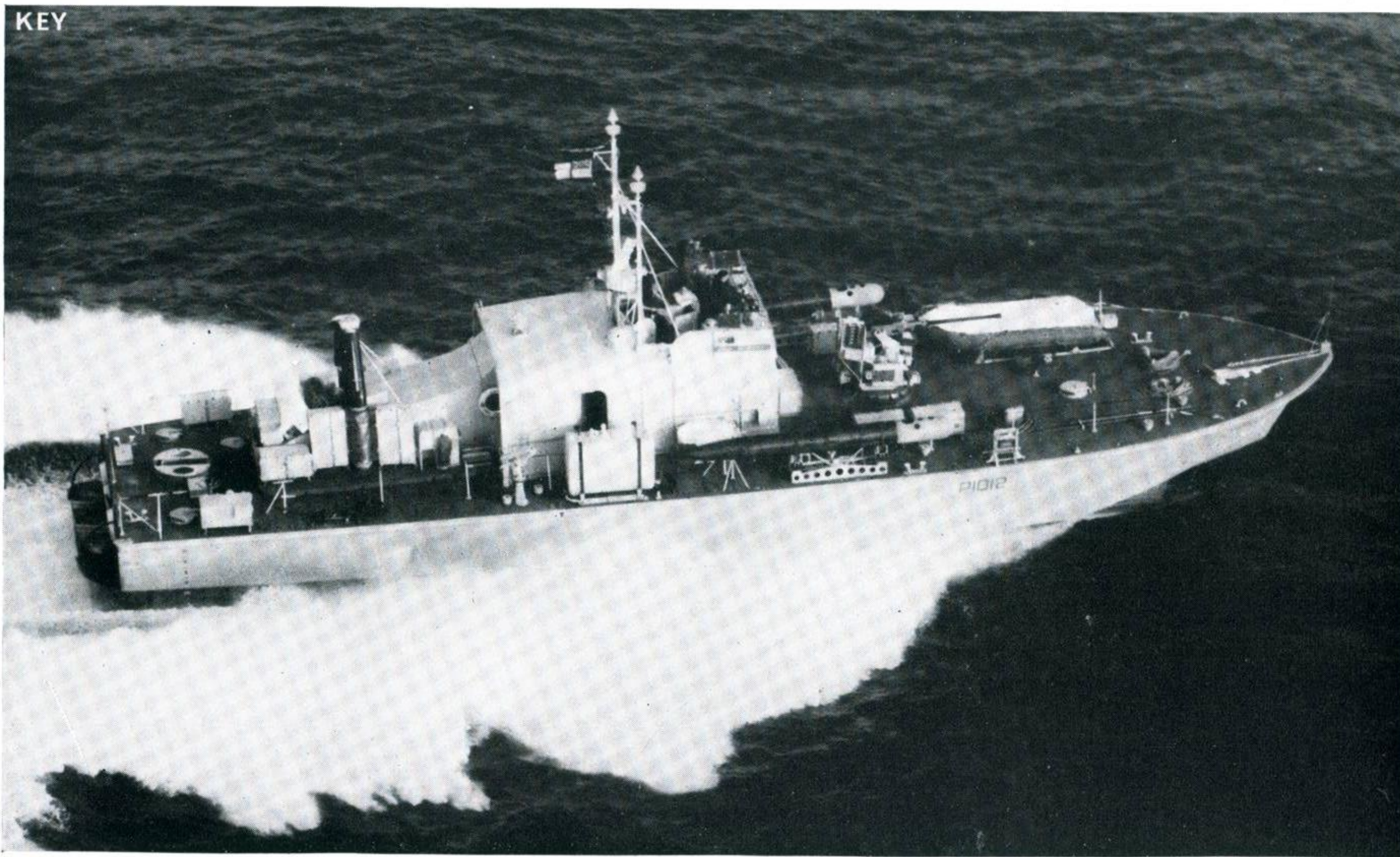
With an overall length of just under 100 feet they are powered by three Proteus gas turbines originally designed for aircraft use. These give a service speed of 46 knots and a maximum speed of 52 knots. Rover gas turbines driving Metro-Vickers-40 kW generators provide electrical power.

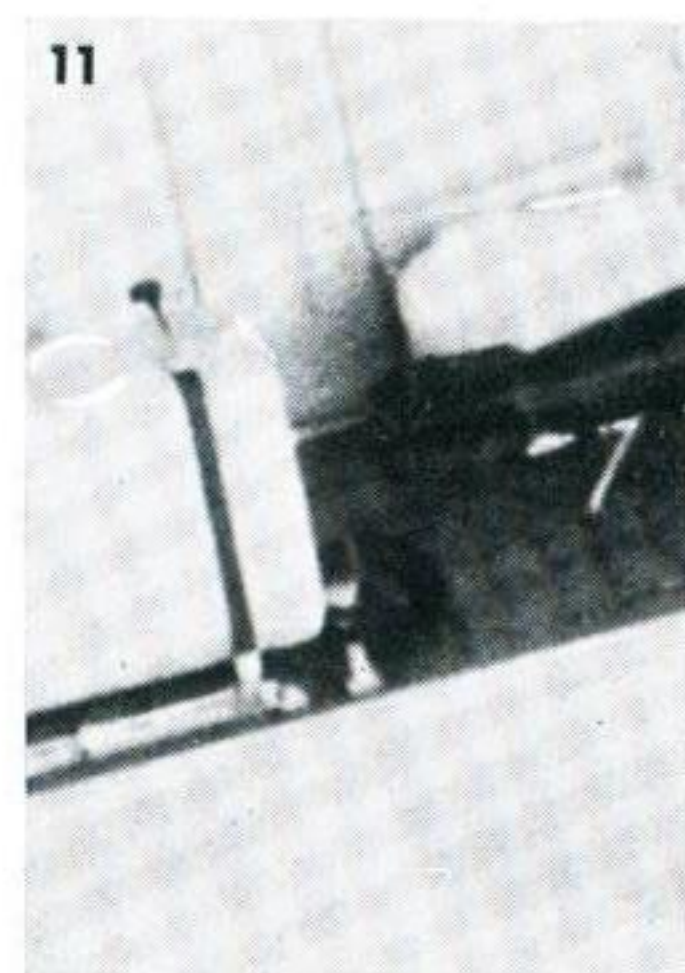
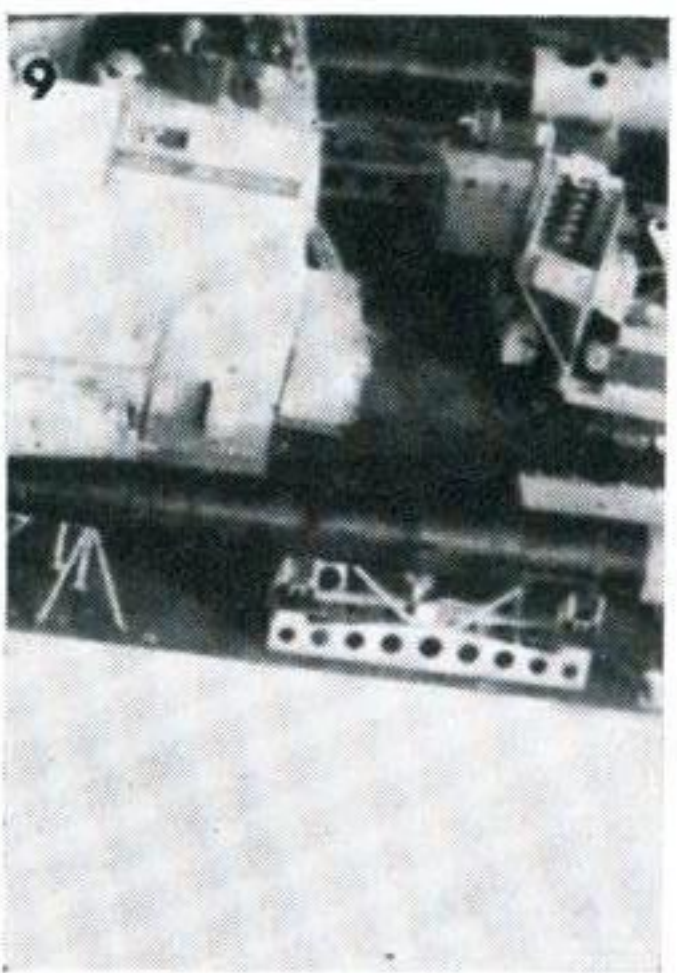
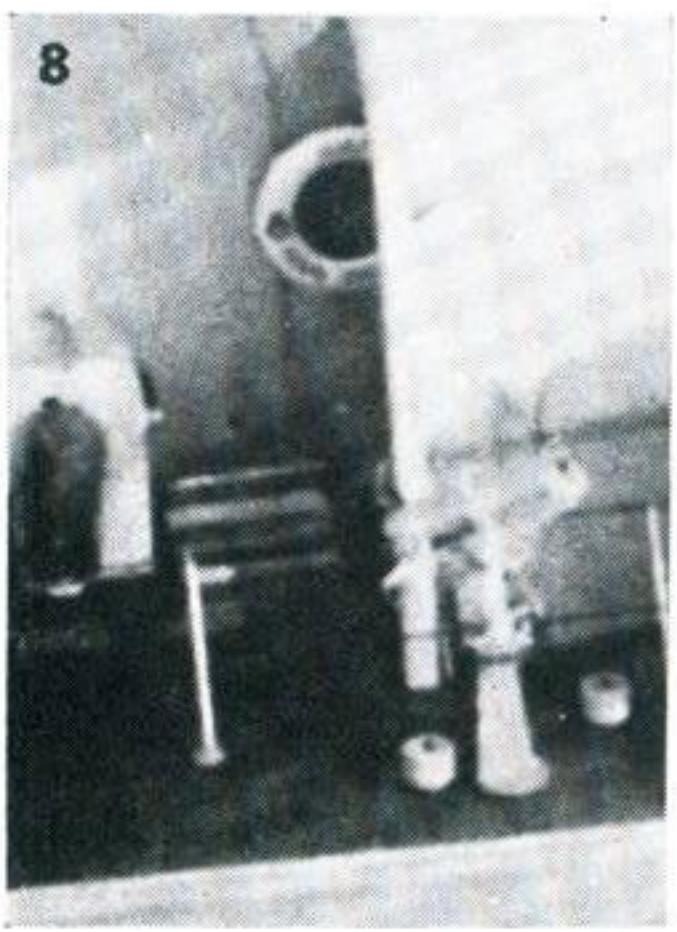
As motor gunboats they carry two 40-mm. guns and two 21-inch side-launched torpedoes and as torpedo boats they carry one gun and four torpedoes.

They were designed as experimental craft for operations in coastal waters against warships and merchant ships, a role not unlike that of the "Osa" and "Komar" class vessels of the U.S.S.R.

There are differences in appearance between these craft, noticeably in the bridge structure.

Follow the lesson instructions on page 60 and check your results with the solutions on the cover, but be sure to complete your solutions list before you do look.





continued overleaf

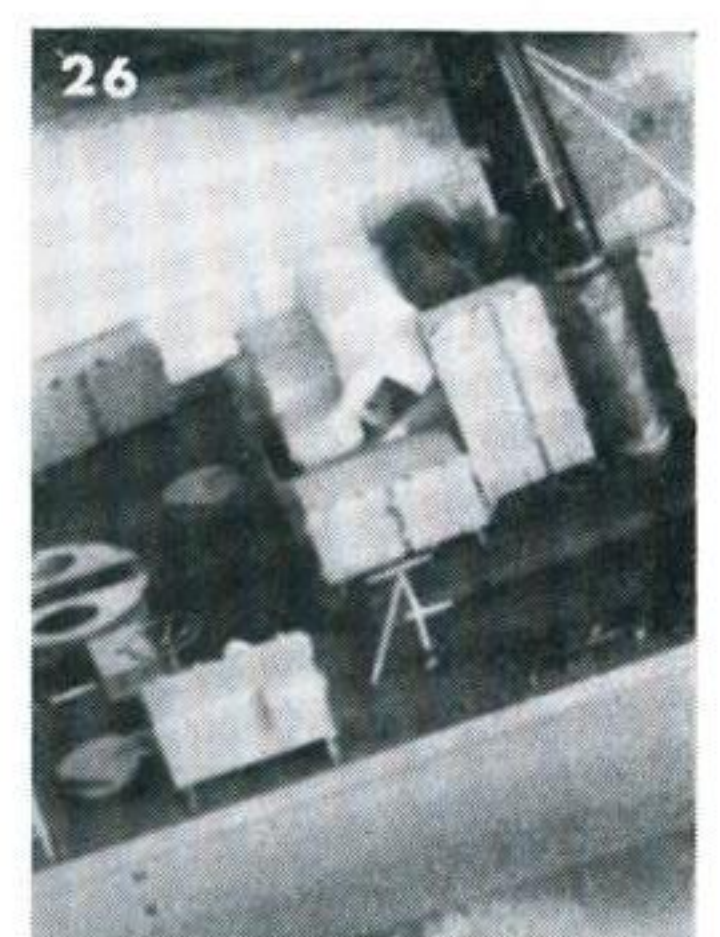
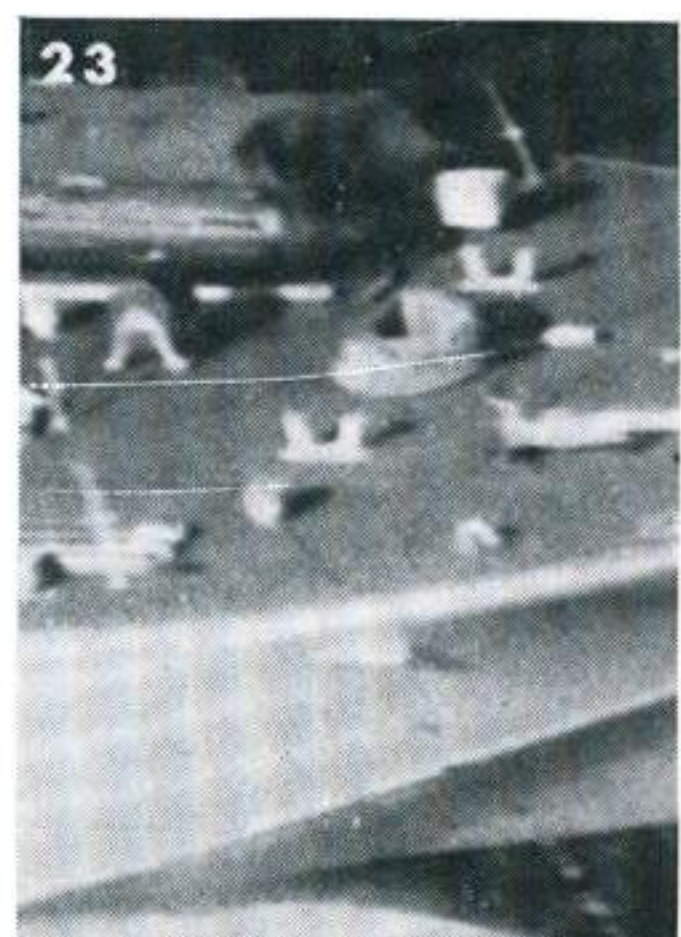
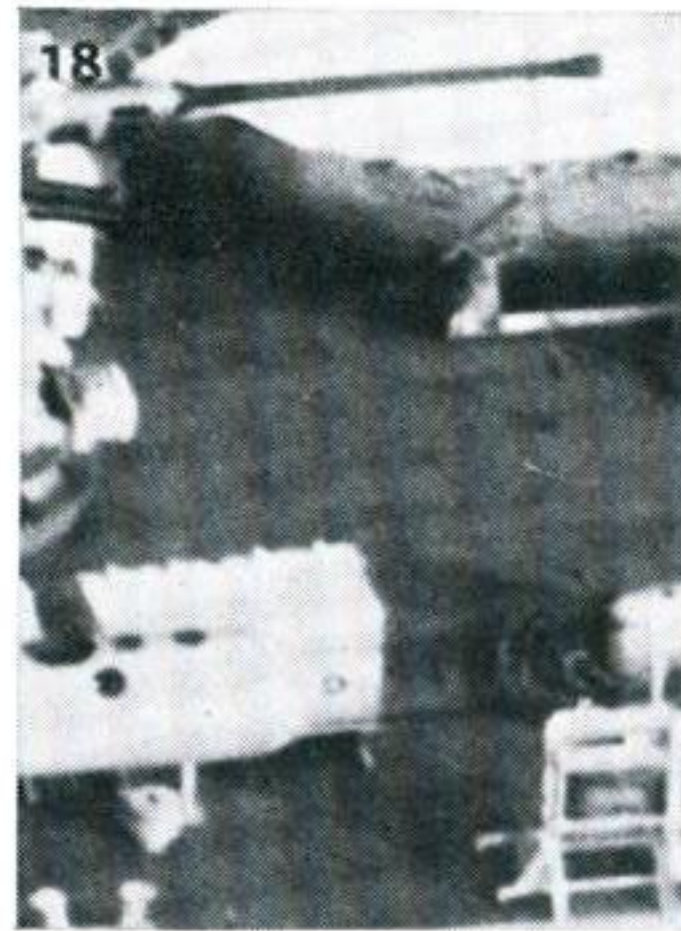
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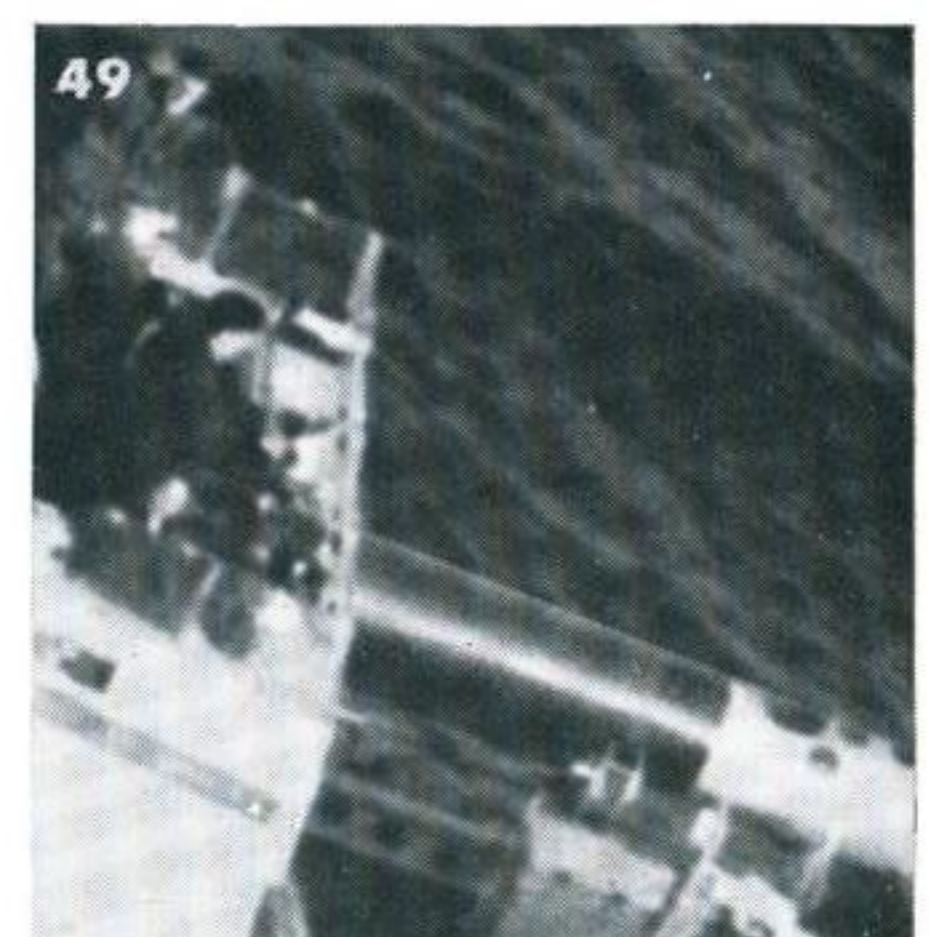
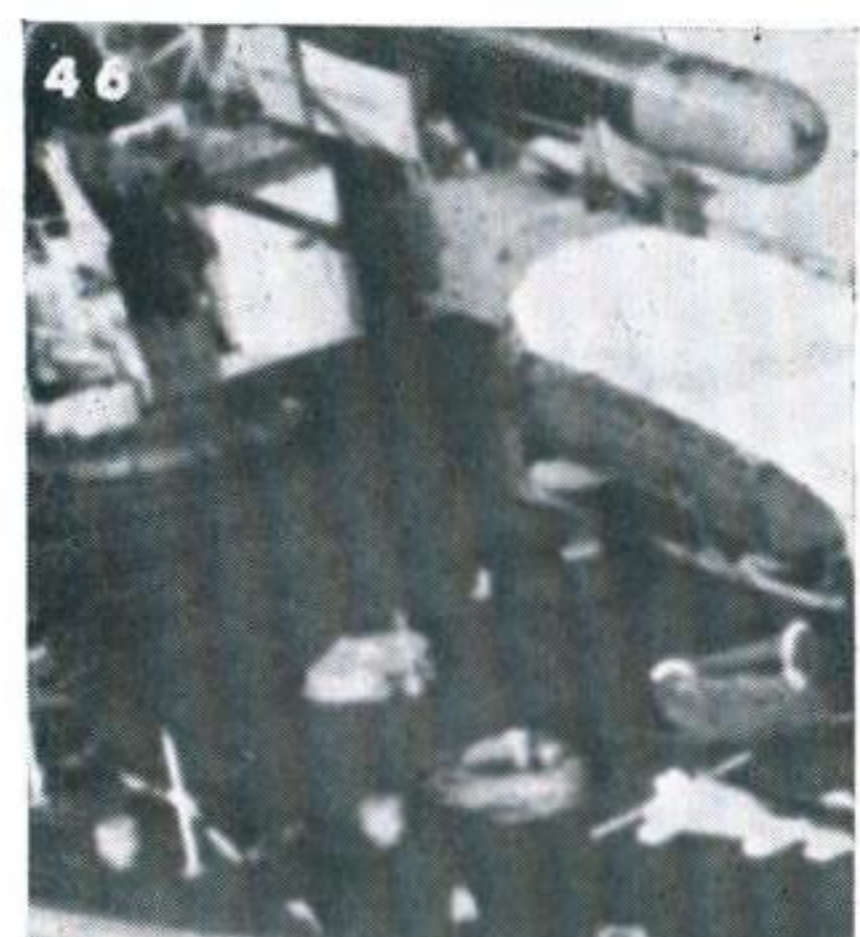
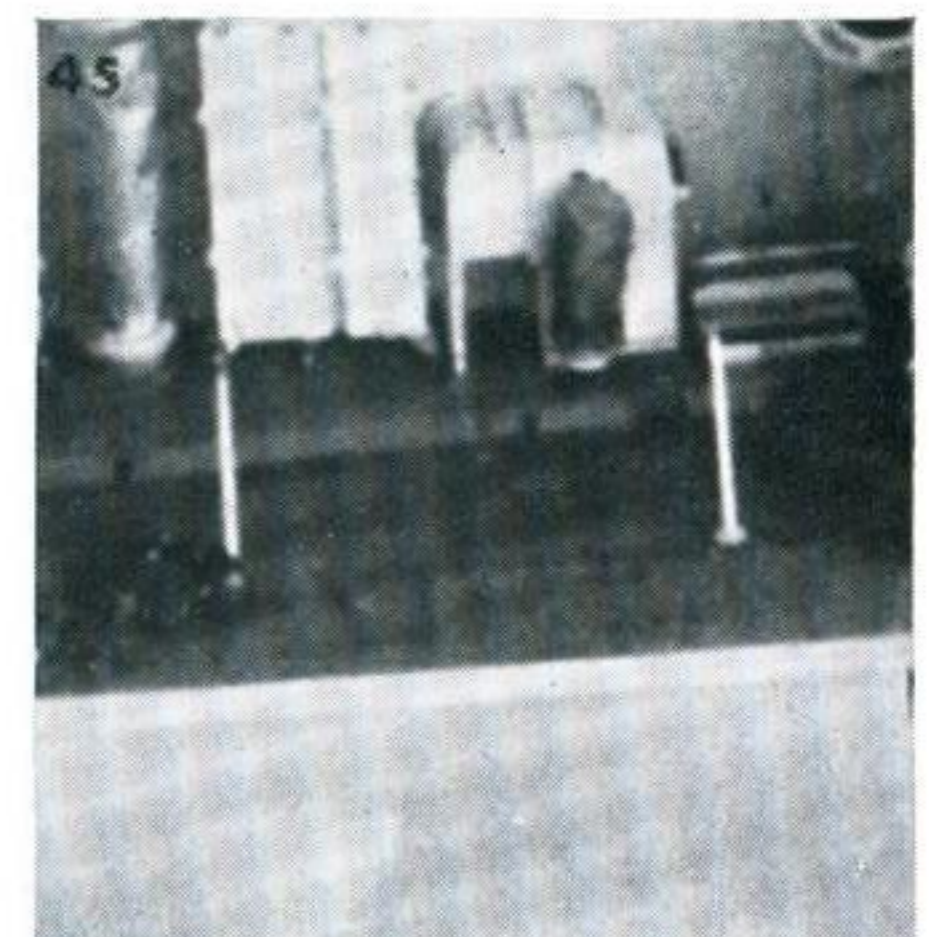
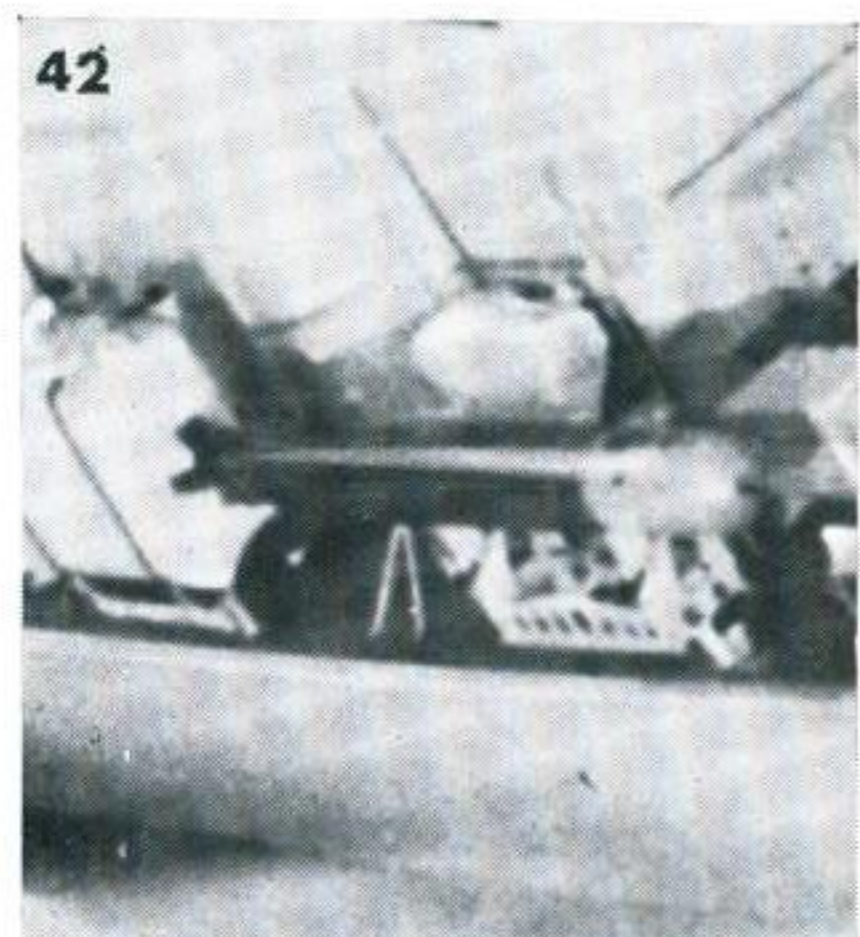
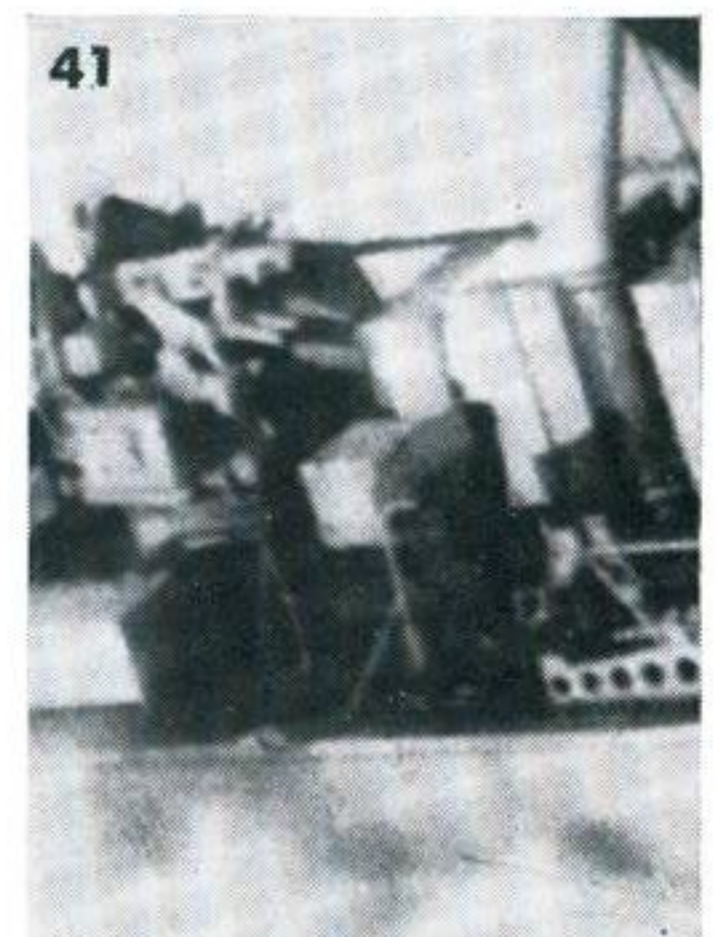
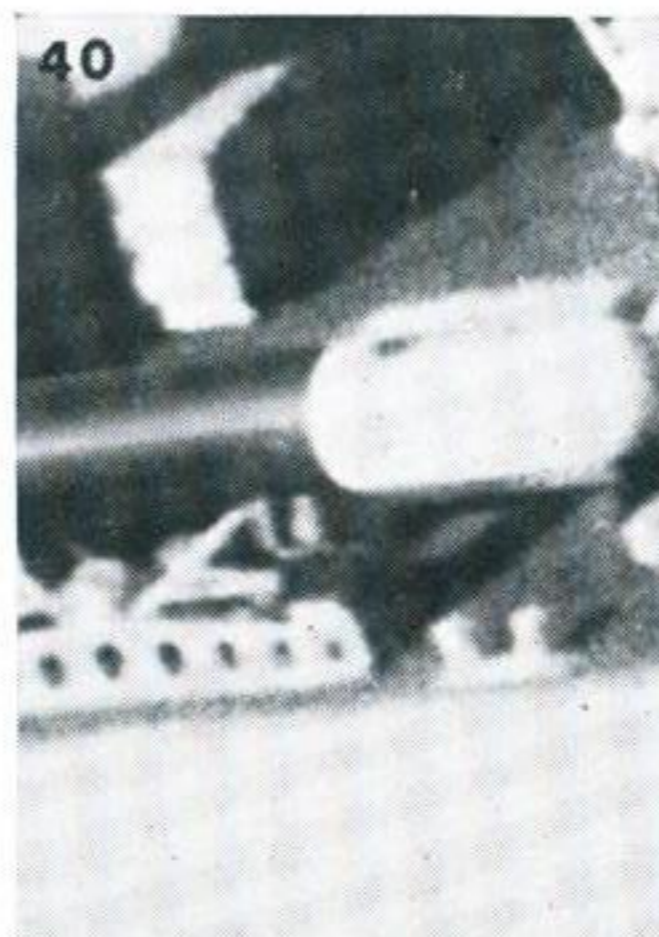
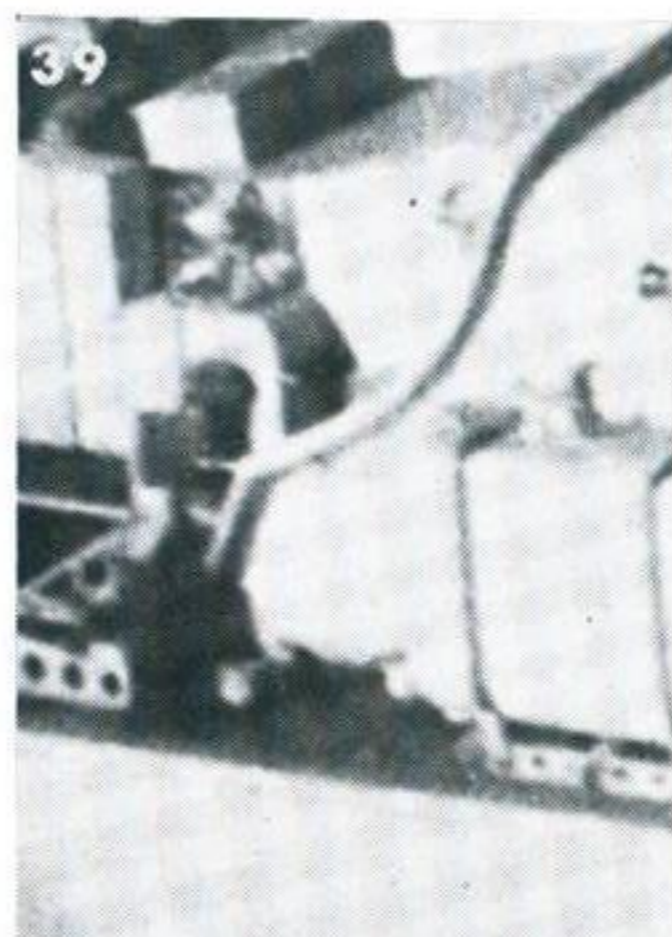
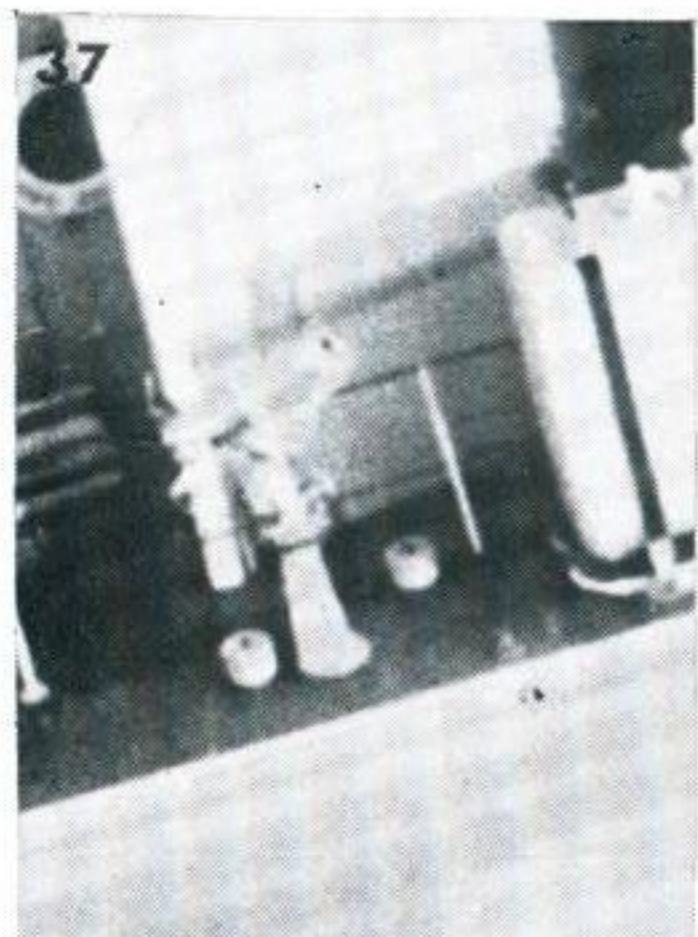
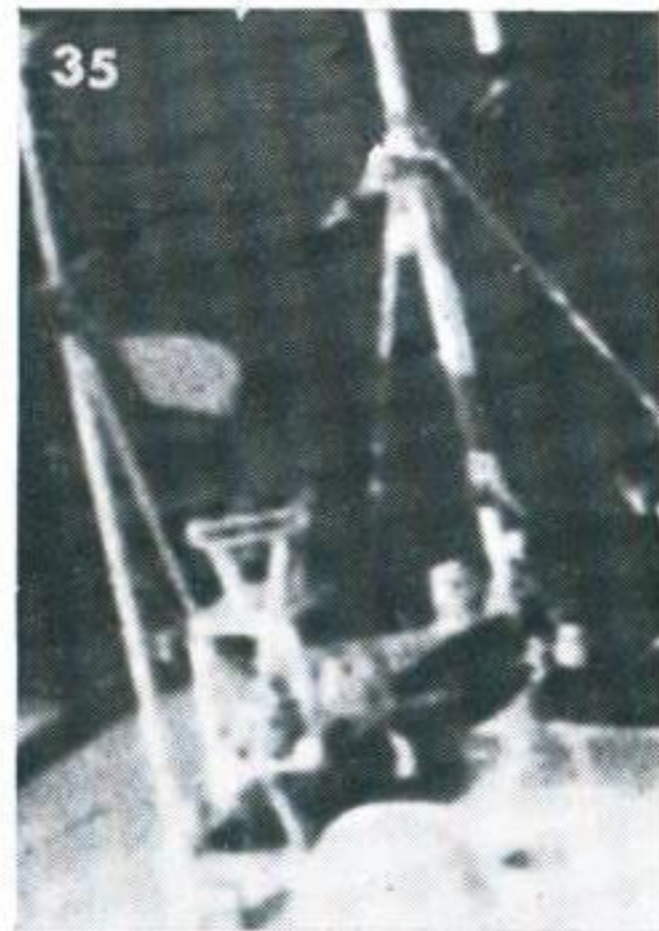
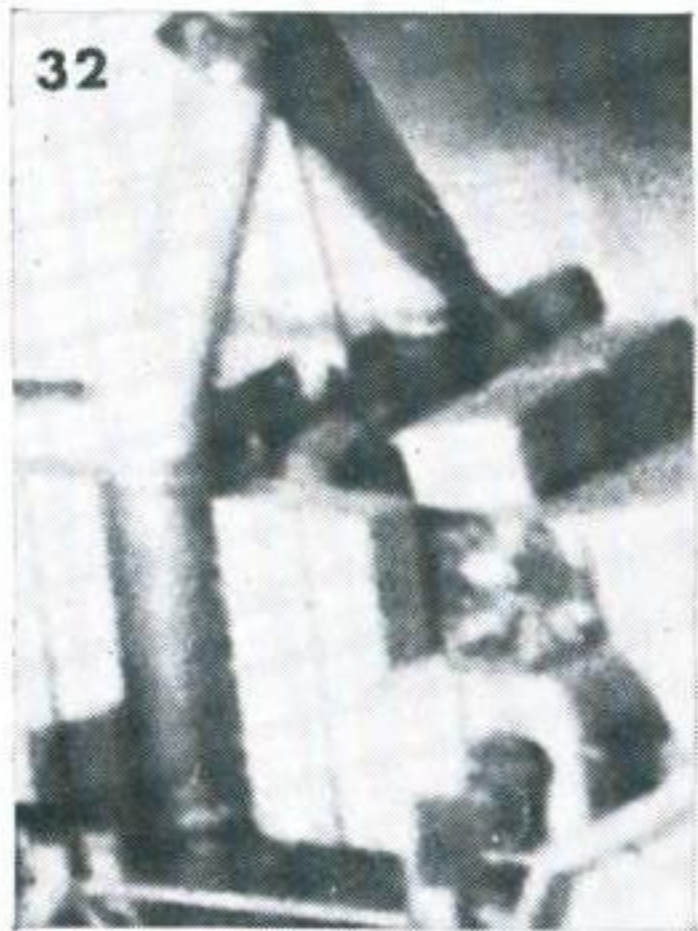
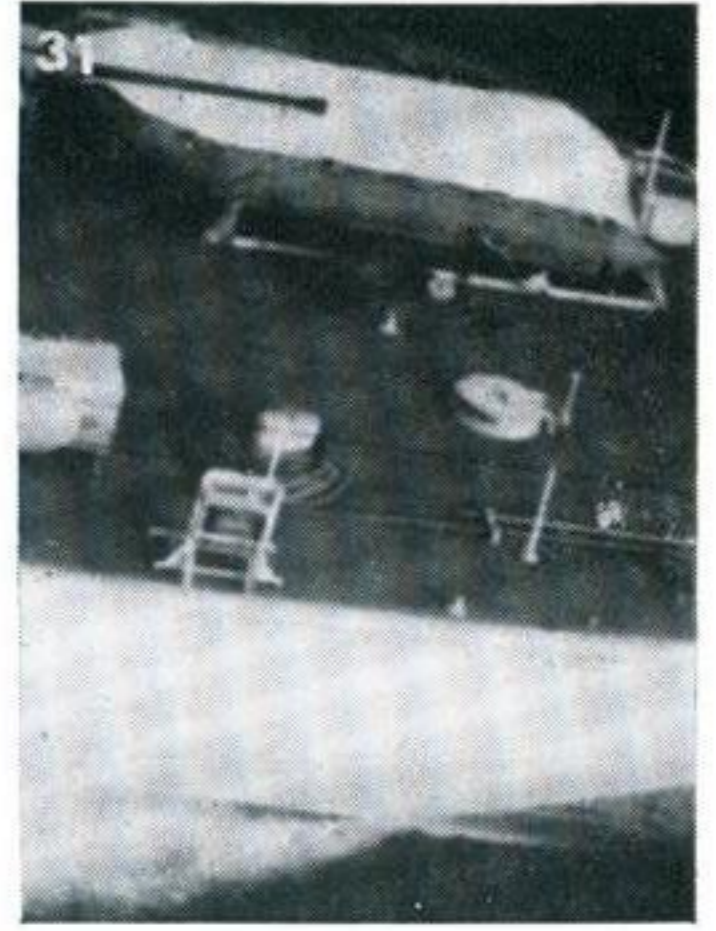
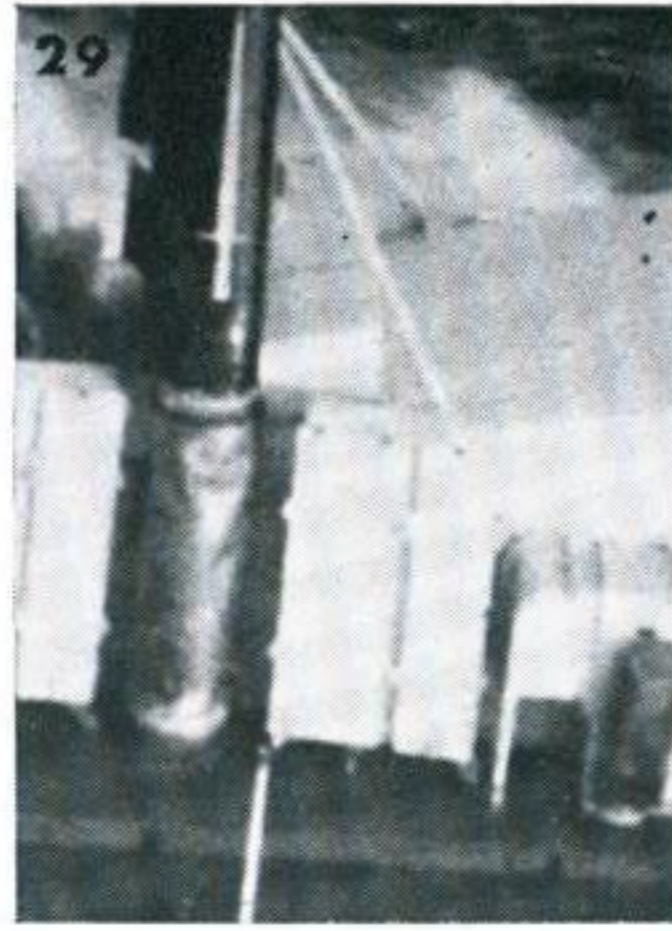
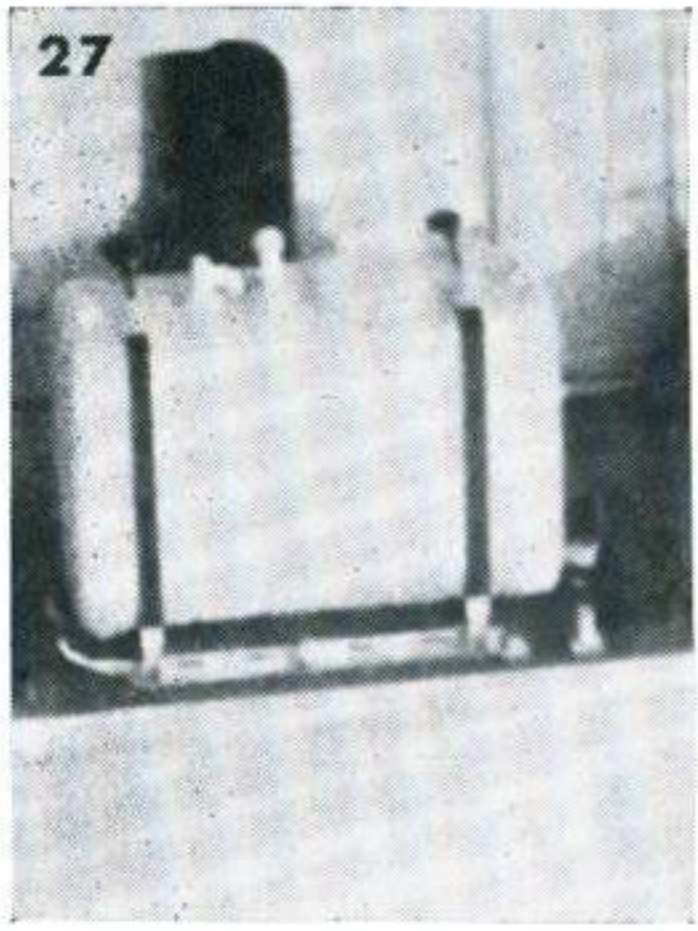
RN BRAVE CLASS FAST PATROL BOATS *continued*



Lesson instructions are on page 60

Solutions on the back cover





GERMAN SPz 12-3 (HS 30)

Armoured Personnel Carrier

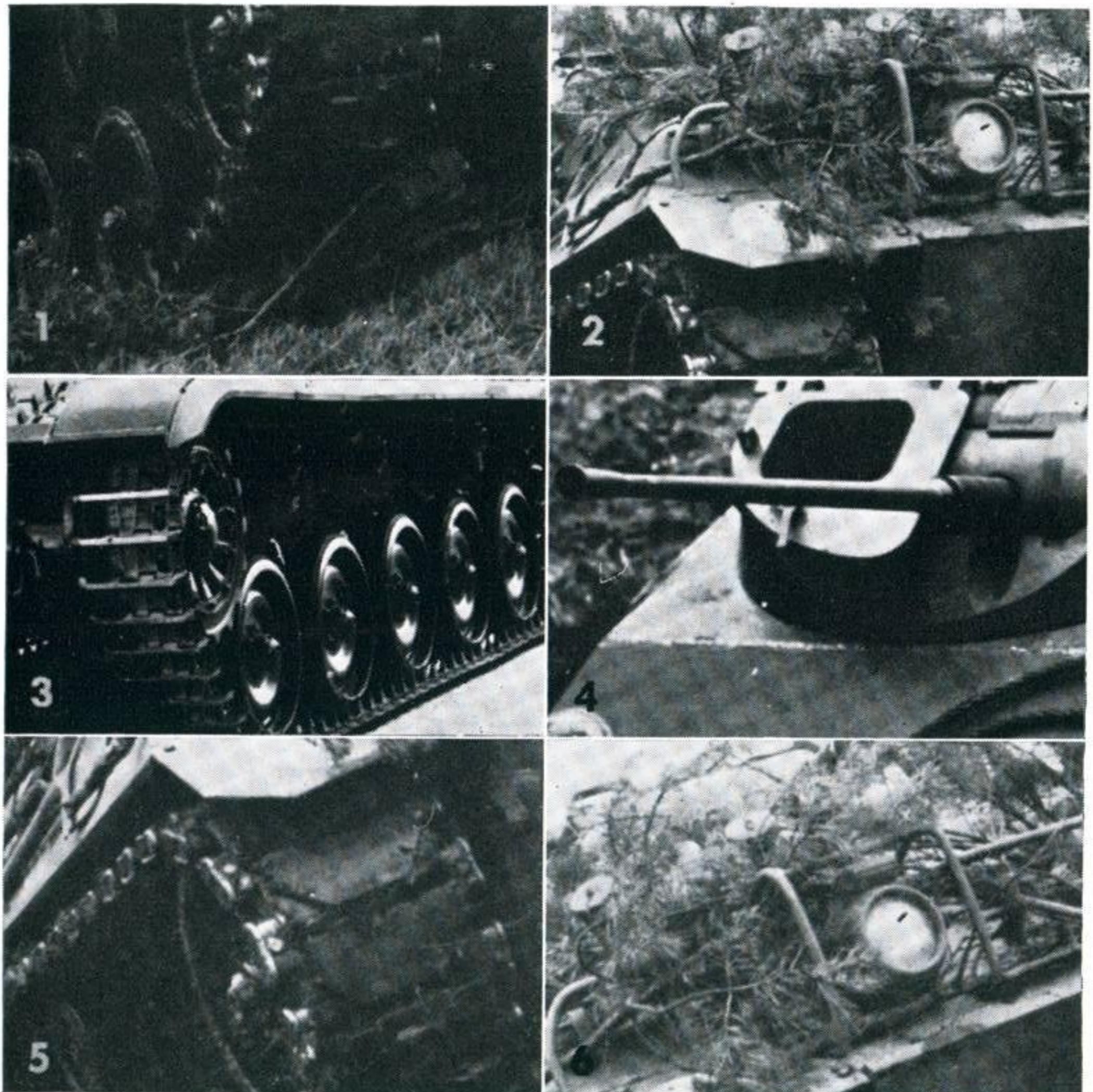


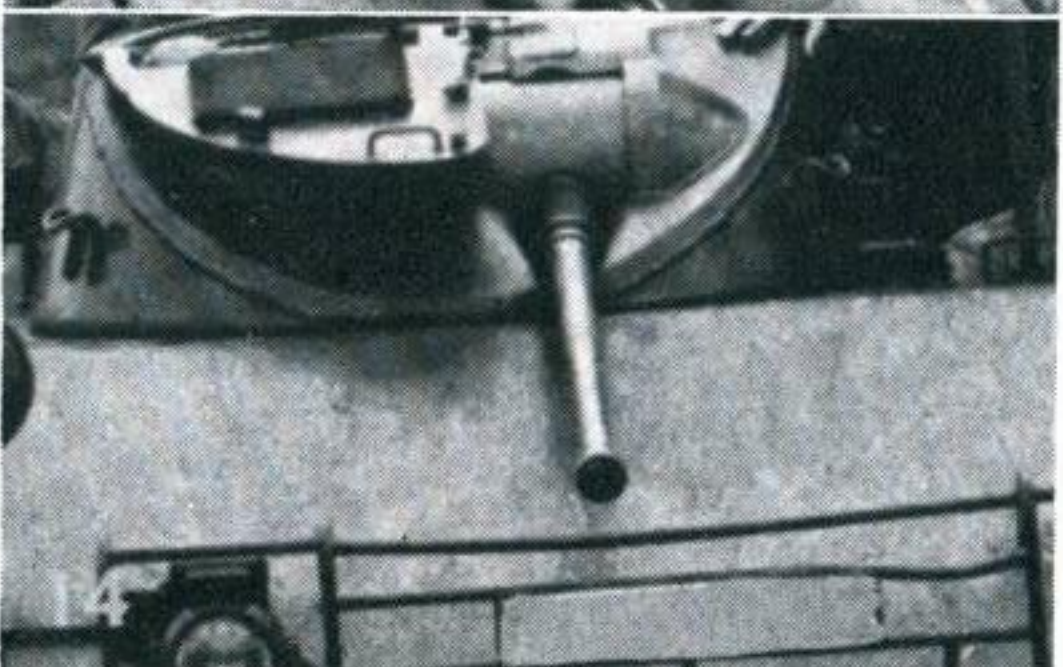
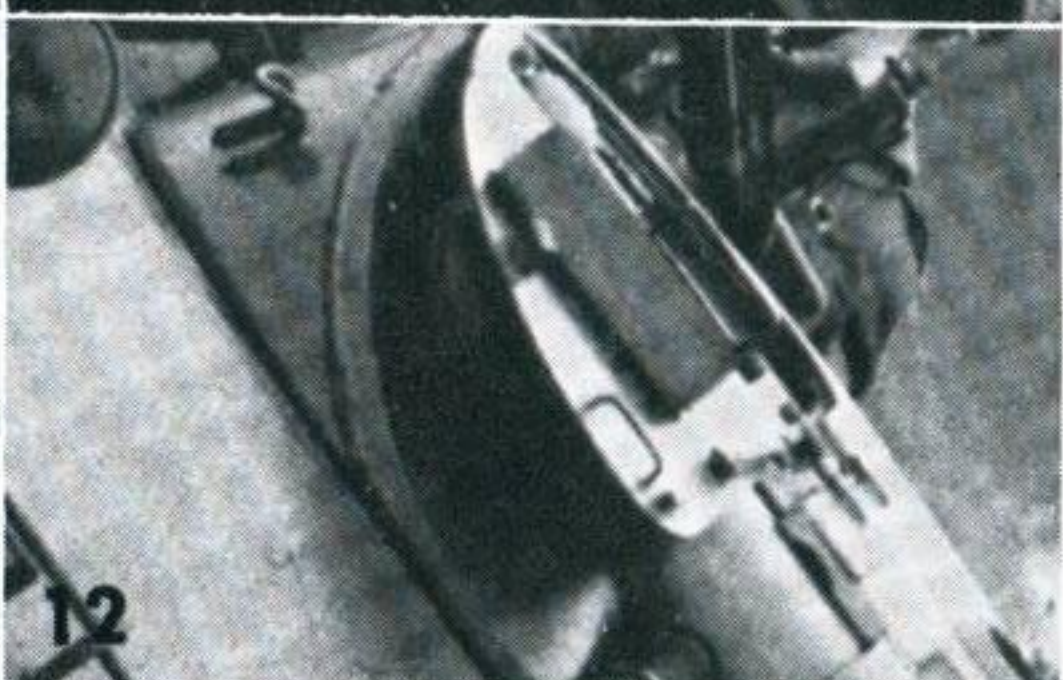
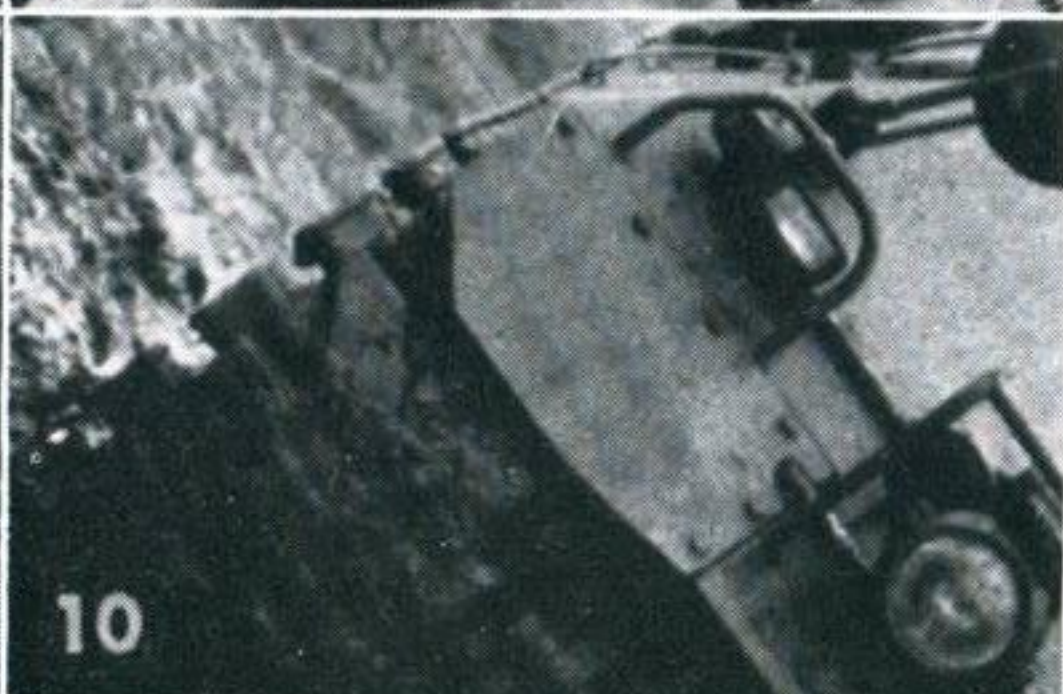
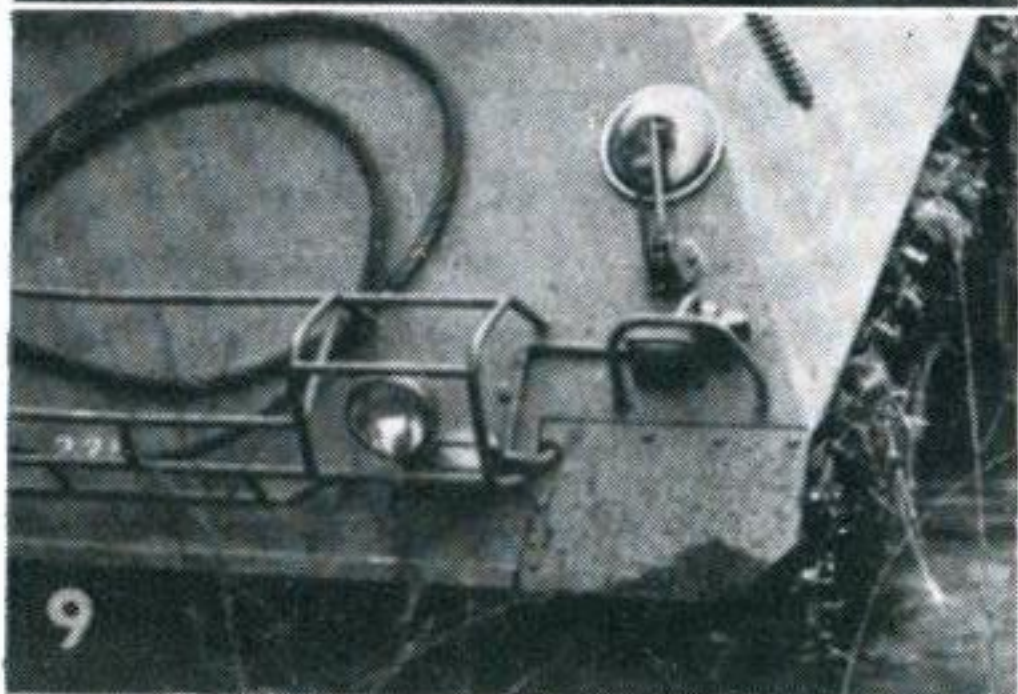
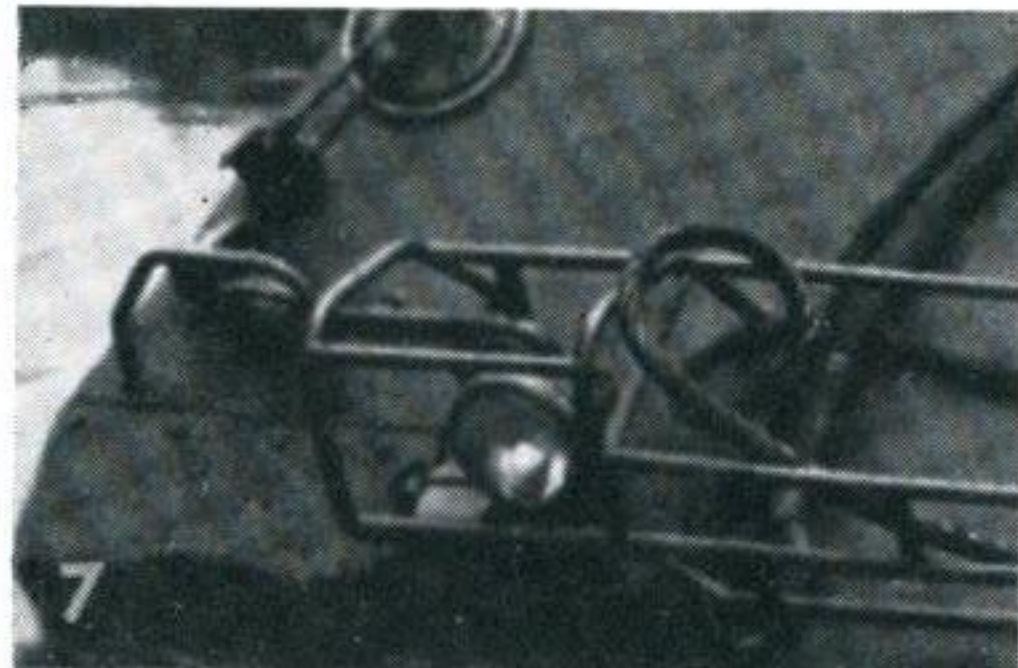
The HS-30 armoured personnel carrier is the most important of a series of German Army vehicles which were the subject of a lesson in the October 1966 issue of the *Journal*. These vehicles include the Jagdpanzer (Rakete) or JPz 3-3, the SPz 51-3 and SPz 52-3 mortar carriers, the SPz 21-3



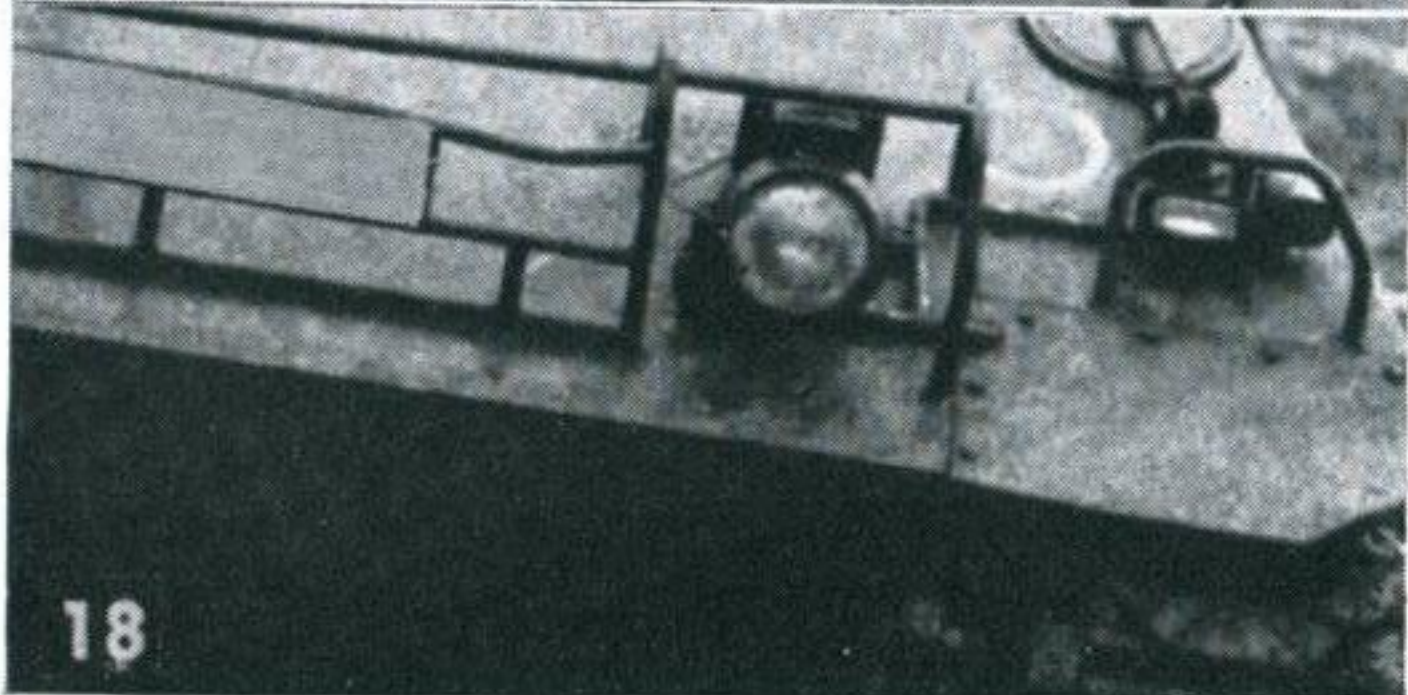
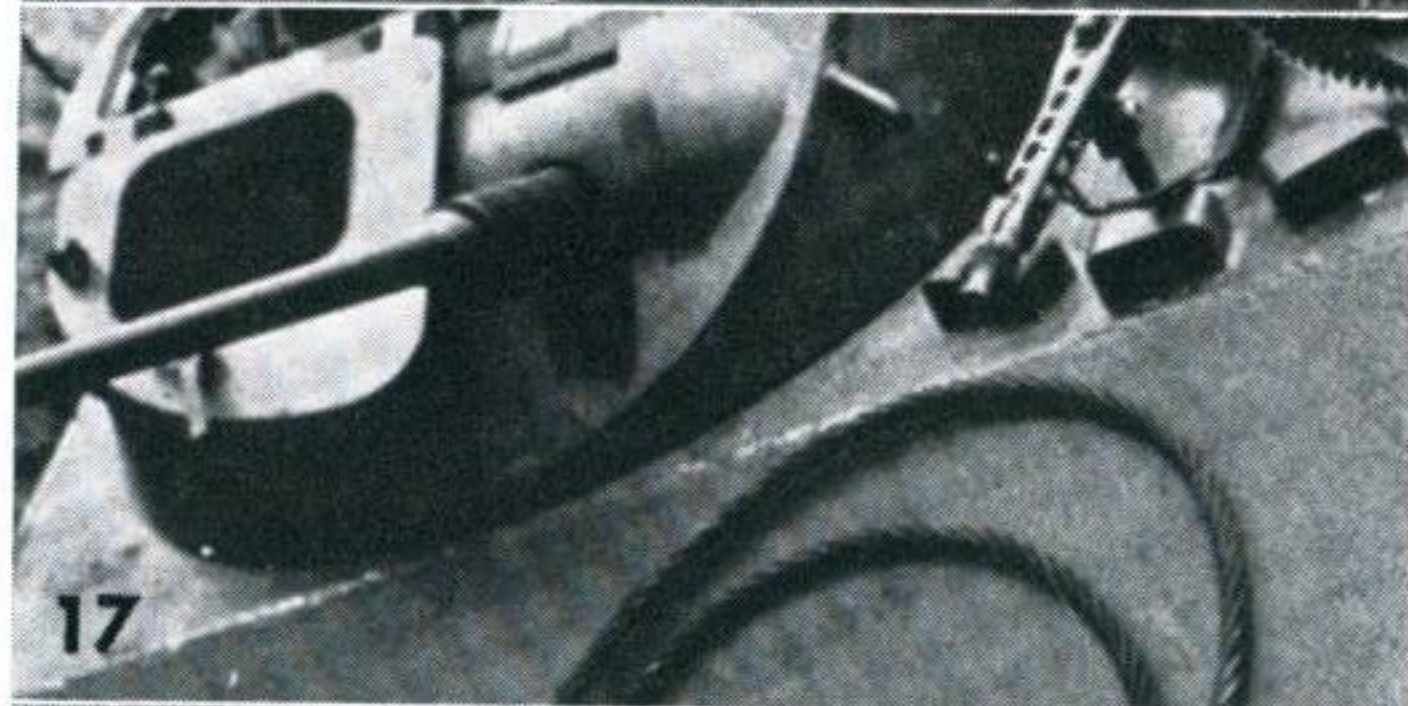
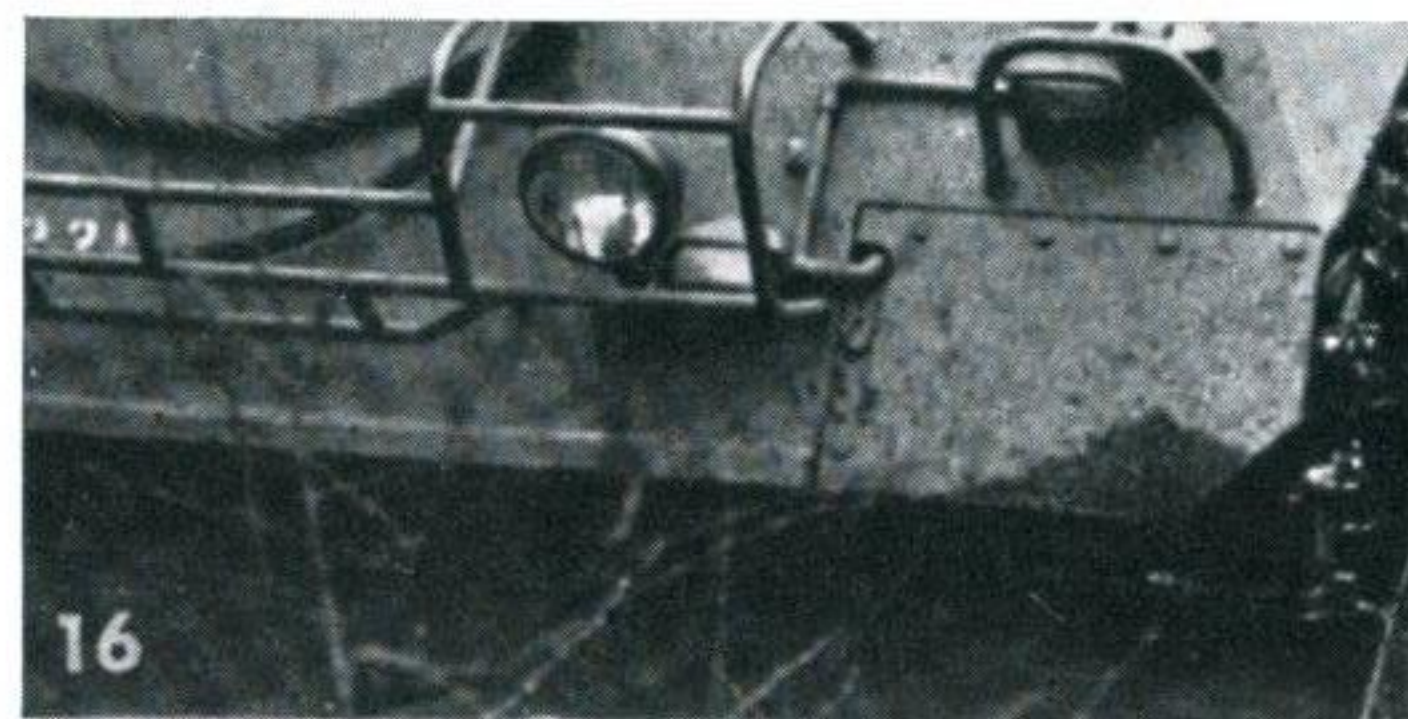
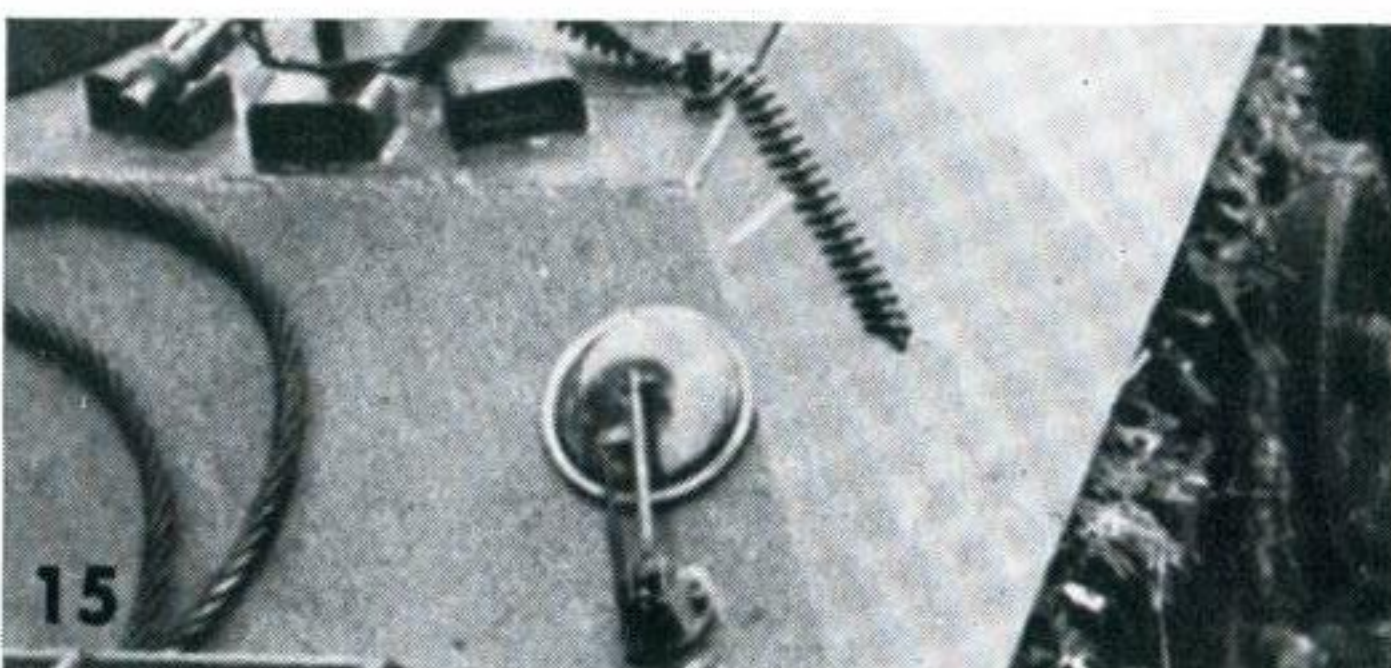
signals vehicle and the SPz 81-3 artillery command post vehicle. The HS-30 carrier, or SPz 12-3, differs from the other vehicles in having a turret with a long barrellled 20-mm. Hispano Suiza automatic gun.

continued overleaf





*Lesson instructions are on page 60
Solutions on the back cover*



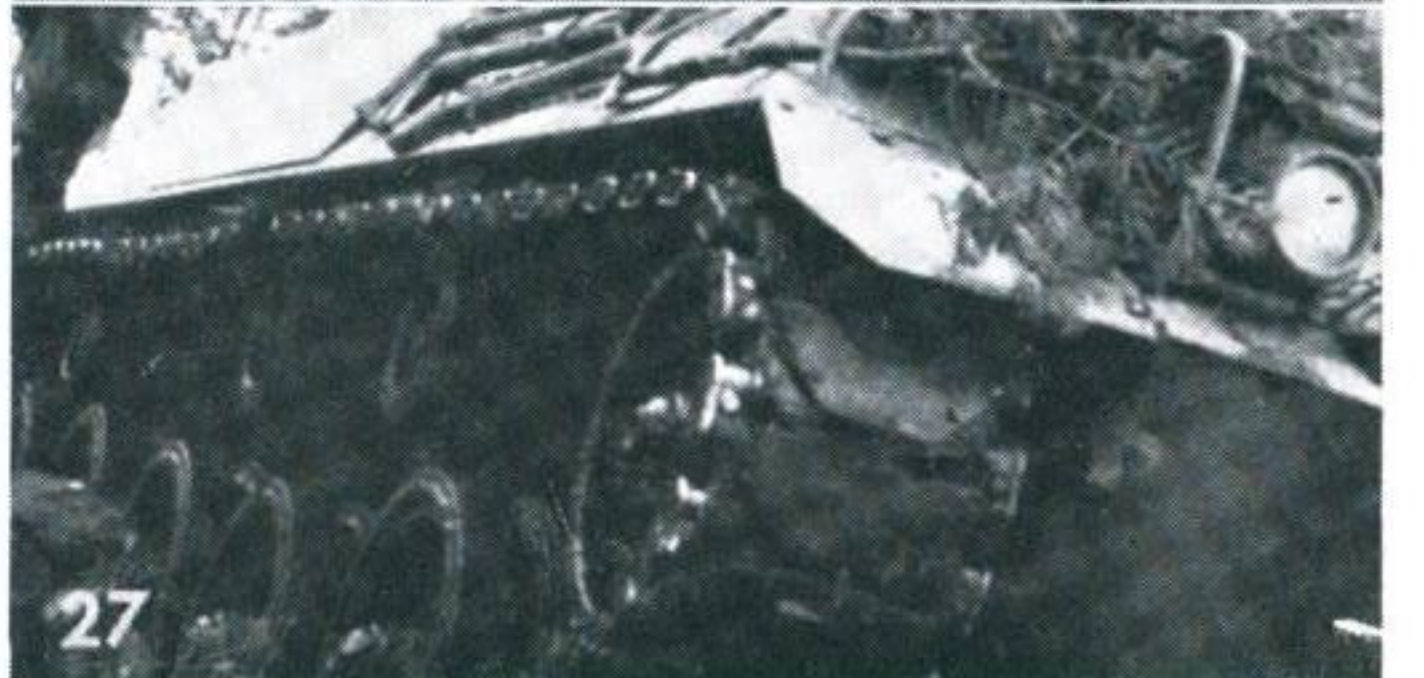
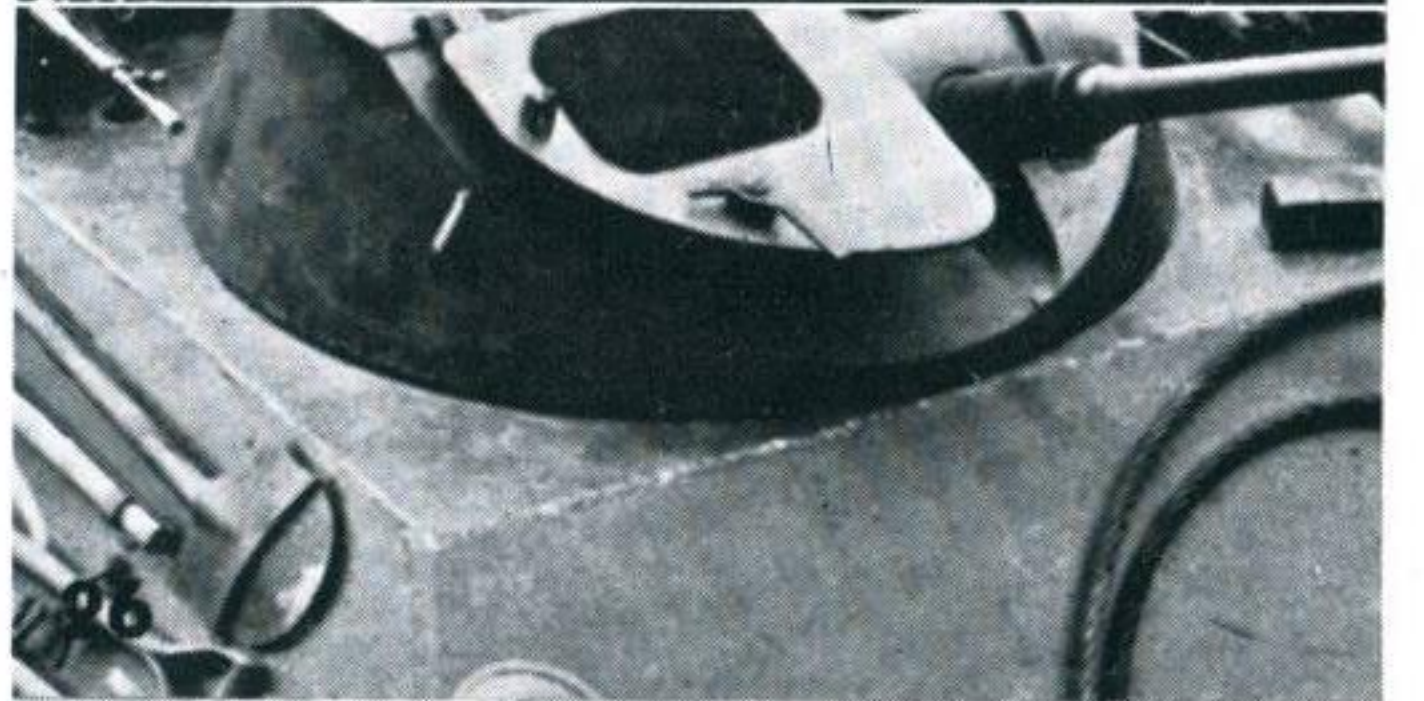
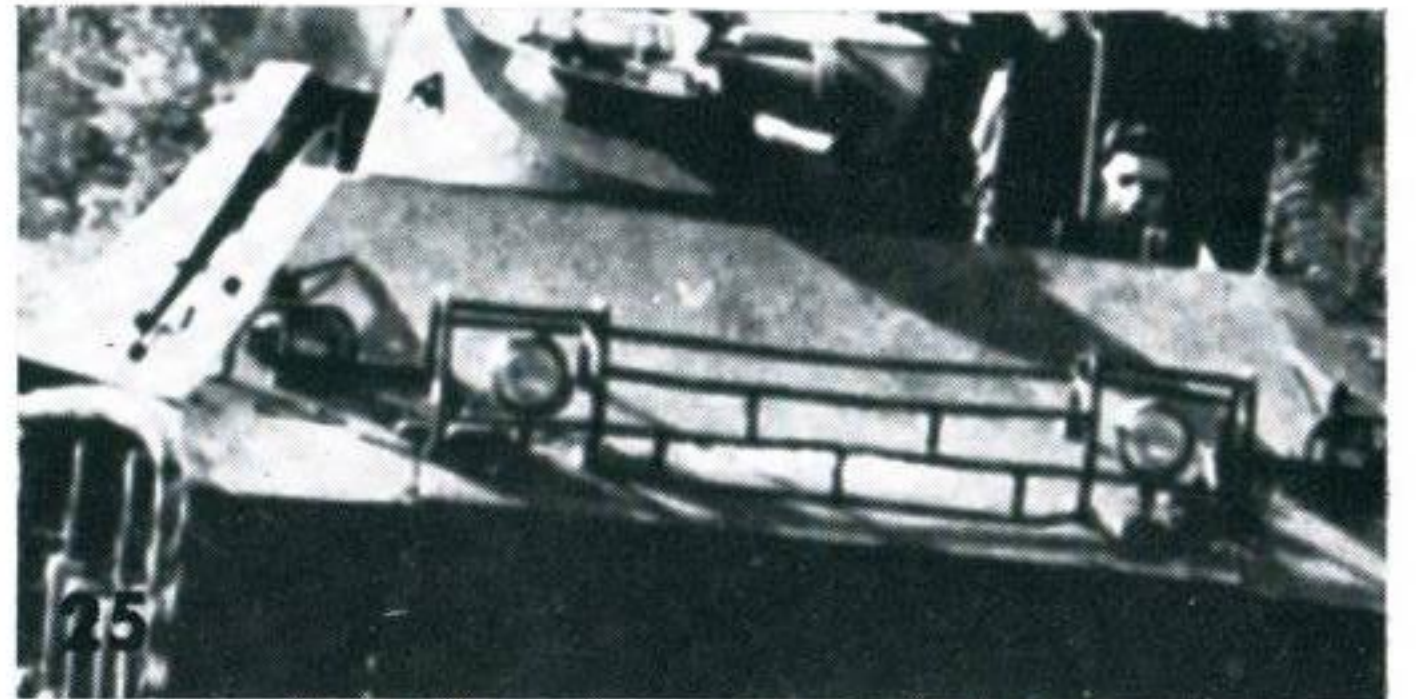
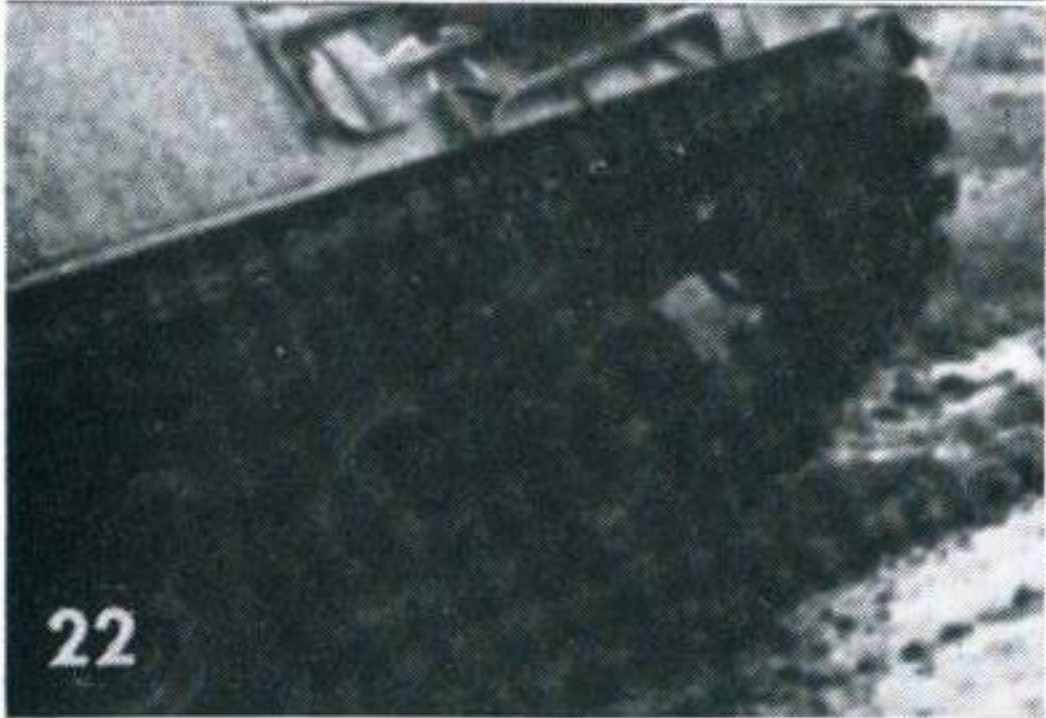
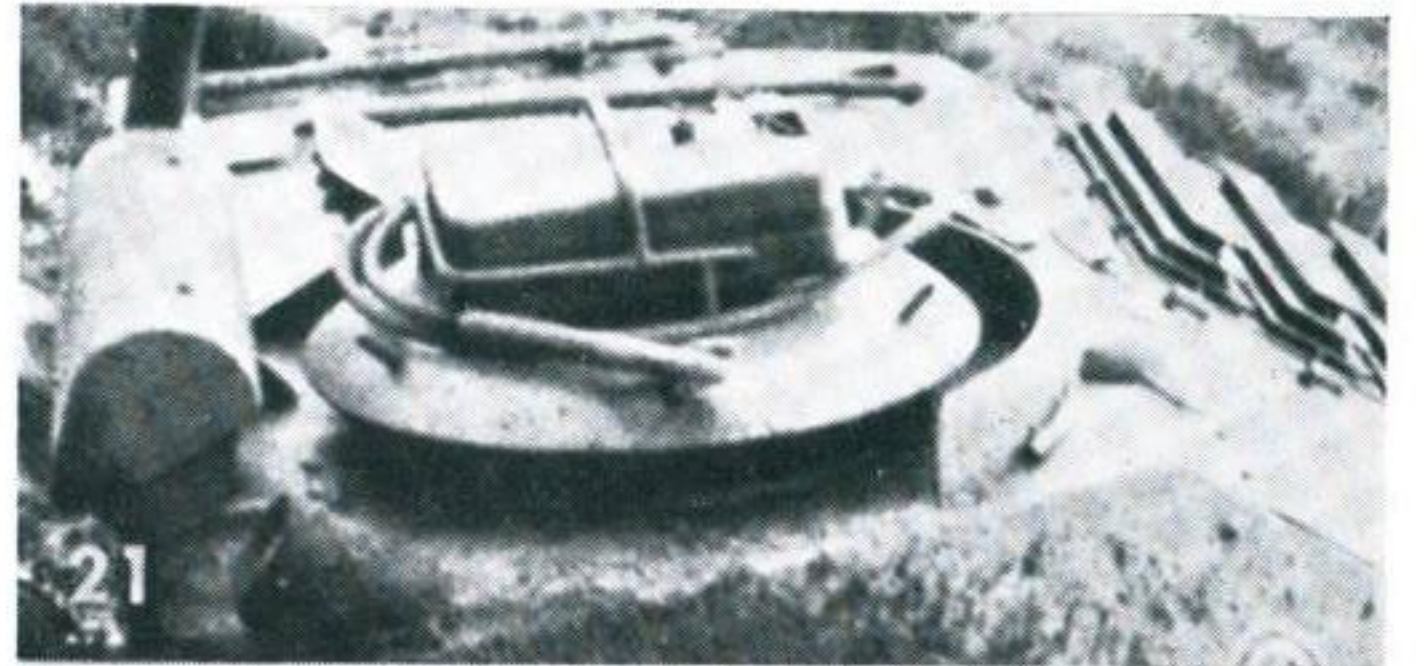
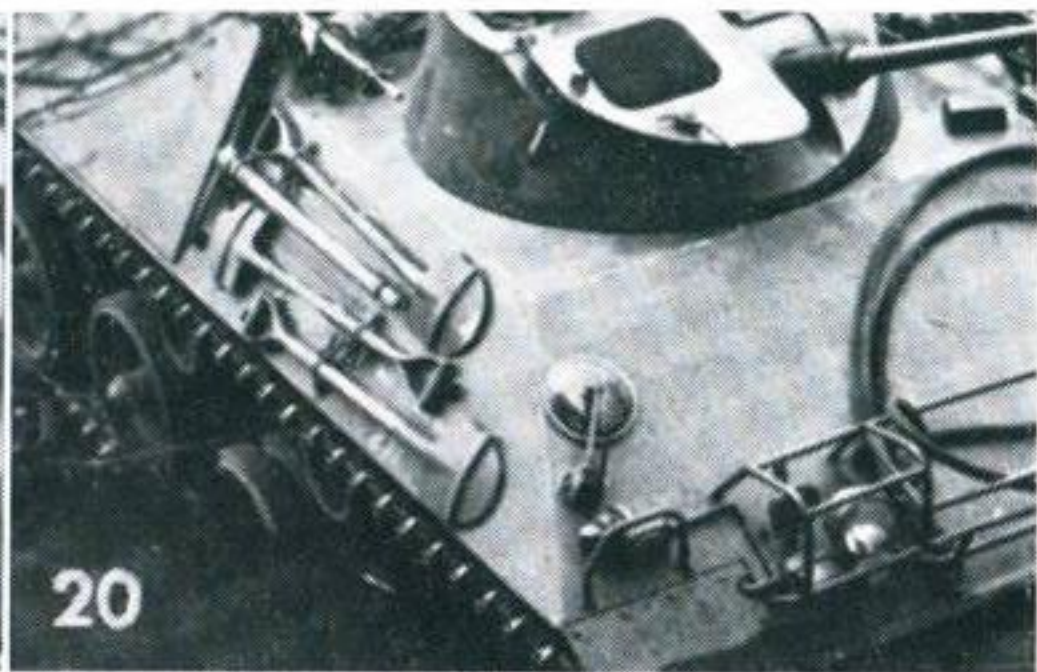
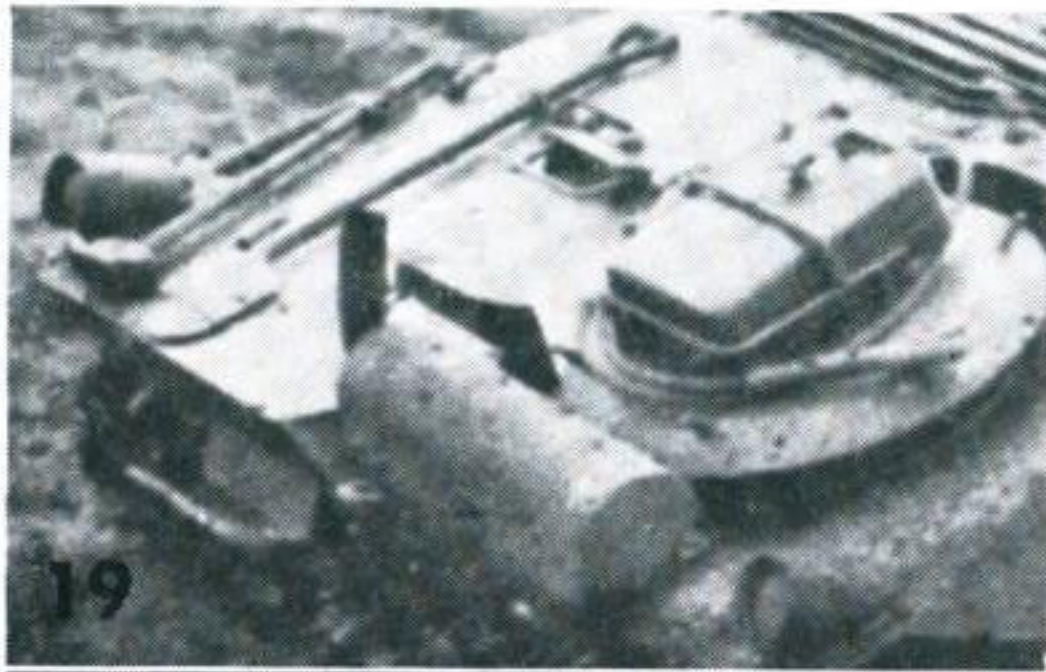


HS 30

Armoured Personnel Carrier

The possession of the 20-mm. gun turret enables the HS-30 carrier to fight other light armoured vehicles and distinguishes it from most other armoured personnel carriers, which are not so well armed. It also differs from them in having an exceptionally low silhouette. Together the gun-turret and the

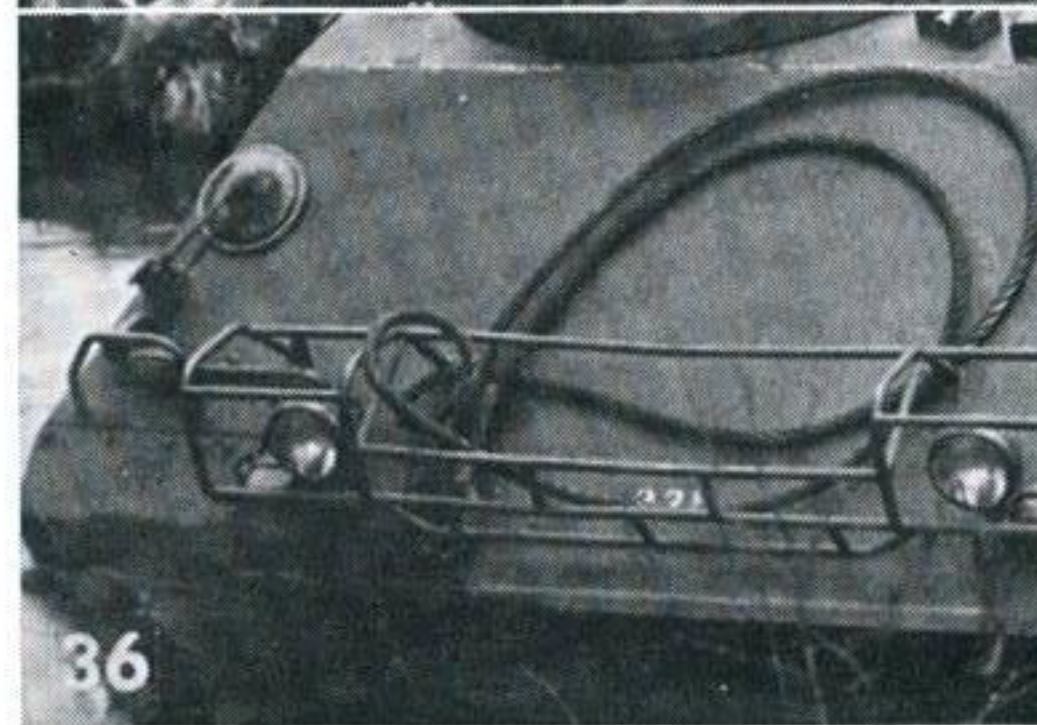
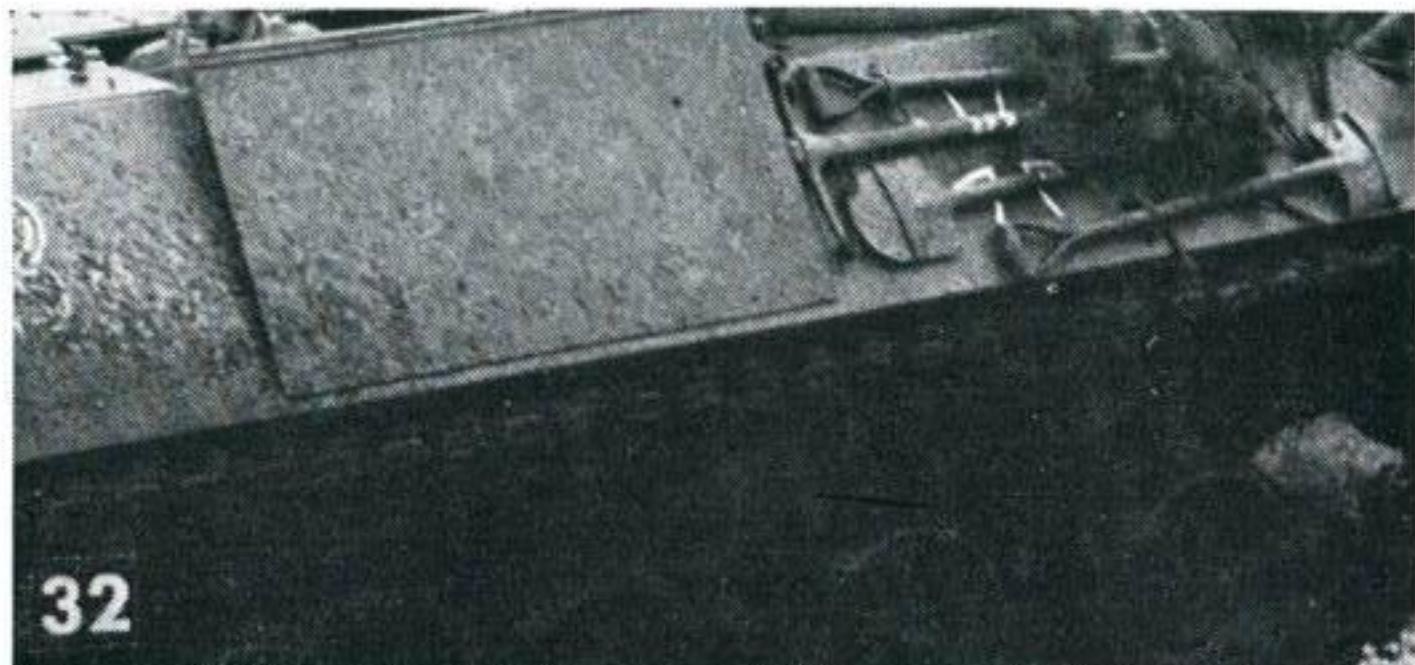
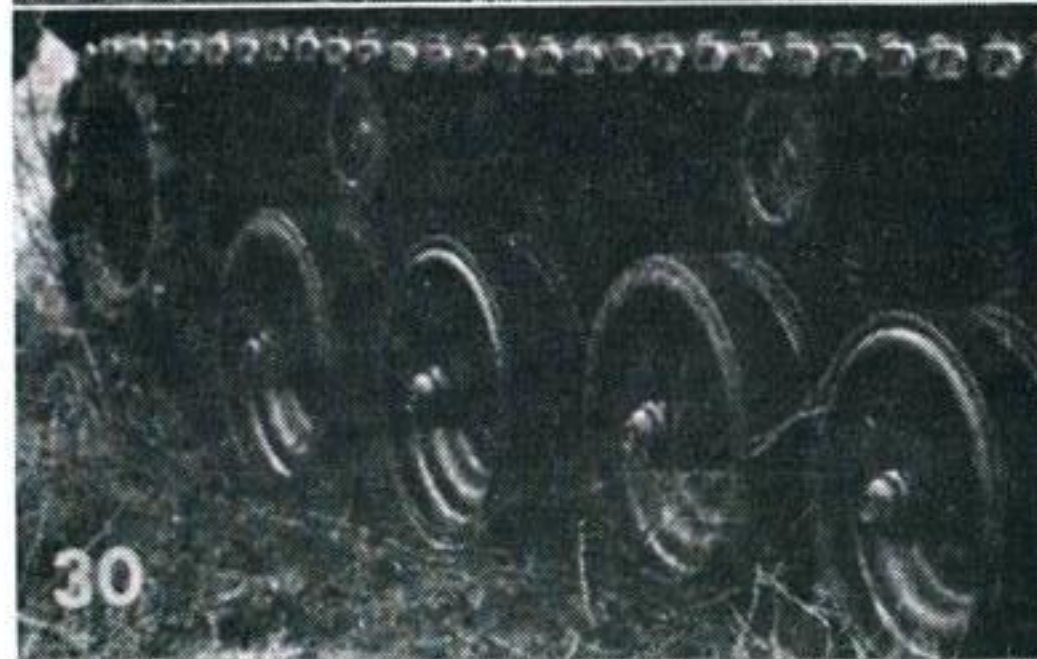
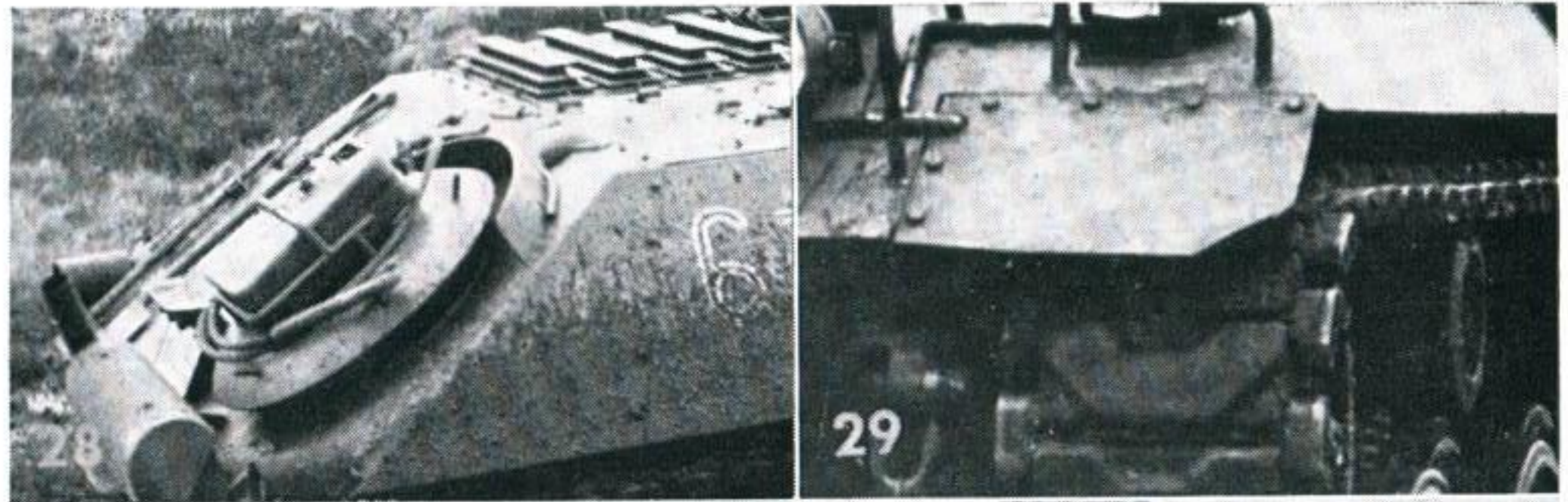
Lesson instructions are on page 60 Solutions on the back cover





low silhouette show that the HS-30 was designed as a vehicle from which the infantry might fight on the move and not merely for transporting infantrymen to wherever they might fight on foot, like most armoured carriers produced so far.

continued overleaf



HS 30

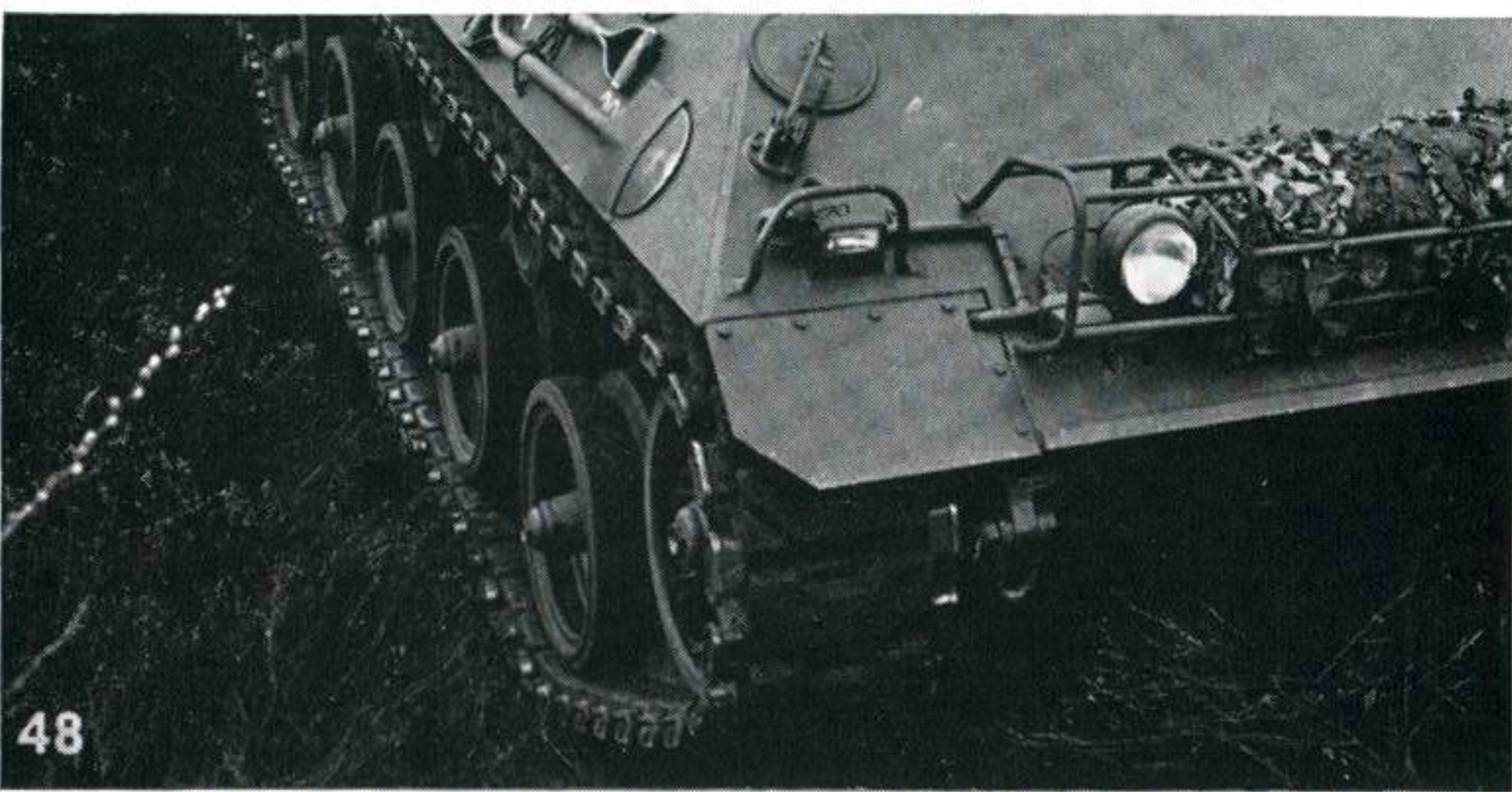
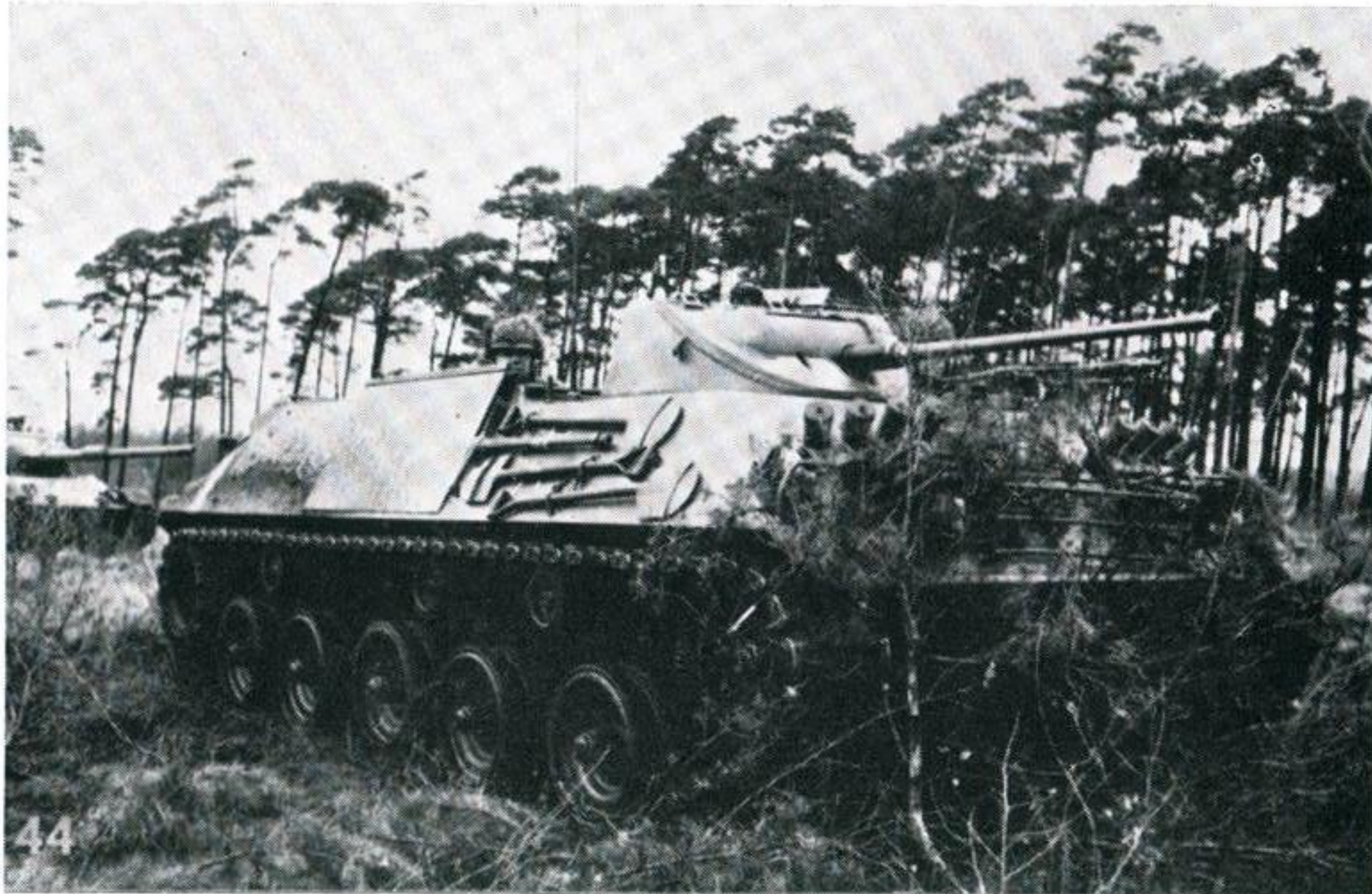
Armoured Personnel Carrier

Turret apart, the HS-30 looks much the same as the other vehicles of its family, although the tops of their hulls differ somewhat, in height among others. They all have five road wheels and three return rollers per side, the wheels being sprung by means of coil springs instead of the usual torsion bars. The HS-30 also differs from most other contemporary carriers in having its engine at the rear. The engine is an 8-cylinder Rolls-Royce B.81: it develops 235 b.h.p. and gives the 14.6-ton vehicle a maximum road speed of 40 m.p.h.

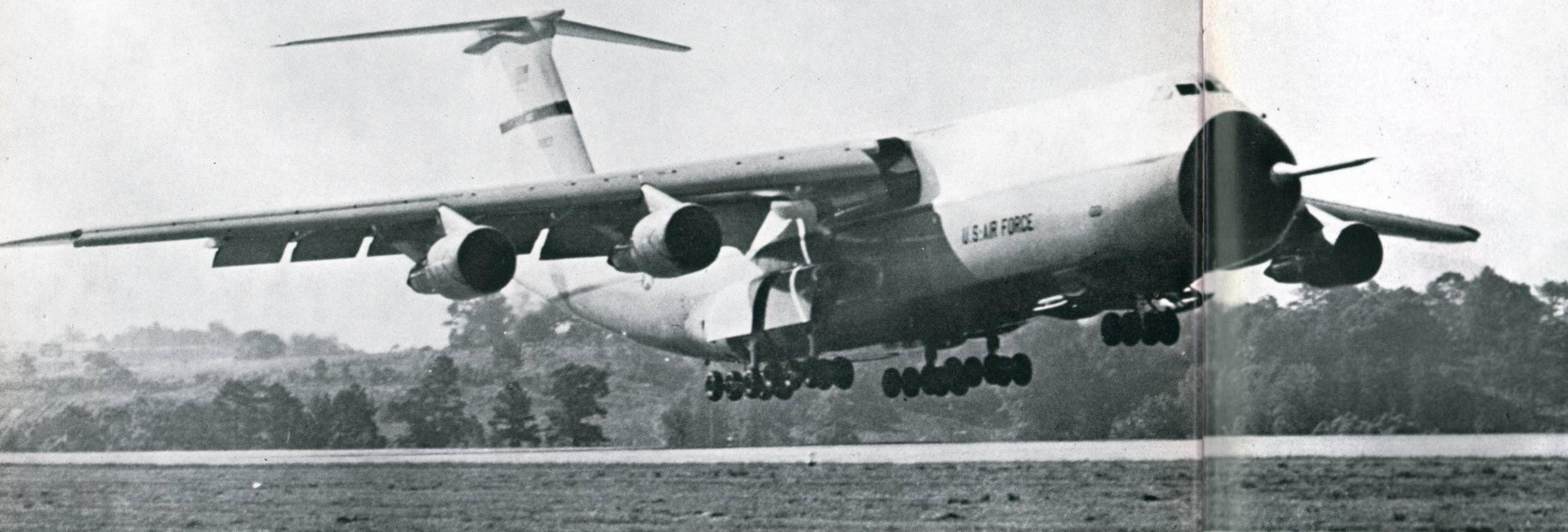


Lesson instructions are on page 60 Solutions on the back cover





US Designation / popular names — Check List



A British Service aircraft type is known throughout our own Services by a name, but in the U.S. Services the designation number is its correct type identity with a popular name merely associated.

To many of our British and Commonwealth readers references to, say, U-6s and V-2s in Vietnam, may not evoke the names Beaver and Caribou in that area. Hence this guide reference check list of American basic designations with British reporting names.

All types listed are still flying, but not necessarily in U.S. service, e.g. the B-17 went out of U.S.A.F. service many years ago but a few are still used by Brazil.

A-1 Skyraider
A-3 Skywarrior
A-4 Skyhawk
A-5 Vigilante
A-6 Intruder
A-7 Corsair II
A-37 Dragonfly

B-17 Fortress
B-24 Liberator
B-25 Mitchell
B-26 Invader

B-29 Superfortress
B-47 Stratojet
B-50 Superfortress
B-52 Stratofortress
B-57 Martin-built Canberra
B-58 Hustler
B-66 Destroyer (similar to A-3)
B-70 Valkyrie

C-1 Trader
C-2 Greyhound
C-3 Martin 404

C-4 Gulfstream I
C-5 Galaxy
C-6 King Air
C-9 DC-9
C-10 HP Jetstream
C-45 Expediter (Beech 18)
C-46 Commando
C-47 DC-3 Dakota
C-54 DC-4 Skymaster
C-82 Packet or Boxcar
C-97 Stratofreighter
C-117 Super Dakota
C-118 Liftmaster
C-119 Packet or Boxcar
C-121 Super Constellation
(in some cases Warning Star)
C-123 Provider
C-124 Globemaster
C-130 Hercules
C-131 Samaritan
C-133 Cargomaster
C-135 Stratolifter
(or Stratotanker according to role)
C-137 Stratoliner
(basic Boeing 707)
C-140 JetStar
C-141 StarLifter

E-1 Tracer
E-2 Hawkeye

F-1 Fury
F-3 Demon
F-4 Phantom II
F-5 Freedom Fighter
F-6 Skyray
F-8 Crusader
F-9 Panther or Cougar
F-10 Skynight
F-11 Tiger
F-12 Lockheed A-11
F-47 Thunderbolt
F-51 Mustang
F-84 F-84A-E Thunderjet
F-84F Thunderstreak
RF-84F Thunderflash
F-84G Thunderjet
F-86 Sabre
F-100 Super Sabre
F-101 Voodoo
F-102 Delta Dagger
F-104 Starfighter
F-105 Thunderchief
F-106 Delta Dart
F-111 (No other name)

H-1 Iroquois or HueyCobra
H-2 SeaSprite
H-3 S-61 Sea King
H-6 Cayuse
H-13 Sioux or Trooper
H-19 S-55 Chickasaw
(Westland-built as Whirlwind)
H-21 Shawnee/Workhorse
H-23 UH-12 Raven
H-25 Retriever/Army Mule
H-34 S-58 Choctaw/Seahorse/
Seabat *(Westland-built as Wessex)*
H-37 S-56 Mojave
H-43 Huskie
H-46 Sea Knight
H-47 Chinook
H-50 Dash
(acronym for Drone Anti-Sub Helic.)
H-52 Sikorsky S-62
H-53 S-65 *(in one case Sea Stallion)*
H-54 S-64 Skycrane
H-55 Hughes 269A
H-56 Cheyenne
H-57 JetRanger (U.S. Navy)
H-58 JetRanger (U.S. Army)

O-1 Bird Dog
O-2 Cessna 337C Super Skymaster

P-2 Neptune
P-3 Orion
P-5 Marlin

S-2 Tracker

T-1 Seastar
T-2 Buckeye
T-6 Texan or Harvard
T-28 Trojan
T-29 Convair 240
T-33 Shooting Star/Silver Star
T-34 Mentor
T-37 Cessna 318
T-38 Talon
T-39 Sabreliner
T-40 JetStar
T-41 Cessna 172
T-42 Beech Baron

U-1 Otter
U-2 Lockheed U-2
(no popular name)
U-3 Cessna 310
U-4 Aero Commander 560A/680 (U.S.A.F.)
U-5 Helio H-500
U-6 Beaver
U-8 Seminole *(Twin Bonanza and Queenair 65)*
U-9 Aero Commander 560A/680 (U.S. Army)
U-10 Helio Super Courier
U-11 Aztec 250
U-16 Albatross
U-17 Cessna 185
U-18 Navion
U-21 King Air

V-1 Mohawk
V-2 Caribou
V-6 P1127 Kestrel
V-7 Buffalo
V-10 Bronco

Right **HH-53** variant of Sikorsky S-65

Below **AH-1G** HueyCobra

Bottom **U-21A** King Air



SOLUTIONS TO TESTS AND EXERCISES



Cover Picture: The Royal Navy aircraft carrier *Eagle* (Captain J. E. Pope R.N.) is shadowed by a Russian guided-missile armed destroyer of the Kildin class off the east coast of Scotland. The Russian warship spent several days in the vicinity of H.M.S. *Eagle* while she was working-up in the Moray Firth before the start of the NATO exercise Silver Tower, which involved more than a hundred ships and also aircraft of nine nations in the North Atlantic. In the course of the exercise, a convoy of merchant ships sailed from Halifax, Nova Scotia. It was the first to be formed in the Atlantic since the end of World War II and it was escorted by warships of the Canadian Armed Forces (Navy) and the United States Navy. More than sixty ships of the Royal Navy, including the aircraft carrier *Eagle*, three destroyers and fifteen frigates, took part in the exercise in the Atlantic and English Channel. The aircraft front to rear are Buccaneer S.2., Sea Vixen FAW.2 and Wessex.

CORRECTIONS

October 1968 Republic F-105 Thunderchief

Pages 262 and 263: The following targets are not F-105s and are, therefore, jokers: No. 10 is an RF-84F; No. 18 is an F-4; No. 24 is an F-100D.

June 1968 Corsair II

Page 149: The KEY view at the bottom of the page is not a Corsair II but a PR version of the Crusader.

TEST PAPERS

Page 60

YS-11: Jokers are second line 2nd and 5th pictures and third line 4th picture.

Bronco: Joker is second line 2nd picture.

Page 61

JAGDPANZER KANONE

All targets are **Jagdpanzer Kanone** except Nos. 2, 14, 17, 20 and 32 which are jokers.

Page 64

VIGILANTE

All targets are **Vigilante** except Nos. 21 (F-111) and 28 (Destroyer).

Page 68

HOOK

All targets are **Hook** except Nos. 10, 42 (Hip) and 23, 41 (Hound).

Page 72

H.M.S. BRAVE CLASS FAST PATROL BOATS

All targets are **Brave Class Fast Patrol Boats** except Nos. 10, 12, 24, 30 and 38 which are jokers.

In the illustrations given, 1st and 2nd Key are of "Brave Swordsman" together with numbers, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 14, 15, 17, 18, 22, 26, 27, 28, 29, 31, 33, 36, 37, 42, 43, 44, 45, 46, 47, 48 and 49.

3rd Key is of "Brave Borderer", together with numbers 16, 19, 20, 21, 23, 25, 32, 34, 35, 39, 40, 41.

Page 76

HS-30

All targets are **HS-30** except Nos. 3, 11, 24, 34 and 40 which are jokers.

Page 84

TESTING TIME

10 Friendship	11 Harrier	12 Herald	7 Comet	8 Basset	9 Caravelle	4 Buccaneer	5 Jet Provost	6 Hunter	1 Trident
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TESTING TIME

Solutions above

