



QUALITY SINCE 1833

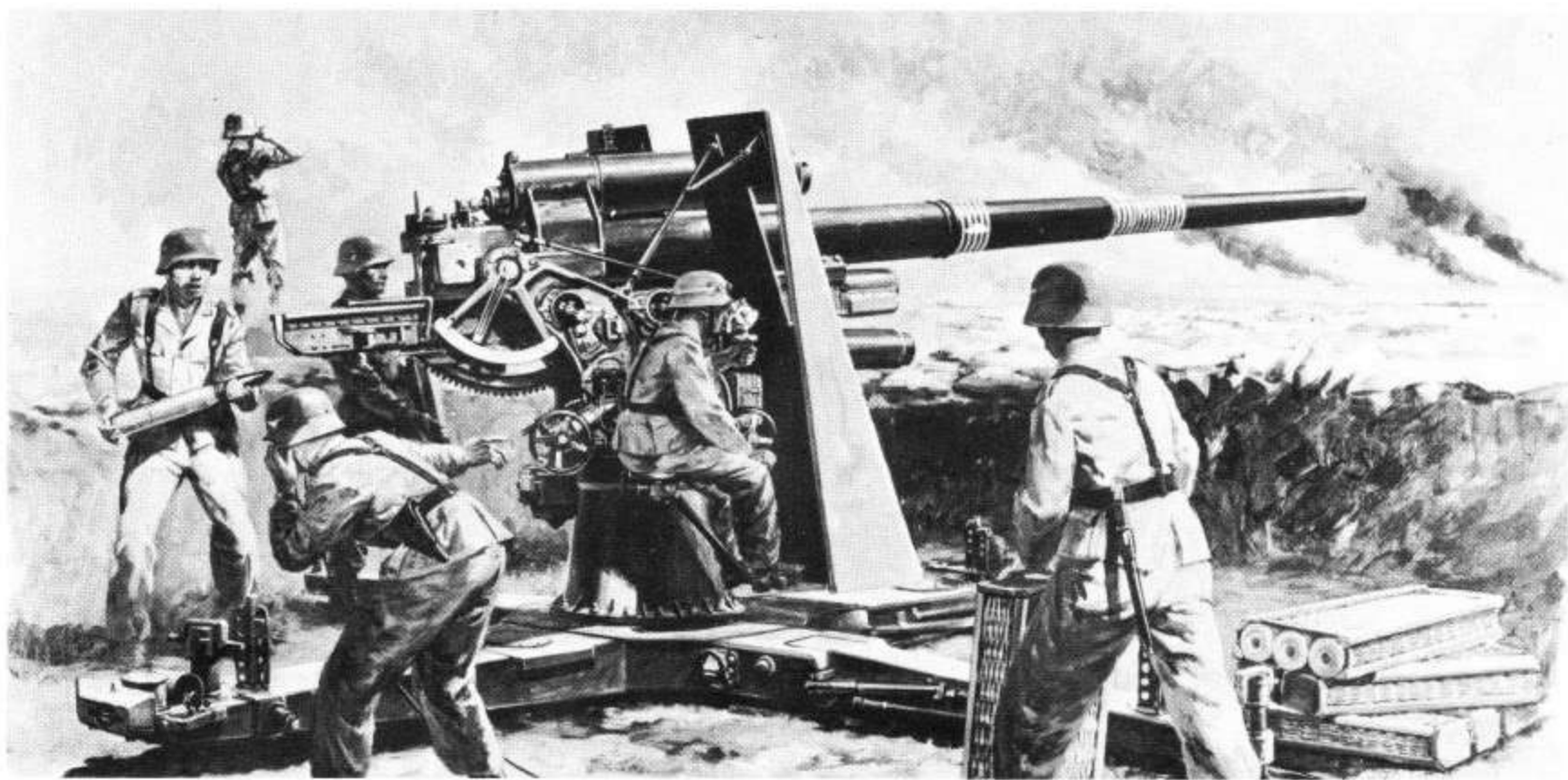


1:76 SCALE BATTLEFIELD DIORAMA KITS

SERIES NO.2 GERMAN 88mm ANTI-AIRCRAFT ANTI-TANK GUN WITH SANDBAG BUNKER AND CREW

INSTRUCTIONS

ITEM NO. 0861



HISTORICAL BACKGROUND

In 1916, the first 88mm Kw Flak appeared. Two models were produced, one by Krupps of Essen and the other by Rheinmetall-Borsig. These guns were mounted on a four wheeled trailer and towed by a truck. With the treaty of Versailles, Krupp was forbidden to produce small calibre guns. However, in 1921 they arranged for their designers to work with Borfors in Sweden and in return Borfors were given foreign concessions on the Krupp guns. As a result of this forward looking policy, in 1928 Krupp was able to produce designs for a high velocity 88 millimeter gun with a semi-automatic breech which ejected the cartridge case and recoiled the striker spring after firing each round.

The "88mm FLAK 18" entered production in 1933 and was used to good effect during the Spanish Civil War. Following this battle experience much modification was carried out which resulted in the model "88mm FLAK 36" appearing in 1937 having a new barrel with interchangeable rifling tube. A new trailer also appeared with simplified methods of raising and lowering the gun carriage for action. This was known as the "Sonderanhaenger 201". In 1937, the FLAK 18 was improved and modified so that

it, like the FLAK 36, could be fired at ground targets without having to lower the gun from the trailer. From 1940 numerous guns were equipped with large shields to protect the crew while engaging ground targets. Later models were mounted on the improved "Sonderanhaenger 202" with double wheels at both front and rear. Finally the FLAK 37 appeared, the difference being a new gun laying system used only for anti-aircraft purposes. By the end of 1944, there were over 10,000 of these guns in service.

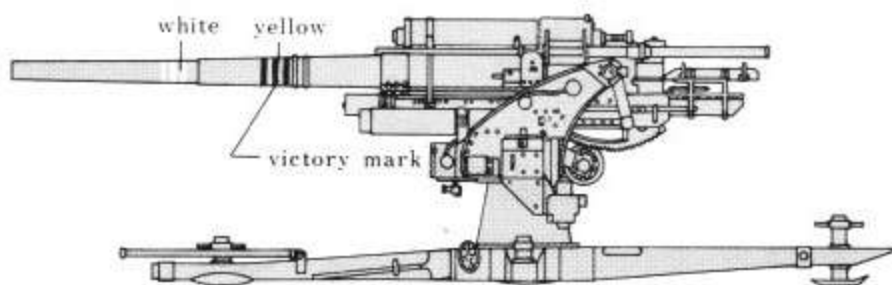
Technical Details for 88m/m FLAK 18

Weight in action:	5 tons
Range horizontal:	14,680 meters (16,200 yards)
Vertical:	10,600 meters (11,554 yards)
Traverse:	360 degrees
Elevation:	plus 85, minus 3 degrees
Caliber:	88 mm
Rate of Fire:	15/20 rounds per minute
Muzzle Velocity:	RE. 820 meters/sec. (2,690 feet/sec.)
Weight of project:	HE. 9 kg (20 lbs) AP. 9.5 kg (21 lbs)

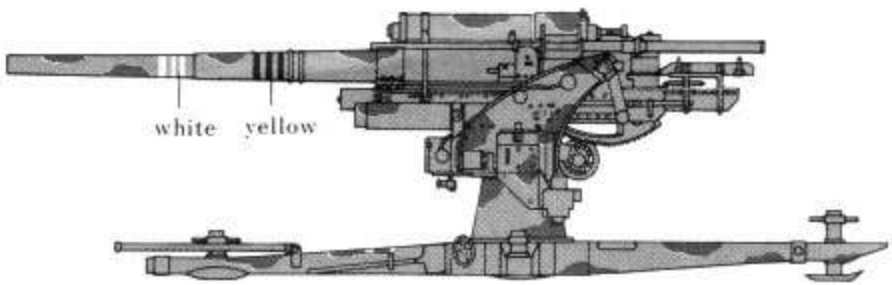
PAINTING REFERENCE:

Note: It is much easier to paint parts while they are still on the runners or "trees".

Eastern front



African front



field-grey



dark-yellow



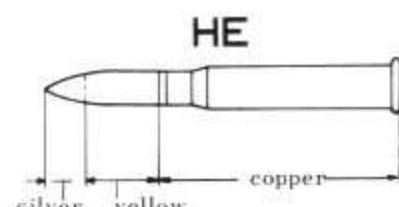
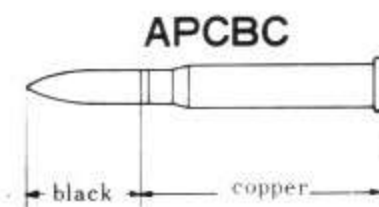
red-brown

REFERENCE PAINTING FOR "88mm FLAK 18"

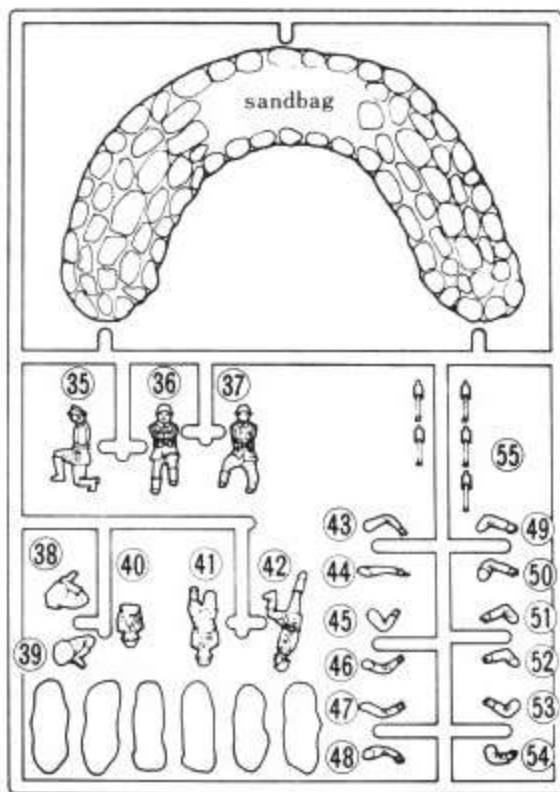
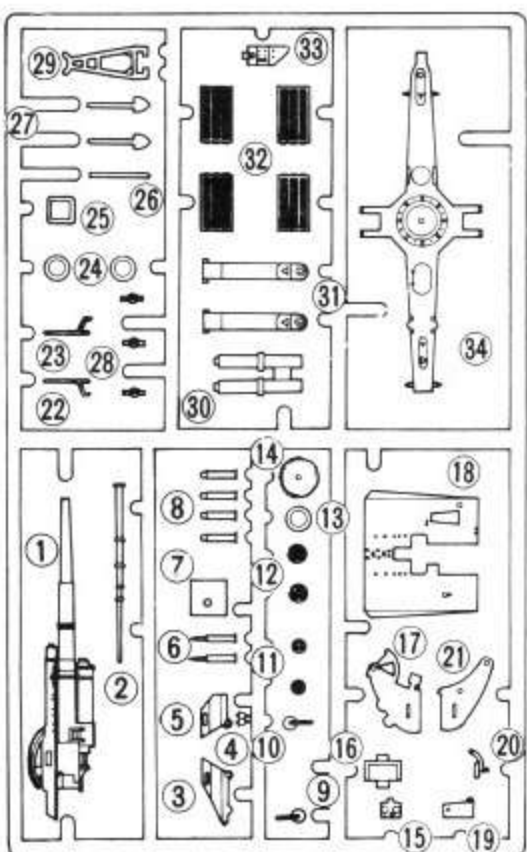
Basic color tone is field-grey (dark-grey) or dark-yellow (sand). On these basic tones, dark-green or red-brown were sprayed properly for camouflage. The victory mark on the cannon barrel was painted by white or yellow line.

Painting for Cannon ball:

(you can choose whichever you like)



PARTS DRAWING

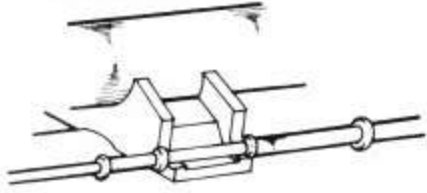


Painting for Artilleryman:
helmet) field-grey
uniform)
boot) black
belt)

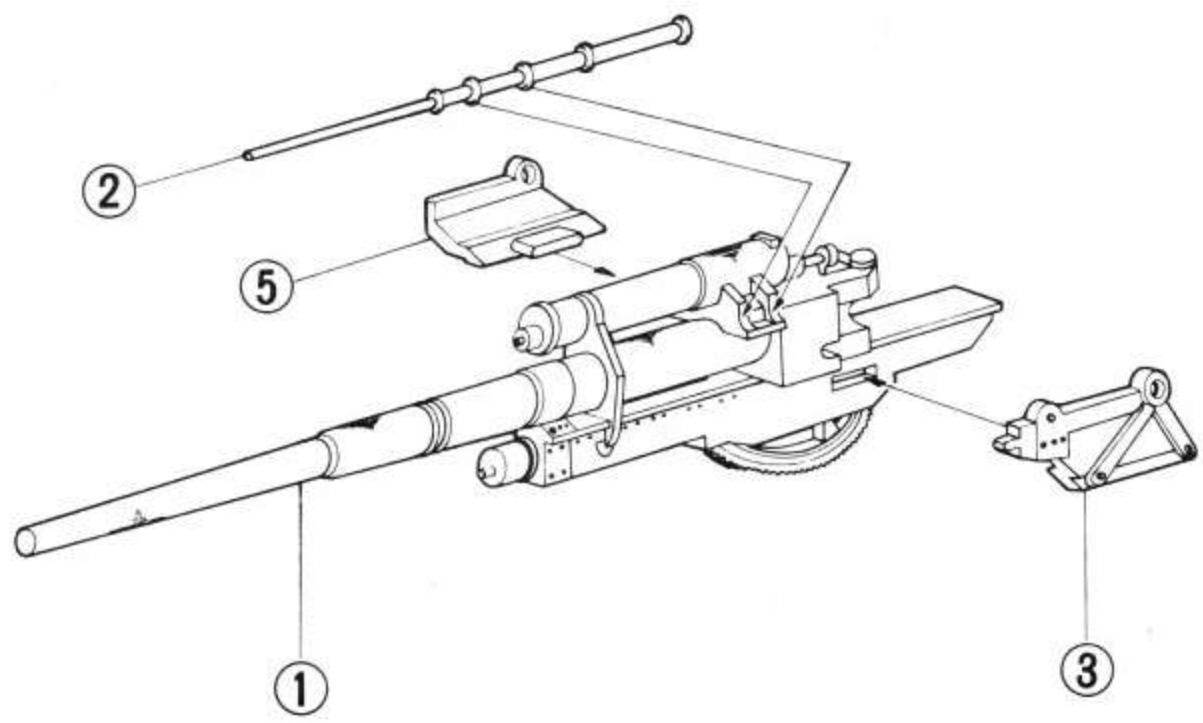
1. CANNON BARREL ASSEMBLY

① Below reference picture-A shows the proper way to cement gun sight ② to cannon ①.
Parts ⑤ and ③ are inserted into the same hole of cannon carriage base from both sides, as pictured.

REFERENCE PICTURE-A



1

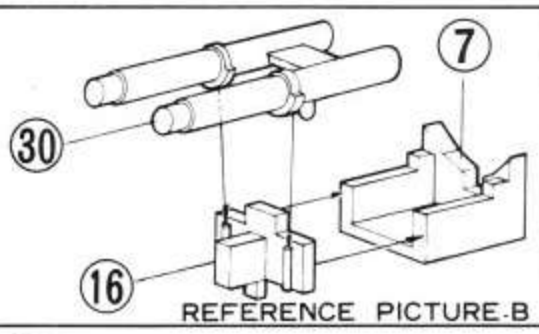


2. CARRIAGE AND PERSONNEL SHIELD ASSEMBLY

① Assemble equilibrator according to reference picture B.
Cement parts ⑫ and ⑫ to part ⑰ as shown in reference picture C.

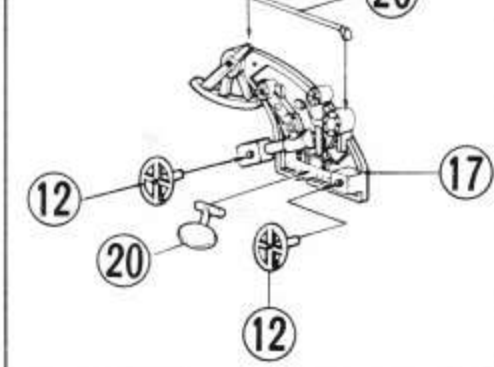
② Assemble parts ⑰, ⑰, assembled equilibrator and cannon barrel together. First, cement inside under bosses of parts ⑰ and ⑰ in the slits of assembled equilibrator from both sides, like sandwich the equilibrator, then insert upper side bosses of ⑰ and ⑰ in the holes of parts ③ and ⑤.

IMPORTANT:
In this case, do not cement upper side bosses of ⑰, ⑰ to the hole of part ③ and ⑤ so that cannon barrel can be move up and downward.

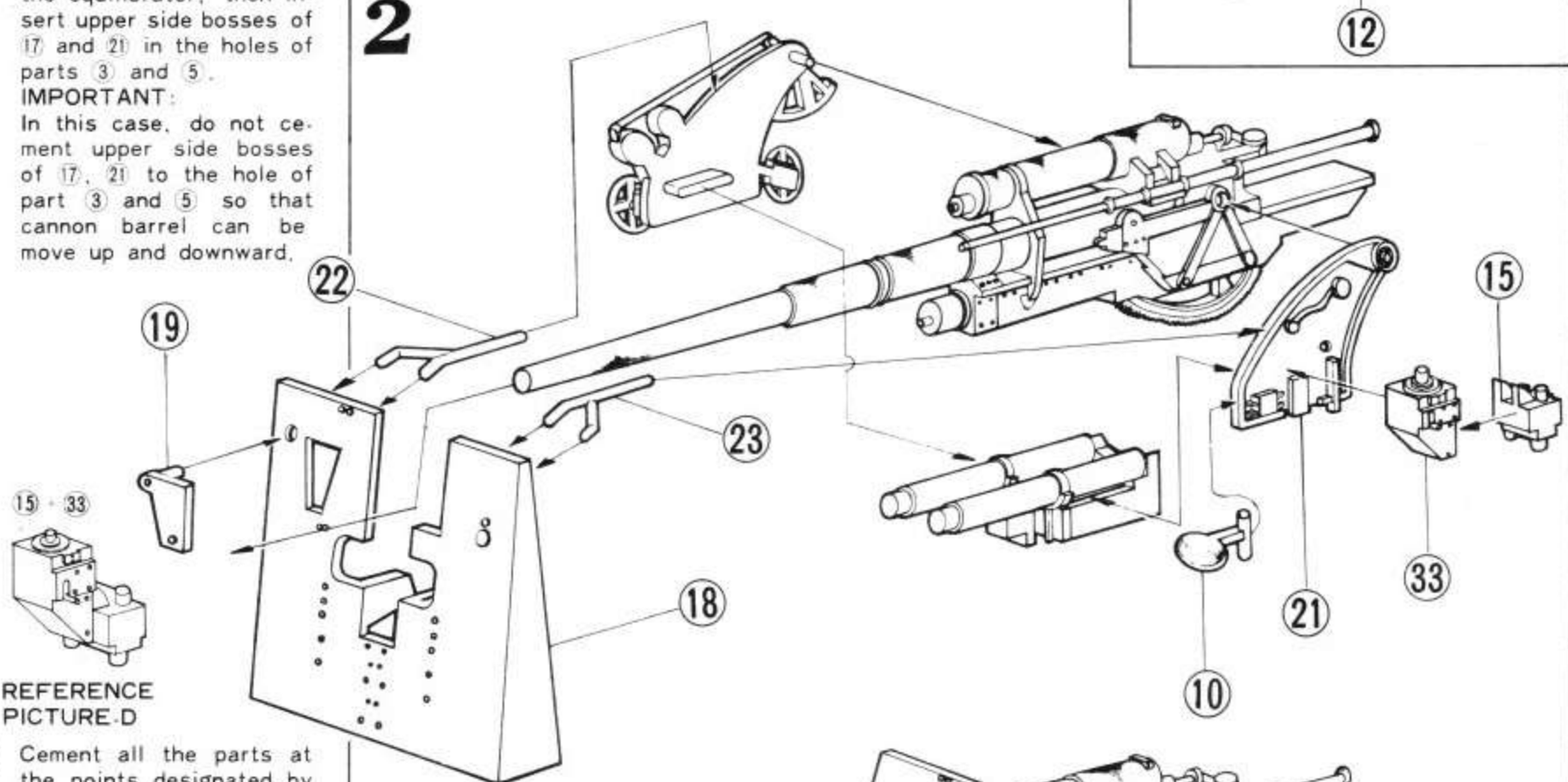


REFERENCE PICTURE-B

REFERENCE PICTURE-C



2



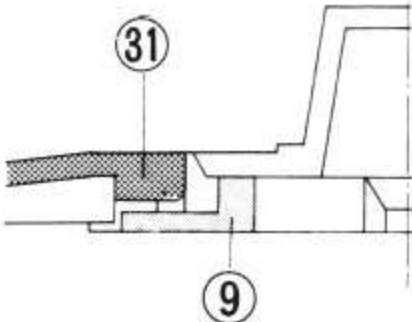
REFERENCE PICTURE-D

③ Cement all the parts at the points designated by arrows in the illustration.
④ Shield supporters ⑫, ⑫ should be cemented shield side first. There are no other supports for the shield.
⑤ Ignition assembly is shown in reference picture D.

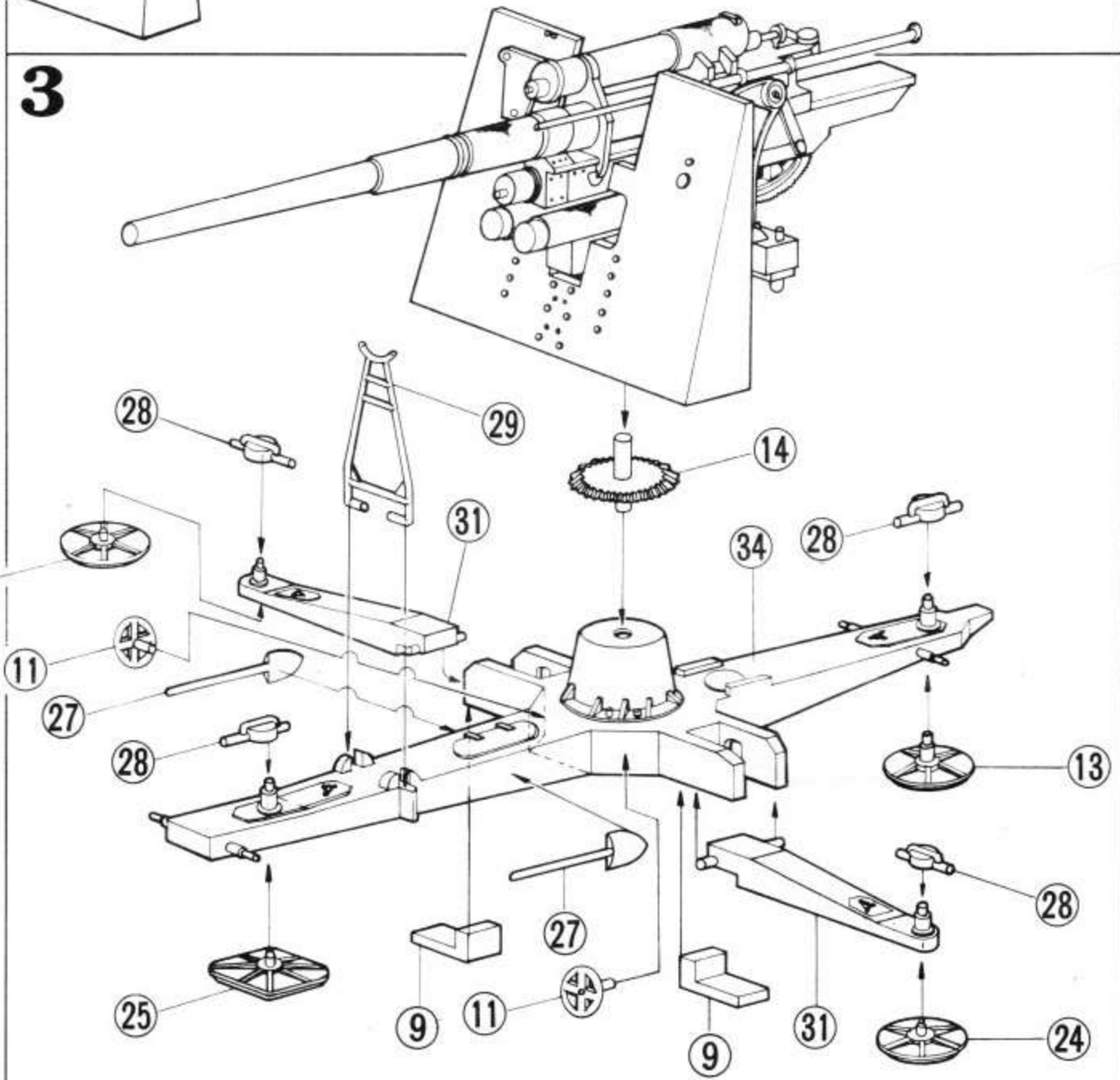
3. PLATFORM AND OUTRIGGERS ASSEMBLY

① Cement all the parts at the points designated by arrows in the illustration.
② Outrigger ⑳ is not cemented to the platform but stopped by part ⑨ to hold upward when travelling. (Study reference picture.)

REFERENCE PICTURE-E



3



4

4. ARTILLERY MEN ASSEMBLY

④ Assemble artillery men as shown in the illustration, then put them on the plates respectively. As for the painting, study the reference picture of cover side.

