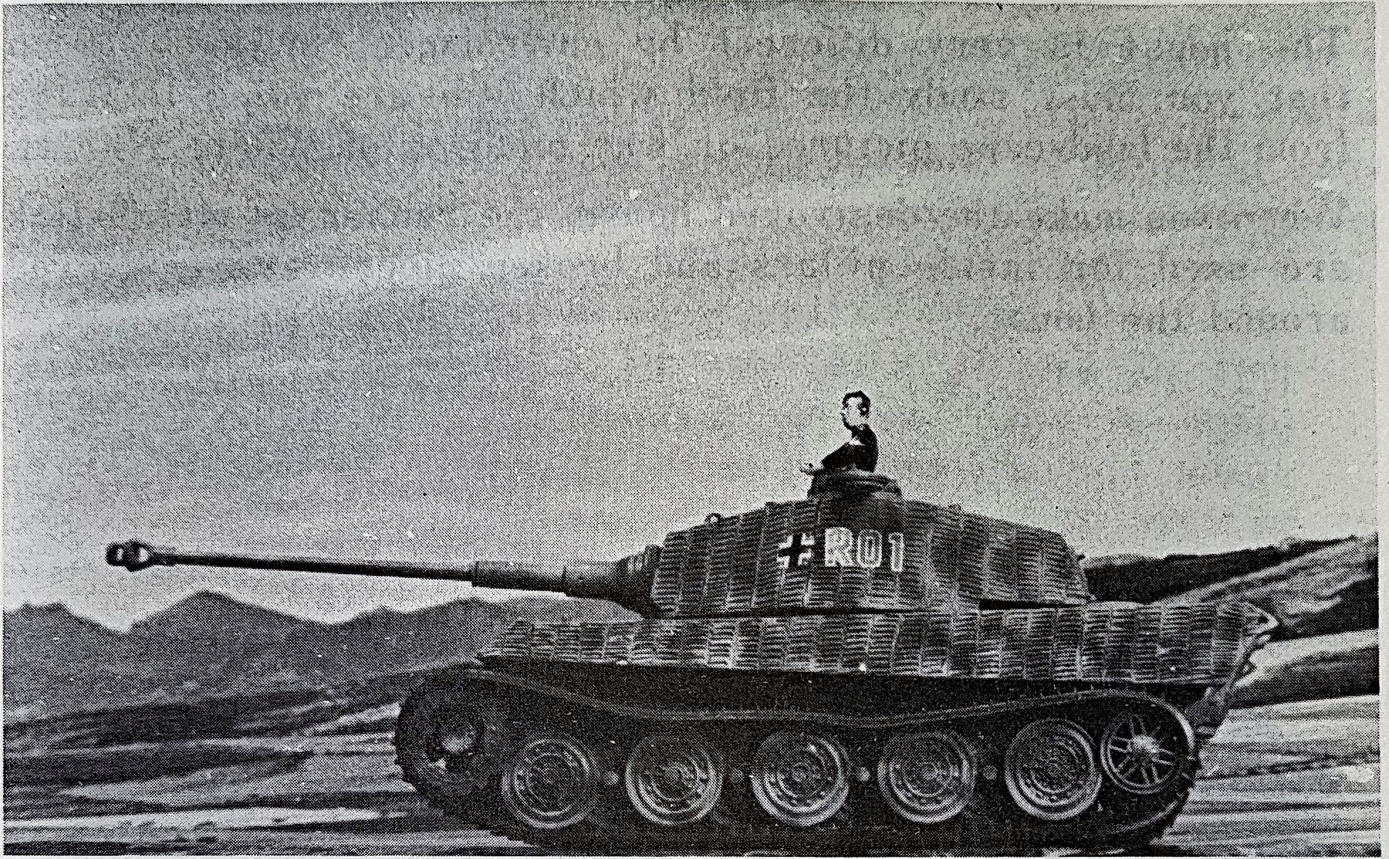


1/76

World Armor Series & Battlefield Diorama Series

DIORAMA — GUIDANCE



FUJIMI's 1/76 scale World Armor and Battlefield Diorama series are just planning for the Diorama setting.

As the scale is just setted for this purpose, you can enjoy the big panorama on small space.

The pleasure of Diorama setting is to find and enjoy your own originality for making and set scene.

Starting from ground making, tree, house, soldier or vehicle are setting gradually.

The scenes which spreading there are just your own creature not seen anywhere.

Not take things too seriously, enjoy Diorama freely.

You can study World War books, photo books or box lid.

This guidance is a one which gathered outline of Diorama setting roughly. Except this, we hope that you will draw and lealize your own originality.

FUJIMI MOKEI CO.,LTD.

251 Takamatsu, Shizuoka City, JAPAN.

Printed in Japan

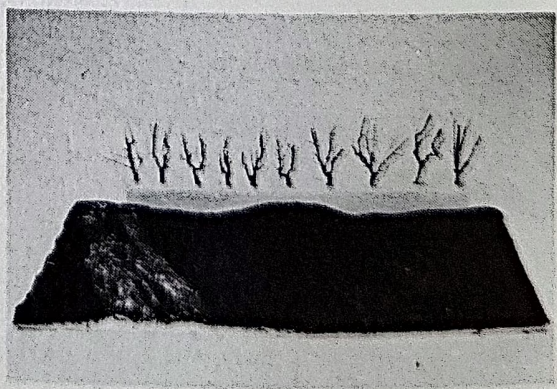
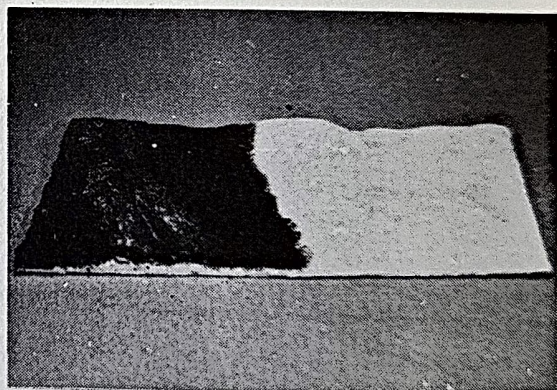
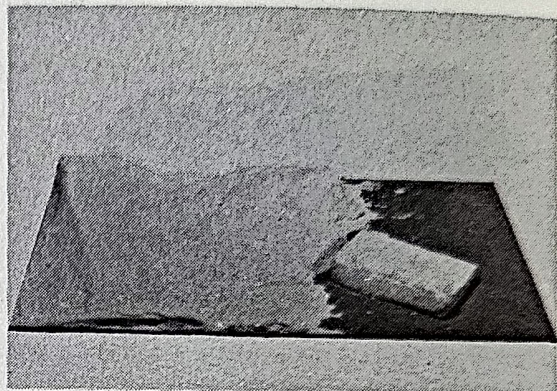
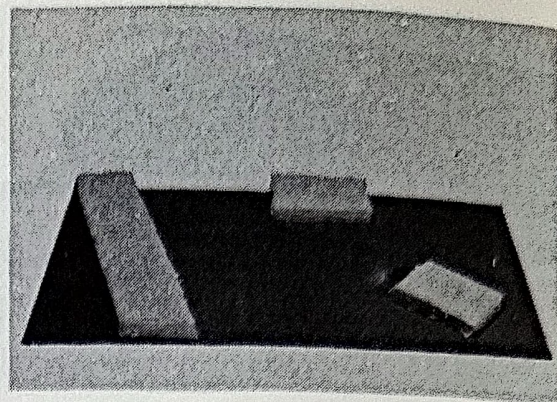
1. THE WAY TO MAKE GROUND

First of all, make paddings to give Diorama scene unevenness such as hill or river.

The blister styrol or corrugated cardboard is very suitable for this purpose.

1. Make the autline of configuration by cementing the padding on the Diorama.
2. Plastering paper-clay or plasticine on the ground, form up the whole appearance.
3. When you make the traces of caterpillar or tyre, you can make them before clay is not dry perfectly stamping caterpillar or tyre on clay.
4. Coat starch evenly on the ground after clay is dried then spray color powder on it.
The color is used properly by the color of land for example desert is ocher and grassland is green.
5. It is also an idea to use real sand or clay for rough road or desert. In this case, sieve will be help you much.

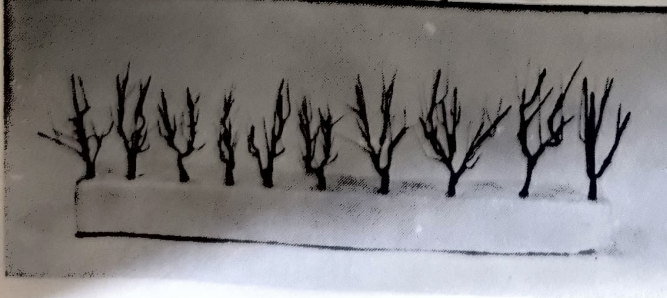
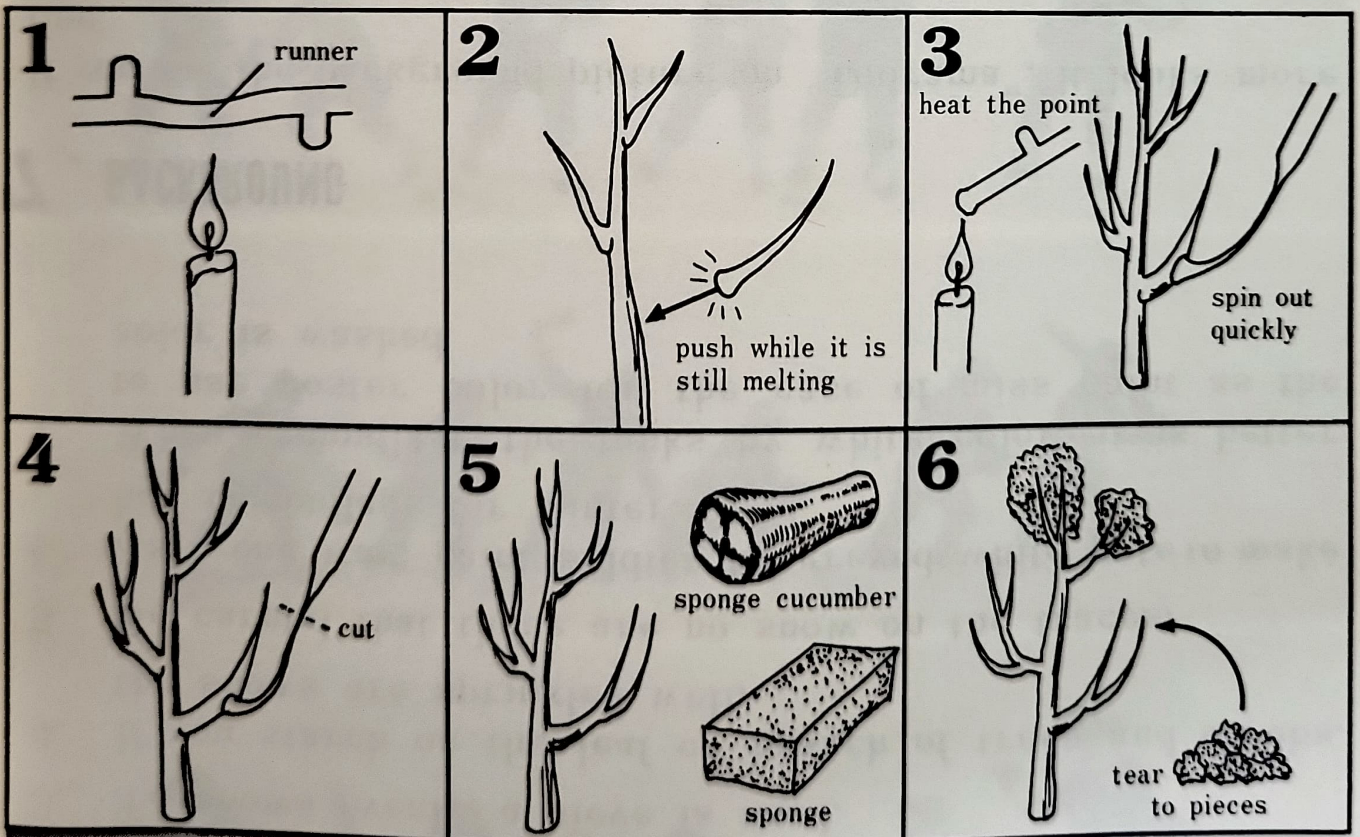
Now, after these fundamental formation is over, you can make advance to next step which put tree, rock, stone, house and etc. on the ground by your own idea.



2. THE WAY TO MAKE TREES

Concerning to the trees assembly, you can get already made ones at hobby shop but you can make more varied or suitable size of trees by your own hands easily using runners as shown below.

1. First, cut the runner to proper length to make tree's trunk. Heat it by candle light and bend or stretch out to suitable size.
2. The big branches are made as same way as trunk assembly and cement them to trunk by glue or heating the branch's base.
3. When you make twig, you have to heat the top of runner almost melting then push its melting point to big branch and spin it out quickly.
4. The extra twigs are cut off as shown.
5. Sponge or sponge cucumber are used for leaves.
6. Paint the leaves green or color what you like.

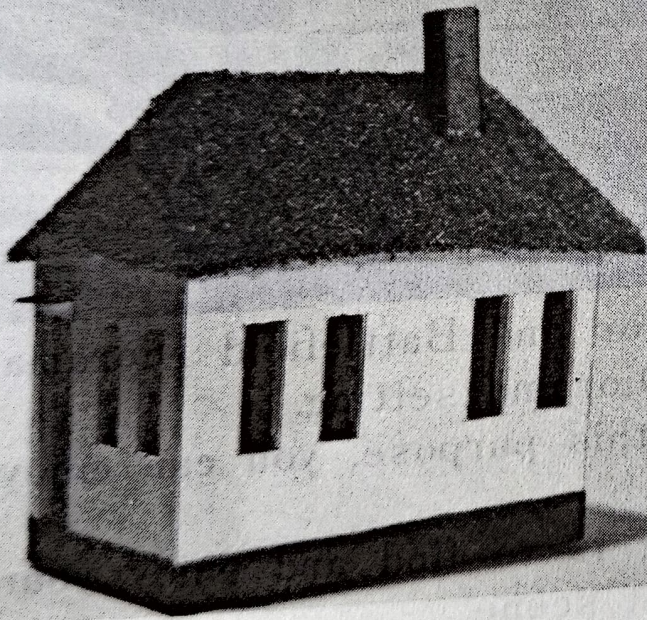


3. HOUSE

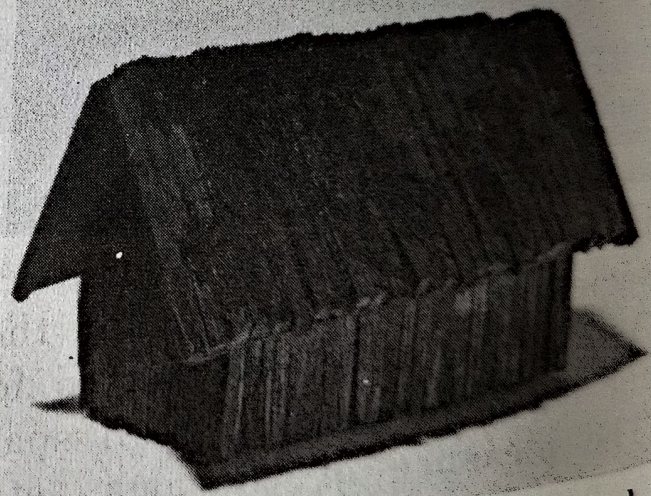
The plastic plate, blister styrol, cardboard, Balsa or matchstick are good construction materials.

The house is very different by environment or location so that you must study the field which you are going to make from the landscape pictures or war. pictures of World War II.

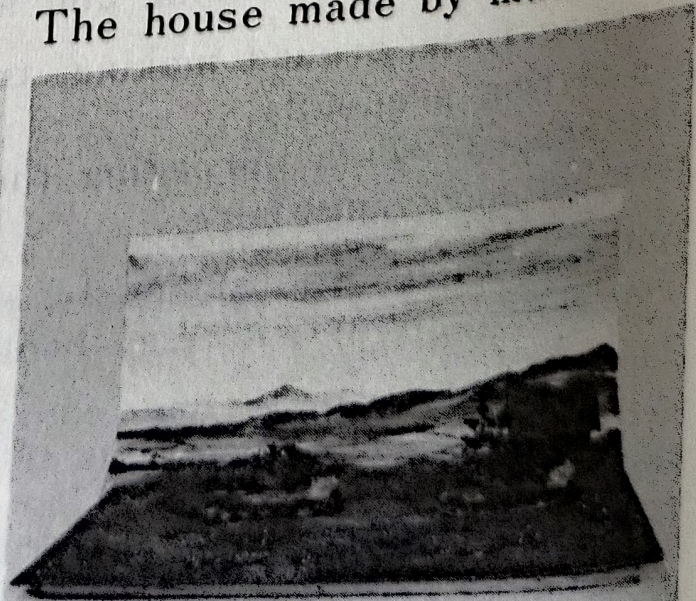
When you make the destroyed house, the runner or matchstick are used for inside pillars and broken pieces are scattered around the house.



The house made by papers



The house made by matchstick



4. SOLDIERS

Soldier is a indispensable material for diorama scene. Because, the workmanship of Diorama is very depend upon the result of soldier's assembly or painting.

Assembly is easy but never save labor and also for painting. If you want remodeling on arms or legs, you can bend them using small candle light. However, carefully bend them studying your own arms or legs.



5. TANKS

Usually the tanks which used on Diorama are painted muddy.

Especially, it becomes more realistic when caterpillar or wheels are painted muddy.

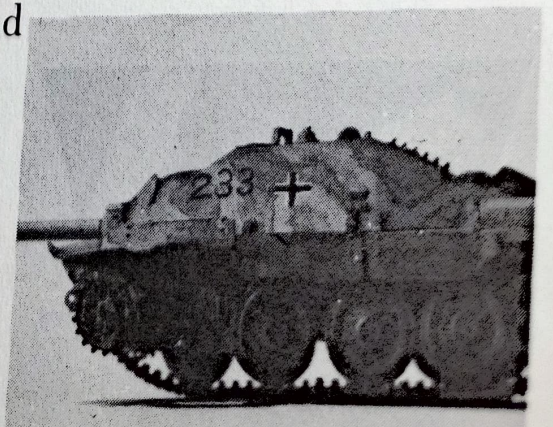
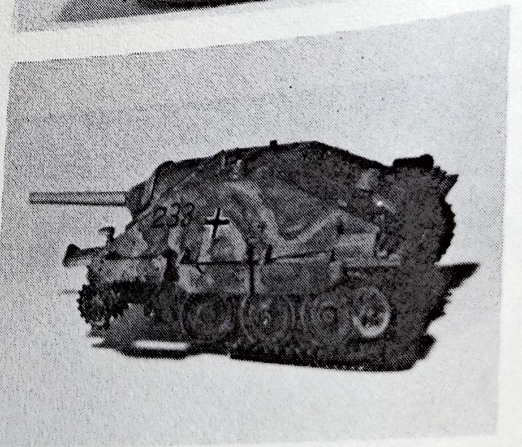
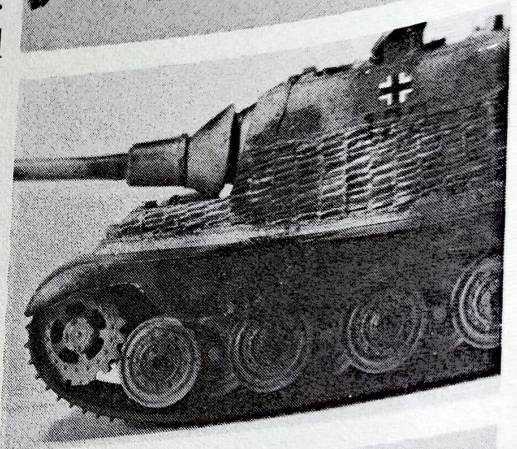
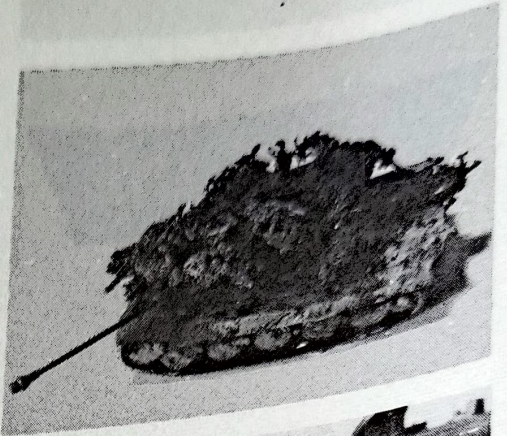
If you need to paint the tank which sank into mud, first, put the pate on the tank then paint on it to show much effect.

If you want to make camouflaged tank by trees or leaves, you can again use runner and sponge or sponge cucumber. The way to make these trees and leaves are just same way as step (2).

When you make destroyed or damaged tanks:

1. In case of damaged by gunpowder such powder as rocket or bomb; First make injured place by heated soldering iron or screw driver then paint there injured color.
2. In case of damaged by bullet or armor piercing ammunition; Make wounded place or piercing hole by nail or wire then paint the place radial as radial as if a bullet pierced the armor.

Besides, you can imagine and devise such ocations as mine destroyed road wheel or caterpillar.



6. SNOW SCENE

1. The trees which is used are dead tree or needle-leaf tree (cedar, fir).
2. White color powder, wheat flour, salt are used for snow.
3. To snows evenly, a sieve is used.
4. If you starch on the leaf or branch of trees and shrubs, the snows are sprinkled well.
5. Be careful that there are no snow on the traces.
6. As a one way; paint soldier by greyed white pate to make him camouflage for winter.
7. When camouflage the tanks by white color, it is better to use poster color for the case of miss paint as the color is washed.

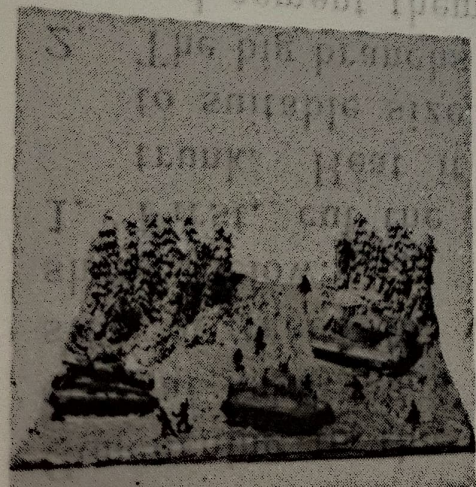
7. BACKGROUND

If you set the background picture on "Diorama", it looks more fine.

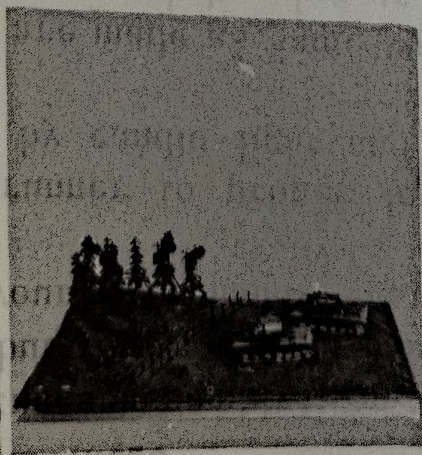
Illustration board, corrugated cardboard or plywood board are used for its material.

When plywood board is used, white paper is papered on it. Pigment or poster color are better to use for paint.

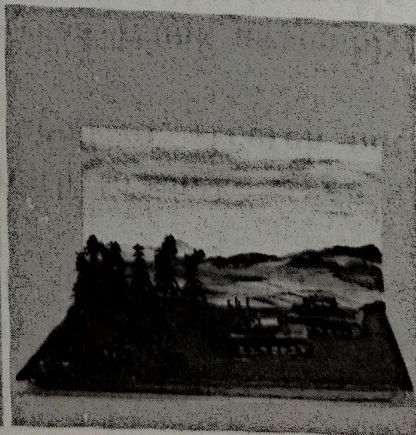
The scene is painted freely at the choice of Battlefield, but if you paint the higher sky darker and the horizon pale, it would become more realistic.



Scene of snow



Scene without background



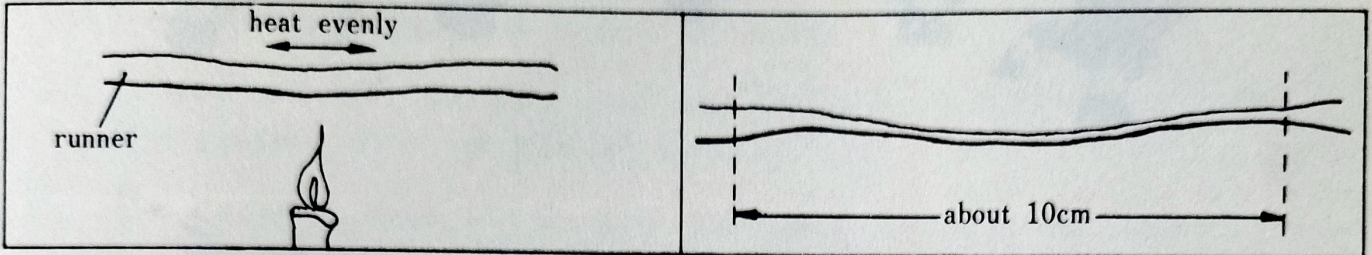
Scene with background

8. THE WAY TO MAKE COCONUT TREE.

First, prepare about 5cm long plane runner.

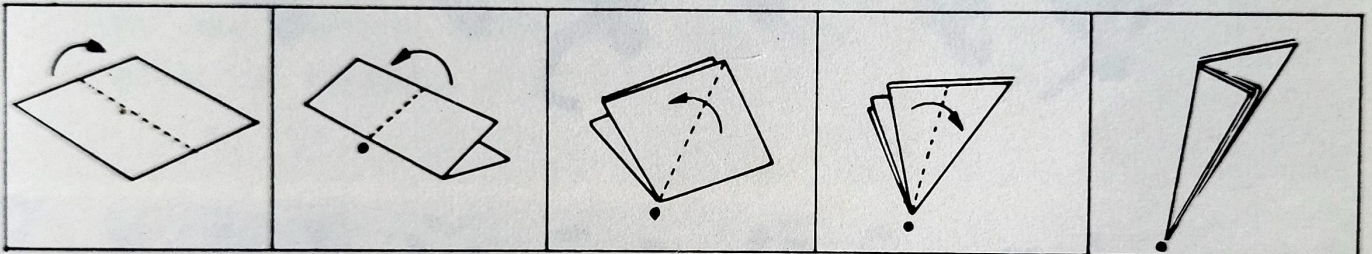
Heat it evenly by candle light then stretch out to make suitable size of tree's trunk.

The suitable length of trunk is about 10cm.



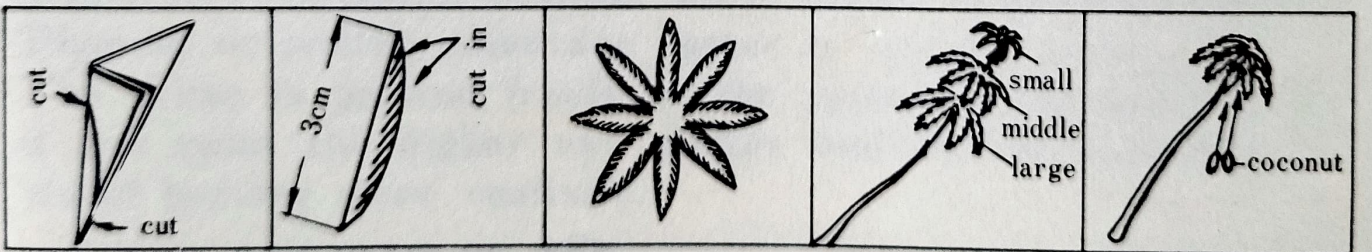
Leaf is made from colored paper for folding play.

Cut paper 7cm square then fold as illustrated in pictures.



Watching the first picture carefully, cut the folded paper semicircle. 3cm length is suitable and cut in as shown in second picture. The third picture is showing the unfolded paper leaf. (Make three leaves.)

It is coming more realistic to put real seed such one as rice for coconut.



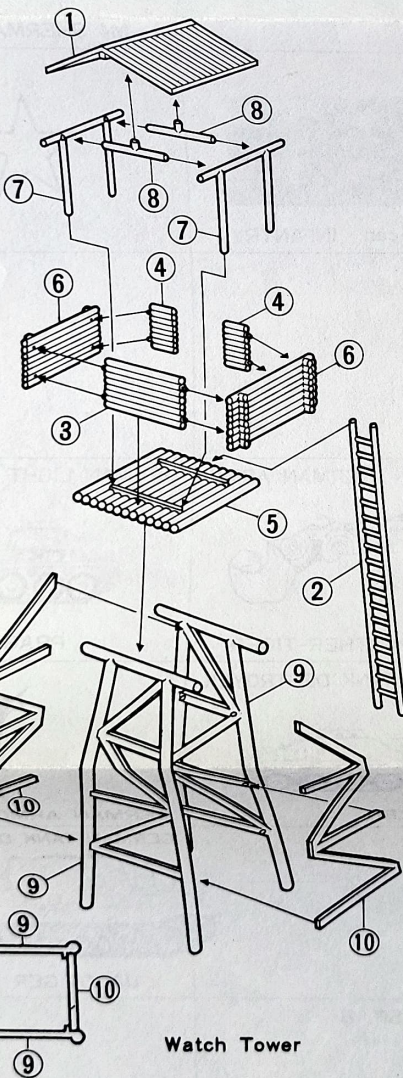
1:76
SCALE

BATTLEFIELD DIORAMA KITS

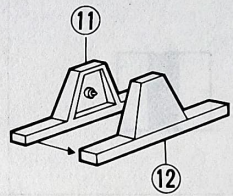
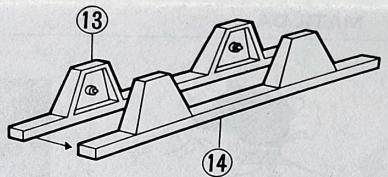


SERIES NO.5 WATCH TOWER·PILL BOXES
TANK OBSTACLES

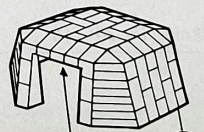
INSTRUCTIONS



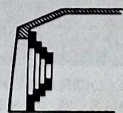
Watch Tower



Anti-Tank Obstacle
(Dragon Teeth)



Dot at bottom.



Pill Box



Red-brown

— Watch Tower



Neutral-grey

— Pill Box
— Anti-Tank Obstacle
(Dragon Teeth)



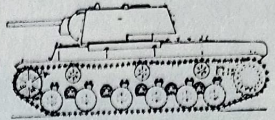
Cement-color

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251 Takamatsu, Shizuoka City, JAPAN.

NEXT NEW PRODUCTS ARE...

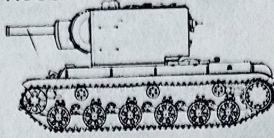


RUSSIAN HEAVY TANK



KV-1A Type 1941

RUSSIAN HEAVY TANK

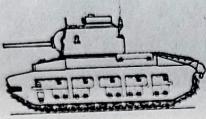


KV-II Advance Type



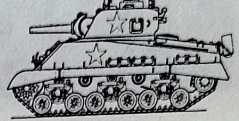
Russian Tank follows NEXT.

BRITISH INFANTRY TANK



MATILDA

U.S. ARMY MEDIUM TANK



M4 SHERMAN



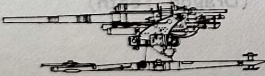
NEXT BRITISH TANK IS... ?



American INFANTRY

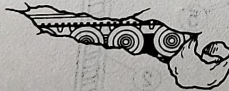


GERMAN ANTI-TANK ANTI-CRAFT



88mm FLAK 18

GERMAN ARMY



JAGDPANTHER-TIGER
GERMAN TANK DESTROYER

GERMAN LIGHT TANK



PRAGA



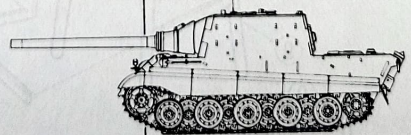
HETZER



GERMAN ARMORED CAR
GERMAN TANK DESTROYER

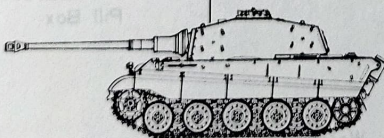


BATTLEFIELD DIORAMA KITS
TENTS · BRICK WALLS · OIL DRUMS
FOOT BRIDGES · FUEL CANS · SAND BAGS



JAGDTIGER

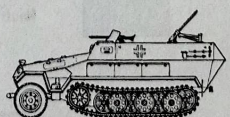
PANZER KAMPFWAGEN VI AUSF. B



TIGER II



GERMAN INFANTRY



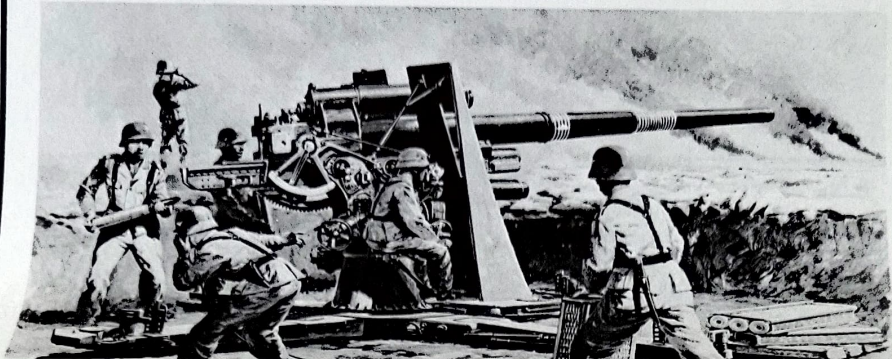
SCHÜTZEN-PANZERWAGEN
(Sd. Kfz. 251)

1:76 SCALE BATTLEFIELD DIORAMA KITS



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

INSTRUCTIONS



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 Bofors in Sweden and in return Bofors 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 "Sonderhaenger 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 "Sonderhaenger 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.

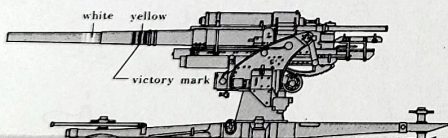
Technical Details for 88m/m FLAK 18

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)

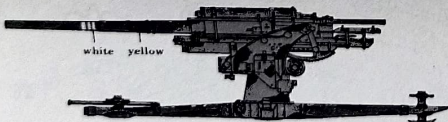
PAINTING REFERENCE:

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

Eastern front



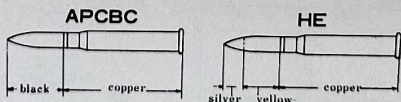
American front



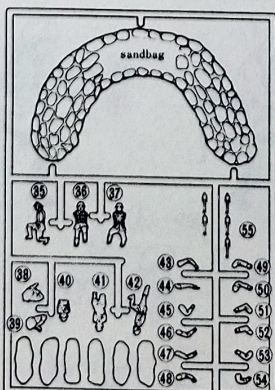
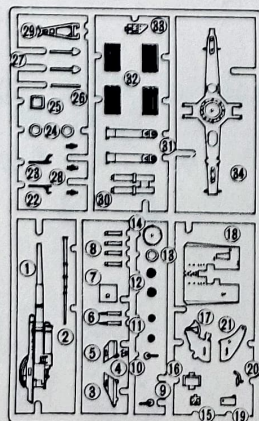
REFERENCE PAINTING FOR "88mm FLAK 18"

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



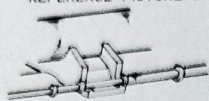
Painting for Artilleryman:
helmet) field-grey
uniform)
boots) black
belt)

1. CANNON BARREL ASSEMBLY

1 Below reference picture A shows the proper way to cement gun sight 2 to cannon.

2 Parts 5 and 3 are inserted into the same hole of cannon carriage base from both sides, as pictured.

REFERENCE PICTURE A



2. CARRIAGE AND PERSONNEL SHIELD ASSEMBLY

1 Assemble equilibrator according to reference picture B.

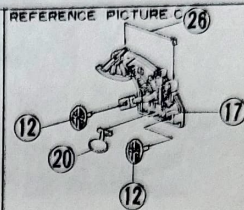
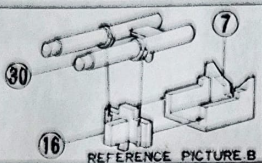
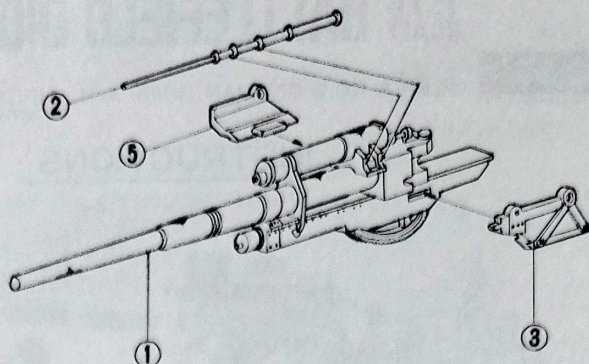
2 Cement parts 12 and 16 to part 17 as shown in reference picture C.

3 Assemble parts 17, 19, assembled equilibrator and cannon barrel together. First cement inside under bores of parts 17 and 21 in the elite of assembled equilibrator from both sides, like carborundum the equilibrator, then insert upper side bores of 17 and 21 in the holes of parts 3 and 5.

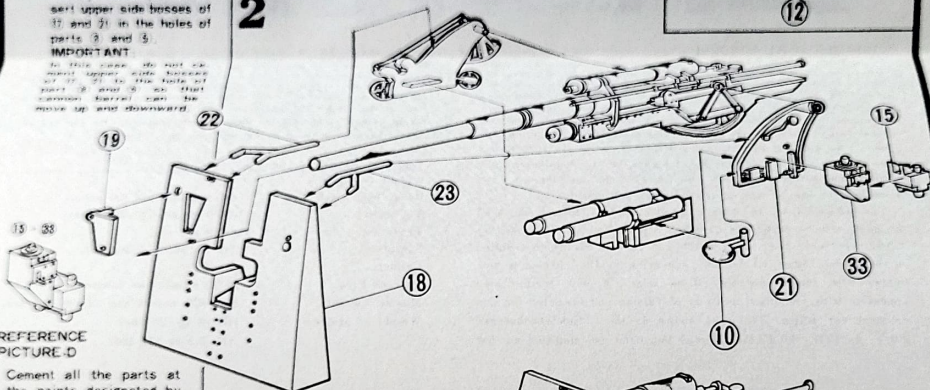
IMPORTANT

In this case, do not cement the barrel to the carriage. The barrel must be moved up and downward.

1

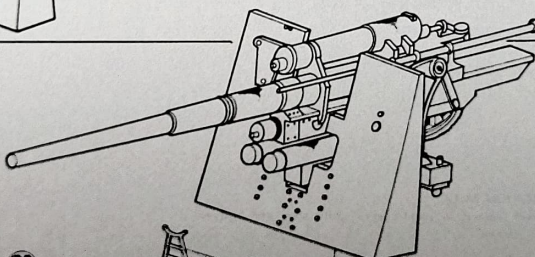


2

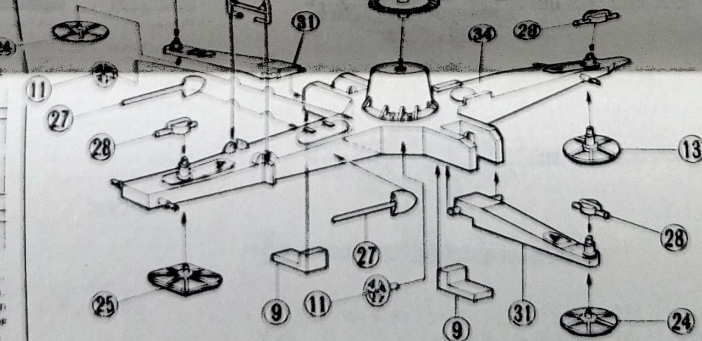


REFERENCE PICTURE D

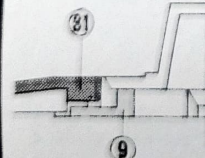
3



3



REFERENCE PICTURE E

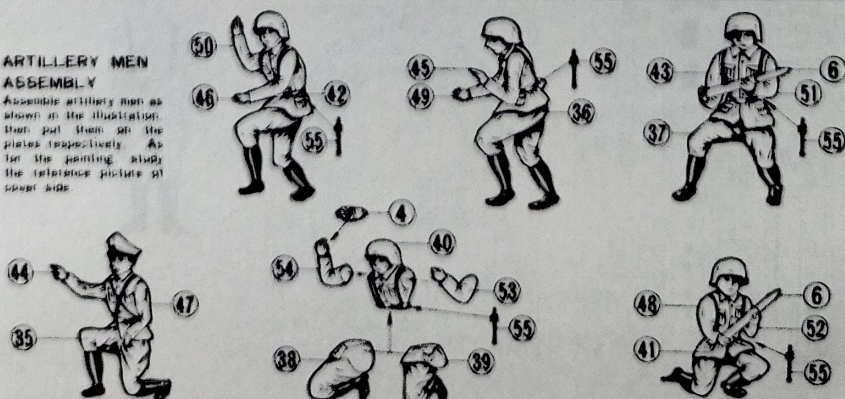


3 Rotating gear 11 is cemented on the platform. Finally assembled cannon and carriage is put on the platform (not cemented).

4

4. ARTILLERY MEN ASSEMBLY

1 Assemble artillery men as shown in the illustration. Then put them on the plates respectively. As for the pointing plug, the reference picture of spear side.



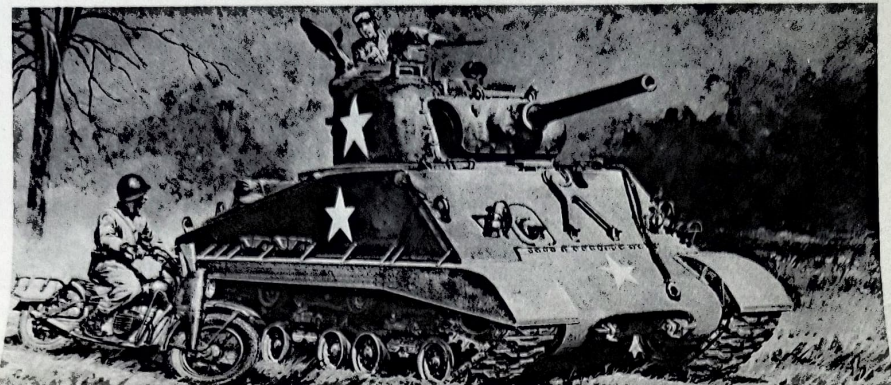


U.S. ARMY MEDIUM TANK M4 SHERMAN

U.S. ARMY MEDIUM TANK M4 SHERMAN (M4A3 105 mm HOWITZER)

1:76 SCALE MODEL KIT

ASSEMBLY INSTRUCTIONS



HISTORICAL BACKGROUND

Although the British and American Armies never went into production with specialized assault guns on the lines of the German and Russian vehicles of this type, various tanks had howitzers fitted in place of the standard armament and were used as close support vehicles, going forward with the leading Infantry in order to demolish obstacles.

The normal type of self propelled howitzer was not very suitable for this particular role, due to the vulnerability of the open superstructure.

Writing in March 1945, General George S. Patton, commander of the U.S. Third Army, stated that "the great mobility of the fleet-footed Sherman usually enables it to evade the slow and unwieldy Tiger."

With their adoption of this cumbersome tank, the Germans, in my judgement lost much of their ability in armoured combat. These tanks are so heavy and so slow and their road life so short that the Germans are forced to use them as guns rather than as tanks. That is, they are forced on the defensive against our armour, whereas we invariably try and generally succeed in using our armour on the offensive against his infantry, communications, and supply lines-the proper use of armour."

Certainly, there was no better known or more widely used tank than the Sherman in the history of armoured warfare. The howitzer utilized on the Medium M4 and M4A3 was the 105-mm Howitzer M4.

This had a calibre length of 25 and fired the same ammunition and had the same performance as the U.S. standard 105-mm field howitzer M2A1. It could fire a 33 lb shell a maximum distance nearly seven miles. The rate of fire was four rounds in half a minute. Smoke shells were available, and a hollow charge anti-tank shell was developed which

could penetrate 4 inch armour at any range up to just under five miles. Muzzle velocity firing H.E. was 1,550 ft. per sec., or firing hollow shells 1,250 ft. per second. The M4A3 was produced at Detroit Arsenal. 500 with V.V.S. were produced between May & September 1944, and 2,539 between September 1944 and June 1945 with H.V.S..

SPECIFICATION FOR "M4A3 SHERMAN"

Dimensions:

Total Loading weight	31.8 tons
Length overall	6.20 m (20 ft. 4 2/16 in.)
Width overall	3.00 m (9 ft. 10 2/16 in.)
Height	3.38 m (11 ft. 1 1/16 in.)
Track contact length	3.73 m (12 ft. 2 13/16 in.)
Ground clearance	0.18 m (7 1/16 in.)
Width of track	0.58 m (1 ft. 10 1/16 in.)

Power plant:

Engine	One Ford GAA-III water-cooled V-8 petrol engine.
	450 b.h.p. at 2,600 r.p.m.

Performance:

Maximum speed	39 km/h (24.23 M.P.H.)
Trench crossing ability	2.29 m (7 ft. 6 3/16 in.)
Climb ability	0.61 m (2 ft.)

Armament:

Main cannon	1-Type M, 105-mm Howitzer
Machine guns	2-7.62 mm
	1-12.7 mm

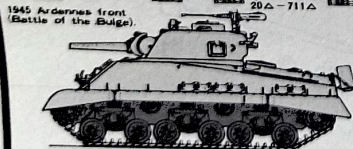
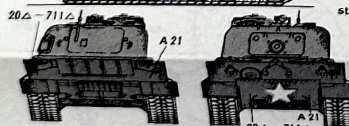
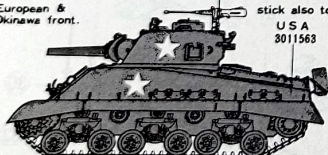
Armour:

Turret	25-91 mm (1-3 9/16 in.)
Body	13-114 mm (8/16- 4 8/16 in.)

REFERENCE PAINTING FOR M4 SHERMAN.

European & Okinawa front. stick also to opposite side.

USA 3011563



olive-drab



white



flat-base

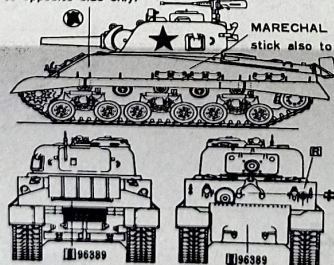
Basic color tone is olive-drab.

In winter time, the upper body was painted white but under body was always painted olive-drab.

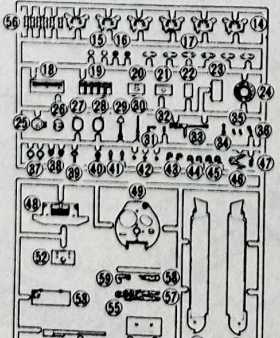
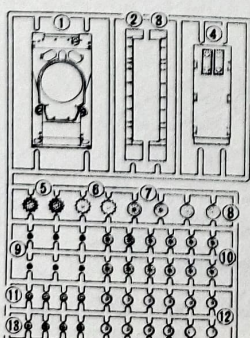
Concerning the position of decals, study the reference pictures.

*Note: White is frosted by flat-base color.

stick to opposite side only.



SHERMAN used by French Army.



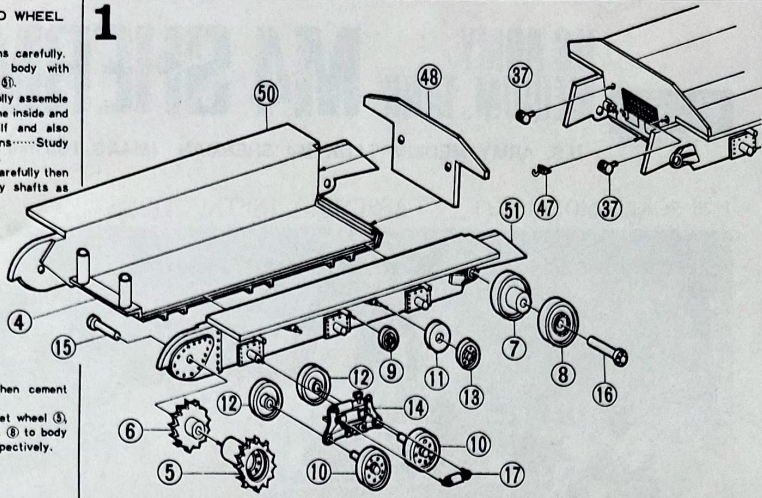
Unit Code Markings	Serial Number
Okinawa Front	USA
20△-711△ A21	3011563
20△-763△ B15	USA 3243360
European Front	USA
7△-A17△ C10	2922449
7△-31△ △12	USA 3058305

PARTS DRAWING

caterpillar

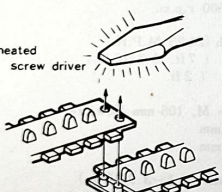
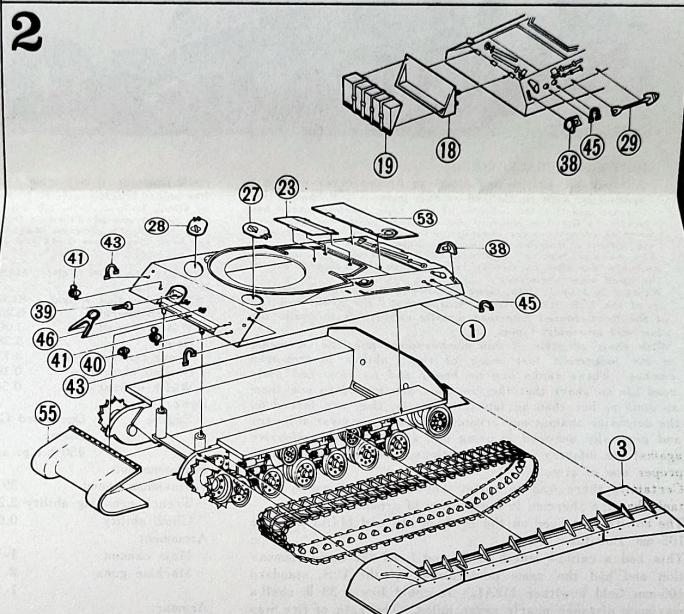
1. UNDER BODY AND WHEEL ASSEMBLY.

- Study the illustrations carefully. Assemble the under body with parts ①, ②, ③ and ④.
- **IMPORTANT:** Carefully assemble the wheel checking the inside and outside of wheel half and also the cemented positions.....Study also the box picture. Assemble all wheels carefully then cement them to body shafts as shown.
- First: Cement return roller ① and guide wheel ②, ③ to shafts.
- Note: In this case, there is guide ditch between guide wheel halves ① and ②.
- Second: Assemble suspension and road wheel together using parts ④, ⑤, ⑥ and ⑦. (Make 6 units) then cement them to body.
- Third: Cement sprocket wheel ⑧, ⑨ and idler wheel ⑩, ⑪ to body shafts ⑫ and ⑬ respectively.



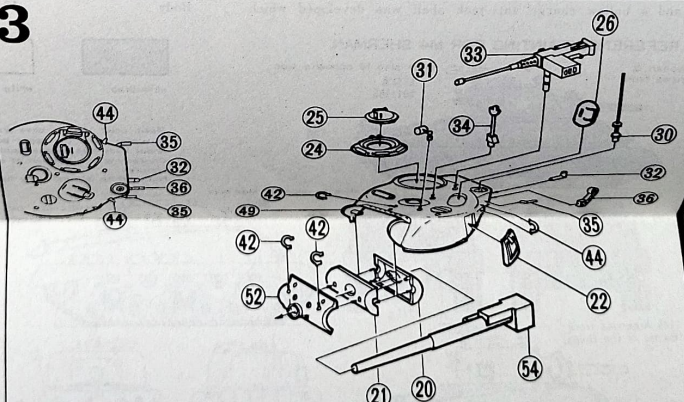
2. UPPER AND UNDER BODY'S PARTS ASSEMBLY.

- Cement all the parts of upper body at the points designated by arrows in the illustration.
 - Caterpillar assembly. Insert one side end stud in hole of the other side, then lightly melt top of stud with heated screw driver. The caterpillar set should be done before fender assembly.
 - Fenders ② and ③ shall be cemented to both sides of the upper body respectively. Snap fit the upper body to under body.
 - Cement front armor plate ④ at the front of body.
- IMPORTANT:**
Assemble cannon so it is movable.



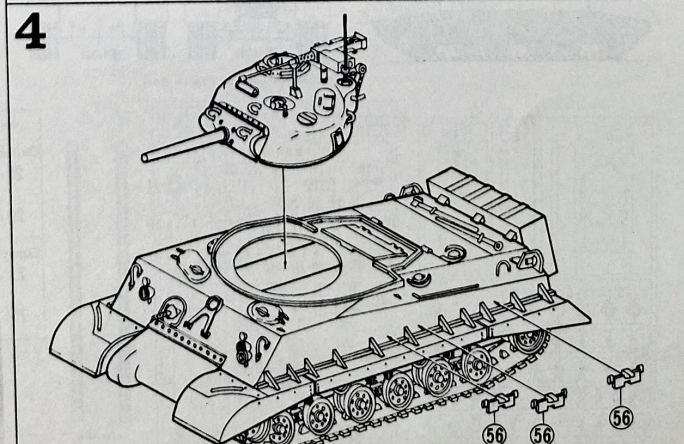
3. TURRET AND CANNON ASSEMBLY.

- Cement all the parts of turret at the points designated by arrows in the illustration.
- As shown, sandwich and cement the boss of turret with cannon drum halves ② and ③. Slide the cannon barrel ④ through the cannon drum from inside of turret. Cover and cement cannon mantlet ⑤ on the cannon drum.



4. FINAL ASSEMBLY

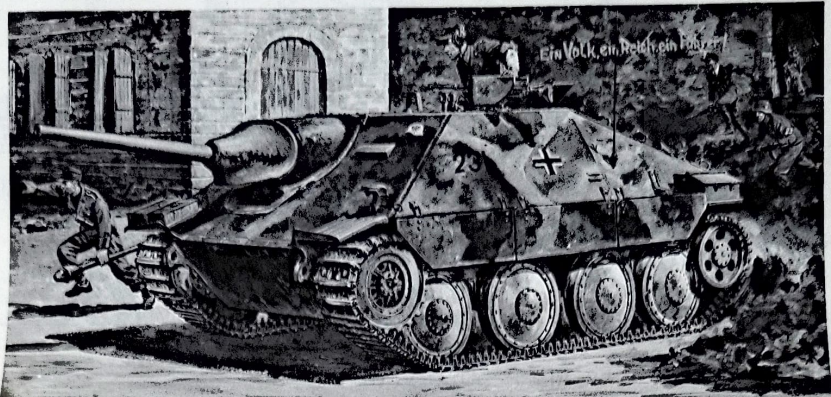
- Insert bottom stud of turret into the hole of previously assembled main body (Do not cement). Spare caterpillars are placed also to the opposite side.
- Assemble tank man by illustration shown on the opposite side of this instruction sheet.



GERMAN TANK DESTROYER HETZER



1:76 SCALE MODEL KIT ASSEMBLY INSTRUCTIONS



HISTORICAL BACKGROUND

When the German Army entered Czechoslovakia in 1938 and took over all Czech Army equipment, they found two excellent tanks in production. These tanks possessed outstanding qualities; for this reason production was allowed to continue and they were introduced into regular service with the German Army as the Pz. Kw. 35(t) and Pz. Kw. 38(t) (HETZER)

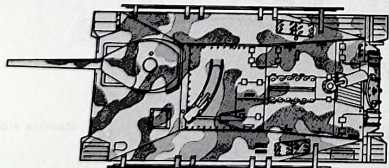
The Hetzer was developed specially as a tank destroyer in 1943 on the widened chassis of the Czech TNHP-S light tank of 1938. This vehicle, known as the Pz. Kw. 38(t) served with the German Army throughout the war, first as a battle tank, then as a modified s.p. carriage for several different types of weapon.

The Hetzer mounted a standard Pak 39 without a muzzle brake, which was quite adequate for its purpose. A low and compact silhouette, together with well sloped armour gave good protection, though the crew were rather cramped as a result. It was renowned for its simplicity and reliability. There were over 4,000 built. Hetzers served also post-war with the Czechoslovak Army and 158 were purchased in 1946-47 for the Mobile Brigades of the Swiss Army, under the designation Pz Jg G13. These vehicles were given new 160 h.p. engines.

SPECIFICATION FOR "HETZER"

Dimensions	
Combat weight	17.6 short tons
Length	20 ft. 7 in (6.27m) (including 8 ft. 8½ in (2.65 m) cannon)
Width	8 ft. 8½ in (2.65 m)
Height	6 ft. 11½ in (2.11 m)
Ground clearance	1 ft. 3¾ in (0.40 m)
Track contact length	9 ft. 3¾ in (2.84 m)
Width of track	1 ft. 1½ in (0.35 m)
Power plant	
Engine	Praga, 6-cylinder, Watercooled, 150 h.p. 2,600 r.p.m.
Transmission	Praga-Wilson planetary gear type 5 speeds forward, 1 reverse.
Performance	
Maximum speed	42 km. p.h. (26 m.p.h.) on roads; approximately 14 km.p.h. (22.4 cross-country. m.p.h.)
Radius of action	178 km (111 miles) on roads; approximately 96.0 km (60 mile) cross-country.
Climbing ability	25 degrees
Trench crossing ability	5 ft. 3 in (1.60 m)
Maximum fording depth	2 ft. 11½ in (0.90 m)
Armament	
	1×75 mm Pak 39L/48: Cannon ball 36 rounds
Armor	
Body front, under	2 ½ in (60 mm)
Body front, upper	2 ½ in (60 mm)
Body side, under	¾ in (20 mm)
Body side, upper	¾ in (20 mm)
Body rear, under	¾ in (20 mm)
Body rear, upper	¾ in (8 mm)
Ceiling	¼ in (8 mm)
Crew	
	4 men

REFERENCE PAINTING FOR GERMAN TANK "HETZER"



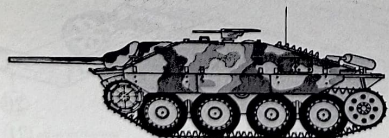
sandy brown



dark yellow

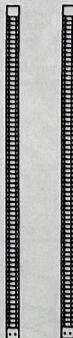
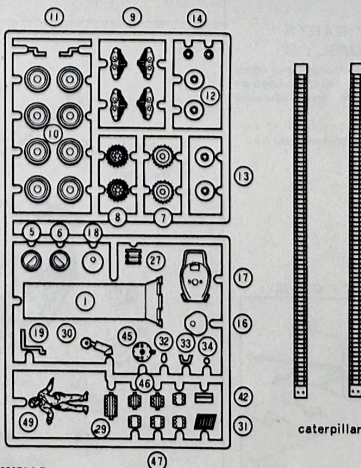
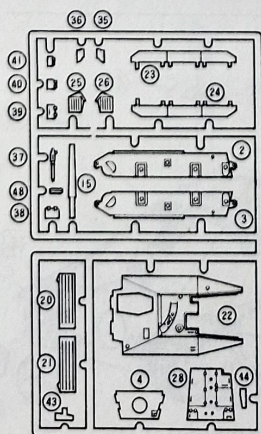


red brown



REFERENCE PAINTING FOR "HETZER"

Basic color tone is dark-yellow (sand). On this basic tone, sandy-brown or red-brown were sprayed properly for camouflage. By the battle field, there were tanks also camouflaged by dark-green. The cross marks should be placed on both sides of fighting compartment as shown in box art picture and the Division' marks are usually placed at both sides of front.



caterpillar

1 UNDER BODY AND WHEEL ASSEMBLY

- Study the illustrations carefully. Assemble the under body with parts (1), (2), (3) and (4). Assemble all wheels carefully then cement them to body shafts respectively.

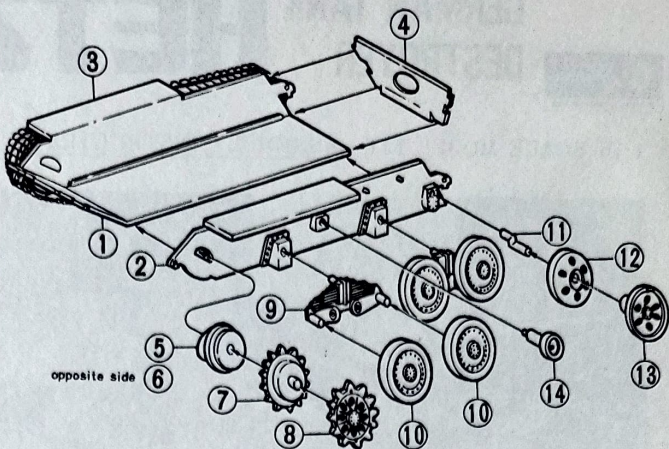
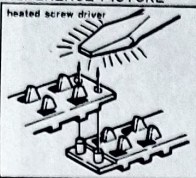
IMPORTANT:

Check inside and outside of wheels and also the fixed locations.

2 CATERPILLAR ASSEMBLY:

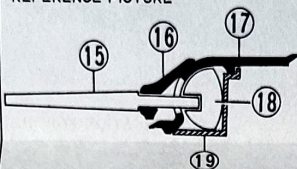
- Insert the end stud from one side into the hole on the opposite side, then gently melt top of the stud with heated screw driver. The caterpillar treads are installed as per illustration, part III.

REFERENCE PICTURE

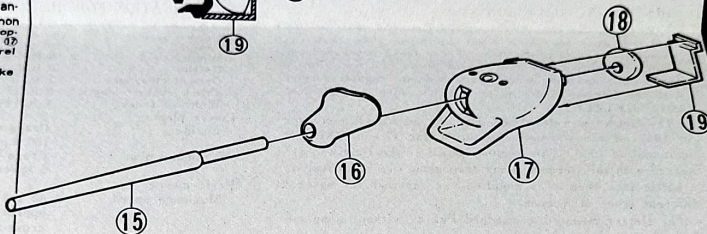


opposite side

REFERENCE PICTURE



Numbered side faces down.

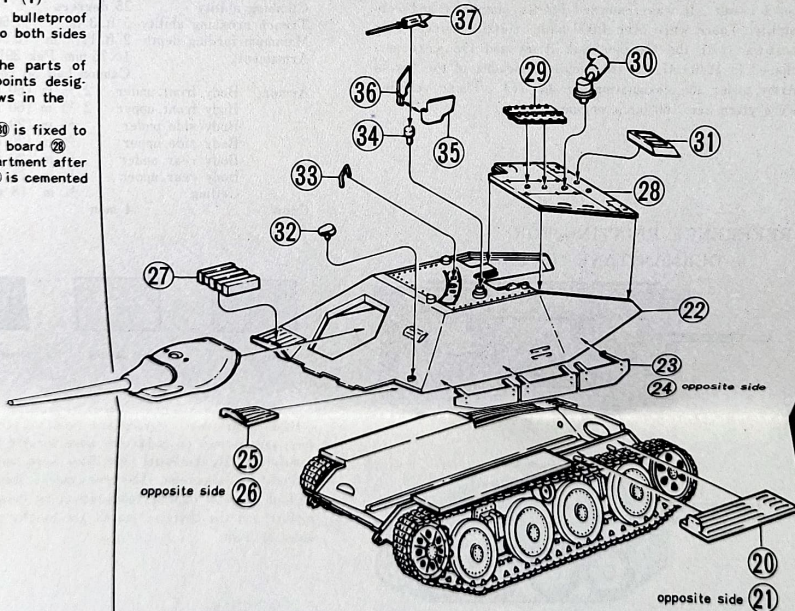


2 CANNON ASSEMBLY

- Put cannon barrel stopper (16) through cannon drum (17) and cannon mantle (18), then connect cannon barrel and its stopper (16) together.
- Don't cement between cannon mantle (18) and cannon drum (17), cannon barrel stopper (16) and cannon drum (17) and also cannon barrel stopper (16) and part (18). It is important to make cannon barrel movable.

3 BODY PARTS ASSEMBLY (1)

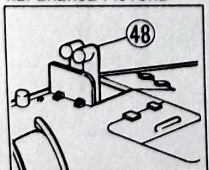
- First, cement bulletproof plates (27, 28) to both sides of upper body. Cement all the parts of body at the points designated by arrows in the illustration.
- Exhaust pipe (30) is fixed to the rear side board (28) fighting compartment after the radiator (31) is cemented previously.



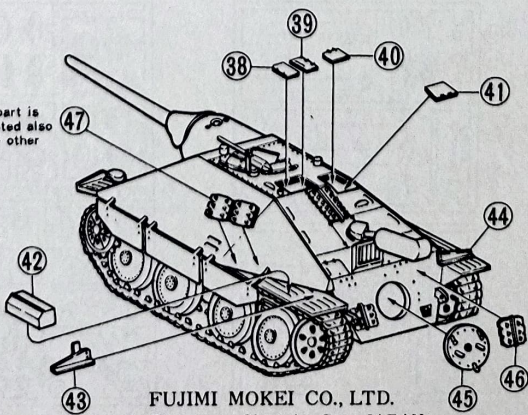
4 BODY PARTS ASSEMBLY (2)

- If the periscope (46) is used, assemble hatch (44) open as shown in the reference picture.
- Spare caterpillars (47) are placed anywhere you like.

REFERENCE PICTURE



This part is cemented also to the other side.



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