

# PANTHER

# Panzer Kampfwagen V (sd.kfz171) Ausführung A

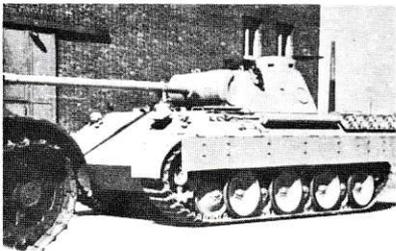


1/35 MILITARY MINIATURE SERIES



## ● Interesting Facts about the German Medium Tank "Panther"

Since 1943, during World War II, there appeared an unusually fast tank on the European Front the silhouetted among its German Mechanized Division. This was the "Panther" medium tank, with its formidable power of attack and fast maneuverability, that soon became an object of terror to men of the Allied Forces.



Panther Ausf D

If put to a question, "Which was the best German tank during the war?" The majority of the people, without hesitation will answer the name "Panther." It is known that the PZKW-IV and the Tiger-II tanks were also produced by German technology and were both outstanding tanks. But the PZKW-IV was meant to be replaced by the Panther, and the Panther, showing improved attacking and defensive powers and accurate maneuverability on the field, soon became the German's main strength tank.

The Tiger I with its 88mm gun would seem at first to be superior to the Panther's 75 mm gun in attacking power. But when viewed from the point of armour piercing power of the shell, the Panther, with its 70 caliber KWK 42 anti tank gun and sloping side armour proved much stronger in actual fighting than the Tiger I's 56 caliber KWK 36 anti tank gun with vertical side armour.

The Tiger II tank, which should be called the 'improved Panther' was much stronger in attacking and defensive power than the Panther. However, considering the number of Panthers produced and used during this time, the Panther tank was still Number 1.

The main strength German tanks at the start of the war were all unique in the sense that their designs were completely based on German plans and ideas. But the Panther was influenced by the Soviet masterpiece tank T-34 which was seen for the first time on the east European Front.

In the beginning of 1942, in order to fight against the T-34, the German military ordered a new tank from Dymler-Benz and M.A.N. companies with the following specifications:

weight-35 tons; speed-60 km/hr; armament-75 mm long gun and armour, 60mm thick in front hull, 35mm in the rear and 100 mm at the front of gun turret.

Lastly, it was specified that the tank be equipped with a Maibach HL210, water-cooled, V-type 12 cylinder engine. In May of the same year, M.A.N.'s model was chosen without waiting for completion of a proto-type tank. However, there were 2 important modifications. First, in order to meet the military's demand, considerably more than the original 35 ton weight was needed. Second, the military ordered a change in the thickness of the frontal armour from 60mm to 80mm.

Because of these changes, the engine type had to be changed from HL210 to HL230. Then, in order to accommodate this engine, a much better gear was needed, but mass production began without this last change, which resulted in frequent gear malfunctions and related troubles. This became the Panther's greatest defect. In the same year, Dymler-Benz and Henschel were ordered to produce the Panther. Therefore, production was greatly increased and a total of 6283 Panther Tanks were produced, second only to PZKW-4 in number.

The first mass produced Panther type D was not equipped with a machine gun but after the experience of close battle. A 7.92 mm MG 34 was added to the Panther's right front hull armament beginning with its type A. The special feature of the Panther was the left and right driving mechanism. This created an interchangeability of movements, using the torsion bar system. By 1944, the Panther was further improved from Type A to Type G with a change in its side shape.



Panther's last model, Ausf G.

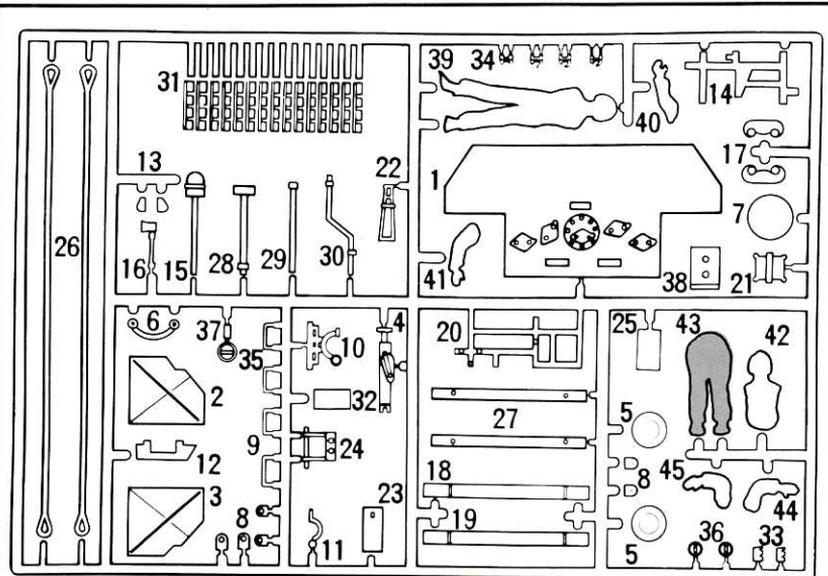
The Panther continued its activities against the Allied Forces throughout the latter half of the war. One of the famed battles it waged during this latter period probably is the one against the new Soviet JS II heavy tank on the eastern front.

The Panther at that time, was the main strength tank of the Gross Deutschland, the strongest German Mechanized Division, under the command of General Hasso von Manteuffel. The Panther reportedly destroyed 350 JS II tanks and 20 other armoured vehicles in the battle. It was a complete one-sided victory for the Panther and one for the book of military history. The Panther, therefore, was an extremely balanced tactical tank and should be called a masterpiece destined to bear the last glory of German war technology. Its glorious name will forever remain in the records of the 2nd World War.

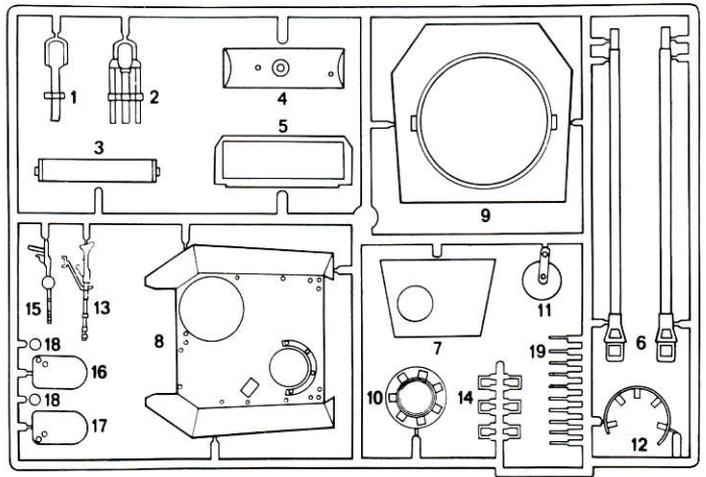
# PARTS

## Parts A

1. Rear Panel
2. Rear Tool Box (left)
3. Rear Tool Box (right)
4. Jack
5. Front Shaft Metal Cover
6. Arm for Escape Hatch
7. Escape Hatch
8. Hinge
9. Hand Rail (A)
10. Gun Barrel Carriage (A)
11. Gun Barrel Carriage (B)
12. Gun Barrel Carriage (C)
13. Gun Barrel Carriage (D)
14. Utensil Rack (small)
15. Shovel
16. Hatchet
17. Shacklet
18. Utensil Container Half (upper)
19. Utensil Container Half (lower)
20. Utensil Rack (large)
21. Utensil (A)
22. Utensil (B)
23. Machine Gun Carriage
24. Front Window Cover Holder
25. Front Window Cover
26. Wire
27. Auxiliary Caterpillar Rack
28. Utensil (C)
29. Utensil (D)
30. Utensil (E)
31. Auxiliary Caterpillar
32. Hull Stopper Parts
33. Front Hatch Cover Stopper
34. Hook
35. Hand Rail (B)
36. Cleaning Rods Case
37. Light
38. Dummy Fixing Plate
39. Commander's Body
40. Commander's Left Arm
41. Commander's Right Arm
42. Driver's Upper Half
43. Unnecessary
44. Driver's Left Arm
45. Driver's Right Arm



## A

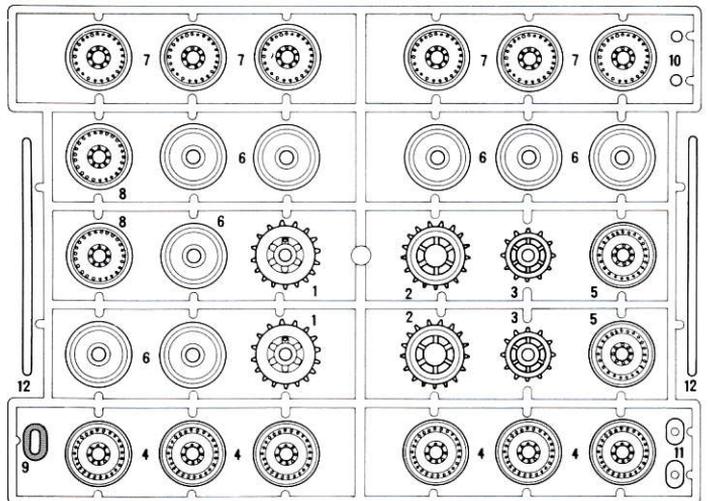


## B

## Parts B

1. Exhaust Pipe (A)
2. Exhaust Pipe (B)
3. Cannon Drum (inside)
4. Cannon Drum (outside)
5. Cannon Drum (middle)
6. Gun Barrel
7. Gun Turret Rear Panel
8. Gun Turret
9. Lower Gun Turret
10. Commander Hatch
11. Commander Hatch Cover
12. Rail
13. Machine Gun (MG 34)
14. Hand Rail (C)
15. Front Machine Gun (MG 34)
16. Front Hatch Cover (left)
17. Front Hatch Cover (right)
18. Stopper
19. Upper Gun Turret Hook

## C



## Parts C

1. Sprocket Wheel (inside)
2. Sprocket Wheel (outside)
3. Drive Wheel
4. Road Wheel (SA)
5. Road Wheel (SB)
6. Road Wheel (W inside)
7. Road Wheel (WA)
8. Road Wheel (WB)
9. Unnecessary
10. Front Shaft
11. Rear Shaft
12. Road Wheel Shaft

## Parts D

1. Lower Hull
2. Upper Hull
3. Wheel Cap (A)
4. Wheel Cap (B)
5. Wheel Cap (C)
6. Tracks



★This model is exclusively for display use, that is, non-motorized.

★Be sure to read the following instructions carefully before starting assembly work.

★You will need a sharp knife, a screwdriver, a pair of tweezers, a file, and a pair of pliers.

★Do not break parts away from sprue, but cut off carefully with a pair of pliers.

★Use glue sparingly. Use only enough to make a good bond. Apply cement to both parts to be joined.

Fig. 1 Construction of Rear Panel

★Glue rear parts A2, A3, A4, B1 and B2 onto rear panel A1.

Fig. 3 Fixing of Wheel

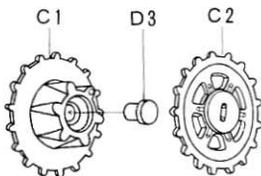
★ Glue A5 onto right and left walls of D1 respectively. First, fix road wheels C6 onto both walls of D1. Then fix road wheels C4 onto D1 and C5 on C12.

Fasten C5 and C4 with wheel stopper cap D4. Fix sprocket wheel onto shaft C10 fixed at Fig. 2.

★Fix road wheels correctly as shown in the Fig. 4.

《Construction of Sprocket Wheel》

★Insert wheel stopper cap D3 onto wheel C1. Glue C2 to C1. Insert assembled sprocket wheel into shaft C10.



《Cutting off Pins on Idler Wheel》

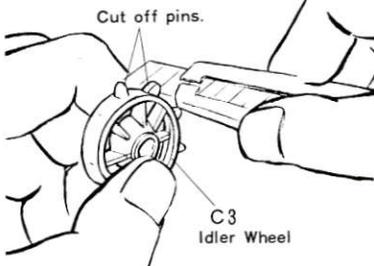
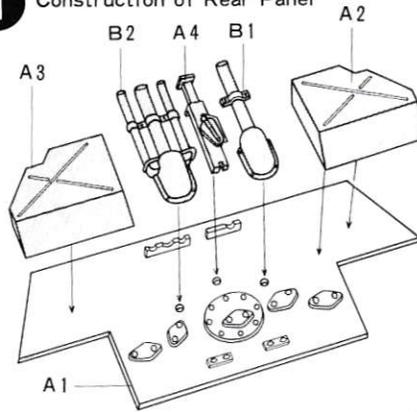


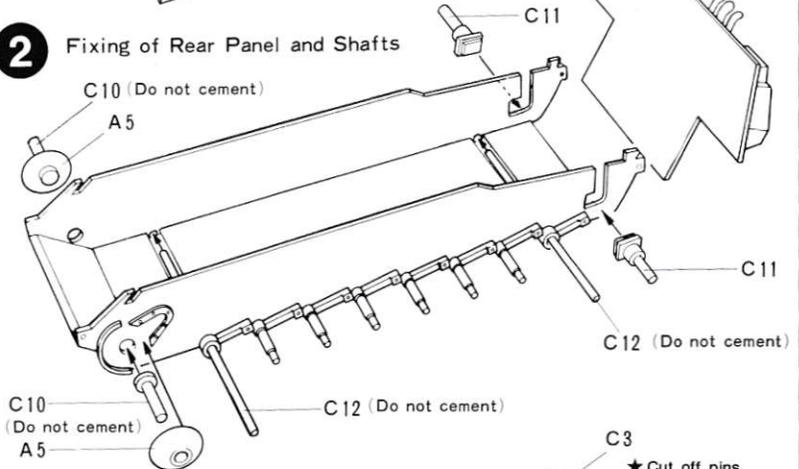
Fig. 4 Note in Fixing Wheels

★Though road wheels C5 and C4 are alike in shape, they are different in size of center holes. Also, C7 and C8 are different only in their hole diameter. Make sure of their number and fix.

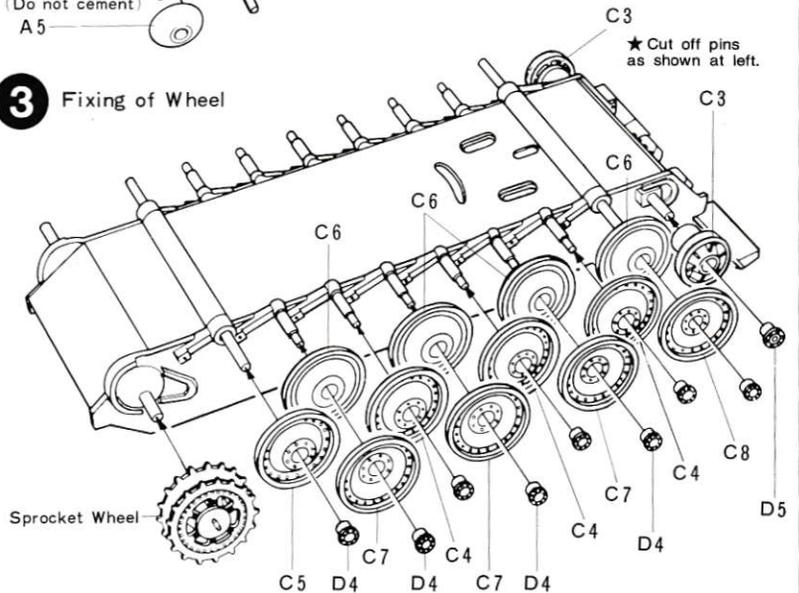
## 1 Construction of Rear Panel



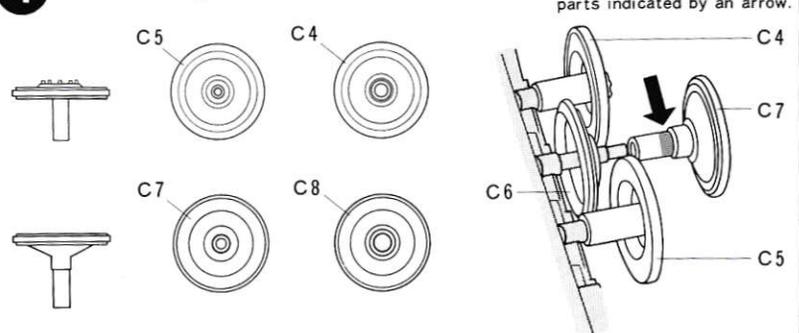
## 2 Fixing of Rear Panel and Shafts



## 3 Fixing of Wheel



## 4 Note in Fixing Wheels



**Fig. 5 Construction of Gun Barrel**  
 ★Glue gun barrel halves B6 together.  
 ★Fix B3 securely into B5. Then glue onto B4.

**Fig. 6 Fixing of Escape Hatch**  
 ★Fix four A8 parts onto escape hatch arm, A6. Then glue A6, A7 and A8 onto rear panel B7.

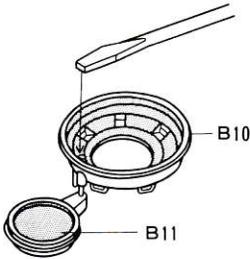
**Fig. 7 Construction of Gun Barrel**  
 ★Glue gun barrel B6 into B4. Next, glue parts B7, B9 and B5 onto gun turret B8 respectively.



**Fig. 8 Construction of Figures**  
 ★Assemble commander and driver figures. While glue is being dried, prepare paint and two or three brushes. When completely dried, paint figures.

**Fig. 9 Fixing of Gun Turret Parts**  
 ★Insert B11 into B10, then lightly flatten the arrowed part in B11 with the heated tip of a screwdriver. (see Fig.B below)

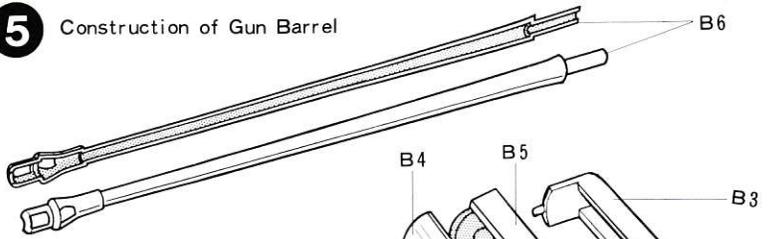
Fig. B



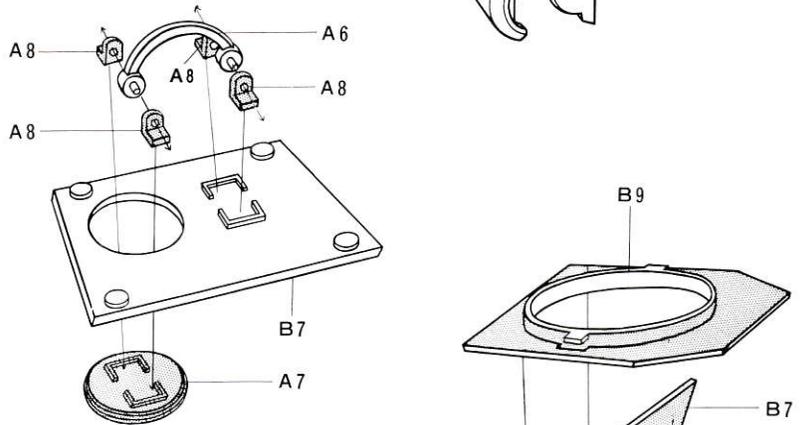
★Glue B10 onto Gun Turret B8.  
 ★After fixing rail B12 onto B10, put commander figure inside B10. Next, glue machine gun B13 onto B12.

★Fix parts A9, B14 and A19 into gun turret B8.

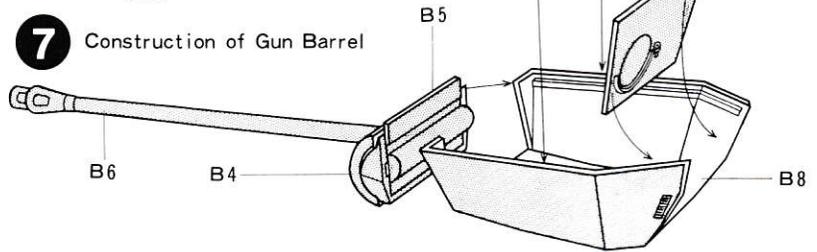
**5 Construction of Gun Barrel**



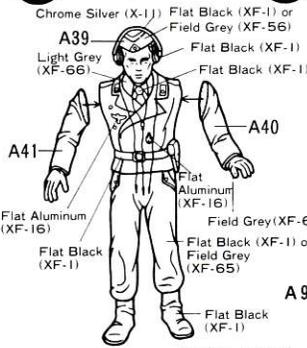
**6 Fixing of Escape Hatch**



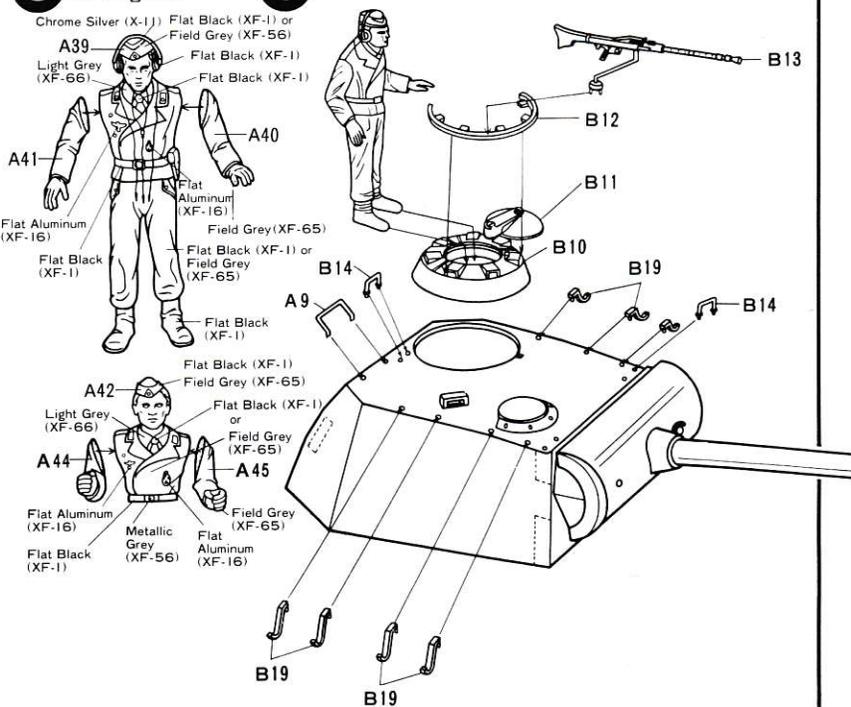
**7 Construction of Gun Barrel**



**8 Construction of Figures**



**9 Fixing of Gun Turret Parts**



**Fig. 10 Construction of Gun Barrel Carriage**

★Glue A13 to gun barrel carriage A10 and A12. Fasten all into A10 by flattening projection with heated tip of a screwdriver.

**Fig. 11 Construction of Utencil Container**

★Glue upper and lower utensil container halves A18 and A19 together. And cement two A36.

**Fig. 12 Fixing of Utencil, A**

★Glue parts A15, A16 and A17 onto utensil rack A14.

**Fig. 13 Fixing of Utencil, B**

★Glue parts A17, A21, A22 and A30 onto utensil rack A14.

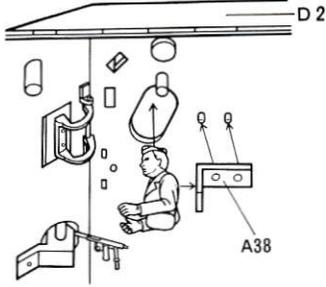
**Fig. 14 Fixing of Upper Hull Machine Gun**

★Fix machine gun B15 into machine gun carriage A23. (use no adhesives). Then glue it inside upper hull D2. Fix right and left A8 to A24. Then glue it onto D2.

Glue B16 and B17 in holes of D2.

★Fixing of Driver Figure.

Glue driver figure to upper hull as follows.

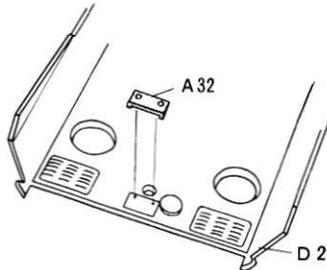


**Fig. 15 Fixing of Upper Hull Parts, A**

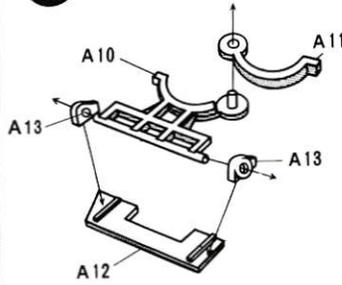
★Glue track stopper A27 into D2. Then glue auxiliary tracks A31 onto the stopper.

★Glue parts A20, A29, A28 and A32 onto upper hull.

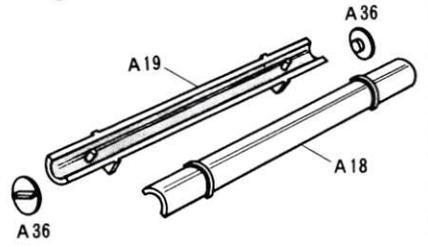
★Put wire A26 into hot water for two or three minutes. Then bend it slowly as shown in the figure. Be careful not to break it. Cement hull stopper A32 to upper hull D2.



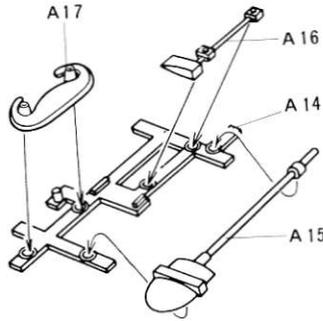
**10 Construction of Gun Barrel Carriage**



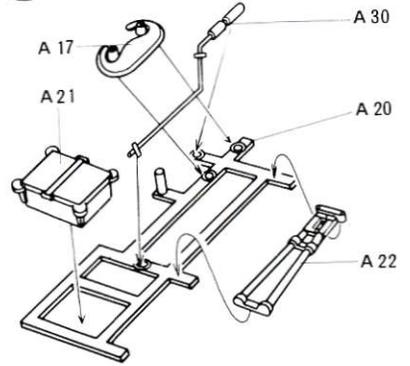
**11 Construction of Utencil Container**



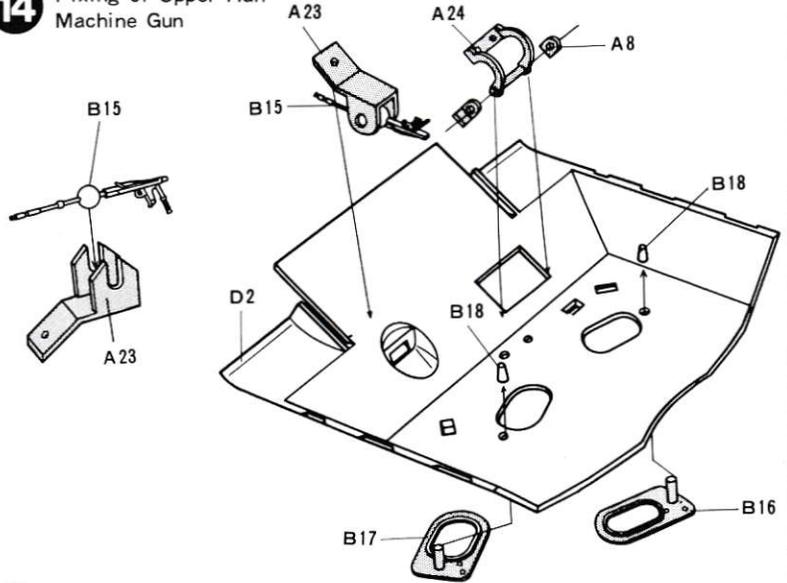
**12 Fixing of Utencil, A**



**13 Fixing of Utencil, B**



**14 Fixing of Upper Hull Machine Gun**



**15 Fixing of Upper Hull Parts, A**

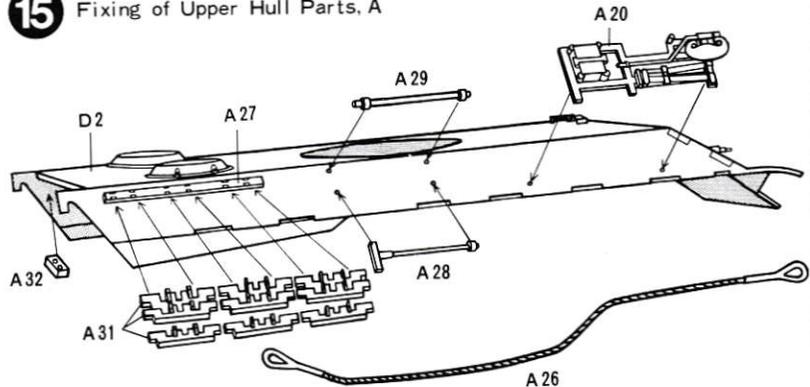


Fig. 16 Fixing of Upper Hull Parts, B

★Fix upper hull parts onto upper hull referring to the figure.

Fig. 17 Fixing of Upper and Lower Hull Halves, A

★When fixing upper and lower hull halves together, first fix the tip end of upper hull D2 into the arrowed part of lower hull D1. Then fix back end of D1.

Fig. 18 Fixing of Upper and Lower Hull Halves, B

★After fixing D1 on D2, the hull stopper A32 will fit inside the rear panel A1 on D2.

Fig. 19 Connection of Tracks

★Connect one end of track D6 with another as shown in the figure. Then flatten the four projections with the heated tip of a screwdriver.

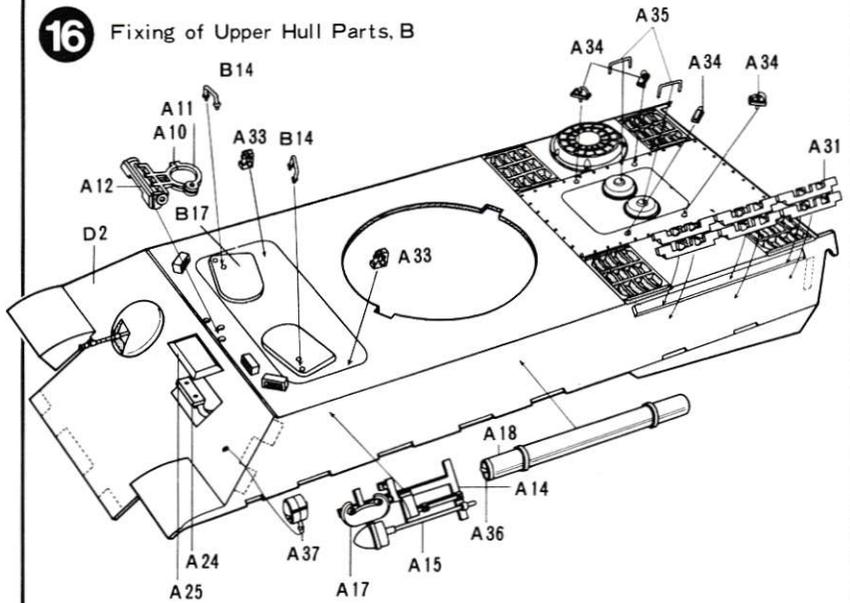
## APPLYING DECALS

Around 1941, the color of all German military were a standard gray except those on the African Front, which were painted in a combination of dark yellow and red brown, or German grey and dark green. However, all these colors were dull matted ones.

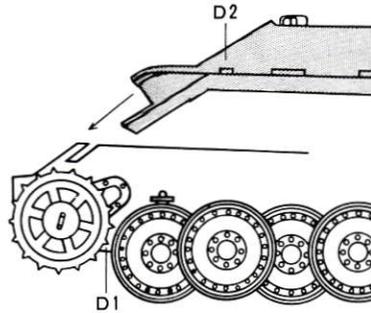
Then in 1942, the combination colors of the African vehicles were changed to dark yellow and red brown. Also, in the Eastern Front, winter white of a grey tint was sprayed over the base color for those vehicles fighting against the soviet forces.

The over-sprayed color paint was of an aquatic nature so when wiped off, the base color was not tainted at all. Then on February 18, 1943, all colors were dismissed and dark yellow became the standard color for all military vehicles by order of the German Central Command. But in order to heighten camouflage effect, respective front forces in various war districts sprayed different colors over this dark yellow. In addition, the German Mechanized Division had distributed among its tanks the following paint colors: 2 kg each Olive drab (color of the U.S. forces); red brown (dark brown mixed with red); dark yellow (standard color). Thus, painting was done either in large spots designs or stripe formations, or sprayed all over, using freely these three colors.

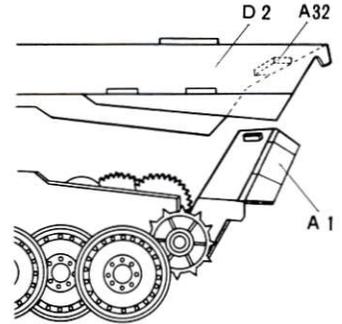
16 Fixing of Upper Hull Parts, B



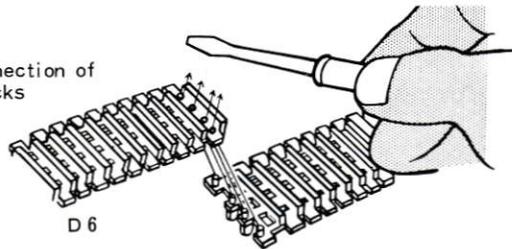
17 Fixing of Upper and Lower Hull Halves, A



18 Fixing of Upper and Lower Hull Halves, B



19 Connection of Tracks



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