

Panzergrenadiers

in

ACTION

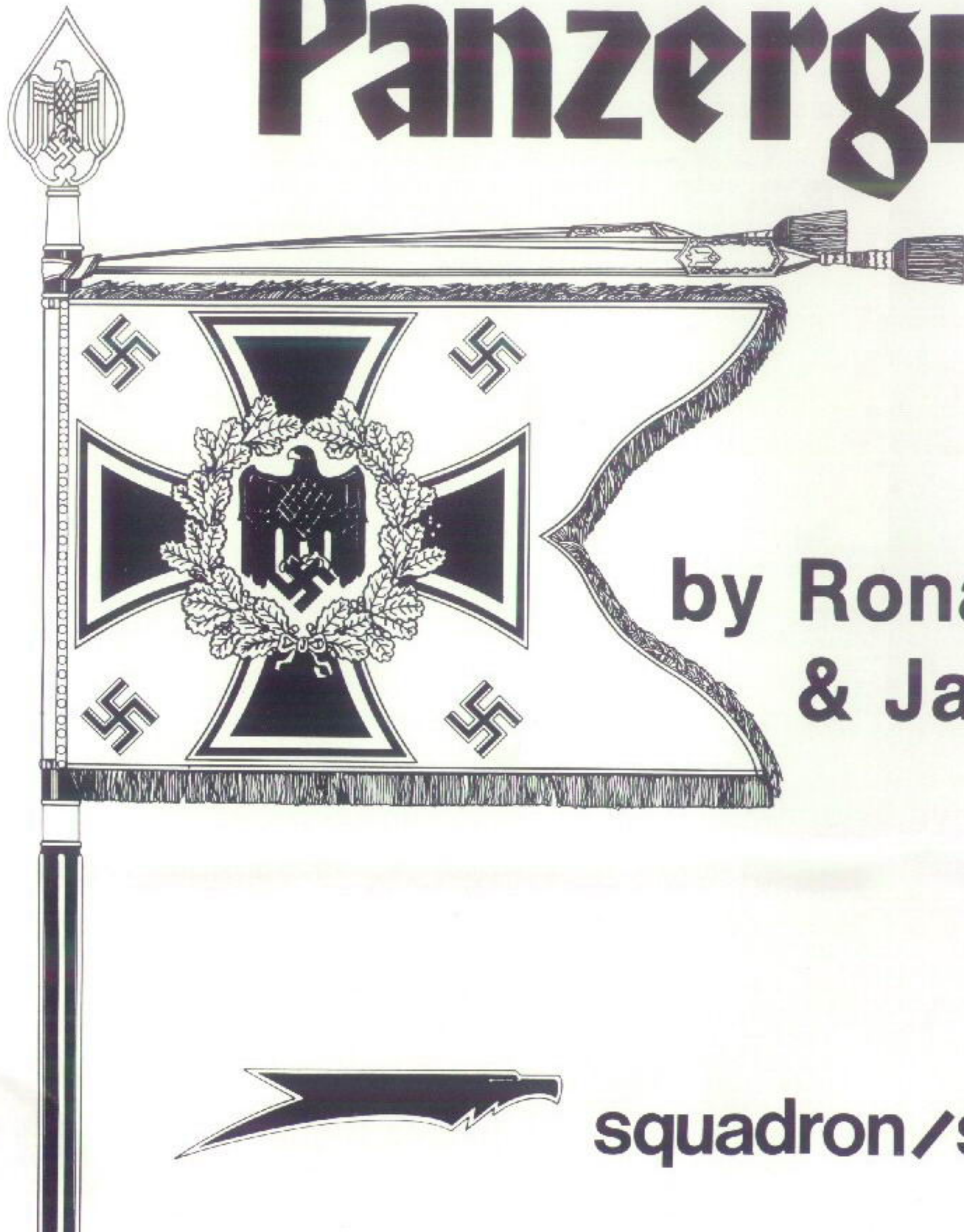


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**WEAPONS NUMBER
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Panzergrenadiers in action



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squadron/signal publications



Infantry Assault Badge



Tank Battle Badge

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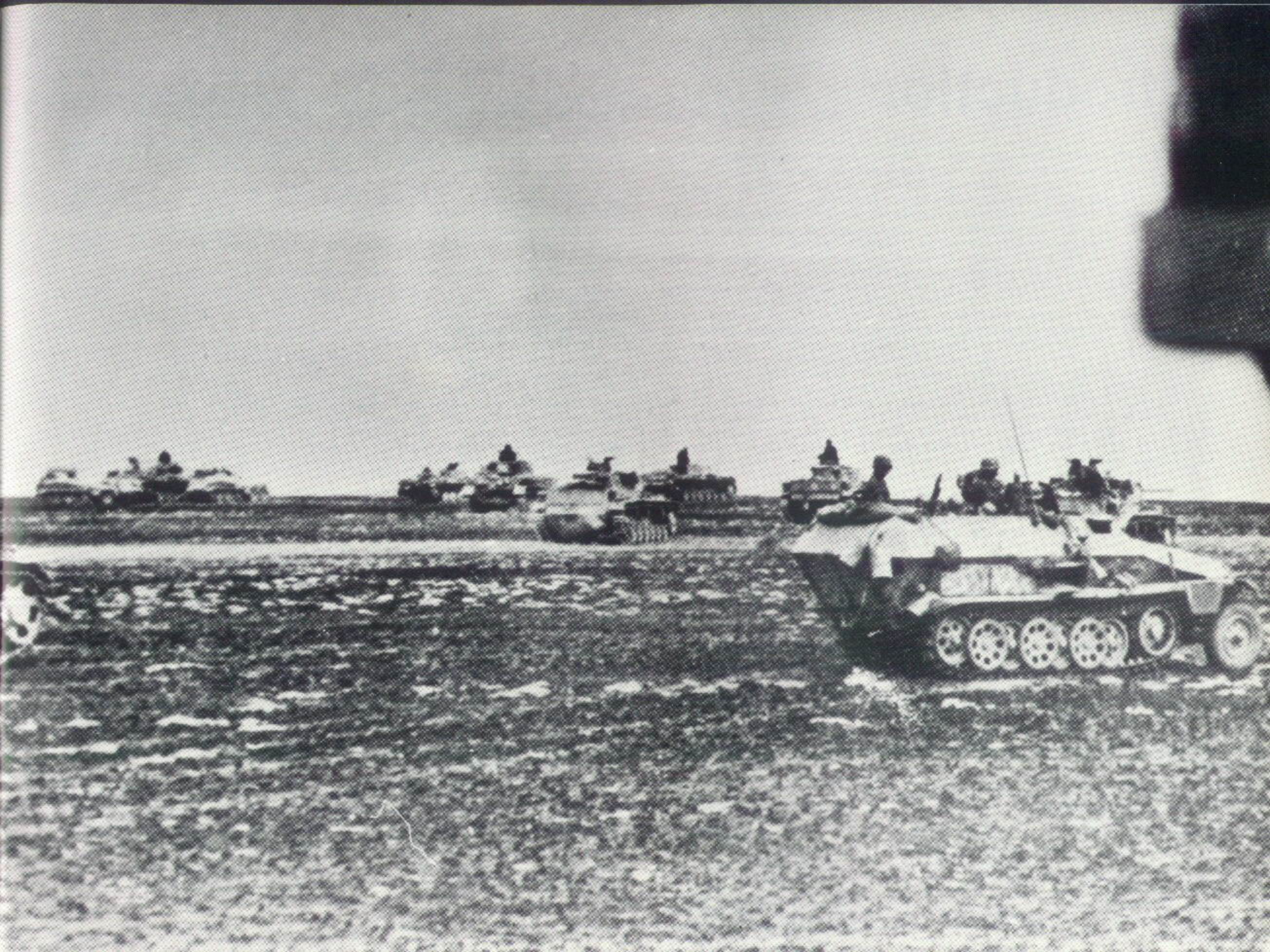
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The essence of the armored attack, Blitzkrieg, as successfully employed by the Wehrmacht from 1939 to 1942. The key to that success was the APC and its platoon of Panzergrenadiers, to solidify the gains made by the armored thrust. In this view, probably dating from 1942, an SdKfz 251 ausf C carries its platoon alongside a troop of PzKpfw IIIs, ready to dismount when opposition was encountered. (Bundesarchiv)



Introduction

After the end of World War I, the Allied belligerent powers scrapped much of their military equipment, discharged large numbers of troops and slashed military budgets. The 'war to end all wars' was over, and many officials and military leaders saw little sense in spending large sums of money in developing new technology or tactics.

In Germany, however, the frustrations of losing the war, and being governed by the often unfair provisions of the Versailles treaty, created a more favorable climate for new military ideas. While the far-sighted innovators in the United States, England and France were generally unable to get their ideas adopted - or even seriously considered - the situation was different for the planners in the German military.

The introduction of the tank had revolutionized warfare in the trenches, but surprisingly, it was the German army which most appreciated the value of the tank. During the 1920s and '30s, German military leaders, inspired by officers like Heinz Guderian, developed new methods of using armor. Instead of the slow plodding pace of British infantry tanks advancing with the troops, the Germans used tanks as swift offensive forces to force openings in enemy lines, surround enemy units and destroy or capture them. This in turn would allow infantry units to consolidate the gains made by armor.

It soon became apparent that tanks were vulnerable to enemy anti-tank guns and infantry units, and that some infantry forces would have to accompany the tanks into action to hold ground as it was captured. Foot infantry was too slow to keep up with motorized and armored units, and because of the greater risk to frontline troops, the infantry going in with the tanks would have to fight from armored personnel carriers. Thus was born the German armored infantry - the Panzergrenadiers.

Because of delays in developing and producing armored infantry vehicles, early Panzergrenadier units usually rode in trucks. However, they were trained in close support of armor, and in working with the tanks to take and hold objectives that had been penetrated by the armor units. Their training also covered defending tanks against enemy infantry and hidden anti-tank weapons, and also how to destroy enemy tanks missed by the Panzers. They were required to know about tank tactics and how to adapt their own tactics to those of the armor.

The formation of Panzergrenadiers also relieved German Panzer Division officers of a great disadvantage in using standard infantry units. The Panzergrenadiers were part of the Panzertruppen and were under the control of the Inspector of Panzer troops. Infantry units were under the Inspector of Infantry, and were not considered an integral part of a Panzer Division. A Panzer Division commander in the early years had a number of conflicting authorities over the troops under his field command: tanks were from the Panzertruppen, infantry from the infantry troops, his artillery was controlled by the Inspector of Artillery and his flak troops were from the Luftwaffe. On certain occasions, this maze of command authorities created serious problems, and eventually Panzergrenadiers replaced the infantry and Army flak units were set up to supplement and replace the Luftwaffe units.

The early war Panzer Divisions had one Panzergrenadier Brigade, composed of two regiments, each with two battalions. Most Panzergrenadiers rode in trucks as motorized infantry. During the battle for Poland, a very small number of early SdKfz 251 armored halftracks were tested, but these were insignificant. Even during the battles in France in 1940, the halftracks were in very short supply and trucks were widely used. On occasion, one battalion of Panzergrenadiers was equipped with APCs; the other units retained their trucks. One of the more common vehicles used was the Krupp L2H143 6x4 light truck, but even this was not available in sufficient numbers, and it had poor cross-country performance which limited its usefulness.

During the 1940 reorganization and formation of new Panzer and Panzergrenadier Divisions, the new armored personnel carriers became available in greater numbers. There

were two types, both developed from unarmored halftrack artillery tractors. These were the 3-ton SdKfz 251 built on the chassis of the Hanomag SdKfz 11 3-ton tractor, and the 1-ton SdKfz 250 built on the chassis of the Demag SdKfz 10 1-ton tractor.

The SdKfz 251 was available first. The 3-ton chassis had been chosen because it allowed an armored vehicle big enough to carry a complete squad of Panzergrenadiers. The SdKfz 251 as an APC carried a driver, radio operator and 10 infantrymen. A companion vehicle transported a heavy machine gun squad armed with two heavy machine guns, most often MG34s on heavy tripods.

The body of the SdKfz 251 was ballistically well shaped and afforded excellent protection against small arms fire, though the open top made it vulnerable to overhead air bursts and shell splinters. The interior was rather cramped and many crews preferred to sit on the edges of the body until they were actually in combat. Various special purpose versions of the 251 were developed: command vehicles, ammunition carriers, engineer vehicles, combat ambulances and self-propelled gun carriages.

The SdKfz 251 was somewhat underpowered, had an awkward steering wheel, and required regular maintenance of its complex transmission and track system. When maintained properly, it was a very durable and reliable vehicle, and there were never enough to meet the demands of the Panzergrenadier units. Combat experience suggested many improvements, and these resulted in a number of changes.

There were four basic models of the SdKfz 251 and 23 official versions; there were also numerous (and often unrecorded) field modifications. The initial model, the ausf A, had vision ports along the sides, most of which were deleted from the similar ausf B. The ausf C featured a number of detail improvements based on combat experience. The engine section and nose were redesigned to provide better cooling and protection, the track mudguards were altered, stowage was rearranged and a new interior layout was adopted. The new interior provided better stowage for the crew's weapons and personal gear. The ausf D kept the same interior layout as the ausf C, but featured a completely new body with integral stowage bins and a straight rear overhang. This simplified production and allowed more to be built.

The SdKfz 250 was developed from the Demag D7 1-ton SdKfz 10 halftrack prime mover. It was designed to complement the larger SdKfz 251, and could carry half a squad of infantry. Because of their small size, more SdKfz 250s were used as special purpose vehicles that did not require the interior room of the SdKfz 251.

There were three basic models in the 250 series, and more than a dozen official versions. Field modifications were also made, further confusing the model designations. The early body, produced from 1940 to mid-1943, was a very complex structure with many angled plates. It gave excellent ballistic protection, but was very costly and time-consuming to build. In the fall of 1943, a new body was adopted for the 250. It gave superior protection while having only half the number of plates. The SdKfz 252 was a specialized artillery ammunition vehicle that was phased out to standardize production; it had an early type body with a cut-down rear end. Both the SdKfz 250 and 251 will be the subjects of future Squadron/Signal books.

Panzergrenadiers were originally intended to fight from their vehicles. It soon became obvious that this would not be possible in most conditions, and the standard practice was to reach the best position for an assault and then dismount and attack as infantry, with the vehicles providing fire support with machine guns, or light cannon, which were issued to platoon leaders' vehicles. In the latter part of the war, most Panzergrenadiers exited through the rear doors rather than over the sides of the vehicles, and the use of tarpaulin covers on halftracks became more common.

As part of their status as elite specialist troops, Panzergrenadiers were among the first units to receive large numbers of improved automatic weapons like the MP38 and MP40 machine pistols and the MG34 and MG42 light machine guns. Later developments would result in semiautomatic rifles and a new class of weapon - the assault rifle. The 5cm (light) and 8cm (medium) mortars formed an integral part of each Panzergrenadier company, and were widely used for direct local fire support. The 8cm Gr.W. 34 was virtually identical to the U.S. 81mm mortar. Other special weapons included the Raketenpanzerbuchse 43 and 54 (the German bazooka) and the Panzerfaust rocket antitank grenade, the latter weapon

eventually being issued in vast numbers to most Wehrmacht units.

Panzergrenadiers wore the standard field uniform of the German army or Waffen SS, and could positively be identified only by the Waffensfarbe, the arm of service color: grass green for Panzergrenadiers, white for infantry. Those Panzergrenadiers belonging to named units, such as Waffen SS divisions or elite army units like 'Grossdeutschland' could be identified by the cuff titles on their uniforms.

At the beginning of the war, Panzergrenadiers wore the 1936 pattern tunic (feldbluse) in field gray, field gray trousers with suspenders, high black jackboots, and leather belt and harness to carry the assault pack and personal equipment. The most common helmet was the 1935 pattern, though the 1916 and 1918 models were found in some areas. The feldbluse had pleated patch pockets with scalloped flaps and was made of good quality material, primarily wool. The collars and shoulder tabs were deep blue-green imitation velvet.

As the war progressed, Germany suffered many shortages of critical materials, and wool and cotton fibers for cloth were among the items in short supply. With the great increases in the size of the army as the war progressed, the uniforms were altered to conserve materials and simplify manufacture. The 1943 pattern feldbluse reflected these changes. The collar and shoulder tabs were the same field gray material as the uniform itself, and the material was inferior, the wool content often dropping below 50 percent. The jackboots were replaced by lower combat shoes with two-buckle cloth anklets almost identical to the British gaiters from which they were developed. New trousers dispensed with the suspenders, and featured a cloth web belt as found on tropical uniforms in Africa. The leather harness and belts for the pack and gear were replaced by webbing made of canvas. Even the 1935 helmet was simplified; the 1943 model dispensed with the rolled edge of the 1935 version and thus appeared slightly larger.

There was a trend to increase the number of automatic weapons, and to develop new rifles more suitable for a war of movement. The bolt action Mauser Kar 98K was never replaced, but increased numbers of machine pistols were issued, and attempts were made to introduce a semiautomatic rifle like the U.S. M1 Garand. These gas-operated rifles were never available in large quantities, and the Kar 98K was still the standard rifle at the end of the war. The new MP43 and MP44 assault rifles appeared, but never replaced the older rifles and machine pistols.

In 1944, an even cheaper and poorer quality feldbluse made its appearance. Made of inferior material, including reworked wool and synthetics, the 1944 pattern was a short waist length jacket with only two patch pockets. They were not widely encountered in action, as the end of the war came before they had replaced large numbers of the earlier uniforms. As a general practice, troops in the field tried to make their original uniforms and equipment last as long as possible, as replacement items were usually inferior in quality.

The combination of swift-moving Panzer formations accompanied by Panzergrenadier units proved to be so successful that within a few months Germany ruled most of Europe, and a year later, she also controlled huge areas of Russia. The Allied nations, having neglected their armed forces and using outmoded tactics, simply could not halt the concentrations of German armor and infantry. Though it was the British who coined the term 'Blitzkrieg' (Lightning War), the successful operations of the Panzers and Panzergrenadiers did seem to be lightning strokes on many occasions. German tanks were designed for maximum crew efficiency, and the tactics of massed employment, fast movement and use of Panzergrenadiers to consolidate gains made the Panzer Divisions the most effective military formations in the world.

Germany was defeated for a number of reasons. Among these was a lack of detailed preparation for front-line conditions in Russia, which led to heavy losses in men and equipment, which in turn worsened the shortages of replacements of all types of equipment and personnel. German production could not keep up with losses and could not keep Wehrmacht units well enough supplied to resist the better-equipped Allied forces.

Through the changing conditions of the war, Panzergrenadiers fought with skill, courage and determination. The esprit de corps of many units remained high in spite of

reverses in the field, but as more and more inexperienced replacement troops entered front line units, combat effectiveness often suffered. However, even new troops could still put up resistance, and as the front lines moved steadily toward Germany, her troops fought a more determined war as they retreated. After the great battle at Kursk in July 1943, most Panzer and Panzergrenadier units were forced into a defensive role, but they could still deal heavy blows against enemy forces. During counterattacks in Russia, they often defeated superior forces, and during the Ardennes offensive, Panzergrenadiers fought well against U.S. troops in poor weather and rough terrain. It took Allied airpower to break the offensive completely, though U.S. resistance and fuel shortage had slowed it.

Like Germany's war machine itself, the Panzergrenadiers were overwhelmed by masses of Allied troops equipped with tremendous numbers of vehicles and weapons and enjoying nearly total air supremacy. Retreating across France after the heavy losses near Normandy and west of Paris, the Germans stood their ground at the borders of Germany and many months of fierce fighting were necessary before Germany finally capitulated. The epic defense of Berlin failed, but the Russian victory came only after such fierce losses that their forces had virtually no reserves left.

Ironically, the German troops, including the Panzergrenadiers, were defeated by the same tactics and similar formations that Germany had introduced early in the war. Every American armored division had battalions of armored infantry in halftracks, and even the infantry divisions had tank battalions attached to provide armor support. British and French armored units had similar organizations and the Russians advanced in overwhelming numbers and with aggressive tactics that maintained pressure on German defenders until they retreated or were captured or destroyed.

The tactics that were developed by Germany before WW2 revolutionized armored warfare. The use of specially trained armored infantry - Panzergrenadiers - with the tanks of the Panzer Divisions resulted in overwhelming victories early in the war. In the end it required other 'panzergrenadiers' - American and British armored infantry and Russian tank-borne and halftrack infantry - to defeat Germany on the ground. The Allied tactics were remarkably similar to those which made the Panzergrenadiers so successful, and these basic concepts of armor-infantry cooperation and mutual support still form the basis for tactics used by armored units in most armies today.

Forerunners of the 'Panzergrenadiers', motorized infantry in Krupp trucks move up to the front in Poland. At this stage of the war, most infantry still had to walk - the more fortunate had horse-drawn transport. On bad roads or going cross-country, these pre-war 6 x 4 trucks had inferior performance. In such situations, motorized infantry often became infantry. (Bundesarchiv)





Motorized infantry and Panzergrenadiers seldom fought from their vehicles. The prime purpose of the vehicles was to allow the troops to keep pace with the fast moving armor to which they were attached. When in combat, the practice was to move into the most advantageous position, dismount, and attack on foot. An officer, a Feldwebel (sergeant) and a Landser (private) conferring on tactics while on maneuvers in preparation for the invasion of France. Note the early style tunic and pants worn by the officer, also note the dark green collars and shoulder straps of the enlisted men. (Bundesarchiv)

German tactics were designed around the use of the machine gun as the basic unit of firepower. Rifleman were to support and protect the machine gun. The MG 34 was used as a light machine gun with the attached bipod. For use as a medium machine gun, the MG 34 was mounted on a tripod mount which allowed the weapon to be used for long-range searching fire. (Bundesarchiv)



MG 34

The backbone of the German infantry and Panzergrenadiers was the MG 34, so named for its year of adoption. Here dismounted German machine-gun crews move up during the French campaign. Note the ever present 'spotter', who wears the older 1916 pattern helmet. (Bundesarchiv)



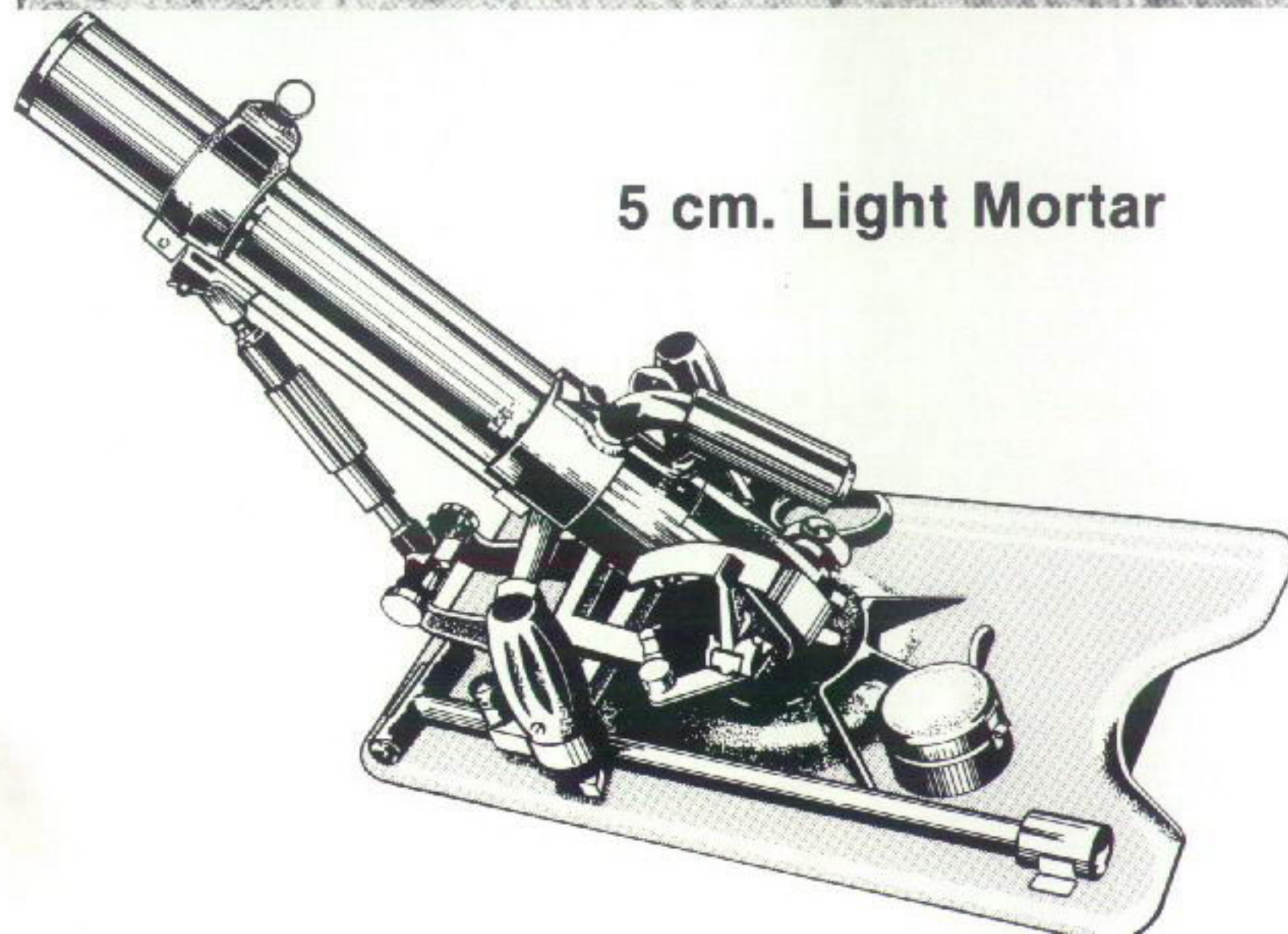


A 5cm (50mm) mortar crew goes into action. In every Panzergrenadier unit, some of the vehicles carried these weapons. Here, a two man crew fires the weapon. Two handles on the base were used to hold the mortar steady during the recoil of firing, allowing continued accurate fire. (Bundesarchiv)



"Luger" P.08

An 8cm mortar crew in action during the French campaign. The two crewmen are stabilizing the mortar to keep it in position for the next round. In prepared positions, sandbags were often used to support the weapon. The German 8cm (81mm) mortar was very similar to the U.S. 81mm mortar. (Bundesarchiv)



5 cm. Light Mortar





River crossings always pose difficulties for an army on the move. Note the netting on the helmets for attaching foliage. Assault troops usually were provided with rubber assault boats like this one for the initial crossings. Pioneer (engineer) units then built bridges of various types or repaired existing bridges or ferries to transport vehicles and material across the rivers. (Bundesarchiv)

A SdKfz 251 ausf A cautiously negotiates a small stream during the sweep to outflank the Maginot line. Note the light bridge sections in front of the hastily constructed bridge. Two of these sections were carried on engineer halftracks for such purposes. By this time units were beginning to be equipped with the 251 halftrack, which was to become the ideal vehicle for the Panzergrenadiers. (Bundesarchiv)

Often infantry and Panzergrenadiers used their splinter pattern camouflage poncho quarters for an expedient means of camouflage. The second Grenadier has a stick grenade in his boot, a common practice made possible by the relatively loose fit of the top of the boot around the leg. Notice the lack of a bayonet frog on the nearest man's entrenching tool. (Bundesarchiv)



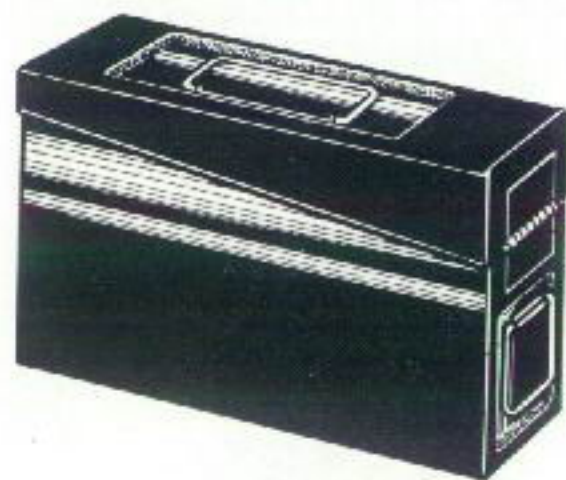
**Gas Mask
Canister**

A machine-gunner and two assistants armed with MP 40 submachine guns cover a French street. The steel shod heels and hob-nailed soles on the boots became less common as the war went on. The man on the right has the standard shovel with the bayonet fastened in place. (Bundesarchiv)



The entire crew of a 251 halftrack has just completed a security sweep through a French field. The first man is carrying a 50 round drum magazine for the MG 34. The helmet bands for holding camouflage materials - like the grass seen here - were standard issue for German troops. (Bundesarchiv)

MG Ammunition Box



Two Panzergrenadiers seen during the early stages of the Russian Invasion, pass through a burning village near the Polish-Russian border. (Bundesarchiv)

German troops crawl toward a Russian position during Barbarossa. Although many Russian armies and divisions were destroyed or captured, smaller units often put up fierce struggles for individual villages and towns. (Bundesarchiv)





PzKpfw 35(t) light tanks support a squad of Panzergrenadiers as they enter a small Russian village during Barbarossa. As usual, the tanks provide excellent cover from enemy fire as well as firepower to destroy Russian strong points. (Bundesarchiv)

Panzergrenadiers race through the outskirts of Polozk, July 1941. When fighting dismounted, these troops often had to move quickly to keep up with the armored vehicles providing needed support. (Bundesarchiv)

Model 24 Stick Grenade



Even in the midst of overwhelming victories, the Panzergrenadiers suffered casualties. Here a group of walking wounded return to their lines for medical treatment or evacuation to a rear-area hospital. (Bundesarchiv)





During the summer of 1941, morale was high and supplies plentiful. This scene would not be repeated in the coming months, as the rapid advance of the German armies bogged down. Many Germans ended up raising their own food animals to insure a supply of meat when there was a shortage of local farm animals or if meat shipments from the Army were insufficient to supply the troops. (Bundesarchiv)



Walther P-38

Units of the 8th Panzer Division, 1st company of the infantry regiment advancing into Russia during the opening stages of Barbarossa. This division was initially assigned to the 4th Panzer Group and took part in the early drive to Leningrad. These SdKfz 251 armored personnel carriers provided the protected cross-country transportation that enabled the Panzergrenadiers to accompany the tanks and consolidate the gains made by the armored units. (Bundesarchiv)

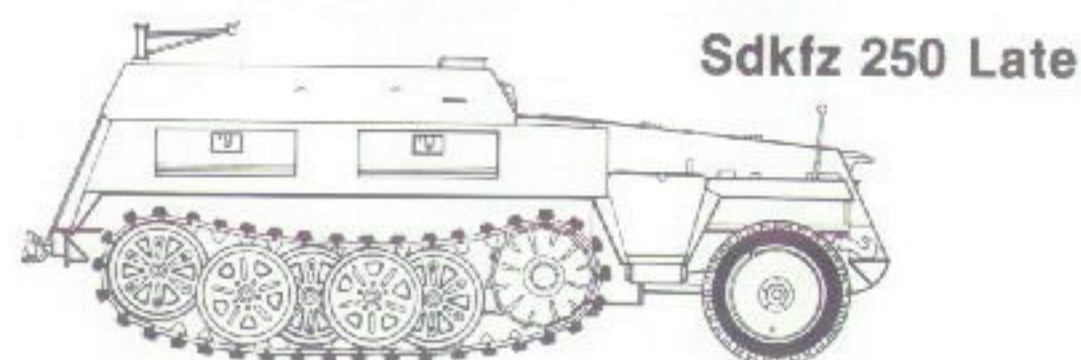
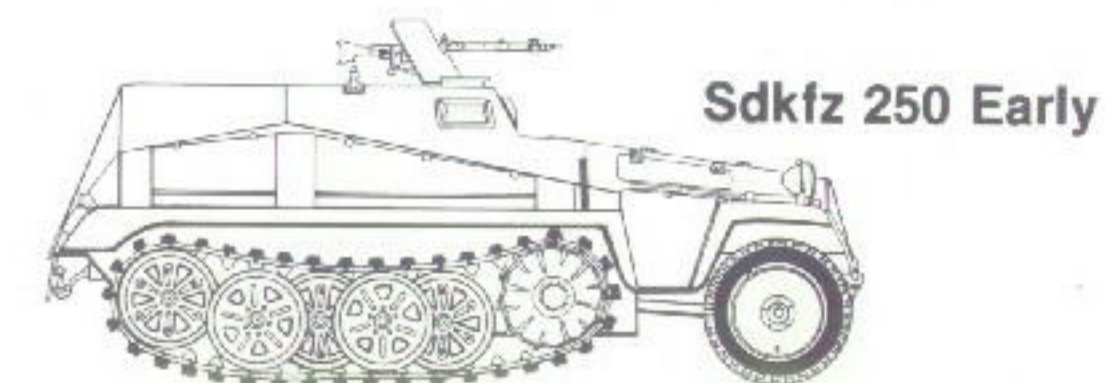
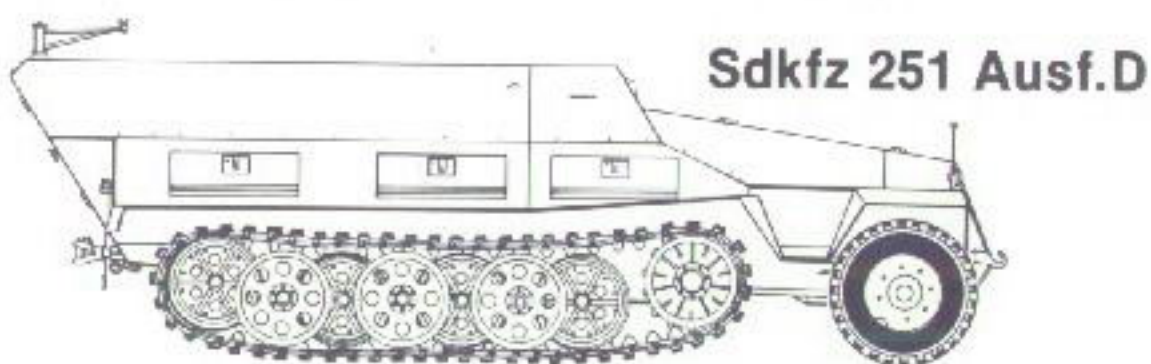
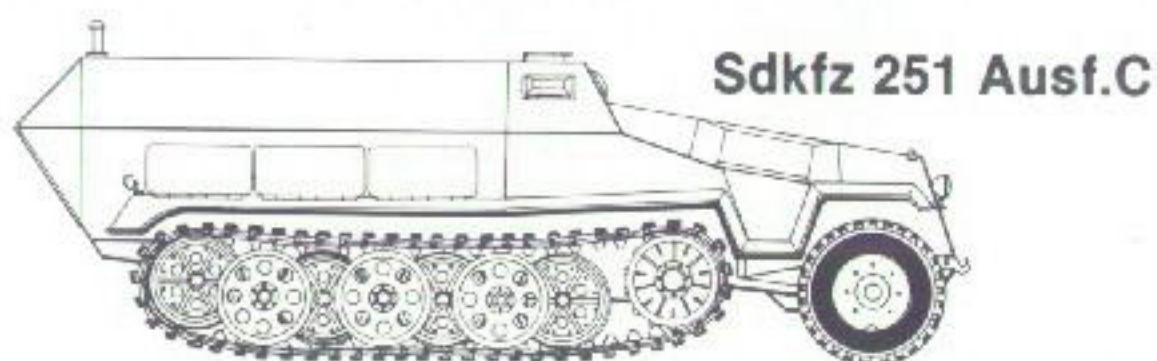
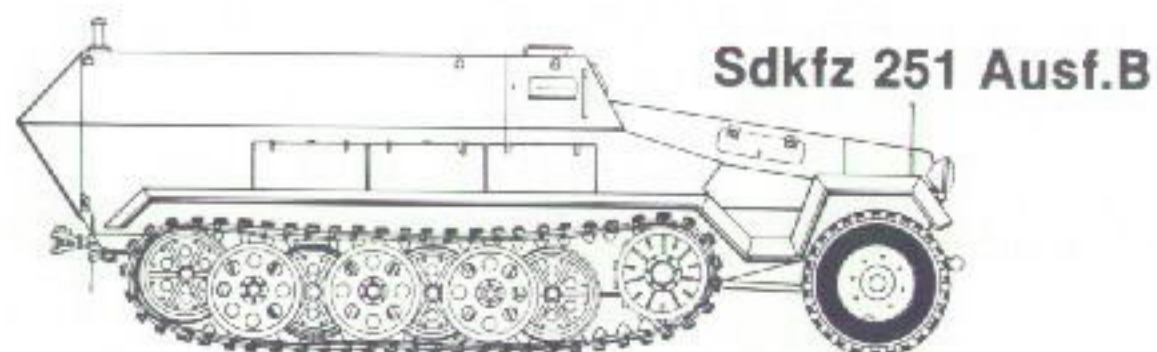




A motorized column pauses for a rest. Note the variety of vehicles used by this unit during the early stages of the Russian campaign. Besides both solo and sidecar-equipped motorcycles, there are SdKfz 10 tractors and both SdKfz 250 and 251 armored halftracks. The 251 at the left is a platoon leader's vehicle and mounts a 3.7cm PAK 36. (Bundesarchiv)

Panzergrrenadiers dismount from their SdKfz 251 vehicles and advance into a village to clear it of any remaining Russian troops. Although the 251s could carry the Panzergrrenadiers through most battles in open country, it was usually necessary for the troops to fight outside the vehicles in built-up areas. The platoon leader's vehicle in the middle has a 3.7cm PAK 36 antitank gun, and will provide fire support for the grenadiers as they move into this village. (Squadron/Signal Archives)





A Sdkfz 251 ausf C of the 14th Panzer Division is seen in Russia. The ausf C was the first model to benefit from combat experience, and featured a redesigned nose and cooling ducts for the engine. The forward MG 34 was used to support the crew of the vehicle, while the rear gun was intended for anti-aircraft use as well as for ground targets. (Bundesarchiv)

A Sdkfz 251 and its crew approach an enemy position along a railroad line in central Russia. These Grenadiers are taking advantage of the protection afforded by the half-track for as long as possible before they dismount and secure the area. Note the mounting frame for the 28cm Wurfrahmen rockets, here covered with foliage. (Bundesarchiv)





Some of the thousands of Russians prisoners taken during the summer of 1941. The German tank crewman wears the early style black 'Feldmutze' along with a scarf of his own personal taste. (Bundesarchiv)

Motorcycle troops of a recon unit pause for a moment to allow 3-ton prime movers to speed supplies to the front. These troops are in the reconnaissance motorcycle company of the 12th Panzer Division in Russia. Note the white border on the motorcycle 'saddle bag', used to mark the width of the vehicle and make it more visible to other traffic at night. (Bundesarchiv)

Panzergrenadiers attached to the 1st Panzer Division examine a captured Russian flag. The non-commissioned officer on the right is wearing a Russian cap. The vehicle is a SdKfz 251 ausf A, now fitted with a shield for the front MG 34, and with a relocated antenna for the radio. (Bundesarchiv)



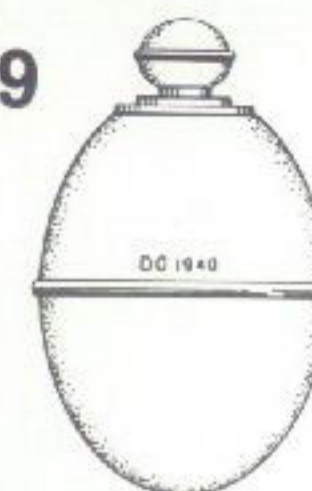


Both these Panzergrenadiers carry 9mm MP 40 machine pistols. During the war, increasing numbers of German troops received automatic weapons, especially assault troops, who usually fought at closer ranges than line infantry. (Bundesarchiv)

A SdKfz 251 ausf B full of Panzergrenadiers advances deeper into Russia during the initial stages of operation Barbarossa. A full crew found the 251 rather cramped, and many crews preferred to stand or sit on the edges of the body to have more room. (Bundesarchiv)



Eihandgranate 39



As the crew prepares for combat, the driver of this 251 B cautiously approaches a railroad crossing. Note the white outline on the upper rear. This was to improve visibility during night driving in the early stages of the war. Note the extra stowage bin added to the front of the body. This also provided increased protection for the front observer. (Bundesarchiv)



A radio team accompanies a forward patrol in Russia. They are operating a two-man field radio, the Tornister Funk D (Torn.Fu.D). The radio operator's assistant walks in front, carrying the radio set. The radio operator follows, carrying the battery case, and operating the controls as needed. (Bundesarchiv)

A SdKfz 251 ausf B command communications vehicle with the 8th Panzer Division. The halftrack has been name 'Fuchs' (Fox) by its crew. The crew have stowed their fur-covered field packs along the sides because there was not as much stowage space inside these radio-equipped vehicles. The frame antenna for the command radio set was conspicuous, and later vehicles used rod or 'star' antennas. (Bundesarchiv)

A camouflaged Panzergrenadier watches PzKpfw 38(t) tanks approach Gori during the drive into Russia, September 1941. As the tanks destroyed enemy positions, the Panzergrenadiers would occupy them and maintain the gains made by the Panzers. (Bundesarchiv)





Captured Russian vehicles often provided means of transportation as German halftracks were many times at a premium. Note this ex-T 60 light tank still has traces of whitewash used as camouflage in the winter. The Germans converted many of these Russian light tanks to gun tractors or cargo carriers by removing the turrets and making internal modifications. (Bundesarchiv)

A 251 A, mounting a 3.7cm Pak 37, provides covering support for the preceding vehicles. Platoon leaders' vehicles were usually fitted with this weapon, which was used for close fire support. Later, the 7.5cm short L/24 howitzers from early PzKpfw IV tanks replaced the 3.7cm guns. (Bundesarchiv)



MG 42

A PzKpfw III provides covering fire for Panzergrenadiers. This tank is an ausf F, remanufactured with front spaced armor and a turret stowage box. Many older tanks were similarly rebuilt to later standards during major overhauls. The Grenadier in the foreground is using the MG 42, which was much simpler and more reliable than the MG 34. (Bundesarchiv)

Taking advantage of the vehicle's cross-country capabilities, this column of halftracks moves on a direct route, ignoring a nearby road. A SdKfz 10 tractor towing a 5cm PAK 38 leads a SdKfz 251 ausf A through a small stream. The staves across the 251 front plate were used to enable the vehicle to cross very soft ground or small ditches. The sandbags on the front roof were to protect the front observer and gunner. (Bundesarchiv)



Military Flashlight
("taschenlampe")

During refitting and training behind the lines, this Panzergrenadier unit practices assault tactics. Most of the Grenadiers wear bands on their helmets which are used to attach foliage for camouflage. (Bundesarchiv)





This view of the rear of a SdKfz 251 ausf B command vehicle of 2nd P.D. shows the fitting of rod antenna to replace the older frame antenna. The frame aerials tended to draw enemy fire, as they were indicative of German command vehicles. The rods were made in sections, and usually had a 'star' top piece with several short radial arms. (Bundesarchiv)



While moving to a new location, a Panzergrenadier unit pauses in a small Russian village. The lead vehicle is a SdKfz 251 ausf A with the special front MG 34 mount used by heavy machine gun squads. This mount used the upper part of the heavy MG tripod, and allowed the gun to be used for long range searching fire. (Bundesarchiv)

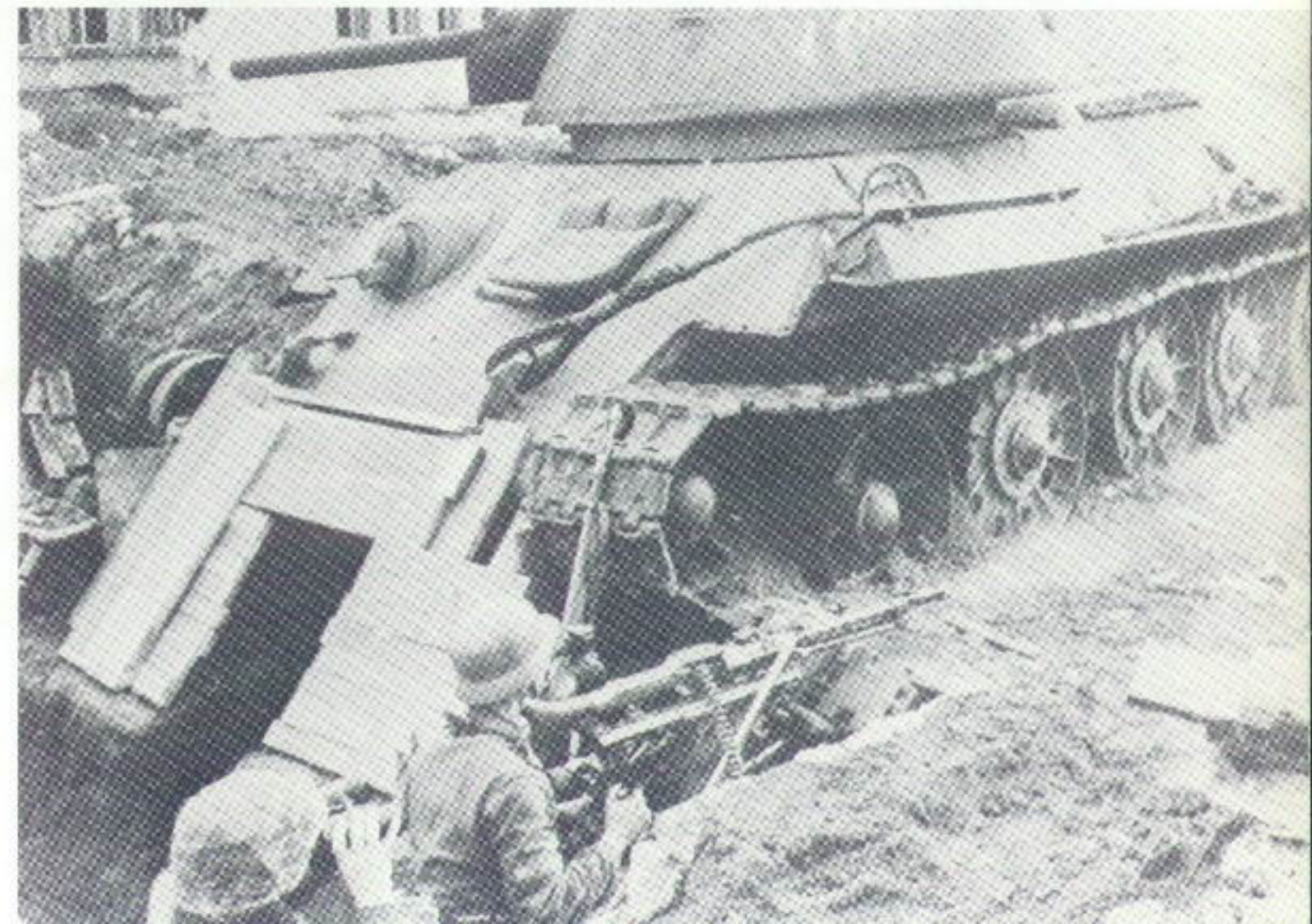
Traffic jams such as this were a common occurrence during advances. Many bridges were destroyed by retreating Russian units and those that remained could not always support the weight of the German tanks. Note the observer standing on top of the PzKpfw IV F2 of the picture. Even though the Russian Air Force suffered heavy casualties, they still were able to attack at any time. (Bundesarchiv)

A group of German soldiers takes a break during a lull in the action. The Feldwebel at the left is in an infantry regiment, and carries the spare magazine pouches issued with the MP 40 machine pistol. The oberleutnant in the center is wearing the rush-green denim field blouse with standard trousers. Note the early canteen, and the army flashlight hanging from the left shoulder board. (Bundesarchiv)



This knocked-out T34 model 43 makes an excellent roof for this German dugout. These machine gunners are members of a Waffen SS unit. The MG 34 is being used in the heavy machine gun role. Note the gunner using the telescopic sight and the remote firing device. There was also a periscopic sight that allowed the gunner to fire the gun from the safety of the dugout position. (Bundesarchiv)

A forward observer checks the accuracy of his unit's fire at hidden enemy positions in this Russian village. Since the bridge across this stream has been destroyed, it is vital that as many Russian positions as possible be knocked-out. If not, there could be many casualties, as the lead units of this Panzergrenadier company have to cross the stream in open terrain. (Bundesarchiv)





The Germans had not prepared adequately for cold weather conditions in Russia. Many troops suffered terribly in the standard uniforms and many expedients resulted. Besides the cold, camouflage in snow became a problem. Here, two groups of German Panzergrenadiers show some of the makeshift solutions to problems of camouflage and cold. Some of these men are wearing snow camouflage garments made from bed linens or sheets, while others wear captured Russian white smocks and white 'union suits', worn outside their standard uniforms. At several points in the war, donations of warm clothing were solicited from German civilians in order to supply front-line troops with more suitable clothing. Much of the Germans' military equipment also had to be modified to function properly in the bitter cold. (Bundesarchiv)

This group of Infantry, waiting for a column of Panzergrenadier halftracks to pass, shows the variety of issued and expedient winter clothing used by German troops during the first winter of the Russian campaign. Though some winter clothing was available, supplies were critically short. Warm clothing was also in short supply, and much captured Russian winter equipment was used. (Bundesarchiv)

Four Grenadiers move through deep snow on a mine detail. Note the great contrast between their Field Gray uniforms and the white surroundings. These are members of an SS Unit, which were generally the ones to receive the best equipment. In 1941, there was not enough special winter equipment to equip even the elite units of the Wehrmacht. (Bundesarchiv)

These SdKfz 251s show the advantages of white winter camouflage, compared to the PzKpfw II still in dark gray. Off the road, the gray vehicle would be easier to hide in the trees, but in open fields or on roads, it is easy to see at great distances. The leading 251 has lost both front fenders, most probably by driving through barricades or obstacles. (Bundesarchiv)

Another example of 'Winter Fritz'. This sentry is wearing woven straw overshoes, which were usually manufactured by local peasants. The straw did protect the feet from the cold, but tended to restrict mobility. Note the fleece earflaps worn over the visored cap. (Bundesarchiv)





This assistant machine gunner wears a Russian quilted jacket with German snow camouflage pants. The MG ammunition belts were made of connected metal links, holding 50 rounds. They could be joined together, as seen here, into belts of any length. Note the use by this man of both the Model 24 stick grenade and the Model 39 egg grenade. Both were concussion-type weapons with relatively limited fragmentation effects. (Bundesarchiv)

(Far Left) This sentry wears an early example of winter garments. These hooded coveralls were hastily made in Germany of sheeting material and rushed to the front. They provided camouflage for snow conditions, but did little to insulate against the cold. (Bundesarchiv)

An interesting adoption for fighting in the snow was a snowshoe-type device attached to the bipods of light machine guns. Without this device, the recoil of the gun would tend to bury it in the snow. A winter item which did reach the front in reasonably large numbers during the early stages of the war was the fur hat, worn by this machinegunner. (Bundesarchiv)



MG 34 with field modification



M35 flamethrower operator in special, rubberized protective clothing, France, 1940.



Two-man radio team with Torn. Fu. d2 field radio, Russia, 1941. The operator, carrying his great coat and zeltbahn strapped to his battery pack, wears the specialty badge of *Nachrichtenpersonal* (Signals), a grass-green lightning bolt on black disc.



Grenadier in makeshift winter camouflage of woolen underwear pulled over his uniform, Russia, 1941-42.



Major and lieutenant in SdKfz 251/1 SPW, Russia, 1941. The major wears the popular, rubberized motorcyclist's waterproof coat. The lieutenant's tunic is a privately purchased version with turn-back cuffs.

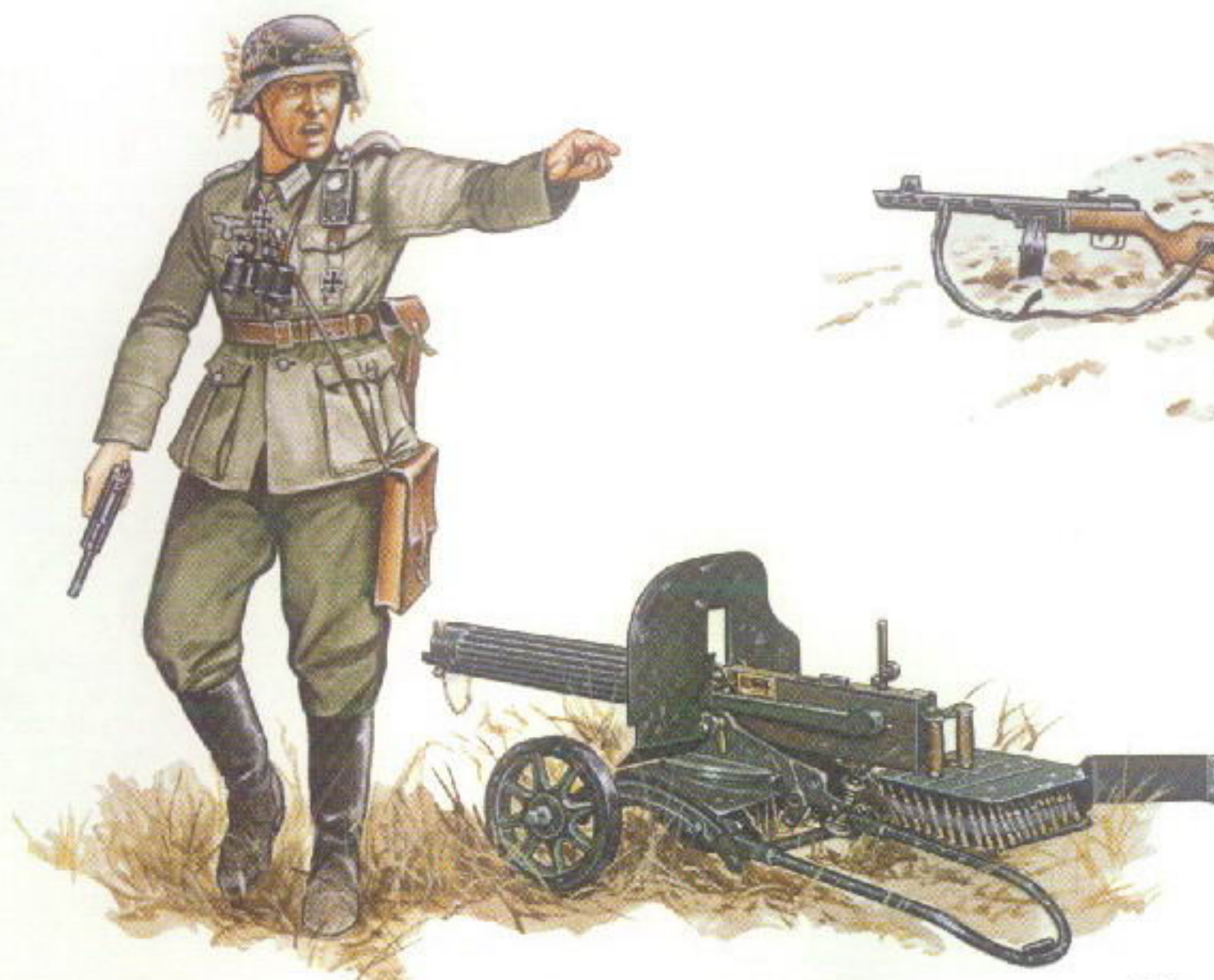


Grenadier of Panzergrenadierdivision "Grossdeutschland" resting. He has removed his standard belts to ease his digging.





Grenadier in captured Russian quilted winter jacket, Russia, 1942-43.

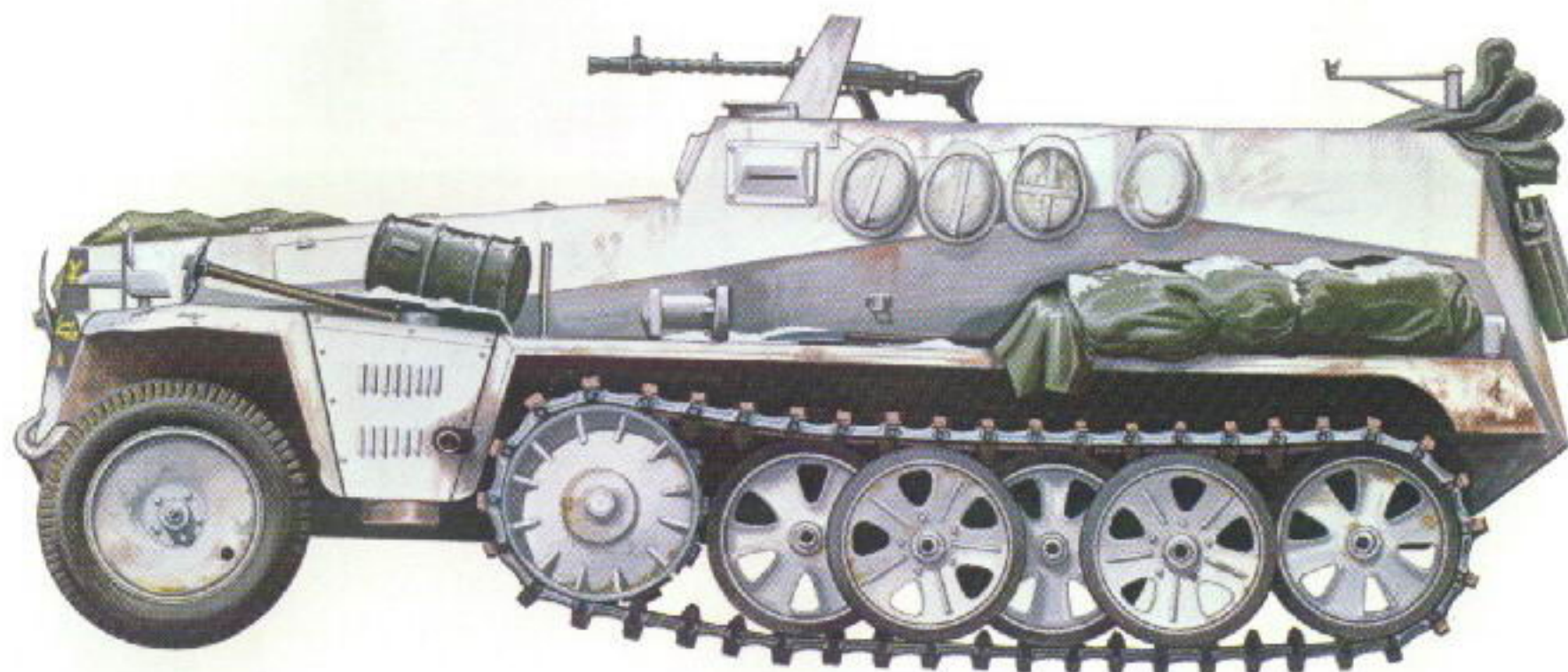


Leutnant, Knight's Cross winner, in faded reed-green denim tunic, Kursk, 1943. The machine gun is Russian Maxim Model 1910.

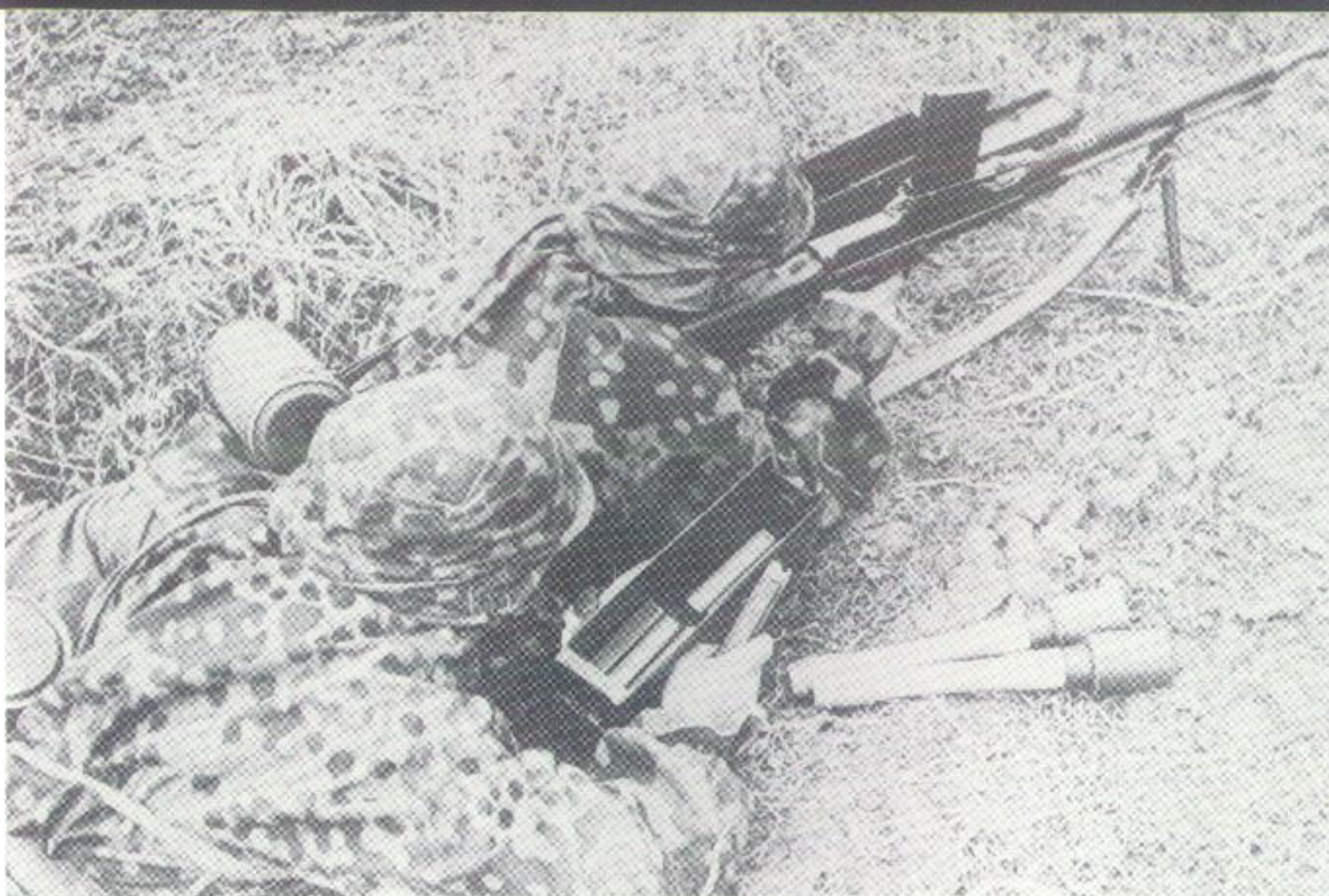


The reversible mouse gray/white winter uniform and felt boots were introduced in 1942 but didn't become common until 1943. This grenadier has a captured PPSH 41 SMG.

VOLETA78



SdKfz 250/1 leSPW of 16. Panzerdivision, Russia.



Two Waffen SS Grenadiers man a forward machine gun next, using the ZB 26, a Czechoslovakian-made weapon. This was more common than generally believed, as Czechoslovakia had a well-developed armament industry. Note the newly issued smocks and helmet covers. (Bundesarchiv)

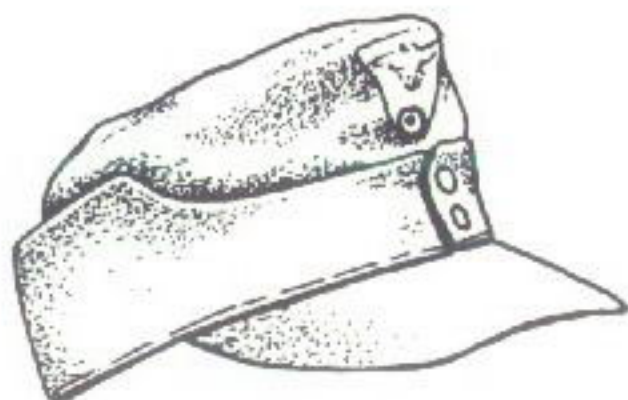
Waiting for further orders, a Panzergrenadier unit pauses on a worn road during the summer of 1943. All the vehicles in this group seem to have their own personally applied camouflage schemes. These troops are from the 4th Panzer Division, whose temporary symbol is seen on the rear of this vehicle, a SdKfz 251 auf C. (Bundesarchiv)

Major Guentlin of the 6th Panzer Division instructs one of his Grenadier officers prior to assaulting a Russian village. The Major is standing in his SdKfz 247 Armored Command Car. These officers are wearing camouflaged smocks made of shelter quarter material. Note the total absence of rank insignia, as required by standing orders. (Bundesarchiv)



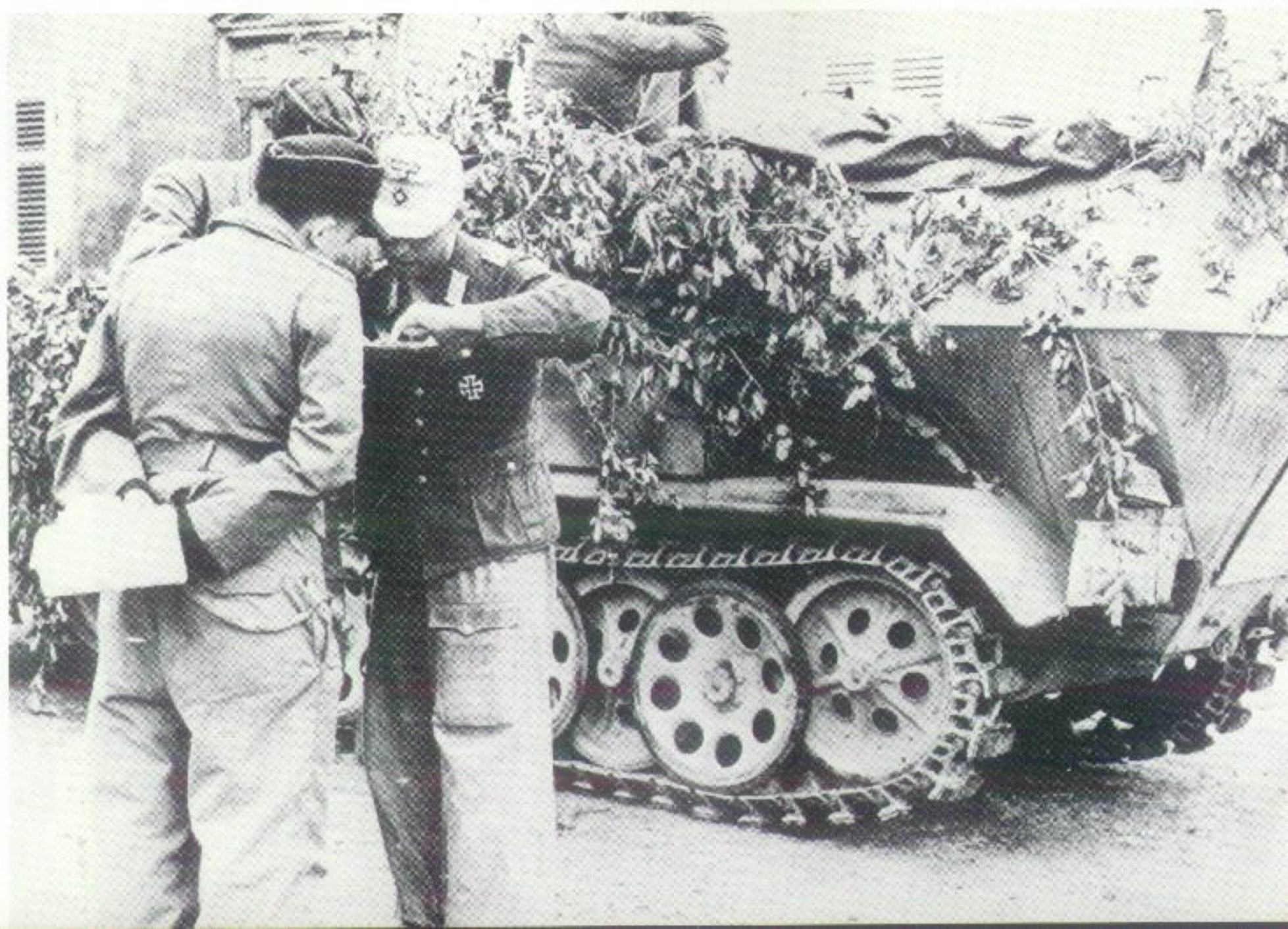


A group of reinforcements move toward the front during the spring of 1943. These halftracks are carrying bits of foliage to help disguise themselves from the growing threat of Russian air attacks. Notice the placement of the number '14' on the rear and side of this SdKfz 251 ausf C. (Bundesarchiv)



1943 "Einheits- mutze"

Officers of the 6th Panzer Division consult their maps for the next objective after taking the village. The nearest man wears the field-gray assault gun uniform, and the man at the right wears a reed green denim feldbluse with appropriate Luftwaffe tropical long pants with the prominent thigh pocket. Note the black Einheitsmutze, piped in silver, on the nearest officer. (Bundesarchiv)

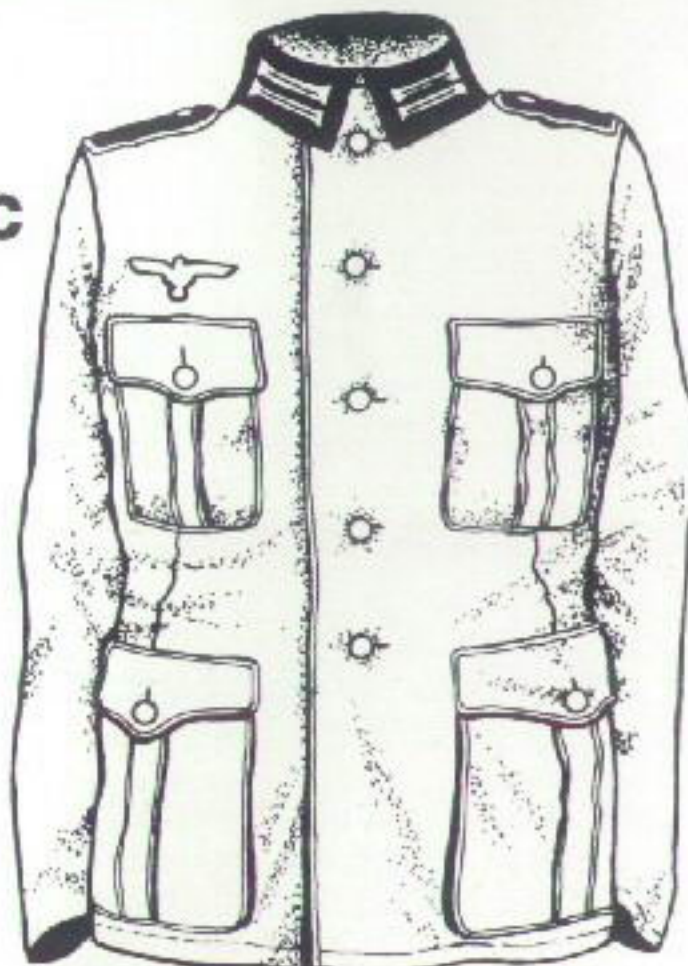




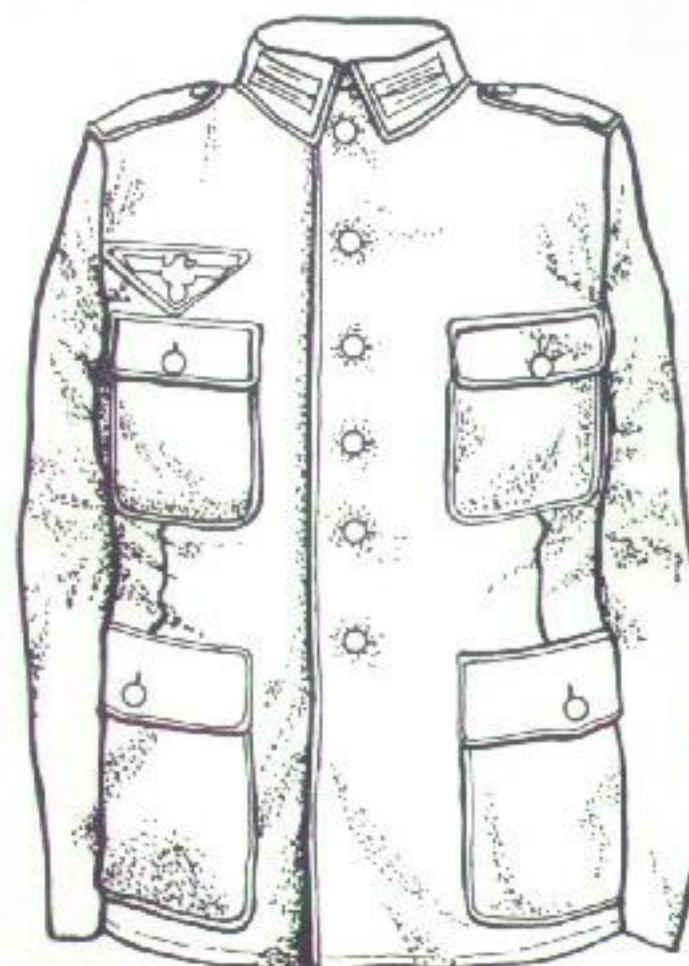
A makeshift platoon of Panzergrenadiers advances toward Stalingrad mounted on a PzKpfw III. Muddy conditions as shown here made it impossible for rapid movement of infantry except by tracked or half-tracked vehicles. Many units were short of motor transport and troops rode on any vehicle that was available. Note the mixture of 1936 and 1943 uniforms in this group of men. (Bundesarchiv)

This young Grenadier approaches the outskirts of Stalingrad. He wears the camouflaged shelter quarter over his uniform and chicken wire on his helmet. He has kept the empty links from used machinegun belts, in case his machinegun ammunition runs low. These could then be loaded by hand with rifle ammunition. (Bundesarchiv)

Uniform Tunic ("feldbluse")



1936 Pattern



1943 Pattern

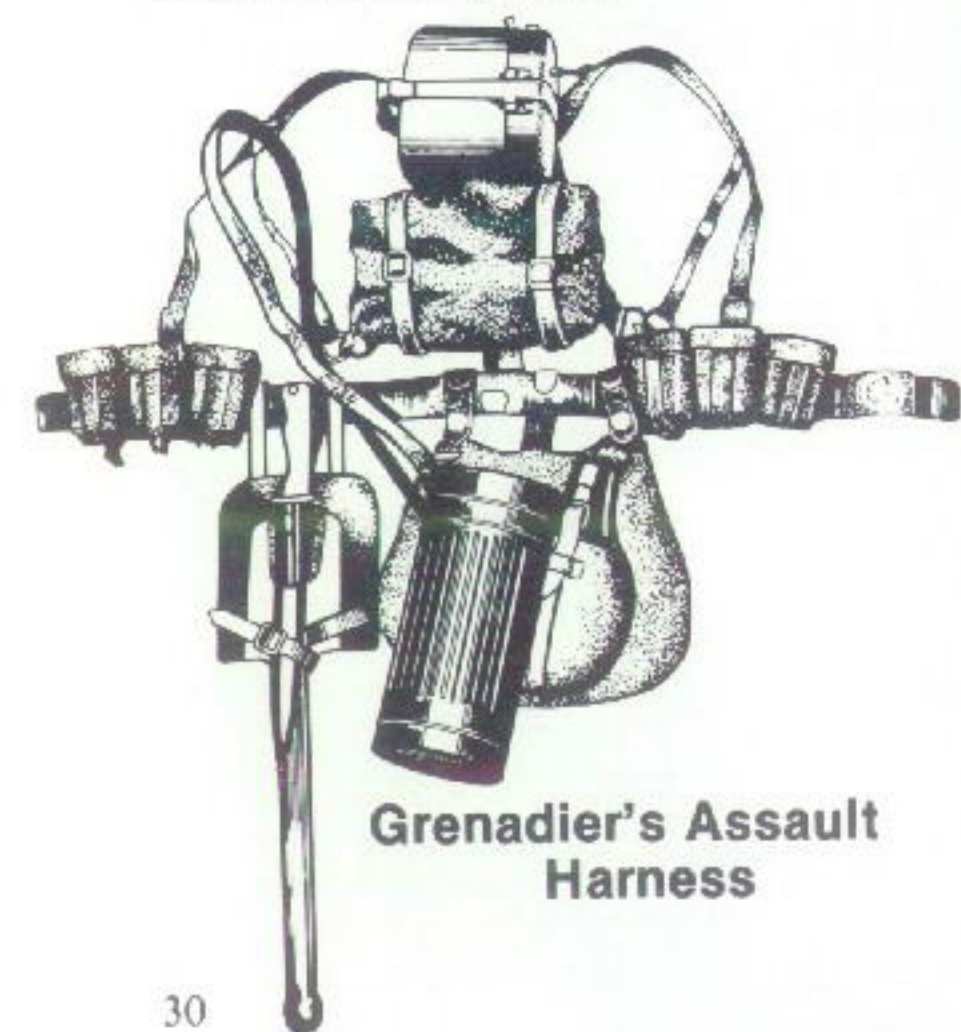




A Panzergrenadier MG 34 team advances up a slope. Most of these men have rearranged the equipment on the standard infantry assault harness, and have discarded items they don't want to carry in action. Many veteran troops preferred to fight as light as possible, and left much non-essential equipment behind. (Squadron/Signal Archives)



A highly decorated officer candidate, seen before Stalingrad. He wears the Iron Cross 1st and 2nd Class, Infantry Assault Badge, Armor Assault Badge, Wound Badge and a Campaign Ribbon. The dark collar is of an early design and was soon replaced with one of material matching the tunic. This is generally a recognizable feature of German uniforms during the early stages of the war. (Bundesarchiv)



Grenadier's Assault Harness



Machine Gunner's Assault Harness

Considered one of the greatest, fiercest and most significant battles of WW2, the fight for Stalingrad destroyed most of the city and its outskirts, cost the Russians very heavy casualties and cost the Germans the loss of the VI Armee, nearly a quarter of a million men. The smoke rising from the heart of this factory complex is testimony to the ferocity of the battle. (Bundesarchiv)





During a lull in the fighting in Stalingrad, Panzergrenadiers rest near a temporary command post. Most of the fighting here involved built-up areas: houses and factories. Casualties on both sides were heavy. (Bundesarchiv)

Panzergrenadiers wait and then advance through the outskirts of Stalingrad. Most of these troops are fighting with full field packs and gear, a very tiring necessity during a fluid attack. Adding to the difficulties of movement with heavy equipment, the blown-up rubble of the city provided hundreds of concealed positions for the Russian defenders. (Bundesarchiv)





A Panzergrenadier hastily seeks shelter on the outskirts of Stalingrad. Carrying two Kar 98K rifles and a box of machine gun ammunition, this soldier presents a typical example of many experienced combat troops. Many soldiers disposed of their heavy field packs, then ended up carrying extra ammo, grenades, even spare weapons. (Squadron/Signal Archives)

Panzergrenadiers use a wrecked T34 for cover during the bitter fighting at Stalingrad. T34s were not used in the city itself, but were used in fighting after the city was taken by the Russians. This is an early production Model 1943 tank. The netting on the near soldier's helmet was used to attach foliage. (Bundesarchiv)

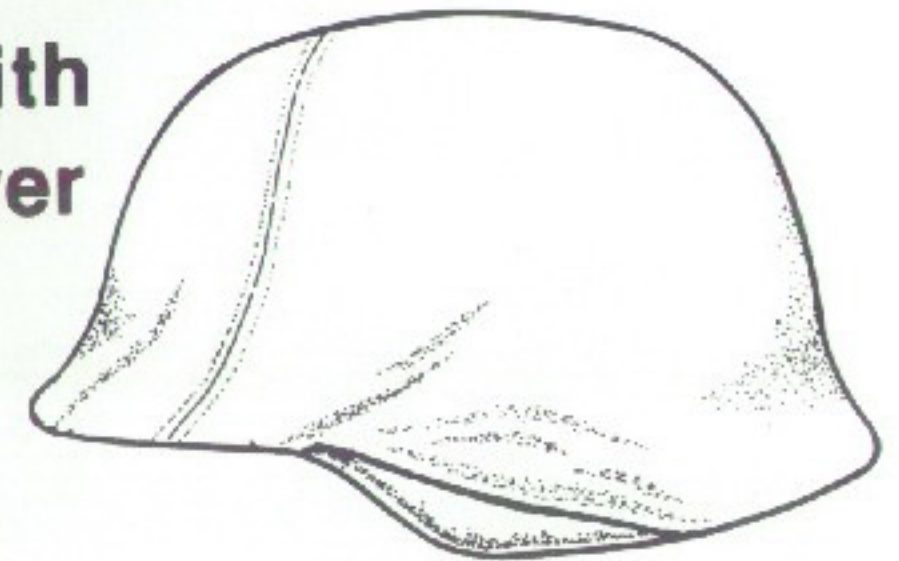
A Panzergrenadier Oberleutnant peers from behind wreckage on the outskirts of Stalingrad. His weapon is a Russian PPSH submachine gun, which was preferred by many Germans over their own, especially because of its reliability and availability of large amounts of ammunition. (Squadron/Signal Archives)





A heavy machinegun crew watches for Russians in deep snow. Two of the crew members have white cloth helmet covers while the gunner's assistant has a white washed helmet. After much use, the snow camouflage material usually turned to a dirty gray. (Bundesarchiv)

Helmet with Snow Cover



A small patrol returns from a reconnaissance mission. The crossed apparatus on the front of the leading soldier are suspenders. These winter uniforms were fairly bulky and the pants were difficult to hold up without the suspenders. (Bundesarchiv)





Another forward machinegun crew keeps an open eye for approaching Russians. These two Grenadiers have an unusual mottled white-wash pattern on their helmets. Again there is an identification band on the left sleeve of the assistant gunner on the right. (Bundesarchiv)

A fast moving column of Panther D tanks carries a company of Panzergrenadiers through a Russian village on the way to the front. Many times, in bad weather, or because of shortage of vehicles, infantry rode on tanks to reach their objectives (Bundesarchiv)

Two members of a forward unit take a break for smoking in a snow trench. The band on the left arm was color-coded for the purpose of distinguishing friend from foe. The Russian and German winter uniforms were very similar and hard to tell apart from a distance. (Bundesarchiv)





Fitted with the two-piece reversible snow camouflage suits, a line of Panzergrenadiers is seen in Russia. In the winter, even the halftracks often couldn't traverse snow covered country, so the troops became true infantrymen. These are the early mouse gray/white suits - later versions had camouflage patterns on the reverse side. (Bundesarchiv)

This PzKpfw IV H proceeds towards the front with a load of Panzergrenadiers. Not all Grenadiers were fortunate enough to receive the camouflage coveralls, and there was always a shortage of these at the front. (Bundesarchiv)





At a forward spotting position, a Panzergrenadier is seen using the standard binocular artillery spotting telescope. This device is fitted with extension tubes over the objectives in order to reduce snow glare. These were also often used in the desert to reduce glare from the sun. The wall of snow 'bricke' provides adequate camouflage from the enemy. (Bundesarchiv)



A company of Panzergrenadiers advance toward a Russian position during a combined Infantry armor attack. The Grenadiers and early PzKpfw IV H are providing flank protection for a Sturmgeschütz III attempting to break through the enemy front. (Bundesarchiv)

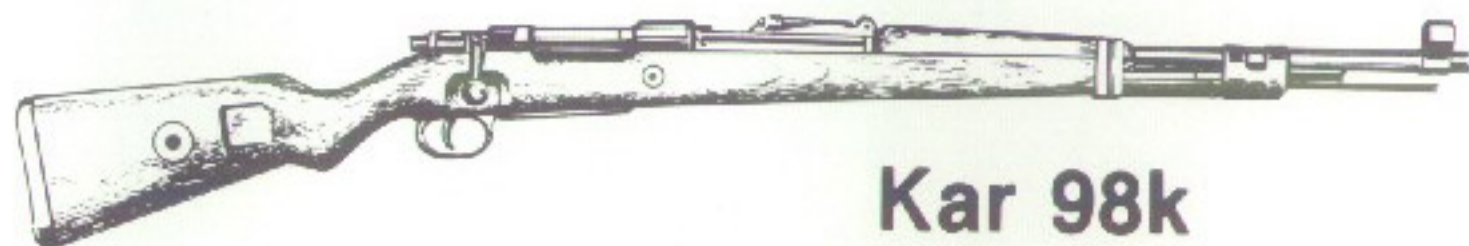


Another heavily armed patrol on the move. These snow suits appear to be lighter and of a different cut than the standard issue. These could have been made of local materials found in the area. This was common practice due to the continual shortages from official supply sources. (Bundesarchiv)



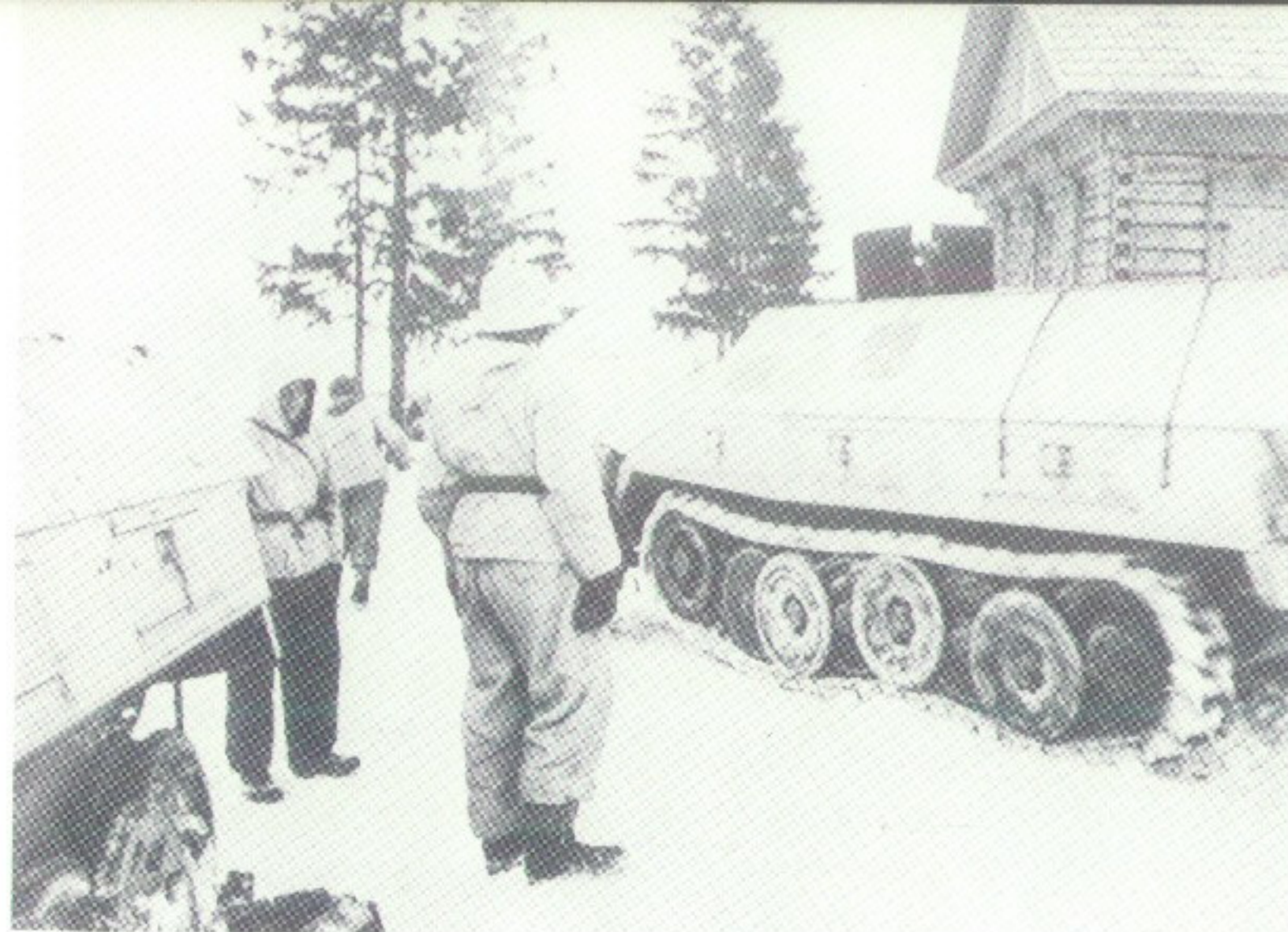
An SS unit poses for the camera in the snow. Another common practice was the use of non-German weapons. The only German weapon in this photo is the Mauser 98K in the foreground. A favorite among German troops was the Russian PPSH submachinegun. The belted machinegun in the center is Czechoslovakian, also used by the British, who called it the Besa. (Bundesarchiv)

The workhorse of the Panzergrenadiers, a SdKfz 251/D halftrack, moves out. The one in the left foreground is undergoing track repair. The D model was the last-issued of the Hanomag armored personnel carriers, and featured a simplified body for easier production. Note the areas around the markings that have not been painted white. (Bundesarchiv)



Kar 98k

Dismounted Panzergrenadiers in the two-piece snow camouflage coveralls march past a Tiger I to a marshalling area prior to an attack. These uniforms were reversible with either field gray or the standard camouflage pattern on the other side. (Bundesarchiv)





This flamethrower crew wears green denim fatigues to serve as basic protection from splattering of the flamethrower. Though fire was (and is) the most feared weapon on the battlefield, flamethrower crews were vulnerable to enemy troops and snipers, who often aimed for flamethrower teams first. The short range of this weapon made the approach to a target very dangerous, and stealth and concealment were essential. (Bundesarchiv)

The flamethrower, a weapon introduced in World War I, saw much service in Russia due to the large amount of brutal close-in fighting frequently encountered. This was a very short-ranged weapon but was extremely effective when it could be employed. These two posed figures wear a specialized flame resistant suit. However, these were seldom used by front line troops. (Bundesarchiv)





Elements of a Panzer Division organize for a counter attack. The 251/9 in the foreground mounts a 7.5cm howitzer which was used to support other vehicles in its platoon. This gun and mount were identical to those used in early StuG III vehicles (Bundesarchiv)

Shoe Anklets



The German successes in Russia cost the Russians extremely heavy losses in men and material. Virtually all the pre-war tanks, guns, and aircraft had been destroyed or captured by the end of 1941. Huge numbers of Russian prisoners were taken and many of them were put to work as laborers for some German units in the field. Heavy Russian losses continued well into the war. During the initial successes at Kursk, many prisoners were taken. (Squadron/Signal Archives)





Panzergrenadiers at the run during the early stages of the Kursk offensive. The German troops initially made good gains in many areas before the superior Russian forces turned the battle around. Behind these men is an early victim of the battle, a Russian T34/76 model 43 tank. (Bundesarchiv)

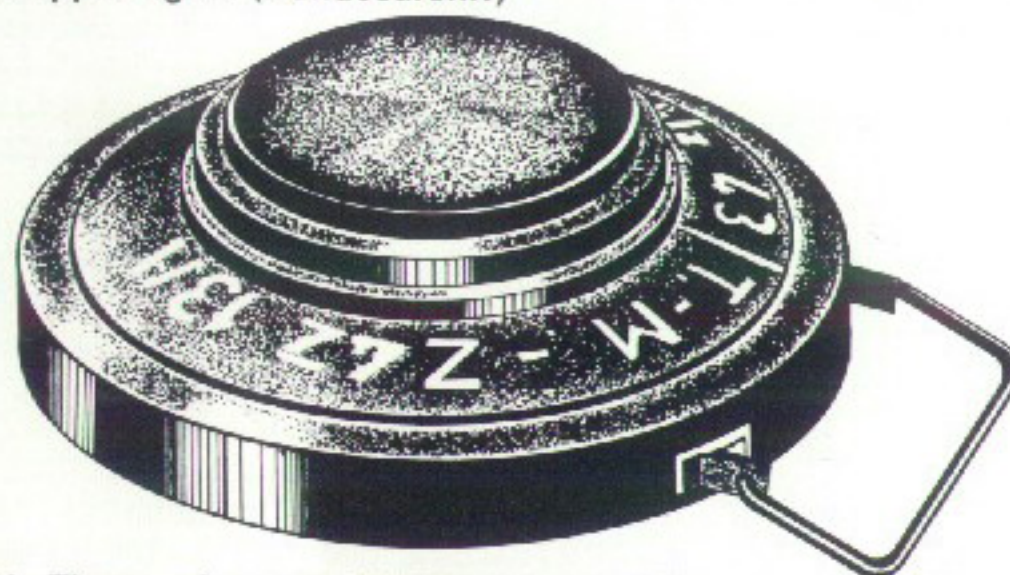
Another group of Panzergrenadiers uses a Tiger I as cover during the advance at Kursk. Though small numbers of Tigers were used near Leningrad in late 1942, Kursk was the first battle to see this new tank committed in strength in Russia. This is a mixed group - the soldiers at the front of this party are Italians. (Bundesarchiv)





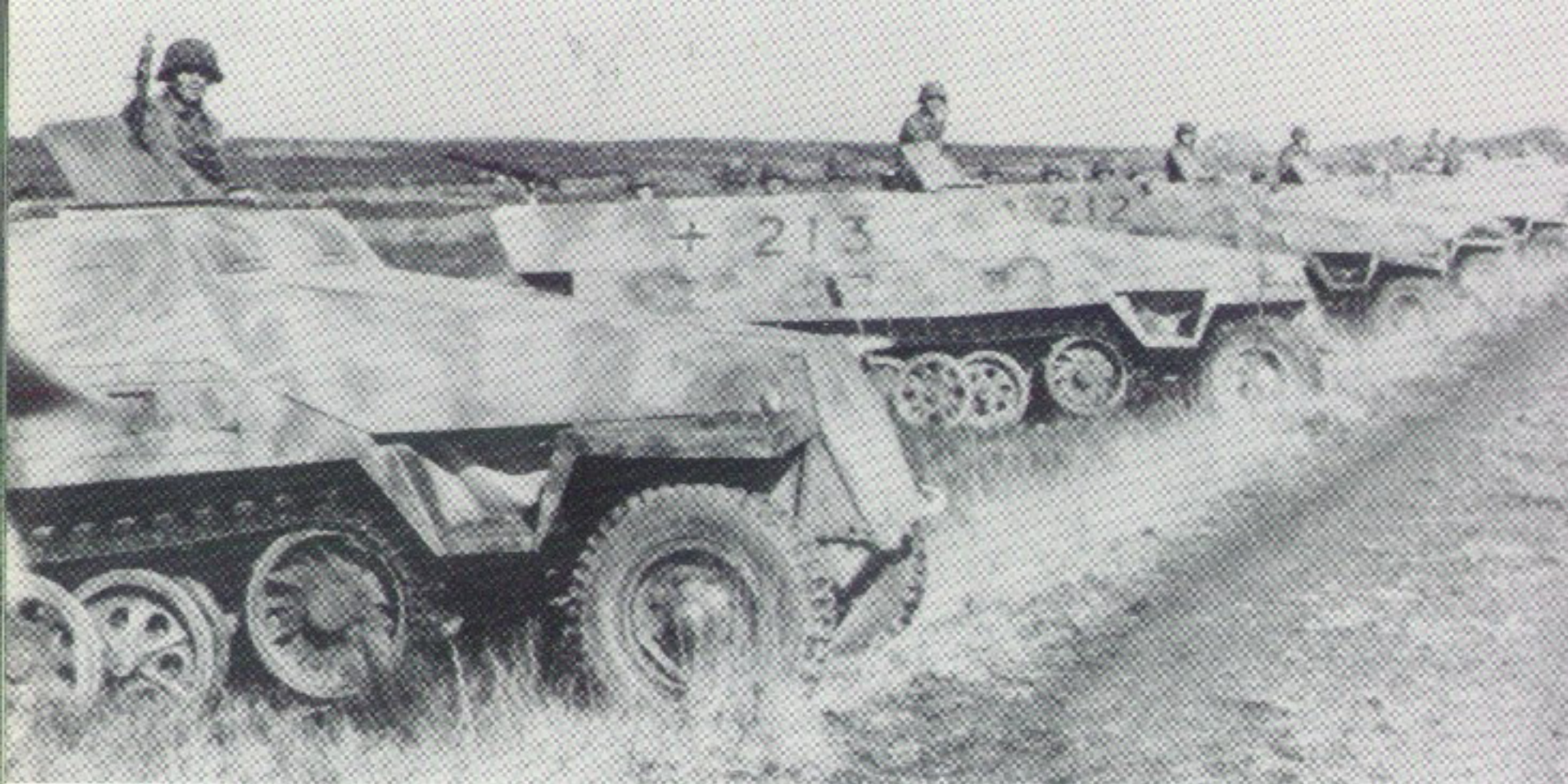
A task hated by soldiers the world over - these Panzergrenadiers are clearing anti-tank mines. Combat often necessitates clearing one's own mines as well as the enemy's. These Grenadiers are clearing safe lanes through their own mine field in order to have a safe avenue through which they can start their assault. Note the lane marker tied to one Grenadier, and also the one already secured in the upper right. (Bundesarchiv)

Teller Mine Model 43



A typical German warning marker indicating a minefield. These, of course, faced away from the enemy. Another sign commonly used was the famous 'Achtung! Minen!' warning marker. (Bundesarchiv)





A Panzergrrenadier Feldwebel attaches the head to a Panzerfaust. These devastating weapons could destroy any existing armor at short ranges. As the war drew on, and Germany found herself almost continuously on the defensive, these weapons were used more and more. They were very cheap to manufacture and took very little training to operate. They were issued to thousands of troops on all fronts. (Bundesarchiv)



Grenadiers of a Waffen SS unit line up for an inspection prior to moving to a new assignment. This unit has just received a number of new 251/D halftracks. Waffen SS divisions, along with a few special army divisions, were allotted the best equipment available. These vehicles carry the standard 3-digit codes commonly used from 1944 onward. (Bundesarchiv)

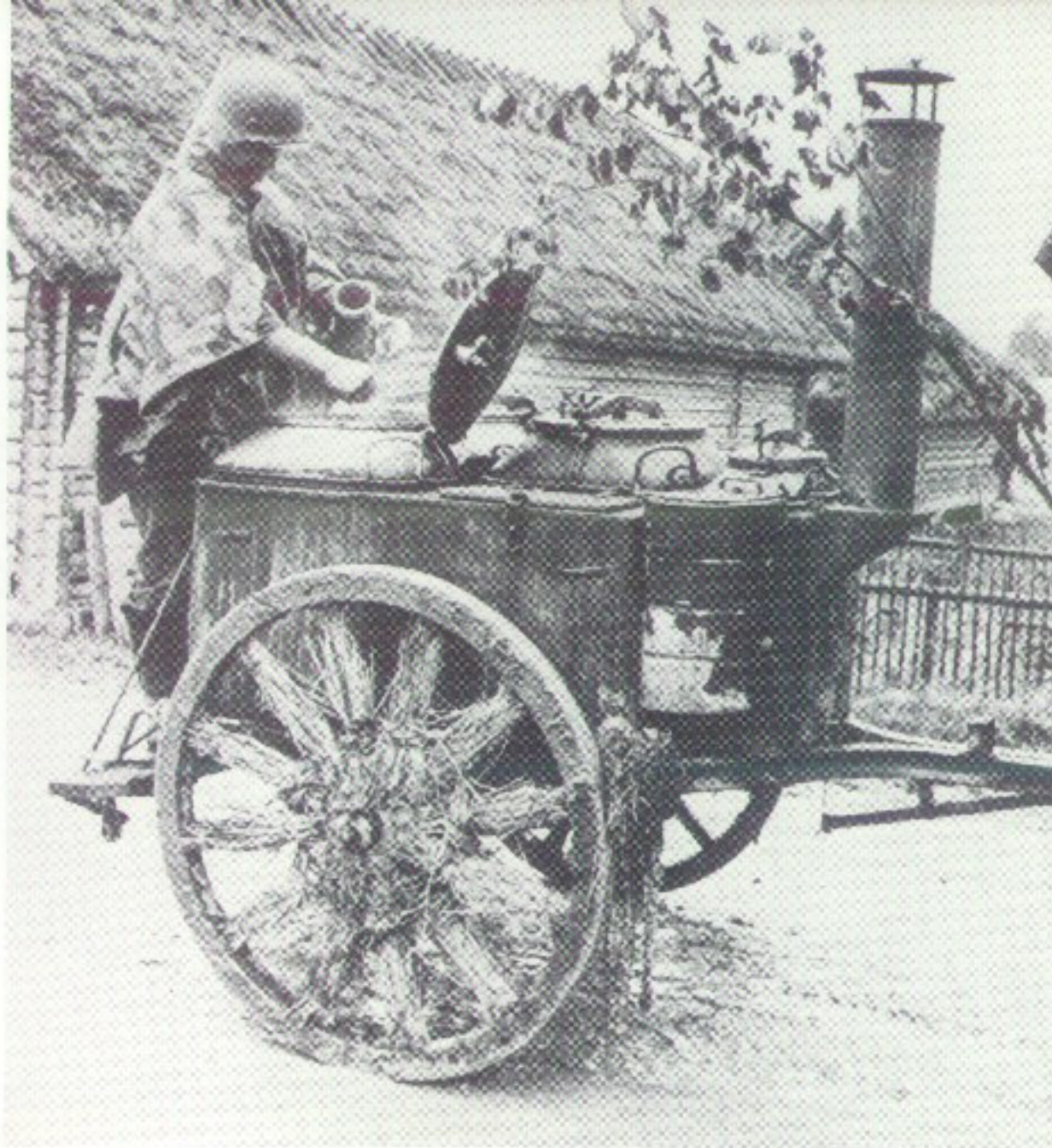
A Panzergrrenadier Leutnant discusses assault tactics with one of his platoon sergeants. This SdKfz 251 aust D communications vehicle is in the standard camouflage scheme of dark yellow, olive green and red brown. Most later command vehicles dispensed with the conspicuous frame antennas and used the 'star' rod antenna seen here. (Bundesarchiv)

Another Panzergrenadier in a shelter quarter helps himself to some hot soup from a mobile field kitchen. Like most quarters, this one is made of standard Army camouflage material. Others used Italian or even Waffen-SS patterns where these were all that was available. (Bundesarchiv)

(Far Right) A Panzergrenadier non-com in Italy waits to move out. He is wearing a faded camouflage smock, in the Army pattern of colors, and a cloth camouflage helmet cover with foliage added. (Bundesarchiv)

(Below Right) A Panzergrenadier and a cavalry friend pose at Kursk. Although on first appearance these two would appear to be members of Waffen SS units, they are actually from the army. Note the army collar insignia and belt buckle worn by the man on the left, a more reliable indication of his branch of service than the SS camouflage clothing he wears. SS camouflage clothing was desirable equipment and worn by all branches of the German Wehrmacht when it could be obtained. (Bundesarchiv)

A popular item of camouflage clothing worn by Grenadiers was the shelter quarter. This was triangular in shape with a slit to put the head through. Four of these, when buttoned together, would form a small pyramid tent into which four men could crowd themselves. The shelter quarter was probably used more frequently than the special camouflage clothing, especially in the Army, where the camouflage uniforms were not as common as in many of the Waffen-SS units. (Bundesarchiv)





This Panzergrenadier Feldwebel has more than twenty destroyed tanks to his credit. Few men could boast of this many successful encounters against enemy tanks. (Bundesarchiv)

Conditions on the Western fronts lead to more sophisticated means of camouflage. Allied air superiority made almost all daylight movements by German units extremely dangerous. Tree branches and other foliage have been added to these vehicles to make them more invisible to roving Allied fighters. However, losses suffered by Panzergrenadier units in France and Italy were extremely high as they were afforded little protection by the Luftwaffe, which by then was concentrating on the defense of Germany from Allied bombers. (Bundesarchiv)





Heavily camouflaged Panzergrenadiers are supported by an equally 'well-garnished' StuG III G. Parked in thick brush to hide the distinctive tracks and suspension, this vehicle would be very difficult to spot from the air. The foliage on the men serves the same purpose and was very effective in brush-covered terrain like this. (Bundesarchiv)

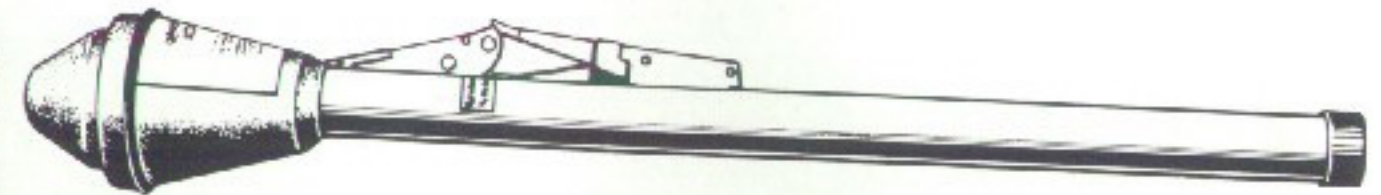
The faces of the Panzergrenadier were many and varied. This SS Grenadier appears to be in good spirits despite the constant strain of combat. He wears the standard Waffen-SS camouflage smock and helmet cover, in the autumn camouflage pattern. (Bundesarchiv)

A group of Panzergrenadiers in France, seen on a Panther ausf G. Note the mix of 1936 and 1943 uniforms and the numbers of old jackboots still in service. Many of the troops which fought in Normandy had been in France for some time and retained the older (and often superior) equipment issued when they were first assigned there. (Bundesarchiv)





Another group of Panzergrenadiers, seen in France, 1944, rides on a Panther ausf G. Note the differences in uniforms, boots and equipment. Much of the late-war equipment, such as the combat shoes and gaiters on the machinegunners, was not as good as the earlier types, so that troops often tried to use old uniforms and equipment as long as they could. (Bundesarchiv)



Panzerfaust 60M

Another view of the same troops above, seen here on the Panther to the left. Because of the shortage of armored halftracks and the limited cross-county performance of most German trucks, it was common in France for Panzergrenadiers to ride directly on the tanks they were to support, until the line of departure was reached. The grenadiers also helped protect the tanks from enemy antitank troops. (Bundesarchiv)



This SdKfz 251 ausf C of the 29th Panzergrenadier Divison has been turned into an emergency ambulance, though it is a basic 251/1 APC. The guns have been removed and a red cross flag identifies its new function. Often there were shortages of ambulances when casualties were especially heavy, and other vehicles had to be pressed into service. (Bundesarchiv)





In the final few months of the war, the Allies gained almost total control of the skies and their armies advanced steadily toward the heart of Germany. As factories and supply centers were overrun or destroyed, the Panzergrenadiers suffered increasing shortages of vital supplies and equipment. Although a few formations in Germany were well-equipped, most front line units saw their strength diminish day by day, as continual losses were not made up. Against the increasing pressure on all the fronts, German troops could do little but fight rear guard actions and then retreat. They came from the East (above) and the West (left), squeezed into smaller and smaller perimeters, until there was no more room to retreat further. In six years, Germany - and the Panzergrenadiers - had gone from overwhelming victory to surrender.



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NCO and grenadier, 21. Panzer-division, Normandy, 1944. The NCO wears lightweight smock, reversible Army splinter camouflage/white. The grenadier carries the Raketten-panzerbuchse 43.

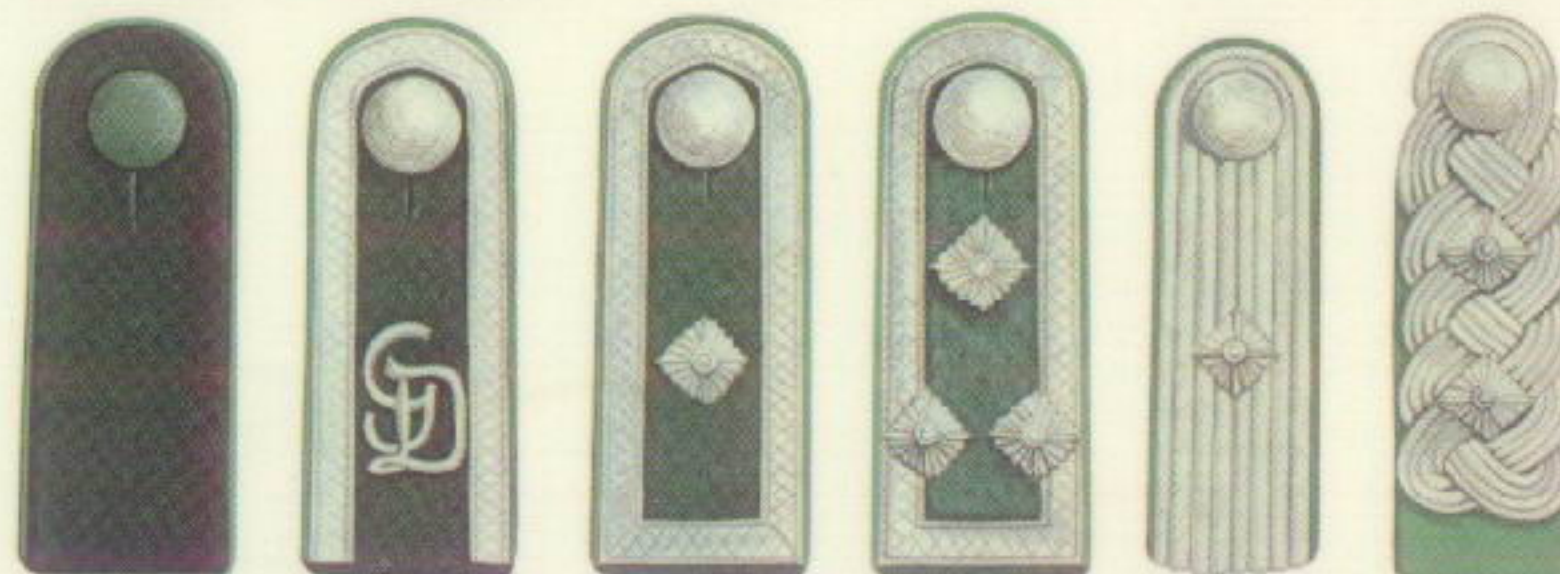


Grenadier and oberfeldwebel, Germany, 1945. Both carry Panzerfaust 60 anti-tank weapons. The grenadier wears the Special Field-Gray uniform normally issued to SP gun crew. The oberfeldwebel has won four tank destruction badges. He carries the rare MP 44.



Leutnant in tropical outfit, DAK-style feldmutze, olive-green tunic and trousers fashioned from Italian camouflage cloth. He wears mountain boots, Italy, 1943.

Shoulder Straps



Grenadier
(grass-green
piping)

Unteroffizier
"Grossdeutschland"

Feldwebel

Stabsfeldwebel

Oberleutnant

Oberst