

Headquarters
TANK DESTROYER CENTER
Camp Hood, Texas

December 21, 1942

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SUBJECT: Fortune Reprint, "The Tank-Killers".

TO : Commanding Officer, 822nd Tank Destroyer Battalion,
Camp Livingston, Louisiana .

Through the courtesy of Fortune, there are furnished you a number of reprints of "The Tank-Killers" which gives a brief description of the Tank Destroyer idea to date. This article appeared in the November, 1942, Fortune.

Chas Miller
CHAS. S. MILLER,
Colonel, G.S.C.,
Chief of Staff.



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THE TANK-KILLERS

A report on the Army's newest tactical weapon.



THE TANK KILLERS

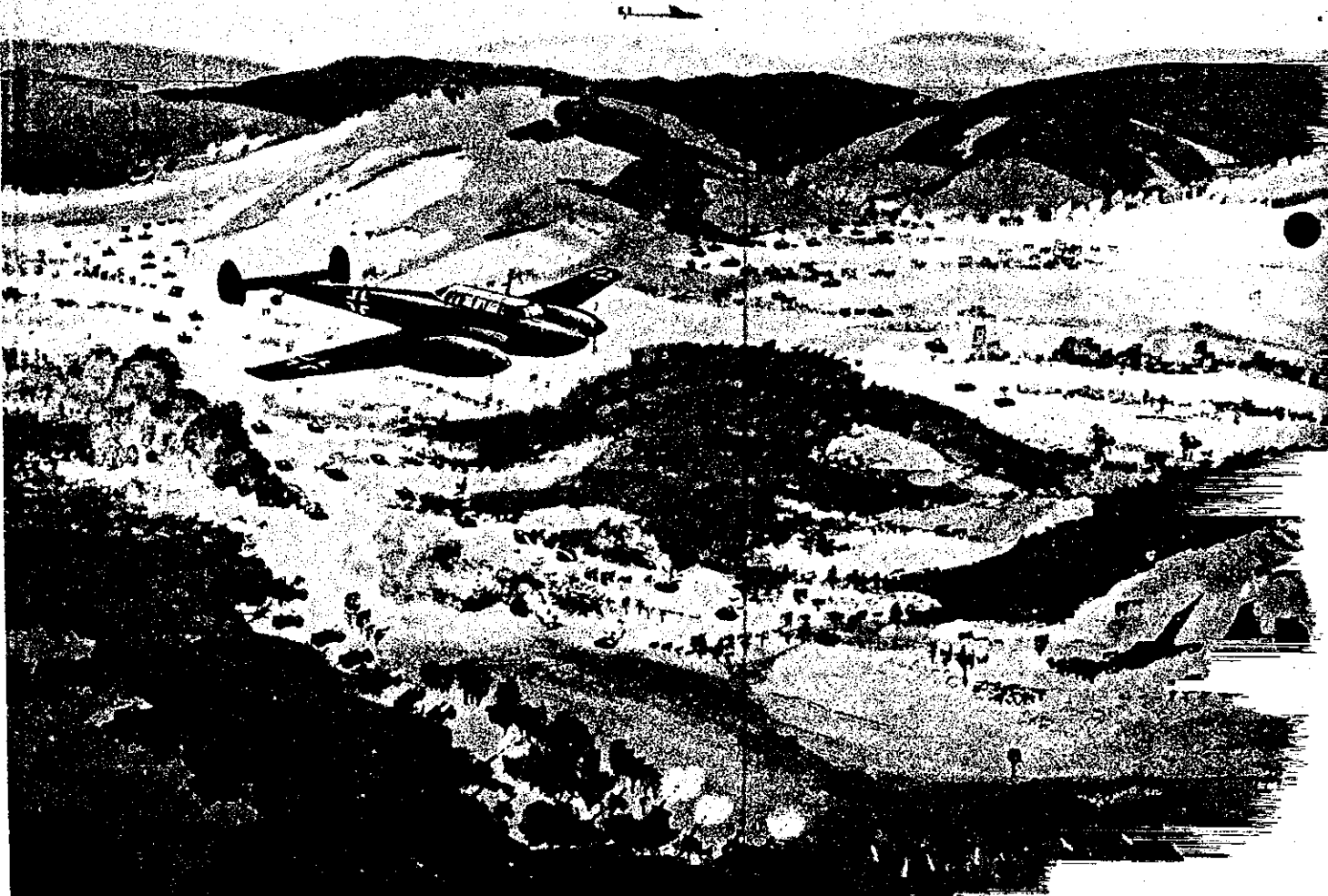
THEY ARE FAST AND AGILE AND PACK A TERRIFIC WALLOP. THE ARMY HOPES THEY ARE THE COUNTERWEAPON THAT WILL END THE LONG REIGN OF THE TANK

MAJOR GENERAL ANDREW D. BRUCE, nine months ago a lieutenant colonel, represents perfectly the new type of officer who is being shoved to the top in the revamped U.S. Army. And the Tank Destroyer Center that he commands at Camp Hood, in the limestone hills of central Texas, illustrates the revolution that is being worked in weapons and tactics.

"The autocrat of the ground battle in this war," says General Bruce, "has been the tank. With the tank destroyer we think we have its number. The destroyer's gun and mount don't have the tank's armor, but its crew commands greater speed, visibility, and maneuverability, and at least equal fire power. It can pick the time and place to deliver its punch and then hightail it to a new position to strike again. One good tank destroyer can be produced for materially less than the cost of a tank, and in far less time and with less critical materials. And by using tank destroyers to stop enemy tanks, you leave your own tanks free to dash through and spread hell among the enemy."

The weapon that has been named, somewhat cockily, the "tank destroyer" is so new and the experimental models are so numerous that no simple definition will cover it. The early version exhibited at the ordnance proving ground at Aberdeen, Maryland, slightly more than a year ago consisted merely of a 75-mm. fieldpiece mounted on a half-track, which is a cross between a heavy truck and a caterpillar tractor. The 1942 fall model is a much more finished product. It looks very much like a tank, but there are several important differences. The new tank destroyer has armor, but this consists of light steel plate, barely thick enough to stop bomb fragments and machine-gun slugs. And its self-propelled mount, having less load to carry than the tank, looks sleeker, faster, and easier to handle. The tank can take more punishment in a slugging match, but the prime rule of the tank destroyer is to avoid infighting.

Some officers, notably Major General George Patton of the First Armored Corps, maintain that, despite all the talk about



superior speed and maneuverability, the tank destroyer is predestined to become just another tank. But General Bruce has no misgivings. When he talks about tank destroyers, he does not remain long in his chair but unlimbers his six feet plus of rugged Texas physique and punctuates his conversation with gestures. When he speaks of delivering a punch, his gray eyes kindle and he brings his right fist down into the palm of his left hand with a force that jars the office. And when he points to a map of Camp Hood on the wall, he raves about the terrain as though he had scooped it out of a sandbox in his basement. In short, he has the energy and enthusiasm of an officer who is given responsibility after years of preparation.

Young "A. D." Bruce was graduated from Texas A. & M. in 1916, just in time to become a provisional lieutenant and go overseas the following year. Commanding a machine-gun battalion, he took part in every major fight of the Second Division. He emerged with the silver leaf of a lieutenant colonel and with the Distinguished Service Cross, the Legion of Honor, the Croix de Guerre with two palms and a star, and two or three other decorations. Of the period between the end of the last war and the start of this one, General Bruce does not talk, but one suspects that his frontier impatience with bureaucracy and traditionalism may have had something to do with the iron gray of his hair.

Self-propelled artillery, the basic idea of the tank destroyer, had a hard time being born. Men like General Sereno E. Brett and

WHEN TANK DESTROYER MEETS TANK

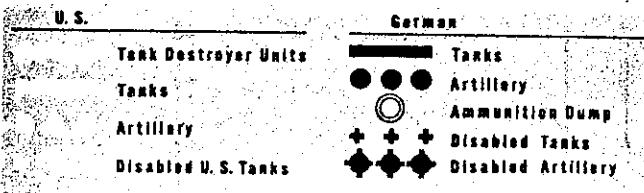
The picture below shows how a battle between U.S. tank destroyers and German tanks might look. Two Nazi tank columns, with air support, approach from either side of the range of hills running from upper left to lower center. As the lower column of tanks comes into range, the tank destroyers lying in wait on the edge of the woods in the left foreground blast away with armor-piercing ammunition. Several tanks become flaming wrecks, while the rest scurry to the nearest cover of terrain or woods. The tank column on the other side of the hills, as yet unharassed, has a surprise awaiting it when it rounds the hill at lower center and runs into another tank-destroyer ambush. Leaving the tank destroyers to neutralize the panzer assault, the U.S. tanks counterattack on the enemy's left flank, trying to break through to cripple communications and blow up an ammunition dump to the north. They run into the fire of emplaced artillery, but are able to break through by their own striking power, plus aid from their artillery and accompanying planes. At this early stage of the battle, the extreme maneuverability of the tank destroyers has not been utilized but there will be ample opportunity for it from now on. Having revealed their position, the destroyers will attract both tank and airplane fire, and their talent for dodging quickly from one position to another will be immensely useful. When the fighting gets hot, both tanks and tank destroyers make the utmost possible use of cover, moving individually in quick spurts, or "leap-frogging," so that one tank stands guard while another dashes for the next available bit of cover, be it a draw in the terrain or a grove of trees. Progressive stages of the battle are shown in the diagrams on the next two pages.



IN THREE ACTS: ATTACK, AMBUSH, REPULSE

These diagrams show three stages of an imaginary battle between U.S. tank-destroyer units and a comparable force of German tanks. Secondary roles are played by emplaced artillery and by a U.S. tank detachment. The first diagram shows the dead lull before the battle. The Nazi tanks are poised for the attack, and the tank destroyers are ready to greet them. In the next diagram the battle is at full tide. The German tank column at the left has run into the ambush of two tank-destroyer units, while the other column is allowed to advance toward the trap set for it beyond the

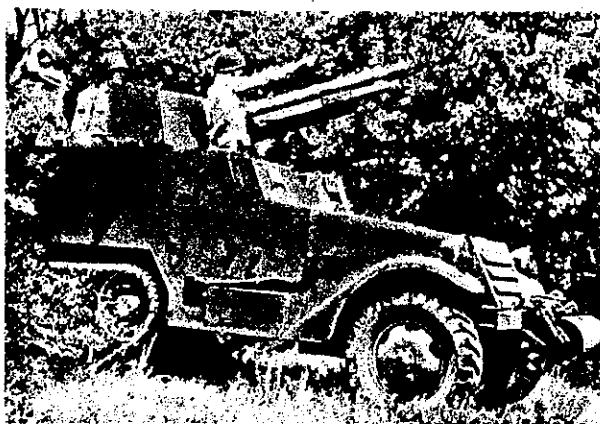
knoll at lower center. The U.S. tanks, taking advantage of the preoccupation of the German tanks, make for the enemy munition dump, upper right. They meet fire from enemy artillery, whose effectiveness, however, is checked by fire of U.S. artillery. In the third diagram, the enemy retreats. Its tanks have been repulsed with heavy losses, though a few still struggle forward. The U.S. tanks push on toward the munition dump. To illustrate more graphically their role, these sketches stack the cards for the tank destroyers. (See pages 116 and 117 for a drawing based on Diagram 2.)



General Daniel Van Voorhis fought vainly for years for the Army to make tactical capital of the nation's great truck- and tractor-building capacity. They wanted to place artillery guns on self-propelled mounts, which could change position in seconds and fire at any time. This seemed to them a distinct advance over the old method of towing the guns along behind a truck or tractor, with the muzzles pointed toward the rear, with several vital minutes required to unhook them and dig the outriggers into the ground. The Ordnance Bureau made numerous pilot models, but the artillery branch refused to be impressed.

But when the panzer divisions "Rommeled" over Poland and then across the Low Countries and France, the U.S. high command began to ask itself, with terrible intensity, what will stop a tank? Then it began to think of the rejected weapon. When in July, 1941, General George Marshall called an antitank conference to meet at the War College in Washington, it was pretty well determined in advance that self-propelled artillery would be one of the Army's main reliances against the enemy's armored forces.

U.S. observers in Africa had reported that Britain's emplaced antitank guns often survived only long enough to deliver four to eight shells. A proper weapon against tanks, the conference decided, must be able to appear suddenly, blast hell out of the



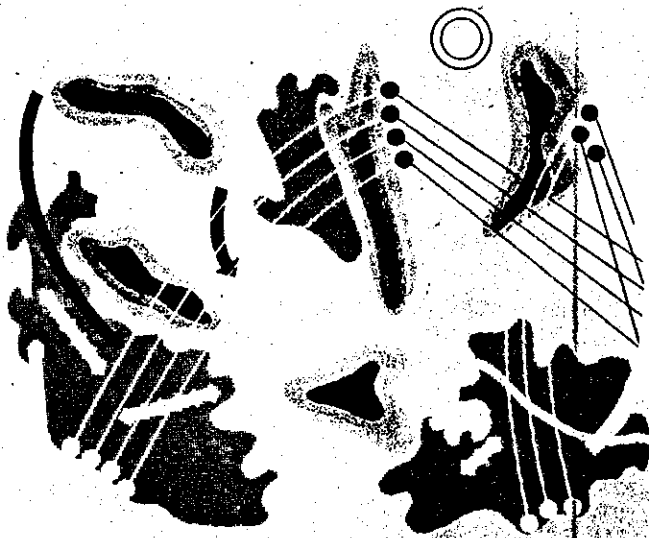
THIS IS A TANK DESTROYER It carries only light armor, relies on speed and maneuverability. Early T.D.'s were merely 75's bolted on half-tracks.

enemy, and then scurry to a new firing position. Its armor must be kept light, not only for speed, but also to allow it to cross bridges, ford streams, and skim through swamps where lumbering tanks could not follow.

G-3 (the training and operations division of the War Department General Staff) ordered that antitank tactics be stressed in the fall maneuvers. Since the Army had few self-propelled guns, antitank tactics emphasized the use of emplaced artillery, grenades, and mines—as they still do, indeed, but chiefly in an auxiliary sense. The bold term "tank destroyers" had not yet been coined, but General Hugh Drum, deploying his First Army along the Pee Dee River in South Carolina, took the initiative by digging out a few score dust-covered 37-mm. guns, bolting them on jeeps, and using them to hunt tanks. In that mimic warfare, the referees ruled that the 37-mm. guns accounted for more than three-fourths of the tanks sent against them, and for a while the 37-mm. antitank gun stood in high esteem.

But the Army changed its opinion quickly after the sad fate of the U.S. light tanks the British sent against the Nazis in Libya last November. At first the war correspondents flashed back word that the light tank had been a brilliant success, dealing destruction to the German mediums. Critics of the light tank were momentarily confounded. But later the true explanation appeared. The foxy Rommel for once had outfoxed himself. He had ordered his medium tanks to withhold fire until the light tanks got within close range. Once within 500-yard range, the light tanks' souped-up 37's had plugged away with deadly effectiveness. Rommel learned his lesson. When next the light tanks were sent against him he opened up with his heavier guns and reduced the 37's to a shambles before they came close enough to strike back. U.S. Army tacticians blame this debacle on the British for sending the light tanks on a mission heavier than they could perform. Whoever or whatever was at fault, it was the end of the argument for the 37-mm. gun as a prime weapon against tanks.

By contrast, the 75-mm. gun was soon to rise in prestige as a mechanized weapon. Some fifty tank destroyers, hastily cobbled together by bolting old 75's on half-tracks, dealt the Japs one of the most painful surprises they encountered in their conquest of Bataan. The U.S. Army had only light tanks, mounting 37's, on Bataan, and their fire bounced off the heavily armored Jap tanks like hail off a roof. But when one of the mounted 75's drew



a head on a Japanese tank, that tank was put out of the battle. The performance of these 75's clinched the General Staff's conviction of the validity of the tank-destroyer concept.

The high command, meanwhile, had decided that the Army's antitank forces should be a separate cadre, readied for their mission by specialized courses at a separate training center. Lieutenant Colonel Bruce, as he then was, took charge of the new command. The Tank Destroyer Tactical and Firing Center opened temporarily in an unused, weed-bordered dining hall at Fort Meade, Maryland, a week before Japan bombed Pearl Harbor.

Already the Colonel had flown all over the South looking for a permanent site for his camp. With the homing instincts of a true Texan, he had looked hardest in Texas. Fifty miles southwest of Waco, he found an area to his liking. Cut diagonally by Cowhouse Creek, which could be dammed to make little lakes of various widths and depths, and spotted with limestone hills and scrub-oak forests, which would make ideal maneuver fields and firing ranges, this site seemed to be made to order.

By the end of February, 108,000 acres had been picked for the reservation, and men from two nearby CCC camps had been assigned to get work going. Some boards from an abandoned CCC camp in Oklahoma were carted down to begin the first mess hall. By this time the Colonel was a Brigadier General.

The planning echelon of the Tank Destroyer Center moved into rented offices in Temple, twenty-six miles from the campsite, late in January. On the last day of March the first antitank battalion, the 893rd, arrived from Fort Meade, and two weeks later a straight tank battalion arrived to furnish an enemy. Orders were issued for the officer school to start May 1, and the T.D. staff persuaded the residents of Gatesville, on the opposite side of the camp from Temple, to give rooms to 250 officers at \$10 a month. They got classrooms in the public school and town auditorium.

While he was supervising all this, the General had also been busy planning the camp. It is laid out functionally, so that all firing ranges open into a common impact area and no battalion is more than a hop, skip, and jump from its training field. The streets are named not after musty heroes of bygone days, but bear names such as Headquarters Avenue, Review Road, Warehouse Avenue, which tell the soldier where he is. The name of the camp General Bruce regards with affection, for General John

B. Hood's Texas Brigade exhibited in the Civil War the offensive dash he is trying to instill in the tank-destroyer troops.

By early September barracks for more than 20,000 men had been completed and the Tank Destroyer Center was in full stride. The work of the camp falls into three parts. First there is the officers' school, which teaches tank-destroyer weapons, missions, and tactics. One department of this school trains enlisted men in motor repair and maintenance, radio operation, military demolition, and other specialized jobs. The job of training officers and technicians rests with Colonel Hugh T. Mayberry, a blond, ebullient Missourian who previously taught antitank tactics at the Infantry School at Fort Benning, Georgia.

Second function of Camp Hood is the training of tactical units as a whole, both officers and men. This falls to Brigadier General Richard G. Tindall, who, like General Bruce, started out as a provisional officer in World War I, interrupting a promising newspaper career in St. Louis. When soldiers leave Tindall's tutelage, they are ready to go abroad, or at least to join a permanent division. Soon Camp Hood will be doubled in size, including a replacement center that will take raw selectees and start them off at once in specialized courses in stopping tanks. When these come to General Tindall's department, they can be polished into finished tank-destroyer troops more quickly than the men he has been getting, who have had only general training.

The constant revision of tank-destroyer training, tactics, and weapons is the third function of Camp Hood. This is done by the Tank Destroyer Board, presided over by Colonel Ray Calhoun Montgomery, a sandy-haired, bushy-browed artilleryman who headed the first experimental mechanized force set up at Fort Meade in 1928. He keeps in constant touch with the Bureau of Ordnance, and a heavy safe in his office is filled with photographs and blueprints of the tank-destroyer weapons of tomorrow.

"THE MAN-KILLER"

The Tank Destroyer Center tries hard to make its tactics and training realistic. It keeps in close touch with line officers and observers returning from the battlefields in both hemispheres. Several instructors have been abroad to learn their subject matter first hand. Major Gordon Kimbrell, a keen young officer who five years ago was playing football at West Point, was sent to the



British Commando School to pick up pointers for the "scout thugs," who will hunt enemy tanks where they are parked at night. Colonel Branner Purdue, Major Edwin Southerland, and Captain Ralph S. Eldridge were sent to scout the battle between Rommel and the British in Africa.

Camp Hood tries systematically to harden its trainees against the inhuman and superhuman demands that will be made of them on today's battlefield. The training at Hood has not gone so far as that of the Marines, which includes, for some troops, the experience of being sprayed with animal blood. Nor does it go so far as the methods of General Bernard Freyberg, the New Zealand commander in North Africa, who trains his soldiers in maneuvers with live ammunition. But the camp's obstacle course, which the soldiers call "the man-killer," makes the course in some camps look like setting-up exercises in the village Y.

On "the man-killer" the men clamber down a stony hill through a smoke screen into water over their heads. Whether or not a soldier can swim, he must go through, carrying his equipment—although he may be helped by his mates. Then over a smooth ten-foot wall and through a barbed-wire entanglement pocked with muddy shell holes. Here they are harassed by the boom of practice mines and grenades set off just far enough away to do no actual harm, yet close enough to shake the ground and shower gravel. The soldiers learn to keep their heads down.

Next they advance up a hill and across a small plateau generously sprinkled with booby traps to catch the unwary. If the by-now-exhausted trooper stoops to pick up a wallet lying on the ground, trips over a concealed wire, or drops for a second on an inviting tree stump, he is jolted by an explosion much too close for comfort. In the final lap of the obstacle course, the men crawl on their bellies through a network of trenches, shell holes, barbed wire, and dummy mines to take a nest of machine guns shooting live ammunition a foot or two over their heads.

Major Kimbrell, in charge of the course, does not ask the men to do anything their officers don't. From shavetail to colonel, the officers go through "the man-killer" and under the guns with the buck privates. If an officer can't take it, no matter how plucky his attempts, he is certain never to lead troops in battle.

"GUNS AND GUTS"

The T.D.'s motto, "Seek, Strike, Destroy," won out in a close race with the laconic slogan, "Guns and Guts." At Camp Hood more stress is placed on accuracy in firing the tank destroyer's big guns than any other thing. Like other camps, Hood suffers from an acute lack of full-sized ammunition, but it trains intensively with sub-caliber firing. A .30-caliber rifle bolted in the bore of a 75-mm. gun teaches the soldier to aim and fire the artillery piece itself. Difference in the muzzle velocity of the sub-caliber and full-sized guns causes some confusion in teaching the proper distance to aim ahead of the fast-moving target. But despite obstacles, the T.D. Center is making marksmen whose scores would give a Nazi tank crew something to think about.

Tank-destroyer troops are taught almost exclusively flat trajectory firing, for they expect to be comparatively close to the target. They leave to the field artillery the more complicated "indirect laying," in which the projectile is shot over in an arc at a target the gunner cannot see but aims at by triangulation.

General Bruce believes intensely in training and fighting with what you have, all the while trying to get something better. He has worked with tank destroyers in which the carriage has ranged

all the way from the versatile jeep to the ponderous chassis of the M-4 tank, and the fire power has varied all the way from a machine gun to the potent 90-mm. anti-aircraft gun. While the improved 75, with longer muzzle and higher velocity, is the prime weapon of the tank destroyer today, it may be supplanted any time volume production on a better gun can be reached. The faster, harder-hitting three-inch anti-aircraft gun is already being used as an alternate weapon, and there is a pilot-model tank destroyer mounting a 90-mm. anti-aircraft gun. Either of these is virtually a match for the German 88-mm., and like it, both are dual-purpose weapons. With the present organization of weapons, a T.D. battalion packs as much fire power as two regiments of 75-mm. field artillery in World War I.

Where there are German tanks, there are likely to be accompanying low-flying planes. So for each two tank destroyers there is a mechanized anti-aircraft unit. Standard weapon on this will be the 40-mm. Bofors, with two .50-caliber machine guns mounted coaxially with it to pepper enemy hedgehoppers.

The search for improved tank-destroyer guns is matched by experiments on the carriages. As a mount for the anti-aircraft guns, Ordnance and the automotive industry have developed a light, fast chassis with a six-wheel drive. For the heavier T.D. gun, Ordnance is trying to perfect the "trackless tank" and also a carriage using the long-rejected Christie principle of individual suspension of wheels within a caterpillar tread. New motive power, too, is just around the corner. Before long both tank destroyers and tanks should be able to get away from the airplane engine, with its heightening effect on silhouette and demand for 100-octane fuel.

Tactically there is nothing of the prima donna about tank destroyers. The manual defines the T.D. battalion, which is the basic tactical unit, as "a self-contained, semi-independent unit capable of action for considerable periods of time against an enemy armored force." But T.D.'s are not organized to protect themselves against strong infantry, cavalry, or artillery forces, and therefore will normally operate with other units. A T.D. battalion is likely to be held far enough in the rear to make the best use of the network of roads branching out to the front.

If enemy tanks break through the front line, the T.D.'s engage them promptly, leaving the tank forces on their own side free to try a counter breakthrough. But the T.D.'s do not always, or even typically, wait for enemy tanks to attack. If scouting has revealed a tank force parked in the enemy area, the T.D.'s may try to sneak through the line and destroy it. Or they may, with the aid of other forces, try to make a hole to use in getting at the tanks. Yet the cardinal principle, engraved by constant repetition in the mind of every T.D. officer, is that his force must avoid "meleeting" with the enemy. Always the tank destroyer plays the role of the agile boxer maneuvering against a heavier foe.

Only the acid test of battle can determine whether General Bruce's vast faith in the ability of his lightly armored mechanized guns to knock out tanks is well founded. Some of the top men in Ordnance share General Patton's conviction that the tank destroyer will eventually have to be "just another tank." Some members of the high command may have their fingers crossed, too. But they are not worried. If the tank destroyers prove less potent than their champions hope, they will still have speeded up by months, if not years, the marriage of the artillery gun to truck and tractor. That is a whole era ahead of towed artillery.