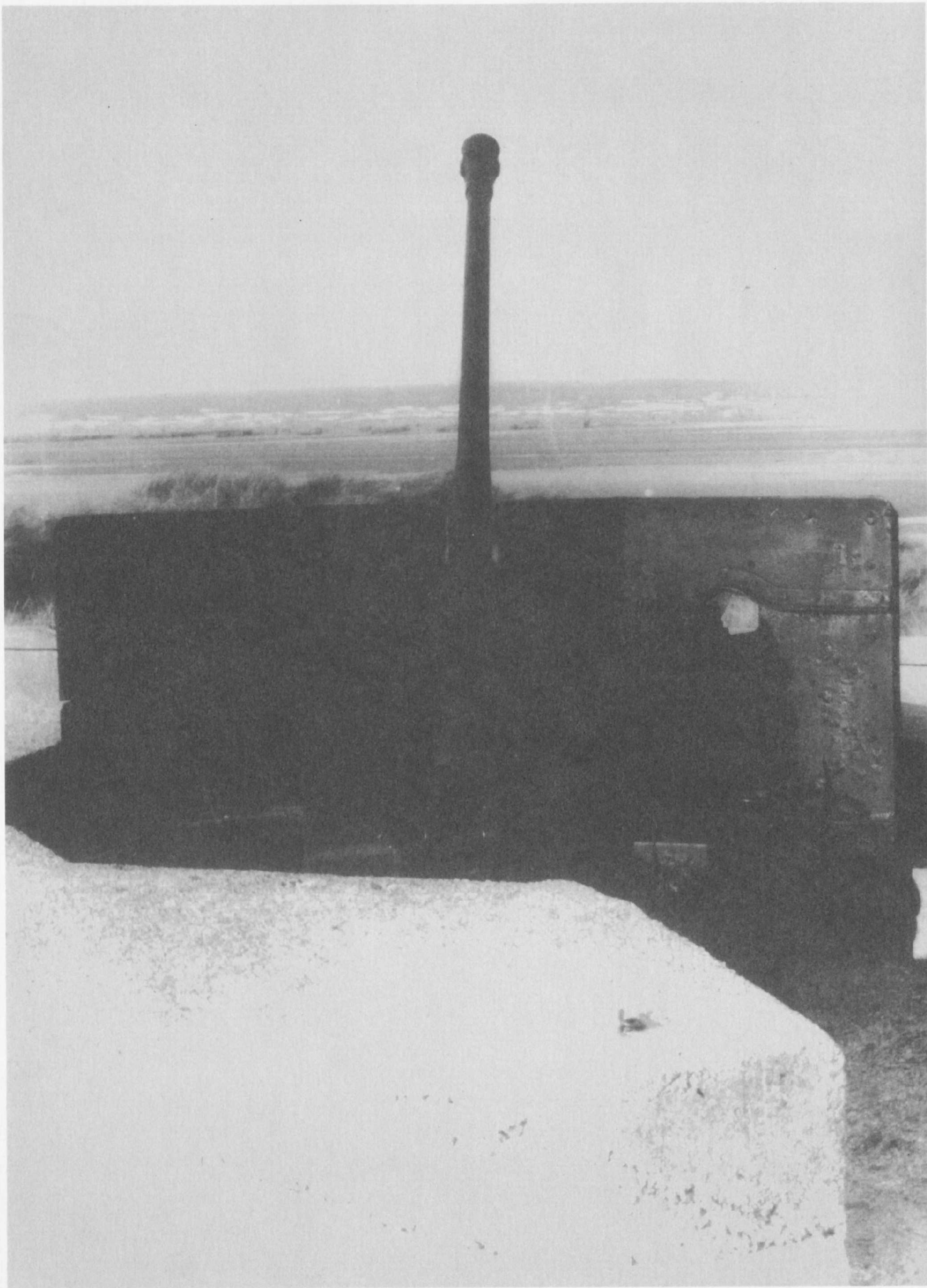


# GERMAN DEFENSIVE BATTERIES & GUN EMPLACEMENTS

ON THE NORMANDY BEACHES  
INVASION: D-DAY JUNE 6, 1944



KARL-HEINZ SCHMEELKE & MICHAEL SCHMEELKE



*A 50mm KwK L/60 of Resistance Nest 5 in its ring position.*

# GERMAN DEFENSIVE BATTERIES AND GUN EMPLACEMENTS on the Normandy Beaches



*A Berliet armored turret with 37mm cannon on a ring mount in Resistance Nest 8 on the Cherbourg Peninsula.*

## INVASION: D-DAY JUNE 6, 1944

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also provided assistance: Batterie Merville, 14180 Merville-Franceville; Le Grand Bunker Riva Bella, 14150 Riva Bella; Museum W5, 67746 Ste-Marie-du-Mont.



*A 100mm lFH 14/19 (t) in a field position on the coast.*

## Sources:

Files of the Bundesarchiv Freiburg, Military Archive  
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Abbeville 1988

*Sie kommen*, Carell, Stalling Verlag 1965

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*Les Avion du 6. Juin*, Crochet, Heimdal 1993

*Zwischen Bunkern und Domen*, Brand, Amsterdam  
1944

*Die 4.7cm Festungspak und ihre Verwendung in  
deutschen Befestigungsbauten*, J. Fuhrmeister, Fortifi-  
cation No. 5

Translated from the German by David Johnston

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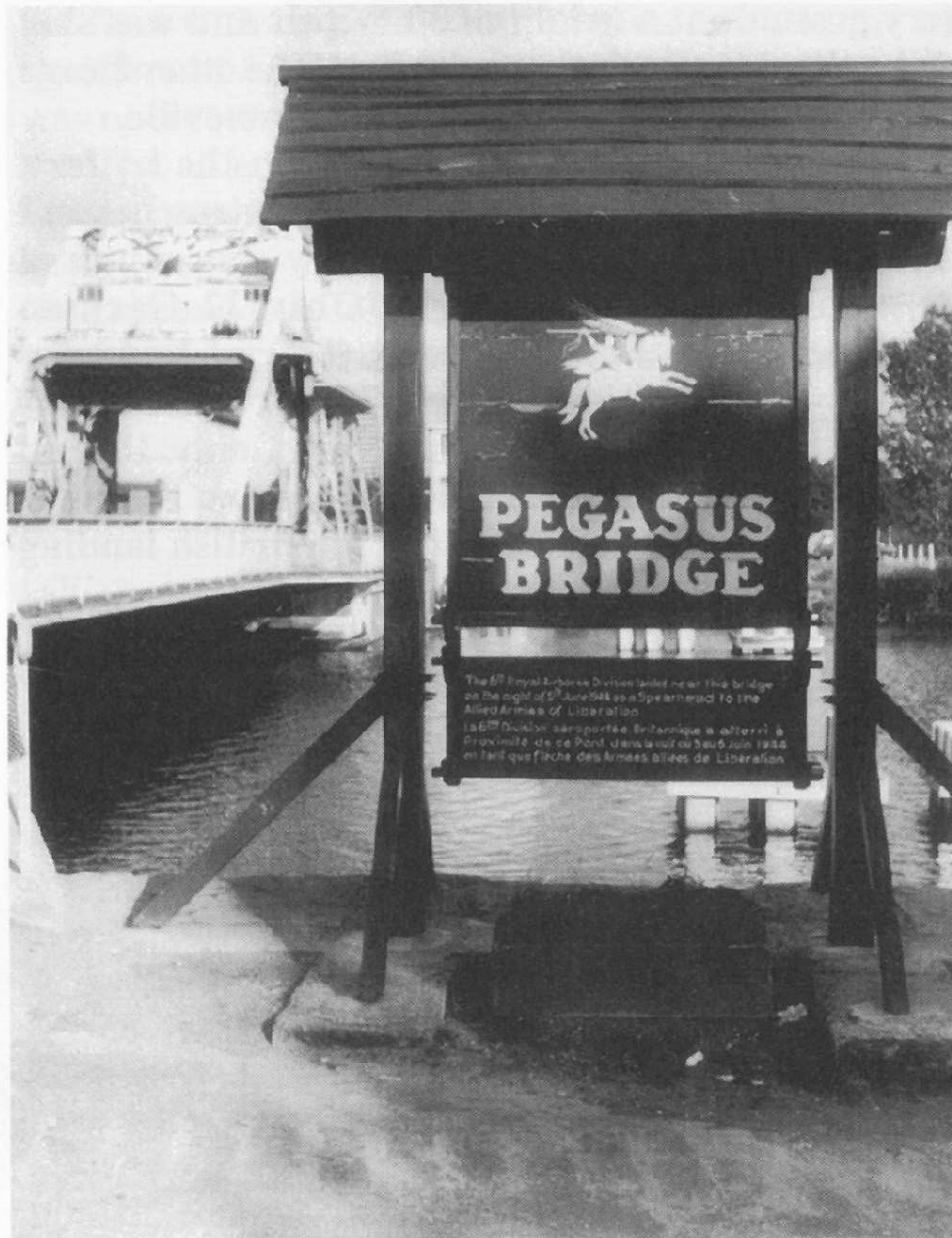
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*A propaganda company's drawing of the Allied airborne landing.*



*The drawbridge over the Caen Canal near Benouville. British airborne troops dubbed it "Pegasus Bridge" after their heraldic animal.*

## The Invasion of Normandy

On June 6, 1944 the German Armed Forces communique reported:

"Last night the enemy began their long-prepared and anticipated attack on Western Europe. Preceded by heavy air attacks on our coastal fortifications, they dropped airborne troops at several places on the coast of Northern France between Le Havre and Cherbourg and simultaneously landed from the sea, supported by strong naval forces. Heavy fighting is in progress in the coastal sectors attacked."

Several minutes after midnight on June 6 4,255 soldiers of the British 6th Airborne Division, under the command of Major-General Richard Gale, landed by parachute or glider north of Caen. Within a few hours they had captured 65 square kilometers of territory and seized the bridge over the Caen Canal near Benouville as well as the bridge over the Orne near Ranville, which was parallel to the canal.

In addition the British airborne troops blew up five bridges over the Dives River, which lay eight kilometers to the east, thus preventing the Germans from quickly moving up reserves against the British and Canadian landing sectors, Gold, Juno and Sword, between Arromanches and Riva Bella.

One of the primary missions of the English airborne troops was the capture of the German coastal battery at Merville. Allied air reconnaissance had reported the existence of the battery in April 1944. The French Resistance incorrectly reported that the battery, manned

by 130 men of the 1716th Artillery Regiment, was armed with 150mm cannon. It was therefore believed to pose a deadly threat to Sword, the landing beach assigned to the British 3rd Division. The storming of the battery was assigned to the 9th Parachute Battalion under Major Terence Otway. It was planned that Otway should attack the battery from outside with 750 men, while an additional 60 men in Horsa gliders were supposed to land on the battery grounds at the moment of the attack, in order to disrupt the German defense from inside.

However heavy anti-aircraft fire forced the pilots of the glider tugs to take drastic evasive action. Consequently the paratroopers were dropped as far as 50 kilometers from their intended target. As well, the glider carrying the special equipment, such as mine detectors, had separated from its tug over the Channel and had crashed. Ninety minutes after the landing Otway had only assembled 150 men; nevertheless, at about 3:30 A.M. he decided to attack the Merville Battery.

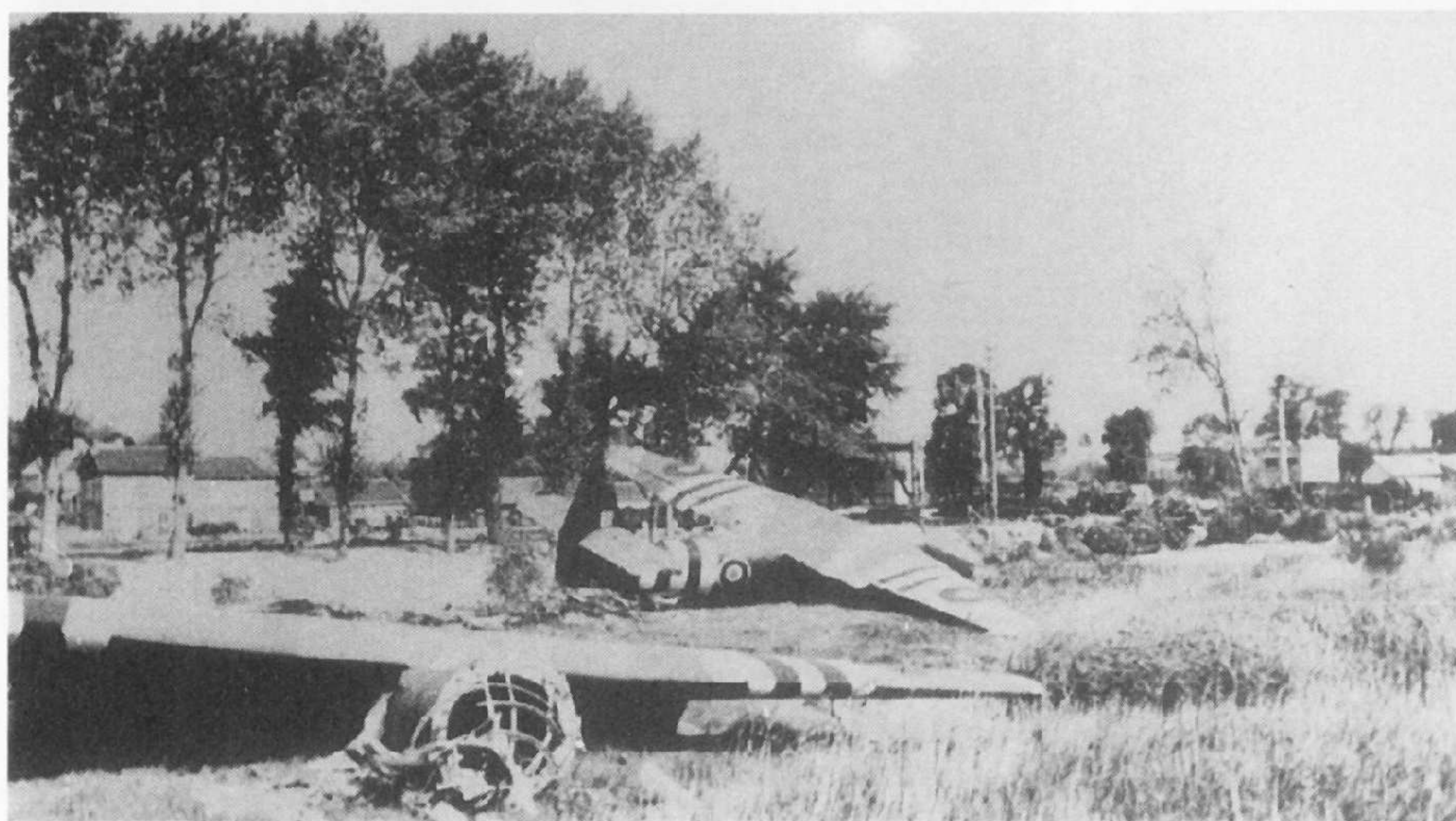
Shortly before midnight the battery had been attacked from the air again, by 109 Lancaster bombers. 382 tons of bombs were dropped, but only a few hit the gun positions. Following the air raid Leutnant Steiner, the battery chief, instructed the sentries to be especially watchful, and soon the German artillerymen had spotted Otway's men moving about outside the battery grounds. Two of the three gliders swooped over the battery at about 4:30 A.M. The first glided over the

battery grounds at a height of 30 meters and was shot down by the strongpoint's 20mm flak. The other Horsa landed several kilometers away near Gonneville.

Otway now gave the signal to storm the battery. His men blew up the barbed wire entanglements and charged into the position. The battery was captured after a thirty-minute struggle. Only 22 German artillerymen were taken prisoner; the rest had been killed. Otway's force lost 66 men. Then came the surprise: the battery had no 150mm guns, only 100mm Czech field cannon<sup>1</sup>. These could only fire on the inner beach and thus posed no threat to the British landing from the sea.

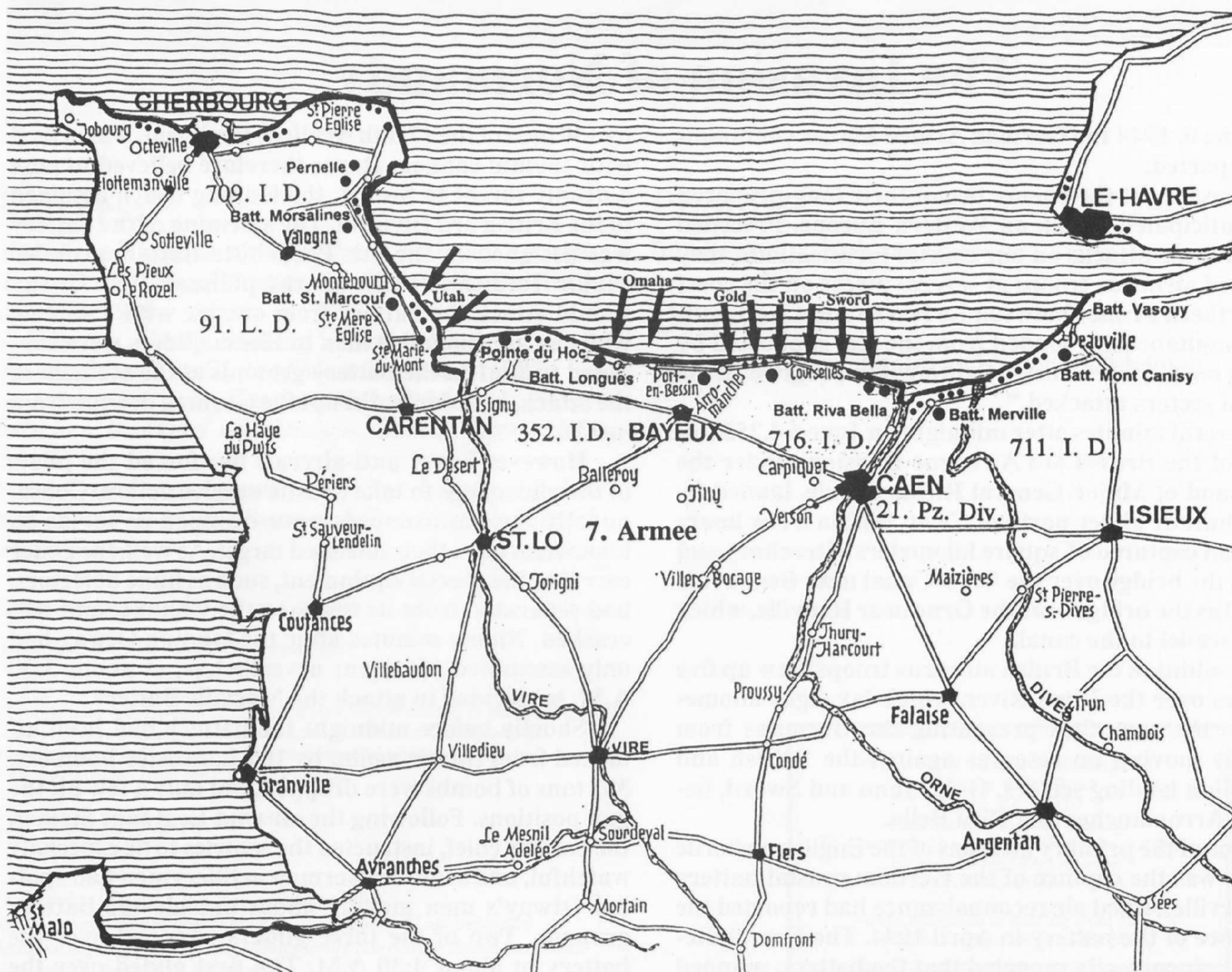
Soon after its fall the Merville Battery came under fire from the German battery in Ouistreham, and the English evacuated the position. Toward morning two companies of the 744th Grenadier Regiment took possession of the Merville Battery again. Emergency repairs were carried out on the guns and soon they began bombarding Sword Beach. Merville remained in German hands until the end of July.

<sup>1</sup> Information from former members of the battery as well as files in the Sword Museum in Lion-sur-Mer has revealed that the position was equipped with 100mm LFH 14/19 (t) guns.

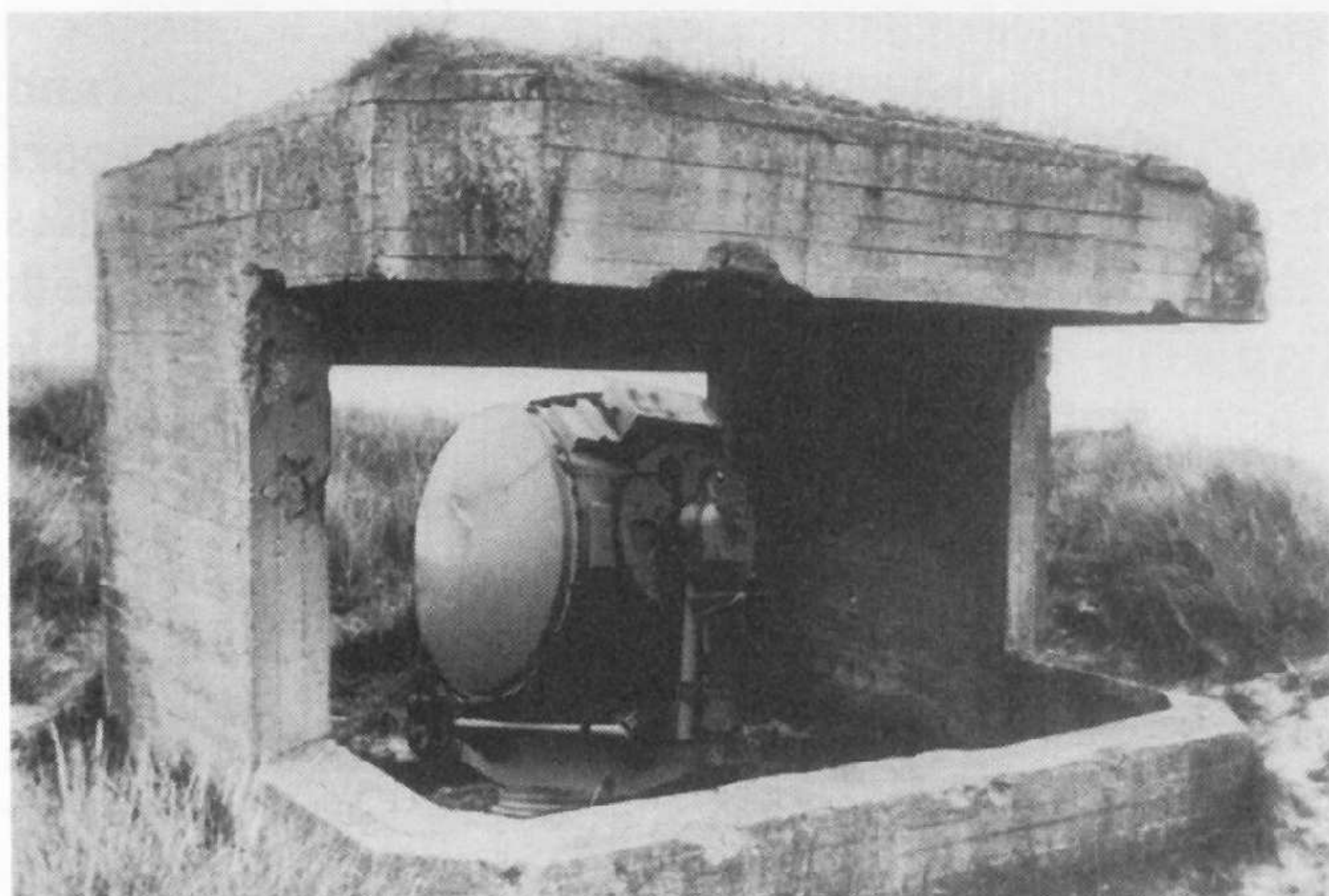


Left:  
British Airspeed Horsa I gliders  
along the Caen Canal on the morn-  
ing of June 6.

Below:  
General map of Normandy, with the  
Allied landing beaches between Le  
Havre and Cherbourg.



The American airborne landings on the Cherbourg Peninsula began at the same time as the British landings farther east. The 101st Airborne Division under



the fleet with its radars and reported this to the headquarters of Air Fleet 3 in Paris. However the message was not received, as the H.Q. was in "night rest" status.

The allied air forces had been softening up the defenses in preparation for the invasion in Normandy since January 1944. All the bridges over the Seine in the east and the Loire in the south had been destroyed, transforming Normandy into a strategically isolated

*Left:*

*This 1100mm searchlight was used by the St. Marcouf Battery to illuminate the sea.*

Major-General Taylor came down between Carentan and Ste. Mère Église, and the 82nd Airborne Division under Major-General Ridgway landed north of the mouth of the Vire. Along with the 17,262 American soldiers, 504 light guns and 101 jeeps were dropped on over-sized parachutes. However the American troops also encountered heavy anti-aircraft fire, and furthermore they suffered heavy casualties on landing in flooded areas.

Nevertheless, the Americans occupied the town of Ste. Mère Église, cutting the road between Carentan and Cherbourg. A train company of a flak unit abandoned the town without a fight and even left the guns' prime movers behind. The Americans also occupied several small villages behind the Utah landing sector and secured the important access roads to the beach.

Even before coordinated countermeasures got under way on the German side, the Allies had more than 22,000 elite troops fighting on French soil.

The regimental command post of the 6th Parachute Regiment in Carentan, commanded by Major Freiherr von der Heydte, informed LXXXIV Army Corps in St. Lô, of the American airborne landings at 12.11 A.M. At about 1:00 A.M. the commanding officer of the 716th Infantry Division, Generalleutnant Richter, also sent a report to corps of enemy airborne landings. General der Artillerie Erich Marcks, commander of the army corps, immediately reported this to Seventh Army Headquarters in Le Mans. At 1:15 Generalmajor Pemsel put the Seventh Army on Stage II alert (the highest level of battle readiness).

At this point in time 59 allied convoys were nearing the Norman coast. These convoys consisted of a total of 8 battleships, 22 cruisers, 93 destroyers, 229 escort craft, 200 minesweepers, 360 smaller ships and 4,222 landing craft. At a predetermined point in the Channel the convoys split up and set course for the American beaches of Utah and Omaha and the British and Canadian beaches of Gold, Juno and Sword.

At 1:50 A.M. the landing fleet was located by the radar station at Strongpoint 42, near Arromanches. The information was passed on immediately to the Naval Group Command in Paris. Luftwaffe radar station "Distelfink" near Douvres-la-Délivrande also located

the zone. After the allied landings, German reserves were forced to make lengthy detours, and furthermore their movement was hindered by constant air attacks. Supply lines, like roads and railways, had been extensively bombed, as had all German airfields within a radius of 500 kilometers of the invasion zone.

The allied air attacks on the coastal positions began at dawn on June 6. During the night 1,136 heavy bombers had attacked the German coastal batteries between Vasouy and La Pernelle. Every coastal battery, radar station and resistance nest was attacked with bombs and rockets.

The invasion fleet began bombarding the German coastal positions at 5:00 A.M. Lying off the Cotentin Peninsula and the heights of St. Martine de Varreville and Le Madeleine were 243 large ships, including the battleship USS Nevada, the monitor HMS Terror and the cruisers USS Tuscaloosa and Quincy. As well there was HMS Hawkins, Enterprise, Black Prince, Soemba and eight destroyers. At first only two heavy batteries, Marcouf (3 x 210mm Skoda cannon) and La Pernelle II (3 x 170mm K 18) were able to answer.

Not until the actual landing on Utah Beach began at about 6 A.M. were the other coastal batteries able to



*The Sherman Duplex Drive (D.D.) amphibious tank was developed especially for the invasion of Normandy. It had two screws driven by the tank's motor. The tank could cope well with calm water, but it swamped easily in rougher seas.*

intervene in this area. Nevertheless, American troops very soon succeeded in isolating or eliminating the resistance nests of the 709th Infantry Division, which fought bravely. Contact with the airborne forces was made at about midday. By the evening of June 6 the US 4th Division had 21,328 men and 1,472 vehicles ashore.

Between 5 A.M. and 6:25 A.M. the USS Texas, HMS Glasgow, USS Arkansas, FFS Georges Leygues and Montcalm and 12 destroyers fired on the coastal fortifications on Omaha Beach between Vierville and Colleville, as well as the coastal battery on Pointe du Hoc. However the battery's six 155mm Kanone 418 (f) guns had been moved inland several days earlier, unseen by allied air reconnaissance.

The most modern coastal battery in this sector was the Longues Naval Battery (4 x 150mm Tbtsc C/36 and 1 x 122mm K390/1 (r)), which fired more than 600 rounds at the fleet by the evening of June 6. It was there that the landing forces, units of the US 5th Corps, suffered the heaviest losses. Several weeks prior to the invasion the German defensive force in this area, which until then had consisted of just the 716th Infantry Division under the command of General Richter, was bolstered through the addition of the 352nd Infantry Division under Oberst Korfes. As well, as the result of faulty calculations the preparatory bombing by the allies missed the coastal positions.

Landing on the beaches beneath the coastal bluffs, the American 1st and 29th Divisions ran into extremely heavy defensive fire from the German strongpoints; by evening they had taken almost 6,000 casualties. Not until allied destroyers sailed close to shore and placed the

fortifications under direct fire, and the ammunition of the German defenders began to run out in the afternoon, did the US troops slowly succeed in gaining a foothold.

At the British-Canadian beaches of Gold, Juno and Sword the first wave of landing forces had the support of tanks of the 1st Armored Brigade, and the defenses of the 716th Infantry Division were soon breached. There were no modern coastal batteries there capable of engaging the fleet. The Vasouy Battery (3 x 150mm Sk L/45) was situated too far to the west, and only its free-standing gun was able to fire on the landed troops. Not until 8 A.M. did the 22nd Panzer Regiment, part of the 21st Panzer Division, receive marching orders for the coast, even though the entire regiment had been waiting for the order, ready to move, its position near Caen since 4 A.M. Now, during daylight, the tanks were subjected to continuous fighter-bomber attacks. Furthermore the English had meanwhile established a blocking perimeter around their beachhead with heavy weapons, like tanks and anti-tank guns. The few German tanks were unable to break through.

The German armored reserve, the Panzer-Lehr Division and the 12th SS Panzer Division, were under the control of the OKW and were not released for action until later in the day. By the time the two units arrived at the invasion coast on June 7, the allies had already landed more than 50,000 soldiers and 8,900 vehicles and had established a stable front. The German forces in Normandy were incapable of opposing this superior force, which was equipped with the latest technology.



*An MG 42 machine-gun in a ring position, Standard Structure 202, part of Resistance Nest 5. This tiny bunker proved extremely successful on account of its small size. 3.7 meters deep and 2.2 meters wide, it was very difficult to spot.*



*Feldmarschall Rommel inspects coastal defenses near Cherbourg in April 1944. In the background is an 88mm Pak installed in a bunker.*



*In early 1944 German combat engineers ram tree trunks into the outer beach near Lion-sur-Mer. Fitted with an anti-tank mine and steel blades, these obstacles were supposed to sink Allied landing craft.*

## The Atlantic Wall in Normandy

The High Command of the German Armed Forces expected an allied invasion from early 1944 on. Furthermore aerial reconnaissance and reports from agents revealed the massing of troops and materiel in Central and Southern England.

The Commander-in-Chief West, Feldmarschall von Rundstedt, had a total of 58 divisions at his disposal with which to repel the invasion. On January 1, 1944 Feldmarschall Rommel was placed in command of Army Group B in support of von Rundstedt. Under his control were the areas held by the Seventh and Fifteenth Armies and, tactically, the Netherlands region.

Normandy, which the Germans did not consider a likely target for invasion, was home to the following units in early 1944, seen from east to west: the 711th Infantry Division, the 716th Infantry Division, the 352nd Infantry Division, the 709th Infantry Division, the 243rd Infantry Division and the 91st Air Landing Division. The latter was a pure infantry unit to which

the 6th Parachute Regiment was attached, and the designation Air Landing Division was a cover designation. The infantry divisions consisted partly of troops from Eastern Europe, Georgians and Cossacks, whose fighting potential was low. Southeast of Caen was the 21st Panzer Division, the only armored unit in the immediate coastal region. It was equipped with the Panzer IV, but also with some captured French tanks.

At the beginning of 1944 construction of the Atlantic Wall was far from complete in Normandy. There were scarcely any long-range naval batteries, and most of the army batteries had been issued captured guns and were suitable only for bombarding the beach. The light weapons, like field guns and mortars, were situated in the resistance nests, in many cases in field positions.

Subsequently we will describe several batteries and resistance nests in Normandy which can still be examined today.



*This Somua tank turret with its 47mm cannon guarded the entrance to Honfleur Harbor. (BA)*

*Morning, June 6, 1944. German coastal defenses at the mouth of the Orne lay under heavy fire from the Allied fleet. (BA)*



# The Vasouy Battery

150mm SK L/45

The Vasouy Battery belonged to the 266 Naval Artillery Battalion and its three 150mm ship's guns (45 calibers) were supposed to give flanking fire to the fortress of Le Havre from the south bank of the Seine.

Construction of the battery began in the summer of 1943 and was completed by year's end. Two guns were installed in a Type M 272 bunker, while the third was left in an open circular position. It was this gun which fired on the invasion fleet and allied troops on several occasions even after the invasion. In August 1944 the garrison was evacuated across the Seine into the

fortress of Le Havre. Several days later navy frogmen blew up the guns.

The 150mm SK L/45 had been used as a coastal defense cannon in the days of the Reichswehr. The 6,620-millimeter-long barrel had 48 grooves and a conical wedge type breech. The gun could be traversed 360 degrees on its circular foundation; range of elevation was from -4 degrees to +45 degrees. The gun's armor-piercing and high-explosive projectiles, which weighed 45.3 kilograms, were loaded separate from the cartridge.

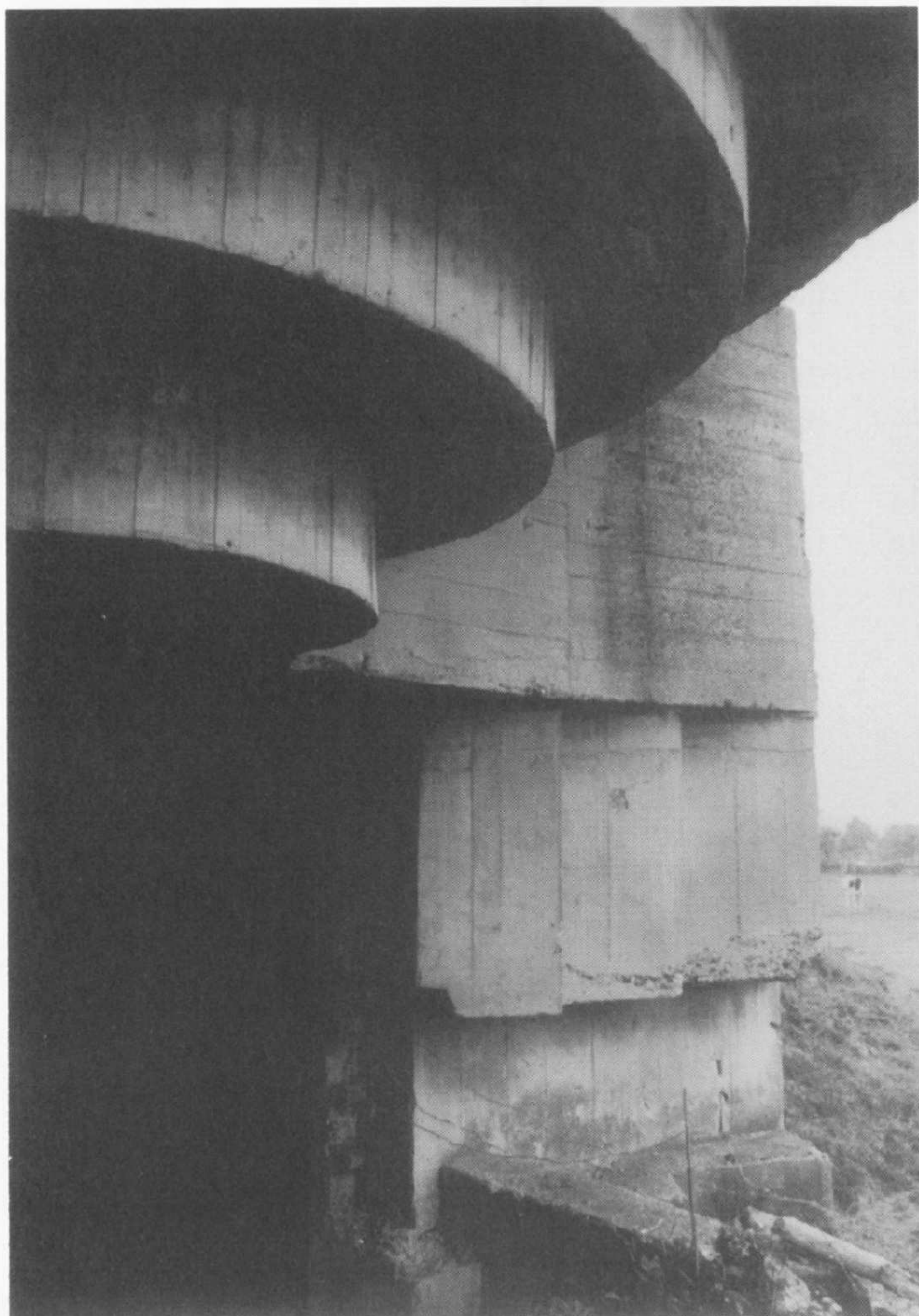


*Above:*

*The Vasouy Battery's 150mm cannon in its open ring emplacement. The gun was built in Essen by Krupp AG.*

*Left:*

*A Type M 272 gun bunker, part of the Vasouy Battery.*



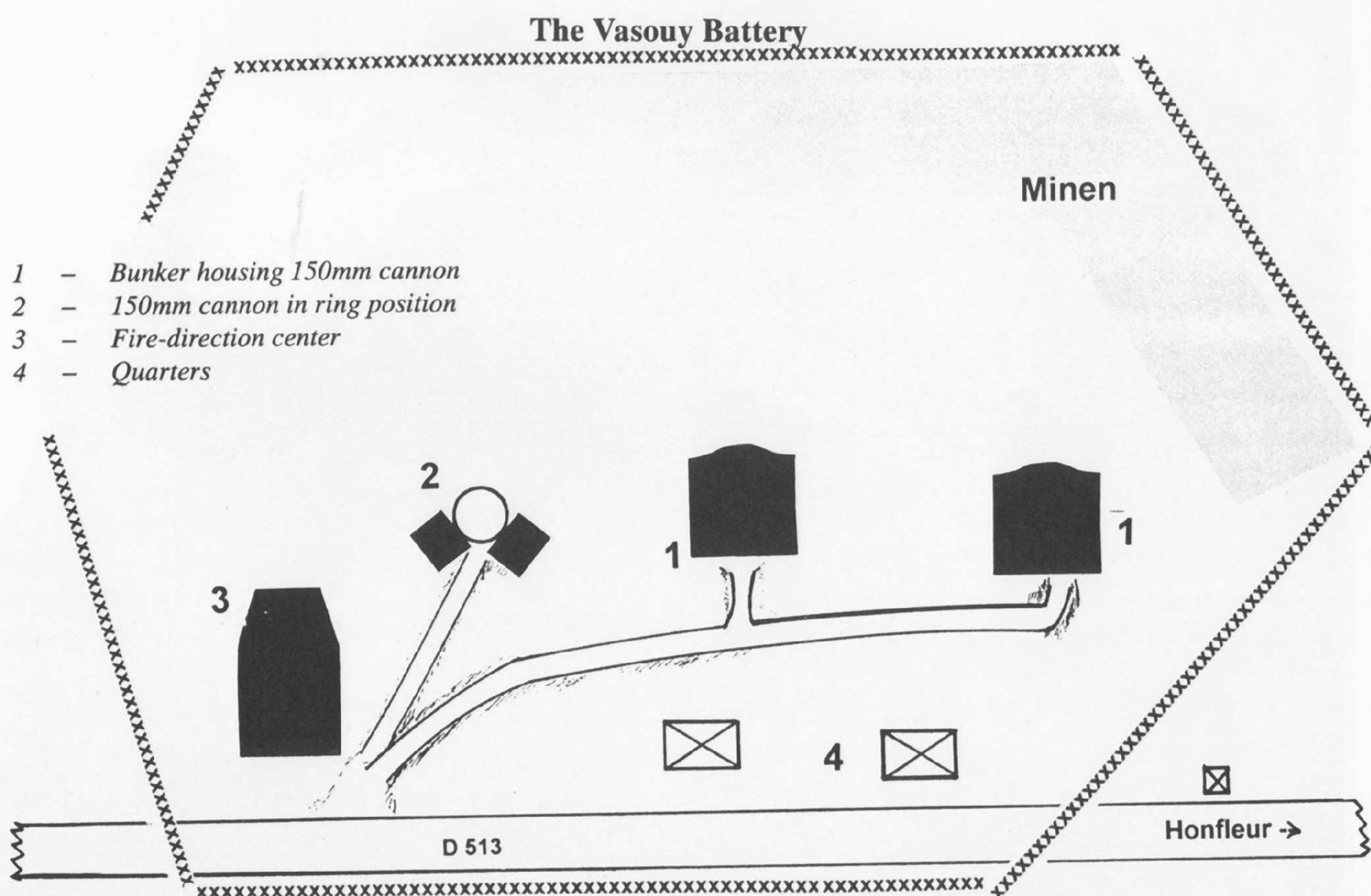
*Left:*  
Detail photograph of a gun bunker, whose stepped concrete structure deflected incoming shells.

*Below:*  
The Vasouy Battery's two-story fire-direction center. In the upper level was the 4-meter range-finder, in the lower level the computer room with the fire-direction computer. The entire former battery grounds is still in good condition today and is easily accessible.





The 150mm SK L/45 was installed on the mount with its 100mm-thick armor shield. The gun received a camouflage finish of green-yellow in order to blend into the countryside. In this photo the muzzle and breech mechanism are covered with tarpaulins. (BA)



# The Mont Canisy Battery

155mm K420 (f)

The Mont Canisy Battery was equipped with six French Feldkanonen 420 (f) field cannon and one 155mm Feldhaubitze 414 (f) field howitzer, the latter serving to provide illumination and engage enemy tanks. The 155mm K420 (f), whose original French designation was Canon de 155 L mle 16, was taken on charge by the German Army artillery in 1940.

In 1941 the Todt Organization fortified the hill, installing underground tunnels. Following the loss of 30 battery personnel killed in a heavy air raid on April 23, 1943, the Todt Organization began building bunkers to house the guns. However by the time of the invasion only the first three bunkers were complete. With a maximum firing range of 21,300 meters, the free-standing guns were just able to reach the allied fleet off Sword Beach. As soon as it was light aircraft laid smoke around the ships and the guns at Mont Canisy concentrated on the flashes produced by the firing of the ships' guns. The battleship *Ramilles* subsequently turned its eight 380mm and twelve 150mm guns on to the battery. Nevertheless, well-aimed salvos from the battery forced the battleship *Warspite* to weigh anchor at about 9:30 A.M. and anchor out of range of the Mont Canisy guns.

The battery was abandoned in August just before it was encircled by allied troops, and the guns were blown up.



*A gun crew of the Mont Canisy Battery in front of their 155mm Kanone 420 (f). On the left of the photo is the gun commander, Unteroffizier Felsenheim. The loader standing beside him is holding a high-explosive shell which weighed 43 kilograms.*

*Below: The breech mechanism of the 155mm Kanone 420 (f) with opened breech. Barrel length was 7362mm (47.5 calibers). The barrel weighed 5,270 kilograms and the cannon's overall weight was 13,150 kg. (BA)*

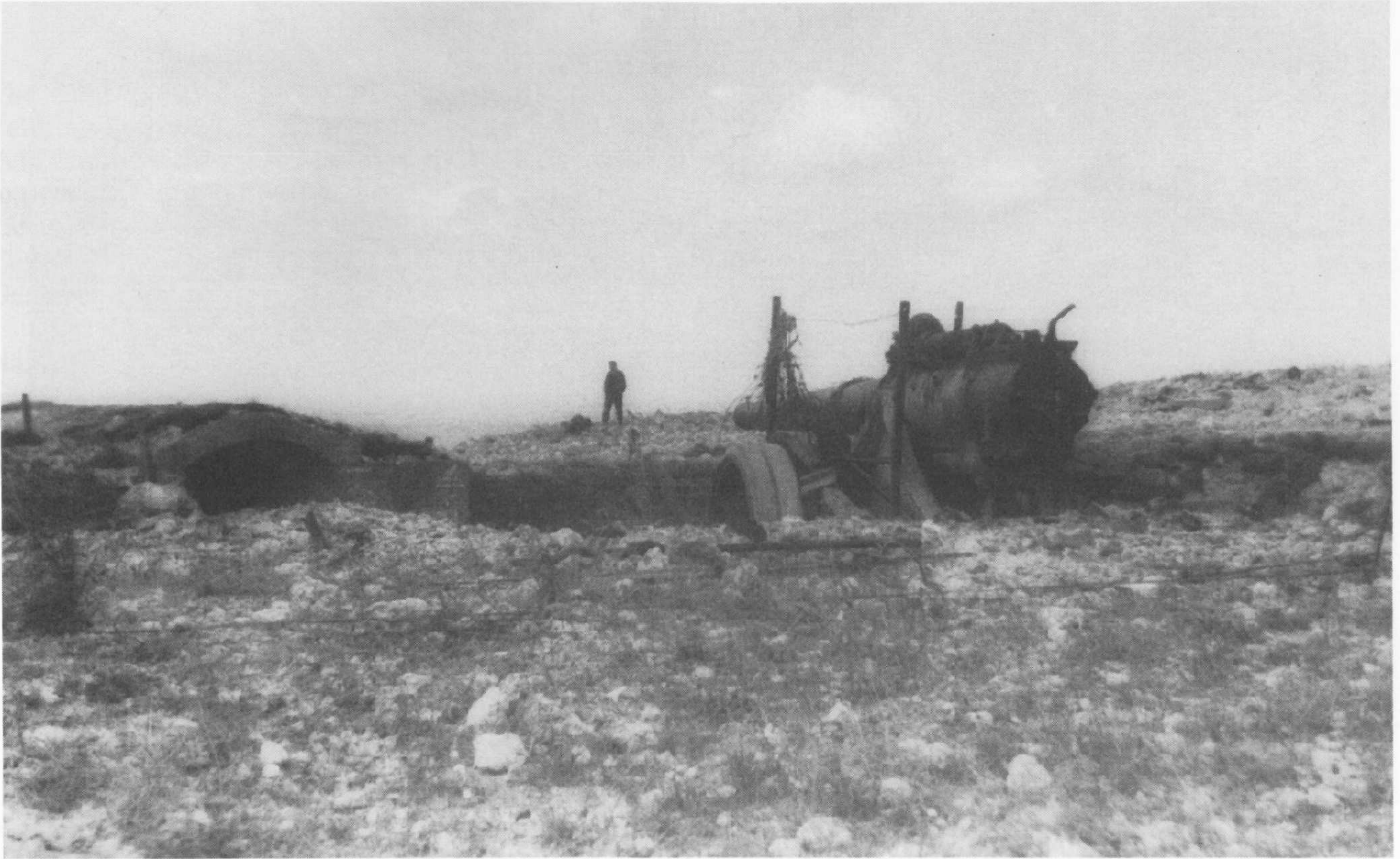




*A camouflaged gun of the Mont Canisy Battery in an open ring position. The positions of the neighboring Houlgate Battery lay on the next hill, seen in the background. (BA)*

*Gun bunker of the Mont Canisy Battery, Standard Structure 679. The barrel has been raised to its maximum elevation of +38 degrees. (BA)*





*A 155mm Kanone 420 (f) in a ring emplacement, which included an ammunition shelter.*

*The same emplacement 50 years later; the gun has been removed. In spite of the overgrowth the position is easily recognizable.*





*The battery opens fire on the invasion fleet off Sword Beach.*

*The ships immediately make smoke.*





*During installation of the 155mm cannon in the bunker, Standard Structure 679, the original gun mount had to be replaced by a revolving mount with embrasure shield. The revolving mount made the gun easier and faster to aim.  
Below: The same gun bunker on Mont Canisy 50 years later.*





*The gun bunker on Mont Canisy; in the foreground is a large crater caused by an allied naval shell.*

*After the war the battery grounds were cleared of mines by German prisoners of war, most of whom were members of the 9th SS Panzer Division, and the ground was levelled.*



*The foundation for the revolving mount of the 155mm Kanone 420 (f).*

# The Merville Battery

Construction of the Merville Army Battery began in late 1943. The position, which was built as a series of strongpoints, was situated in a meadow near the village of Merville, approximately 3 kilometers from the sea, and was armed with four 100mm leichte Feldhaubitze 14/19 (t) light field howitzers.

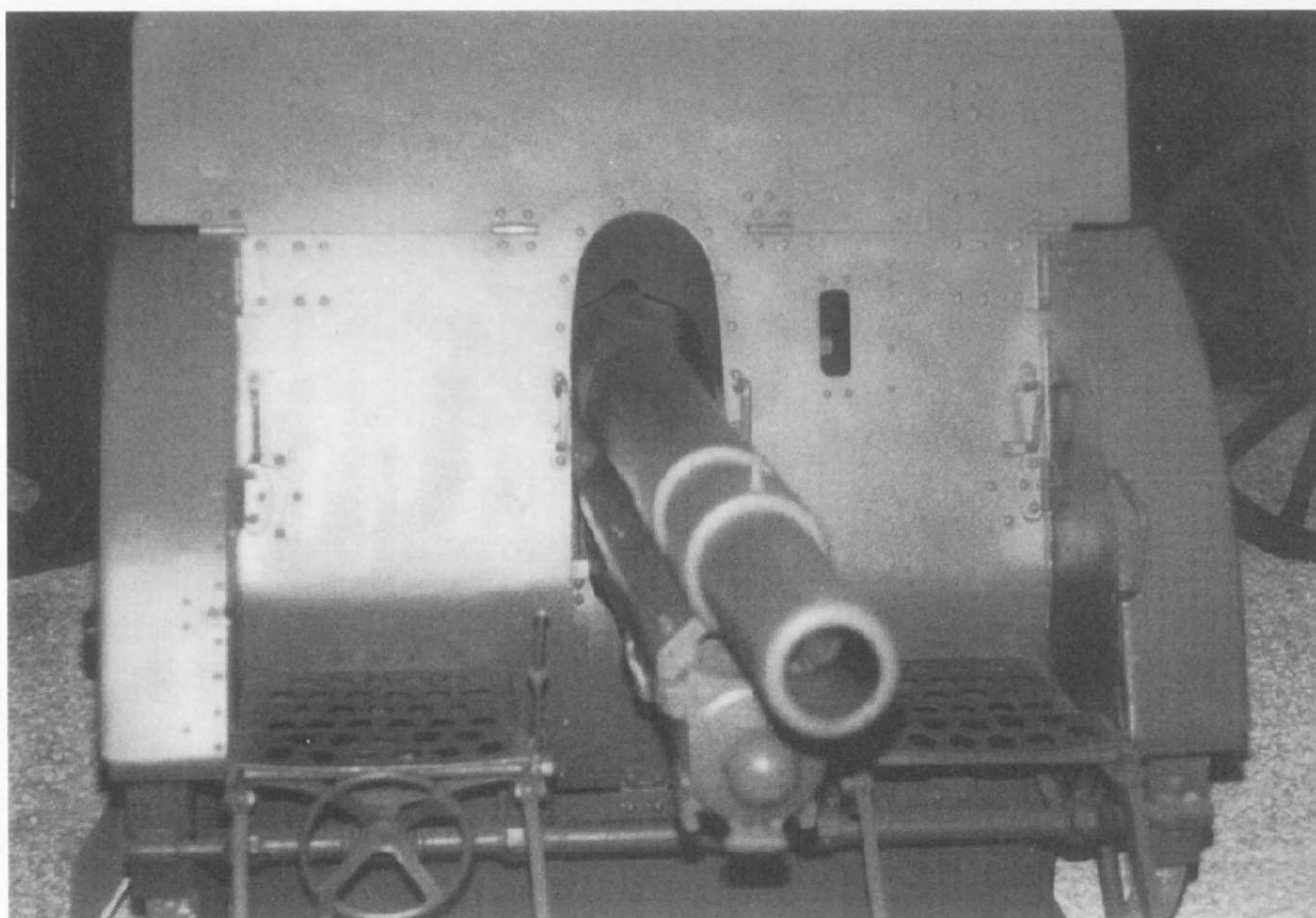
The 100mm cannon were originally built for the Austro-Hungarian Army's artillery in 1914. After the First World War the guns were modernized to a limited degree by the Skoda Works in Pilsen and delivered to the Czechoslovakian Army. They were subsequently taken over by the German Armed Forces in 1938 and on account of their age were assigned to coastal defense from 1942 on. In the Merville Battery the four guns were in bunkers, although only the most easterly Type 611 structure was equipped for close-in defense.

Allied aerial reconnaissance discovered the position as soon as work began on the battery. Furthermore the Todt Organization hired French workers in Caen to pour the concrete, and these passed on information to the resistance. Concrete was poured by floodlight between 7:30 P.M. and 5:30 A.M. so that it could harden during the day. In spite of repeated allied air attacks, the battery was able to report ready to fire at the beginning of April 1944. In total more than 1,000 bombs fell on the battery, of which only 50 struck the actual position and only two a bunker. As mentioned in the introduction, the battery was the site of bitter fighting on the night of the invasion. It was reoccupied by German troops later on June 6 and was not finally abandoned until the end of July. Today there is a worthwhile museum there.



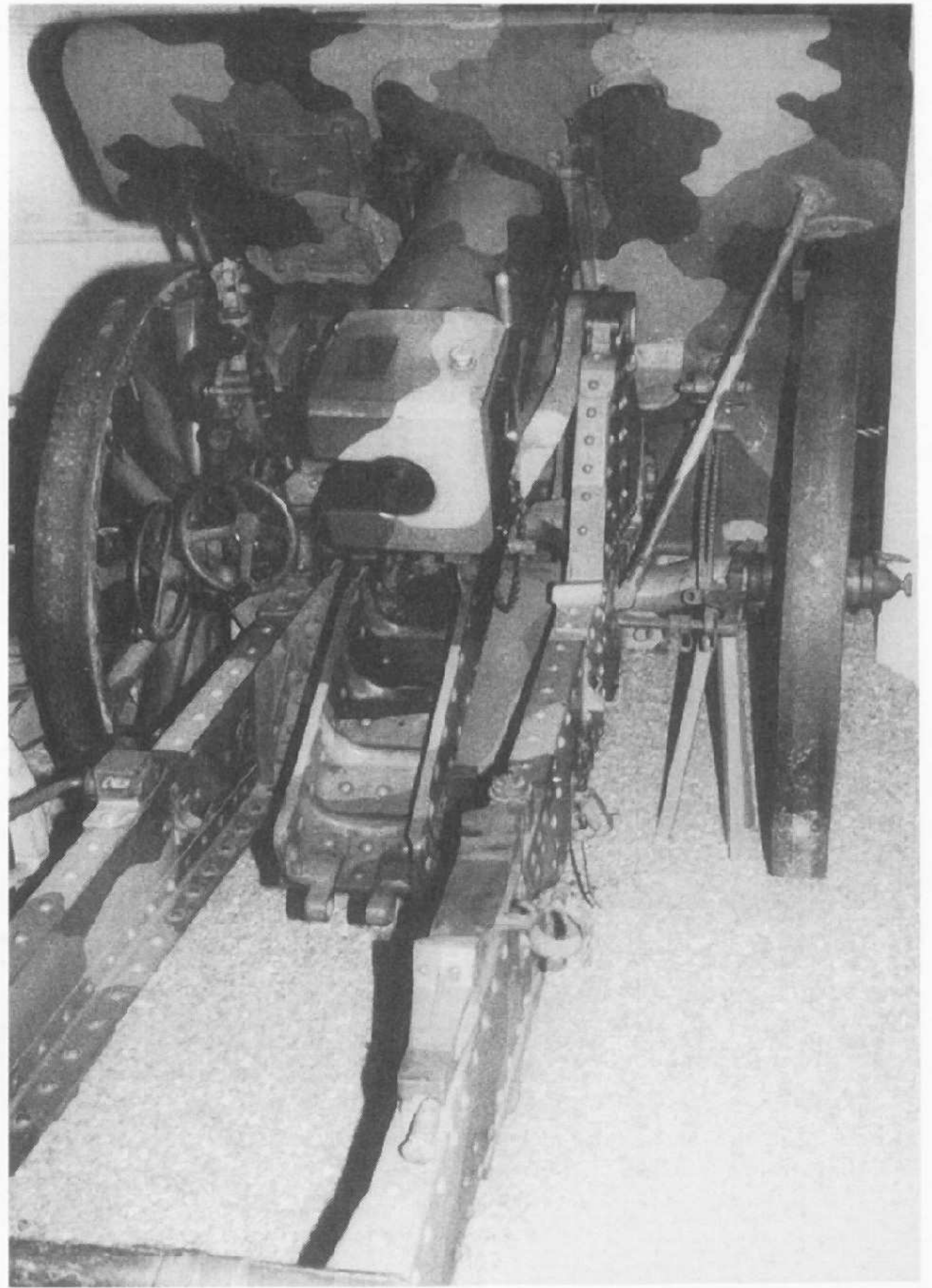
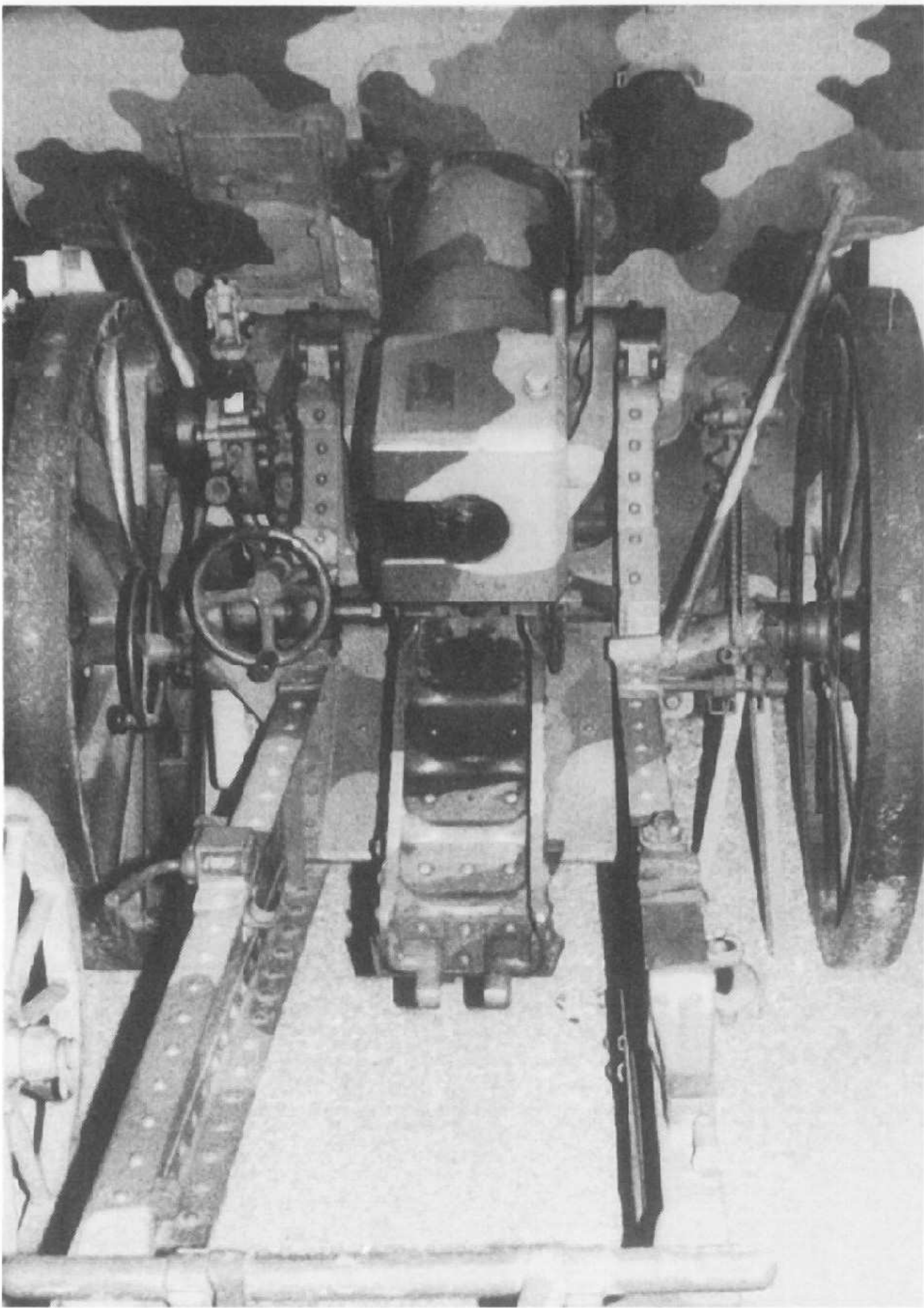
*Above:*

*Two gun bunkers of the Merville Battery with earth heaped up on their sides.*



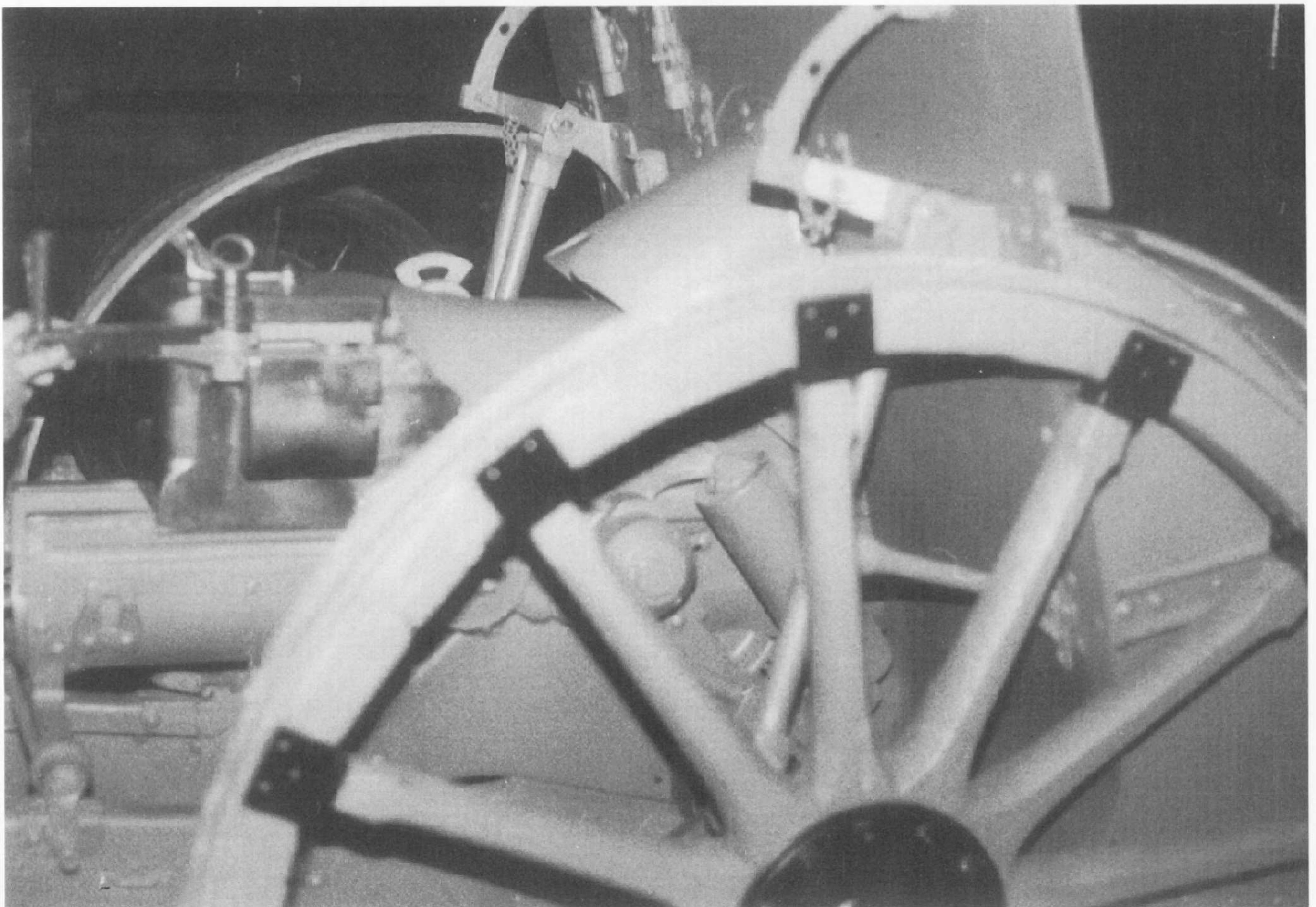
*Left:*

*The 100mm Light Field Howitzer 14/19 (t) had a 2,200-mm-long (22 calibers) monobloc gun barrel with 38 grooves, a riveted carriage with folding trail and a large gun shield, the upper portion of which was sloped slightly toward the rear. The total weight of the cannon was 1,380 kilograms.*

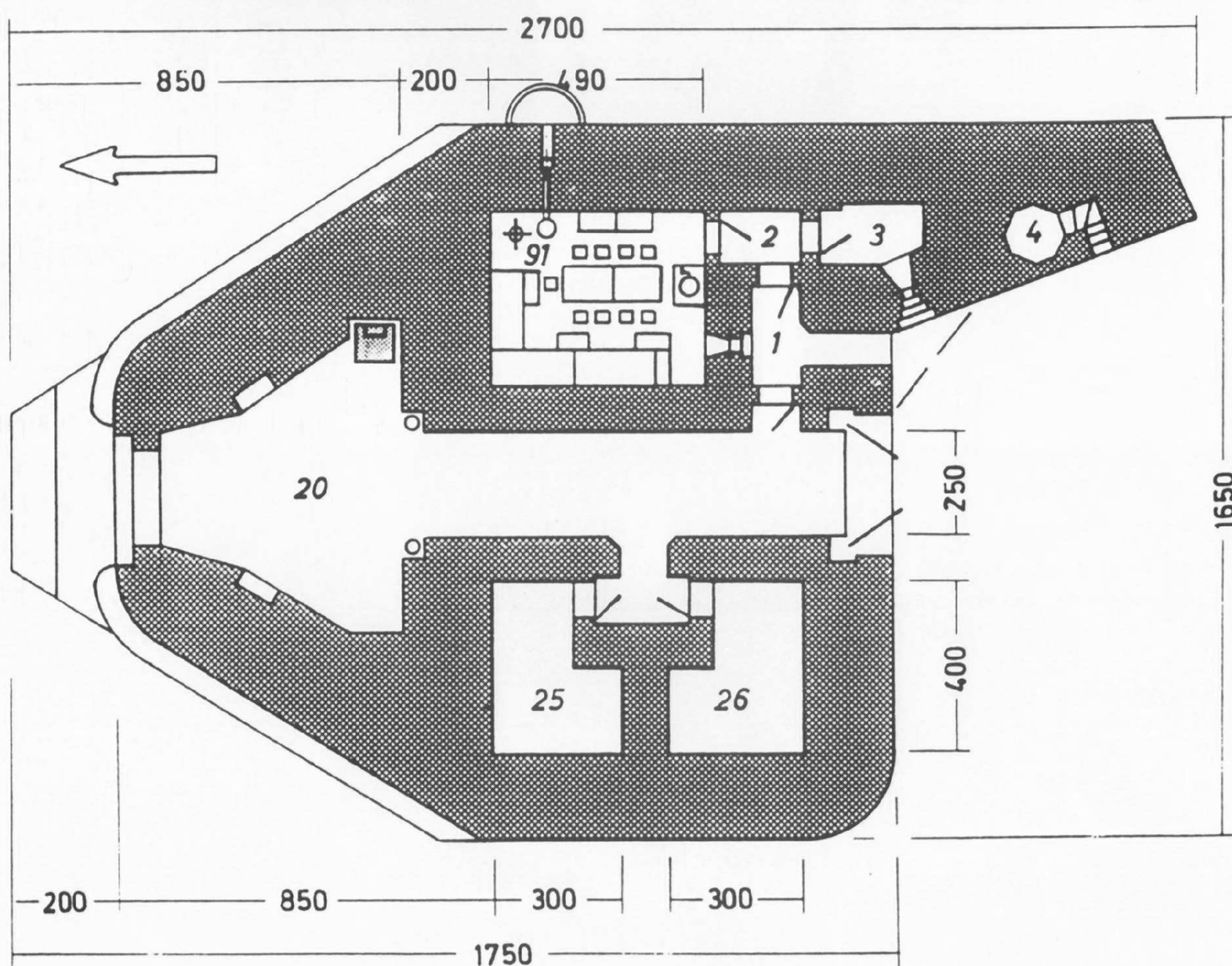
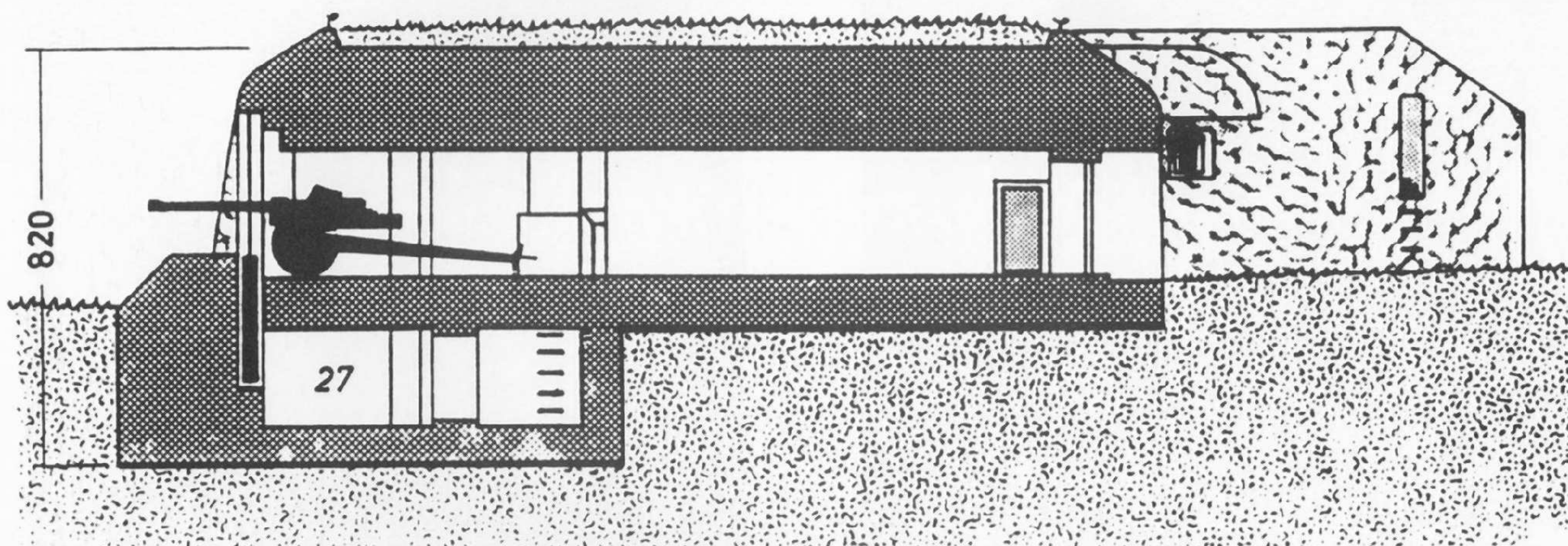


*The breech section of the 100mm cannon with sliding-lever breechblock. On the left side of the gun was the gun layer's position with optical sight and the handwheels for the elevating and traversing mechanisms. The gun fired high-explosive shells weighing 16.7 kilograms. Maximum firing range was 9,700 meters.*

*Below: The wooden-spoked wheels of the LFH 14/19 (t) with steel hubs.*



# Merville Army Coastal Battery Standard Structure 611



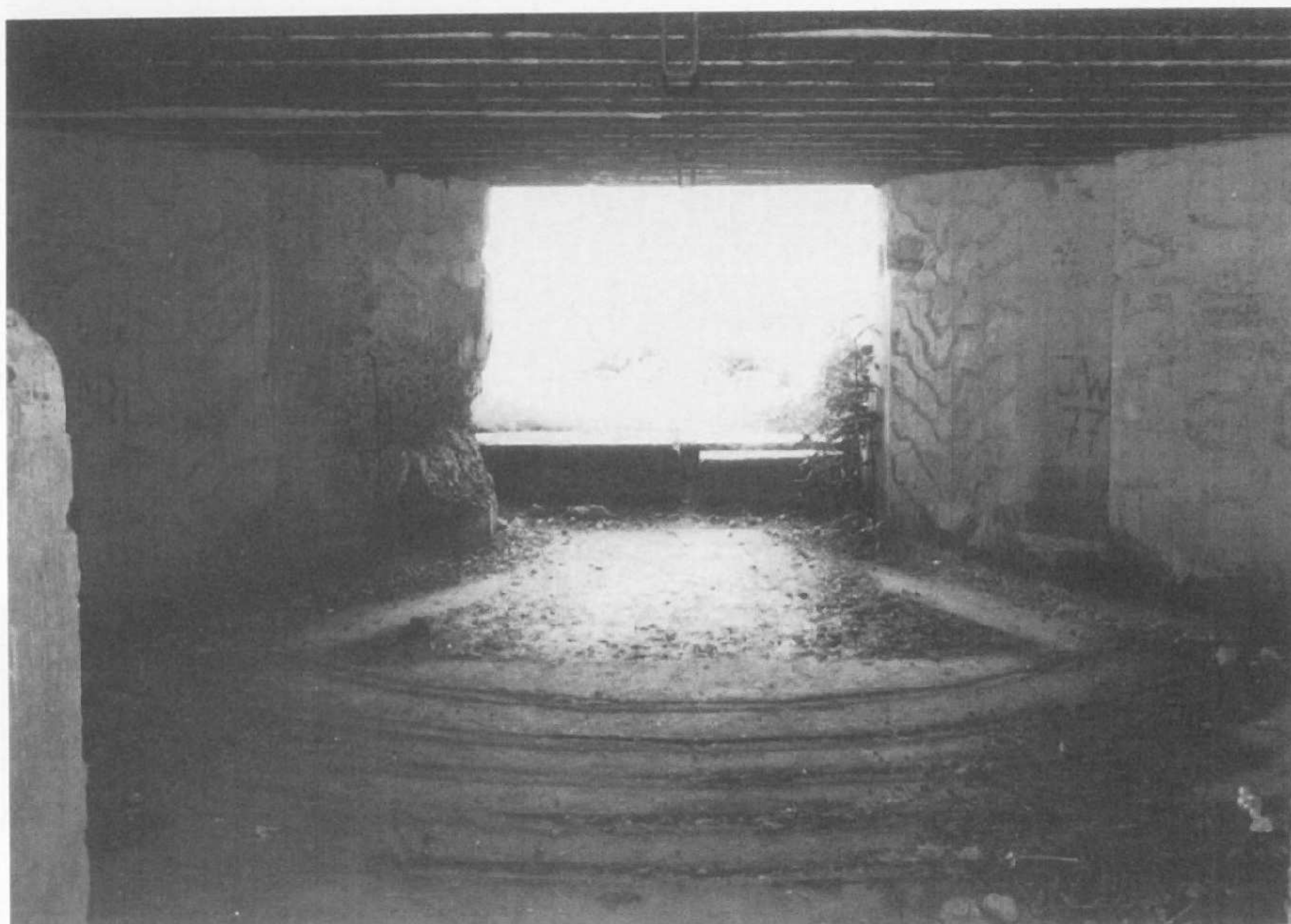
20 - gun room  
25 - shell room  
26 - cartridge room  
27 - storeroom

1 - entrance  
3 - machine-gun post  
4 - machine-gun post  
91 - readiness room



*Above:*

*A gun bunker of the Merville Battery. The embrasure allowed a field of traverse of 60 degrees and a field of elevation of from 0 degrees to 45 degrees.*



*Right:*

*Inner view of the gun bunker. Grooves were left in the concrete floor for arresting the gun's trail spade.*



*Left:*

*The back side of Standard Structure 611 with machine-gun embrasure for close defense. Construction of the bunker required 1,330 cubic meters of cement, 63 tons of steel rod and 15.5 tons of structural steel. Today the bunker houses a worthwhile museum.*

# The Riva Bella Battery

155mm K 420 (f)

Like the Mont Canisy Battery, the Riva Bella Army Battery was equipped with six French 420 (f) field guns. It was one of the few batteries in the Atlantic Wall to receive a fire-direction tower. As well as the 155mm field cannon, the battery received 50mm tank cannon (KwK), 80mm mortars, machine-guns in armored turrets and a 20mm anti-aircraft gun in a flak tower.

The battery was the target of a heavy bombing raid on the night of May 28-29, however the 155mm guns escaped damage. The next day the battery commander moved the guns five kilometers inland.

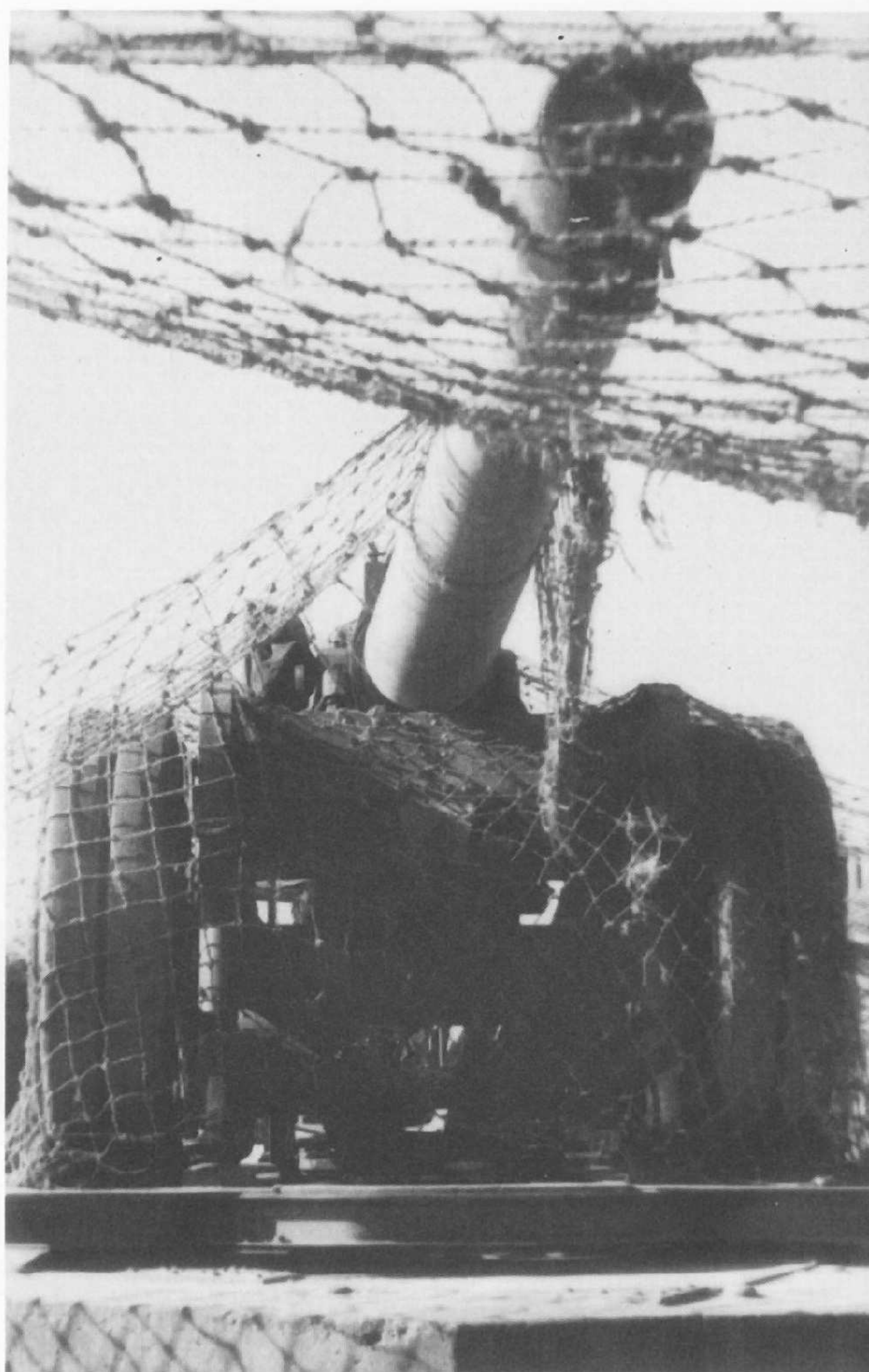
From its new position, on June 6 the battery opened fire on Sword Beach, where the landing was in full swing. As a result, from 10 P.M. on the British were forced to postpone further landings on the east end of the beach. Finally, on the evening of June 6, British troops overran the battery in its new position.

*Right:*

*A 155mm gun of the Riva Bella Battery. The wheeled carriage was fixed to a revolving base, which made it easier to traverse the gun. The gun could only be traversed three degrees to each side in its wheeled carriage.*

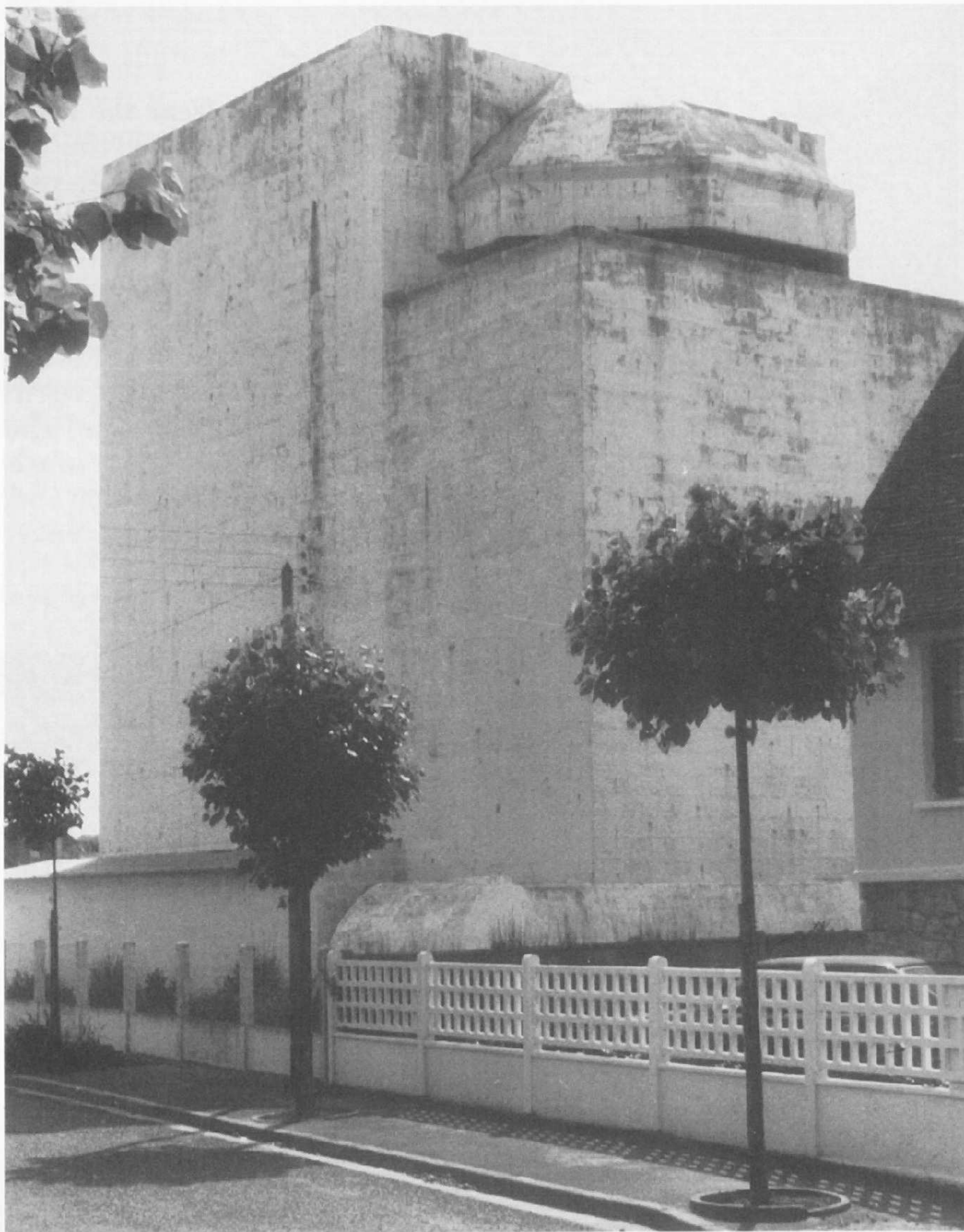
*Below:*

*Today the battery's flak tower is an observation tower and provides a view of the former battery grounds and Orne Bay.*



*Right:*

*The Riva Bella Battery's 17-meter-high fire-direction center. The five stories housed the range-finder, a ranging and computer room and several equipment rooms, as well as quarters for the gun crews. In addition there was a 20mm anti-aircraft gun on the roof. Today the fire-direction center houses a museum.*



*Below:*

*The approach to the battery was guarded by anti-tank mines and obstacles.*





## W 39

### 75mm Pak 40

Near the village of Le Hamel the Todt Organization erected two Type 612 structures for the 75mm anti-tank guns of Resistance Nest 39. Facing east, this position guarded Strongpoint 42, a navy radar station.

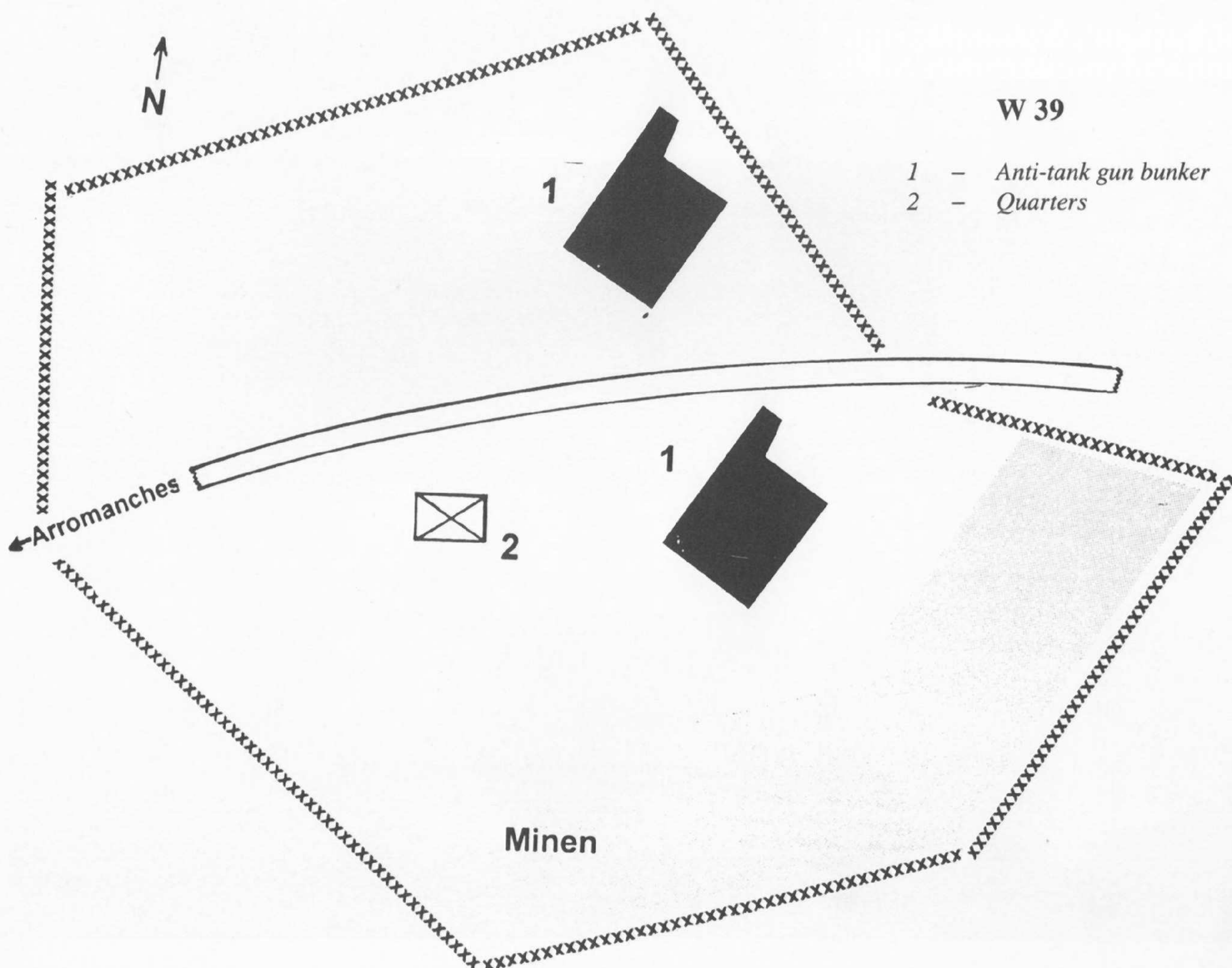
The 75mm Pak 40 by the Rheinmetall Firm proved very successful in the Atlantic Wall in the anti-tank role. Most of the guns were sited to place flanking fire on the beaches and in their concrete bunkers could not be engaged effectively from the sea. The Type 612 bunker's embrasure allowed a range of traverse of 70 degrees for the 75mm anti-tank gun and was sealed by wooden doors. 500 rounds of ammunition could be stored inside the bunker.

*Left:*

*Resistance Nest 39 with its two 75mm anti-tank guns was a typical defensive position in Normandy. The photo shows a 75mm Pak 40 in its bunker, a Standard Structure 612. Construction of the bunker required 385 cubic meters of concrete, 17 tons of steel rod and 4.1 tons of structural steel.*

*Below:*

*Schematic drawing of Resistance Nest 39.*



# The Longues Battery

150mm TbtsK C/36

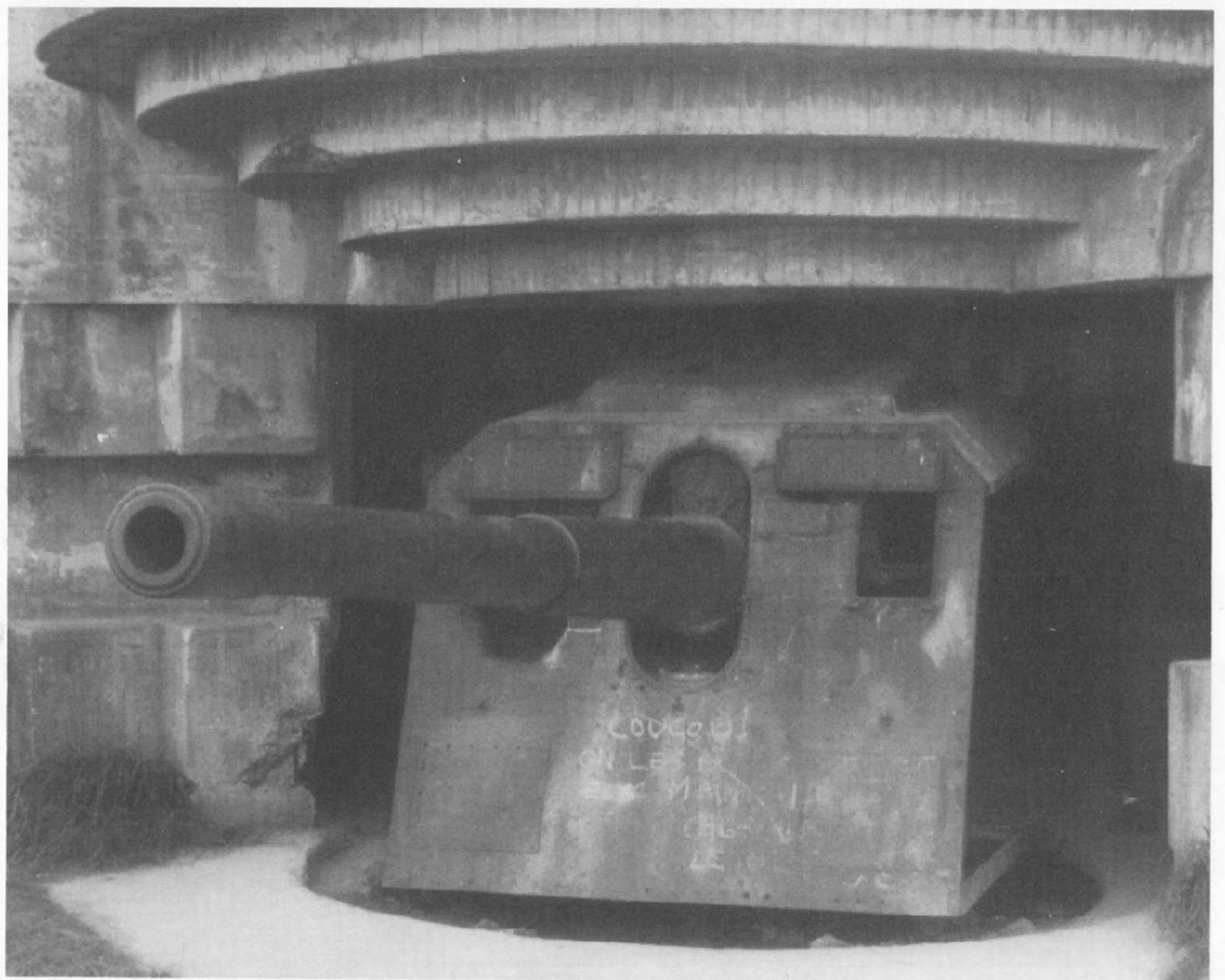
With its four 150mm TbtsK torpedo boat cannon, the Longues Naval Battery, situated near the village of the same name, was one of the most modern batteries in Normandy. The Todt organization built four Type M 272 bunkers for the guns. The fire-direction post and two searchlights were located right on the coastal bluffs. The battery was the only one on the invasion front to receive an AC-powered follow-the-pointer system. This allowed firing data calculated by the fire-direction post to be transmitted automatically to each gun. All cables, like the data transmission lines from the fire-direction post to the gun bunkers and the telephone lines, were laid in shafts deep under ground. As well the battery possessed a 122mm K390/1 (r) gun for illumination and several 20mm flak.

The line between the fire-direction center and the guns was put out of action by the heavy bombing attack and the subsequent naval bombardment. Firing data had to be transmitted to the guns by way of placards.

After an hour-long duel with the fleet, whose gun-fire was directed by an aircraft, two bunkers took direct hits in their embrasures. The other two guns continued firing at the fleet on the evening of June 6, while the free-standing 122mm cannon was used to bombard Gold and Omaha Beaches. The next day British troops supported by tanks captured the battery. The 150mm C/36 torpedo boat cannon were built by Skoda and Krupp. Maximum firing range was 19,525 meters.

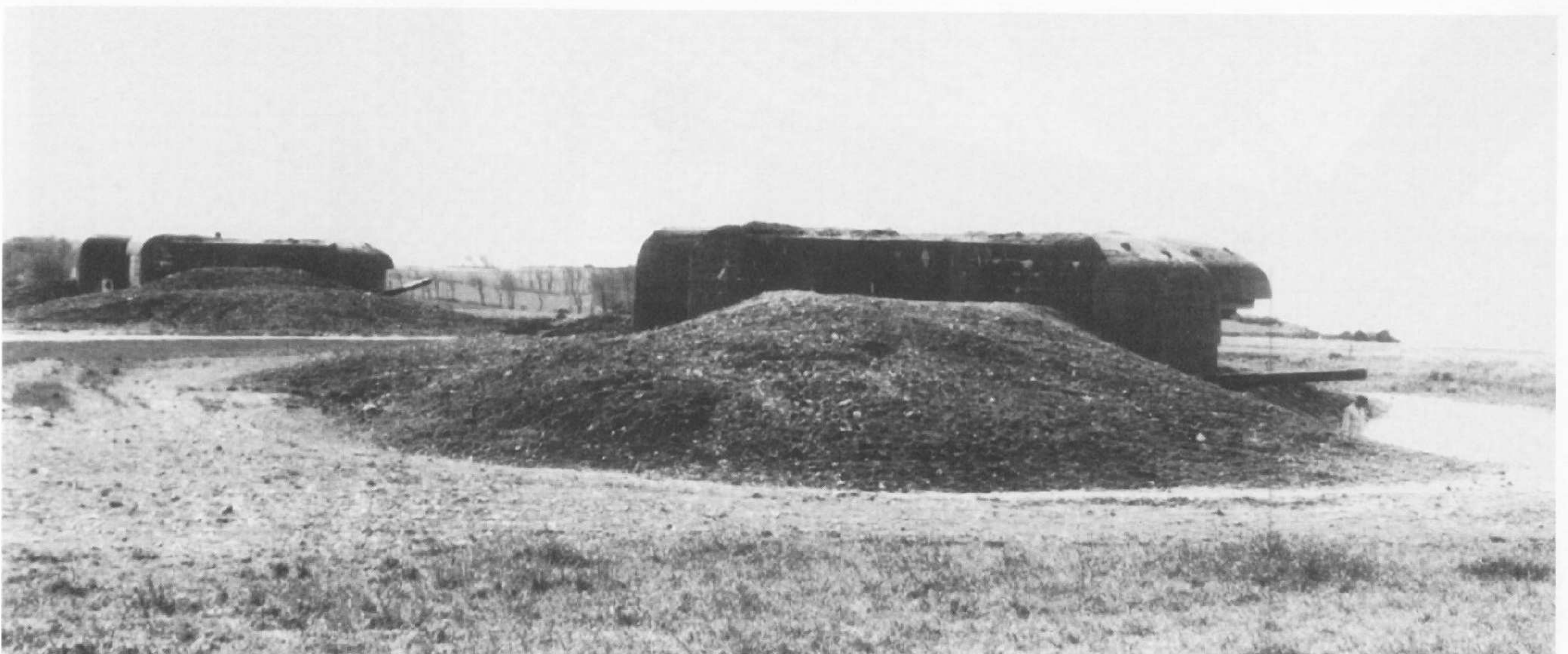
*Right:*

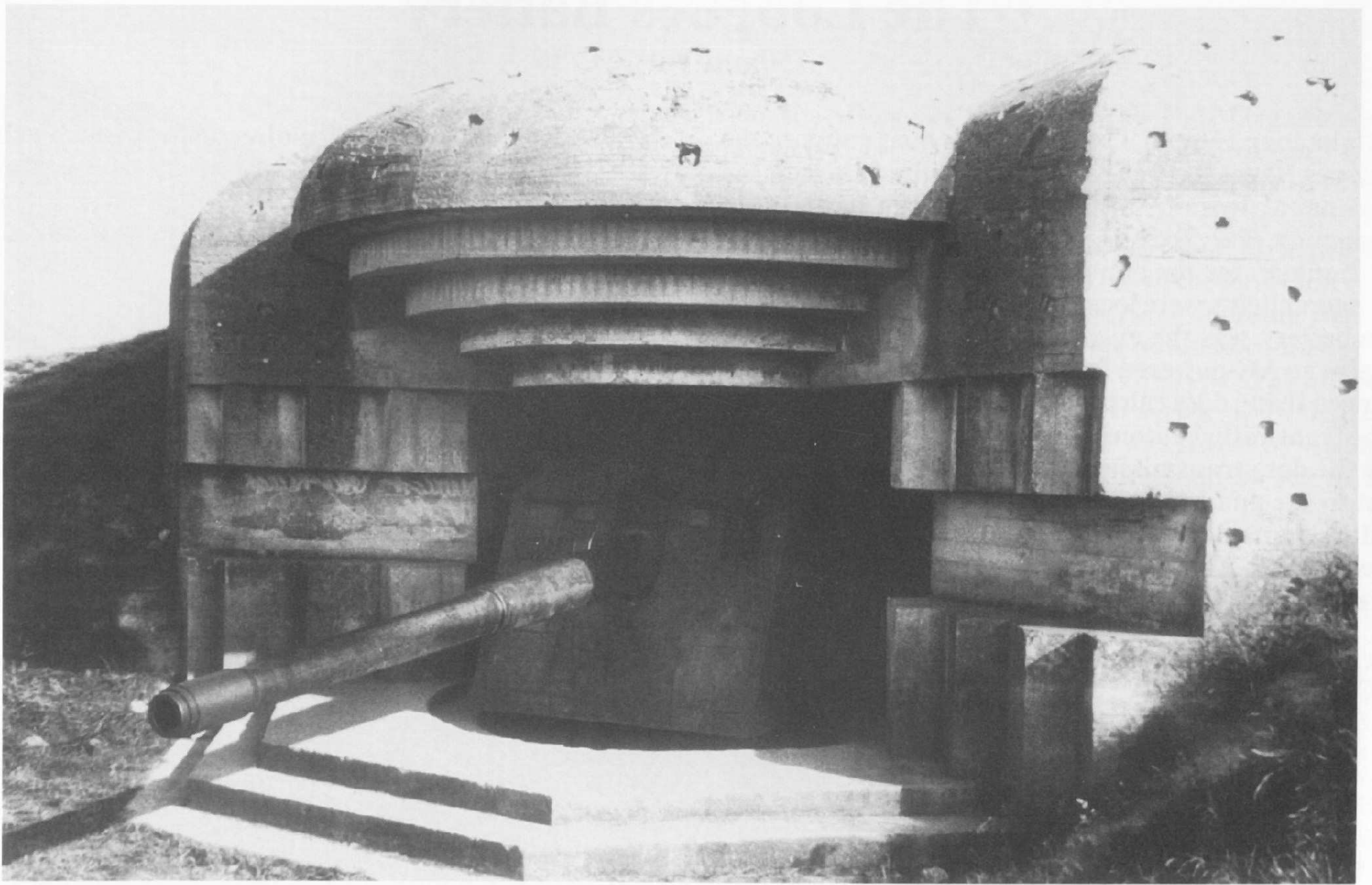
*Front view of the 150mm Torpedo Boat Cannon C/36 in a Type 272 bunker. All four of the Longues Battery's 155mm guns were built by Skoda in Pilsen.*



*Below:*

*Two of the Longues Battery's gun bunkers, with earth heaped up against their sides.*

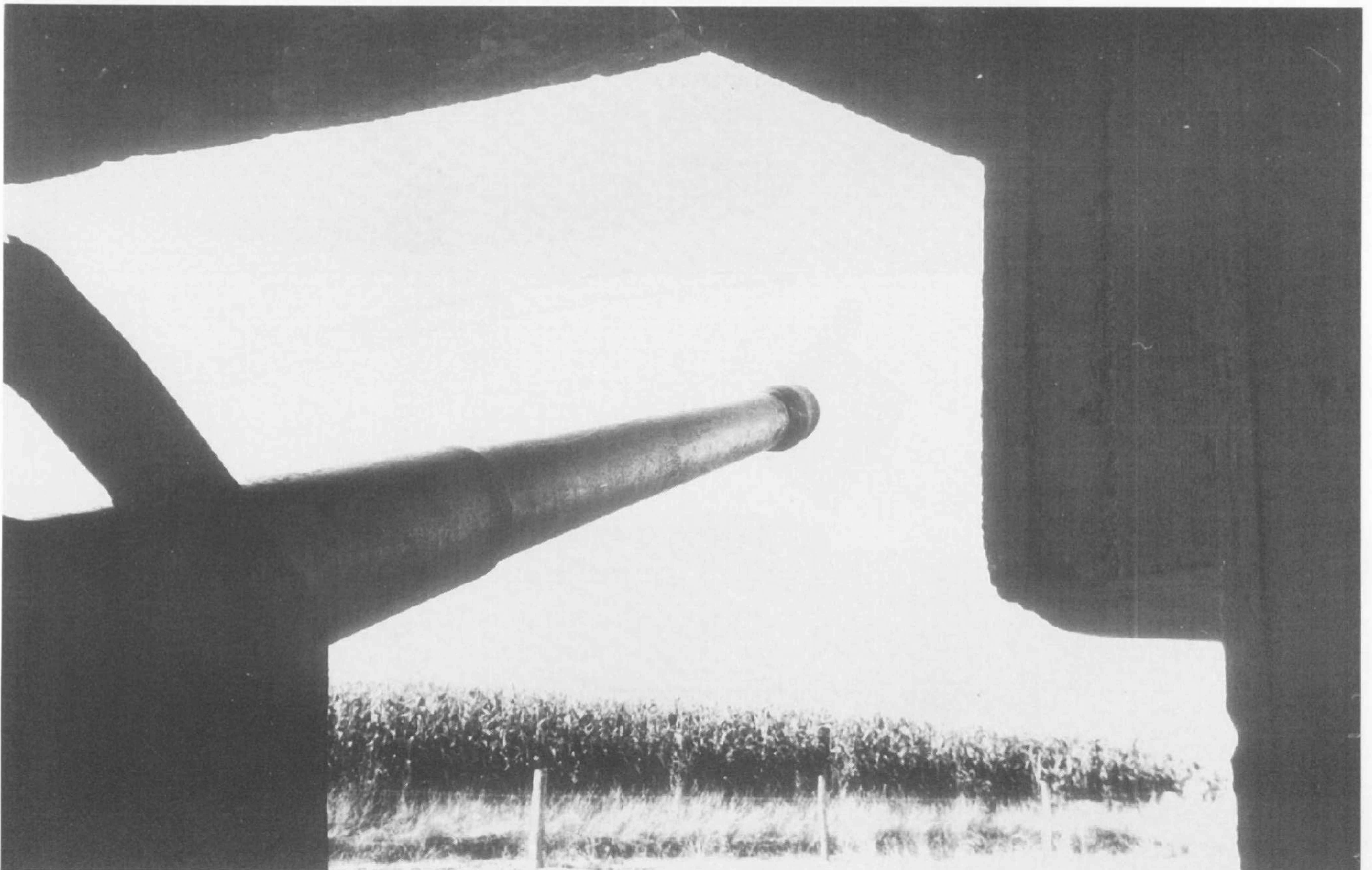




*Today there are still three 150mm cannon in the Longues Battery. This position, too, has since become a tourist attraction.*

*Below:*

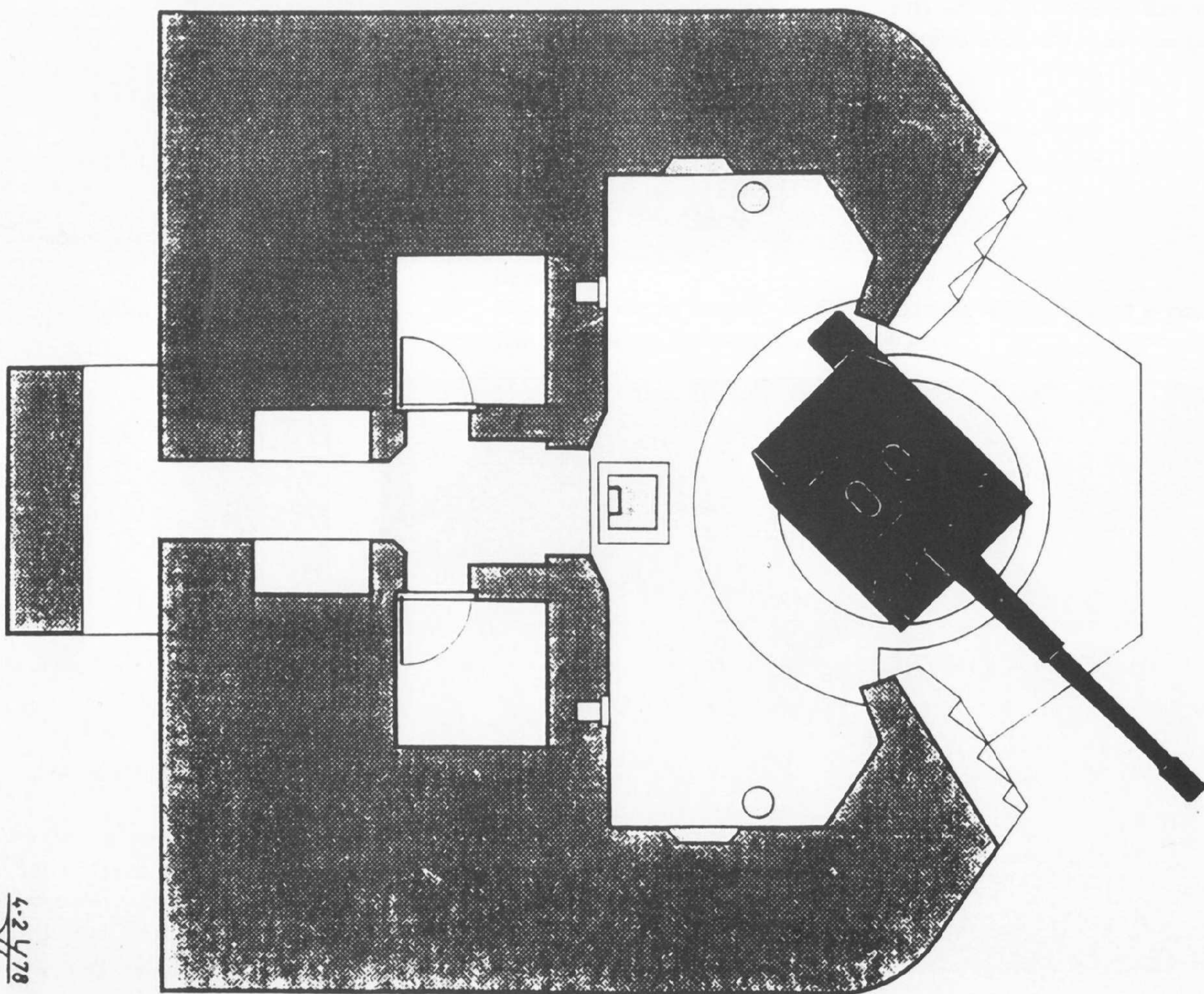
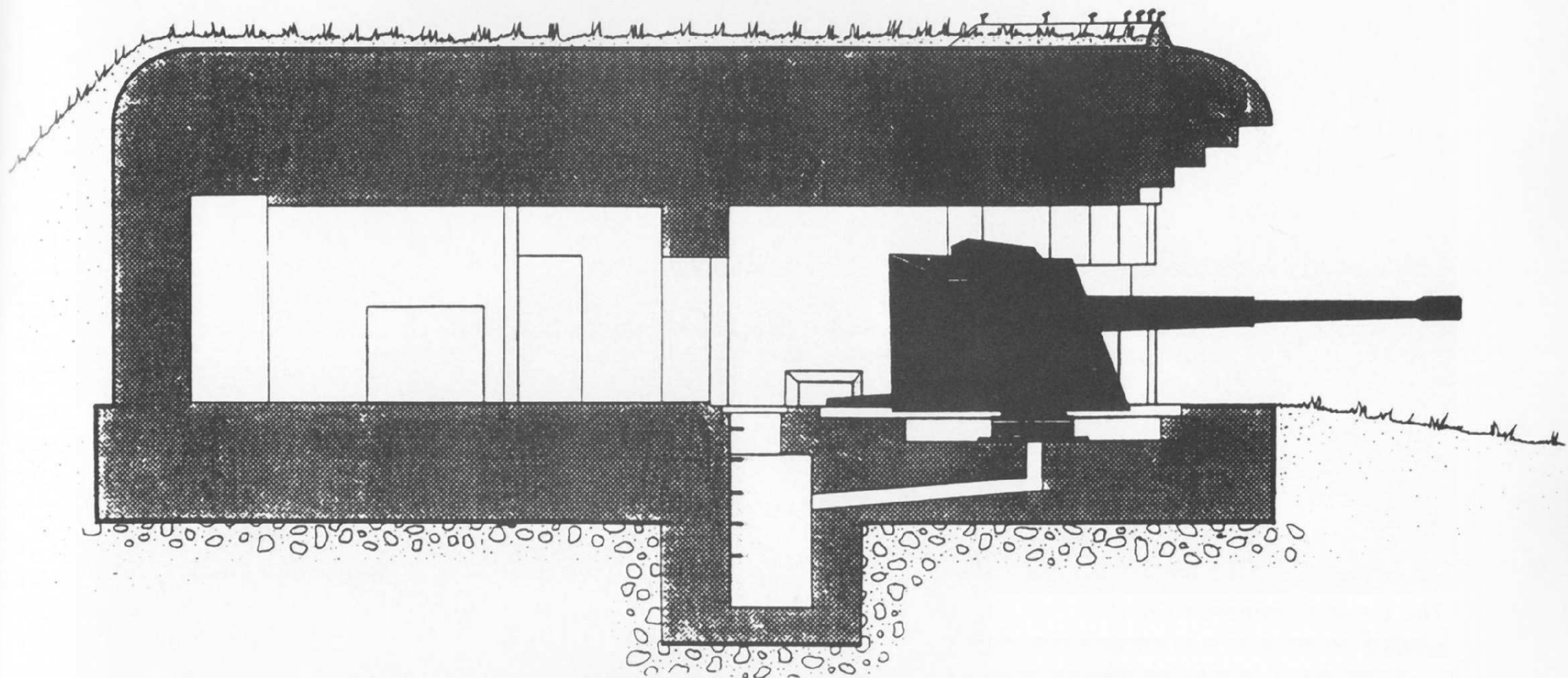
*The 6,772-millimeter-long barrel of the 150mm cannon in a raised firing position of 40 degrees. Muzzle velocity was 835 m/sec, maximum range 19,525 meters. The weapon fired L/4.6 high-explosive shells with point detonating fuse and cap, L/4.5 high-explosive shells with base detonating fuse, and L/3.8 armor-piercing shells.*



# Longues Naval Coastal Battery

## Type M 272 Bunker

*Drawing of the 150mm Torpedo Boat Cannon C/36 in the Type M 272 bunker.*



4-2478



*The left side of this cannon's gun turret was ripped away by a shell fired from an allied warship. The gun's conical wedge breech-block has been removed.*



*The Longues Battery's fire-direction center was located directly on the coastal bluffs. To-day well-constructed paths give easy access to the installation.*



*A 150mm searchlight belonging to the battery. In the foreground is the steering arm, with which one man could aim the searchlight in azimuth and elevation.*



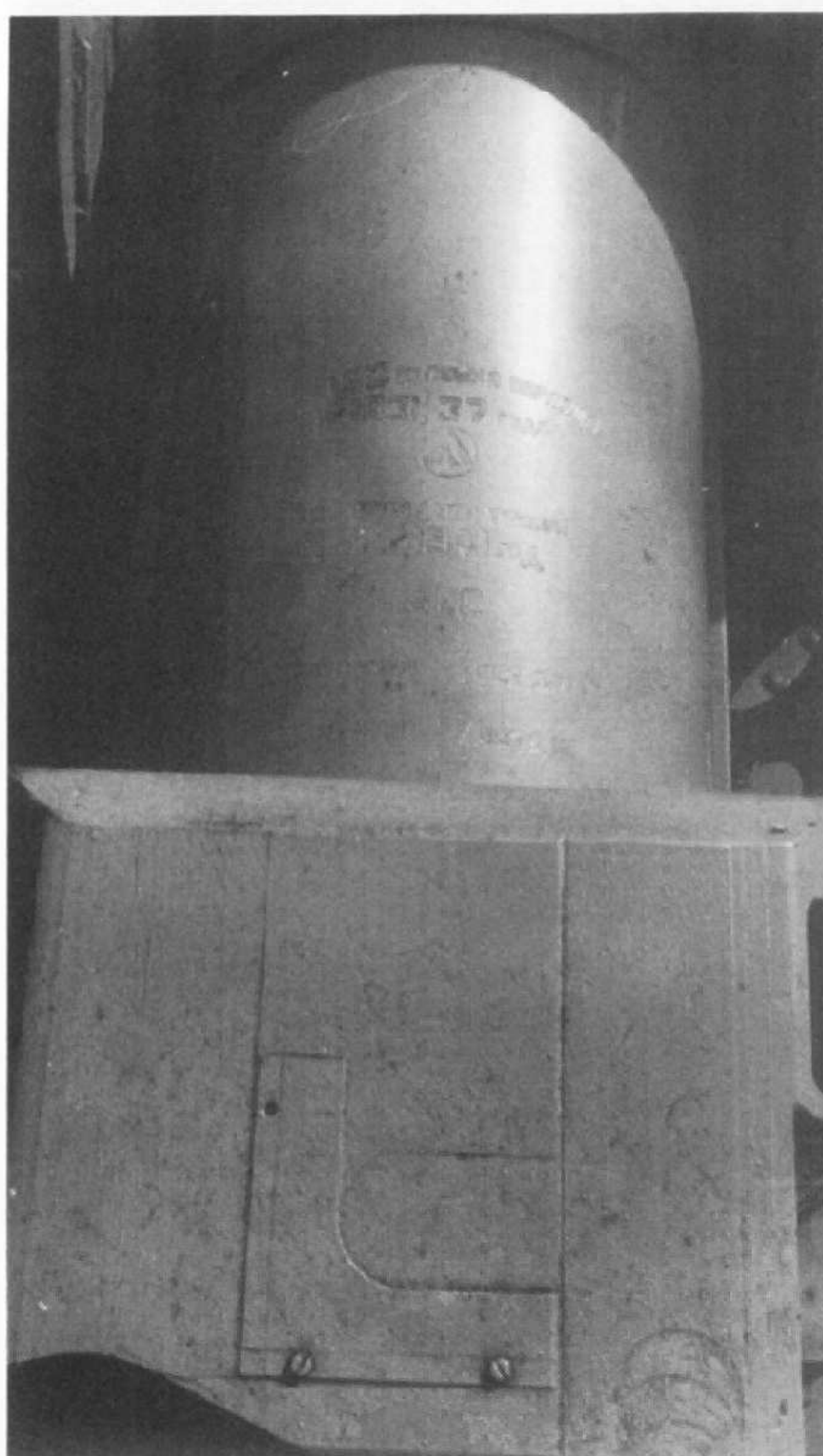
*The 122mm K390/1 (r) had a 5,483-millimeter-long barrel and a range of elevation from -4 degrees to +45 degrees. To the right of the breech may be seen the breechblock lever. The gun's interrupted-screw-type breechblock has been removed.*

#### **122mm K390/1 (r)**

**The Longues Battery's illumination gun, a 122mm Kanone 390/1 (r), sat in an open field position. Maximum range was 20,870 meters with a projectile weight of 25 kilograms. The army battery near Ver-sur-Mer was also equipped with cannon of this type.**

*Below left:*

*Engraved on the barrel in front of the breech are the years the gun was manufactured and modernized (1931/1937).*



*Below:*

*The gun carriage permitted a field of azimuth of 28 degrees to each side. The cannon's all-up weight was 7,100 kg.*





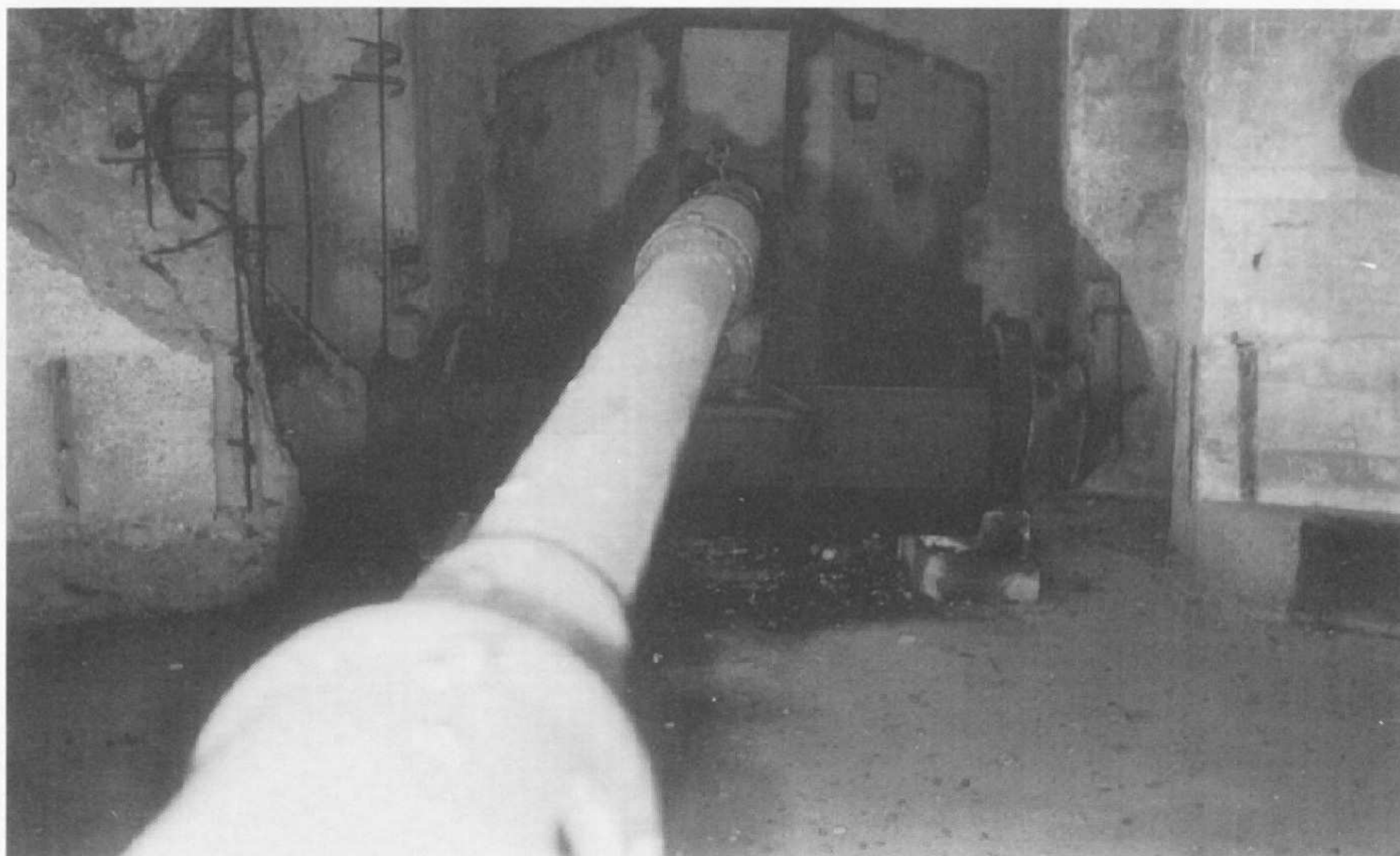
*Only a small portion of the 6,616-millimeter-long barrel of the 88mm Pak 43/41 protruded from its bunker, which was placed in a flanking position, and even that part was screened by the flanking wall.*

#### **W 71 - W 72**

At Omaha Beach Resistance Nests W 71 and W 72 barred the access road from the beach to the village of Vierville-sur-Mer. American combat engineers and Rangers landed there on the morning of June 6. The main weapons of the resistance nests were two anti-tank guns, one 88mm Pak 43/41 and one 75mm Pak 97/38. As well there were 50mm fortress mortars and heavy machine-guns. Anti-tank obstacles fashioned from railway rails, so called "Czech hedgehogs", guarded the inner beach. After heavy fighting in which the two anti-tank guns alone destroyed 8 tanks and several landing craft, at about 1 P.M. on June 6 both strongpoints were taken by US Rangers.

#### **88mm Pak 43/41**

With a maximum firing range of 15,300 meters, the 88mm Pak 43/41 produced by Krupp was among the most effective anti-tank weapons of the war. The 88mm Pak in resistance nest W 71 was housed in a Type 677 Standard Structure positioned to place flanking fire on the beach. The embrasure provided a range of traverse of 56 degrees. 200 rounds of ammunition could be stored in the bunker.



*Right:*

*Today the gun still sits in its bunker, although the gun carriage's trail and wheels have been removed.*

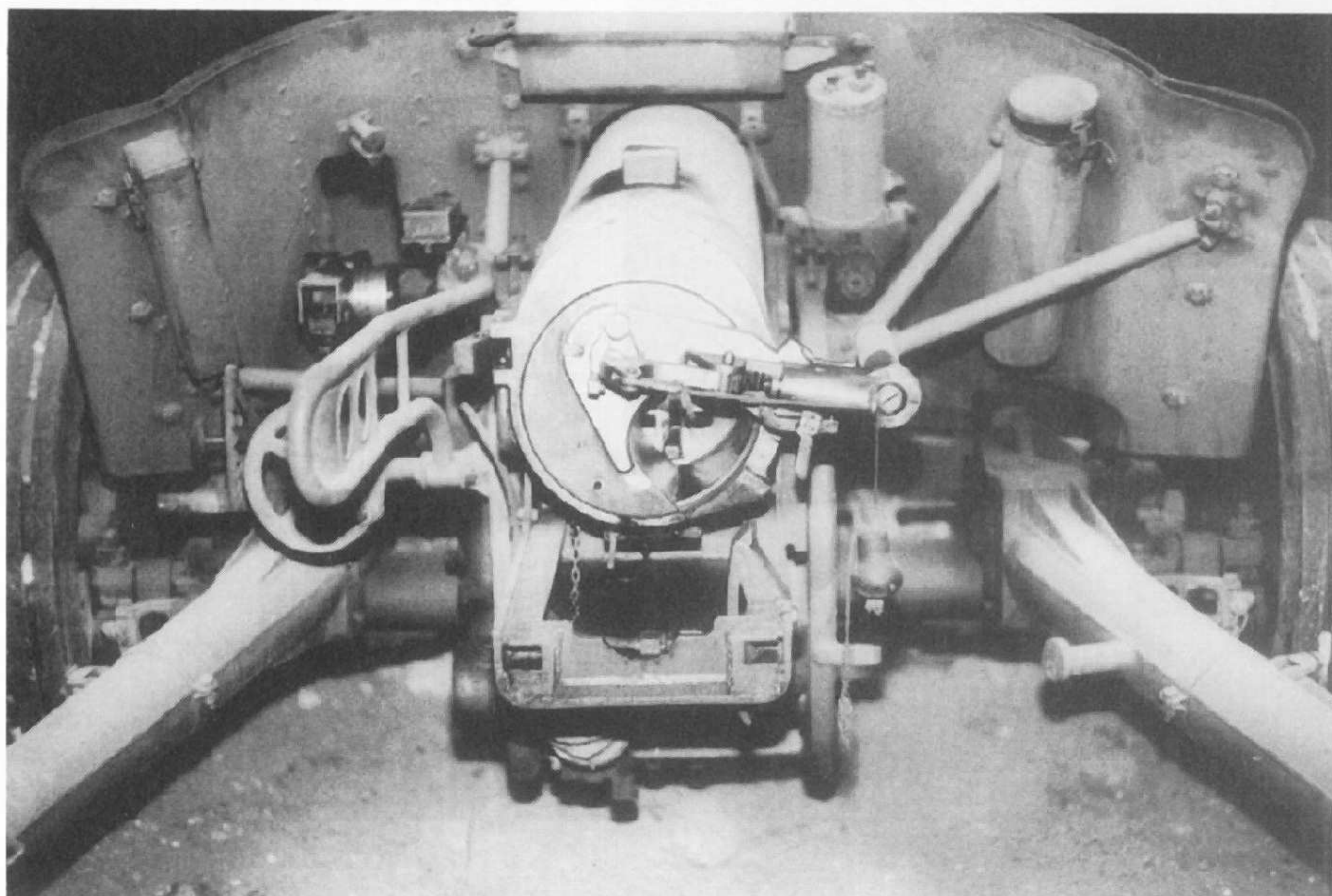
### 75mm Pak 97/38

The 75mm Pak 97/38 resulted from the installation of the barrel of the French Field Cannon 97 on the carriage of the 50mm Pak 38. The 2,720-millimeter-long

barrel had 24 grooves and was fitted with a long muzzle brake. The gun achieved a muzzle velocity of 570 m/sec and was suitable for engaging tanks only if hollow-charge ammunition was used.

*Right:*

*Inspection of a 75mm Pak 97/38 in an open field position on the Normandy coast. Range of elevation was from -8 degrees to +25 degrees. The all-up weight of the cannon in firing position was 1,190 kilograms.*

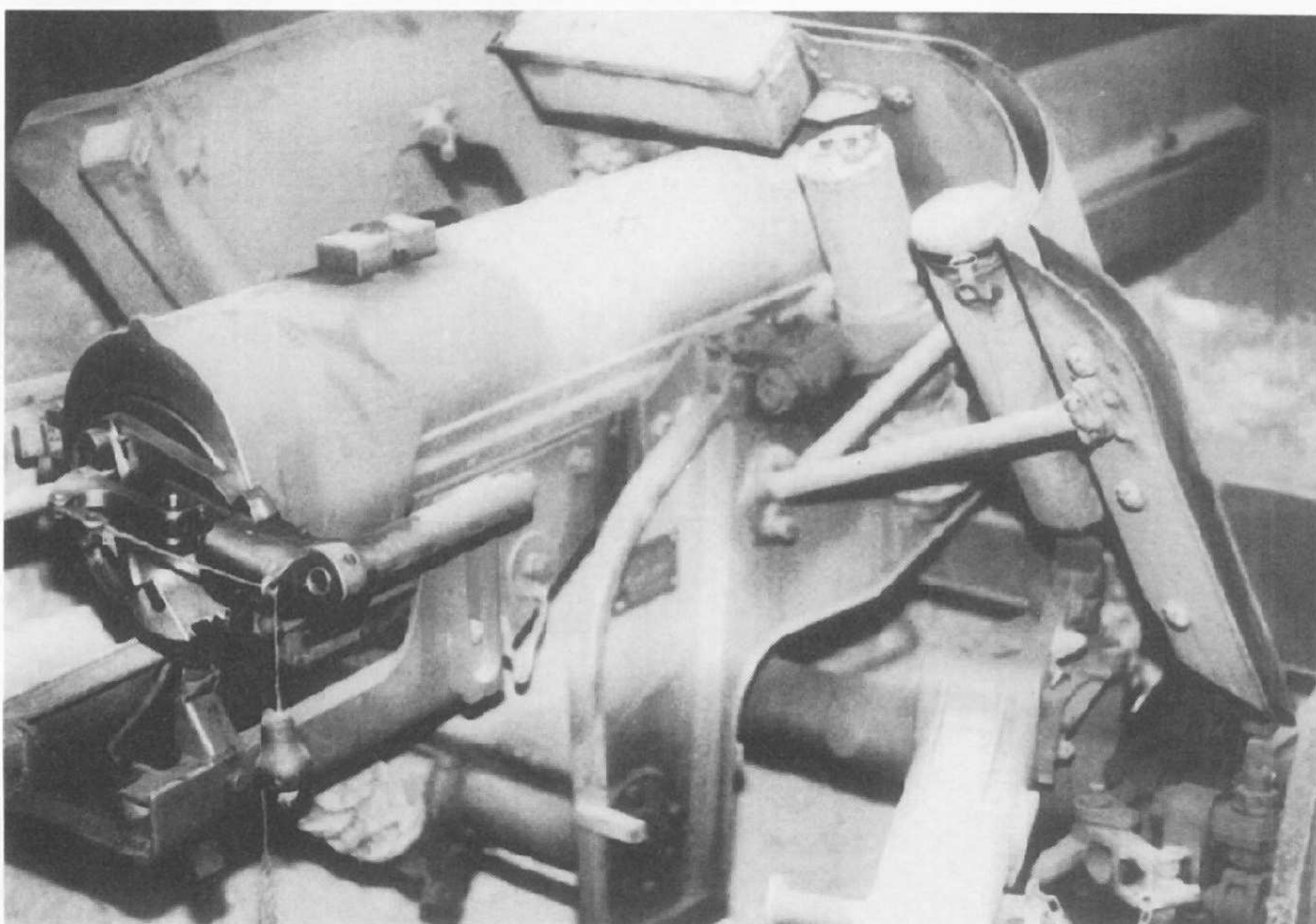


*Left:*

*The interrupted-screw-type breechblock of the 75mm anti-tank gun with pull cord. On the gun's left side is the elevation handwheel, with the optical gunsight above it. The weapon fired H.E. rounds of French origin designated 7.5 cm Spr Patr 230 (f) to Spr Patr 236 (f), armor-piercing shells of Polish origin designated 7.5 cm Gr Pz Patr (p), as well as the German 7.5 cm Granat Patrone and 7.5 cm Gr Patr 97/38 H1/B. The latter was especially well-suited to engaging tanks.*

*Right:*

*The double, 4-millimeter-thick gun shield offered the crew only limited protection against shell splinters.*



# W 5

On the morning of June 6 the American 4th Division landed on Utah Beach near resistance Nest W 5. The strongpoint was manned by a platoon of 3rd Company, 919th Grenadier Regiment and six men of the Caen Air Observer Company. In command of the position was Leutnant Arthur Jahnke, a Knight's Cross winner in the war in Russia. In addition to three 50mm tank

cannon (KwK) in circular foundations and Type 667 bunkers, the strongpoint's armament included two 50mm fortress mortars, a 37mm Renault armored cupola, a Feldkanone 16 field gun, two 47mm Pak 181(f) anti-tank guns, three Goliath remote-control tanks and light infantry weapons, such as machine-guns.

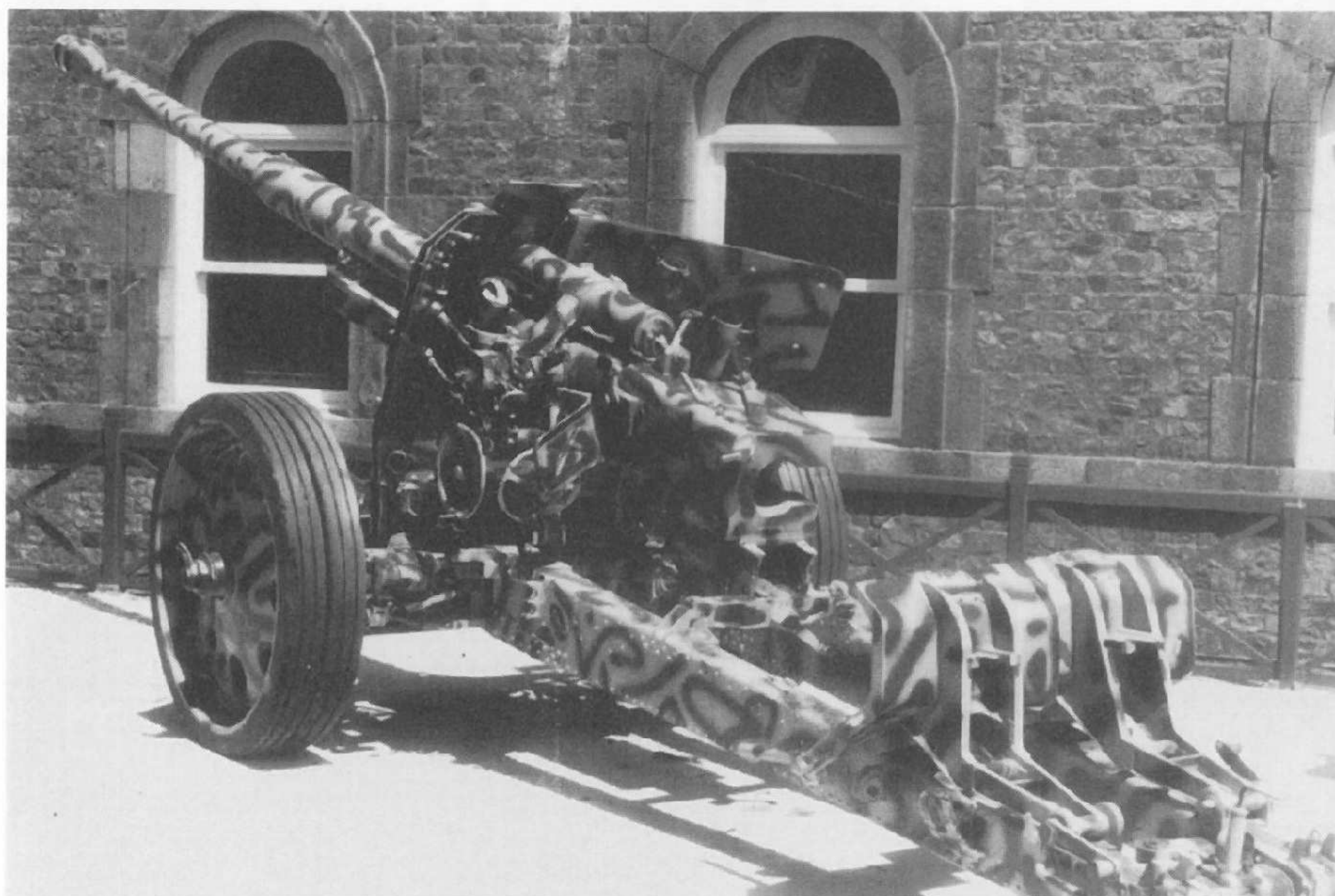


*Left:  
Lieutenant Lanker of the 31st  
Photo Reconnaissance Squadron  
makes a photo run over Resistance  
Nest 5 on May 6, 1944, one month  
before the invasion.*

*Below:*

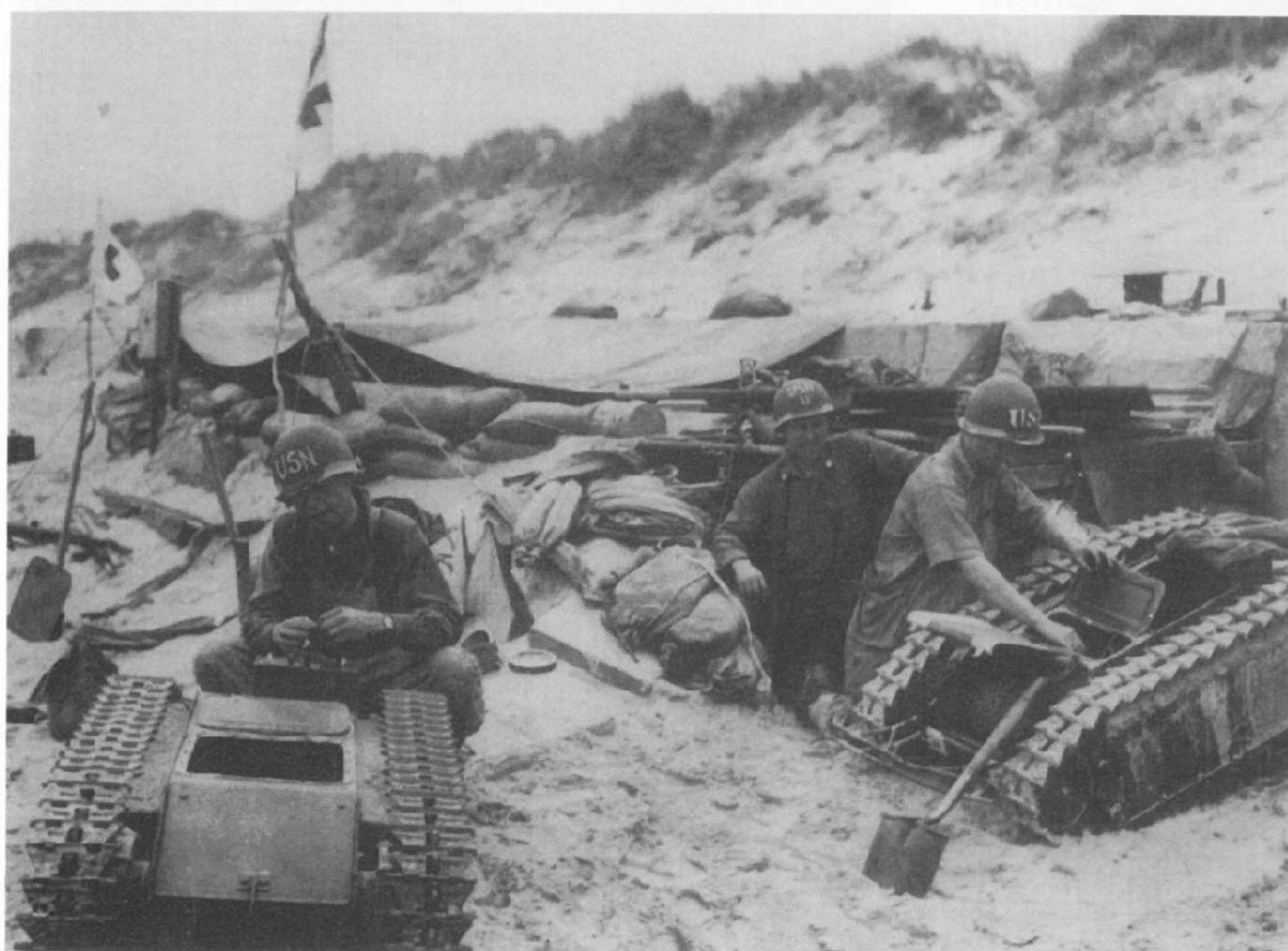
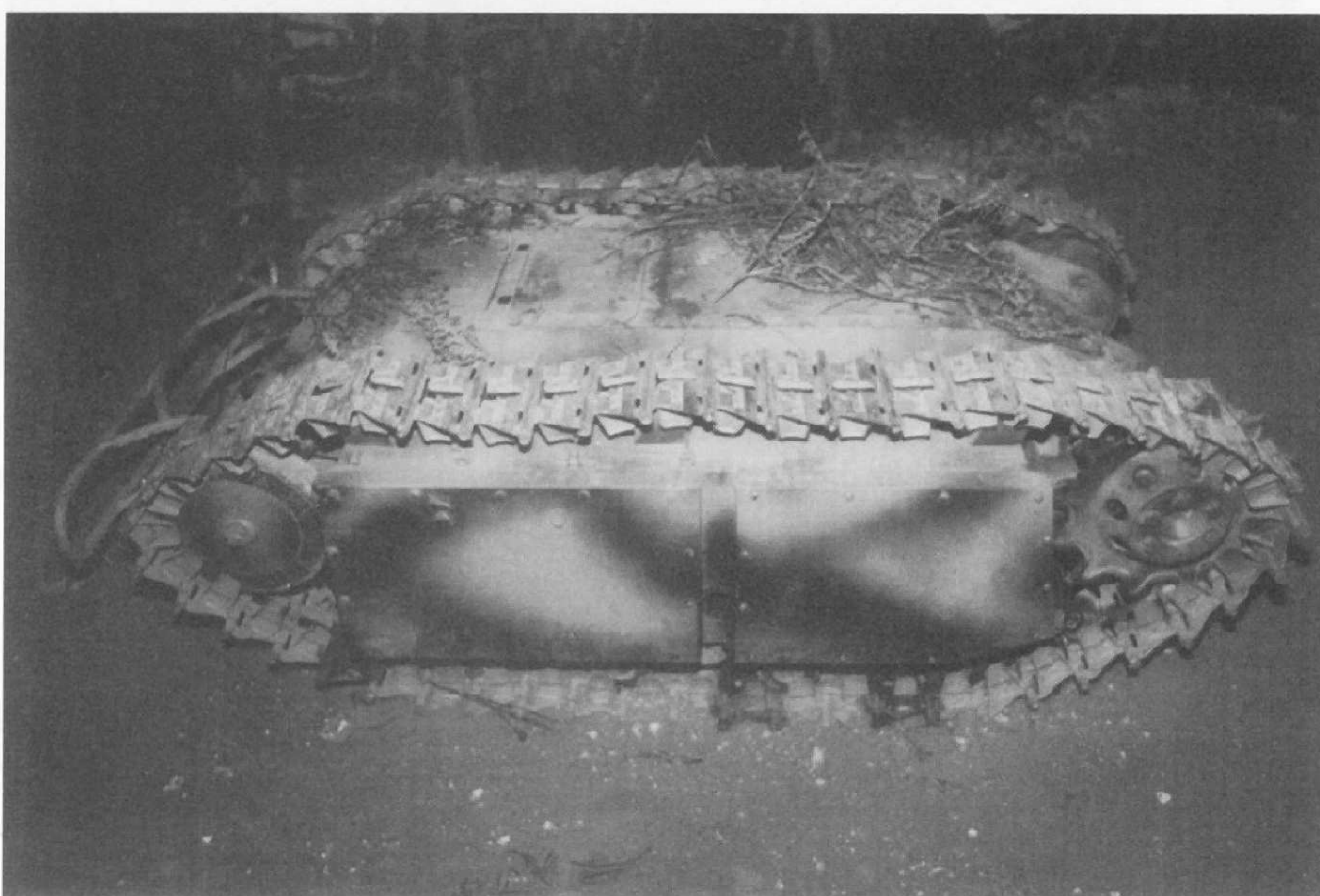
*W 5's 88mm Pak 43/41 sits in an open field position behind the anti-tank wall which sealed off the position along the water line. Camouflage nets have been hung above the gun.*





*Left:  
Today the 88mm anti-tank gun sits  
in the Fort du Roule Museum near  
Cherbourg.*

*Right:  
W 5 was the only strongpoint in  
Normandy to have received several  
remote-controlled Goliath tanks,  
which carried 90.7 kilograms of  
explosives. The Goliaths were sup-  
posed to be used against landing  
craft and tanks which came ashore.*



*Left:  
American marines examine two  
Goliath tanks. The heavy vibra-  
tions produced by the powerful air  
raids on the position caused the  
small tanks' remote control mecha-  
nisms to fail and they were left  
stranded on the beach.*

### 47mm Pak 181 (f)

The 47mm anti-tank gun, Model 1937, was captured in small numbers by the Wehrmacht after the conclusion of the campaign against France in 1940. From 1943 on these were employed in the Atlantic Wall with the designation 4.7cm Pak 181 (f).

The anti-tank gun was capable of firing high-explosive and armor-piercing shells, both as fixed ammunition. The semi-automatic breech made possible a rate of fire of six shots per minute. As used in W 5, the guns were emplaced behind a concrete wall and each weighed 1,070 kilograms.

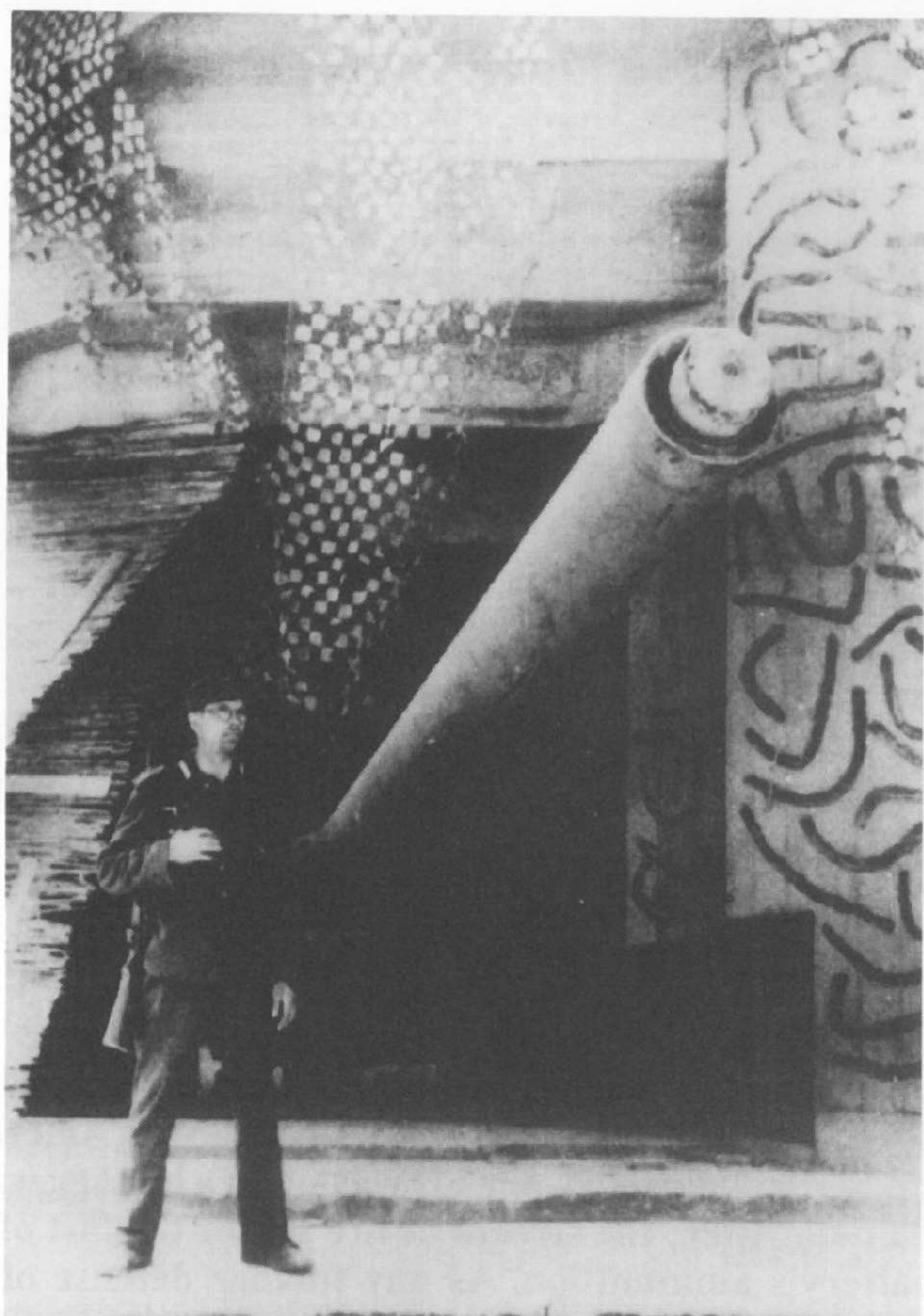


*A 47mm anti-tank gun in the dunes of W 5 during the invasion. In the background American vehicles and supplies arrive on the beach.*

*Today this 47mm Pak 181 (f) is back in its old emplacement. The gun shield of armor plate has been removed.*

*Kilometer Stone 00 on the beach in front of Resistance Nest W 5. This marks the spot where the liberation of France began.*





*Front view of the 210mm Skoda cannon in the Type 683 gun bunker. The embrasure was covered with reed mats as a camouflage measure.*



*The same perspective 50 years later. Attempts to demolish the bunker had little effect.*

## The St. Marcouf Battery

The St. Marcouf Naval Battery was located on the east coast of the Cherbourg Peninsula on a hill several kilometers inland. The garrison consisted of 3 officers, 7 NCOs and 287 enlisted men. Marcouf was armed with three 210mm Skoda K 39/40 (t) and one 155mm K 420 (f) cannon and six French 75mm anti-aircraft guns. The battery was equipped with a French-made 7-meter range-finder, a scissors telescope and a home-made range indicator.

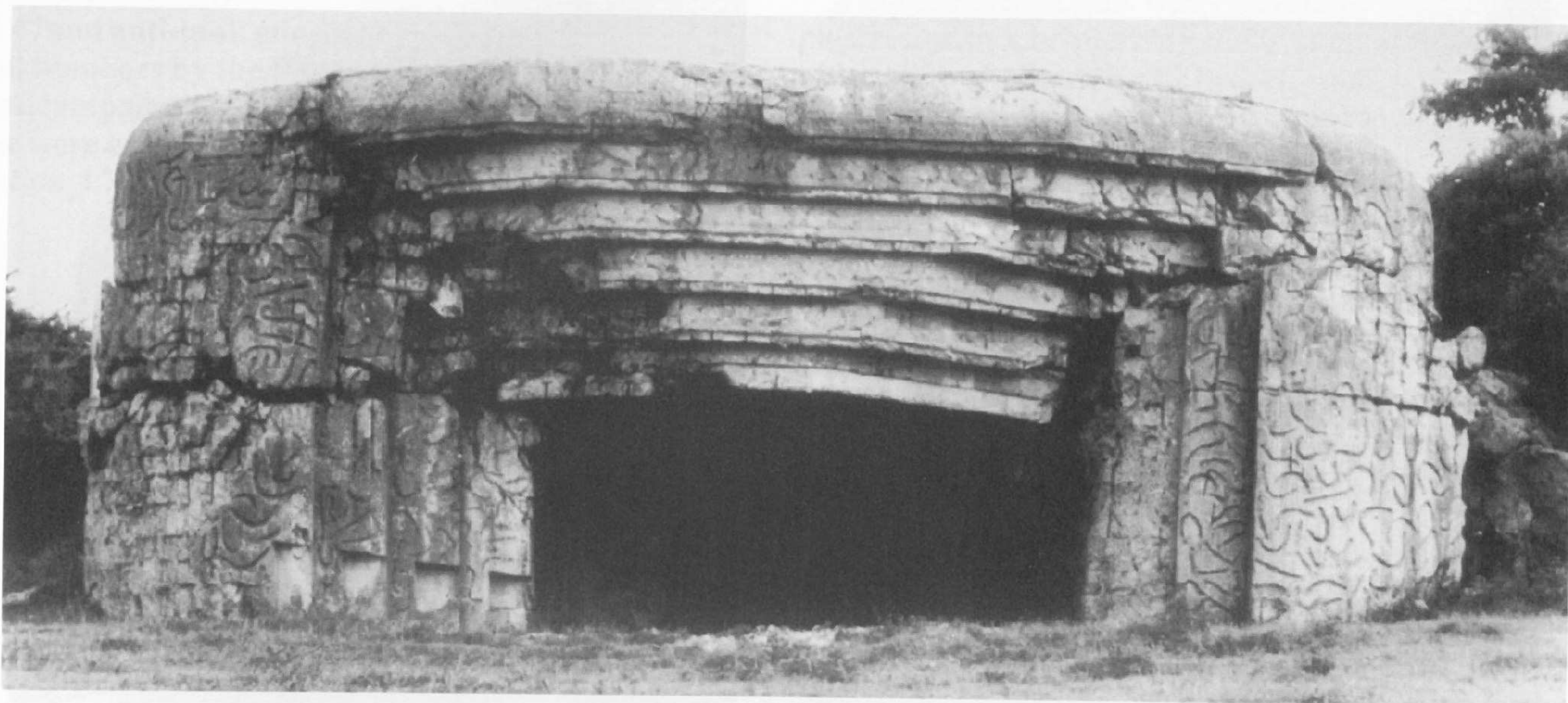
Work on the battery was still not complete when the invasion began. Two of the Skoda cannon were in Type 683 concrete bunkers; however, the third gun was in an open fixed position, and the anti-aircraft guns were also in makeshift positions. On June 6 the 155mm cannon was in the Cherbourg arsenal undergoing repairs after it had been damaged in an air raid. Marcouf's neighboring battery, HKAA 2/1261, was situated near the village of Azeville and was manned by 170 army artillerymen. Its four 105mm 331 (f) field cannon were in Type 649 bunkers.

On the morning of June 6 the Allied fleet off Utah Beach began a bombardment of both batteries. Once it became light, Marcouf was able to return fire with its three 210mm guns. The US cruiser Quincy (9 x 203mm and 8 x 127mm guns) had ranged in on Marcouf. Later the battleship Nevada (10 x 356mm and 16 x 127mm guns) joined the battle. According to plan, the landing

of men and materiel on Utah Beach began at about 6 A.M.

At 7 A.M. the Nevada scored a direct hit on the embrasure of Number 3 bunker with a 127mm shell. Fortunately, however, the shell was a dud and passed through the bunker and out the other side without exploding. Soon afterward the fleets ceased firing and American paratroops attempted to seize both batteries. The artillerymen were able to fight off this attack by the Americans, who were not yet fully organized, and the fleet, around which aircraft maintained a constant smokescreen, soon resumed firing. The US destroyer Corry, whose aircraft had been shot down by flak, lay outside the smokescreen and fired at German strongpoints on the beach. Marcouf soon had the Corry's range and was able to score several direct hits. At 7:17 A.M., following a tremendous explosion amidships, the Corry disintegrated and sank.

The nearby destroyer Glennon hastened to the Corry's aid, but it too took a direct hit and then withdrew. The Glennon zigzagged in an attempt to escape Marcouf's guns, but took further hits in its superstructure. After sailing in circles for some time, the destroyer came to a halt and sank slowly by the stern. Altogether the Allies lost three destroyers in the waters off Utah Beach. Even as the destroyers were sinking, a near miss put Marcouf's Number One gun out of action.



*Construction of this gun bunker required 2,000 cubic meters of concrete, 100 tons of steel rod and 22.6 tons of structural steel.*

Meanwhile the American commander, General Bradley, ordered the battleships USS Arkansas and Texas (each with 10 x 356mm and 16 x 127mm guns) from neighboring Omaha Beach to Utah Beach to fire on Marcouf. The Marcouf Battery was thus under continuous fire from three battleships and several cruisers. At about 9 A.M. the Nevada scored a direct hit on the embrasure of Bunker 2. The personnel in the bunker were killed instantly and the gun was totally destroyed. Both bunker weapons were now out of action. Ohmsen ordered the free-standing gun to fire at the beach, where US troops had been landing since 6 A.M.

On June 7 Marcouf and Azeville were completely surrounded by US troops. The artillerymen quickly repaired one of the bunker guns. During the course of the next day several American assaults were beaten off; valuable material – portable radios, assault rifles, ammunition and badly needed medical supplies – was captured.

The artillerymen held out in their bunkers; several times they had to call on the Azeville Battery to lay down barrage fire on their own positions to drive away the American assault troops and tanks. On June 8 Ohmsen

had the free-standing gun blown up as a precaution. The Azeville Battery fell on June 9. There an American soldier managed to work his way up to a bunker with a flamethrower; the stream of fire set off the last of the battery's ammunition. As any further defense of the battery had become impossible, the garrison surrendered.

With the fall of Azeville Marcouf was on its own. Enemy guns pounded the battery grounds throughout the day. This fire stopped only just before an infantry assault. Fighter-bombers flew over the battery constantly, firing on anything that moved. Even during the night the Americans fired tracing ammunition into the battery, in order to prevent the defenders from improving their positions.

On June 12, acting on an order from the Cherbourg Naval Commandant, Ohmsen secretly abandoned the battery. He and 78 men set out to the north in the direction of the German front, ten kilometers away. The American sentries noticed nothing. 21 badly wounded men were left behind in the battery under the care of a medic. Oberleutnant Ohmsen was awarded the Knight's Cross in Cherbourg on June 14, 1944.



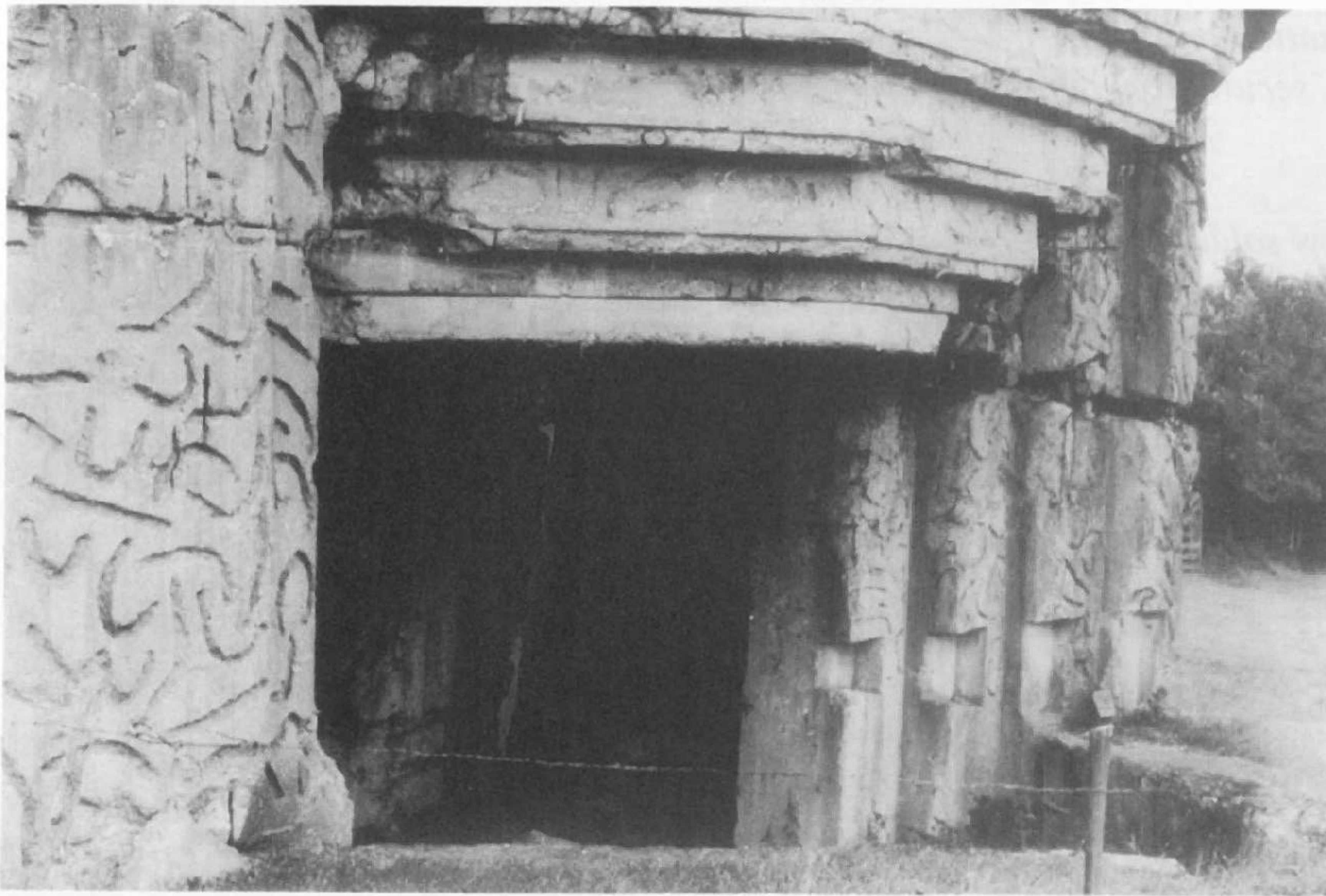
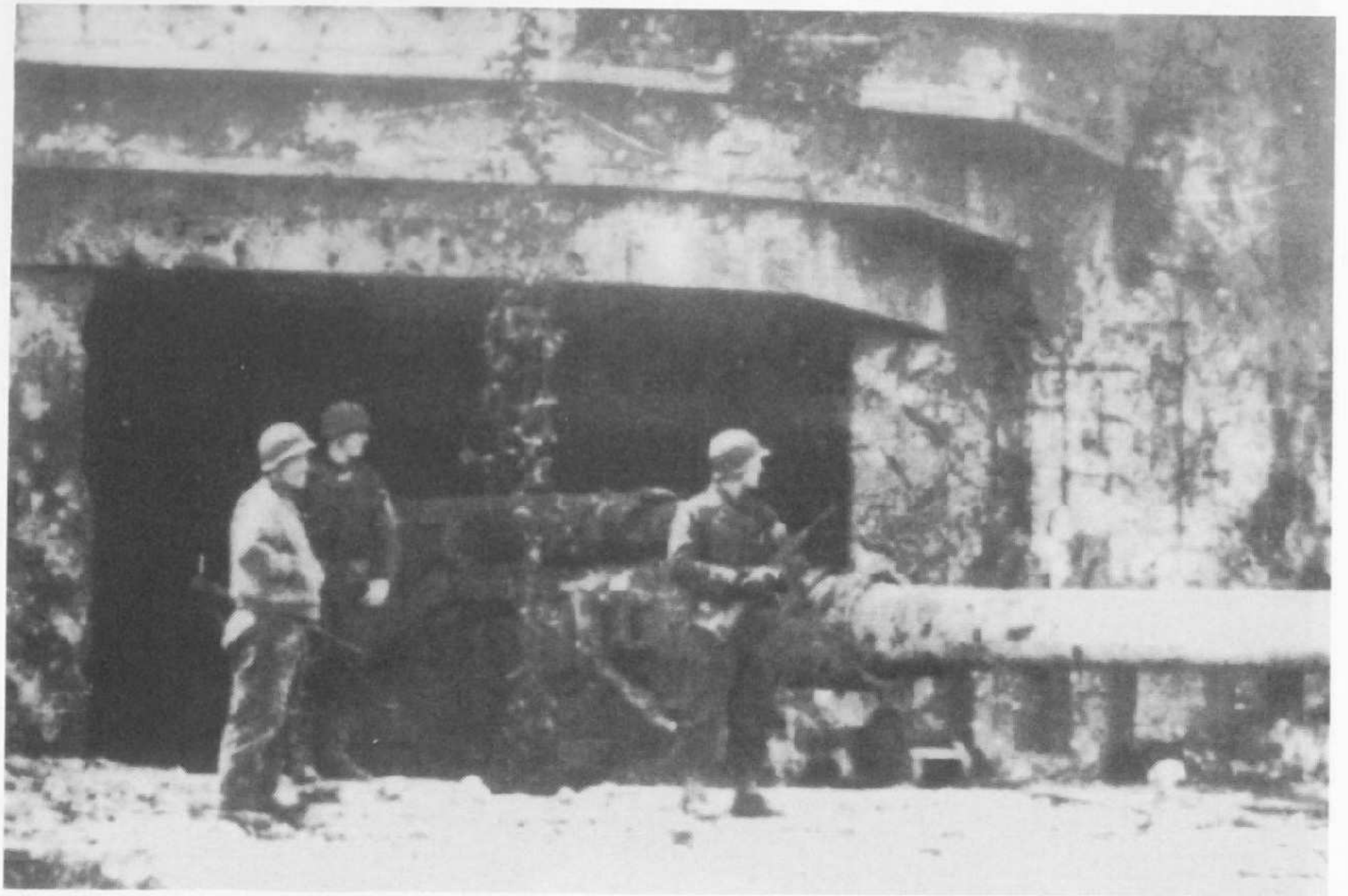
*A 210mm K 39/40 in field position after firing. The cannon had a barrel length of 9,530 millimeters, of which the rifled portion was 7,193 millimeters long. Visible on top of the barrel is the hydro-pneumatic recuperator. Range of elevation was from -4 degrees to +45 degrees. All-up weight in firing position was 33,800 kilograms.*

## 210mm K39/40 (t)

The 210mm cannon was built for Turkey and Sweden by Skoda. After 1938 the Wehrmacht took over several of these guns, designating them 21 cm K39/40 (t). The one-piece barrel with jacket moved in a cylindrical jacket cradle. The hydraulic recoil brake was

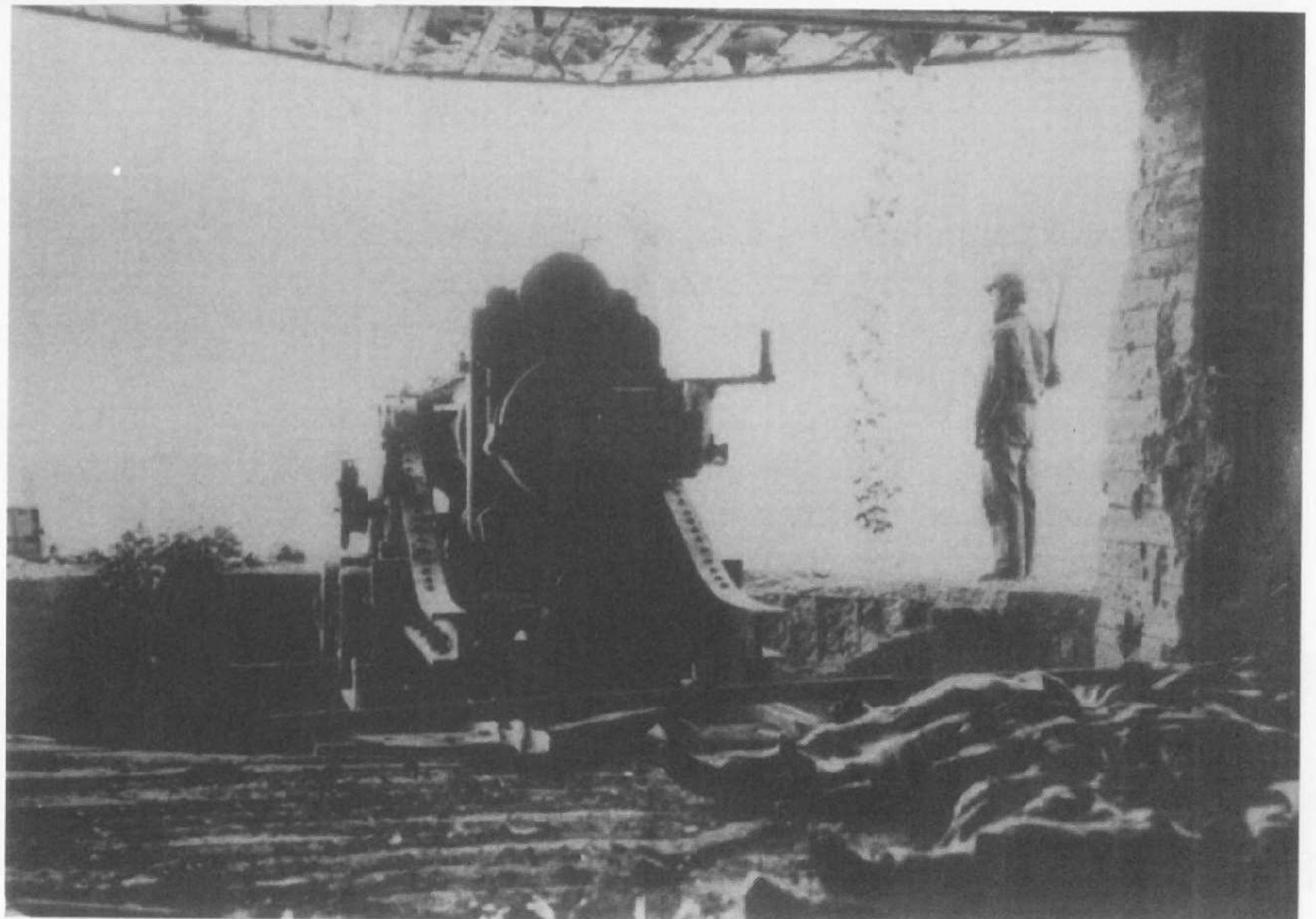
positioned beneath the barrel, the hydro-pneumatic recuperator above it. The bottom mount and the turntable rested on the box-shaped base plate, seated in ball bearings.

*Immediately after the battery had been occupied by American troops, combat engineers blew up both gun bunkers. The two photos, right and below, show the same bunker in 1944 and 1994.*



*Right:*

*Interior view of one of the bunkers after the fighting. The screw-thread-type breech of the K39/40 is open. Loading was carried out with the barrel elevated eight degrees, by means of a two-wheeled projectile cart. The shell, which weighed 135 kilograms, was loaded separately from the cartridge. The gun fired 210mm H.E. shells of Czech origin, as well as the German Panzergranate 39 armor-piercing and Granate 40 H.E. rounds.*





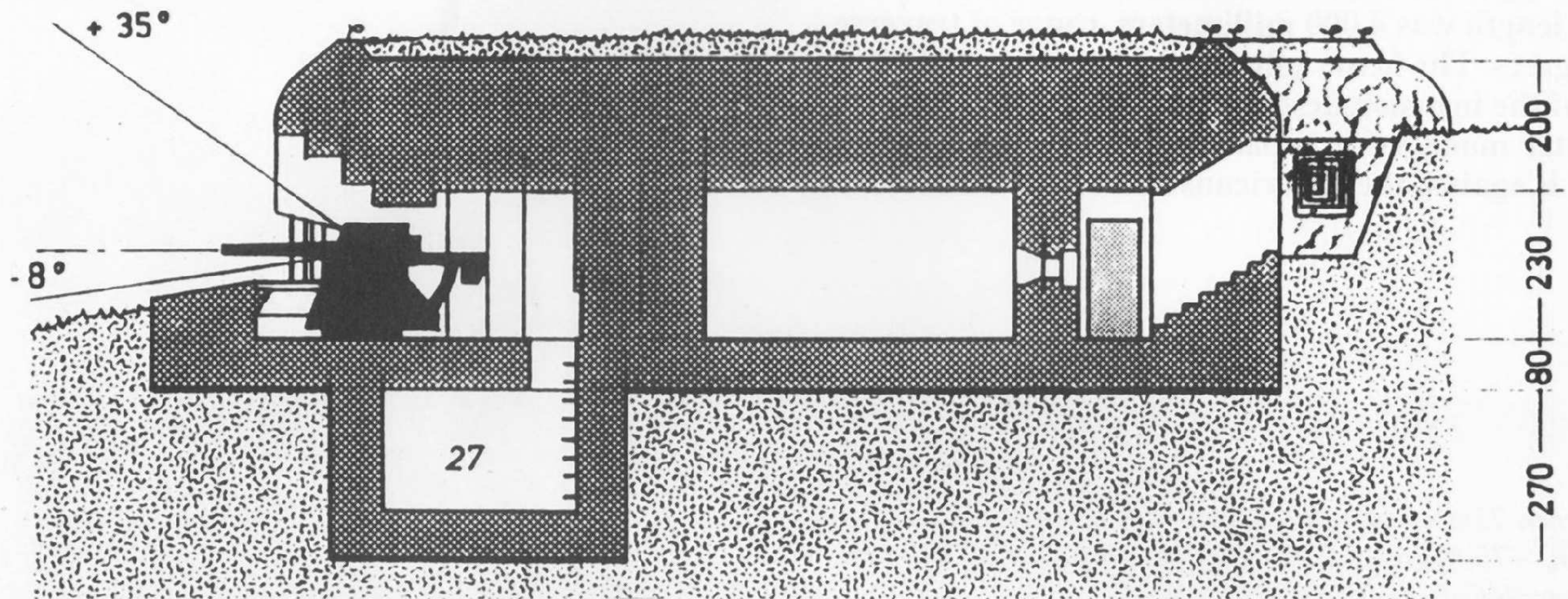
*In addition to gun bunkers, the Todt Organization built Type H 622 bunkers, so-called "group shelters", for the off-duty personnel. Each bunker could house 20 men, secure from bombing and shelling. (BA)*

*Oberleutnant Ohmsen (center) with two fellow soldiers after he received the Knight's Cross in Cherbourg on June 14.*



# Azeville Army Coastal Battery

Type 649 Bunker



*Above:*

*A drawing of the Type 649 bunker.*

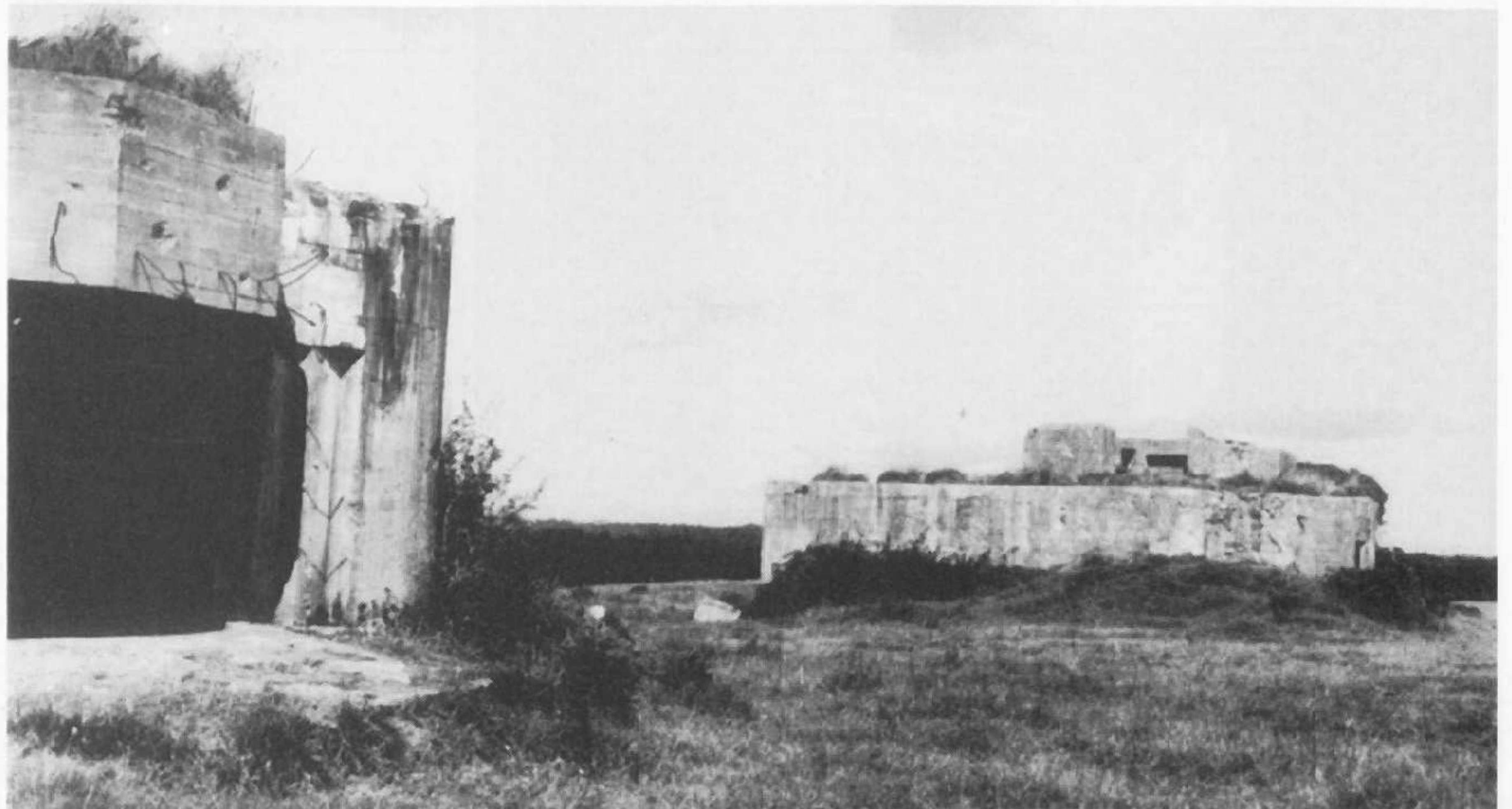


*Left:*

*Front view of the Azeville Battery's 105mm Kanone 331 (f) in its gun bunker. The maximum firing range of the captured French weapon was about 9,000 meters.*

*Right:*

*Two gun bunkers of the Azeville Battery in 1944.*

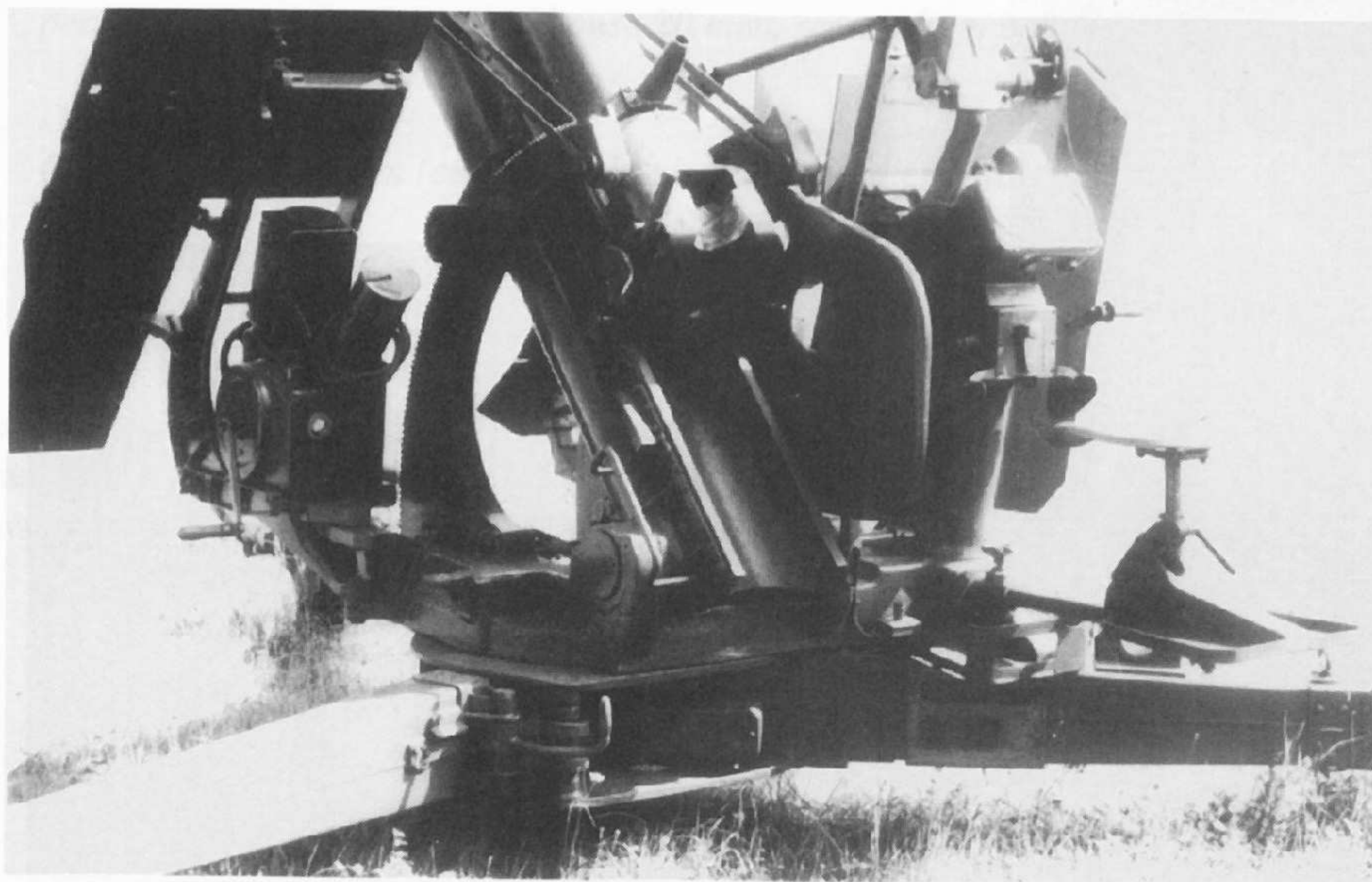
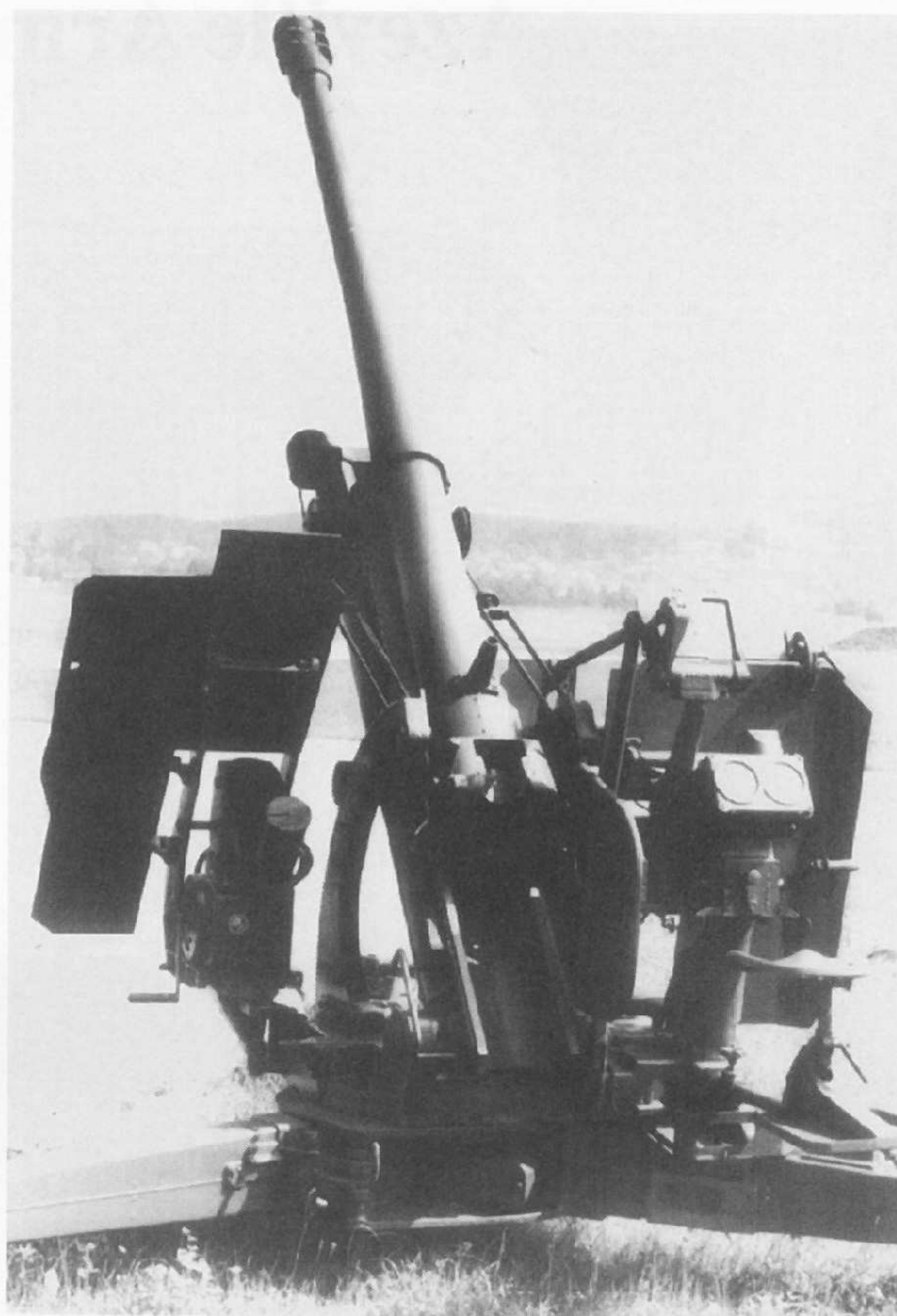


### 75mm Flak (f)

The Marcouf Battery received the French 75mm anti-aircraft gun for air defense. The gun was manufactured by the firm of Schneider et Cie in Le Creusot. Barrel length was 4,000 millimeters, range of traverse 360 degrees. The heavy allied air raids during the first night of the invasion destroyed all six guns. Ohmsen's men later managed to repair one 75mm flak and employed it against the Americans in an anti-tank role.

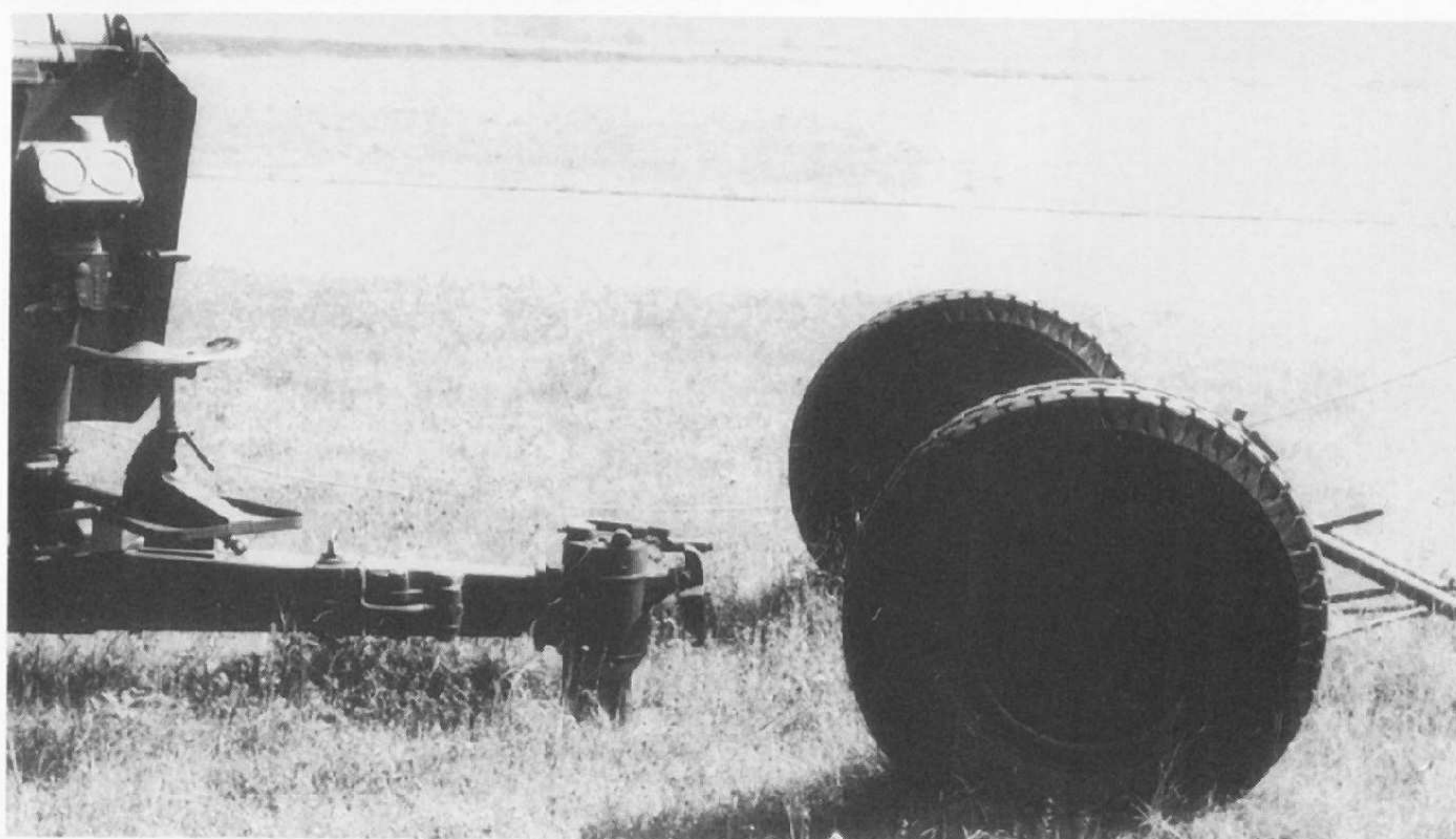
*Right:*

*The French 75mm anti-aircraft gun with its barrel at maximum elevation, +70 degrees. Maximum firing range was 800 meters with a muzzle velocity of 685-715 m/sec. The variation in muzzle velocity was due to the very worn state of the gun barrels.*



*Left:*

*The tripod mount of the 75mm Flak. On the right side of the gun are the gun layer's seat and the receiver for the angles of azimuth and elevation.*



*Right:*

*The 75mm Flak's forward pair of wheels.*



*A field-type bunker housing a 47mm Pak (t) anti-tank gun in Resistance Nest 12 near Les Gougins on the Cherbourg Peninsula. The crew of the bunker have reinforced the bunker's roof with sandbags. (BA)*

## W 8

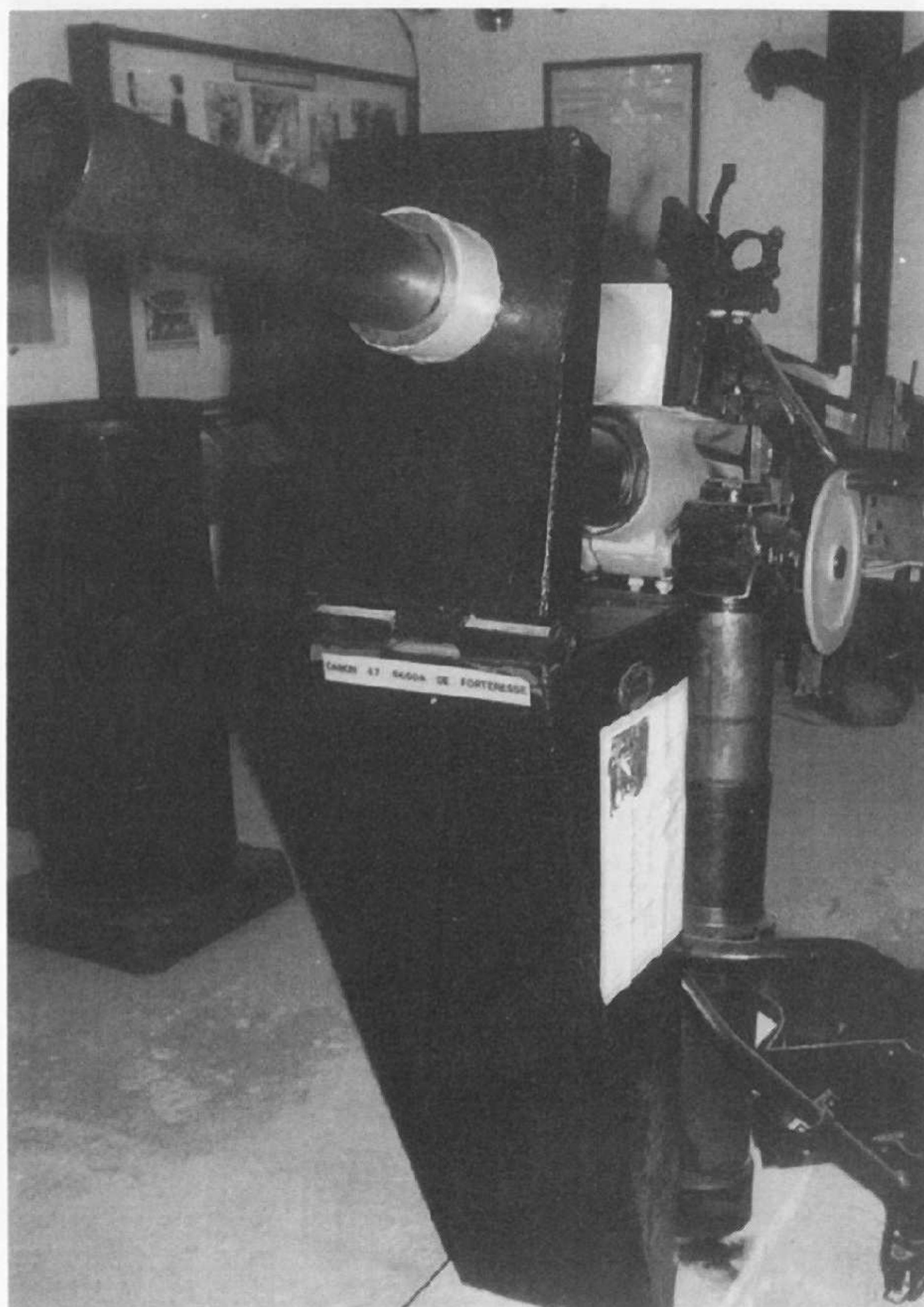
### 47mm Fortress Anti-tank Gun (t)

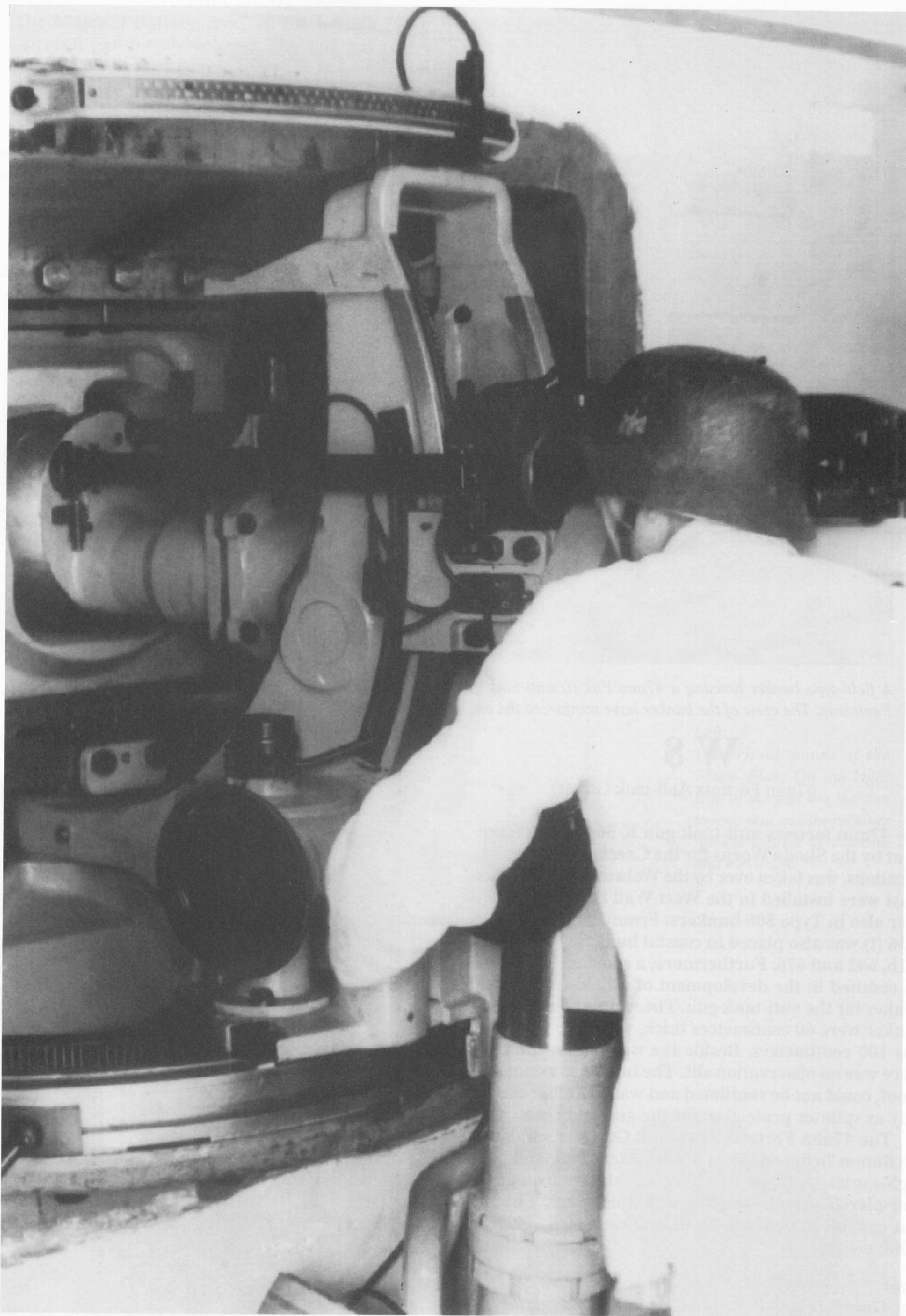
The 47mm fortress anti-tank gun K 36 (t), a development by the Skoda Works for the Czechoslovakian fortifications, was taken over by the Wehrmacht after 1938. Most were installed in the West Wall in Type 139 and later also in Type 506 bunkers. From 1942 on the Pak K 36 (t) was also placed in coastal bunkers, Types 631, 631b, 642 and 676. Furthermore, a shortage of materials resulted in the development of a field-constructed bunker for the anti-tank gun. The walls and roof of the bunker were 60 centimeters thick, while the front wall was 100 centimeters. Beside the weapon on the right there was an observation slit. The bunker was not gas-proof, could not be ventilated and was therefore classed only as splinter protection for the gun and crew.

The 47mm Fortress Anti-tank Gun (Czech) had a maximum firing range of 5,200 meters and could fire high-explosive shells weighing 1.5 kilograms and armor-piercing shells weighing 1.65 kilograms. The gun was capable of penetrating 41 millimeters of armor at 1,000 meters.

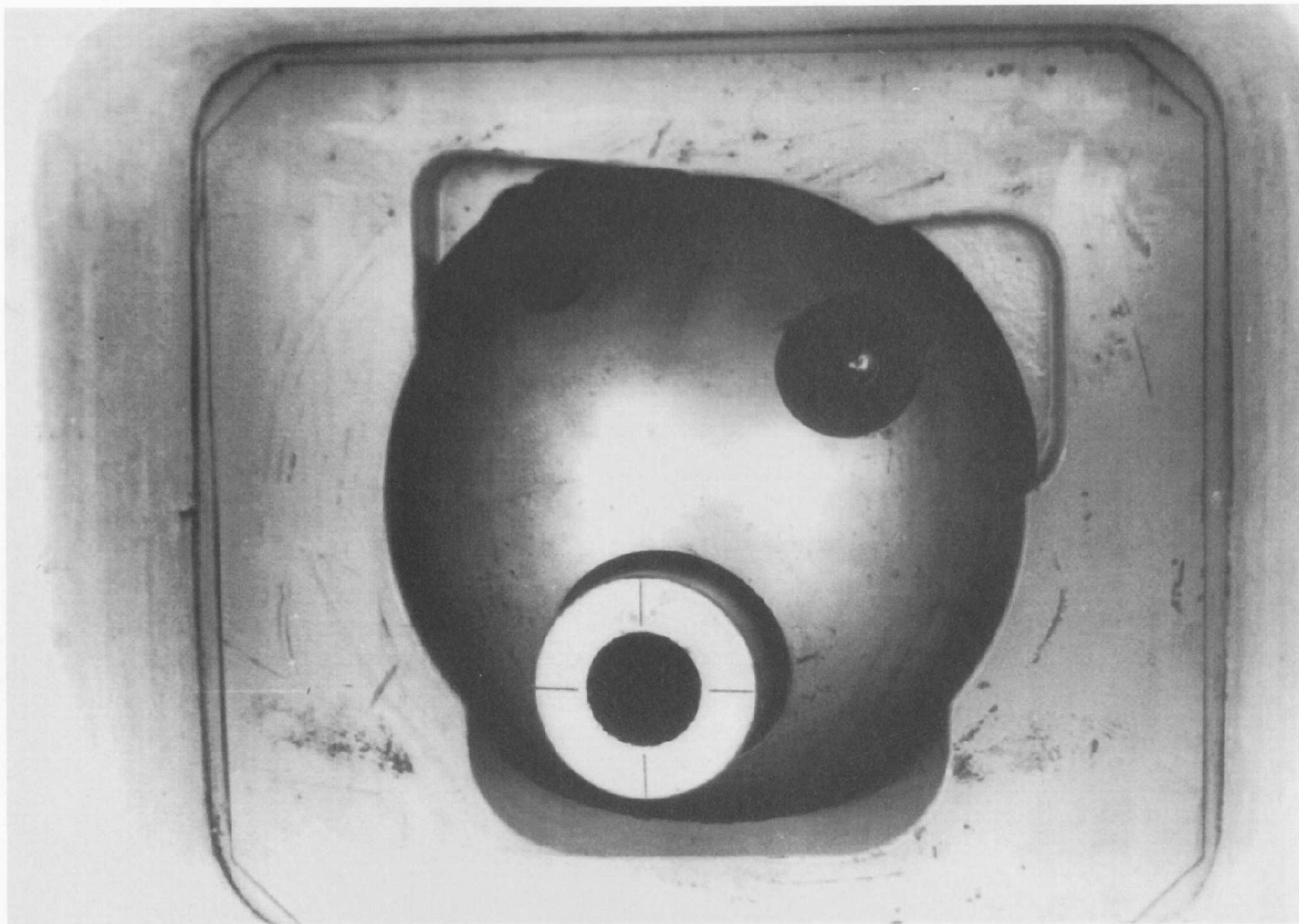
*Right:*

*This 47mm Fortress Anti-tank Gun (Czech) sits today in the Riva Bella Battery Museum. The gun's barrel length was 2,040 mm (43.4 calibers); weight in firing position was 1,860 kg.*





*The gun layer was responsible for setting the azimuth and elevation, as well as for firing the gun.*



*The ball mount with the barrel of the 47mm Pak and the opening for the optical sight. A 7.92mm MG 37 (t) machine-gun could also be mounted; the firing port in the ball mount is visible on the upper left.*

*Field-built bunker for the 47mm Pak (t) in the former Resistance Nest 12 as it appears today. The exterior of the bunker shows evidence of numerous hits by enemy artillery, however the ball mount and vision slit are undamaged.*





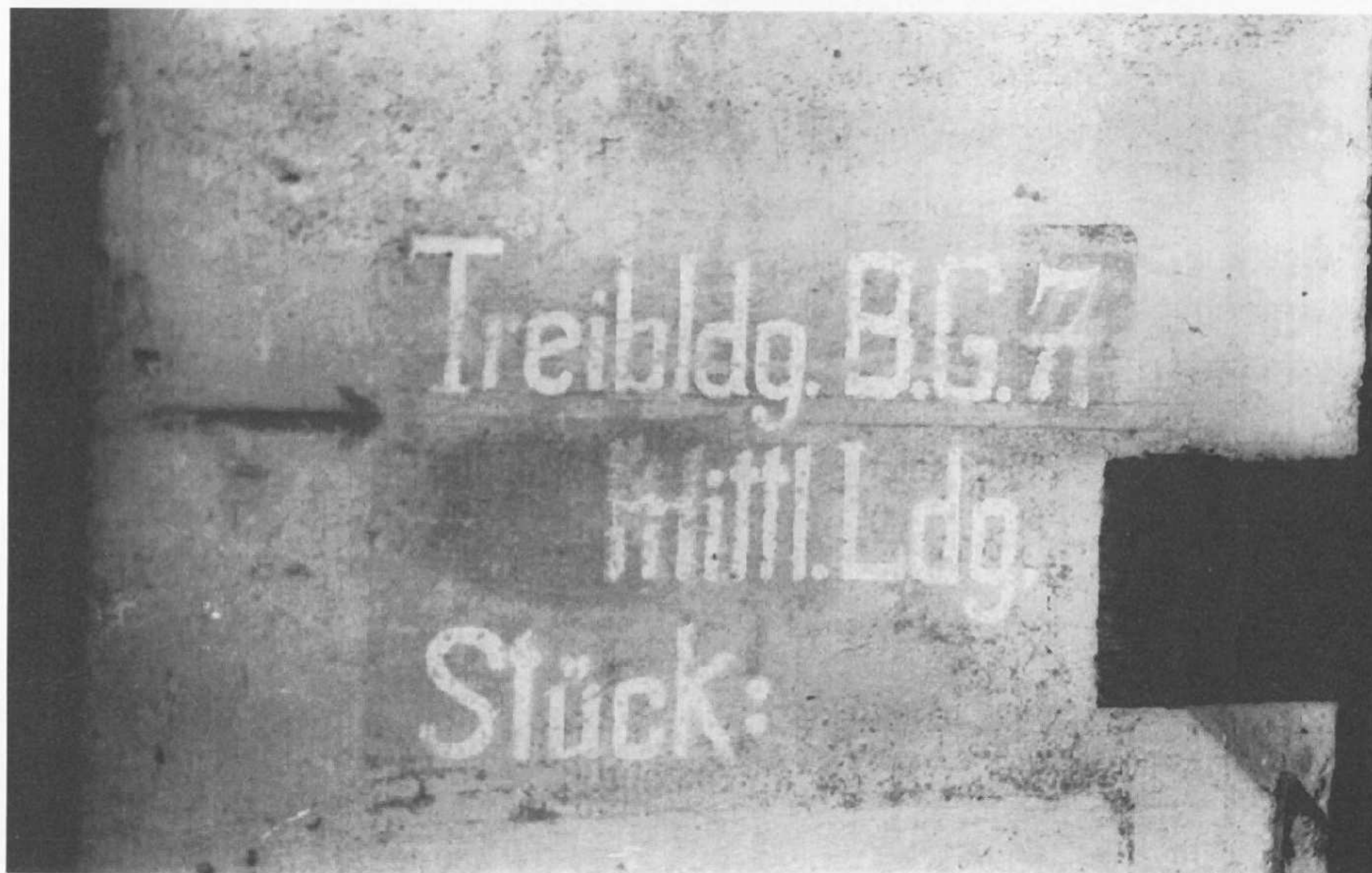
*A 155mm Kanone 420 (f) of the Morsalines Battery in its ring mount. The photo was taken during construction in the summer of 1941. The concrete ring surrounding the base plate has yet to be built.*

## The Morsalines Battery

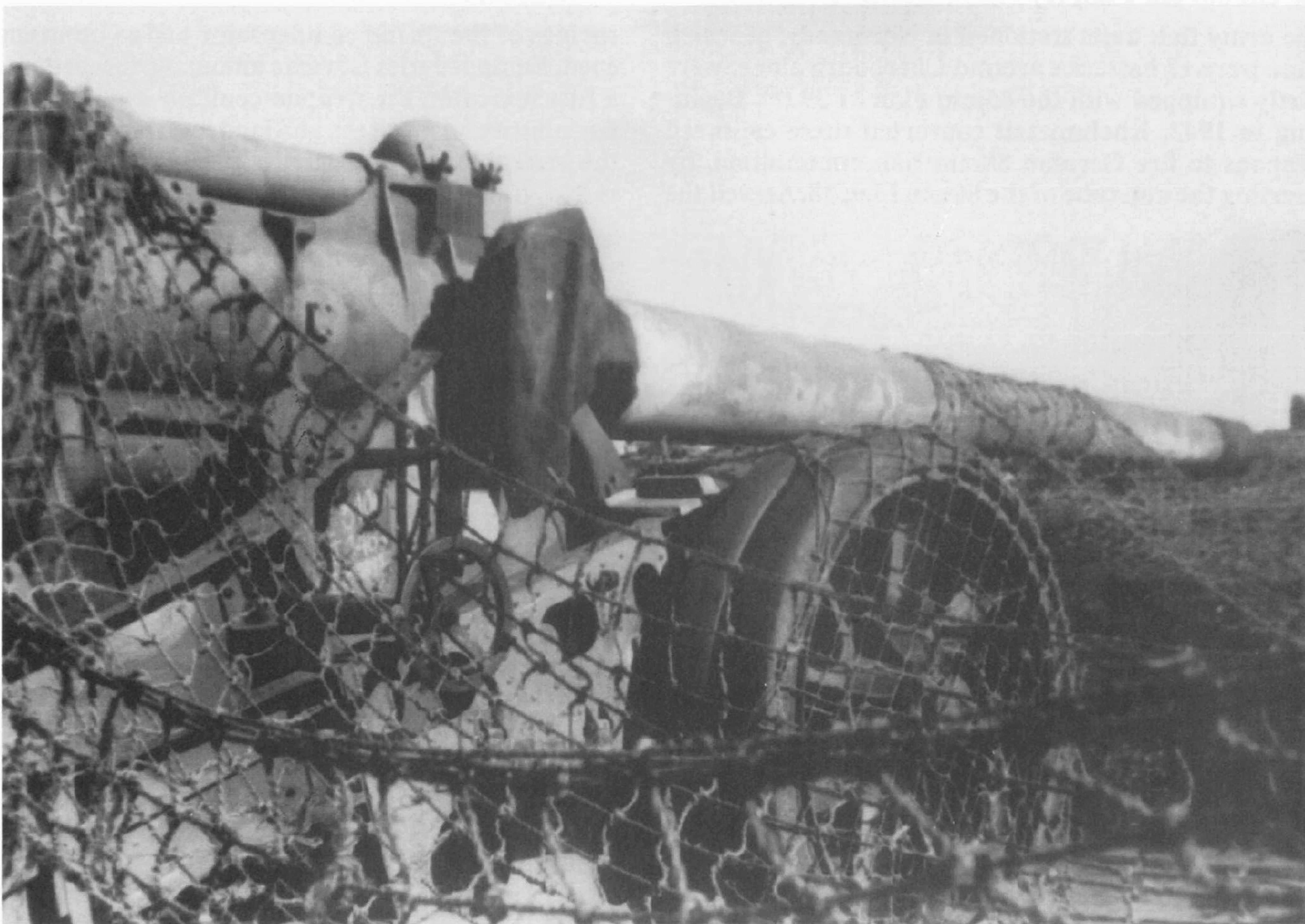
155 MM K 420(f)

The Morsalines Battery was situated on a high plateau, 87 meters above the ocean, near St. Vaast. The six 155mm 420 (f) field cannon sat in open ring emplacements with underground ammunition storage rooms. In spite of the efforts of the artillerymen to camouflage the position – the emplacements were covered with dif-

ferent color camouflage nets to suit the season, and the footpaths were laid out with duckboards, over which the grass grew – the installation was destroyed in a precision air raid on May 10, 1944. Two guns were destroyed by bombs and the position was subsequently abandoned.



*The artillerymen kept track of the types and number of projectiles at the entrance to the munitions bunker.*



*The barrel of the 155mm cannon could be traversed three degrees to each side by means of a handwheel visible on the gun carriage. On the extreme left of the photo is the breech assembly, here covered with a tarpaulin. The elevation handwheel and optical sight, in the center of the photo, are also covered.*



*One of the Morsalines Battery's guns, destroyed in a British air raid on May 10, 1944.*

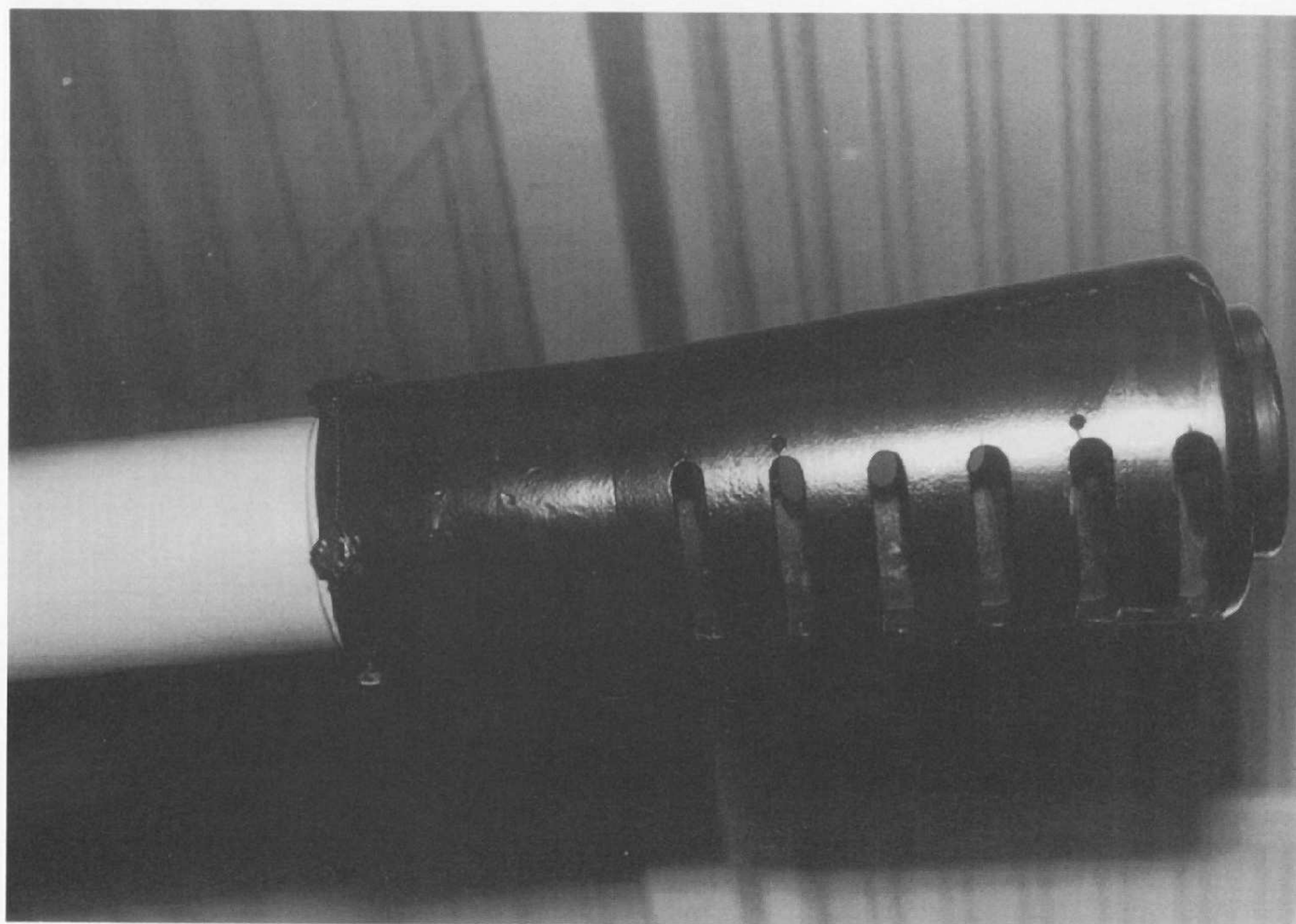
### 8.5 cm/8.8 cm Flak (r)

The army flak units stationed in Normandy, of which there were 12 batteries around Cherbourg alone, were partly equipped with the 85mm Flak M 39 (r). Beginning in 1942, Rheinmetall converted these captured weapons to fire German 88mm flak ammunition, by inserting the gun tube of the 88mm Flak 18. As well the

springs of the spring compensator had to be strengthened. Equipped with German automatic fuse setters and a fuse indicator, the weapon could be used for air defense but also against sea and land targets. In Normandy the M39 (r) proved especially effective in the anti-tank role.



*The 8.8 cm/8.5 cm Flak M 39 (r) in firing position. The rubber-tired iron wheels proved to be very robust and durable. With a barrel length of 4,693mm (55.2 calibers), the gun achieved a muzzle velocity of 800 m/sec and a maximum firing range of 15,500 meters. By comparison the German 88mm Flak 18/36 achieved a maximum firing range of only 14,800 meters. More than 1,000 Flak M39 (r) guns were used by the Wehrmacht.*



*Left:  
The muzzle brake of the 8.5 cm/8.8 cm Flak M 39 (r), which was screwed onto the barrel.*



*A navy war correspondent films the aiming process of the 210mm Skoda cannon in the St. Marcouf Battery.*

# COASTAL BATTERIES IN THE ALLIED LANDING ZONE ON JUNE 6, 1944

Vasouy	NMAA 266	3 x 150mm SK L/45
Villerville	AHKAA 1/1255	4 x 155mm ?
Manoir Normandie	AHKAA	4 x 105mm K331 (f)
Manoir Claire F.	AHKAA	6 x 155mm
Mont Canisy	AHKAA 2/1255	6 x 155mm K 420 (f)
Champs Rabats	A 1711 Art.Rgt.	4 x 155mm
Houlgate	AHKAA 2/1260	4 x 155mm
Riva Bella	AHKAA 1/1260	6 x 155mm K 420 (f)
Merville	A1716 Art.Rgt.	4 x 100mm LFH 14/19 (t)
Ouistreham	A1716 Art.Rgt.	4 x 105mm LFH 18M
Colleville-Montg.	A1716 Art.Rgt.	3 x 150mm (under construction)
Bény-sur-Mer	A1716 Art.Rgt.	4 x 105mm LFH 18
Mare Fontaine	A1716 Art.Rgt.	4 x 105mm LFH 18
Ver-sur-Mer	AHKAA	4 x 122mm K390/1 (r)
Vaux-sur-Aure	A1352 Art.Rgt.	4 x 105mm LFH 18
Ferme Tringale	A1352 Art.Rgt.	2 x 105mm LFH 18
Lieu-dit Pierre S.	A1352 Art.Rgt.	2 x 105mm LFH 18
Longues-sur-Mer	NMAA 260	4 x 150mm TbtK C/36
Pointe du Hoc	AHKAA	1 x 122mm K390/1 (r)
Maisy la Perr.	AHKAA	6 x 155mm GPF K418 (f)
Maisy la Mart.	A1352 Art.Rgt.	6 x 155mm FH 413
St. Martin-de-Varreville		4 x 105mm LFH 18
Azeville	AHKAA 1/1261	4 x 105mm 331 (f)
St. Marcouf	AHKAA 2/1261	4 x 105mm 331 (f)
	NMAA 260	3 x 210mm K39/41
		1 x 155mm K420 (f)
Mont Coquerel	AHKAA 6/1261	4 x 105mm K 331 (f)
Aumeville-Lestre	AHKAA 8/1261	4 x 105mm K 331 (f)
Crasville	A HKAA 5/1261	4 x 105mm K 331 (f)
Morsalines	A HKAA 6/1261	6 x 155mm K 420 (f)
La Pernelle I	AHKAA 9/1261	6 x 105mm K 331 (f)
La Pernelle II	AHKAA 10/1261	3 x 170mm K 18

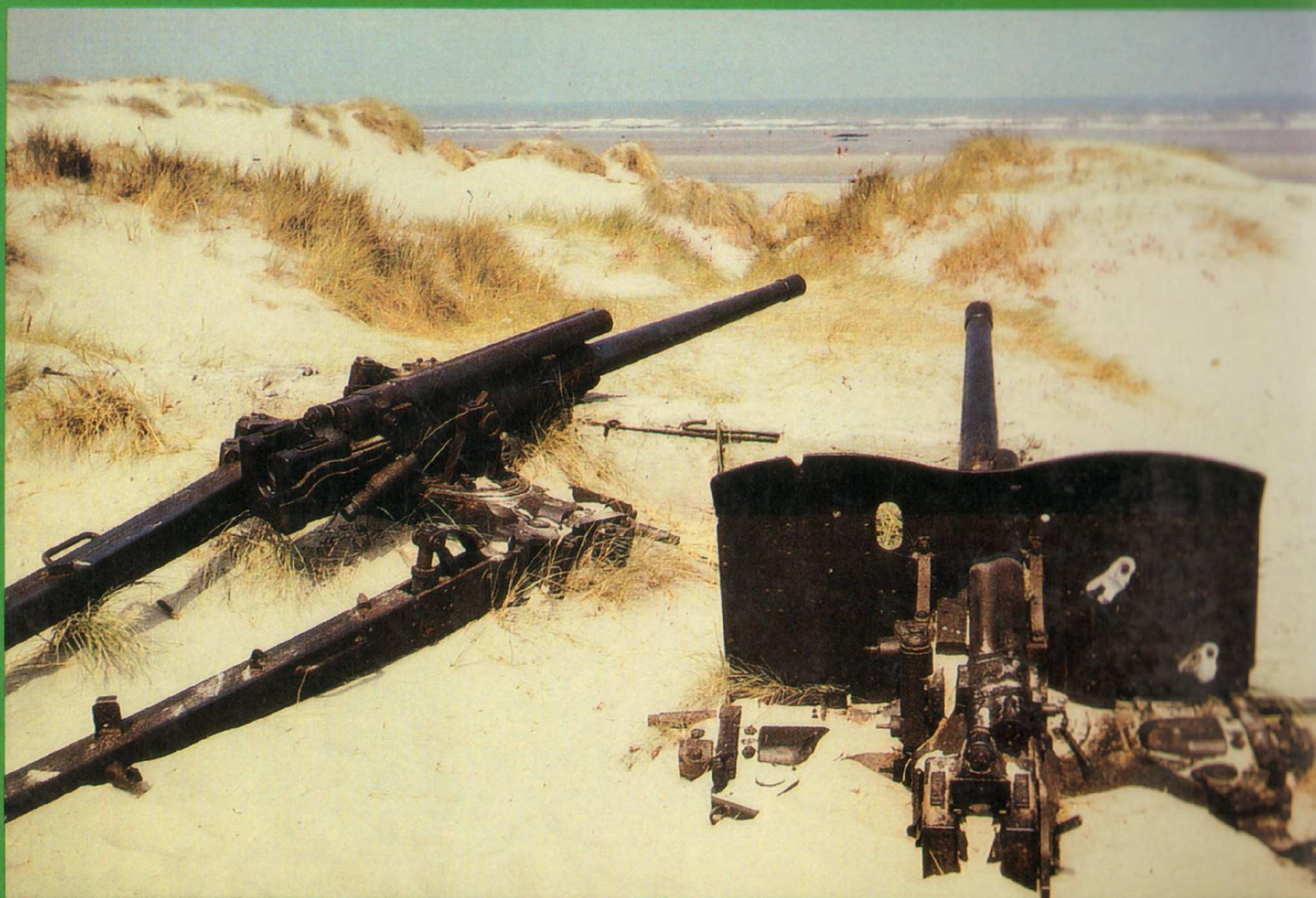
A = Army      N = Navy      HKAA = Army Coastal Artillery Battalion      MAA = Naval Artillery Battalion



*A 105mm Light Field Howitzer 18/42 in an improvised firing position on the Normandy coast. This cannon, which was built by Krupp, was one of the weapons most used by the army artillery on the invasion front.*



*A 155mm Kanone 420 (f) of the Riva Bella Battery with its barrel at maximum elevation of +38 degrees. (BA)*



*Two 47mm Pak 181 (f) anti-tank guns of Resistance Nest W 5 after the war.*

*The bridge over the Caen Canal in 1993. In the foreground a 50mm KwK L/60 tank cannon.*

