

The German mine launchers and grenade launchers in World War I

Guns for the Pioneers

One of the most important tasks of the pioneer troop has always been the construction and removal of fortifications and bridges. For this reason, artillery, pioneers, pontooners, sappers, etc. formed a single branch of arms for centuries: the so-called *engineer troop*.

Only with Scharnhorst's reforms during the Napoleonic Wars did the "fighting" Artillery separated from the "non-combat" engineering and pontoon troops - at the request of the artillery, which saw this combination as a threat to their newly won position as a branch of arms with equal rights alongside infantry and cavalry.



25 cm heavy mine launcher.

However, while the artillerymen naturally took their guns with them, they continued to leave the less than glorious task of removing field fortifications to the engineer force. Without cannons and mortars, this now had to fall back on simpler means, such as the so-called *rod charges* - rods up to four meters long with a remotely detonable explosive charge at the tip.

Originally gun cotton was used for this load, followed from 1888 by *Garnet Powder 88* (a picric acid derivative) and finally in 1902 by *Filler Powder 02* (TNT).

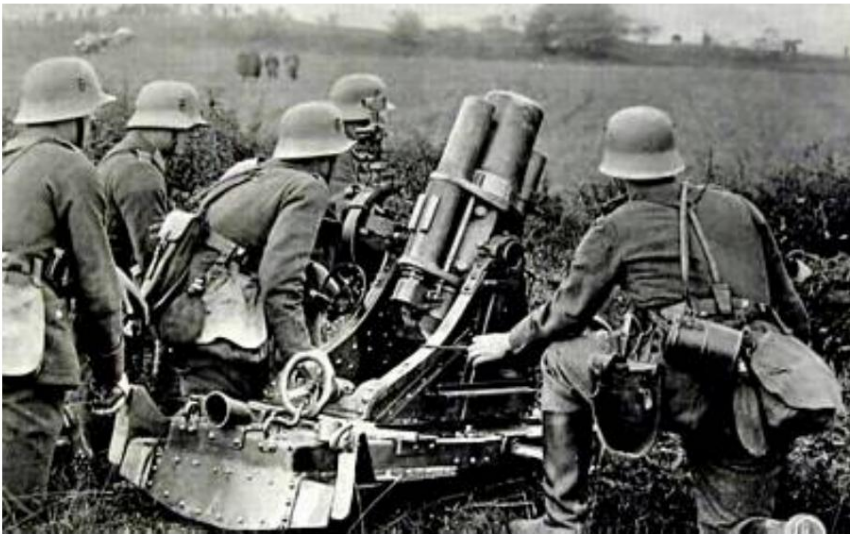
In an emergency, the sappers with this unwieldy equipment and protected only by thick woolen coats had to crawl to the enemy fortifications up to pole length, and then the charges

ignite. A highly risky procedure in view of modern bolt-action rifles and the ever-increasing explosive charges! Sometimes the charges were also thrown in the manner of a hand grenade, but in a prone position and under enemy fire that was not a good solution either.

It was clear to the German sappers that they needed some kind of gun that could destroy obstacles and fortifications at a distance. However, since guns were nominally a matter for artillery, the influential APK (*Artillery Examination Commission*) refused any cooperation. So it was up to the pioneer troop to remedy the situation.

In 1907, the Engineering Committee - normally responsible for designing fortifications - began designing a special weapon to deliver explosive charges (also known as "mines" at the time) over long distances. The Ehrhardt company was contacted for technical support, since the usual gun supplier Krupp was too much under the influence of the APK.

The first generation of mine launchers

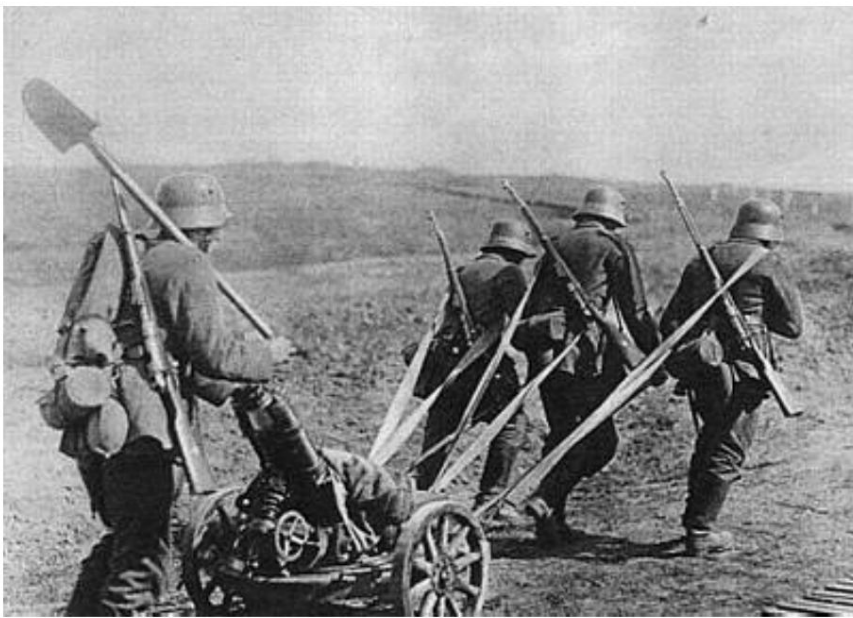


25 cm heavy mine launcher, old type.

The first result of this work appeared just three years later: the *25 cm heavy mine thrower (sMW)*.

This weapon was essentially an extremely short-barreled mortar that fired projectiles with an extremely high explosive charge (50 kg of TNT in a 97 kg shell). Its range was rather short at just under 600 m, but this was more than compensated for by its high firepower.

Unlike classic mortars, however, the barrel of the 25 cm sMW was rifled to improve aiming accuracy and also had a barrel return. But it was still loaded in the classic way from the muzzle. A total of 44 examples of this weapon were built in the greatest secrecy until the beginning of the war and, alongside the super-heavy 28 cm, 30.5 cm and 42 cm artillery mortars, formed the backbone of the siege artillery. The *17 cm medium mine thrower (mMW)* followed in 1913 as a more mobile and cheaper support, which was nothing more than a scaled-down version of the 25 cm model. At the beginning of the war there were 116 of this type in the troops.



7.85 cm light mine launcher, old type.

The *7.85 cm light mine launcher (LMW)* was actually intended as the third model in the series and the main weapon for those pioneer units that accompanied the army's assault spearheads .

However, only a single prototype existed in 1914. Although this was put into production as quickly as possible after the first experiences with the two larger brothers, it was ultimately only produced in small numbers.

The second generation in 1916

As the fronts froze in trench warfare, there were increasing demands for weapons that could reach further and also cover the rear areas of the ever-expanding trench systems on both sides.

In addition, the mine throwers originally used directly at the front were increasingly moved to the rear, mostly in separate positions, in order to prevent return fire from enemy artillery.



7.85 cm lightweight mine launcher, new style, with maximum barrel elevation.

The medium and heavy mortars were therefore replaced in production with revised versions that featured a longer barrel and a larger barrel riser for more range.

In addition, they were mounted on turntables that allowed full 360° lateral orientation. In order to differentiate between the two versions, the old models received the suffix *a/A* (= "old type"), while the new models were given the designation mMW 16 or sMW 16, based on the year of introduction 1916.

The IMW was also replaced on this occasion by a more modern variant, which was inconsistently referred to as IMW 16 or IMW n/A (= "new type"). The reason for this change, however, was not the range of the weapon and it had already had a turntable in the old version. Instead, the gun was given a short spigot tail, which served as a support to fire the LMW at very low elevation (up to horizontal).

Despite all the advantages they offered in trench warfare, the mine throwers were more of a marginal phenomenon at the front until the end of 1916. Then, however, OHL apparently realized that for the price of a single 77 mm field gun, seven IMW could be built, or corresponding numbers of mW and sW. In addition, the production of shock-resistant explosives could no longer keep up with consumption at the front. Therefore, the focus was on the mine launchers with their much lower muzzle velocity and thus a much lower load on the grenade.

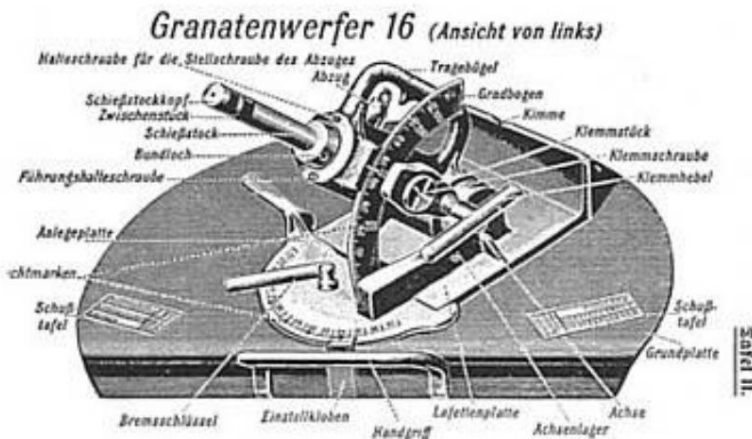


7.85 cm lightweight mine launcher, new style, with minimal barrel elevation.

As a result, the production of mortars was stepped up considerably and the stock of mortars increased from 44 sMW and 116 mMW in August 1914 to 1,234 sMW, 2,361 mMW and 12,329 IMW in November 1918.

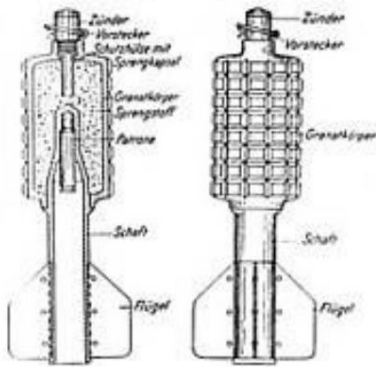
In addition, the *very heavy 38 cm mine launcher* was also produced in small numbers, but it did not prove particularly effective due to its immobility.

Grenade launcher 16



Seite 11.

Wurfgranate 1915.



At the other end of the size scale, the British had meanwhile introduced the highly successful Stokes Trench Mortar, which was vastly superior in mobility to its German counterpart - the IMW n/A.

Three soldiers were able to position this weapon without any problems, even in the most adverse terrain.

In response, the Stock & Co company in Berlin-Marienfelde acquired the license to build the *priest-thrower* for the Austro-Hungarian army.

This fired a wing-stabilized projectile weighing about 2 kg over a distance of about 500 m. Its somewhat strange name came from the fact that its inventor was a Hungarian priest named Vécser.

In order not to evoke unwanted associations ("A mine thrower throws mines, a priest thrower throws...") it was only given the sober name *Granatenwerfer 16* in the German army.

The weapon performed extremely well in the field and, when broken into two parts, was even more portable than its British counterpart. In theory, each infantry company should receive two of these, but production figures never reached the required level.

After the Great War

With the end of the First World War, the history of mine and grenade launchers quickly came to an end:

- The 25 cm heavy mine thrower 16 fell under the restriction of the Versailles Treaty that the Reichswehr was not allowed to have heavy artillery.
- The *Granatwerfer 16*, on the other hand, was replaced by various designs based on the technically simpler Stokes mortar, which eventually led to the smoothbore 5 cm, 8 cm and 12 cm mortars of the Wehrmacht in World War II.
- The 7.85 cm light mine thrower 16 and medium mine thrower 16 remained in service with the Reichswehr until the 1930s, when they were then replaced by the above-mentioned mortars.

Technical specifications

	grenade launcher 16	7.85 cm lighter Minenwerfer n/A	17 cm medium mortar 16	25 cm heavy mortar 16
Caliber:	-	7,85 cm	17 cm	25 cm
Weight:	38,1 kg	133,5 kg	509,8 kg	629,2 kg

tube length:	15,2 cm	41,7 cm	65,5 cm	76,2 cm
bullet weight:	1,9	4,4 kg	51,3 kg	92,6 kg
muzzle velocity:	kg ?	80 m/s	80 m/s	67 m/s
Range:	460 m	1.190 m	1.060 m	890 m
Height direction:	Max +80°	0° to 75°	Max +75°	Max +75°
page direction:	140°	360°	20th	20th

The above is a reproduction of the article Die deutschen Minenwerfer und Granatenwerfer from the website Battlefield 1918. The author's name is not available.