

Tunnel warfare

Tunnel warfare is a general name for [war](#) being conducted in [tunnels](#) and other underground cavities. It often includes the construction of underground facilities in order to attack or for defense and the use of existing natural caves and artificial underground facilities (catacombs, city communications, etc.) for military purposes. Tunnels can be used to undermine [fortifications](#) and slip into territory, while it can strengthen a [defense](#) by creating the possibility of [ambush](#), [counterattack](#) and the ability to transfer troops from one portion of the battleground to another unseen and protected. Also tunnels can serve as shelter for troops and people from enemy attack.

It can be sometimes linked with [urban warfare](#), as tunnels are often found in urban areas and [cities](#), although urban warfare as a whole usually dominates any tunnel considerations.

Tunnels, due to their nature, restrict [fields of fire](#) and thus any troops in a tunnel usually only have a few areas exposed to fire or sight at any one particular time. Also they can be part of an extensive [labyrinth](#) and have [cul-de-sacs](#) as well as reduced [lighting](#) that can create a closed-in night environment.

Modern warfare

Increased firepower that came with the use of [gunpowder](#), [cordite](#) and [dynamite](#) made above ground fortifications very expensive if they should withstand any attack. Fortifications were covered with earth and finally they were built totally underground to protect crews and ammunition. For the purpose of firing, [artillery](#) and [machine gun](#) emplacements had [loopholes](#).

Such a tunnel fortress was difficult to enter and inside there was no room for the attackers to hide from gunfire and explosives. On the other hand [poison gas](#) proved to have a devastating effect.

In [trench warfare](#) with heavily fortified strongholds, the tactic of digging and [mining](#) the enemy positions was used in the [American Civil War](#) during the [Siege of Petersburg](#) and the [Russo-Japanese War](#) during the [Siege of Port Arthur](#). Extensive mining warfare was conducted by German, French, British and Australian troops on the [Western Front](#) during [World War I](#), where the largely static frontlines created favorable conditions for mining.

The largest mining operations were conducted in the [Battle of Messines](#), where specialist [Royal Engineer tunnelling companies](#) placed 22 mines under [German](#) lines. 19 were eventually exploded, killing about 10,000 German soldiers. Underground attacks especially broke the morale of the enemy if he was surprised in his secure positions. However, the huge craters that are the results of mining enemy positions could be obstacles during an advance, as was found at Petersburg [Battle of the Crater](#) and the Somme. Tunnels built to secure frontline supply were built in several places on the Western Front.

On the [Eastern Front](#), the successful [Brusilov Offensive](#) employed tunnel/trenches to allow the Russian troops to start the initial assault very close to the Austrian trenches. During [World War II](#), the [rapid transit systems](#) that existed in many cities became another military consideration.

The lessons of these battles led to the construction of even bigger systems of defense underground, like the [Maginot line](#) or the [West wall](#) with their own infrastructures.

[North Korea](#), it has been claimed, has prepared several transport tunnels with a capacity 10,000 troops per hour for a possible invasion of [South Korea](#). This melds the defensive tunnel warfare with [mobile warfare](#). ^[*by whom?*]

The term **tunnel war** or **tunnel warfare** was first used for the [guerrilla](#) tactic employed by the Chinese in the [Second Sino-Japanese War](#). The tunnel systems were fast and easy to construct and enabled a small force to successfully fight superior enemies.