Great Chain of The Golden Horn: Constantinople's Impenetrable Barrier

For all capital cities in ancient and modern history, protection is a major survival strategy. The legendary Constantinople was no exception. It was one of the richest cities in the history of the world and a a cradle of Western civilization as an imperial capital for almost 16 centuries. How do you protect a vital and large capital? But the secret was its position. On a strategic peninsula, it was vulnerable. The solution for was a great chain "barrier" across the Golden Horn waterway. It was instrumental in defending the city's main naval access point, preventing attack and invasion for centuries until the city finally fell in 1453 AD.

Constantinople's Golden Horn: Advantages And Disadvantages

Naval warfare and naval military technology have long been fields of innovation and strategic advancement. In those days, a powerful naval force meant a city or empire could undertake naval sieges and blockades or wage long range warfare. But for Constantinople, a naval attack could quickly spell doom because of the Golden Horn's vulnerabilities and it's position close to the city.

The Golden Horn is an estuary of two rivers and an inlet in the larger Bosphorus strait. It is (4.66 miles) long and (2,460 ft) at its widest point. The maximum depth, at the point where it flows into the Bosphorus, is about (115 ft).

The Golden Horn was a rich and busy waterway as early as 6700 BC, with numerous ancient settlements around it. Its importance developed around the 7 th century BC.

In 2008,a settlement and burial site was discovered which pushed the history of the city back to 6500 BC. But beginning around the 7 th century BC, the Golden Horn became a vital waterway crucial to trade in the ancient world.

Constantinople's Great Chain: Powerful Linked Iron Barrier

Constantinople's waterway was not used exclusively for trade and such an inlet becomes a big opportunity for a cunning attackers. A fleet could enter, bypass the horn-shaped harbor and strike.

Byzantines made use of a trusted naval defense method, a large chain strung and tightened at a crucial moment, preventing entrance of ships. It was placed at the entrance to the waterway. It extended from the Tower of Eugenius on the city's outer walls to the so-called *Megálos Pýrgos* , the Great Tower, on the other side of the waterway.

In the era it was built, the construction was a major architectural and engineering achievement. It was made from hundreds of heavy forged iron links. When fully extended, it was (0.46 miles) long.

The preserved portion of the great chain has links that weigh between (26-33 pounds). Each link is (20 inches) long and (2 inches) thick. Some scholars claim that this "old" chain dates to a later period and that earlier period chains may have been heavier.

Historical sources such as the late Byzantine chronicler and historian George Sphrantzes, a witness of the Fall of Constantinople, wrote: "*…the chain was extremely heavy... the emperor ordered that this very heavy chain of iron be placed at the mouth of the harbor"*.Sources suggest each individual link could have been as long as (3.2 feet). When not deployed – which was very often – the chain in its dormant state had 9 catenary curves. A catenary is the natural curve that a chain assumes under its own weight. These sags were the result of 10 support points: two were the tower endpoints, and the other eight were on large pyramidal pontoons which stretched across the Golden Horn waterway. Enormous pontoons were made from tree trunks, fastened together by iron plates. The chain and suspension system were impenetrable. The these pontoons measured (65 x 49 ft). From two towers, the chain was operated by a complex and ingenious system of wheels, pulleys, and water tower counterweights.

The Arabs Try To Break Through Constantinople's Great Chain

For centuries, the chain proved was a most important defensive strategic in the Mediterranean. Muslim Arabs, between 717 and 718 AD, of the notorious Umayyad Caliphate, launched a devastating and decisive attack against Constantinople. Their powerful and numerically superior fleet was a huge advantage. The Byzantines, led by the Emperor Leo III the Isaurian, came up with a plan and the chain was crucial.

September 3 rd 717 AD, the Arab fleet attacked and entered unopposed; with the chain lowered. It was Leo III's strategy. The Arab fleet entered deeper and drew their ships closer to the city walls.

Leo ordered the be chain raised and immediately and the defenders of Constantinople began a devastating attack with highly flammable *Greek Fire*, a combustible compound from a flame-throwing weapon. Some historians believe it could be ignited on contact with water. Possibly a mixture of naphtha and quicklime.

Off guard, the Arabs lost, burned alive as their burning ships sank. The chain barred retreating vessels causing additional deaths.
Getting Past Constantinople's Great Chain Was Possible
One of the earliest records of the chain is the time when it was of *no* use. The attackers came in the back door.

Sometime during the 940's AD, the Rus' prince, Igor of Kyiv , attacked, relying heavily on his powerful fleet, which the Viking-influenced Rus' were well known for. Igor had his fleet carried across land; a practice in constant use by the Rus'. Warships were rolled on huge logs, bypassing dangerous routes by using this as a tactical advantage, he attacked by bypassing the chain.

Igor of Kyiv lost. His numerically superior fleet was destroyed by a small, rundown flotilla that was purposely set on fire and, in the narrows, his fleet of warships was consumed by fire ships. Igor of Kyiv never fully recovered from this devastating defeat.
But in April 1453, 70 Ottoman galleys were portaged and put in on the other side of the chain. They were cut off from the greater part of their fleet, which remained behind the chain that could not be broken and Ottomans won in May 1453 AD.
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