



**Simon Lake**

# Simon Lake: The Inventor and his Submarines Part III: Lake Torpedo Company

by Bob Bachand

John Holland's submarine *Plunger*, built in 1897 at a dry dock alongside Simon Lake's *Argonaut I*, was a disappointing failure (See Part II). The government funds that had been awarded

for its construction could not be used for Holland's newly designed submarine. Faced with inadequate funds to build his new vessel, Holland's company joined into a partnership with the Electric Launch Company. Together, the two formed the Electric Boat Company, which eventually would become part of General Dynamics.

Simon Lake was determined to get beyond his successful underwater salvage operations. Sometime during 1900, he formed the Lake Torpedo Company at Bridgeport, Connecticut, where he made plans to build submarines to compete for government contracts.

Lake moved quickly. On November 1, 1902, his submarine *Protector* was launched at the Bridgeport shipyard. The sixty-five-foot long, eleven-foot beam vessel was, like Lake's earlier submarines, designed mainly as a defensive weapon, but it had a great deal of firepower. She was armed with three torpedo tubes, two at the bow and one at the stern. *Protector* also incorporated the usual Lake design, wheels to run on the bottom and a forward pressurized compartment with its diver's hatch. On the surface, the submarine was powered by two 250-horsepower, four-cylinder gasoline engines; underwater she was propelled by electric engines. The vessel was submerged by flooding its ballast tanks, and once underwater, four hydroplanes kept her on an even keel. On the surface, the boat could attain the speed of eleven knots; submerged she could run at a maximum of seven knots.

In July of 1902, *Scientific American* published an article entitled *The "Blindness" of the Submarine*. It described several attempts made by the French and Italians to produce periscope-like devices. They all apparently had failed.

John Holland's submarine *Plunger* was equipped with an apparatus called "camera lucida." It produced a shadow-like image on a white background, but it was useless for determining distance or direction. Lake finally solved the blindness factor with his most important innovation, the omniscopes,

an early version of the periscope. Lake incorporated the omniscopes in building *Protector*. Sir Howard Grubb later perfected the instrument for British submarines.

In 1902 and 1903, *Scientific American* published two separate articles on the submarine *Protector* in which, after examining the vessel's performance, the authors gave it high praise. Lake approached the Navy requesting that it run trials on his company's newest submarine. However, by the time the "brass" got around to scheduling trials between Electric Boat's newest sub, *Fulton*, and Lake's

pleted in Russia. *Protector* was later transported by rail across Siberia to the port of Vladivostok where she might have given battle to one of Electric Boat's submarines (Electric Boat had sold five subs to the Japanese), but by that time the conflict had ended.

In 1906 Lake built an 85-foot submarine in hopes of selling it to the U. S. Navy. Named *Lake* after its inventor, the vessel was put up against Electric Boat's latest submarine, *Octopus*, but once again Electric Boat was awarded the contract. Two years later, led by U. S. Representative Lilley of Connecticut, Congress investigated charges of cronyism

regarding the Navy's dealings with Electric Boat. A short time later the Navy awarded the Lake Torpedo Company its first contract. But unlike Electric Boat, Lake's company had to finance construction of its submarine from its own funds. The company finally was paid for its boat after a series of successful sea trials were performed by the submarine.

Government orders for additional submarines began coming in. Lake's Bridgeport facility expanded, and by 1916 some 5,000 workers were employed at the shipyard. Between 1911 and



**Bow view of the R-26 at the Bridgeport shipyard.**

*Protector*, it was too late. Faced with growing financial problems, Lake already had agreed to transport his submarine to a Russian base for sea trials.

The Russians and Japanese were at war (Russo-Japanese War), and if the Japanese detected the shipment of *Protector* to their adversary, they certainly would have protested. Both countries were vying for the purchase of undersea warships from Holland and Lake.

To avoid discovery, Lake and his crew waited to head out of Bridgeport until dark. It was an ideal night. Fog covered portions of Long Island Sound as the submarine made its way toward the East River, its conning tower just breaking the surface. Still under cover of dark, they arrived at Prince's Bay, near Sandy Hook. In the early morning hours, she was loaded aboard the steamer *Fortuna* for transport to Russia. However, despite the precautions, reporters suspected that *Protector* had been taken out of the country. On the following day, a *New York Times* article posed this question in its header, "Submarine Sent to Japan? Capt. Simon Lake, the builder of the submarine named after him, was seen to-day, and refused to deny or affirm the report. He said the *Protector* had gone from here, but where he would not state."

The Russians were impressed with Lake's submarine. They immediately ordered five additional boats. The submarines were built partially and assembled at the Newport News Shipbuilding Company and then shipped and com-

1921, the company built thirty-three submarines for the Navy. Many were built at Bridgeport, while others were contracted out to a Long Beach, California dry-dock, Newport News Shipbuilding (Virginia) and the Portsmouth Navy Shipyard (Kittery, Maine).

The Lake Torpedo Company did not last long beyond the end of World War I. Some of the allies that had fought together asked, "Is the submarine a legitimate weapon?" U-boat warfare had destroyed 12,000,000 tons of shipping and taken hundreds of allied and enemy lives. There were demands by a few nations that this type of war vessel be abolished on humanitarian grounds. The French considered the submarine necessary for their defense, and the Americans felt that the boats should be retained under certain restrictions. As the controversy dragged on, it curtailed most submarine construction.

The Lake Torpedo Company closed its doors in 1925, but its founder was undeterred. Lake made plans to produce prefabricated concrete homes that he called Sunshine Homes. Imitating Henry Ford's production line, he intended to mass produce components for the structures in an assembly line. Unfortunately, his idea never got off the ground, but when we look at many of today's methods of private home construction, he was ahead of his time.

Like all great inventors, Simon Lake was bright, imaginative and a risk-taker. Some regard Lake as the "Father of the Modern Submarine," while others feel that the title rightly belongs to John Holland. But when the accomplishments of both men are reviewed, it is reasonable to conclude that both men share in the title.

The last article in this series covers Simon Lake's submarine *O-12*. Renamed *Nautilus*, she was the first sub to attempt a trip under the Arctic ice.



**USS *Plunger*, a 107-ton Holland-type submarine built at Elizabethport, NJ, was commissioned in September 1903.**