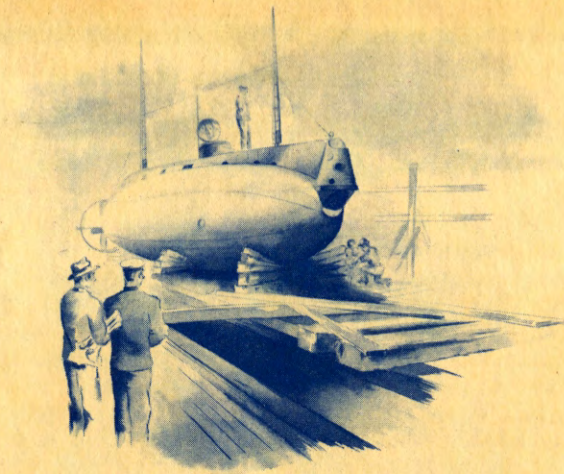
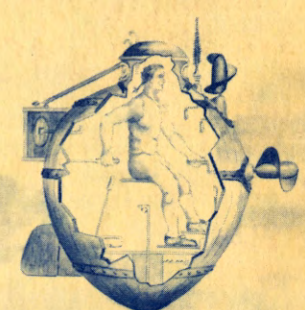




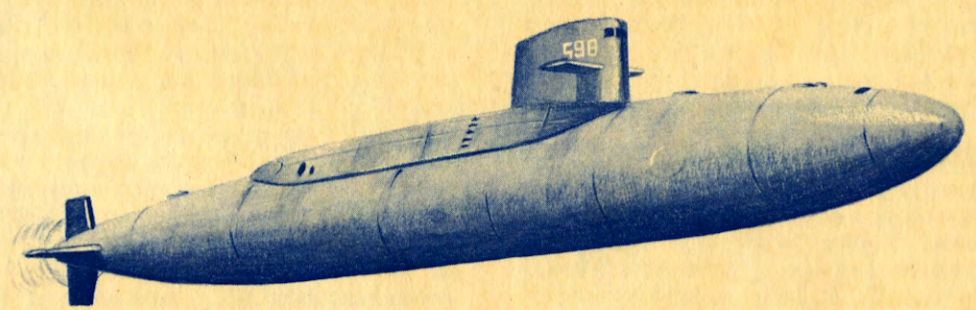
ALEXANDER THE GREAT
DIVING BELL 300 B.C.



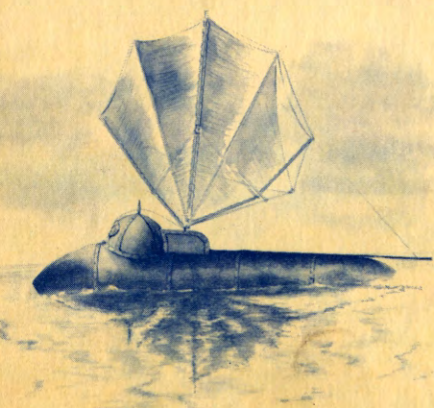
USS HOLLAND 1900



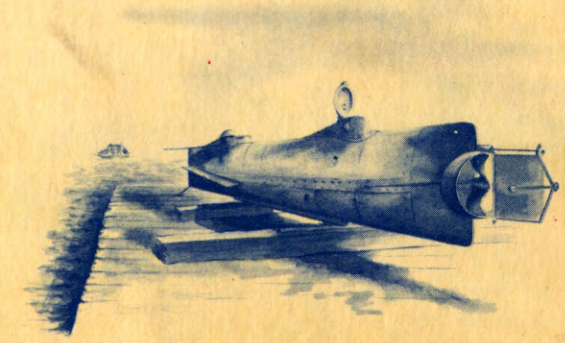
DAVID BUSHNELL'S TURTLE
1776



USS GEORGE WASHINGTON — SSB(N) 598
WORLD'S FIRST FLEET BALLISTIC MISSILE SUBMARINE



ROBERT FULTON'S SUBMERSIBLE
1800



THE HUNLEY
1863

GD
GENERAL DYNAMICS
ELECTRIC BOAT
GROTON, CONNECTICUT

'Inner-Space' Explorers



USS SEAWOLF
SS(N) 575

In the summer of 1958, the USS Seawolf, second of the A-sub, captured the world's attention and established her own niche in the annals of submarine achievement by staying submerged, completely independent of the earth's atmosphere, for a record 60 days. In doing so, the Electric Boat-built Seawolf demonstrated the ability of the nuclear submarine as a weapon that can remain hidden for long periods of time. The Seawolf was launched on July 21, 1955 and commissioned on March 30, 1957.



USS NAUTILUS
SS(N) 571

A new era in the history of submarine building and underwater travel began at Electric Boat Division January 21, 1954, with the christening by Mrs. Dwight D. Eisenhower of the revolutionary Nautilus. First of the nuclear-powered submarines, she represented man's first attempt to harness the power of the atom for undersea craft propulsion. And so successful was the attempt that the Nautilus—commissioned on September 30, 1954—traveled 62,559 miles on her nuclear reactor before being refueled for the first time. In August, 1958, the Nautilus proved the feasibility of underwater Arctic operations by becoming the first submarine to travel submerged from the Pacific to the Atlantic via the North Pole.



USS SKATE
SS(N) 578

As the first nuclear submarine designed for quantity production, the USS Skate—displacing 2,360 tons and measuring 268 feet—was commissioned at Electric Boat in December, 1957. The following year she got her first taste of Arctic travel by following the Nautilus under the Polar ice. And on March 17, 1959, the Skate became the first submarine in history to surface at the North Pole. While there, her crew scattered the ashes of Sir Hubert Wilkins, the late famed Arctic explorer.



USS SKIPJACK
SS(N) 585

Skipjack, the first A-sub to feature diving planes on her sail, is the fastest and most maneuverable submarine in the Navy. She is also the first of the "shark-shaped" hull nuclear subs. Because of her exceptional maneuverability, cruising aboard the Skipjack has been likened to flying an airplane. Measuring 252 feet and displacing 2,830 tons, the Skipjack was launched at Electric Boat in May 1958, and commissioned in April of the following year.



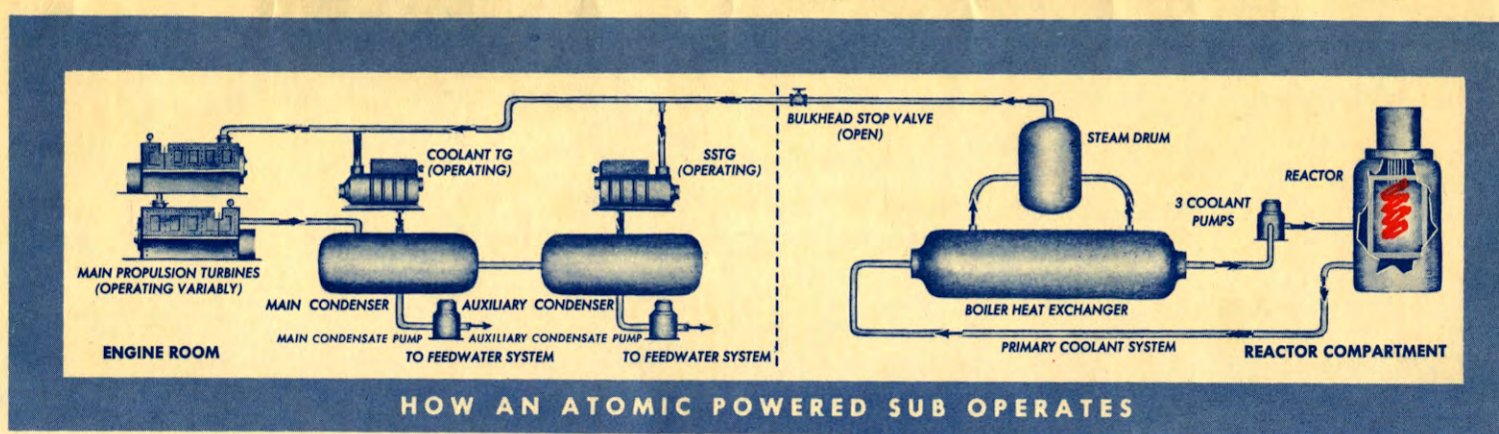
USS TRITON
SS(N) 586

The USS Triton, world's largest submarine, on May 11, 1960, completed the first submerged circumnavigation of the globe. Covering 41,500 miles in 84 days, the nuclear-powered Triton followed much the same route as did Ferdinand Magellan, 16th century explorer. In honoring the submarine's commanding officer and crew on their return, President Dwight D. Eisenhower called the Triton feat an "extraordinary accomplishment." The Triton was commissioned at Electric Boat in November, 1959, and is the only nuclear submarine powered by twin reactors. She is 447 feet long and displaces 5,900 tons.



USS GEORGE WASHINGTON
SSB(N) 598

The USS George Washington, first of the Polaris-firing submarines, was commissioned at Electric Boat on December 30, 1959. Hailed as one of this country's prime deterrents to war, the Washington is a virtually invulnerable mobile underwater missile launching platform. The Washington's equipment includes a gyro stabilizer for keeping her steady in rough seas and three Ships Inertial Navigation Systems. Polaris subs are named after famed Americans.



"Underway On Nuclear Power"

Here's how the Nautilus, the George Washington and other nuclear submarines operate:

Prior to the successful harnessing of the atom for propulsion, submarines were severely limited in underwater endurance. The oil-consuming diesel engines required air with which to burn the fuel. Therefore, the engines could be operated only when the submarine was on the surface, or when the snorkel—a pipe to the surface—was raised. The snorkel, of course, presents an object which can be seen or detected by radar. When completely submerged, a conventional submarine must derive her propulsion from her storage batteries. With no means of recharging other than by snorkeling or running on the surface, the submerged endurance on a single charge was limited to a matter of hours.

Atomic engines overcame the handicap that had plagued submarines through their entire history. The nuclear power plant is, in the simplest terms, a steam engine of fantastic endurance.

In the operation of a nuclear submarine, a tiny lump of enriched uranium makes possible a controlled nuclear reaction, causing tremendous heat. This heat boils water, converting it to steam which drives large turbines. The movement of these turbines turns the submarine's propellers and also drives turbo-generators which fill the crew's electrical needs. The atomic engine, needing no oxygen, thus makes the submarine a sort of underwater city, capable of subsistence to the limits of the humans aboard.

The era of the Nuclear Navy began on January 17, 1955, when the USS Nautilus slipped away from piers at General Dynamics/Electric Boat in Groton, Conn., and flashed the historic message: "Underway on nuclear power."

In the years since, nuclear powered submarines have become one of our nation's most versatile and formidable weapons. They range from fast attack vessels to anti-submarine submarines, from the world's largest submarine to the Fleet Ballistic Missile submarine—a nearly invulnerable mobile missile launching platform.

Atomic submarines have almost unlimited endurance and can remain submerged, completely independent of the earth's atmosphere, for periods of more than two months. Nuclear reactors propel them at high speeds, and they can travel well over 100,000 miles without refueling. Thus, nuclear submarines are free to operate in all the oceans which cover seventy per cent of the earth's surface.

On December 30, 1959, an entirely new concept came into being with the commissioning of the USS George Washington, a nuclear submarine capable of firing 16 Polaris intermediate range ballistic missiles from submerged positions. This type of submarine has been hailed as the nation's greatest deterrent force.

Hidden in the depths of the ocean, almost immune from attack, the Polaris submarine is always ready to counter aggression with missiles having greater destructive power than all the bombs dropped by both sides in World War II.

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