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August 19, 1999

The cased presentation chest was given to Rear Admiral Ralph Earle on his retirement from the the united states navy. This contains one of each of the detonators he invented while he was in the service

Admiral Earle ,was chief of the Bureau of Ordnance during World War I, and on December 13, 1943 the station was commissioned as the Naval Ammunition Depot Earle

RALPH EARLE—*Naval
Officer and College President*



"Each year, there come to Annapolis, in Maryland, youths from every section of these United States and from the islands of the sea to be molded into naval officers wherewith the nation's Fleet is manned.

"In each of the successive decades of naval annals *one* arises who embodies within himself all of the elements of the ideal naval officer.

"*Such was RALPH EARLE.*"

—W. T. CURVEAUS



R A L P H E A R L E

—*Naval Officer and
College President*

By

REAR ADMIRAL W. T. CLUVERIUS, U. S. N. (RET.)

Member of The Newcomen Society

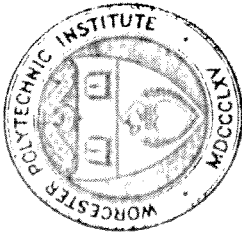
President

Worcester Polytechnic Institute



A Newcomen Address

1940



In his opening remarks during this Memorial Meeting at the Union League Club, Admiral Cluverius made the following statement:

"It is my privilege, first, to express the sincere appreciation of Worcester Polytechnic Institute to the American Branch of The Newcomen Society of England for its splendid gesture in sponsoring here, in the Nation's metropolis, this meeting in memory of a distinguished president of a New England school.

"I desire, also, to say that I feel deeply honored to have a share in this occasion which commemorates the career of one whose sterling qualities as a man will long be remembered.

"We, all of us who knew him, are indebted to this Society which thus has sought in the presence of his friends, his colleagues, his trustees, and his classmates to pay tribute to RALPH EARLE—Naval Officer and College President."



§ Beloved of the entire Society in America, Admiral Earle served as member of the New England Committee of The Newcomen Society of England. Through the years, he took active part in the work of American Newcomen and at the time of his death had in preparation a manuscript: "GUNS THAT WON A WAR," scheduled to be presented at this same January 1940 meeting of the Society dedicated to his memory and addressed by his distinguished lifelong friend, Annapolis classmate, and successor at Worcester, Admiral Cluverius, Chief of the Bureau of Ordnance, United States Navy, during the First World War, it was Admiral Earle who developed the famous "railroad mounting" for heavy ordnance used by A. E. F. in France. In this work he had the effective help of his old friend, the late Samuel M. Vauclain of Philadelphia, until his death the Vice-Chairman of American Newcomen's Philadelphia Committee. Shortly before his death, Admiral Earle wrote the Office Bearers at New York that he wished, in his Newcomen manuscript, to pay high tribute to Mr. Vauclain.

THE NEWCOMEN SOCIETY OF ENGLAND

THE NEWCOMEN SOCIETY OF ENGLAND was founded at London shortly after the First World War, to encourage and promote research and study of material history, that of Material Civilization, including the history of: Industry, Transportation, Communication, the Utilities, Mining, Economics, Finance, and Banking. Engineering provides a basis for these human activities.

With headquarters at The Science Museum, South Kensington, in London, the British membership includes industrialists, engineers, physicists, educators, historians, and technologists distinguished for their services in various parts of The British Empire.

The Society takes its name from Thomas Newcomen (1663-1729), the British Engineer, whose valuable contributions in improvements to the newly invented Steam Engine brought him lasting fame in the field of the mechanic arts. Newcomen, in partnership with the famous Thomas Savery (1650-1715), developed the Newcomen Engines, whose period of use was from 1712 to 1775. It was in 1764, while working on a model of Newcomen's engine, that James Watt first conceived the idea of a condensing engine: the Watt Engine.

The "Transactions" of The Newcomen Society, issued annually at London, constitute an unique and most valuable contribution to the history of Material Civilization. These annual volumes find their way to technical and university libraries throughout the World.

In 1923, through the initiative and efforts of The American Founder, Mr. L. F. Loree of New York, aided by a small group of well-known American industrialists, bankers, railroad presidents, historians, engineers, and educators, there was founded the American Branch of The Newcomen Society of England. The American Newcomen has its headquarters in those of The American Society of Mechanical Engineers at New York, one of whose officers is the Joint Honorary Corresponding Secretary for North America, in Newcomen Society.

Two principal events in the yearly program of American Newcomen are: the Annual American Dinner at New York, held simultaneously with the British Dinner at London and with exchange of cable greetings; and the "Annual American Pilgrimage" to some point of historic interest concerned with the beginnings of industry, or transportation, or the mechanic arts in America. Papers presented at the Annual Dinners are read simultaneously at London and New York.

A collateral objective of American Newcomen is to provide another informal link in the friendly and intimate relations between the United States and Great Britain. American Newcomen has three Honorary Members.

American Newcomen comprises in its membership many American leaders in the fields of finance, industry, transportation, communication, the utilities, history, science, engineering, university education, and technology. The Newcomen Society of England enjoys international reputation in the value of its papers and meetings, which are based upon exhaustive scientific research in these special fields of History.

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WAT TYLER CLUVERIUS

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*Biographical Sketch
of The Author*

Distinguished Naval Officer, veteran of West Indian, Philippine, Mexican, and First World War sea operations, REAR ADMIRAL W. T. CLUVERIUS, U. S. N. (Ret.) graduated from U. S. Naval Academy Annapolis in Class of 1896. Native of Louisiana, his has been broadest experience in sea duty and as commanding officer ashore. Served as Chief of Staff, U. S. Fleet. Commanded second division of battleships, U. S. Fleet. Commandant: Norfolk Navy Yard; 6th Naval District; Base Force, U. S. Fleet; Philadelphia Navy Yard, League Island. His entire service in the United States Navy, during 43 years, was one of rare distinction. He won repeated recognition. Member: United States Naval Institute; American Society of Naval Engineers. Upon retirement, 1939, became President of Worcester Polytechnic Institute. Is member of New England Committee, The Newcomen Society of England.

R A L P H E A R L E

*-Naval Officer and
College President*

EACH YEAR, there come to Annapolis, in Maryland, youths from every section of these United States and from the islands of the sea to be molded into naval officers wherewith the nation's Fleet is manned.

The pattern of this mold was delineated by Commodore John Paul Jones who, in a letter of 1789 addressed to the commissioners charged with the organization of the new Navy, stated the specifications as follows:

"* * * It is by no means enough that an officer of the navy should be a capable mariner. He must be that, of course, but also a great deal more. He should be as well a gentleman of liberal education, refined manners, punctilious courtesy, and the nicest sense of personal honor."

Naturally, it always has been difficult and many times impossible to meet these exacting requirements because of the manifold variations in the available ingredients. Racial background, differing environment, and diverse characteristics in the make-up of American youths enter into the

problem of producing a worthy product from the mold. That it can be accomplished, however, has been demonstrated. In each of the successive decades of naval annals such a one arises who embodies within himself *all* of the elements of the ideal naval officer.

Such was Ralph Earle.

That he was, professionally, a most able officer the records of the Department of the Navy fully attest; that he possessed a liberal education was recognized by the many institutions of learning who honored him. He was a gentleman and his courtesy stamped every act. Many hold that the "title to honor has been gratuitously conferred on the profession of arms since man began to recognize the nobility of courage, self-sacrifice and devotion to ideals." That honor was safe in this man's keeping.

It is my high privilege to set forth at this gathering the outstanding features of the career of a beloved classmate and a life-long friend.

Ralph Earle was born in the city of Worcester, Massachusetts, on May 3, 1874. His sturdy ancestors were the early settlers of nearby Leicester. From boyhood he had dreamed of a life in the Navy. It has been said that he framed all of his studies with Annapolis in mind. There was one fly, however, in the ointment of his desires, and that was he feared he would not have the requisite five feet and two inches of stature in order to pass the physical examination at the time of his entrance. He set up a horizontal bar in the side yard of his home on Kendall Street where he exercised by the hour in the hopes of becoming taller. Someone, knowing his ambition, told him that long hours in bed accompanied by constant periods of stretching his legs would turn the trick. The assiduity in which this process was carried out caused his parents to intervene. His adherence to his steadfast purpose to follow the

sea was manifested when his parents permitted him, at fifteen, to make a voyage under sail to Cuba. Instead of lessening his desire, this youthful episode strengthened his purpose.

Earle passed through the various grades of the Worcester public schools and, in January 1892, he entered Worcester Polytechnic Institute. Then, in a few months, came the opportunity to realize his boyhood hopes when he won a competitive examination for entrance to the United States Naval Academy. He became a Naval Cadet in August 1892. Persistence was a marked characteristic throughout his subsequent career.

I met him first on the day that he entered the Naval Academy. From that time to the day of his death, Ralph Earle was beloved by everyone of his classmates. He was a loyal, helpful and unchanging friend. From the outset, he took a high scholastic position in his class yet had time to engage in many collateral activities and he enjoyed everything. His interests were wide and he was ever keen "on the job", to which he had set his hand. As an officer in the Corps of Cadets his bearing towards his juniors was just, yet he was most considerate always.

He met the lovely girl that later became his devoted wife while a naval cadet and this meeting typifies still another trait of his. The year-book of our class uses this quotation concerning him:—"I am as constant as the Northern Star of whose fixed and resting quality there is no fellow in the firmament."

There never was but one girl in his heart.

Upon graduation May 6, 1896, he joined the North Atlantic Squadron. He was an ensign during the Spanish American War, in 1898. He served then in the gunboat HORNET throughout the operations in Cuban waters. He participated in the two engagements of Manzanillo, for

which he was awarded the Sampson Medal, which bore the name of the commander-in-chief, and was a token of valor in action. In the first battle, June 30, 1898, he navigated the gallant little HORNET into a mined harbor where she fought the enemy until totally disabled and had to be towed out of the harbor under heavy fire. In the second engagement, July 18, 1898, I was a witness to the spirited manner in which the HORNET fought. The ship in which I served, the SCORPION, was a near neighbor on the firing line. The HORNET stood her ground for nearly four hours until the enemy's gunboats were destroyed and the shore defenses silenced.

In 1904, while a lieutenant, he was a division officer on the battleship MISSOURI. On one occasion, when at target practice in the Gulf of Mexico, a flare-back occurred in the guns of the after twelve-inch turret, causing flames to fill the turret and to penetrate to the handling room below, where was located the magazine. In this catastrophe, five officers and twenty-seven enlisted men were killed. Lieutenant Earle was among those who were highly commended for meritorious conduct on this occasion. He received personal letters of high praise from both the President of the United States and the Secretary of the Navy for peculiar bravery displayed in rescuing survivors and in preventing further disaster to the ship. It is of interest to note that, on the following morning, the battleship MAINE was sent over the same range to fire her practice in order to sustain the morale of the ships present. I recall full well, as an officer of the MAINE, the determined spirit with which that ship went forward to her trying duties.

We find him in 1914 in command of the DOLPHIN at the occupation of Vera Cruz, in which his ship played a conspicuous rôle. The United States had intervened in Mex-

ican affairs. The Navy had taken the most important support of the Republic. The DOLPHIN figured in the Tampico incident which had precipitated the occupation and Earle's command was most active in the stirring events along the Mexican coast.

His particular bent was ordnance and he served with especial efficiency as a gunnery officer at sea. Ashore, he was an inspector of powder for the East Coast; the head of the Department of Ordnance and Gunnery at Annapolis and in command of the Naval Proving Ground at Indianhead. So splendid an account had he given of his talents that it was natural enough that he was selected as the Chief of the Bureau of Ordnance of the Navy. This was shortly before our entry into the World War. He was the youngest officer to occupy the important post which was so soon to become charged with the greatest responsibility. Serving under him were officers many years his senior as well as scores of outstanding representatives of business and the professions. His administration was one of quiet efficiency in the midst of turbulent activity.

In addition to the greatly augmented provision of guns and ammunition for an enormously increased Navy, the Bureau of Ordnance was charged with the development of depth charges and the arming of merchantmen wherewith to combat the submarine menace. Among the many important projects conceived by Admiral Earle, two stand out in boldest relief. In referring to these, an official paper of the Navy Department states:

"In addition to the heavy duties thus involved, Captain Earle, then Rear Admiral as Chief of Bureau, evolved and urged upon the Department the plan of closing the North Sea by a mine barrage, utilizing for this purpose an entirely new type of mine which by the adaptation of scientific developments of the time he felt could be constructed. He was able to convince the Navy Department, and

they in turn the British Admiralty, of the possibilities of this plan, and meanwhile pushed the experimental development of a new mine. With the success of the design of the mine and with the adoption of the plan a tremendous industrial effort directed by him resulted in the delivery abroad in one year of about one hundred thousand fully loaded Naval mines. These mines were laid by the United States Naval Forces in the North Sea Barrage, which, it is believed, had a substantial effect upon the early and successful termination of the War."

As the commanding officer of a mine planter engaged in this work, it was my great satisfaction to participate in the consummation of a huge undertaking which was originated by my distinguished classmate.

The official paper stated further that:

"Rear Admiral Earle also conceived the possibility of the use of spare naval fourteen-inch guns as long range guns on the Western Front and, with the cooperation of the Baldwin Locomotive Works, secured the design and manufacture of gunmount cars to carry and fire these guns and supply trains to serve them. As a result a railway battery of these guns was actually serving on the Western Front and carrying out bombardment operations against the enemy in the latter months of the war."

The importance of the successful accomplishment of the mine effort in the North Sea—a barrage two hundred and thirty miles in length and more than twenty-five miles wide—is realized if it is recalled, that at the time of the entry of the United States into the War, the submarines of the Central Powers were directing especial attention to the troop transportation. The United States convinced the Allies that a strong convoy entirely across the Atlantic would alone secure the safe passage overseas of American troops. So tight did the convoy become that its penetration by submarines was rendered practically impossible. The enemy then directed his attention to the merchant shipping of the Allies throughout the Seven Seas. It was

Earle's belief that if the submarines could be bottled up near their nests, that is, within the North Sea, their purpose, which was potentially disastrous to the allied cause, could be thwarted. So it proved. As to the Naval Battery made possible through Earle's persistent effort, these guns were of the largest caliber possessed by the Allies on the battle fields of France. They typified the will to win which was present in every thought and act of those who originated and those who executed the plans for victory.

The work of the post-war period being completed, Earle asked to go to sea. This is properly the desire of every officer of the Line. The Secretary of the Navy in accepting with regret Earle's resignation as Chief of the Bureau commended him upon the signal service that he had rendered his country and stated that: "great enterprises begun under your administration and carried out with such honor to the Navy, will constitute one of the finest chapters of naval achievement in its whole history."

High praise indeed; and fully deserved.

Thereafter, as a captain, Earle commanded the battleship CONNECTICUT. This tour of service was followed by the command of the Naval Torpedo Station at Newport, Rhode Island. There, in 1925, he received the call to return to the city of his birth, and to accept the presidency of the Worcester Polytechnic Institute, whence he had gone forth thirty-two years before.

Ralph Earle, the naval officer, now became Ralph Earle, the college president.

He was inaugurated October 22, 1925. He brought with him to his new task all of the talents that had made possible a conspicuously successful military career. The Institute now looked forward with assurance to an era of continued and expanding usefulness in the training of young men for leadership in the world of science and

engineering and for loyal, patriotic citizenship." This prospect soon became a reality.

President Earle's first efforts were directed toward a building expansion and an improvement in the appearance of the campus. This was natural because his father, Stephen C. Earle, had been the architect of the original buildings of the Institute. Ralph Earle made a fitting home for the general library in Sinclair Hall, and revived in it daily chapel services which had long been discontinued. There followed a new and beautiful freshman dormitory, Sanford Riley Hall. A swimming pool and new athletic fields became realities through the generosity of the alumni. There was an expansion of the curriculum, improvements in the methods of teaching, strengthening of the staff; so that, today, Worcester Polytechnic Institute is recognized as one of the soundest undergraduate schools of engineering in the United States.

On the human side, where he was at his best, Ralph Earle sought ever to advance the interest of the students. In athletic and physical development generally, participation was wide and the teams of Tech are today notable examples of good sportsmanship. The spirit he inculcated still pervades the campus. The members of the faculty were closely bound to him; the undergraduate was his personal friend. He tightened the bonds of the alumni to their alma mater. His wisdom as an administrator soon showed itself in the growth of the reserve funds. There were early struggles with the modest income of the college, but, throughout the fourteen years of his administration, success in his able business management was apparent. In his last year, as the sixth President of the Institute, his vision of a greater Tech took semblance with the starting of a splendid Student Activities Building, the Alden Memorial, which is now rapidly rising on the West Cam-

pus. The full realization of his dream will come with a great hall of Mechanical Engineering for which he had already laid the plan.

If Ralph Earle was loved by those for whom he labored on the campus, he was held in equally high esteem by all others with whom he came in contact. He became Worcester's first citizen. He gave himself unscintingly to the welfare of his community and honors were showered upon him. His home beside the campus, presided over by his charming wife, was the center of a gracious hospitality of which every student partook.

Ralph Earle had human qualities which stamped him as an inspiring leader. He had developed a faith and pride in the school which flowered apace. Referring to this fact, a trustee said of him "a modest, friendly man developed this growing spirit. He never spared himself. While he mastered every detail of administration, he, also, knew every man at Tech and a host of the Alumni. He preached the doctrine of unswerving devotion to duty by practicing it. He was one of those rare men who make goodness attractive."

Thus, under the aegis of this man, whose "training in the Navy had tempered to the fineness of a Toledo blade his high sense of honor, his courage and his devotion to duty," the school to which he had been called grew in influence and distinction. In February of 1939, the highest hopes of his whole administration were achieved in the launching of a huge building expansion, and in reporting on this matter to his devoted Board of Trustees, he declared "this is the proudest and happiest day of my career at Tech." A week later, the thirteenth of February, Ralph Earle was dead. He had arisen from bed following a short illness in order to speak at Chapel, as was his custom. The effort was too great and, as he began the service with the

students there assembled, he collapsed. In two hours, he was gone.

Of him, his faculty said in memoriam: "His work was done; he had laid the foundations broad and deep; and in the buildings that shall rise upon them will be found, so long as Tech shall endure, his fitting monument."

The school, the city, New England paid "loving tribute to the memory of a great Christian gentleman." He was buried in a little Quaker graveyard hidden away in a pine grove near Leicester. Beside him sleep eight generations of his ancestors in direct line. None is surer of the gift of the Great Reward than is he.

We who wore the uniform of our Country's service as did Ralph Earle so worthily, we mourn a shipmate, a name that is all-inclusive among those who stand side by side in war and peace, in tempest and smiling skies—a band of brothers. With you, his friends, abides the memory of a distinguished scholar and an understanding educator of youth whose career is ended.

His successor at the Worcester Polytechnic Institute prays for grace and guidance that he may carry on acceptably the work of Ralph Earle, a labor that created self-reliant and useful citizens, his lasting contribution to the Country he served so well.

THE END



The USS Intrepid, in honor of the memory of Rear Admiral Ralph Earle, United States Navy, at which this address was delivered, on January 4, 1940, was under the direction of American Newcomer's permanent New York Committee.

