

74, 18-1925

William Joseph Hammer.

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(Late) Major, General Staff, U. S. Army.

- Past: President of The Edison Pioneers - 1920
- " President of the National Conference on Standard Electrical Rules, 1896
- " President of The Franklin Experimental Club, 1890-1892
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- " Vice President; American Institute of Electrical Engineers, 1891-1893
- " Manager, American Institute of Electrical Engineers, 1893-1896
- " Vice President; Aeronautical Society of America
- " Vice President; New York Electrical Society
- " Vice President; Agassiz Natural History Society
- " Vice President; New York Electric Club, (1885)
- " Vice President; Boston Electric Club, (1886)

Fellow of The American Association for The Advancement of Science,
 Fellow of The American Physical Society,
 Fellow of The American Institute of Electrical Engineers,
 Fellow of the American Geographical Society (1920)

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- Major on Inventions Section, War Plans Div. G.S., Army War College, June 4, 1918
 - Major on The General Staff United States Army, Army War College, Dec. 19, 1918
 - Major on Inventions Section, Operations Division, G.S., (War Dept.), June 30, 1919 to Oct. 27, 1919
 - Member of The Military Order of The World's War,
 - Member of Staff of New York Chapter M. O. W. W.
 - Member of The Society of American Military Engineers.
 - Chevalier of The Legion of Honor of France, (Feb. 10, 1925)

Miscellaneous Data

Laboratory Assistant of Edward Weston (Weston Malleable Nickel Co.) Newark, N. J., 1877-8. Made solution for Weston Co. They sold out to the Adams solution syndicate of Boston.

Laboratory Assistant of Thomas Alva Edison, Menlo Park, N. J., 1879-1880. Had charge of tests and records of Incandescents Electric Lamps. Did general laboratory work on telephone, Electric Railway, Vacuum Pumps, etc.

First Chief Engineer of The Edison Electric Lamp Co., Menlo Park, N. J., 1880-81. Cleaned old Edison Pen Works, installed first 200 vacuum pumps, put in electric motors to run Archimedes Mercury Pump, saw up bamboo, operate furnace blower, rotating annealers, etc. and putting in power line with Martin Force from Laboratory 3/4 mile away. Conducted extensive lamp tests, and invented alarm device for factory gas plant. Attended the First Int. Electrical Exposition at Paris in 1881 prior to taking up my duties in London, England.

First Chief Engineer of the English Edison Electric Light Company, London, Eng., 1881-82. Constructed Holborn Viaduct 3,000 light centralstation, the first station in the world for Incandescent Electric Lighting started Feb. 12, 1882, & installed Edison Central Station of 12 Edison Dynamos at this Crystal Palace, Int. Elec. Exhibition, 1882.

First Chief Engineer of the German Edison Electric Light Company, (now "A. E. G.") Berlin, Germany, 1883-4. Put in many plants throughout Germany. Invented and installed at the Health Exhibition in Berlin, the first motor driven "Flasher" electric sign in the world. (now universal)

Representative of Thomas A. Edison and Eight Edison interests at the Franklin Institute, International Electrical Ex., at Philadelphia, Pa., 1884. Built here the first Flashing "Column of Light", afterwards used at Chicago Ex, at Coney Island, etc.

Confidential Assistant to Edward H. Johnson, Pres., Parent Edison Electric Light Co., New York, 1884. (at 65 Fifth Avenue).

Chief Inspector of Central Stations of Edison Elec. Light Co., 1886-86. Having charge of all Edison Central Stations in U.S. Initiated and carried out elaborate economy test on Harrisburg Edison station.

Member of First Board of Directors of the Ass'n of Edison Elec. Illuminating Co.'s. 1884-5.

Incorporator, trustee and first Secretary of Sprague Elec. R. R., and Motor Company. 1885-86. Was offered the post of General Manager several times.

Chief Engineer and Gen. Mgr., Boston Edison Company, 1886-7. Acted as contractor for installing \$140,000 of underground Edison system and installed 88 sprague electric motors, making this the first real station for transmitting electric power, largest motor 15 H.P.

Consulting Engineer and Contractor to Ohio Valley and Middle-Atlantic States Centennial, Cincinnati, Ohio. 1888. I had two contracts of between 30 to 40 thousand dollars to produce elaborate electrical effects at the Exposition, put in electric fountains, tropical gardens, electric waterfall, electric rainbow, electric fish, and many other things operated by electrically driven automatic devices invented by me.

Invented and set up at the Crystal Palace the first electric sign in the world. This was flashed by hand and spelled Mr. Edison's name, letter by letter and altogether. - 1882.

Invented first motor-driven flashing sign in Berlin, Germany, (now universally used). (See proceedings of Illum. Engineering Society, Eng. Society's Building, New York City) 1883.

Installed the first electric house in the world at Newark, N. J. in 1884 (Played seven musical instruments; cooked food; rang bells, burglar alarms, fire alarms, fired cannon and fireworks, electric lamps, electric gas-lighting, etc)(See N. Y. World, Jan. 3, 1885 and "Electrical "Diablerie" reprint)

Fitted up small Bartholdi "Statue of Liberty" so that contributions for the pedestal fund, dropped in the base, would light an electric lamp as Miss Liberty's Torch. (Considerable sums thus secured.) 1885.

Chairman Committee on Safe Wiring, Nat. Elec. Light Ass'n. 1893-4-5-6.

Was first in the world to employ wireless for domestic purposes - to call servants, nurse, ring bells, turn on lights, fire cannon and send messages, at New York home in 1900.

Made first complete efficiency test of an electric light central station, testing at one and the same time (with 12 assistants) the engines (fuel and evaporative tests and draft) and boilers, dynamos, distribution system, meters, etc., (so that cost of 1-candle-power in an incandescent lamp from a central station, was for the first time ascertained,) at Harrisburg, Pa., Aug. 29-30, 1885.

Installed the first electric plant in the world, driven by artesian well power, which operated directly a turbine connected to a dynamo, giving 65 16-candle-power lamps day and night, at the Ponce de Leon Hotel, St. Augustine, Florida. - 1887. (Used by cleaners, watchmen, repair men, etc., when 8,000 light plant, I installed in 1887, was shut down in summer)

Made long-distance transmission of sound experiments between New York and Philadelphia, employing Edison Telephone transmitters and receivers, phonographs and 103 miles of cable (overhead, submarine and underground). - Feb. 4, 1889. Repeated certain of these experiments at the Paris Exposition of 1889, before the Electrical Jury, between the Edison Display at the Exposition and the home of Louis Rau, chairman of the Jury. Later on the occasion at Col. Geo. E. Gouraud's lecture on the Edison Phonograph was presented to the French Academy, as the man who had conducted these elaborate experiments.

Attended closing exercises of Paris Exposition of 1889, on top of the Eiffel Tower, and recorded on an Edison phonograph cylinder voices of M. Eiffel and others and booming of the cannon announcing the close of the Exposition. - 1889. (I still possess this interesting record.)

Member of one of four leading teams at the finish of the first long-distance endurance test of automobiles between New York and Buffalo, September, 9,-14, 1901.

Representative of Thomas Alva Edison at the Paris Exposition of 1889. Set up and operated all of Mr. Edison's inventions which embraced 19 departments and covered 9,800 square feet of space. (Forty-five assistants). 1889. Built a huge Edison lamp 45 feet high employing 20,000 Edison lamps, the daily output at that time.

Consulting Elec. Engineer and Expert in private practice from 1889-1925. Making reports, tests and giving expert testimony in patent suits, etc.

Member of Electrical Exposition Committee of National Electric Light Association at Providence, R. I. Feb. 17-18, 1890.

Member of Electrical Exhibition Committee of N. E. L. A., Montreal, Canada, August 24-29, 1891.

Member of Special Committee on Standard Rating of Arc Lamps of Nat. Elec. Lt. Ass'n, with Professors T. C. Mendenhall, William A. Anthony, Edward Weston and George Forbes, F.R.S., Washington, D.C. 1894.

Representative of eleven important Am. Elec. interests at Crystal Palace, Int. Elec. Ex., 1892, and received a silver medal.

Delegate of Am. Inst. of Elec. Engineers to International Electrical Congress, Paris, France, 1900. Member of Special Joint Committee of American and British Electrical Engineers at Paris, France, 1900.

Member of Executive Committee, New York Section, American Electro-Chem. Soc'y, 1900 and lectured on Radium at the only joint meeting at the Am. Elec. Chem. Soc. and the Am. Ins. of Elec. Eng's. in 1903.

In 1900 made professional trip through Europe, of 15,000 miles, and wrote elaborate papers thereon for Am. Inst. Elec. Eng's - Franklin Institute, etc.

In 1902 made professional trip through Europe, of 20,000 miles, through thirteen countries, and prepared elaborate papers for the A.I.E.E., and Am. Elec. Chem. Soc., etc. Chairman of Jury on Telegraphy, Telephony and Wireless at the St. Louis World's Fair, and conducted elaborate wireless tests between St. Louis, Mo., and Chicago, Ill., 1904 on De Forest system. Member of Departmental Jury of Exposition.

Received the Grand Prize for my Historical Collection of Incandescent Elec. Lamps.

Representative of the Am. Inst. of Elec. Eng's, at the "Hall of Fame" ceremonies, May 30, 1907.

Visited Prof. Pierre Curie at his laboratory in Paris in 1902, and through his courtesy secured nine tubes of Radium and one of Polonium, which I took to the United States. - 1902.

Gave 88 lectures in the U.S. upon the work of Prof. & Mme. Curie and on "Radium and other radioactive substances" before universities, colleges, scientific societies and schools, being the first one to take up work actively with radium in America. - 1902-1907.

Invented and developed the "Radium Luminous Materials" both in powdered and liquid form, now in use all over the world, for watches, clocks, aeroplane and automobile instruments, etc. (Made many applications in 1902 and 1903) - 1902.

Was first - I believe - to use radium for treatment of cancer and tumor, and to make and use radioactive solutions. (See medical journals and eminent physicians I cooperated with) - 1903.

Sent Prof. Curie a large box of radioactive minerals from the U.S., (Carnotite, Autunite, Gummite, Sheelite, Torbernite, etc.) Prof. Curie tested same and sent me his report with letter of thanks. 1904.

Wrote first book upon Radium, published in U.S., also England, Germany and Italy. (N. Y. State Librarian included this book among the 56 most sought-after books in the libraries of the State.) 1903.

Wrote articles on Radium and Radioactivity for "Encyclopedia Americana" and many other publications. 1903, 4, 5 and 6.

Member of The Curie Committee of the Franklin Institute, appointed to investigate and report upon the work of Prof. Pierre and Mme. Sklodowska Curie on radium and other radioactive substances, resulting in the conferring upon them of the Elliott Cresson Gold Medal - May, 1909.

Invented and patented process of producing colored phosphorescent materials by combining phosphorescent and fluorescent substances. 1907.

Made balloon flight across France at close of Paris Exposition with Drs. A. L. Rotch and R. T. Wells, making many scientific tests and observations - 1889.

Chairman General Com. of the Aeronautical Congress of the Ter-Centennial Expo. of Jamestown, Va. (Oct. 28-29, 1907)

One of the Editors of "Navigating the Air," official book of the Aero Club of America - 1907.

Representative of the Am. Institute of Elec. Engineers and the

Aeronautical Society of America at the presentation of the U. S. Government gold medal to Messrs. Wilbur and Orville Wright by President Howard W. Taft at the White House, Washington, D.C., June 9, 1909.

Secretary and Expert of The Aeronautics Com., of the Hudson-Fulton Celebration at New York - 1909. Personally drew contracts with Wright Bros. & Curtiss to take part, built hangers on Governors Island, etc.

Presided at the Tenth Anniversary of First Flight-by-Man, at the Aeronautical Society of America and presented bronze statue and resolutions to Mr. Orville Wright on behalf of the society.

Referee, Judge and Starter at many aviation meets at Morris Park, New York, Mineola, L.I., Staten Island, etc. in 1908-9-10-13.

Invented systems for signalling from War Balloons, 1879-1889.

Has testified for the Wright Bros., in all their aeroplane litigation in the U.S.

Wrote article on work of the Wright Bros. for "Air Services Magazine, Nov. 1923.

Member of Special Committee appointed by the Aeronautical Society of Am., at the request of the General Staff of the U. S. Army, to recommend methods for the formation of a reserve force of civilian aviators for the Army - May 22, 1916.

Member of Expert Committee of Army officers, lawyers and U. S. Patent attorneys, advising the War Department and Alien Property Commission upon patents, contracts, etc., - 1918-1919.

Marked and held up at the U.S. Patent Office the issuance of many U.S. Patents during the World's War, which patents would be likely to convey information of value to the enemy. - 1918-19.

At request of War Plans Div., General Staff, reported upon the practicability of the plans of the Handley-Page Co., who proposed to fly two large H-P aeroplanes from Nova Scotia via the Azores to Europe and into Germany, July 17, 1918.

Was among first five whose plans were selected out of the many thousands submitted for securing the widespread distribution of propaganda into enemy countries. October 5, 1918.

Flew in airplanes during the war, testing sound devices, etc. 1918-19.

Was one of the owners of the First Aeroplane built and sold in America. (Date of contract January 1, 1909) First flight by Glenn H. Curtiss in this machine, January 26, 1909.

Wrote first complete Chronology of Aviation for the World Almanac 1911; reprinted and distributed nineteen thousand copies in 1913 - here and abroad.

Was one of the General Staff officers at the Army War College, Wash., D.C., delegated to examine documents, papers, etc., captured from spies and prisoners, to see if these contained technical matter of value to the service. 1818-19.

Delegate of the Aeronautical Society of Am., to the Congress of Constructive Patriotism at Wash., D.C., January 25-26, 1917.

Delegate of the Aeronautical Society of America to the Convention of Patriotic and Defense Societies at Wash., D.C., Feb. 21, 1917.

Delegate of the Military Order of the World's War to the Aeronautical Congress and Flying Meet at Detroit, Mich., October 7 - 14, 1922.

Delegate of the Military Order of the World's War to the Immigration Conferences of the National Civic Federation, New York, 1923.

Delegate to the Convention of the Military Order of the World's War, Boston, Mass., 1924.

Delegate of the Military Order of the World's War to the Convention of the National Civic Federation, New York, 1924.

Witnessed the Official Government Flights of the Wright Brothers at Fort Meyer, Va.

With Prof. Alexander Graham Bell, Octave Chanute, Maj. Geo. O. Squier, Glenn Curtiss, and Messrs. Baldwin and McCurdy, I acted as an honorary Pall bearer at Lieut. Thomas Selfridge's funeral, he being the first man in the world to lose his life in an air-plane (while flying with Mr. Orville Wright at Washington Gov't tests)

In 1900 drove to St. Cloud, France, with Professor Samuel P. Langley, Secretary of Smithsonian Institution, to witness dirigible balloon tests shown to us privately by M. Santos Dumont, and we arranged to visit Count Zeppelin at Lake Constance, but Prof. Langley was called back to America and I went alone but found Zeppelin's first dirigible had been damaged in landing and I went on to Oberammgau to see the Passion Play.

Judge and official in charge of the New York Times flight around Manhattan Island, October 13, 1913, at which time six airplanes flew for the first time in history entirely around Manhattan Island and without accident, from the flying field of the Aeronautical Society of America on Staten Island and back.

Chairman of Committee on "Camouflage" of the Aeronautical Society of America at the beginning of the World's War.

Chairman of the American Institute of Electrical Engineers Committee at the Worlds Fair in Chicago, Ill., 1893.

Spent 34 years making a historical collection illustrating the development of the incandescent electric lamp all over the world. Collection now set up in United Engineering Building, 29 West 39th Street, N. Y. City - 1913. (4 cases 10 ft. long and 1 case 4 ft. square)

For 45 years has been making a collecting of autographed portraits of eminent scientific men. - 1924.

Member of Executive Committee of the Edison Medal Fund - 1908-12.

Has prepared an elaborate bibliography upon Selenium and its industrial and scientific applications.