

Copies filed by request with the French Government in 1925 at which time I received the Cross of The Legion of Honor and made a Chevalier, And at the time I was examined by the U.S. Army Board for a Commission in the U.S. Army Reserve, I would have received the commission but it was found that I was beyond the age limit of 64 years - W.J.H

BIOGRAPHICAL DATA  
of  
WILLIAM JOSEPH HAMMER

1926.

Born, at Cressona, Schuylkill Co., Pa., Feb. 26, 1858, son of William Alexander and Martha Augusta (Beck) Hammer; educated at private and public schools, Newark, N.J., and attended University and Technical School lectures abroad; married Jan. 3rd, 1894, Alice Maud White; one daughter, Mabel White Hammer. (Mrs Thomas C. Aschelon)

daughter of Thomas H. White of Cleveland Ohio

- Past: President of The Edison Pioneers -- 1920  
" President of the National Conference on Standard Electrical Rules, 1896-1906 (which originated the National Electric Code)  
" President of The Franklin Experimental Club, (Newark, N.J.) 1890-1892.
- " Vice President; American Institute of Electrical Engineers 1891, '92 and '93 and Life Member.  
" Manager, American Institute of Electrical Engineers, 1893, '94, '95 and '96.  
" Vice President; Aeronautical Society of America, 1908-9-10 to 1918.  
" Vice President; New York Electrical Society  
" Vice President; Agassiz Natural History Society, Newark, N.J. (Newark P.H.S. Section named in his honor)  
" Vice President; New York Electric Club (1885)  
" Vice President; Boston Electric Club (1887)

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)

Cross of "The Legion of Honor" from France, 1925  
World War Medal, United States Government, 1920  
World War Medal, New York State 1920  
Elliott Cresson Gold Medal, Franklin Institute, 1906.  
"Grand Prize", St. Louis, Mo. Exposition, 1904.  
Departmental Medal, St. Louis, Mo. Exposition, 1904.  
John Scott Legacy Medal and Premium, Franklin Institute, 1902.  
Silver Medal, Crystal Palace Int. Elec. Ex., 1892  
Silver Medal, Crystal Palace Int. Elec. Ex., 1882

Major on Inventions Section, "War Plans Div.", of the General Staff U.S. Army, at the Army War College, Washington, D.C., June 4, 1918 to June 30, 1919.  
Major on "The General Staff" U.S. Army, Army War College, Washington, D.C. December 19, 1918. (Inventions Section, "War Plans Division", G.S.)  
Major on The General Staff, U.S. Army at War Department "State War and Navy Building, Washington, D.C. June 30, 1919 to Oct. 27, 1919. (Inventions Section "Operations Division" G.S.)  
Member of The Military Order of The World War (Historian General Electrical Club in 1926-28)  
Member of Staff of New York Chapter M.O.W.W. (1923) Historian (1926)  
Member of The Society of American Military Engineers (Charter Member)  
Also Member National Aeronautic Association, Franklin Institute, American Institute of Electrical Engineers, New York Electrical Society, Edison Pioneers, Am. Soc. of the French Legion of Honor, Nat. Security League, Am. Physical Society, Am. Association for the Advancement of Science etc.  
Citizens Committee of One Thousand  
National Security League etc.

Left the Newark Public High School at the end of my second year (1875) and assisted my father William A. Hammers in his Wholesale & Retail Confectionery business for 3 years when the business was sold and my father became President of the N.J. State Tax Commission and I entered ~~the~~ <sup>the</sup>

MISCELLANEOUS DATA

Laboratory Assistant of Edward Weston (Weston Malleable Nickel Co.) Newark, N.J., 1878-9. Company was sold out to the Adams solution

*syndicate of Boston in 1879, I made most of his nickel plating solution part-out - my father's Co. up to this time I left (March 5-1879) when entered Russell & Everett Hardware Co. at 1879 a year and in April 1879 left to take a better job in Spelvan Bros. Station House at*

Laboratory Assistant of Thomas Alva Edison, Menlo Park, N.J., 1879-1880-81. Had charge of tests and records of Incandescent Electric Lamp. Did general laboratory work on Telephone, Electric Railway, Vacuum Pumps, Incandescent Lighting system, Ore separating, etc. Made the first Map of the original system of underground conductors for the Pearl Street Station of the New York Edison Co., and assisted Mr. Edison and Mr. Francis R. Upton in laying out the feeders and mains and calculating the network of copper conductors. (I have a copy of this map made at Edison's laboratory in Menlo Park in 1880 by me.)

*remained by the middle of the year when Mr. Edison employed me at Dec. 1879*

First Chief Engineer of The Edison Electric Lamp Co., Menlo Park, N.J., 1880-81; and with Francis R. Upton, General Manager, cleaned out and equipped old Edison Electric Pen Works, installed first 200 vacuum pumps, put in electric motors to run Archimedes Mercury Pump, saw up bamboo, operate carbonizing furnace blower, rotating glass annealers, etc; assisted in erection of overhead power line from Laboratory 3/4 miles away. (This was the first commercial system ever established for the electric transmission of power.) Conducted extensive lamp tests. 50,000 lamps made the first year at Lamp Works. Assisted Charles Batchelor, Mr. Edison's partner, preparing equipment for Lamp Factory for French Edison Co., and in preparing Edison exhibits for Paris Electrical Exposition of 1881.

Also went to Goerck Street Machine Works to assist in tests on first "Jumbo" Steam dynamo of 22 tons (subsequent ones were of 30 tons) for the Paris Exposition and I personally attended to the loading and shipment, thereof, leaving for Europe October 12, 1881.

By direction of Mr. Edison I visited the First International Electrical Exposition in the World at Paris, France in 1881, remaining for two weeks prior to taking up my duties in London, England where I became the First-Chief Engineer of the English Edison Electric Light Co. Associated with Mr. Edward H. Johnson, Edison's financial representative in England. I constructed the "Holborn Viaduct" -3,000 light central station, employing two, and later three 30 ton Edison "Jumbo" dynamos, Edison Underground Tubing, Edison Electrolytic meters, etc., here was designed the first automatic circuit-breaker, the first flexible cords such as now universal. Here double pole fuses were first employed, insulated gas fixture attachments for lamps, wire guards for lamps, the first heavy current switch ever employed was invented and used, two colored conductors in wiring, Siemen's differential Arc lamps were experimentally employed as were Electric motors and and one of "Faure's" first storage batteries was set up and operated from an Edison dynamo and Clerk gas engine; it being intended to connect it later to the Central Station System.

The "Holborn Viaduct" Central Station was the first Central Station for Incandescent Electric Lighting established anywhere in the world. I personally, turned on the current for the first time on this 3,000 light Central Station, on Jan. 12th, 1882. The New York "Pearl Street" Station started with 400 Edison lamps on Sept. 4th, 1882. (See Electrical World March 5th, 1904.)

The "British Electric Lighting Act" later caused the abandoning of the Holborn Viaduct Station of the English Edison Company, the company confining itself to manufacturing Incandescent lamps in combination with the Swan Co.

I gave the name "Jumbo" to Edison's 30 ton steam dynamos by reason of the fact that the "S.S. Assyrian Monarch" which brought numbers 2 and 3 dynamos over to London for the Holborn Viaduct station had on its previous trip to the United States, taken the huge elephant "Jumbo" over to P.T. Barnum who had purchased it from the London Zoo for his circus in America.

At the time I constructed the Holborn Viaduct Station, I also put in a 1,000 light Edison Central station at the Crystal Palace Int. Elec. Exp. of 1882 consisting of twelve Edison 60 light dynamos driven by 3 Robey semi-portable engines and boilers and 6 sets of friction clutches. The station supplied light to the extensive Edison exhibit.

Mr. Edison's elaborate exhibit of his inventions shown at the Paris Elec. Exp. of '81 was also set up by me and shown at the Crystal Palace Exp.

*In 1882 I lectured in London upon the Edison system of Incandescent Electric Lighting.*  
Colored incandescent electric lamps were first made and used by me at the Crystal Palace Exp. as were lamp festoons and "flashing" lamp signs *Electric* in 1882.

My Historical collection of Incandescent Electric Lamps was also exhibited at the Exp. for the first time and received a Silver Medal from the Jury of Awards.

I invented and placed over the big organ in the Concert room at the Crystal Place in Feb. 1882 the first "Flashing" Incandescent Lamp Sign ever constructed, this flashed the name "Edison" letter by letter and altogether by means of a hand operated "Flasher" (See "Engineering" London Eng. March 17, 1882, "The Electrician" London, Eng. June 10th, 1882, Illuminating 'Engineering' Soc. Proc. N.Y. Aug. 30th, 1920 and "Signs of the Times" May 1916 and N.Y. Tribune Oct. 22th, 1911.)

*Mr Edison sent his financial representative in England Mr. Edward H. Johnson his friend - appearance of his original perfected the first phonograph which was shown at various fairs & exhibitions in England and upon his return to America he presented it to the Edison Co.*

While Chief Engineer of the English Edison Co. I had my salary raised several times and received a set of Resolutions from the Board of Directors and a substantial cash bonus, and in 1883 was offered simultaneously the posts of Chief Engineer of the French and German Edison Companies becoming the First Chief Engineer of the German Edison Co. now the Allgemeime Elektrizitaets Gesellschaft of Berlin, Germany, I held this position in 1883 and '84 organizing the working departments of the company, laying out and supervising many plants throughout Germany and assisted in the starting of the manufacture of Edison dynamos at Charlottenburg. I returned to the U.S. late in 1884.

I invented and installed on top of the Edison Pavillion at the Health Exposition in Berlin the "First Automatic Motor Driven Flashing Electric Sign" in the world (Now universal). This sign flashed the name Edison letter by letter and as a whole automatically all during the Exp. (See Proc. Illuminating Eng. Soc. New York, Aug. 30th, 1920, "Signs of the Times" May 1916 and the "N.Y. Tribune" Oct. 22nd, 1911.)

While in Berlin I attended certain lectures at the Berlin University and the Technische Hochschule and was President of the American Club *and attended its Art Study + Fencing Classes.*

Upon my return to the United States in 1884, I was appointed Representative of Thomas A. Edison and eight Edison interests at the Franklin Institute International Elec. Exp. of 1884. Built the first "Flashing Column of Light" afterwards imitated at the Chicago Exp., at Coney Island, Lenox Lyceum Exp. N.Y., Minneapolis Exp., Portland Exp., and elsewhere, *and used 100 C.P. Edison lamps on attendants' headsets with plates on their heads so that they could walk about in the crowds and light up the lamps by standing on contact plates placed on the floor at various points.*  
In 1884, Appointed Confidential Assistant to Edward H. Johnson President of the Edison Electric Light Co. at 65 Fifth Ave., N.Y. headquarters of the Edison interests.

Installed the "First Electrical House in the world" at 23 Rowland Street, Newark, N.J. in 1885. Seven musical instruments were played electrically, food (coffee, eggs and toast) were cooked by electricity, boots blacked by electricity, phonographs, electric bells, burglar alarms, fire alarms, rising bells, heat regulating thermostats, electric gas lighting were employed, the number of the house was made of tiny electric lamps, a talking figure had a phonograph inside its anatomy and cannon and fireworks were fired electrically etc. (see "N.Y. World" Jan. 3rd 1886, Newark, N.J. "Daily Advertiser" and "Daily Journal" Jan. 3rd 1886, and my various "Electrical Diablerie" reprints)  
(Note) Few electrical devices could be purchased in 1885 so I had to devise them.

Appointed Chief Inspector of Central Stations of the Parent Edison Electric Light Co. and for two years made electrical, mechanical and Financial reports and tests upon the various Edison Central stations through the U.S. and instructed their employees. I also made special reports containing *Suggestive* criticisms to the Edison Machine Works, Edison Lamp Works, Tube Works, Edison Electric Light Co. and Bergmann & Co. Copies of my Central Station Reports were sent to all

Edison Elec. Ill. Cos. in the U.S. - 1884-1885.

*with Frank J. Sproague and Edward H. Johnson*  
Elected an Incorporator and Trustee of the Sprague Electric Railway and Motor Co., and was the company's first Secretary for a year and was offered the General Managership. 1885-1886.

In 1885 fitted up one of the first models ever made of Bartholdi's "Statue of Liberty" with a battery in the base so that silver quarters contributed to the pedestal fund which were dropped in the base, would light a tiny electric lamp as Miss Liberty's Torch. Considerable sums thus secured. The New York World collected \$96,000 from 100,000 Americans for the pedestal fund. America provided pedestal for statue which France presented to the U.S. (See Newark Journal, July 20, 1885, N.Y. World July 20, 1885 and The Engineer, Aug. 7, 1885. Elec. Review, London Eng. Aug. 8th, 1885.)

As Chief Inspector of Central Stations I made the first complete efficiency test of an electric light central station, ever made testing at one and the same time (with 12 assistants) the engines and boilers (fuel and evaporative tests and draft), lamps, dynamos, distribution system, meters, etc., so that the cost of 1-candle-power in an incandescent lamp supplied from a central station, was the first time ascertained. Edison Elec. Ill. Co., Harrisburg, Pa., Aug. 29-30, 1885. (See Harrisburg Independent, Sept. 1, 1885, Jarvis Eng. Co.'s Report, 1886, Electrical Engineer, Feb. 1886, and American Engineer, Feb. 1886)

I was responsible for the Edison Company's taking up the manufacture of insulated wires and cables, bringing William Phillips and men and machines over from England and starting work at the Edison Tube Works Brooklyn in 1886. *Mr Charles Batchelor Mr Edison's Chief Partner said that this was the most slip ever taken by the Edison Co. and later Mrs. Green a few thousand dollars in my scheme and carrying it off successfully.*  
Sent a telegraph message to myself at my home in Newark, N.J., from a moving train running on regular schedule time on the Staten Island R.R. between Clifton and Tottenville as first official test of the Edison-Phelps "Grasshopper" Telegraph System, Feb. 1st, 1886. (See N.Y. Times and N.Y. World, Feb. 2, 1886.)

Chief Engineer and Gen. Mgr., Boston Edison Elec. Ill. Co., 1886-87. Also acted as contractor for installing \$140,000 worth of Edison underground tubing and changed overhead system to underground and removing equipment from old building to the new without interruption of the service; also changed plant from a losing investment to one paying 12% dividend on its capitalization, this financial showing resulting in securing the funds for building the new station, and also of the securing of additional funds for the New York and Philadelphia Companies, and in conjunction with the Sprague Company's agents installed 98 Sprague electric motors up to 15 H.P. in size; making this the first real station for transmitting electric power on a considerable scale in the world. Prepared an elaborate chart giving in a circular form the fullest data regarding these 98 Electric motors, this chart was published in the "Electrical World" Sept. 3rd, 1887 and I distributed many separate copies at my own expense. *This elaborate chart and hundreds of letters which I wrote gave great assistance to other Central Stations desiring to introduce electric motors on their lighting circuits.*

Retained as Consulting Electrical Engineer by Edison Electric Light Co. in 1887 to complete and start up the 8,000 light plant for the Ponce de Leon Hotel at St. Augustine, Florida, also overhauled Jacksonville, Fla. Edison plant which had been struck by lightning and burning out dynamo armatures, instruments, etc. *which I repaired with my own hands owing to the exigencies of the case and the distance from the supply base.*  
Installed for H.M. Flagler the first electric light plant in the world, driven by artesian well power, which operated directly a water turbine connected to an Edison dynamo supplying 65 16-candle-power lamps day and night, at the Ponce de Leon Hotel, St. Augustine, Florida --1887-88, the lamps being used by cleaners, watchmen, repair men, etc., when 8,000 light plant which I installed in 1887 was shut down in summer, as there was no gas, no other illuminant employed. (See St. Augustine News, 1888, The Flagler Memorial Church now occupies this site.)

Established the "Hammer" prizes at the Newark Public High School; awarded for years; for the best work done by students under Prof. Geo. C. Sonn in building scientific apparatus, later taking certain of these boys in my employ at Cincinnati in 1888 and at Paris Exp. France

in 1889. (See Newark Evening News June 20, 1890. "The Laboratory" N.P.H.S. Annual of 1890) I presented the school with one of Mr. Edison's earliest tin foil phonographs.

Consulting Engineer and Contractor to the Ohio Valley and Middle Atlantic States Centennial, Cincinnati, Ohio, 1888. I had two contracts of about 40 thousand dollars to devise and build elaborate electrical effects as attractions for the Exposition, and I put in electric fountains, rotating tropical gardens, electric waterfall with powerful electric pumps, electric rainbow, mysterious electric fountain, rotating and flashing electric "Xmas" trees, 30 ft. luminous electric fishes, huge Incandescent lamp made of 15,000 Edison lamps the daily output of the lamp works, and many other features operated by electrically driven automatic devices invented by me and now extensively copied here and abroad. (See Cincinnati Com. Gazette, June 10th, 1888, Electrical World, Oct. 6, 1888 and Cincinnati, O. Enquirer, July 1st, 1888.)

At the time of my lecture on "Edison and His Inventions" before the Franklin Institute, Feb. 4th, 1889, conducted elaborate long-distance telephone relaying and transmission of sound experiments between New York and Philadelphia, employing 2 Edison carbon telephone transmitters, 2 Edison loud speaking "Electro-Motograph receivers, 2 Edison phonographs, 2 sets of Induction coils and batteries and 104 miles of duplex cable, 6 miles of which were submarine and underground cables and 98 miles strung on poles. The sound was transmitted through the air 5 times and through no less than 15 separate mediums and the physical characteristics of the sound waves were changed 48 times during transmission, and the singing, talking, and cornet music was broadcasted by telephones to 14 different cities. I received the "John Scott" Legacy Medal and Premium from the Franklin Institute for this work Feb. 5, 1902. 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 Electrical Jury. Later, in 1889 on the occasion of Col. Geo. E. Gouraud's lecture on the Edison Phonograph, I was presented to the French Academy as the man who had conducted these elaborate experiments. (see Electrical World, Feb. 16, 1889; Western Electrician, April 5, 1902; Elec. World and Engineer, June 3, 1899; Electrical Experimenter, Sept. 1917; Elec. Review, Feb. 16, 1889; Electrical World, Aug. 31, Sept. 7, 14, 21, 28, Oct. 5 and 12, 1889; Engineering, London, England, March 15, 1889.)

Personal Representative of Thomas Alva Edison at the Paris Exposition of 1889. Designed, set up and operated all of Mr. Edison's inventions which embraced 19 departments, telegraph, telephone, phonograph, electric lighting, ore separating, etc., and covered 9,800 square feet of space; had 45 assistants. Built a huge Edison lamp 45 feet high, employing 20,000 Edison lamps, the daily output of the Edison Lamp Works at that time. On the base of the lamp were large electrical American and French flags entwined, which waved and flashed as a rheostat turned the lights up and down. There was also a huge flashing panel bearing the name "Edison" and other automatic emblematic devices. The Edison Exhibit and the Eiffel Tower were the outstanding features of the Exposition. (See the Engineer, London, Eng., Nov. 15, 1889, Elec. World, N.Y. Aug. 31, Sept. 7, 14, 21, 28, Oct. 5, 12, 1889.) (I was subsequently made a Chevalier of the "Legion of Honor" for this work through Mr. Edison's personal efforts, 36 years later.)

Accompanied Mr. and Mrs. Edison to the Hotel de Ville to attend the dinner given in Mr. Edison's honor by the City of Paris, France, Sept. 9, 1889 and to the dinner given to Mr. and Mrs. Edison by Mr. Gustav Eiffel on the Eiffel Tower at the Paris Exposition and spent an evening with President Carnot and his family at the Elysee Palace and showed them Mr. Edison's phonographs.

Hired a balloon of 27,000 cu. ft. of gas and made a flight across France at the close of the Paris Exposition of 1889 with Dr. A. Lawrence Rotch of Harvard University and Blue Hill Observatory, and Dr. R.G. Wells of St. Louis, making many scientific tests and observations meteorological, electrical magnetic, and signalling, dropping phonograph cylinders attached to parachutes and addressed to myself at my hotel, etc., Nov. 14, 1889. (See "Navigating the Air", Doubleday, Page & Co., 1907, Paris N.Y. Herald, and Galignani's Messenger, Nov. 15 and 16, 1889.) (Have since made many aeroplane flights)

X In 1889 I accompanied Mr. Edison, who was then visiting the Paris Exposition, to the German Science Congress at Heidelberg and later to Berlin where we were entertained by Profs. Herman Von Helmholtz and Dr. Werner Siemens and by the "A.E.G." (Formerly German Edison Co.)

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

*In 1890 Mr Edison presented me with an autographed set of 2 Vols of all of his Patents which were his two sets made at his time and many of his Patents are to be specially reprinted and his two sets cost \$400 each.*  
X In 1890 I was one of the earliest users of the Edison phonograph for office dictation purposes, dictating on the wax cylinders my letters which my assistant later transcribed on his typewriter.

X After the First Electrocution (that of Kemmler in 1890) I was urged by prominent electrical men to accept the post offered me of expert for N.Y. State in charge of Electrocution Apparatus and on Oct. 30th, 1890 Dr. Carlos MacDonald and the N.Y. State Commission offered me a permanent position as State Expert in charge of various electrical matters for New York State if I would accept but after careful consideration of the matter I declined.

*Jan 31 - 1890 Annual Meeting and*

X At the first Annual Banquet of the Franklin Experimental Club of Newark, N.J. a boys scientific club I had organized, I hoped to interest some men of public spirit in the Club by means of the banquet which we held Jan. 31st, 1891. Much of the food was electrically cooked and a tiny electric train on a circular track carried food, cigars and matches around the table, phosphorescent-skulls grinned at the feast as they spoke sepulchrally by means of a phonograph placed beneath the cushion on which they rested, gold fish swam about with tiny electric lamps inside their stomachs which were at times flashed on and off. A small stuffed black bear and a large crane graced the table and blinked their eyes. Seated at the head of the table was a life sized figure of Benjamin Franklin loaned by the Eden Musee whose consulting engineer I had been. Franklin presided at the feast and by means of an Edison Phonograph which I had placed in his interior he addressed his guests and recited "Poor Richard" homilies during the meal as he drew lightning from the clouds on the ceiling by means of his kite and key. During the meal Electro-magnets on the ceiling released a shower of flowers and bon bons on the guests. A large model of the Eiffel Tower in the centre of the table was brilliantly illuminated and a small cannon on top was fired as was done at the close of the Paris Exposition of 1889, and my Eiffel Tower phonograph cylinder was shown and the guests heard the boom of the cannon on top of the Eiffel Tower which closed the Paris Exp. at 1889. Music was furnished from a building blocks away by means of a loud speaking telephone and huge trumpet. *(See Elec. Engineer 1891 and his Electrical Experiment in Sept-1917, the Franklin Club unfortunately was wiped out by a fire from a saloon next door and I*

Member of the Electrical Exposition Committee of the National Electric Light Association at Providence, R.I., Feb. 17, 18, 19 -1891, and also *Personnel suffered a considerable loss* member of the Exposition Com. of the N.E.L.A. at Montreal, Canada Aug. 24-29, 1891.

X Consulting Engineer to the "El Dorado" plant of Bolossy Kiralfy at the Palisades Amusement Park, Weehawken, N.J. (3,000 people on the outdoor stage) 1891. (See Elec. World, July, 1891, Electricity July 5, 1891.)

X Representative of eleven important Am. Elec. interests at Crystal Palace Int. Elec. Ex., 1892, and received a silver medal from the exhibition. (See Electrical Engineer, London, Eng., 1892, Electricity Aug. 24, 1892.)

X In May, 1892, I was a guest for over two weeks of Sir Hiram S. Maxim at Baldwyn's Park, Bexley, England, and in July at his invitation returned for a second visit and to witness the first tests of the huge Maxim steam driven aeroplane, 126 feet long, mounted upon a track of about a mile in length. I had a ride upon it over this track at Baldwyn's Park. It never left the ground. (See "Navigating the Air", Doubleday, Page & Co., 1907.)

X Was present when Alexander Graham Bell opened the Long Distance Telephone line of 1,000 miles from 18 Cortlandt Street, New York to 105

Quincy Street, Chicago, October 18, 1892. (See Elec. Review N.Y. Oct. 29, 1892). (I also remember seeing Prof. Bell's 1st telephone in the exposition gallery at the Centennial Exp. at Philadelphia, Pa., in 1876).

*Mr Edison was my Bondsmen for \$40,000 in connection with his settlement of the affairs of one of his chief associates whom I took me 3 years and 3 mos to clear up.*

Chairman of the American Institute of Electrical Engineers Committee at the World's Fair in Chicago, Ill., 1893, and fitted up the Official Headquarters, *acted as his Personal Representative of Prof Galileo Ferraris and set up and exhibited at his A. S. E. E. Home the apparatus with which he discovered the principle of the rotary magnetic field*  
Editor of Engineering Pointers for the "Electrical Buyers' Reference" Magazine New York 1893.

Chairman Committee on Safe Wiring, Nat. Elec. Light Ass'n. for 4 years, 1893-'4-'5 and '6. (N.E.L.A. Proc. and Elec. World and Elec. Review).

Designed the Official Certificate of the Am. Inst. of Elec. Engineers and the "original" badge March 1893. (See Electricity, May 24 and Nov. 29 and Elec. World May 27, 1893).

Chairman for several years of the committee on Standard Rules for Electrical Construction and Operation of the National Electric Light Association.

Appointed a member of Special Committee on "Standard Rating of Arc Lamps" of the National Elec. Light Association, with Professors T.C. Mendenhall, William A. Anthony, Edward Weston and George Forbes, F.R.S., Washington, D.C., 1894. (See N.E.L.A. Proc. and Rules for Safe Wiring Booklet).

Elected President of the National Conference on Standard Electrical Rules in 1896-7 holding the office until 1906 and on July 20, 1906 received a set of resolutions of appreciation from the National Conference and a Life Membership. The National Conference originated and promulgated "The National Electric Code" used throughout the United States. (See N.E.L.A. Proc. Elec. World, Elec Review, Western Electrician etc. 1896-7 and 1906. Also Official Booklet of the Nat. Conference S.F.R. 1897.)

Delegate of Am. Inst. of Elec. Engineers to International Electrical Congress, Paris, France, 1900. Member of Special Joint Committee of 5 American and 5 British Electrical Engineers. Appointed for their joint meetings held at Paris, France and later at London, Eng., 1900, and as chairman of the Special Resolutions Com. Prepared the engrossed illuminated Resolutions of thanks presented by the A.I.E.E. to the British Institution March 1901, a photo of which is in the A.I.E.E. headquarters in New York.

Member of Executive Committee, New York Section, American Electro-Chemical Society, 1900. Lectured on Radium before the Society April 18, 1903. (See Soc. Proc.)

Was first in the world to employ wireless for domestic purposes in the home, to call servant to table, to call nurse, ring bells, turn on light, fire cannon and send messages, etc., at New York home in 1900. (See Electrical Review, Feb. 25, 1905, Telegraph Age, March 1, 1905, etc.)

In 1900, while in attendance at the Aeronautical Congress at Paris, I drove to St. Cloud, France, with Professor Samuel P. Langley, Secretary of Smithsonian Institution, to witness the dirigible balloon tests shown to us privately by M. Santos Dumont. I made a set of photos of the tests for Professor Langley, which he framed and hung in his private office, and we also arranged to visit Count Zeppelin at Lake Constance, to witness tests of his first Zeppelin dirigible, but Prof. Langley was called back to America and I went alone at his request but found Zeppelin's first dirigible had just been damaged in landing and would not fly again for six or eight weeks, so I went on to see the "Passion Play" at Oberammagau and continued my trip. At Paris Prof. Langley presented me with an autographed set of photographs of his early experiments in dynamic flight.

In 1900 made professional trip through Europe, of 15,000 miles, and wrote elaborate papers thereon for Am. Inst. Elec. Engineers, Franklin Institute, etc. (See A.I.E.E. Proceedings Feb. 28, 1901, etc.)

A portion of my paper before the A.I.E.E. was published in the Proceedings of the Smithsonian Institution in 1902 by Prof. Samuel P. Langley on the recommendation of Prof. Alexander Graham Bell. (Prof. Langley presented me with 300 reprints thereof).

Member of Com. on Arrangements and Reception Com. of the Am. Ins. of Elec. Engineers "Conversazione" held at Columbia Univ., N.Y., April 12, 1901. (Prof. S.P. Langley sent an interesting exhibit and asked me to act as his personal representative there).

Member of one of four leading teams at the finish of the first long-distance endurance test of automobiles between New York and Buffalo, (500 miles). Under the auspices of the Automobile Club of America, Sept. 9-14, 1901. (4 "White Steamers".) *Operated one car for half the distance.*  
*In 1902-3 was Com. Engineer to the Fall River Automatic Telephone Exchange System Co + delivered*

In 1902 made professional trip through Europe, of 20,000 miles, through thirteen countries, and prepared elaborate papers for the Am. Ins. Elec. Eng. and Am. Elec. Chem. Soc., on "Radium and other Radio Active substances", etc., at only joint meeting ever held by these societies, April 17, 1903. (See Societies Proceedings; also Elec. World and Engineer, April 25, 1903.)  
*elaborate paper on the system in the paper position Telephone Engineering at the Am. Soc. of Elec. Engrs June 23 1902 see A. I. E. E. Proc + Elec. Engrs 25/1903*

Visited Prof. Pierre Curie at his laboratory in Paris in 1902, and through his courtesy secured nine tubes of Radium of varying purities and one of Polonium, which I took to the United States in 1902, being the first to introduce Radium into America, and used same extensively in my laboratory experiments, lectures, etc. Mme. Curie presented me with an autographed copy of her thesis upon "Polonium" and Prof. and Mme. Curie also gave me their autographed photographs.

Gave 88 lectures in the U.S. upon the work of Prof. and 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 and to lecture upon it --- 1902-1907. (Most of these lectures were given at my own expense.)

Invented and developed in 1902 the "Radium Luminous Materials" both in powdered and liquid form, now in use all over the world, for the dials of watches, clocks, aeroplane and automobile instruments. etc. (Made many applications in my lectures and in my laboratory in 1902 and 1903) I was the first to apply them to gun sights, watch and clock dials, key hole, escutcheon mouthpiece of telephone, lamp sockets, keys and pulls, push buttons, poison bottle labels, statuettes, etc., electric lamp sign and phosphorescent sign and writing, etc., in 1902 and 1903. Many have testified to having seen these applications in my laboratory. (See Radium Patent litigation, my books and papers on Radium, "Story of Electricity", Vol. 1.)

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 in 1903-04. (Such as Dr. Willy Myer, Dr. Wm. H. King and Dr. Manges.)

Wrote the first book in the world upon Radium, published in U.S., England, Germany and Italy. (N.Y. State Librarian in his official report included this book among the 56 most sought-after books in the libraries of the State chosen from 7,865 books published in 1903. (See N.Y. Times, April 9, 1904.)

Wrote articles on Radium and Radioactivity for "Encyclopedia Americana" Vol. 13, 1904, and many other publications in 1903-04-05-06.

Have prepared a case of "Historic Wires" which have been interpolated at various times when electricity has been sent through an Electric Circuit upon some memorable occasion.

These wires embrace authenticated parts of Morse's first telegraph circuit, Bell and Watson's first telephone circuit, - Cyrus W. Field's first Atlantic Cable, W.J.H.'s first circuit starting the first Edison Central Station in London, Eng., Jan. 12, 1882. Section of 1st Sprague Elec. R.R. at Richmond, Va. Section of 1st Niagara Falls Elec. Cable Wire Section which lighted A.I.E.E. headquarters with Moore Vacuum tubes. Section of deep sea cable through which first message was sent completely around the world, etc. etc..



Was present when the first "Round the World" telegraph message was sent by President Theodore Roosevelt from Oyster Bay, L.I., on July 4, 1903 through the recently completed Pacific Ocean cable, 8,300 miles in length and completely round the globe a distance of 25,835 miles and received by Mr. Clarence H. Mackay, President of the Postal Telegraph Co. at the Company's headquarters, 253 Broadway, New York, the elapsed time during sending and receipt of the message being 12 minutes. See Telegraph Age, N.Y., Chicago Inter. Ocean etc., N.Y. Tribune, July 1903. (My case of historic sections of electrical wires was interpolated in the circuit and the company kindly made me a world map showing the round the world circuit.)

Have done considerable original work in my laboratory upon Selenium, Radium, X-rays, Cathode Rays, Ultra Violet light, phosphorescence, fluorescence, cold light, wireless, etc., preparing many lectures and papers thereon.

Attended the American Institute of Elec. Eng.'s dinner to Thomas A. Edison in commemoration of the 25th Anniversary of the invention of the Edison Incandescent Elec. Lamp, Feb. 11, 1904. (Mr. Edison's birthday) Mr. Edison telegraphed a message to the A.I.E.E. and my case of historic sections of electrical wires was interpolated in the circuit at the time.

In 1904 sent Prof. Pierre Curie from Colorado, a large box of radioactive minerals which I had collected, including Carnotite, Autunite, Gummite, Sheelite, Torbernite, etc. Prof. Curie tested same and sent me his report from his Paris Laboratory with letter of thanks and highly endorsing the "Carnotite" now extensively used.

Appointed by President Francis a member of the Organization Committee of the International Electrical Congress held at St. Louis World's Fair in 1904.

Chairman of Jury on "Telegraphy, Telephony and Wireless" at the St. Louis World's Fair, originated and conducted elaborate secret wireless tests between St. Louis, Mo., and Chicago, Ill., 1904, on the DeForest system. (See Elec. World and Engineer Nov. 12, 1904, Western Electrician, Sept. 24, 1904. Dr. Lee DeForest received The Grand Prize.)

Member of "The Departmental Jury" of the St. Louis Exposition of 1904.

Member of Com. in charge of 1st Aeronautical Exhibition of the Aero Club of America at the 69th Regiment Armory, N.Y., Jan. 13, 1906 and loaned my extensive aeronautical collection which Prof. Alexander Graham Bell told me at the time was the most complete collection in the United States. *Attended Franklin Bi-Centenary at Paris, Pa. April 19-1926 with reception at White House Hall + Am. Acad. Soc. + services at Franklin's grave*

Chairman General Com. of the International Aeronautical Congress and member of Executive and Technical Committees of the Ter-Centennial Exposition of Jamestown, Va., Oct. 28-29, 1907. (See N.Y. Sun, Oct. 28, 1907.)

1908 to 1917

One of the Editors of "Navigating the Air", official book of the Aero Club of America -- 1907. And one of the earliest members of the Aero Club <sup>1905</sup> A Charter Member, Vice-President and Director of The Aeronautical Society of America, and member of The National Aeronautic Association of the United States <sup>1922</sup>.

Donated anonymously the prizes for the Model Airplane contests of the Aeronautical Soc. held at the Automobile Club of America Hall, N.Y. City. *Prepared an elaborate paper on "Lighting by Incandescence" for the Quarterly Century number of the Electrical Review of N.Y. March 9-1907.*

After years of experimenting, invented and patented process for producing colored phosphorescent materials by combining phosphorescent and fluorescent substances, 1907. Made bouquets of colored phosphorescent flowers, toys, phosphorescent oil paintings etc. offered its use for stage scenery, ballets, etc., airplanes, dirigible balloons, landing stages, signs. (See Sci. Amer. July 25, 1914, "Aeronautics" March 31, 1914, My U.S. Pat. 868, 779, Oct. 22, 1907 and U.S. Pat. 12,812 June 16, 1908.

By invitation of the Trustees of The United Engineering Society attended the Dedication ceremonies of the home given by Mr. Andrew Carnegie

X to the American Engineering Societies at 29 West 39th St., New York, April 16 and 17, 1907.

Official Representative of the Am. Inst. of Elec. Engineers, at the "Hall of Fame" ceremonies, May 30, 1907 at the time of the unveiling of the tablet to Prof. Samuel F.B. Morse, placing a wreath thereon.

(See A.I.E.E. Proc. June 1907.) *also attended the ceremonies with Mr + Mrs Edison when Mr Edison unveiled the bust of Joseph Henry at the Hall of Fame in 1924.*

X On Sept. 25, 1908, Prof. Alexander Graham Bell, Octave Chanute, Major Geo. O. Squier, Lieut. R.B. Creecy, Lieut. G.C. Sweet, Percy Bradford, Prof. Monroe Hopkins, F.W. Baldwin, J.A. D. McCurdy and William J. Hammer acted as Honorary Pall Bearers at Lieut. Thomas Selfridge's funeral, (he being the first man in the world to lose his life in an airplane while flying with Mr. Orville Wright at United States Gov't. tests at Ft. Myer), Sept. 17, 1908. (Washington Post, Times, Evening Star, Sept. 26, 1908.)

Witnessed the Official Government Flights of the Wright Bros. at Fort Myer, Va., 1909, as representative and expert of the Hudson Fulton Celebration Commission of New York.

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. Autographed photos presented to me by Prof. and Mme. Curie were used in this report. (Franklin Institute Proc. May 1909.)

X Official representative of the American Institute of Electrical Engineers, and the Aeronautical Society of America, at the presentation of the U.S. Government's gold medal to Messrs. Wilbur and Orville Wright by President William Howard Taft at the White House, Washington, D.C., June 10, 1909.

X Secretary and Expert of the Aeronautics Com., of the Hudson-Fulton Celebration at New York, 1909. Personally drew the contracts with the Wright Bros. and Glenn Curtiss to take part, arranged with Gen. Leonard Wood and War Dept. for the first use ever made of Governor's Island as a landing field, built two hangars, made arrangements with Signal Corps, issued passes to Island, etc. (See N.Y. Sun and N.Y. Herald Oct. 5, 1909, N.Y. World June 22, 1909 and N.Y. Tribune, Aug. 18, 1909.)

X Wrote first complete "Chronology of Aviation" for the World Almanac, 1911; (Mr. Hudson Maxim was associated with me in the matter) reprinted and distributed gratis; twenty-two thousand copies in booklet form here and abroad in 1912-13. Mr. Patrick Y. Alexander of London, England, assisted me in bearing the expense. Distributed many copies abroad, (this Chronology has formed the basis of many subsequent chronologies).

X Dec. 18, 1913, presided at the "Tenth" Anniversary of "First Flight-by-Man" by Messrs. Wilbur and Orville Wright, at the Aeronautical Society of America and presented bronze statue of "Ajax" and engrossed resolutions to Mr. Orville Wright on behalf of the society. (See Aeronautics Dec. 1913, N.Y. Herald, Dec. 19th, 1913, and Official Booklet A.S. of Am. 1914.)

X Chairman of Reception Committee of Aeronautical Society of America at Banquet at Astor Hotel, April 27, 1911. President William H. Taft, Admiral Peary and over 1,100 guests were present. (See N.Y. Tribune, April 28, 1911.) Loaned my collection of models of all leading airplanes for decorating the speaker's table (these were copies of models made by Wilbur, Orville and Lorin Wright - which they loaned to me that I might make copies of them.) *Nov 3rd June 26-1909 Oct-1st and Nov 4th*

X Referee, Judge and Starter at many aviation meets held by the Aeronautical Society at Morris Park, New York, 1908-09, Mineola, L.I. *May 30* 1910-'11 and '12, and Oakwood Heights, Staten Island, 1912-'13 and '14. *+ Oct-13* (See "Aeronautics", Daily Press and Official Booklet.)

Invented systems for signalling from War Balloons in 1880 and in 1889. (See England Electrical Review, Aug. 8, 1885 and my article, "A Flight over Paris" in "Navigating the Air" by Doubleday Page & Co., 1907.)

X Have testified for the Wright Bros. in much of their aeroplane litigation in the United States.

X Referee at First Flying Meet and Tournament of The Aeronautical Soc. at Morris Park, N.Y. Airdrome Nov. 3-1908.

Was one of the syndicate owning the "First Aeroplane ~~built and sold~~ in America." (Date of Curtiss contract, January 1, 1909. The first Wright Airplane was purchased by the U.S. Government July 1909 after official tests.) First flight by Glenn H. Curtiss in this machine, January 26, 1909. It was sent about the country to arouse the interest of the public in flying and without expectation of profit. The Wright Bros. on account of their Official Government Flights were unable to accept our order. Charles Willard our first aviator. (See "Epitome" of the work of the Aeronautical Soc. 1909, N.Y. World, March 3, 1909.)

*and in fact in the whole world*  
*Wilbur and Orville Wright were the first men to fly on Dec 17<sup>th</sup> 1903 at Kitty Hawk N.C. & S.C.*  
Officially delegated by the Aeronautical Society of America, the American Institute of Electrical Engineers and the New York Electrical Society to attend the funeral of Wilbur Wright, aged 45 years, 1 month, 14 days, who died at Dayton, Ohio, May 30, 1912 of typhoid fever, and was buried at Dayton, June 1st, 1912. (See Dayton Evening Herald and Dayton Daily News, June 1, 1912.)

*at Orchard Hedges*  
X Judge and official in charge of the New York Times "Aerial Derby" 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. Awarded \$2,250 in money prizes on behalf of the New York Times and on Oct. 17, 1913, awarded silver cups to winners of the "Aerial Derby" which cups were donated by Mr. Octave Chanute to the Aeronautical Society for meritorious service in aeronautics. (See N.Y. Times, Oct. 14, 1913 -- Bulletin of Aeronautical Soc. of Am., Nov. 20, 1913.)

X Spent 34 years making a historical collection illustrating the development of the incandescent electric lamp all over the world. This collection which I started at Edison's laboratory at Menlo Park, N.J. in 1880 was set up in United Engineering Building, 29 West 39th St., New York City (1913) is now the property of The Edison Association of Elec. Illuminating Cos., having been presented to it by the General Electric Co., which bought my collection for that purpose in 1913. There are 4 cases each 10 ft. long and 1 case 4 ft. square. This "History of an Art" was awarded the Elliott Cresson Gold Medal by the Franklin Institute in 1906, a Silver Medal in England in 1882, and the "Grand Prize" at the World's Fair, St. Louis, Mo., 1904. (See Trans. N.Y. Elec. Soc., Feb. 17, 1913, Elec. Review, March 9, 1907, Association of Edison Elec. Ill. Co's. St. Louis Expo. Booklet, 1904, Franklin Institute Journal, Nov. 1906, The Story of Electricity, Vol. 2, 1922.)

X Have also made a similarly complete collection of Incandescent Lamp Sockets from all over the world. (This has never been exhibited and is still in my possession.)

X Spent 45 years making a collection of autographed portraits of eminent electrical and scientific men of the world and also possess an extensive collection of autographed letters of Franklin, Edison, Morse, Farmer, Wallace, Henry, Wrights, Bell, Kelvin, Hertz, Crookes, Swan, Lubbock, Thomson, Curies and many others.

X One of the Founders and Contributors and a Member of the Executive Committee of the Edison Medal Fund -- 1908-12. ("Edison Medal" now awarded by Am. Ins. of Elec. Engineers in whose custody it has been placed.)

Chairman of Technical Board, Aeronautical Society of America, 1913.

X Have been preparing for many years an elaborate bibliography upon Selenium and its industrial and scientific applications and have a large collection of American and foreign Selenium Cells. (Have shown many practical applications in my lectures and in my laboratory starting 5 H.P. motors with a beam of light turning on electric lights, firing cannons, telephoning with a beam of light, measuring light, etc (See A.I.E.E. paper April 17, 1903, Proc. Am. Elec. Chem. Soc. 1903, N.Y. Tribune, March 20, 1910 and Electrical Experimenter, Nov. 1915.)

Official Representative of the Aeronautical Soc. of Am. at the presentation of the Elliott Cresson Gold Medal to Mr. Orville Wright by the Franklin Institute, May 20, 1914.

Prepared largely at my own expense the Official Booklet of the Aeronautical Soc. of Am., containing Const., By-Laws, Membership list, Reports of Flying Meets, Exhibitions, Lectures, Papers, etc., copyrighted 1914.

Member of Com. on Arrangements and Speaker at the Banquet tendered to Lt. Col. George O. Squier in charge of Aviation Section, Signal Corps, U.S. Army by the Aeronautical Soc. of Am. at St. Regis Hotel, N.Y. Nov. 28, 1914. (See Aero World, Dec. 1914.)

Testified as an expert in the Brooklyn Rate Case in 1915 and also in the "Phila. Elec. Co's. Rate Case" 1915 submitting many elaborate exhibits including the first complete list and classification of all of Mr. Thomas A. Edison's Patents under which the various Edison Electric Illuminating Cos. operated. *Have also testified in many Patent-Cases and in 1898 in a famous Electric R. R. Case (Albany) was on the witness stand for two months*

On "Edison Day" (at the Panama Pacific Exposition at San Francisco), Oct. 21, 1915, was one of a group of Mr. Edison's associates and friends gathered at his laboratory at Orange, N.J., who listened to Mr. Edison's address to us over 3,400 miles of Long Distance Telephone circuits. My case of historic Electrical circuits was interpolated in the lines at the time.

Official Delegate of the Am. Inst. of Elec. Eng. at the First Aviation Congress of the Aeronautical Soc. of Am. at the Engineering Society Building, N.Y. Feb. 5, 1915. (See N.Y. Herald, Feb. 6, 1915.)

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 to be trained in Peace time, to be called into service in time of war. -- May 22, 1916.

Chairman of the Committee on War Camouflage of The Aeronautical Soc. of Am. 1916.

Delegate of the Aeronautical Society of Am., to the Congress of Constructive Patriotism at Washington, D.C., Jan. 25, 26, 27, 1917.

Delegate of the Aeronautical Society of Am., to the Convention of Patriotic and Defense Societies at Washington, D.C., Feb. 21, 1917. (See Proc. A.S. of Am., Feb. 27, 1917.)

Frederick A. Scheffler, Charles Wirt, Sydney B. Paine and William J. Hammer were the original Committee which organized the "Edison Pioneers" (Jan 14th, 1918), an association of Mr. Edison's early assistants and associates. My designs for the Official Membership Certificate and Official Badge unanimously adopted. (1920)

Was commissioned a Major on the Inventions Section, "War Plans" Div., G.S. U.S. Army, June 4, 1918, in charge of Electrical and Aeronautical War Inventions; appointed a Major on the General Staff, U.S. Army, Dec. 13, 1918. "Inventions Section" transferred to the "Operations" Division G.S. at War Department June 30, 1919, where I continued my work until I was mustered out of service Oct. 27, 1919.

Member of Expert Committee of Army officers, lawyers and patent attorneys at Washington, D.C. advising the War Department and the Alien Property Commission upon patents, contracts, etc., during the World War -- 1918-1919.

Served at times at U.S. Patent Office by direction of "The Inventions Section" G.S., marking and holding up many patents which if they had been issued would have been likely to convey useful information to the enemy, 1918-1919. (The Examiners at the Patent Office declined to accept this responsibility of holding up Patents.)

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 on bombing expeditions during World War. July 17, 1918.

X Was among "first five" whose plans were selected out of the many thousands submitted to former Ambassador Gerard's Committee for securing the widespread distribution of propaganda into enemy countries during World War, Oct. 5, 1918.

X Flew in airplanes with Major John W. Butts, G.S. during the War over Washington, D.C. testing sound devices, etc., 1918-19. Inspected Helicopter Airplanes of Peter Cooper Hewitt and Emile Berliner and types of airplanes propellers, balloons, dirigibles and parachutes and many thousands of electrical and aeronautical war inventions and devices.

X Was one of the General Staff officers at the Army War College, Wash., D.C., delegated to examine war documents, papers, etc., to see if these contained technical matter of value to the service. 1918-19.

X Prepared original draft of the Official Report of the work of the Inventions Section, War Plans Div. General Staff by direction of Col. Charles H. Hilton, G.S., Chief of Section (1919)

X Attended the Official Reception to General John J. Pershing at the War Department, Washington, D.C. upon his return from the World War.

X Attended the luncheon to Marshal Ferdinand Foch by the Pennsylvania Society, Nov. 19, 1921 and the luncheon tendered to Marshal Joseph Jacques Cesaire Joffe by the Military Order of the World War, April 27, 1922.

X Delegate of the Military Order of the World War to the Aeronautical Congress and Flying Meet of the National Aeronautical Ass'n. at Detroit Mich., Oct. 7-14, 1922.

X Wrote article on work of the Wright Bros., for "U.S. Air Service Magazine", Nov. 1923.

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

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

X Delegate of the Military Order of the World War to the Convention of the National Civic Federation, New York, 1924. (See N.Y. Herald, Nov. 11, 1924.)

X Through the personal efforts of Mr. Thomas A. Edison whose sole representative I was at the Paris Exposition of 1889, and with the kindly cooperation of M. Andre Brouzet, Acting Consul General of France, the honor of Chevalier of the Legion of Honor of France, was conferred upon me at the monthly meeting of the Military Order of the World War at the Army and Navy Club, New York City, Feb. 10, 1925. (See Bulletin M.O.W.W. Feb. 1925, N.Y. Herald-Tribune, Feb. 11, 1925 and Journal A.I.E.E. March, 1925.)

X Member of the Original Advisory Committee of the Quentin Roosevelt Memorial Chair of Aeronautics and the Aeronautical Research Laboratories of the New York University, 1925.

X Chairman Committee on Resolutions of the N.Y. Chapter of The Military Order of the World War, 1925. Elected Historian in 1926 and Member of Color Guard.

X Official Delegate of the N.Y. Chapter at the Annual Convention of the Military Order of the World War at New York, Sept., 1925.

X Member of the Reception Committee of the New York Chapter of the National Aeronautic Association of the U.S. A. at its convention Oct. 8, 9, and 10, 1926. Mr. Elmer Sperry and W.J. Hammer were appointed a special committee to visit Messrs. Amundsen and Ellsworth on Oct. 29, 1926 upon their arrival in New York from their trip by dirigible balloon over the North Pole and invite them to attend the annual dinner of the N.A.A.A. about to be held. We visited them but they could not accept at the time.

X Official representative of The Mil. Order of the World War and the Am. Soc. of Mil. Engineers at the dedication of Gutzon Borglum's "Wars of America" Memorial erected in Military Park, Newark, N.J. May 31st, 1926.

*Elected Historian of the N.Y. Chapter of the Mil. Order of the World War 1926-7*

Mr. Edison presented me with one of his latest Diamond Disc, Cabinet Phonographs and 50 selected records at the time of my visit to his Orange Laboratory, Orange, N.J. July 13th, 1926 *with a silver plate medal inscribed "To Maj William J. Hammer from Thomas A. Edison July 13<sup>th</sup> 1926."*

On Aug. 10th, 1926 went by auto with Captain Rene Fonck, and others to Roosevelt Field, Westbury, L.I., N.Y. to inspect Sirkorsky's huge Trans-Atlantic Airplane at the request of Col. H.E. Hartney to consider use of my Radium Luminous preparations and my colored phosphorescent-Fluorescent coloring materials in connection with the proposed flight. Mr. Ivor Sirkorsky kindly gave me a fine flight in his other large airplane over Long Island.

Sept. 3rd 1926 Appointed a Delegate to the Annual Convention of the Nat. Aeronautic Ass'n. of Am. at Phila., Pa., Sept. 7-8-9, 1926 and the Nat. Air Races at the "Sesqui" Expo. Made an ascent in the huge Army Kite Balloon at the "Sesqui", *Sept-10<sup>th</sup> 1926 and witnessed Mrs Gertrude Ederle's first demonstration in the lake below of how she swam across the English Channel shall-*

In addition to books referred to above in the above data, have written *before* many papers, monographs, etc.; on the Incandescent Electric Lamp; Selenium and its Scientific and Industrial Applications; High Tension Railroads; The Phonograph; the Poulsen Telegraphone; The Transportation of a Busy People; High Furnace Gas Engines; the S.O. 2 Engine; The Steam Turbine; ~~Lightning~~ Phenomena; Expositions National, International and Electrical; Aeronautics; Spherical and Dirigible Balloons; The "Finsen" Treatment of disease by Ultra Violet Light; Electrical Wonders; Electricity and things which can be done with it; Fire Insurance Regulations; National Electric Code; Wireless; Long Distance Sound Transmission; Automatic Telephony; Phosphorescence; Fluorescence; Ultra Violet Rays, "X" Rays; Cathode Rays; Edison and his Inventions; William Wallace and his contributions to the Electrical Industry; Surface Properties of Aluminum and Zinc; Edison's Tungstate of Calcium Lamp; The Nernst Lamp; The "First" Electrical House in the World; "Electrical Diablerie"; Important European Electrical and Engineering Developments at the close of the 19th Century; Radium and other Radioactive Substances, etc., and have given many lectures upon certain of these subjects.

*Elected Historian General of the National Chapter of the Red Cross of the World War at the Annual Convention at Phila Pa. Oct-9<sup>th</sup>-1926*

*Re-elected Historian General N. C. W. W. at the Annual Conv. at Baltimore Md Oct 1926*

*Member of reception Com. to meet Maj Gen. John J. Pershing upon his return from Europe / Nov 8-1926*

Professional Notice

William J. Hammer, Consulting Electrical Engineer and Expert. In private practice from 1889 to 1926. Reports upon Industrial Plants, inventions and projects, laboratory and other tests, expert testimony in electrical, aeronautical and other patent suits, accident cases, rate cases, etc. Expert testimony before Public Service Commissions, State and Municipal bodies, and Committees, and reports upon European patents and processes for clients. Has spent over seven years in Europe upon professional work. Fellow Am. Ins. Elec. Engineers, Am. Phys. Soc. and Am. Ass'n. for Adv. of Science, Chevalier Legion of Honor of France, (late) Major, General Staff, U.S. Army *etc.*