



PROCLAMATION

OFFICE OF THE GOVERNOR STATE OF ARIZONA
Bruce Babbitt ~ Governor

** NIKOLA TESLA DAY **

WHEREAS, America's history is based on the contributions of individuals who came here from countries around the world, and we are grateful for the contributions these citizens have made to the quality of life in our country; and

WHEREAS, Nikola Tesla – a distinguished scientist – is one such person who made numerous contributions to our society. Born in 1856 of Serbian parents in what is now Yugoslavia, Tesla emigrated to the United States at the age of 28; and

WHEREAS, although at the time many scientists did not accept Tesla's ideas – specifically, his solution to the problems of applying alternating current in light and power systems – Tesla remained firm in his convictions and, with George Westinghouse, eventually brought the tesla system to market as the standard in electricity in the 20th century; and

WHEREAS, Tesla's other inventions include the synchronous alternating current motor, devices for generating high voltage and high frequency currents, and contributions to radio technology. Indeed, the word "Tesla" is now part of the language of electrical science; and

WHEREAS, Tesla was honored both during and after his lifetime by those who realized his important scientific contributions and in September 1983 the U.S. Postal Service paid tribute to him by issuing a commemorative stamp in his honor;

NOW, THEREFORE, I, Bruce Babbitt, Governor of the State of Arizona, do hereby proclaim September 21, 1986, as

** NIKOLA TESLA DAY **

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Arizona

Bruce Babbitt
GOVERNOR

DONE at the Capitol in Phoenix on this fifteenth day of September in the Year of Our Lord One Thousand Nine Hundred and Eighty-six and of the Independence of the United States of America the Two Hundred and Tenth.

ATTEST:

Lois Gofford
Secretary of State





COMMONWEALTH OF PENNSYLVANIA
GOVERNOR'S OFFICE
HARRISBURG

PROCLAMATION

NIKOLA TESLA DAY
SEPTEMBER 21, 1983

America's history is based on the contributions of individuals who came here from countries around the world, and we are particularly grateful for the contributions these citizens have made to the quality of life in our country.

Nikola Tesla -- a distinguished scientist -- is one such person who made numerous contributions to our society. Born in 1855 of Serbian parents in what is now Yugoslavia, Tesla emigrated to the United States at the age of 28. Although at the time many scientists did not accept Tesla's ideas -- specifically, his solution to the problems of applying alternating current in light and power systems -- Tesla remained firm in his convictions and, with George Westinghouse, eventually brought the tesla system to market as the standard in electricity in the 20th century. This accomplishment literally changed the face of the earth.


Tesla's other inventions include the synchronous alternating current motor, devices for generating high voltage and high frequency currents, and contributions to radio technology. Indeed, the word "Tesla" is now part of the language of electrical science -- not only in the name of the Tesla coil, but in the term "tesla" for the unit of magnetic flux density, becoming another in the class of such terms as volt and watt.

Although forgotten by many, Tesla was honored both during and after his lifetime by those who realized his true scientific worth. On September 21, 1983 the U.S. Postal Service will pay tribute to this great inventor by issuing a commemorative stamp in his honor.

Therefore, I, Dick Thornburgh, Governor of the Commonwealth of Pennsylvania, do hereby proclaim September 21, 1983 as NIKOLA TESLA DAY in the Commonwealth in recognition of the lasting contributions made by this truly fine scientist. I urge all citizens to appreciate the achievements of the distinguished inventor and scientist, Nikola Tesla.



GIVEN under my hand and the Seal of the Governor, at the City of Harrisburg, this nineteenth day of September in the year of our Lord one thousand nine hundred and eighty-three, and of the Commonwealth the two hundred and eighth.


Dick Thornburgh
Governor

Commonwealth of Pennsylvania



Governor's Office

PROCLAMATION

NIKOLA TESLA DAY
July 10, 1989

Nikola Tesla, a distinguished scientist, has been called the genius who ushered in the age of electrical power. Born in 1858 of Serbian parents in what is now Yugoslavia, Tesla emigrated to the United States at the age of 28. At that time, many scientists did not accept Tesla's ideas, including his solution to the problems of applying alternating current in light and power systems.

Tesla remained firm in his convictions and, with George Westinghouse of Pittsburgh, brought the Tesla system to market as the standard in electricity in the 20th century. Tesla's other inventions include the synchronous alternating current motor and devices for generating high voltage and high frequency currents.

Nikola Tesla's scientific genius formed the foundation for many of today's technological advances, and it is fitting that we honor him on the 133rd anniversary of his birth.

Therefore, I, Robert P. Casey, Governor of the Commonwealth of Pennsylvania, do hereby proclaim July 10, 1989, as NIKOLA TESLA DAY in Pennsylvania. I urge all citizens to recognize the contributions of this distinguished inventor and scientist.



GIVEN under my hand and the Seal of the Governor, at the City of Harrisburg, this ninth day of June in the year of our Lord one thousand nine hundred and eighty-nine, and of the Commonwealth the two hundred and thirteenth.

Robert P. Casey
Robert P. Casey
Governor



NIAGARA COUNTY

LEGISLATURE

COURT HOUSE

LOCKPORT, NEW YORK 14094-2740

LEE SIMONSON

Chairman

DESPINA BOBICK

Clerk

(716) 439-6194

Proclamation

WHEREAS, Nikola Tesla played a key role in developing the AC polyphase system and the concept of the Rotating Magnetic Field that made the use and transmission of alternating current possible, and

WHEREAS, Nikola Tesla's "on-the-job-role" here in Niagara County insured the successful completion of the first Niagara Power Project in 1895, and

WHEREAS, Nikola Tesla's role made Niagara County a center for technical achievement that was duplicated throughout the world, and

WHEREAS, his role is not realized by the members of this community and much of America,

NOW, THEREFORE the Niagara County Legislature does hereby designate July 10, 1991 as

" NIKOLA TESLA DAY "

throughout the County of Niagara and that all business, educational and social institutions are encouraged to recognize his special contributions to the Niagara economy and the quality of life throughout the world.

IN WITNESS WHEREOF I have hereunto set my hand and the official seal of the Niagara County Legislature this 15th day of January, 1991.

LEE SIMONSON, CHAIRMAN
NIAGARA COUNTY LEGISLATURE





THE CITY OF NEW YORK
OFFICE OF THE MAYOR
NEW YORK, N.Y. 10007

January 16, 1993

To All In Attendance
Nikola Tesla Memorial Service
St. Sava Cathedral
20 West 25th Street
New York, New York

Dear Friends:

It is my pleasure to join you in commemorating the distinguished life and work of Nikola Tesla on the occasion of the 50th anniversary of his death.

Nikola Tesla, born in Serbia in 1856, was indeed a pioneer in his field. In 1893 he astonished the world by demonstrating the wonders of alternating current electricity at the World Columbian Exposition in Chicago. While other scientists in Mr. Tesla's day rejected his belief that such a current could produce light and power systems, he remained firm in his convictions and worked with George Westinghouse to market this system, which is, of course, standard power today.

Mr. Tesla's many other discoveries include the Tesla Coil, fluorescent light, wireless transmission of electric energy and remote control. And it was Nikola Tesla who designed the first hydro-electric power plant in Niagara Falls in 1895.

On behalf of all New Yorkers, I convey my best wishes to each of you gathered today as you celebrate the accomplishments and legacy of Nikola Tesla.

Sincerely,

A handwritten signature in black ink, appearing to read "David N. Dinkins".

David N. Dinkins
MAYOR



State of New York

Executive Chamber

This year marks the 134th anniversary of the birth of the distinguished scientist and inventor, Nikola Tesla.

Born in 1856 of Serbian parents in what is now Yugoslavia, Tesla emigrated to the United States at the age of 28. He worked with Edison for a short time and then went into business for himself.

At that time many scientists did not accept Tesla's ideas or his solution to the problems of applying alternating current in light and power systems. Working in his own laboratory, and with George Westinghouse of Pittsburgh, Tesla brought the Tesla system to market as the standard in electricity in the 20th century. Tesla also invented the principle of the rotary magnetic field embodied in the apparatus used in the transmission of power from Niagara Falls. Some of his other inventions included new forms of dynamos, transformers, induction coils, condensers, arc and incandescent lamps and other electrical apparatus.

It is fitting that the people of New York join with the members of the Tesla Memorial Society to recognize

NIKOLA TESLA

for his contributions to science and to his fellow man.



Herish H. Parsons

GOVERNOR



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W. W. Averill

GOVERNOR

September 6, 1989



The Empire State is fortunate to be the center of invention, ingenuity and progress, having been home to countless inventors and entrepreneurs whose ideas gave way to the world's greatest and most coveted goods and services. We in New York are equally proud to recognize the accomplishments of inventors such as Nikola Tesla, a prolific creator who, in cooperation with George Westinghouse and J.P. Morgan, introduced humanity to the practicality and benefits of electricity.

Nikola Tesla immigrated from Serbia in the former Austria-Hungary to the United States in 1884 at the age of 28. He received degrees from Columbia and Yale Universities and lived most of his life in New York City where he worked on the more than 700 inventions he patented. He found support for his idea of alternating current electricity and a broader spectrum of inventions that lifted mankind's physical burden and gave them the tools to live in safety and comfort. Tesla is best known for revolutionizing electromagnetic technology and developing the system of the alternating current, upon which is based the entire system of electricity in the United States.

Tesla's prolific, successful decades in this State earned him the recognition of his peers, many of whom have considered him the greatest inventor ever. In 1893, George Westinghouse, who financed many of Tesla's inventions, provided the first World's Fair with electricity using Tesla's alternating current system. Tesla's miracle of science and subsequent ideas paved the way for the development of robotics, computers, microwaves and satellites. Humanity owes a debt of gratitude to one whose inventions innovated and enhanced our lives so permanently.

It is fitting that all New Yorkers acknowledge Tesla's work, which modernized life for all Americans and all mankind.

NOW, THEREFORE, I, George E. Pataki, Governor of the State of New York, do hereby recognize July 10, 1997 as

NIKOLA TESLA DAY

in the Empire State.



George E. Pataki
GOVERNOR



STATE OF NEW JERSEY
EXECUTIVE DEPARTMENT

Proclamation

WHEREAS, July 10, 1997 marks the 141st Anniversary of Nikola Tesla's birth, a gifted scientist, inventor and American patriot who contributed much to the industrial development of the United States; and

WHEREAS, born of Serbian parents he immigrated to the United States in 1884, where he worked on the more than 700 inventions that he patented; and

WHEREAS, inventor and developer of alternating electric current, the standard in the United States today, he astonished the world in 1893 by demonstrating the wonders of alternating electric current at the Chicago World's Fair; and

WHEREAS, his many other discoveries include the Tesla Coil, fluorescent light, wireless transmission of electric energy, and remote control; and

WHEREAS, he designed and supervised the construction of Niagara Mohawk Power, the first hydro-electric generating plant in the United States; and

WHEREAS, Nikola Tesla joined the company of Volt, Watt, Ohm, et al in 1956, when the unit of electromagnetic flux density was named the "tesla" in his honor;

NOW, THEREFORE, I, CHRISTINE TODD WHITMAN, Governor of the State of New Jersey, do hereby proclaim

JULY 10, 1997

as

NIKOLA TESLA DAY

in New Jersey, and urge the citizens of the Garden State to recognize the invaluable contributions and inventions made by him, and their importance to our families and our way of life.

GIVEN, under my hand and the Great Seal of the State of New Jersey, this first day of July in the year of Our Lord one thousand nine hundred and ninety-seven and of the Independence of the United States, the two hundred and twentieth.

Christine Todd Whitman
GOVERNOR



BY THE GOVERNOR:

Lonna R. Hooks
LONNA R. HOOKS, SECRETARY OF STATE



State of Nevada
Executive Department

A Proclamation by the Governor

WHEREAS, AMERICA'S HISTORY IS BASED ON THE CONTRIBUTIONS OF INDIVIDUALS WHO CAME HERE FROM COUNTRIES AROUND THE WORLD, AND WE ARE PARTICULARLY GRATEFUL FOR THE CONTRIBUTIONS THESE CITIZENS HAVE MADE TO THE QUALITY OF LIFE IN OUR COUNTRY; AND

WHEREAS, NIKOLA TESLA -- A DISTINGUISHED SCIENTIST -- IS ONE SUCH PERSON WHO MADE NUMEROUS CONTRIBUTIONS TO OUR SOCIETY. BORN IN 1856 OF SERBIAN PARENTS IN WHAT IS NOW YUGOSLAVIA, TESLA EMIGRATED TO THE UNITED STATES AT THE AGE OF 28. ALTHOUGH AT THE TIME MANY SCIENTISTS DID NOT ACCEPT TESLA'S IDEAS -- SPECIFICALLY, HIS SOLUTION TO THE PROBLEMS OF APPLYING ALTERNATING CURRENT IN LIGHT AND POWER SYSTEMS -- TESLA REMAINED FIRM IN HIS CONVICTIONS AND, WITH GEORGE WESTINGHOUSE, EVENTUALLY BROUGHT THE TESLA SYSTEM TO MARKET AS THE STANDARD IN ELECTRICITY IN THE 20TH CENTURY. THIS ACCOMPLISHMENT LITERALLY CHANGED THE FACE OF THE EARTH; AND

WHEREAS, TESLA'S OTHER INVENTIONS INCLUDE THE SYNCHRONOUS ALTERNATING CURRENT MOTOR, DEVICES FOR GENERATING HIGH VOLTAGE AND HIGH FREQUENCY CURRENTS, AND CONTRIBUTIONS TO RADIO TECHNOLOGY. INDEED, THE WORD "TESLA" IS NOW PART OF THE LANGUAGE OF ELECTRICAL SCIENCE -- NOT ONLY IN THE NAME OF THE TESLA COIL, BUT IN THE TERM "TESLA" FOR THE UNIT OF MAGNETIC FLUX DENSITY, BECOMING ANOTHER IN THE CLASS OF SUCH TERMS AS VOLT AND WATT; AND

WHEREAS, ALTHOUGH FORGOTTEN BY MANY, TESLA WAS HONORED BOTH DURING AND AFTER HIS LIFETIME BY THOSE WHO REALIZED HIS TRUE SCIENTIFIC WORTH. ON SEPTEMBER 21, 1983, THE U.S. POSTAL SERVICE PAID TRIBUTE TO THIS GREAT INVENTOR BY ISSUING A COMMEMORATIVE STAMP IN HIS HONOR;

NOW, THEREFORE, I, RICHARD H. BRYAN, GOVERNOR OF THE STATE OF NEVADA, DO HEREBY PROCLAIM SEPTEMBER 21, 1988 AS

NIKOLA TESLA DAY

IN NEVADA IN RECOGNITION OF THE LASTING CONTRIBUTIONS MADE BY THIS TRULY FINE SCIENTISTS.



In Witness Whereof, I have hereunto set my hand and caused the Great Seal of the State of Nevada to be affixed at the State Capital in Carson City, this 21st day of September in the year of Our Lord one thousand nine hundred eighty 8.

By the Governor: 
Secretary of State: 



KUDY PERPICH
GOVERNOR

STATE OF MINNESOTA

OFFICE OF THE GOVERNOR

ST. PAUL 55155

June 6, 1964

Dear Friends:

Thank you for giving me this opportunity to send greetings to all attending this Niagara Falls event to mark the centennial of the arrival of Nikola Tesla to the United States.

This is indeed an historic occasion. Mr. Tesla's contributions to the field of science are invaluable, and it is imperative that we keep his name and accomplishments in the forefront of scientific and academic history.

I commend you on your efforts to honor and maintain the memory of Nikola Tesla. My best wishes to you for continued success in your endeavors.

Sincerely,

A large, stylized handwritten signature in cursive script that reads "Rudy Perpich".

RUDY PERPICH
GOVERNOR

Office of the Mayor

CITY OF NEW YORK



Proclamation

WHEREAS:

NIKOLA TESLA IS BEING HONORED IN OUR CITY ON THE TENTH OF JULY, THE 141ST ANNIVERSARY OF HIS BIRTH. TESLA WAS BORN IN 1856 TO SERBIAN PARENTS IN CROATIA, THEN PART OF THE AUSTRO-HUNGARIAN EMPIRE. HE STUDIED ELECTRICAL ENGINEERING AND, REALIZING THE PROBLEMS ASSOCIATED WITH THE USE OF DIRECT CURRENT, BEGAN TO DESIGN AN ALTERNATING CURRENT MOTOR. HE WAS RECOMMENDED FOR A POSITION IN THOMAS ALVA EDISON'S RESEARCH LABORATORY IN NEW YORK AND MOVED HERE IN 1884. EDISON HIRED TESLA, BUT DID NOT AGREE WITH HIS THEORIES, SO TESLA LEFT AFTER ONE YEAR AND ESTABLISHED THE TESLA ELECTRIC COMPANY IN 1887. SOON HE PATENTED HIS ALTERNATING CURRENT MOTOR AND WAS HIRED BY GEORGE WESTINGHOUSE. THE 1893 COLUMBIAN EXPOSITION IN CHICAGO WAS ELECTRIFIED BY WESTINGHOUSE USING TESLA'S SYSTEM OF POLYPHASE ALTERNATING CURRENT. ALSO IN PARTNERSHIP WITH WESTINGHOUSE, TESLA DESIGNED THE WORLD'S FIRST HYDROELECTRIC GENERATING PLANT, DISTRIBUTING ELECTRICAL CURRENT TO THE CITIES OF NIAGARA FALLS AND BUFFALO; AND

WHEREAS:

IN 1897 TESLA, WHO EXPERIMENTED WITH RADIO WAVES, DEMONSTRATED WIRELESS COMMUNICATION OVER 25 MILES; AND THE NEXT YEAR DEMONSTRATED ELECTRICAL ENERGY TRANSMISSION WITH RADIO-CONTROLLED MODEL BOATS. HE INVENTED SEVERAL GENERATING MACHINES AND THE TESLA COIL, WHICH PRODUCED CURRENTS AT A GREAT NUMBER OF FREQUENCIES AND MAGNITUDES. THESE AND OTHER INVENTIONS INSPIRED LATER RESEARCH SCIENTISTS; AND

WHEREAS:

NIKOLA TESLA SPENT HIS LAST FOUR DECADES LIVING IN OBSCURITY IN OUR CITY. HE HAD PATENTED MORE THAN 700 INVENTIONS IN THE UNITED STATES. AND HIS WORK MADE POSSIBLE INCREASED PRODUCTIVITY IN INDUSTRY, THE MODERN APPLICATIONS OF ALTERNATE CURRENT ELECTRIC POWER, MODERN COMMUNICATIONS, AND SUCH ADVANCES AS ROBOTICS, COMPUTERS, SATELLITES, AND MICROWAVES.

NOW THEREFORE, I, RUDOLPH W. GIULIANI, MAYOR OF THE CITY OF NEW YORK, IN RECOGNITION OF HIS GROUNDBREAKING WORK, DO HEREBY PROCLAIM THURSDAY, JULY 10, 1997 IN THE CITY OF NEW YORK AS

"NIKOLA TESLA DAY"


RUDOLPH W. GIULIANI
MAYOR

IN WITNESS WHEREOF I HAVE HEREUNTO
SET MY HAND AND CAUSED THE SEAL OF
THE CITY OF NEW YORK TO BE AFFIXED.





EXECUTIVE CHAMBERS



Richard D. Lamm
Governor

EXECUTIVE ORDER
PROCLAMATION
NIKOLA TESLA MONTH
August 5 - September 9, 1984

WHEREAS, Nikola Tesla was an electrical genius, prolific inventor and developer of alternating electric current, the standard in the United States today; and

WHEREAS, 1984 marks the 100th anniversary of Tesla's arrival in the U.S. from Yugoslavia; and

WHEREAS, Tesla's first successful commercial application of the production and transmission of alternating current was near Telluride, Colorado, where his machinery provided power to the Gold King Mine; and

WHEREAS, Tesla spent part of 1899 and 1900 in Colorado Springs, where he constructed a laboratory in which he made some of his most significant discoveries, including manmade lightning and proof that the earth could be used as a giant electrical conductor; and

WHEREAS, Nikola Tesla, despite his accomplishments, is largely unknown outside of scientific circles; and

WHEREAS, a series of events marking the centennial of Tesla's arrival in the U.S. will take place in Colorado Springs beginning August 5;

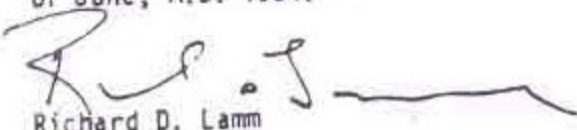
NOW, THEREFORE, I, Richard D. Lamm, Governor of the State of Colorado, do hereby proclaim August 5 - September 9, 1984, as

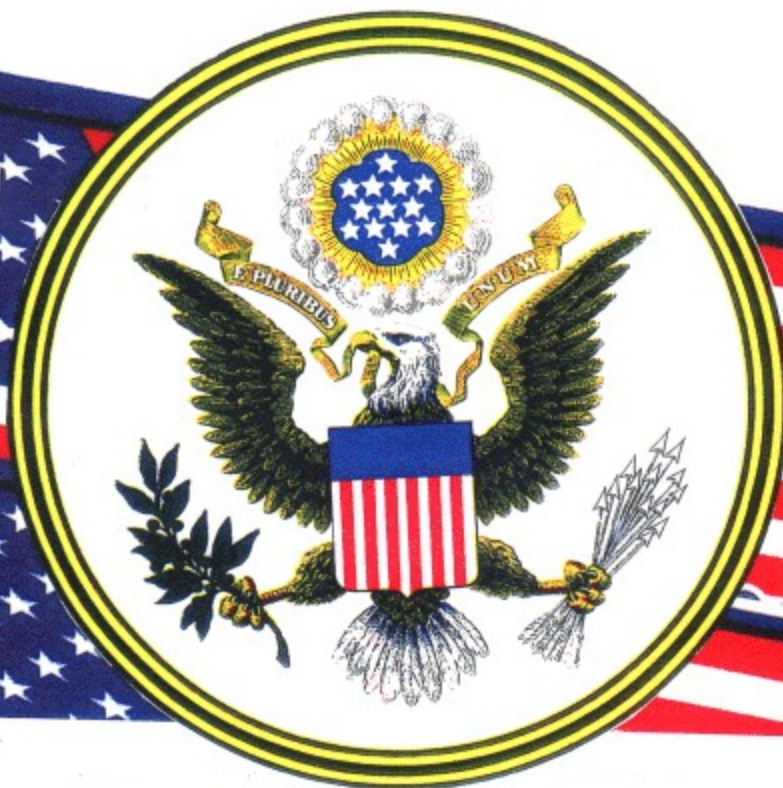
NIKOLA TESLA MONTH

in the State of Colorado.



GIVEN under my hand and the Executive Seal of the State of Colorado, this twenty-seventh day of June, A.D. 1984.


Richard D. Lamm
Governor



June 29, 1989

CONGRESSIONAL RECORD — Extensions of Remarks

E 2375

EXTENSIONS OF REMARKS

MARKING THE BIRTHDAY OF INVENTOR NIKOLA TESLA

HON. JOEL HEFLEY

OF COLORADO

IN THE HOUSE OF REPRESENTATIVES

Thursday, June 29, 1989

Mr. HEFLEY. Mr. Speaker, July 10 marks the 133d anniversary of the birth of Nikola Tesla, a native of Yugoslavia who traveled to this country in 1884 and discovered the rotating magnetic field, considered the basis of most alternating-current machinery.

Tesla's vision and achievements earn him a stature the world has eagerly bestowed on Thomas Edison and George Westinghouse, two of his contemporaries. Yet he remains relatively unknown despite the fact his research did much to create the world we live in today.

Tesla was no stranger to my hometown of Colorado Springs. Along one side of Prospect Park there's a plaque marking the place where, in 1899 and 1900, Tesla conducted some of his most spectacular experiments. Those experiments were recounted by author Harry L. Goldman in the March 1971 edition of the *American West: The Magazine of Western History*. I commend that article to my colleagues for their attention.

[From the *American West: The Magazine of Western History*, March 1971]

NIKOLA TESLA'S BOLD ADVENTURE

(By Harry L. Goldman)

On the afternoon of May 17, 1899, inventor Nikola Tesla stepped from the train at Colorado Springs obsessed with electrifying the earth. The elite of Little London turned out to welcome the stranger from New York City and they were not disappointed—Tesla was a striking figure. His tall slenderness, wavy black hair, piercing gray eyes, and European mannerisms never failed to capture the emotions of those about him.

Of the several dignitaries who made it their business to be on hand, few were able to comprehend the significance of Tesla's visit. It was not long before the electrical wizard was able to give his audience a traumatic demonstration of his purpose.

Of the thousands who reached these shores in 1884, destiny marked Nikola Tesla, an immigrant from Yugoslavia, as one who would soon stand out from the crowd. Within a span of fifteen years, the ambitious inventor bestowed upon his adopted country a prodigious number of scientific achievements and accomplishments.

He not only gave us our present system of alternating-current power transmission, but also the invaluable a.c. motor, ideas and apparatus for industrial induction heating and welding, diathermy, with its medical applications, synchronous time mechanisms, gaseous tube lighting as in neon and fluorescent bulbs, as well as X-ray apparatus and techniques for their employment. Furthermore, Tesla established a considerable amount of the groundwork for radio communications and related fields including the science of radio-guided missiles.

At the turn of the century, when colleagues were directing their attention to moderate distance code communications,

Tesla was feverishly anticipating a method of broadcasting music, speech, pictures, and newspapers to all parts of the globe. According to the inventor, his "World System" of communications would not only interconnect telegraph, telephone, and stock ticker services, but would also provide the benefits of safe and accurate navigation without the aid of compasses. Clocks throughout the world would require little attention as their operation could be radio-controlled from a master station. In addition, he claimed that it would provide personal telephone communications between parties, regardless of distance, with an incredible device small enough to be carried in one's pocket.

As though this were not enough, Tesla's World System was to incorporate the transmission of electric power without the aid of wires. Swaggering in his own inimitable manner of grandeur, the inventor predicted the feasibility of running the street cars of London and lighting the lamps of Paris by the power generated from Niagara. The implications of such a reality fermented a passion which bordered on the threshold of physical pain. "Humanity will be like an ant heap stirred up with a stick," cried the impetuous Tesla. "See the excitement coming!"

Tesla's New York experiments had become restricted by the physical limitations of his Houston Street laboratory. The four-million volt lightning-like discharges produced by his electrical transformers struck ceilings and walls. It was impossible for him to apply practical tests to his wireless transmission theory without accommodations more in proportion to the enormity of his imagination.

Evidently, Tesla's fame and stories of his scientific achievements had preceded him in his journey to the West. His arrival created quite a stir in that bustling community known "for its cosmopolite and high bred people" as well as "its reputation of always doing the right thing at the right time." Noting Tesla's arrival, the *Colorado Springs Gazette* (May 28) declared, "This week has been noticeable for the presence of distinguished personages in Colorado Springs. Tesla, the electrician, second only to Edison, if indeed to anyone, is establishing his scientific headquarters here and will settle the question of wireless telegraphy in the weeks to come." News reporters badgered the inventor with questions about his scientific achievements and for information pertinent to his presence in Colorado Springs.

Tesla satisfied their curiosity by informing them that he proposed "to send a message from Pike's Peak to Paris." (This was more than two years prior to Marconi's famed transatlantic transmission.) The natives were well aware of a United States Signal Service (Weather Bureau) telegraph station at the summit of their famous mountain but Tesla's utterances were something else. The inventor further explained, "I will investigate electrical disturbances in the earth. There are great laws, which I want to discover, and principles to command."

Tesla took a room at the Alta Vista Hotel with a view of the majestic Peak, affording him an opportunity for enjoying his favorite pastime, watching nature's lofty thunderbolts. Furthermore, he liked Room 207 because its number was divisible by three.

Tesla's habit of carrying out experiments and repeated acts in numbers divisible by three was but one of the many phobias that haunted the inventor throughout his life.

Armed with a loan of \$30,000 from John Jacob Astor, \$10,000 from M. Crawford, a drygoods merchant, and the unending influence of his lawyer friend, Leonard E. Curtis, Tesla became fervently committed to a regimented schedule. He contracted for the construction of an experimental laboratory of his own design. In mid-July, a structure of awe and mystery stood isolated on the prairie pasture east of the Colorado School for the Deaf and Blind. It was a huge barn-like construction approximately 100 feet square and braced on three sides. Above its sloping roof was an 80-foot tower through which there extended a 200-foot mast topped by a one-meter copper sphere. The forbidding omen hovering over the area was augmented by a fence with notices written in large black letters warning, "Keep Out—Great Danger!"

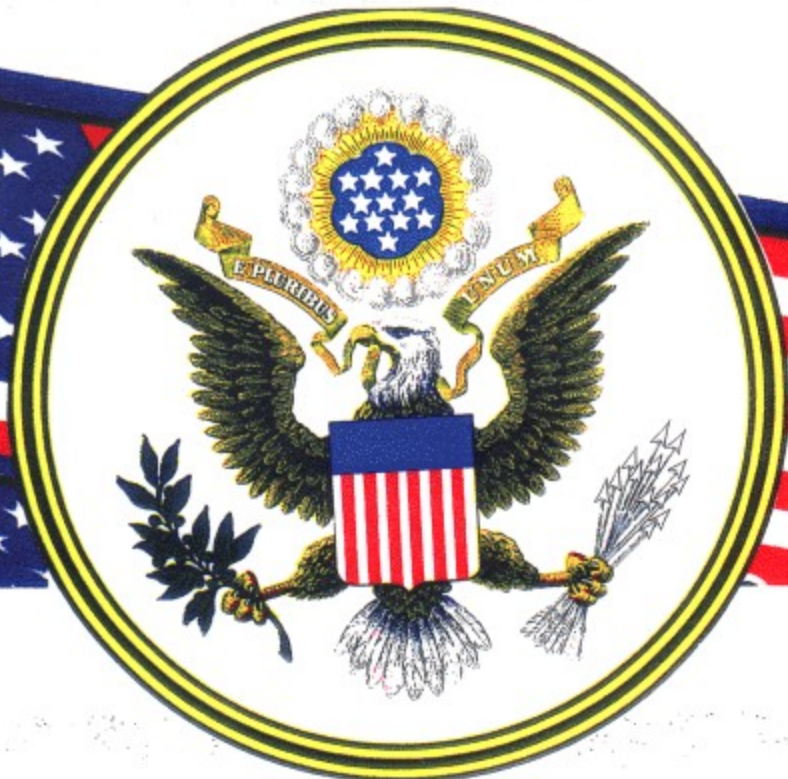
The major part of the interior was taken up with a variety of Tesla innovations. The electrical wizard was pioneering virgin fields and his apparatus, yet untried and exhibiting all the characteristics peculiar to an H.G. Wells's fantasy, had to be constructed by highly trained technicians and shipped from the east. High-voltage transformers, dynamos, resonant-tuning devices, capacitor-discharge apparatus, oil-insulated capacitors (a Tesla invention), and a large metered control panel were among the items neatly spaced about the hall.

At one end of the laboratory was the secondary coil of a giant Tesla transformer, which the inventor termed a "magnifying transmitter." Its primary coil (buried underneath the floor) was fifty-one feet in diameter and wound with heavy copper bars.

In the center of the secondary was another coil with a diameter of ten feet. It carried 100 turns of wire and served to function as an extension of the secondary. The 200-foot mast extended up through the center and supported a large copper cable, which connected to the one-meter copper sphere. Using these devices, Tesla intended to determine if the earth possessed an electrical charge (it does) and to institute experiments that would alter its magnitude (he did). Who but Tesla would be so bold as to undertake a scientific investigation of such proportions?

The mystified citizens of Colorado Springs kept a safe distance from the odd-looking structure. Passersby, such as those using the trolley line on Nob Hill, were amazed by its precocious appearance and would stare in unison with similar sorts of ungainly expressions. Herdsmen moving their animals out to pasture went about their work unable to conceal their contemplations.

Those whose curiosity led them to trespass the bounds of the property reported seeing strange blue flickering lights emanating from the enigmatic gadgets within the laboratory. Said one eyewitness, "Through this mass of intricate and dangerous mechanism, Mr. Tesla walks as fearlessly as if on the streets of the city." A reporter who had managed a peek through the windows was startled to find a Tesla employee standing at his side. "Your life is in peril," he said, "and you would be a great deal safer if you



E 2376

CONGRESSIONAL RECORD — Extensions of Remarks

June 29, 1989

would remove yourself from the vicinity." Tesla was extremely secretive about his work and always maintained a strict security. In order to discourage the overly curious, he publicly announced, "I have an instrument at my station which is capable of killing thirty thousand people in an instant."

There were, however, a few residents who were allowed the privilege of infringing upon the sanctity of Tesla's Olympus. In the book, *The Life of Nikola Tesla*, authors Hunt and Draper mention Fred Stevens, a photographer, and Richard Gregg, an errand boy.

Nonetheless, it is doubtful whether anyone on either side of the Mississippi ever viewed a creation similar to the likes of Tesla's experimental station, and it is no wonder that the sight prompted one writer to say, "Mr. Tesla is a great scientist but a poor architect."

By mid-summer of 1899, Tesla was able to utilize his Colorado experimental station for preliminary investigations of his wireless telegraphy theories. He was extremely pleased with this western state as the site for his experiments. Aside from the pleasantness of its natural beauty, the rarefied air provided exceptional opportunities for the study of high potential electrical phenomena. "No better opportunities for such observations as I intended to make could be found anywhere," said Tesla. "Colorado is a country famous for the natural displays of electric force. In that dry and rarefied atmosphere the sun's rays heat the objects with fierce intensity. I raised steam to a dangerous pressure, in barrels filled with concentrated salt solution, and the tin-foil coatings of some of my elevated terminals shivered up in the fiery blaze.

"An experimental high-tension transformer, carelessly exposed to the rays of the setting sun, had most of its insulating compound melted out and was rendered useless. Aided by the dryness and rarefaction of the air, the water evaporates as in a boiler, and static electricity is developed in abundance.

"Lightning discharges are, accordingly, very frequent and sometimes of inconceivable violence. On one occasion approximately twelve thousand discharges occurred in two hours, and all in a radius of certainly less than fifty kilometers from the laboratory. Many of them resembled gigantic trees of fire with the trunks up or down. I never saw fire balls, but as a compensation for my disappointment, I succeeded later in determining the mode of their formation and producing them artificially."

On one occasion, a fierce lightning bolt nearly demolished Tesla's station even though the actual strike occurred at a great distance. Reported Tesla, "A heavy cloud had gathered over Pike's Peak range and suddenly lightning struck at a point just ten miles away. I timed the flash instantly and, upon making a quick computation, told my assistants that the tidal wave would arrive in 48.5 seconds.

"Exactly with the lapse of this time interval a terrific blow struck the building, which might have been thrown off the foundation had it not been strongly braced. All the windows on one side and a door were demolished and much damage done in the interior. Taking into account the energy of the electric discharge and its duration, as well as that of an explosion, I estimated that the concussion was about the equivalent to the ignition of twelve tons of dynamite."

It was during a violent Colorado electrical storm that Tesla came to make one of his most astounding scientific discoveries. After carefully adjusting his delicate measuring instruments, the inventor noted an unusual reaction to the earth's electrical activity. "No doubt whatever remained," said Tesla.

"I was observing stationary (standing) waves. . . impossible as it seemed, this planet, despite its vast extent behaved like a conductor of limited dimensions. The tremendous significance of this fact in the transmission of energy by my system had already become quite clear to me. Not only was it practicable to send telegraphic messages to any distance without wires, as I recognized long ago, but also to impress upon the entire globe the faint modulations of the human voice, far more still, to transmit power, in unlimited amounts to any terrestrial distance and almost without loss."

Tesla later suggested the employment of standing waves as a means of detecting moving objects at great distances. "By their use . . . we may determine the relative position or course of moving object, such as a vessel at sea, the distance traversed by the same, or its speed." It wasn't until just before World War II, some forty-one years later, that radar—as foretold by Tesla—became a reality.

As a result of his investigations, Tesla concluded that the earth was not only electrified, but that it was charged to an extreme potential. Accordingly, if it were possible to increase the magnitude of the earth's electric charge by artificial means, it might also be possible to withdraw the applied energy anywhere on the globe. Basically, this meant that Tesla's "system" was to provide the benefits of electricity not only to the highly populated continents, but even to the most remote civilized outposts whether on land or at sea.

To accomplish this, however, would require the development of transmitting and receiving apparatus unlike any devices heretofore conceived. It was to this purpose that the electrical wizard dedicated his tireless efforts. At the end of the summer of 1899, the equipment stood ready, in statue-like silence, awaiting the highest man-made voltage experiment in history. Tesla was about to cross a new frontier—one far beyond that which anyone else had reached.

During the initial test, the mute electrical machinery suddenly transformed into life-like fire-spitting demons. Power transformers supplying the heavy currents hummed a dissonant sixty-cycle tune. The floor beams vibrated a cacophonous reply. Spheres of the capacitor-discharge circuit became bridged by a machine-gun series of wrist-thick blinding flashes. The huge secondary of Tesla's transformer was crowned by an electrical fire of long finger-like streamers. A halo of harassing brush discharges enveloped the entire surface of the main switch panel.

Evidently, stray high-frequency currents had found a return path into the Colorado Springs Electric Company's facilities. Unknown to Tesla, the reaction was playing havoc with their generators and transmission lines. Lightning insulators within a dozen miles became short-circuited and glowed with purplish arcs.

The awesome discharges, thundering roar, and the production of choking quantities of pungent ozone portrayed an impression of impending doom. Waving his arms wildly, Tesla screamed an abrupt order to assistants to halt the experiment. Pandemonium gave way to a frightening silence.

Following an inspection of the apparatus and the making of critical adjustments, the inventor issued instructions for a continuation of the test. This time, however, he would take a position outside from where he could observe the copper sphere high above the roof. Standing alone some three hundred feet from the building, the wizard signaled a resumption of the experiment. He presented a bewildering sight. His inch-thick rubber heels, tight fitting cutaway

coat, and black derby hat made him appear to be seven feet tall.

As before, the high-voltage equipment gave an immediate response. Full-fledged lightning bolts over 135 feet in length erupted from the copper sphere. Leaping about in unpredictable fashion, one leader followed the mast downward into the laboratory; another hit the 80-foot framework which was giving support to the 200-foot pole, while others were seen as wriggling streaks clawing at the sky above.

Nearby, in the village of Colorado Springs, the natives, could hardly ignore the electrical wizard's scientific mischief. The thundering roar of his man-made lightning bolts could be heard as far away as Cripple Creek. People walking along the streets experienced the unpleasantness of sparks jumping between their feet and the ground. An electrical flame leaped from a tap when anyone reached for a drink of water.

So great was the power being thrown out by Tesla's "magnifying transmitter" that lights bulbs within one hundred feet of the station glowed regardless of whether they were connected to any circuit and all the electrical equipment of a nearby fuel company ceased to function.

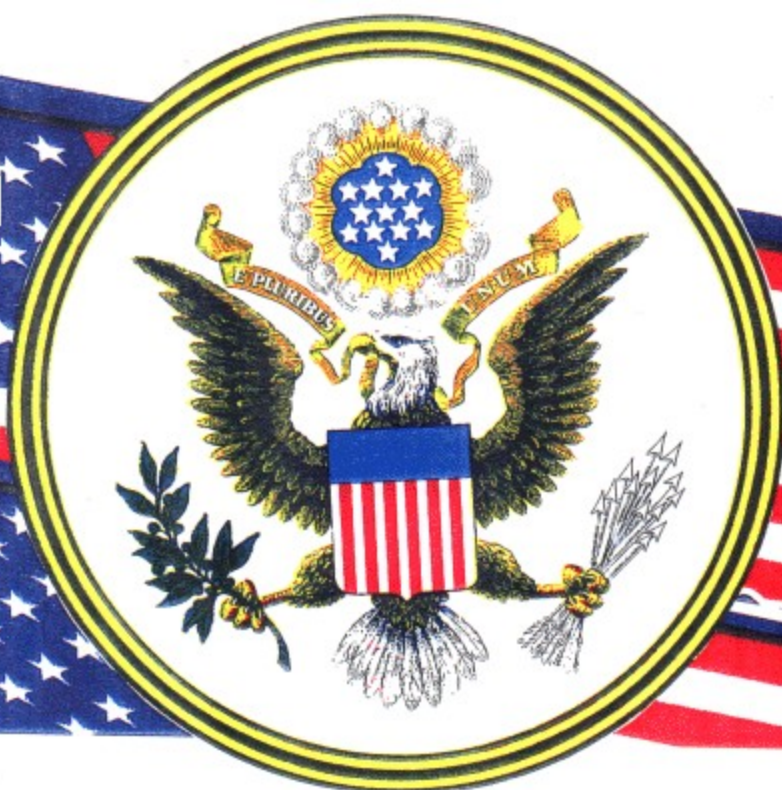
When Tesla's experiments utilized undamped waves (no streamers emitting from the copper sphere), horses at the livery stable suddenly bolted and kicked free of their stalls. Even the insects felt the effects of the electrical barrage. Butterflies became electrified and helplessly swirled in circles—their wings spouting blue halos of "St. Elmo's Fire." One graphic account about the destruction of the main generator at the Colorado Springs Electric Company powerhouse.

Aside from what has been mentioned, little is known of the technical achievements of Tesla's Colorado adventure. The inventor claimed to have demonstrated the practical application of his theory in an experiment which lighted two hundred earth-connected incandescent lamps twenty-six miles from the laboratory. Unfortunately, no photographic record of this event has ever been published and there has been no indication as to the location of the receiving station.

Encouraged by the fruits of his labors, Tesla left Colorado on January 13, 1900, and returned to New York with plans for establishing a world radio broadcasting station (this was two decades prior to the advent of world communications). He obtained \$150,000 from J.P. Morgan and began construction of a plant at Shoreham, Long Island. It consisted of a brick building to house the transmitting equipment and a massive 187-foot octagonal tower capped by a sixty-eight foot metal-framed dome weighing nearly sixty tons.

The plant was never put into operation. Construction problems proved more costly than had been anticipated. And when rumors began circulating debasing the project as a fairy tale, Wall Street turned its back on Tesla's enterprise, a stroke that defeated one of the most unbelievable schemes in the history of human advancement.

Tesla's Colorado station came to an equally inglorious end. It remained intact for several years but eventually was torn down and its contents sold as payment in a suit for unpaid bills and employees' wages. Few references to Colorado history mention its existence and the omission makes it appear as though Tesla's bold adventure was nothing more than a passing dream.



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HONORING ANNIVERSARY OF BIRTH OF NIKOLA TESLA

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from Maryland (Mrs. BENTLEY) is recognized for 60 minutes.

Mrs. BENTLEY. Mr. Speaker, I rise today to ask my colleagues to join me in honoring the anniversary of the birth of one of our Nation's foremost scientists, Nikola Tesla.

A scientist was born 134 years ago today in Serbia, who would change the way we think about electricity. Nikola Tesla is the man who advanced electrical science past Thomas Edison's simple direct current by inventing the alternating current system and many of the machines which make it the form of electrical power used daily all over the world.

Tesla also developed the Tesla coil, an integral component in radios and television sets. It was Tesla, not Marconi, who first demonstrated the wireless radio set. It was Tesla, not Edison, who first demonstrated the feasible long-distance transmission of electrical energy. It was Tesla who first demonstrated the use of radio in controlling torpedoes and model boats. And it was Tesla who demonstrated the precursor to the fluorescent light bulb.

Tesla is credited with approximately 700 inventions. He obtained the patronage of such notable figures as George Westinghouse and J.P. Morgan. And his designs and inventions for the alternating current system resulted in his being awarded 40 patents. Truly, Tesla's achievements are more than worthy of recognition.

Perhaps the most outstanding example of Tesla's genius is his use of the induction motor and polyphase system to harness the tremendous powers of Niagara Falls. The decision to use the Falls to produce alternating current was the decisive battle that won the raging war between direct and alternating current.

Soon thereafter, requests from industry to be hooked up to the new alternating current system came in faster than they could be granted. The high voltages that could be supplied only by alternating current made possible the large-scale production of aluminum and alloyed metals necessary for the aircraft industry. Were it not for Tesla, we might still be taking small ocean craft across the oceans.

Nikola Tesla is truly the embodi-

ment of the American dream. A Serbian immigrant from what is now part of Yugoslavia, Tesla came to America in 1884 to work with the electrical giants of the day. Carrying only his personal belongings, a letter of introduction, and 4 cents, Tesla set out into the brave new world, landing a job with Thomas Edison, making \$18 a week. But he soon became frustrated, and left Edison's laboratory to start his own in 1887.

Four years later, on July 30, 1891, he became a U.S. citizen. I would note, Mr. Speaker, that while Tesla thought little of honorary degrees and certificates, filing them away in drawers, he always kept his naturalization certificate in a safe. His citizenship, Tesla always asserted, was more important than any honors his scientific abilities could garner. He rightfully can claim his place alongside the likes of Franklin, Edison, and Einstein as a truly great American scientist.

Tesla won the respect of the American scientific, business, and social community with his quick wit, gracious charm, and undeniable genius. People would listen to him, transfixed, as he expounded upon a new idea or invention. He often would give demonstrations of new inventions and recently discovered scientific principles.

Some of the more shocking, if you'll pardon the pun, demonstrations involved him electrocuting a laboratory animal with a device through which a few thousand volts flowed, then hooking himself up to the same device and allowing millions of volts of alternating current to flow through his body, demonstrating a scientific principle many scientists today cannot comprehend.

Tesla even earned the grudging respect of Thomas Edison, a fellow inventor whose direct current went the way of the dinosaur in the face of Tesla's alternating current.

The first job Tesla performed for Edison involved repairing the entire dynamo system on a large ship. Working throughout the night, Tesla managed to do in several hours what would have taken other members of Edison's staff several days, at least. Upon hearing of Tesla's feat, Edison uttered perhaps the only positive statement he ever made about Tesla, "That is a damn good man."

Mr. Speaker, every Member of this Congress may take great pride in the fact that our Nation provided the opportunities needed for a poor immigrant to develop a system of electrical power used the world over.

We also may recognize the fact that this man achieved success despite great adversity. His improvements to Edison's dynamos were made without giving Tesla any financial consideration. In fact, Tesla seldom received enough personal financial support to allow him to do anything but break even. Even today, many standard texts, including government publications, do not recognize his contributions to the world of electrical engineering. Tesla is quite possibly the least known of the great scientists our Nation has produced.

Tesla often was cheated out of the benefits of his accomplishments. He often would be so caught up in the joy of discovery that he would forget to patent his inventions, inventions which would be stolen and patented by those with whom he worked. Edison himself refused to make good on a promised \$50,000 bonus.

Fortunately, justice did sometimes prevail. One prime example of this is in what became known as the Great Radio Controversy. In the 1943 case of Marconi Wireless Telegraph Co. of America versus United States, the Supreme Court ruled that it was Nikola Tesla, not Marconi, who first invented radio.

Nevertheless, Tesla continued his work until his death. His work during the latter half of his life was dedicated to improving the Tesla coil and making feasible the transmission of electrical energy without wires. He also began laying the groundwork for the discovery and application of scientific theory leading to robotics, nuclear power, and the cyclotron, or nuclear accelerator.

Tesla's greatest love was the pursuit of scientific knowledge, and the application thereof. He had the uncanny ability to formulate working models of his inventions in his head; nobody knows what other wonderful developments went with him to the grave. Tesla was unwilling—indeed, unable—to put boundaries on his thought.

Tesla taught his young assistants to be thinkers, dreamers, and creators. As Maj. Edwin H. Armstrong, a later contributor to radio science, once noted:

Not only did he teach by accomplishment, but he taught by the inspiration of a marvelous imagination that refused to accept the permanence of what appeared to be insuperable difficulties. An imagination the goals of which, in a number of instances, are still in the realms of speculation.

Mr. Speaker, Nikola Tesla is a naturalized American in whom every citizen may take pride. By honoring the birth of this great individual, we honor the country that made it all possible. Tesla came to America because of the opportunities it provided—and still provides.

Our Constitution gives us the power "to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." Were this not the case, Tesla could not have made the scientific advancements he made.

Truly, Nikola Tesla is a man who changed the world. His work has made possible the large-scale transmission of electrical energy, as well as the use of radio in many different applications. He has inspired countless scientists and engineers to perform the hitherto impossible. And he has furthered the reputation of America as a place where dreams become reality.

Mr. Speaker, today is a day on which we all should stop for a moment and recognize the accomplishments of a great American, Nikola Tesla. He is a man who changed electrical engineering forever, and we must consider his contribution to science as one of the most important of any scientist.

Certainly the United States would not be enjoying its standard of living without the genius of Nikola Tesla, who applied that genius to accomplishments.

Tesla had a dream of a new world, and he worked toward it with fervent energy. In his words, it would be a world "in which there shall be no exploitation of the weak by the strong, of the good by the evil, where there will be no humiliation of the poor by the violence of the rich; where the products of the intellect, science, and art will serve society for the betterment and beautification of life, and not the individuals for achieving wealth. This new world shall not be a world of the downtrodden and humiliated, but of free men and free nations, equal in dignity and respect for man."

As a first generation Serbian-American, I am very proud of this man who was born of humble parents—his father was a priest—in the mountains of Serbia and who died, more than a century ago, to venture into a strange, unknown world, that technology in an era where it just was not done.

How fortunate we all are that he was born 134 years ago in the mountains of Serbia.