

Michael Idvorsky Pupin (1858-1935)

Immigrant, Professor, Inventor, Pulitzer Prize Winner



The Young American

Michael Pupin was the most colorful golfer. Whenever he missed a shot, he heaved his club 50 yards into the woods. Never wanted to see it again. Every boy wanted to caddy for him. After the good doctor went home, his caddy would run into the woods and find the club. Seth Moseley, 1923

Seth Moseley, whose family farmhouse is now the Blackberry River Inn, was reminiscing about Michael Pupin's golf game at the Norfolk Downs. It wasn't until a few years later that Pupin donated several acres of land to the Norfolk Country Club to build a 9-hole golf course 'as long as it's done quickly'; which it was, opening in July, 1928 three months ahead of schedule.

Mihajlo Pupin had come a long way from his humble beginnings in the village of Idvor in what is now Serbia to summering at his sumptuous estate on the west side of Norfolk, a wealthy, world-renowned inventor and winner of the 1924 Pulitzer Prize in Letters.

Born on October 9, 1858 to illiterate peasants, Pupin spent his boyhood summers in the hilly pasturelands around Idvor as a herdsboy safeguarding livestock from nighttime Rumanian thieves. He observed that by sticking his long, wood-handled knife into the ground and pronging

it, he could listen to subterranean vibrations and trace from afar the location of the roaming livestock. Pupin realized that sound vibrations carried farther if the ground was hard; and thereby got his first tantalizing inkling of the invention that twenty-five years later would make his name and fortune in the United States.

Though she couldn't read or write, Pupin's mother, Olimpijada, sent him to an advanced school in a neighboring village where he first learned about



Olimpijada Pupin

Benjamin Franklin's experiments with kites and electricity which ignited his fertile imagination. To escape political upheaval, he was later sent by his church to school in Prague, a journey of two days on the Danube River and one day by rail from Budapest.

When he was in Prague, Pupin's father, Constantine, died suddenly. Pupin wanted to go home and take care of his mother but she wouldn't hear of it. An ad in a newspaper for steerage on the ship *Westphalia* from Hamburg to New York, prompted Pupin to impulsively sell all his belongings and buy a one-way ticket to America. After a rough, stormy two-week passage across the Atlantic, he landed at Castle Garden in New York in 1874, a fifteen-year old greenhorn with 5 cents in his pocket, knowing no one.

Menial jobs were available to immigrants in New York but, on a whim, Pupin signed up to be a laborer on farm in Delaware where he learned to speak English from the farmer's daughter. Returning to New York in the fall, Pupin shoveled coal before getting a job at the New England Cracker Company on Courtland St. in Manhattan stamping the company's name on multitudes of crackers. Evenings, he took advantage of free classes at Cooper Union and spent hours in the library reading the classics where he became obsessed by the painting *'Men of Progress'* by Christian Schussele which depicted nineteen American inventors such as Samuel F.B. Morse, Charles Goodyear and Samuel Colt who, with their inventiveness, had significantly advanced modern civilization.



Men of Progress - Charles Schussele - 1862

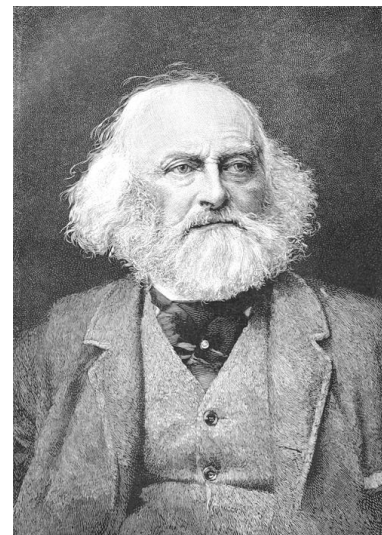
Outgoing and charismatic, Pupin had a gift for ingratiating himself with influential people, one of whom, Dr. Charles Shepard, had him tutored in Greek and Latin and encouraged him to apply to Columbia College which at the time was located on 49th St. and Madison Avenue. To hone his English skills Pupin went to Broadway plays and learned to mimic the enunciation of famed Shakespearean actor, Edwin Booth. He spent summers in New Jersey cutting hay by day and studying Greek and Latin hours into the night. By the time he took the Columbia entrance exams, Pupin had memorized the first two books of the Iliad and four orations by Cicero. Passing the exams easily, he was granted free tuition to Columbia for four years.

At Columbia, Pupin established himself as an outstanding student and after freshman year won \$100 scholarships in Greek and mathematics. Physically strong from shoveling coal and cutting hay, he won Columbia's heavyweight wrestling championship and excelled in crew. Junior year he was elected president of his class.

Columbia at the time was 'a nest of dudes and snobs' who loved to party and play sports. Pupin earned extra money tutoring these laggards, helping the son of famed astronomer Lewis Morris Rutherford get through college. Rutherford was so grateful he sponsored Pupin's application to Cambridge University in London to study mathematics.

Lewis Morris Rutherford (1816-1892)

Since his days as a herdsboy in Idvor, Pupin was fascinated by light and sound which he considered to be 'divine methods of speech' from God. In college he studied and emulated brilliant 19th century scientists such as Michael Faraday and James Clerk Maxwell who were making momentous breakthroughs in understanding and harnessing mysterious electromagnetic forces in the universe.



Pupin became an American citizen in 1883, two days before he graduated with honors from Columbia which offered him a three-year, \$500/yr graduate school fellowship in science and letters. He turned the offer down in favor of Cambridge where the school of mathematics was considered to be the best in the world.

Pupin made his mark at King's College, Cambridge but found the standardized mathematical tripos teaching methods to be unchallenging. Cutting his stint at Cambridge short, he enrolled at the University of Berlin to study under god-like physicist and inventor, Hermann von Helmholtz, one of the most brilliant minds of the 19th century, who revolutionized ophthalmology and discovered the *principle of conservation of energy*. Pupin charmed Helmholtz with his stories of growing up a peasant in Serbia and with his curious, nimble mind. In 1886, Pupin received his P.H.D. in Philosophy from von Helmholtz, with a dissertation titled 'Osmotic Pressure and Free

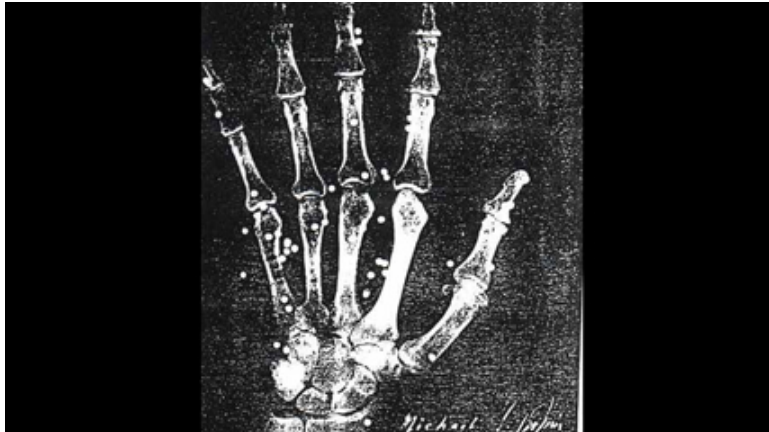


Hermann von Helmholtz (1821-1894)

Energy'. He was offered a professorship in Mathematical Physics at Columbia in the newly formed department of Electrical Engineering at \$2500 a year which he eagerly accepted; but before beginning classes he married Sarah Katherine Jackson, the sister of a fellow student, at the Greek Orthodox Cathedral in London.

Back in New York, Pupin threw himself into his work as a professor while working long hours at night in a primitive Columbia laboratory experimenting on x-rays, the scientific sensation of the mid-1890s. In December, 1895, Wilhelm Roentgen developed the first x-rays in Germany. Only

two weeks later, a New York lawyer who accidentally shot himself in the hand was brought into Pupin's laboratory. Using phosphorescent papers given to him by his friend, Thomas Edison, Pupin developed an x-ray of the man's hand in only a few seconds speeding up the Roentgens's process by several hours. Pupin's name in the science world was made.

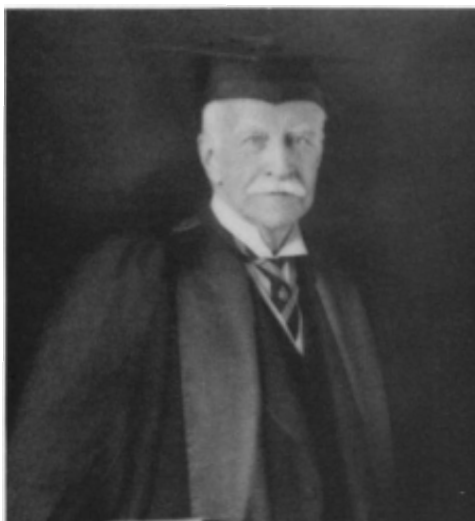


Pupin's Hand X-Ray Revealing Buckshot - 1896

Two months later, Pupin walked through Central Park to Columbia full of joy and optimism. Halfway through his first class he collapsed, most likely from fatigue and exposure to radium and lapsed into a coma with a severe case of pneumonia. After several days of near-death delirium, he came out of the coma only to learn that his wife, who had been nursing him, died five days earlier from the effects of pneumonia she contracted from him.

Paralyzed with despair, Pupin suffered a debilitating nervous breakdown. A physician friend recommended Norfolk to Pupin where the bracing climate might be a tonic for his depression. Pupin rented a house facing Haystack Mountain and spent weeks contemplating the salubrious view from his piazza. But his depression failed to lift.

Norfolk native, Dr. Frederic Dennis, a colleague from Columbia, after trying in vain to cheer Pupin up with pep talks, showed up at Pupin's door in a yellow roundabout pulled by two Cobb horses from his stud farm on Dennis Hill. He gave the horses to Pupin and told him they needed to be trained.



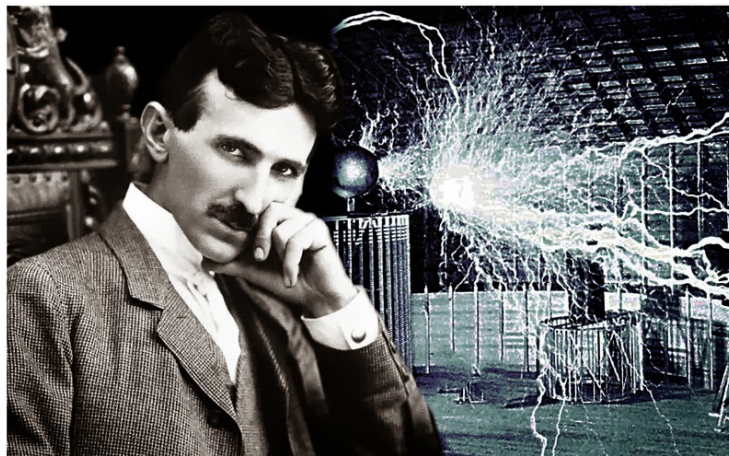
Frederic Dennis, M.D.

This was just the right medicine. Pupin immediately took to the horses and threw himself into their training, a welcome distraction from his enervating grief. Before

long Comet and Princess Rose with Pupin driving, won first prize at the Madison Square Garden horse show. Eighteen months after his wife's death, feeling recovered enough from his despondency, and for the sake of his only child, Varvara (Barbara), Pupin returned to his classroom and laboratory at Columbia.

No longer able to work with x-rays, which he felt helped bring on his pneumonia, Pupin returned to experimenting with electricity and to his workaholic ways in the laboratory. In 1899, barely beating out several scientists working on the same challenge, Pupin filed for a patent on an induction coil that, placed at precise intervals underground (echoing his boyhood knife observations) exponentially expanded the range of long distance telephone calling. AT&T bought Pupin's patent for almost a half million dollars and by doing so saved the company \$100 million dollars over 25 years.

The Electric Wars



Nikola Tesla (1858-1943)

No name today resonates in the realm of state-of-the-art technology more than *Tesla*, Elon Musk's heralded electric car company named after Nikola Tesla, the electrical genius who developed alternating current (AC) a superior technology to Thomas Edison's clunky direct current (DC).

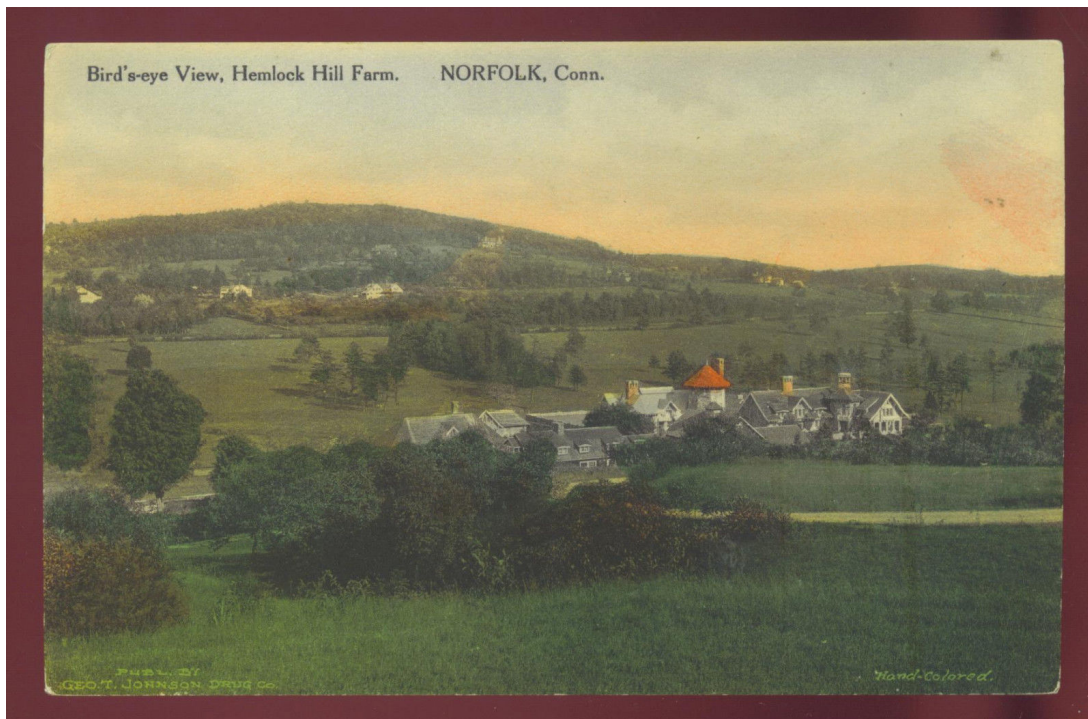
Fellow Serbians, Tesla and Pupin were both brilliant scientists working in the same electronics field, competing for patents with many others on electrical inventions. Pupin based his induction coil patent on Tesla's alternating current oscillator. Tesla was somewhat reclusive, a refined genius who immersed himself in his work while the competitive Pupin, a skilled self-promoter, loved the spotlight, as evidenced by his 1923 best-selling Pulitzer Prize winning autobiography, *From Immigrant to Inventor*.

In a bitterly contested 1915 court case over who who invented wireless telegraphy, Pupin testified that in his opinion Guglielmo Marconi invented wireless. Tesla felt hurt and betrayed and refused to speak to Pupin for years. Pupin regretted his testimony and, on his deathbed in

1935, begged Tesla to accept his apology. Reluctantly, Tesla gave in and went to see Pupin who broke down and cried uncontrollably a few days before he died.

The Norfolk Squire

With the fortune Pupin made from AT&T, he built a grand estate in his beloved Norfolk which he referred to as "this blessed spot where I regained my health and happiness ... my real American home... I have never had a desire to seek a better haven of happiness in any other place, either here or in Europe." In 1905, he engaged noted architect, Henry Hornbostel, who designed the Williamsburg Bridge in New York, to design a grand stone mansion evocative of Pupin's homeland in Serbia and brought craftsmen from Serbia to do the stonework.



Pupin's Serbian Castle on Norfolk's West Side

Pupin became an exotic character around Norfolk, an entertaining fixture at town meetings. In his autobiography, Pupin writes about a run-in he had with elderly Norfolk native, John Nettleton, when Pupin suggested at a town meeting that Norfolk's roads should be improved to attract more summer people. Nettleton stood up and scolded Pupin, telling him Norfolk's roads had always been just fine for the townspeople and that there was no need for newcomers like Pupin to bring their 'vanity and false pride from the city' and try to change things. Pupin was mortified. Some time later, Pupin found a stray dog that no one in town could control. Pupin took

the dog home and painstakingly trained it to be his loyal companion. John Nettleton, impressed by Pupin's patience and kindness with the dog, approached



John Nettleton House (1778) - Laurel Way

Pupin on the road one day and shook his hand saying, that if Pupin could train such a cantankerous, unruly dog, he must be a good person. To Pupin's delight, they became good friends and thereafter he was accepted by the notoriously standoffish townspeople of Norfolk.

Pupin went on to acquire several more patents including one for the electronic resonator that makes tuning radios without interference possible. He was one of the founders of NASA, president of the National Academy of Science, writer and sought-after lecturer who could explain scientific complexities to laymen. He became a celebrity, recipient of twenty honorary degrees and countless awards while hobnobbing with notables such as President Warren Harding, Andrew Carnegie and Albert Einstein.

Columbia named Pupin Hall, where the the Manhattan Project split the first uranium atom which led to the building of the first nuclear weapons after him.

Albert Einstein Greets Pupin - 1934



In New York, Pupin lived in the Dakota at 1 West 71st St., but Norfolk was always his Eden, his 'American Idvor'. He loved Hemlock Hill Farm and riding his Irish Hunter horse, Christy through town; and, a charter member, he loved socializing and playing golf at the Norfolk Country Club where he always said a Serbian prayer before every putt which, alas, never seemed to help.

After several years of failing health, Pupin died of heart disease and kidney failure at the age of 76. After lying in state in the Cathedral of St. John the Divine for thirty days he was buried at Woodlawn Cemetery in Brooklyn, NY.

Michael Kelly
The Norfolk Country Club History Project