



FOR YOU
SCIENTISTS

CHAPTER SAMPLERS FOR
3 WHO HQ® TITLES:

**GEORGE
WASHINGTON
CARVER**

NIKOLA TESLA

MARIE CURIE





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Who Was George Washington Carver?



By
Jim Gigliotti

Chapter 2 Childhood

Every day, George explored the fields and flowers and animals on the Carver farm. It was a big farm, about the size of 180 football fields! Moses and Susan grew corn, wheat, and potatoes. They raised cows, pigs, and horses.

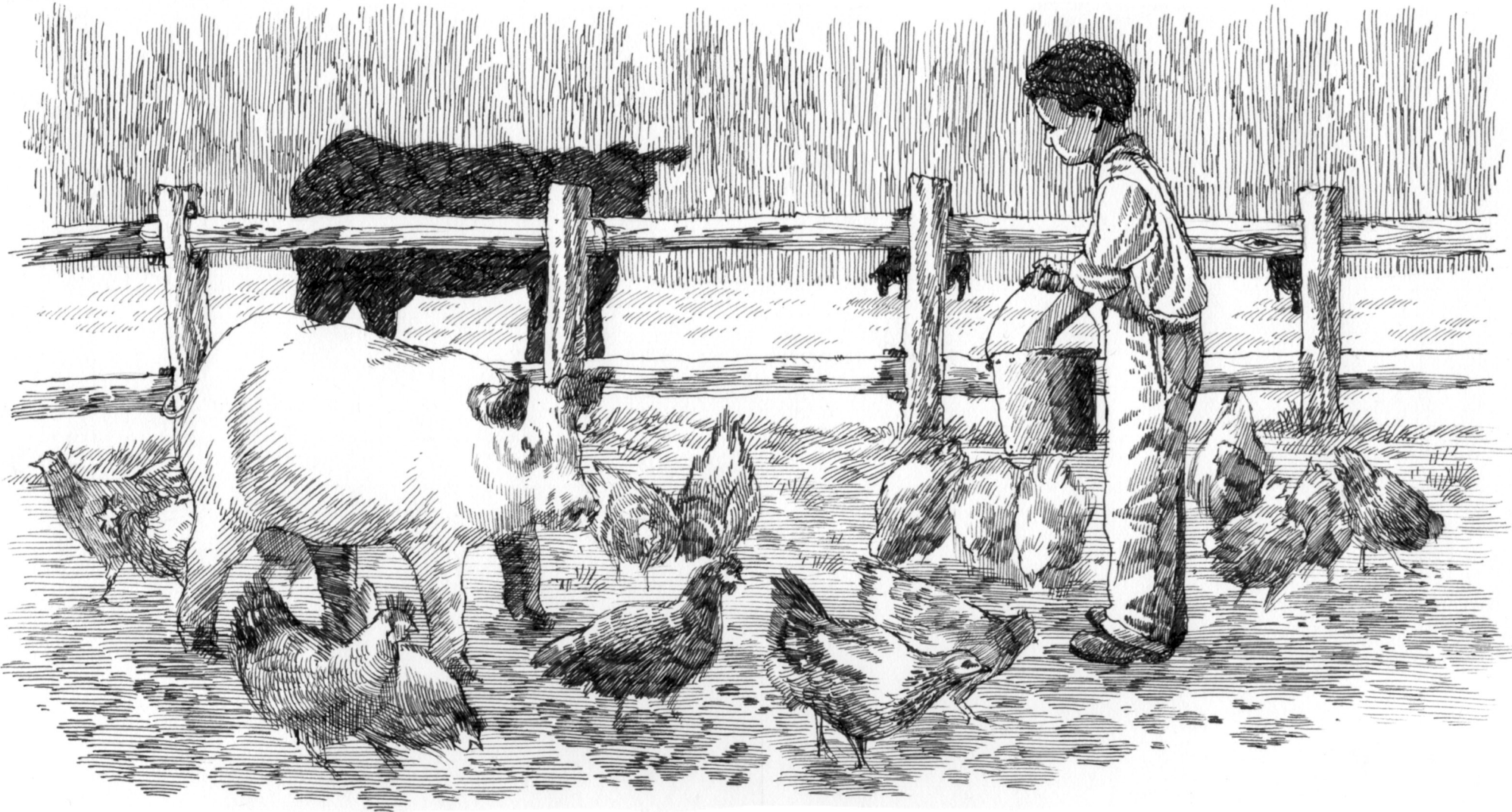


There was always plenty of work to do on the farm. Jim and George were expected to help the other farmhands as much as they could. Jim was big and did some of the chores that took strength, such as plowing the fields. But George never seemed to be fully healthy after he recovered from whooping cough as a baby. He was often sick.

“My body was very feeble, and it was a constant warfare between life and death to see who would gain the mastery,” he once wrote.

Because he was often sick, and not very strong,

George was excused from the heavy-duty work on the farm. But he still wanted to be helpful. So he did what he could, such as taking care of the plants and flowers and feeding the animals.



George didn't go to school as a youngster, but he still had quite an education on the farm. From Moses, he learned to waste nothing. Moses believed that everything the family needed to live was available right there on the farm. From Susan, George learned how to sew, cook, and clean.



Susan even made her own clothes with the help of a spinning wheel she kept in the house.

When George was eight years old, he was baptized a Christian. Because he loved nature so much, George always referred to God as “Creator.” George went to church on Sundays, about a mile away from the farm. During the week, he played with the neighborhood kids. Most of them were white, and he learned to get along with people no matter what color they were.

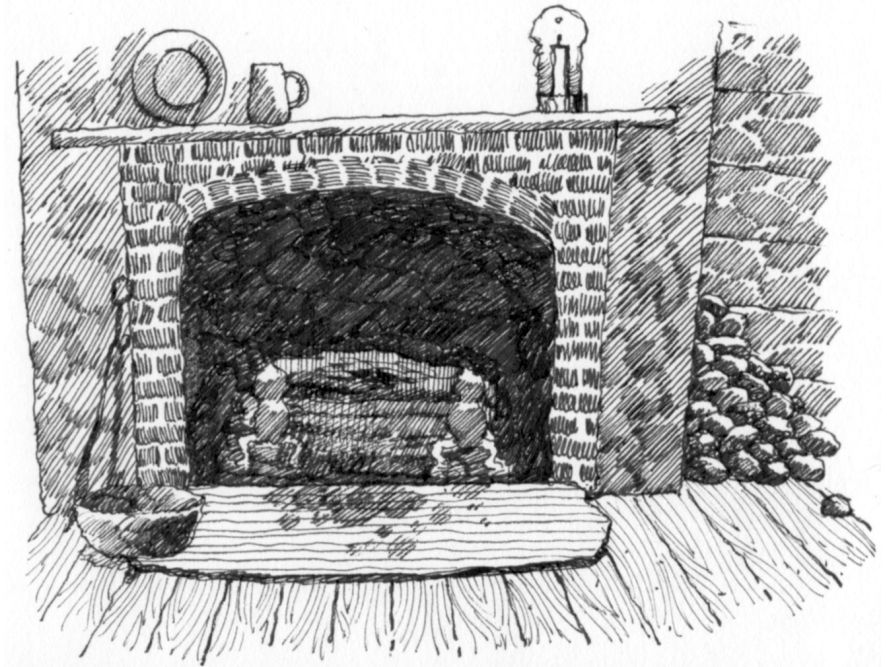
Mrs. Baynham was white. One day when George was helping her with her roses, she showed him the paintings in her house. George decided he wanted to paint pictures like that. He didn't have any brushes or paint or canvas or paper. But Moses had taught him to make good use of whatever was available. So George squeezed the juice out of some berries, took a small stick, and started painting on a flat rock.



When George wasn't working or playing, he took long walks in the fields and the woods, talking to plants and flowers, and caring for them.

He cleared a spot in the woods where he kept his own little nursery—a special place for plants. “Strange to say, all sorts of vegetation [plant life] seemed to thrive under my touch,” he said.

He collected rocks, too, and stashed them by the chimney in a corner of the house. Susan would make him clean out the corner, but the pile would soon grow again.





George was incredibly curious. He wanted to learn everything he could about the plants and flowers and animals he saw every day. When he saw a coneflower, he wanted to know why it was purple. When he saw a black-eyed Susan, he wanted to know how it got its name.

Sometimes, Moses and Susan knew the answers—but not always. The Carvers had an old spelling book. George read the book cover to

cover, but it didn't have the answers he was looking for, either. George wanted to go to school and learn all that he could.

Diamond Grove's school was in the same building where George went for church on Sundays. One day, he and Jim walked to the school. Imagine George's excitement at finally being able to find the answers to all of his questions! And imagine his disappointment at being told that the school was for white children only.



The kids George went to church with on Sundays and played with in the neighborhood could go to school, but he and Jim couldn't. They walked back home.

Jim went right back to helping out on the farm, but that wasn't enough for George. He didn't give up his dream of going to school.

When he was about thirteen, George went to Moses and Susan and told them he wanted to leave. They were the only parents he had ever known, and he loved them very much, but he wanted to go to school. His plan was to hike to Neosho, which had the nearest school for black children.



Moses and Susan always said the boys were free, and they could leave if they wished, so they didn't stop George. The next day, Susan packed up some snacks for George, and he began the long walk to Neosho.



By the time George made it to Neosho, the snacks were long gone. It was getting dark fast. George didn't know anybody in the town, and he didn't have any money. He was tired, and he was hungry.

George spotted a barn. He'd grown up on a farm, so a barn was a friendly place. There was no one inside. He set down his belongings, and soon was fast asleep.

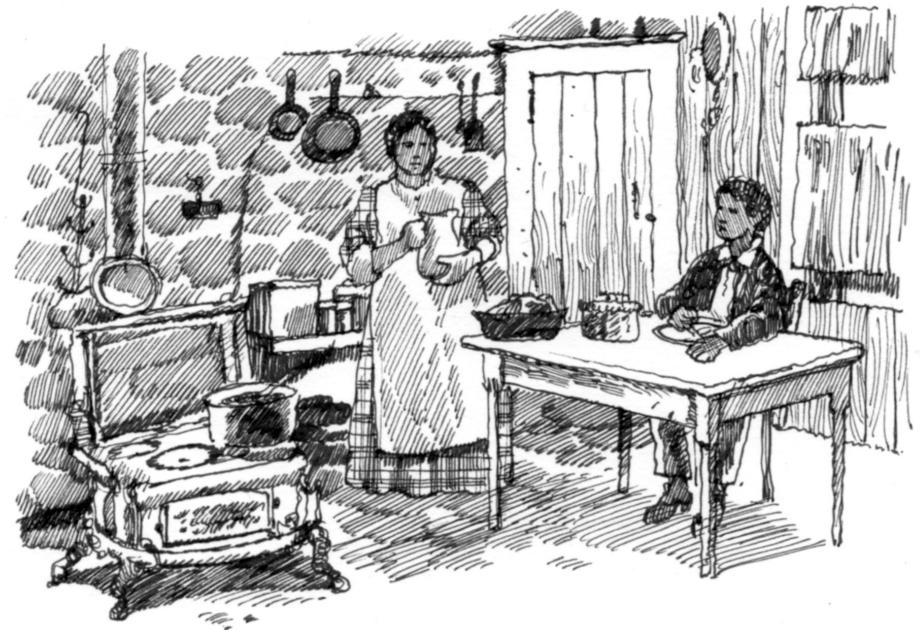


Chapter 3

School Days



When George woke up the next morning, he stepped outside. The owner of the barn, Mariah Watkins, saw him. She figured he was hungry, so she fixed him some breakfast in the main house.



“What’s your name?” Mariah asked him.

“I’m Carver’s George,” he said.

That sounded as if Carver owned George. Mrs. Watkins, who was black, didn’t like that. Slavery had ended more than ten years earlier, and nobody owned anyone else. So Mrs. Watkins called him “George Carver.”

George told Mrs. Watkins that he was in Neosho to go to school. He didn’t have a place to live yet, but he’d figure something out.

Mrs. Watkins was a kind woman, so she told George he could stay with her and her husband, Andrew. But she also was a strict, no-nonsense woman. If George was going to live there and go to the nearby Lincoln School—named after Abraham Lincoln—he'd have to do his share of the chores. George was delighted with that deal. He already could clean house and do laundry.

Moses Carver had taught George not to waste anything. Now Mrs. Watkins taught him not to waste any time. She expected him to go to school during the day, but to come home at recess and do laundry. After school, he would clean the house and maybe help cook dinner.



George and Mr. and Mrs. Watkins read the Bible during the week, and they went to church on Sundays. Sometimes, George walked back to Diamond Grove to visit Moses and Susan and Jim on the weekends.



Neosho was different than Diamond Grove. There were about 3,300 people living there—almost three times as many people as in Diamond Grove. And about one of every eight residents in Neosho was black. Diamond Grove had only sixteen black people living in the whole town when George grew up there.

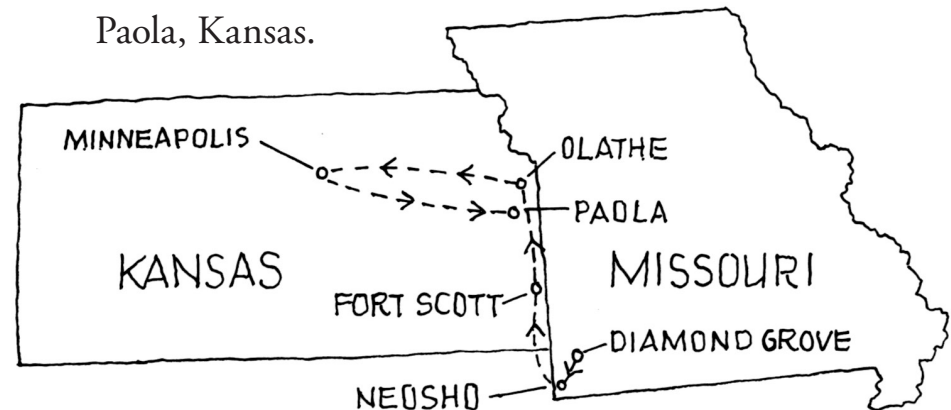
George stayed in Neosho for a year or so, and learned just about all he could at the one-room Lincoln School. “This simply sharpened my appetite for more knowledge,” he wrote. He found that if he wanted more schooling, he’d have to move again . . . and again . . . and again.

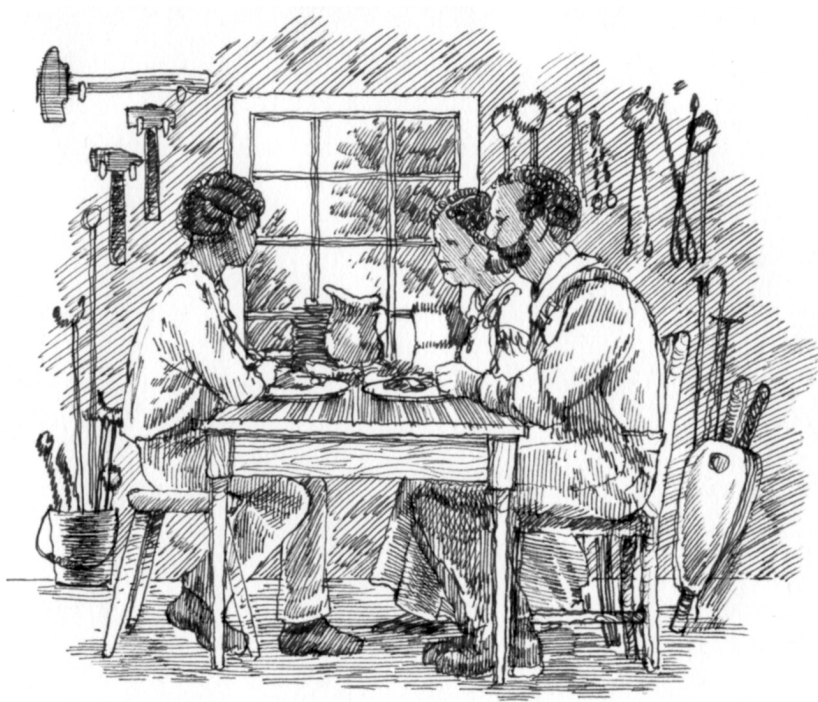




At the time, many former slaves were moving from the South into Kansas and other Northern states in search of a better life. In 1878, George hitched a ride with one such family on the way to Fort Scott, Kansas. George rode in the back of a wagon for part of the eighty-mile trip and walked the rest of the way.

In 1879, he moved to Olathe, Kansas. In 1880, he moved to Minneapolis, Kansas, and then to Paola, Kansas.





At each stop, George's agreeable personality and willingness to work hard made it easy for him to find a family to take him in. In Fort Scott, he moved in with Felix and Mattie Payne and their family. Felix was a blacksmith. In Olathe, George moved in with C.C. and Lucy Seymour. George helped Mrs. Seymour with her laundry business. (In time, he moved with their family to Minneapolis.) In Paola, he moved in

with Willis and Delilah Moore. These were all black families who lived in mostly white towns.

In this period, "sunshine and shadow were profusely intermingled," George wrote. In other words, there were both good times and bad times. The good times included finding schools in every town he lived. He never wanted to stop learning. One classmate remembered that George, who had grown to be six feet tall and thin, would rather collect plants and leaves at recess than play games.



The bad times, however, included cruel encounters with racism. The worst of it came in Fort Scott, where George witnessed a lynching—a black man being murdered by a group of white men. “As young as I was, the horror haunted me,” he said. George left Fort Scott shortly after.

Other instances involved George personally. In one town, he and a white friend went out to breakfast. When they sat down, the waiter told them he would serve the white man, but not George. This kind of racism was legal in those days under “Jim Crow” laws.

In 1883, George got word that his brother, Jim, had died from smallpox. Jim was twenty-three years old. He had left the Carver farm a few years earlier and moved to Arkansas to find work. Although George had not seen his brother much after leaving home, he wrote that he felt “as never before that I was left alone.”

JIM CROW LAWS

IN 1865, THE THIRTEENTH AMENDMENT OFFICIALLY ENDED SLAVERY. BUT BLACKS IN THE UNITED STATES, ESPECIALLY IN THE SOUTH, STILL SUFFERED UNDER JIM CROW LAWS. THE LAWS WERE NAMED AFTER AN OFFENSIVE BLACK CHARACTER FROM A SONG IN THE 1800S. THESE LAWS KEPT BLACKS FROM USING THE SAME RESTAURANTS AND HOTELS AS WHITES DID. AND THEY ALLOWED FOR “SEPARATE-BUT-EQUAL” FACILITIES, SUCH AS RESTROOMS OR DRINKING FOUNTAINS, FOR BLACKS AND WHITES. IN REALITY, WHILE FACILITIES WERE SEPARATE, THEY USUALLY WEREN'T EQUAL. PLACES RESERVED FOR BLACKS WERE OFTEN MUCH WORSE THAN THOSE FOR WHITES.

SOME JIM CROW LAWS LASTED UNTIL ONE HUNDRED YEARS AFTER THE END OF THE AMERICAN CIVIL WAR. IN 1954, THE US SUPREME COURT ENDED SEPARATE SCHOOLS FOR BLACKS AND WHITES. IN 1965, CIVIL-RIGHTS LAWS FINALLY PUT AN END TO “SEPARATE-BUT-EQUAL.”



George found comfort, though, in friends who cared about him. He moved back in with the Seymour family in Minneapolis. This is where George took his middle name. When he began getting mail intended for a different George Carver in town, he added the initial *W* to his name so the postman could tell the two men apart. A friend asked if the *W* stood for Washington. George thought that sounded good, so he became known from then on as George Washington Carver.



George opened a laundry business—washing and drying clothes for other people—in Minneapolis, and bought a small plot of land.

Then he sold the land for a profit and moved to the larger town of Kansas City. He entered a school to learn shorthand and typewriting.



He thought he might want to work for a telegraph office. But he decided business school wasn't enough. George wanted to go to college. So he began writing to colleges he might attend.

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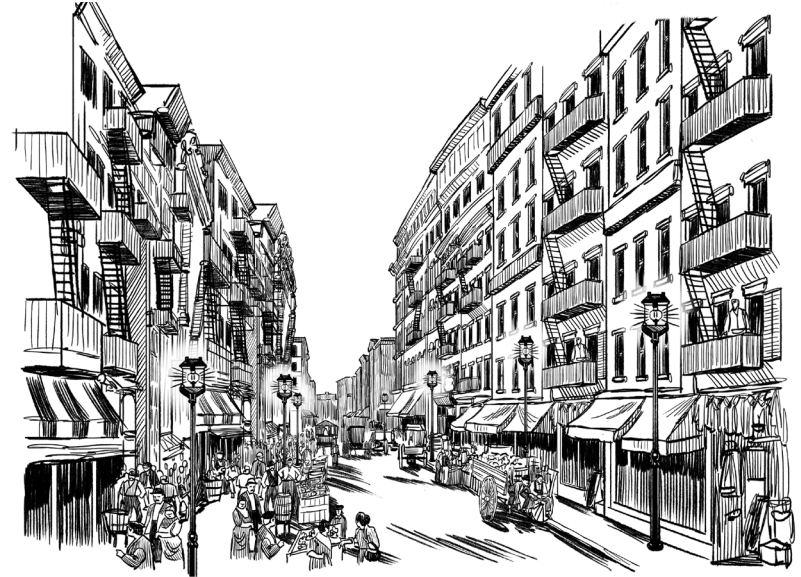


Who Was Nikola Tesla?



by Jim Gigliotti

CHAPTER 6 Fame and Fortune



The mid-1880s were an exciting time in New York City. Skyscrapers were being built. The Statue of Liberty arrived as a gift from France in 1885. And parts of Manhattan were being lit by the Edison Electric Illuminating Company of New York.

It was a difficult time for Nikola, however. He was unemployed and broke. He was also alone. His family was halfway around the world. He needed to find a way to put food on the table. Nikola wondered if all his years studying science and mechanics, reading books, and endlessly working through problems in his mind had been a waste of time.

Then Nikola got the chance to earn two dollars per day digging ditches. It turned out to be his big break! The foreman on the job overheard Nikola talking about his AC motor.



He said he knew a man who was an expert electrician. That man's name was Alfred Brown.

When Mr. Brown met Nikola, he was impressed by Nikola's ideas on alternating current. Together with a lawyer named Charles Peck, Brown and Tesla formed the Tesla



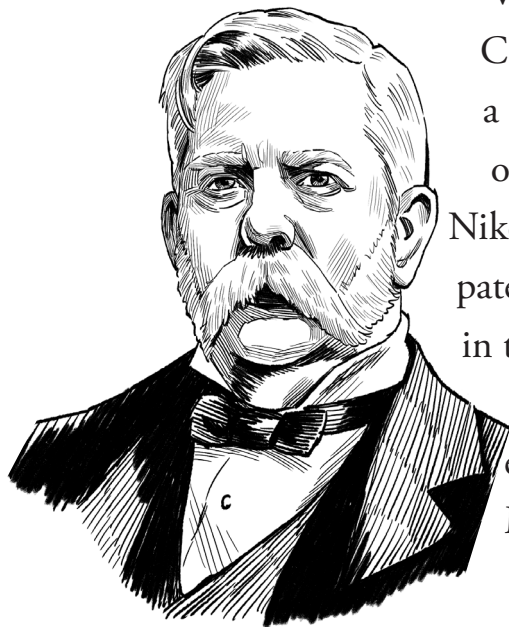
Electric Company. They opened a laboratory in New York City in autumn 1886, and worked to develop patents on alternating-current technology. A patent protects the inventor from someone else copying the idea. It creates an authentic record of the date, time, and place of each invention.

That same year, the US government granted Nikola his first patents. In 1888, he presented his system of alternating-current motors and transformers to the American Institute of Electrical Engineers at Columbia University in New York. As usual, he had a clear vision for the future of electricity before anyone else did.

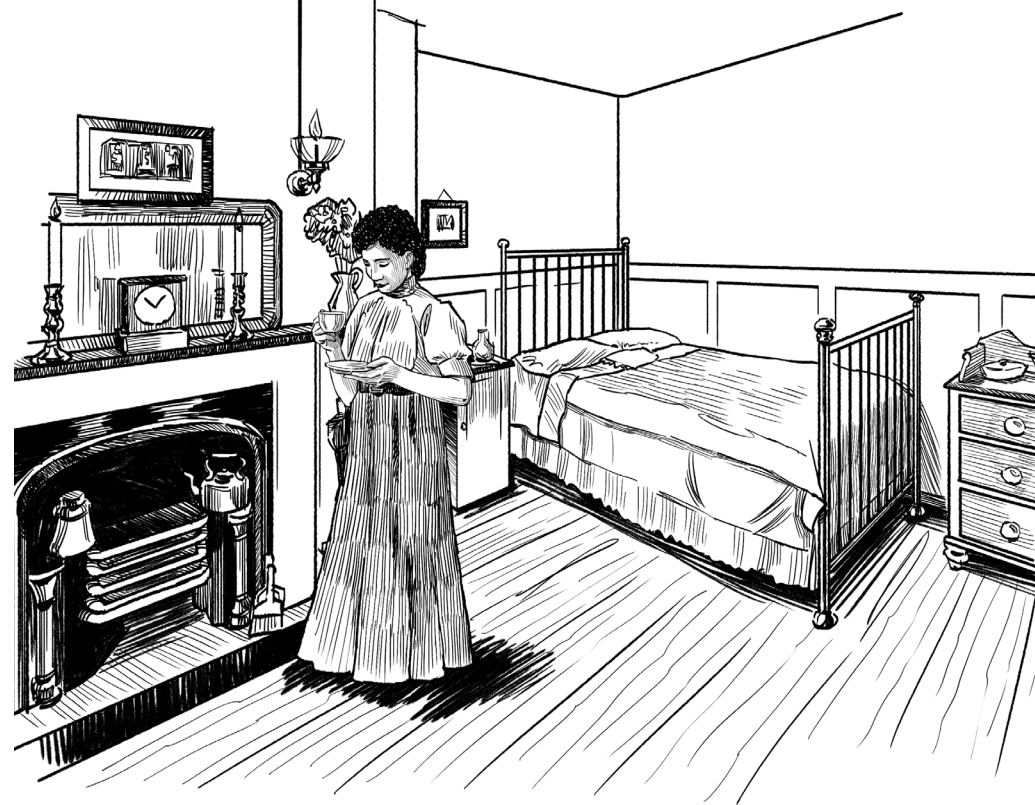
Nikola's patented ideas got the attention of George Westinghouse, the owner of the Westinghouse Electric Company. George was a direct competitor of Thomas Edison's.

Nikola explained how his patents could beat Edison in the electricity business.

Edison had brought electricity to parts of Manhattan in 1882, but most Americans were still more than



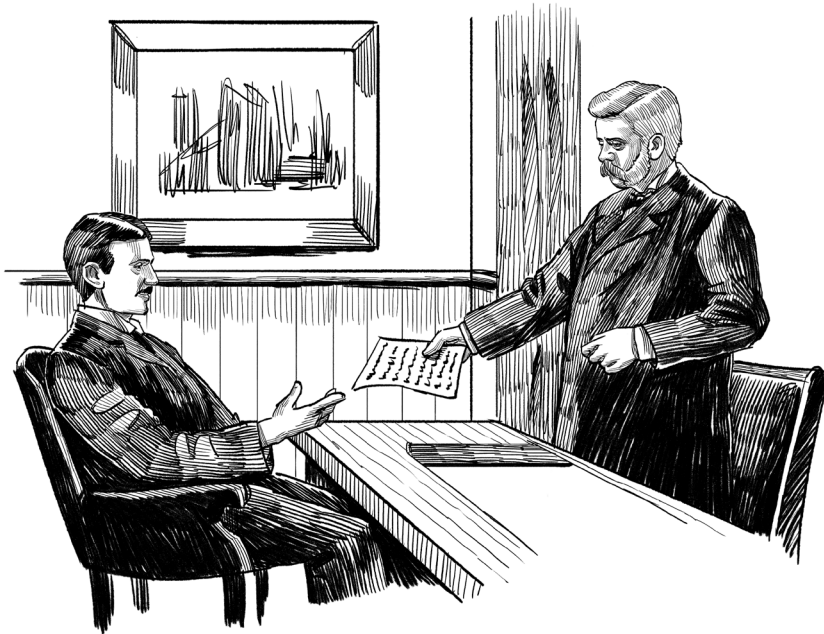
GEORGE



forty years away from having electricity. They still used gas lamps and candles to light their homes. Direct current couldn't travel very far before losing power, so Edison's DC system required many, many power plants. Nikola's AC system could supply electricity to thousands of people with a single power plant.

George Westinghouse wanted to buy Nikola's alternating-current patents. That gave him the

right to use Nikola's ideas as if they were his own. Westinghouse offered a huge amount for the patents. Some reports say Tesla received about

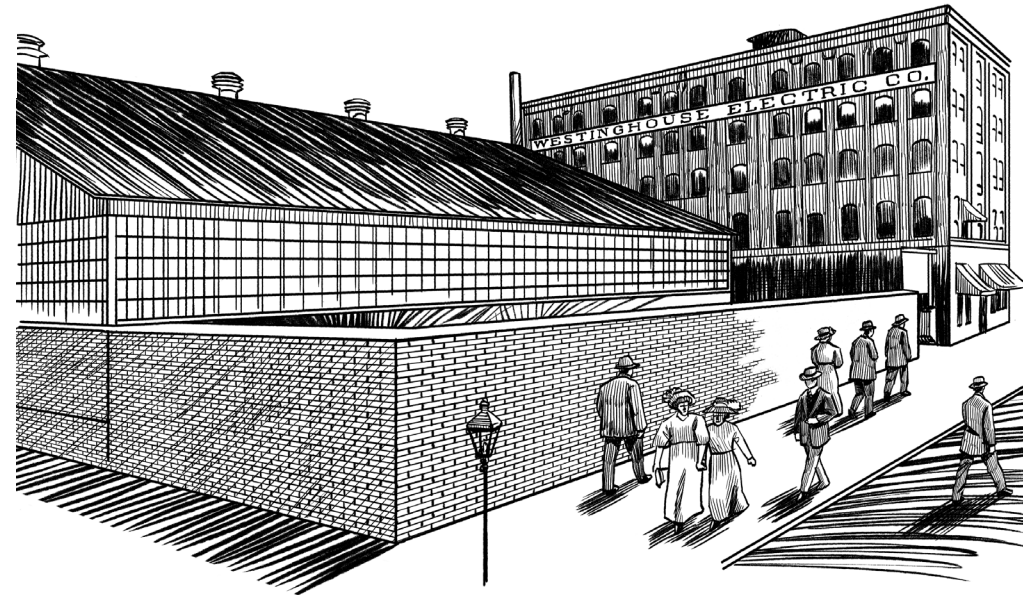


\$500,000 for nearly 30 patents. That's about \$1.5 million in today's money! Nikola also was to receive payments—called royalties—every time the technology was used in a new system.

Only a few days before his thirty-second birthday in 1888, Nikola accepted Westinghouse's offer. Suddenly, he was a rich man! He sent money

home to his mother and his sisters. And he paid the men who had helped him set up the Tesla Company. Nikola had enough left over to do what he really wanted: go back to his lab and work on his ideas.

Nikola had been living in Pittsburgh, Pennsylvania, trying to help the Westinghouse Company make his technology work. But in 1889, he returned to New York. He opened a new laboratory on Grand Street and moved into the fancy Astor House hotel in New York City.



Nikola invited celebrities and scientists to watch demonstrations of his experiments. He was quite a showman in the lab. He amazed his guests with demonstrations that looked like magic. In one, he held a glass tube in one hand and a wire coursing with alternating current in the

other. The current traveled across his body and into the tube, making it glow with a beautiful light!

Nikola worked on many ideas in his New York lab, including something called the Tesla coil.

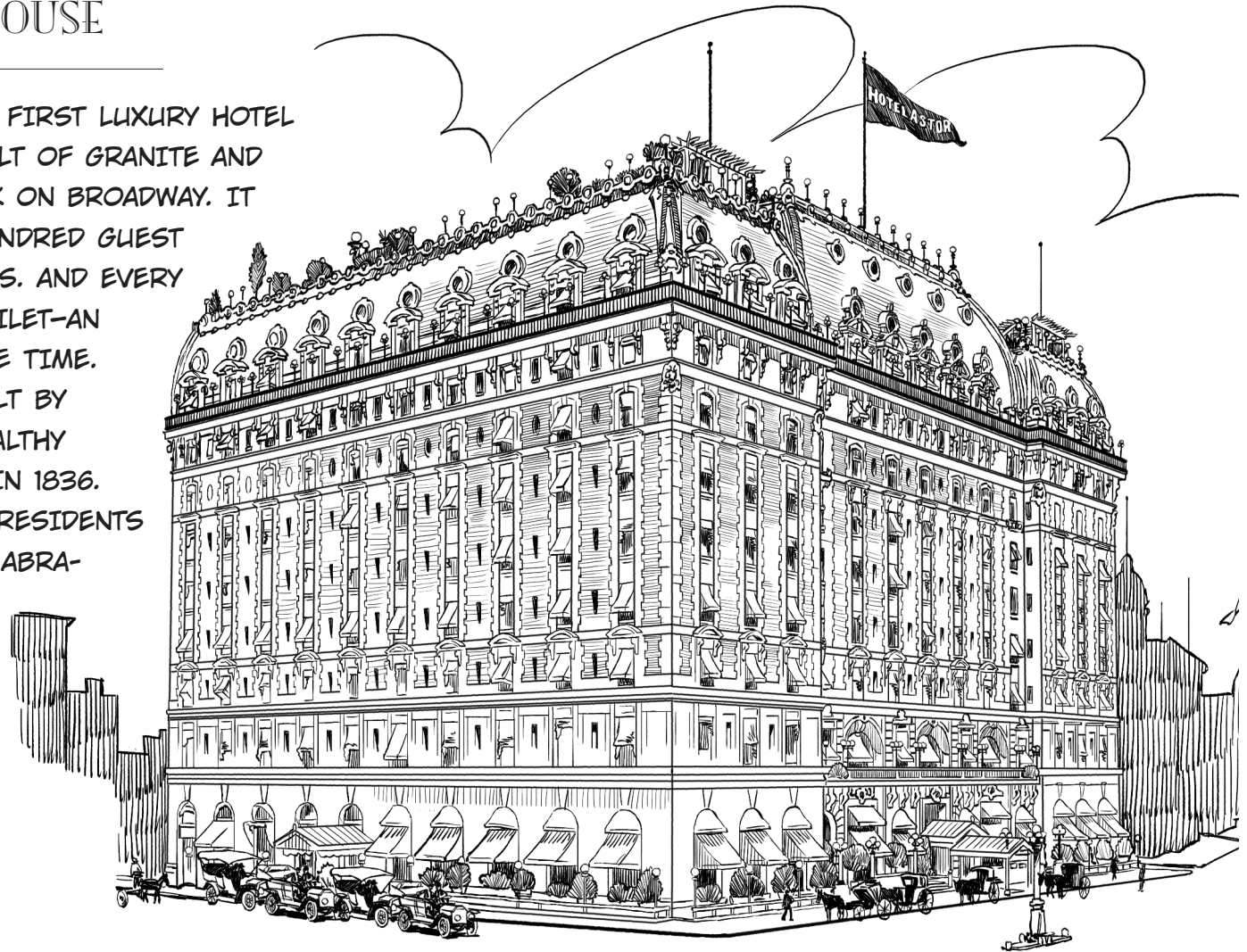


ASTOR HOUSE

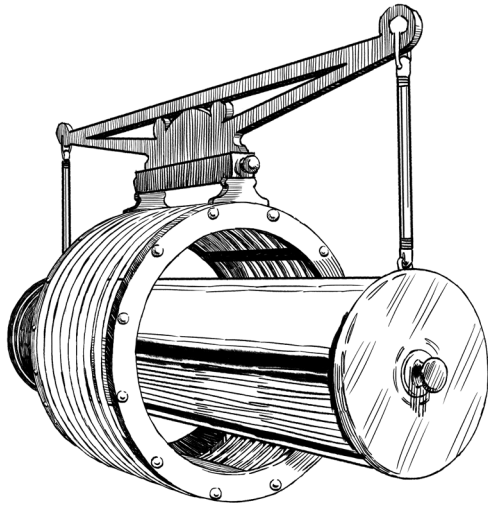
ASTOR HOUSE WAS THE FIRST LUXURY HOTEL IN NEW YORK. IT WAS BUILT OF GRANITE AND TOOK UP AN ENTIRE BLOCK ON BROADWAY. IT HAD MORE THAN THREE HUNDRED GUEST ROOMS ON ITS SIX FLOORS. AND EVERY FLOOR HAD A BATH AND TOILET—AN INCREDIBLE LUXURY AT THE TIME.

ASTOR HOUSE WAS BUILT BY JOHN JACOB ASTOR, A WEALTHY AMERICAN BUSINESSMAN, IN 1836. EIGHTEEN DIFFERENT US PRESIDENTS STAYED THERE, INCLUDING ABRAHAM LINCOLN, WHO STOPPED OVER FOR ONE NIGHT ON THE WAY TO HIS INAUGURATION IN 1861.

ASTOR HOUSE CLOSED IN 1913.



The Tesla coil took a low-voltage alternating current and built it up to a very high-voltage



current. Then it released that intense current through a spark that looked like lightning. The spark created an electrical field all around it.

Nikola's amazing imagination was the key to his genius. It made him different from just about every other engineer. Most inventors build a model of a machine and tinker with it until it works. Nikola, however, first pictured the machine

in his mind, down to the very smallest details and exact measurements. He mentally conducted trial operations. He was even able to inspect the machine weeks later, simply by imagining any wear and tear! Only when he absolutely knew it could work did he actually build it.

Much of the time, Nikola worked by himself. But he was not a loner. He not only invited people to his laboratory, he also entertained groups of important scientists at dinner parties. He had many friends who were not scientists, too, including some of the most famous people of his time, such as writers Mark Twain and Rudyard Kipling, and John Jacob Astor IV, the great-grandson of the man who built the Astor House.

Nikola always dressed well at his dinner parties.



THE QUIRKY INVENTOR

NIKOLA LIVED ALONE FOR MANY YEARS. HE WORKED VERY LONG HOURS. AND HE DEVELOPED SOME UNIQUE HABITS.

HE ONLY SLEPT TWO HOURS EACH DAY—BUT HE MADE SURE TO FIND TIME TO DO HIS TOE CURLS IN THE EVENINGS. HE BELIEVED THAT ONE HUNDRED TOE CURLS FOR EACH FOOT HELPED THE BRAIN.

HE AVOIDED COFFEE, TEA, AND TOBACCO.

HE ATE DINNER AT EXACTLY THE SAME TIME EVERY NIGHT: 8:10 P.M. AFTER EACH MEAL, HE WIPED EVERY DISH AND PIECE OF SILVERWARE WITH A CLEAN NAPKIN.

LATE IN LIFE, HE WOULD EAT ONLY MILK, HONEY, AND BREAD, AND DRINK ONLY VEGETABLE JUICE.

STRANGELY, NIKOLA COULD NOT STAND THE SIGHT OF PEARLS. HE WOULD NEVER TOUCH ANOTHER PERSON'S HAIR. AND HE WAS SO AFRAID OF GERMS THAT HE TRIED NOT TO SHAKE HANDS WITH ANYONE—EVER!



He insisted on wearing white gloves and a good suit. He believed a person needed to *look* successful to *be* successful.

Women were very attracted to the blue-eyed genius who stood over six feet tall. Nikola never married, though. He didn't believe an inventor could devote enough attention to his work if he also had a wife. He once told a newspaper reporter that having a wife would take too much time and energy away from an inventor's duty. But then he added, "It's a pity, too, for sometimes we feel so lonely."

Chapter 7

War of the Currents

In 1890, the Westinghouse Corporation was in trouble. It was losing money.

To help his friend George Westinghouse, Nikola did something remarkable: He tore up the royalty clause in his contract. That meant he would never earn more money from Westinghouse. Nikola didn't mind. He was more interested in his inventions helping people get electricity than in making more money.



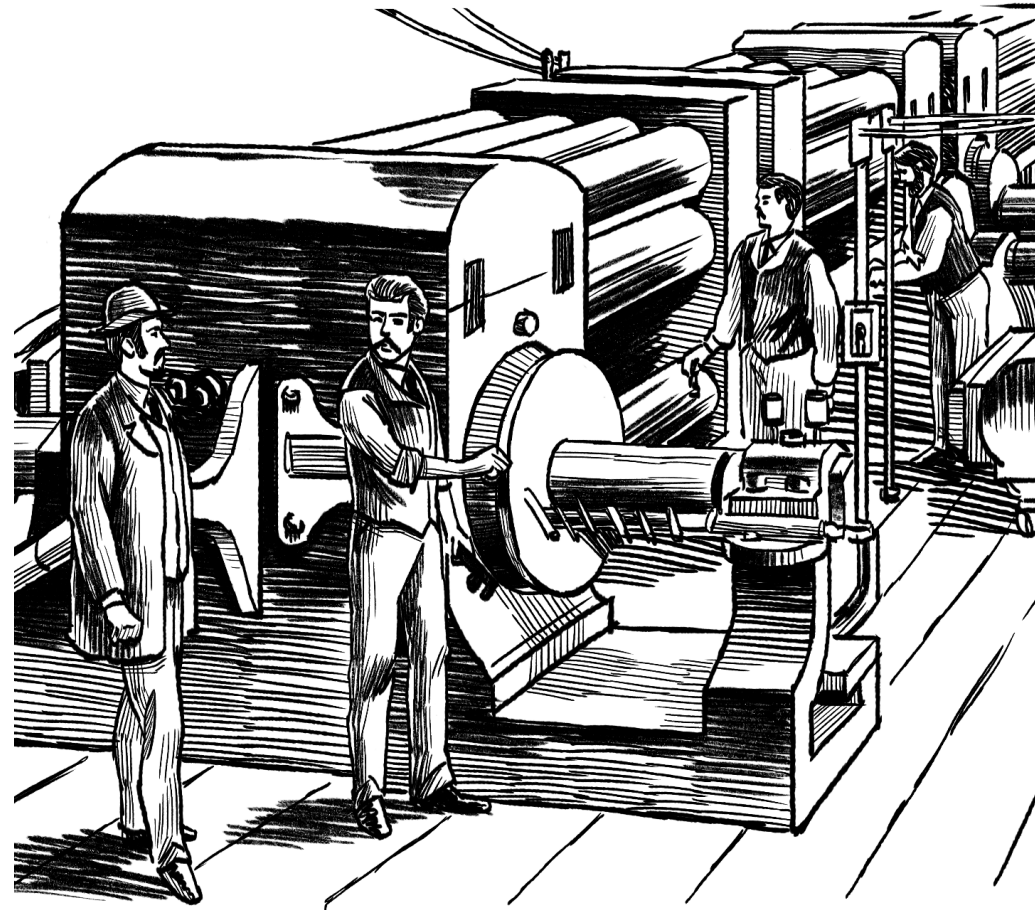
Nikola's partnership with Westinghouse was a big problem for Thomas Edison. At the time, very few homes in the United States had electricity. The average city might have had streetlamps. But people in the countryside wouldn't have even seen them yet. Electrical lines had not yet been set up. There was no way to carry electricity over great distances from the generators. But it was clear that whatever company could find a way to bring electricity to homes in the United States was going to make a lot of money.

Nikola and Westinghouse believed alternating current was the best method. It could travel great distances at high voltage from a large power plant, then be transformed to a lower, safer voltage for homes. Since direct current couldn't be transformed, it could only travel short distances at a safe voltage. Direct current would require a small power plant to be built every mile or so.

Thomas Edison had already started building those power plants. His first DC power station

had opened in New York City in 1882. He knew if AC became standard, he would lose a lot of money on his direct-current stations.

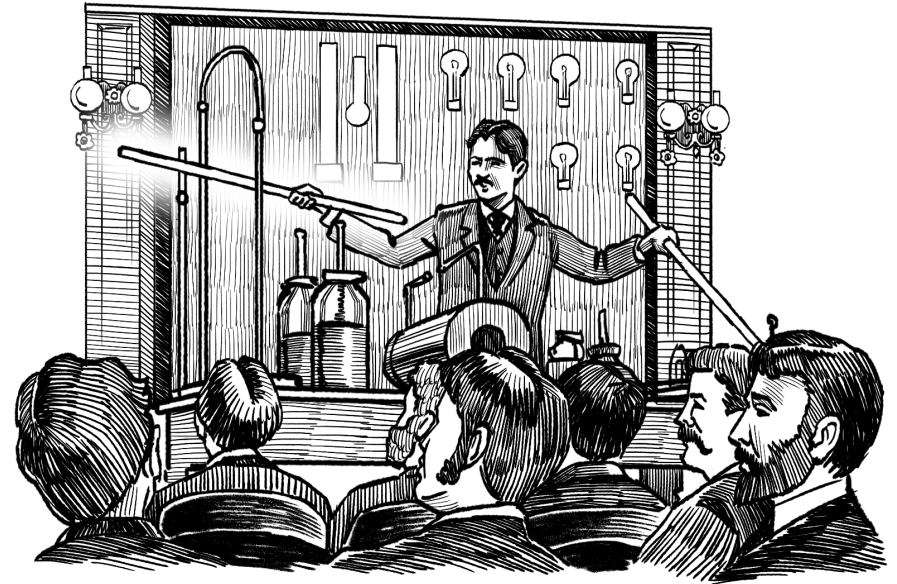
So he tried to convince the public that using



alternating current—Tesla’s big idea—was a bad and dangerous thing. He worked hard to spread the lie.

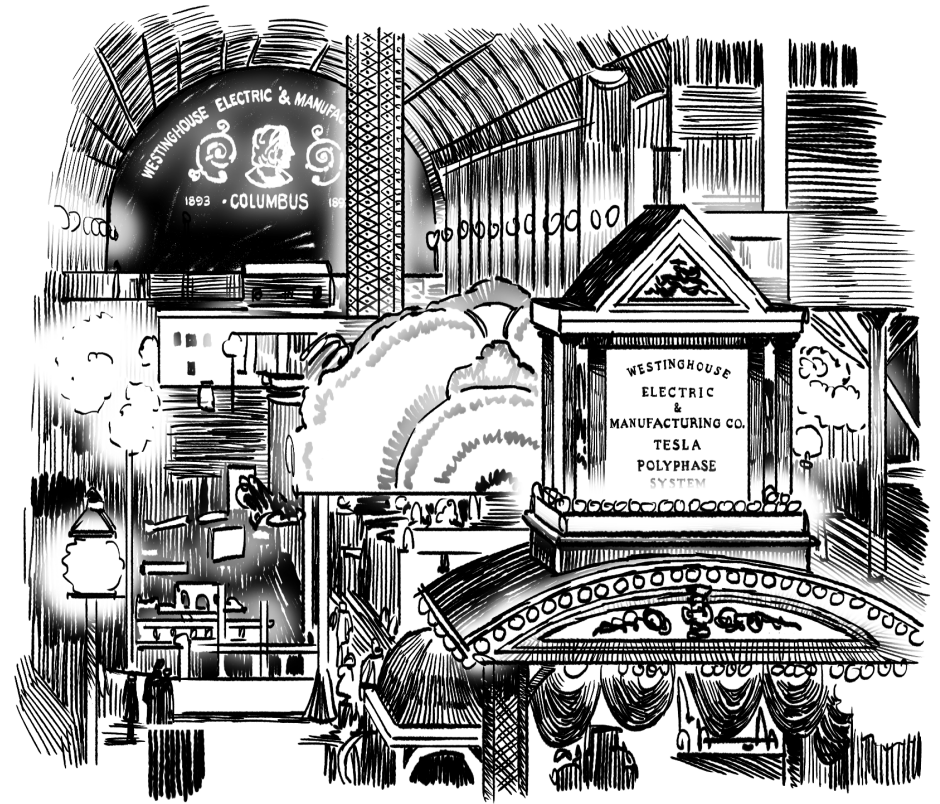
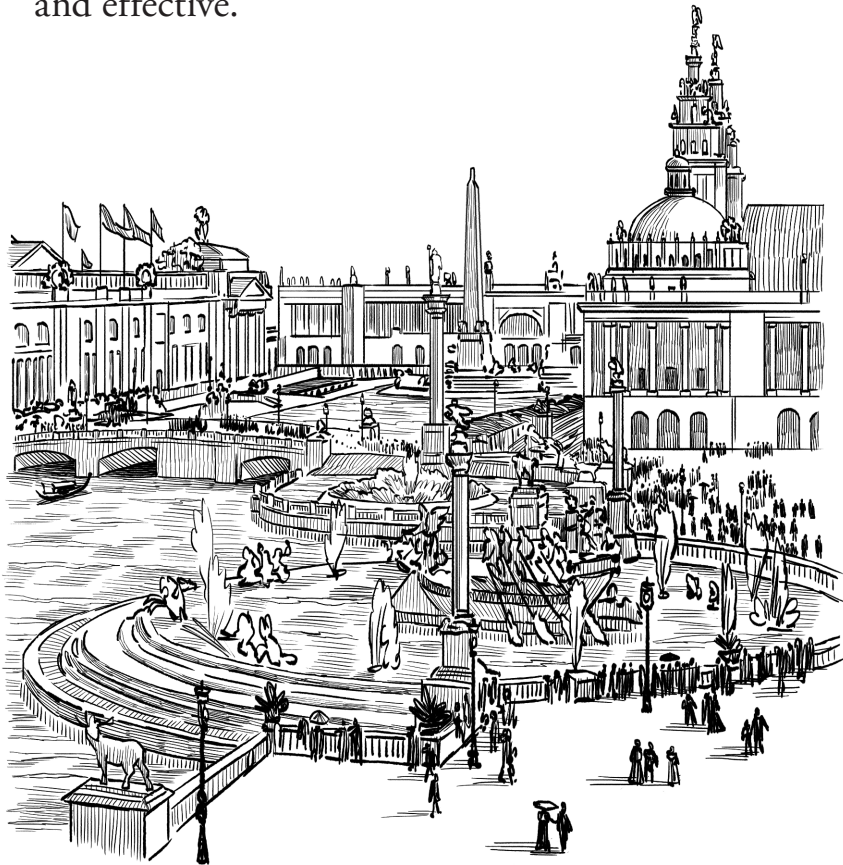


Edison distributed thousands of pamphlets that said alternating current was deadly. And horribly, he teamed up with an electrical engineer to electrocute stray dogs with alternating current. And it worked. Investors and public officials became scared of the AC technology. Nikola knew that any electricity—alternating current or direct current—could be dangerous. How could he and Westinghouse prove AC was just as safe as DC?



In 1891, the year Nikola became a citizen of the United States, he gave another lecture before the American Institute of Electrical Engineers on alternating current. The next year, he gave talks in London and Paris. While in Paris in 1892, Nikola received a telegram from his uncle Petar saying that his mother was sick. “I made the long journey home without an hour of rest,” Nikola said. His mother died several weeks later on April 4.

Back in the United States, George Westinghouse scored a huge victory by winning the contract to power the World's Columbian Exposition in Chicago in 1893. Westinghouse got the job because he offered to provide the electricity for less money than Edison did. The first all-electric fair in history was the best chance to show the world that alternating current was safe and effective.



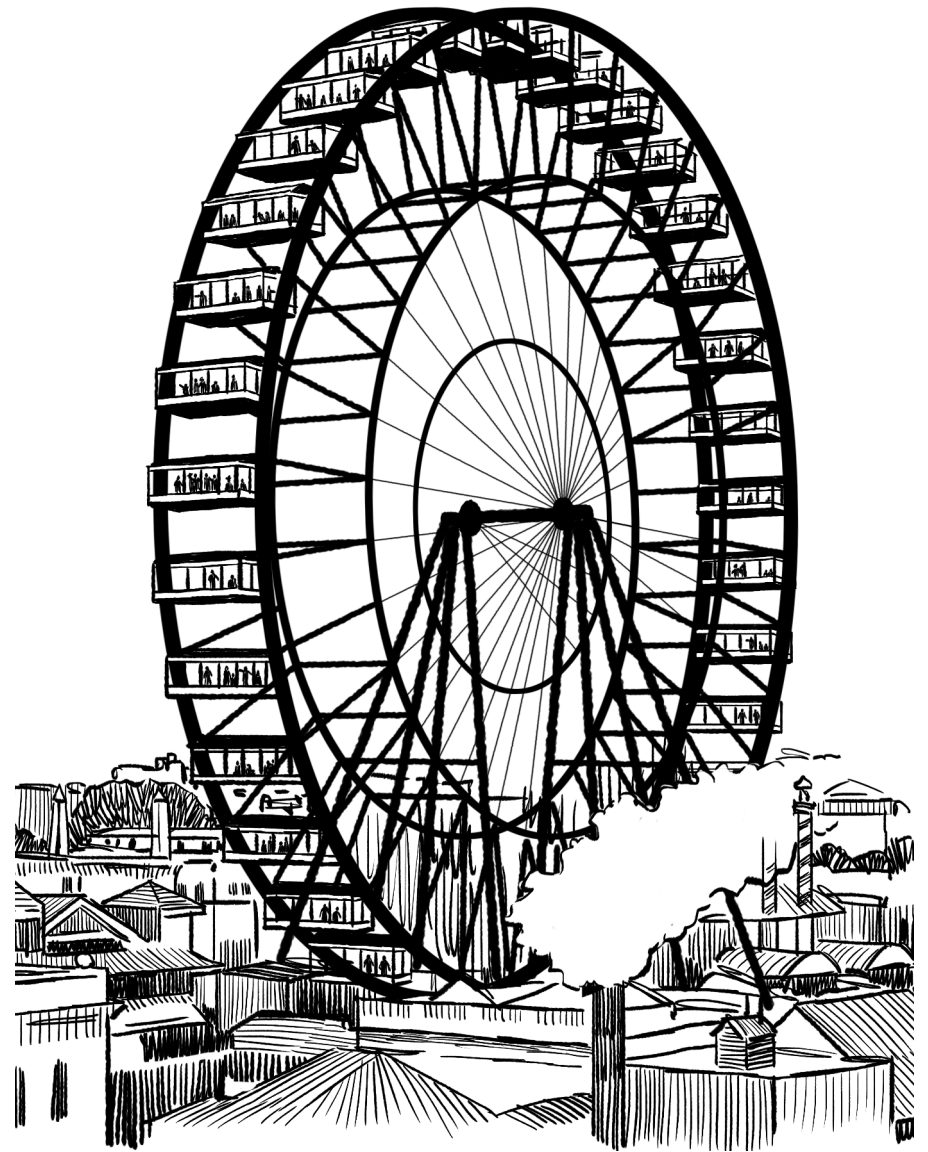
More than two hundred thousand lightbulbs showcased the power of alternating current at the Columbian Exposition. In the Great Hall of Electricity, Nikola wowed onlookers with demonstrations like the ones he had given in his New York City laboratory.

WORLD'S COLUMBIAN EXPOSITION

THE WORLD'S COLUMBIAN EXPOSITION, SOMETIMES CALLED THE CHICAGO WORLD'S FAIR, WAS HELD FROM MAY 1 TO OCTOBER 30, 1893. IT CELEBRATED THE FOUR HUNDREDTH ANNIVERSARY OF CHRISTOPHER COLUMBUS'S ARRIVAL IN THE NEW WORLD IN 1492.

NEARLY TWO HUNDRED TEMPORARY BUILDINGS WERE ERECTED OVER MORE THAN SIX HUNDRED ACRES TO HOUSE 65,000 EXHIBITORS FROM ALL OVER THE WORLD! FOURTEEN BUILDINGS SURROUNDED A GIANT POOL THAT REPRESENTED COLUMBUS'S VOYAGE FROM SPAIN.

MORE THAN 25 MILLION PEOPLE ATTENDED THE FAIR. THERE WERE THOUSANDS OF FUN AND INTERESTING EXHIBITS. AND THERE WERE ALSO MANY NEW PRODUCTS ON DISPLAY, INCLUDING CRACKER JACK POPCORN, JUICY FRUIT GUM, AND SHREDDED WHEAT CEREAL. AND UP TO 38,000 PEOPLE A DAY—MORE THAN 1.4 MILLION PEOPLE IN ALL BY THE END OF THE FAIR—RODE THE WORLD'S FIRST FERRIS WHEEL.



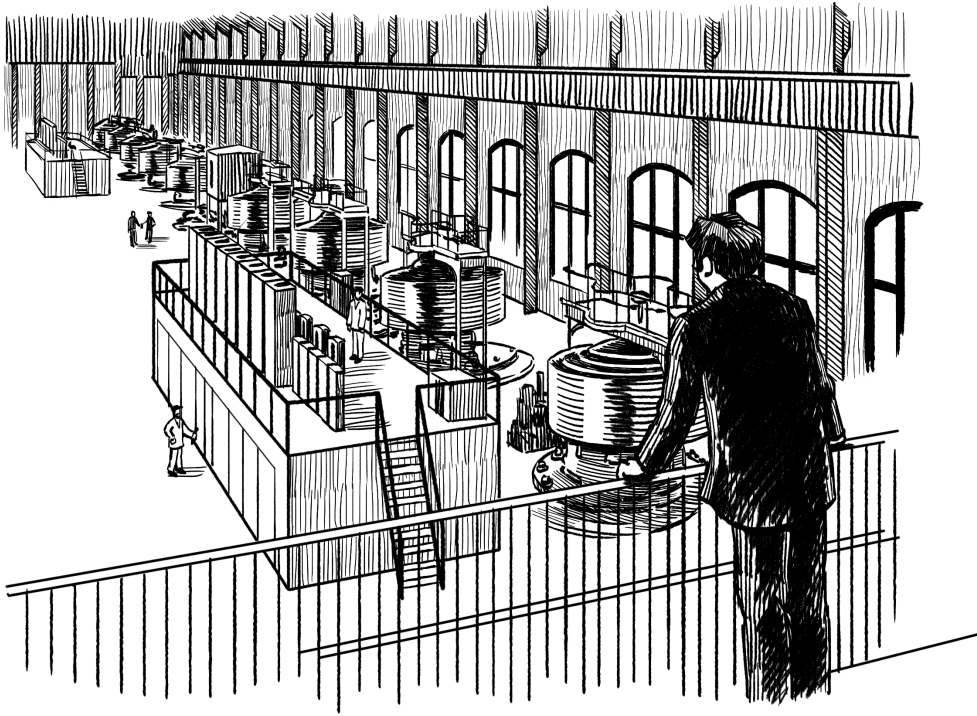
By the end of the six-month exposition, Westinghouse had won over the public. Visitors to the fair could see for themselves how safe and useful the AC lights were. Alternating current soon became the standard technology for delivering electricity to consumers in the United States.

But winning over the public was only a part of the battle in the war of AC versus DC. Actually



getting electricity into people's homes would be the more difficult part. Nikola looked to Niagara Falls for answers. Ever since Nikola read about Niagara Falls as a boy, he had been intrigued by hydroelectricity—the force of falling or flowing water to produce power. The rushing force of the fast-moving water turns a wheel called a turbine. The spinning turbine turns a metal shaft in the motor that generates electricity.

Other scientists and engineers long had talked about using the power of Niagara Falls to create electrical energy. However, nothing had ever come of it. The success of AC technology at the World's Columbian Exposition convinced state officials in New York that it just might work. Before the exposition was over, they had awarded Westinghouse Corporation a contract to build turbines and generators for Niagara Falls using Nikola's patents and alternating-current technology!



The first generator was tested in April 1895. The next year, the world's first large-scale hydroelectric power plant officially opened. It immediately began delivering electric power to Buffalo, New York, around twenty miles away. Within just a few years, the range extended all the way to New York City, a distance of over four hundred miles!

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Who Was Marie Curie?



by Megan Stine

Chapter 7 Fame and Fortune

The Nobel Prize is the highest honor a scientist can receive today. However, when Marie and Pierre received the letter saying they had won, it didn't give them very many details. It didn't say the king of Sweden would be there to hand out the award, and it didn't tell them that they would be getting a huge amount of money—worth more than half a million dollars today!

So Pierre did something shocking. He wrote back to the Nobel Prize committee and said they couldn't come! He thanked them for the prize and explained that Marie was sick. The trip was too long, he said. They couldn't possibly take the time to travel to Sweden. They were too busy teaching their classes.

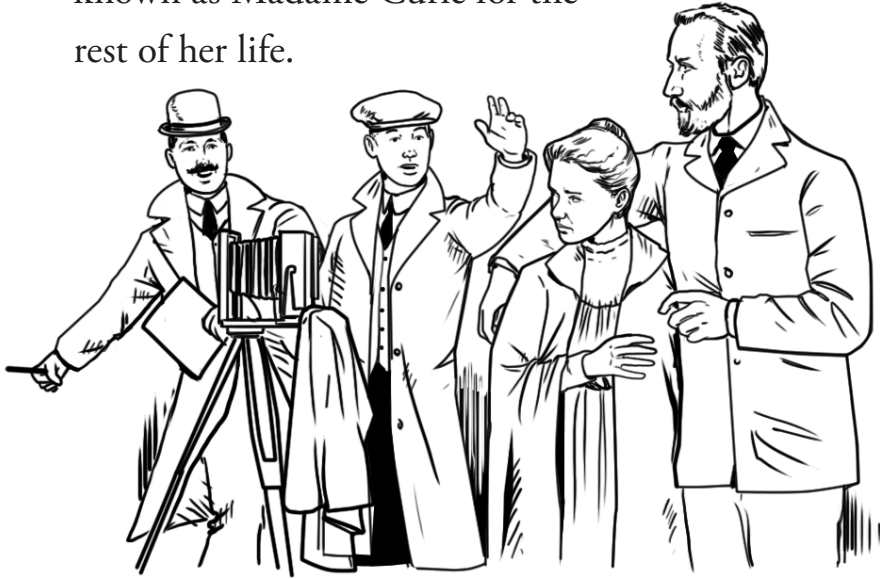
Pierre and Marie probably didn't realize they were being rude. They also didn't know what a big deal the Nobel Prize was. The prize had only been around for three years.

The Curies were supposed to share the Nobel Prize with one other scientist, Henri Becquerel. Becquerel went to Sweden and accepted the award instead. When he gave his speech, he made it sound like he had done all the work. He hardly mentioned Marie and Pierre at all.



Still, the Curies became famous overnight. All the newspapers wrote about them. People were fascinated by Marie—a woman scientist! Newspaper reporters came to her house day after day. When Marie wasn't home, the reporters talked to her daughter, Irene. They even wrote stories about the cat!

The newspapers called Marie “Madame Curie.” *Madame* is the French word for “Mrs.” In a way, they were saying that Marie was only Pierre Curie’s wife—not famous on her own. Marie was known as Madame Curie for the rest of her life.



Pierre hated the publicity. He hated anything that kept him from his work. For weeks, Marie and Pierre tried to avoid the reporters. When asked questions, they answered with just single words. “Yes.” “No.”

One good thing came out of their fame. Now the Sorbonne was willing to give Pierre a job as a professor. Also, after all their years of begging, he and Marie were finally given a better lab.

Meanwhile, the whole world was falling in love with radium. Why? Because it glowed in the dark! The glow seemed like a magic potion to many. People imagined it would cure illnesses—and they were partly right. Radium could help treat cancer, but the opposite was also true. Radium was making people sick, including Marie and Pierre.

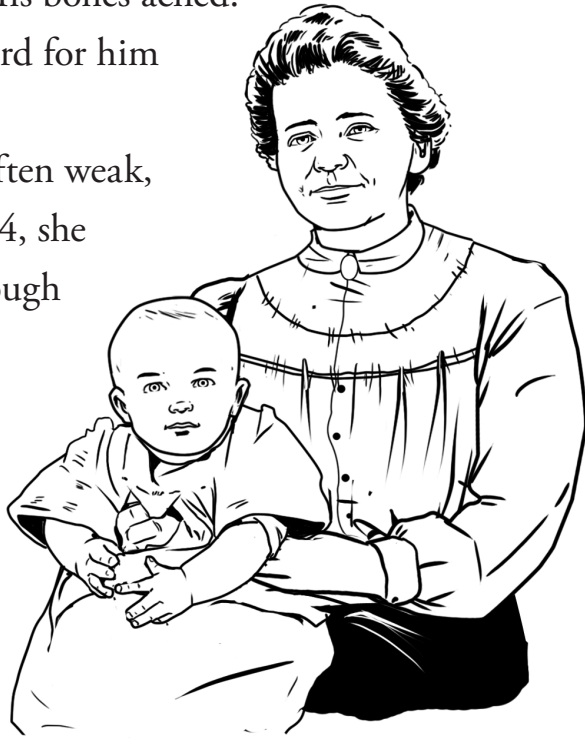
Rich people foolishly drank radium water every day until their jawbones broke into pieces! Actors and dancers put radium on their costumes so they would glow in the dark.



Radium was painted on watches and clocks so the hands would glow. One makeup company even put radium in their lipstick! All these radium products were hurting people.

Radium hurt Marie and Pierre most of all because they handled it for so many years. Pierre's hands were so damaged that he couldn't even dress himself. His bones ached. Pain made it hard for him to walk.

Marie was often weak, too. But by 1904, she was healthy enough to have another baby! On December 6, a baby girl was born. They named her Eve.



For several months after winning the Nobel Prize, Marie and Pierre enjoyed life. They took vacations to the seashore. They bought some new clothes with their prize money, and ate a few fancy dinners out. Big chunks of the money were sent to Marie's family in Poland. Life seemed good.

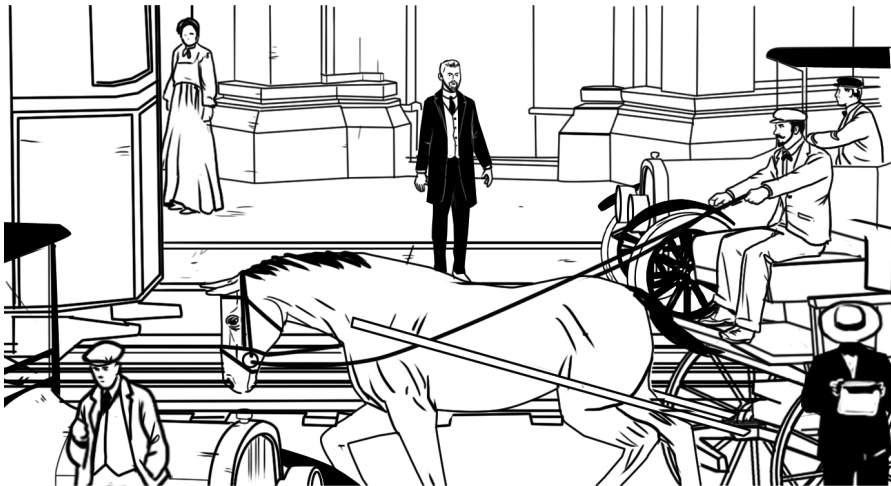
Then one day in April 1906, something terrible happened—something that turned Marie's life upside down forever.

Chapter 8

Misery

It was rainy, gray, and damp all over Paris on April 19, 1906. Pierre had gone out to a science meeting that morning. He was in a wonderful mood. His friends said he was happier and talked more than ever before.

After the meeting, Pierre went back out into the rain. There were horses, carriages, cars, people, and trams everywhere. As Pierre began to cross a big, busy street, a huge horse-drawn wagon hit



him. Pierre tried to grab on to the horse, to steady himself, but he was weak. He fell. The wagon driver couldn't stop the heavy cart. The wheel ran over Pierre and crushed his skull.

A few hours later, Marie heard the terrible news that her husband was dead. It struck her as hard as the wagon that killed Pierre. Marie felt as if there was no reason to be happy ever again. She became silent. She wouldn't eat and barely got out of bed. It seemed to her as if her life was over.



For many months, Marie was miserable and alone. She later wrote that her children, Irene and Eve, were her only reasons to go on living.

After a while, the Sorbonne invited Marie to take over Pierre's teaching job. Marie agreed, but it was a bittersweet triumph. While Pierre was alive, they would not let her be a professor! No woman

had ever taught at the Sorbonne. Now that Pierre was dead, she was welcome to take his place.

On the November day in 1906 when Marie arrived to teach her first class, hundreds of people lined the streets. Reporters and photographers came. The crowds waited to hear what the famous Madame Curie would say. Would she mention





Pierre? Would she talk about how much he meant to the world of science? No. Marie simply began the science lesson where Pierre had left off. Even so, people in the audience cried. They all sensed how Marie felt, and how hard it was for her to go on without him.

For the next few years, Marie was sad. Still, she continued her work and moved her children to a house in the country, not far from Paris. Marie wanted Irene and Eve to be able to swim and play outside. She also wanted them to learn. Irene was especially smart and, like Marie, loved math and science. Eve was good at music.





Marie arranged with her friends to teach a small group of their children at home. It was something like the Flying University! All the adults took turns teaching classes in one another's houses.

Marie's friends were all scientists. They all spent time together, having dinner and teaching the children. They went on vacation to the beach together. They were very close.

One day, her friends noticed a change in Marie. Suddenly, she seemed happier! She was wearing a pretty dress with a flower, instead of the black dresses she had been wearing to mourn Pierre.



Pretty soon, her friends figured out why Marie was happy. She had fallen in love! The only problem was that the man she loved—Paul Langevin—was already married.

Paul was part of Marie and Pierre's circle of friends. He had been Pierre's student. He was a brilliant scientist and a good friend. Paul was unhappily married. Sometimes his wife was violent. Paul wished he hadn't married her.

Marie probably never wanted to fall in love with a married man. But she followed her heart and spent time with him anyway. It was the first happiness she had felt in years.



PAUL LANGEVIN

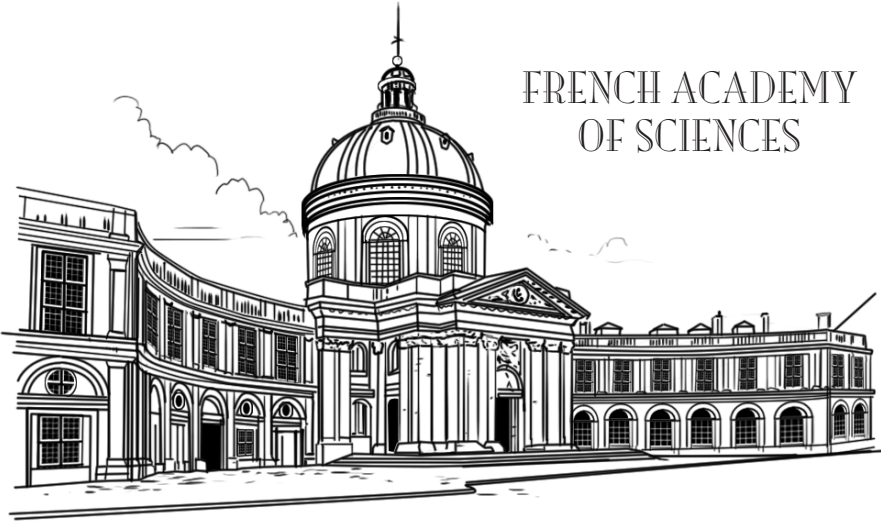
Paul wrote love letters to Marie, and she wrote back to him. One day, Paul's wife, Jeanne, found the letters. She was furious. She threatened to kill Marie! She even followed Marie in the street!



Marie tried to convince Paul to leave his wife and get a divorce. Paul had four children with Jeanne. He didn't want to break up his family. Finally, he promised his wife that he wouldn't see Marie again—except as a friend.

That year, Marie was on the verge of making history—again. She was nominated to become the first woman member of the French Academy of Sciences. Was France ready to treat women equally? There were strong feelings on both sides. Many newspapers wrote angry articles about it. They thought women should not be allowed into this private group of male scientists. Even though Marie was already one of the most famous scientists in the

FRENCH ACADEMY OF SCIENCES



world, they thought she should be kept out.

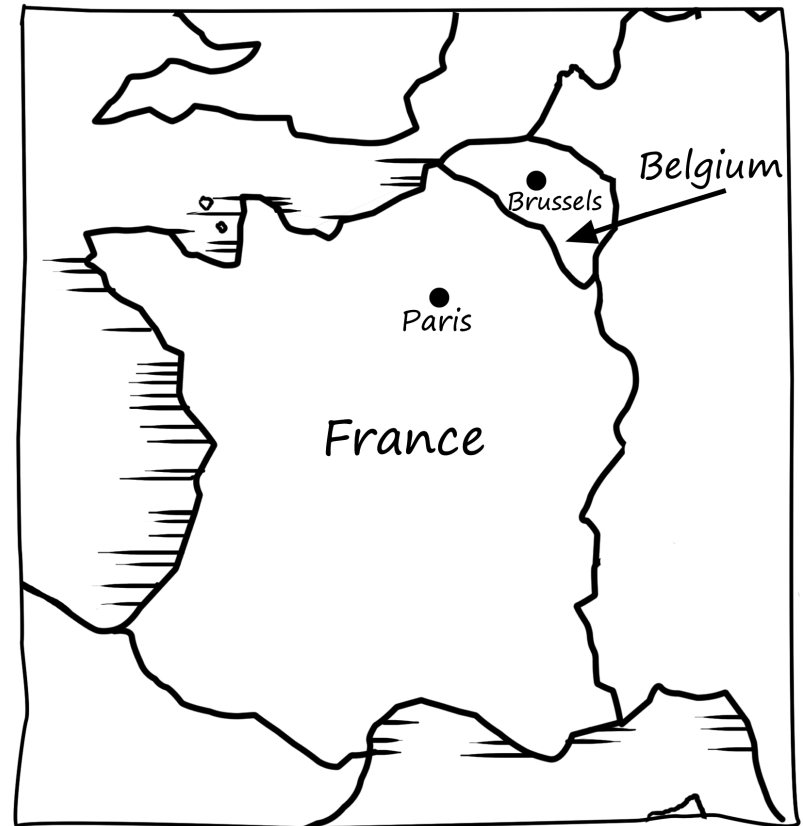
When it came time to vote, Marie was not even allowed inside the Academy's building to see what happened!

The vote was held at exactly four o'clock on January 24, 1911. Marie was not elected. Her friends were angry about it, but Marie acted like she didn't care. She was not the kind of person to make a fuss about anything.

Besides, Marie still had her work, and she was still in love with Paul.

In November 1911, Marie went to a very important science meeting in Brussels, Belgium. All the most famous scientists from Europe were there, including Albert Einstein. Paul Langevin went, too.

When Paul's wife found out he and Marie were in Brussels together, she was furious. She suspected that Paul and Marie were still



in love. She sent Marie's love letters to the Paris newspapers! A terrible scandal broke out. There were stories about Marie and Paul in the newspaper every day. Many French people thought Marie was to blame.

Marie was angry and horrified. She didn't want her daughters to suffer from the bad publicity. She didn't want it to ruin her career, either.

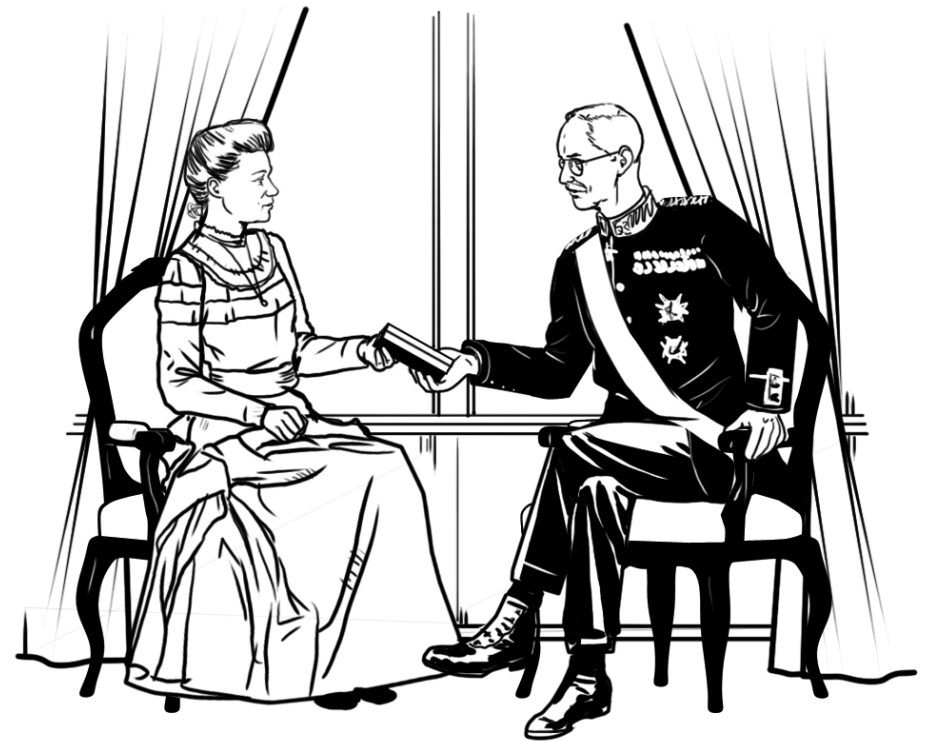
It was an especially bad time for this kind of trouble. That same week, Marie had just gotten a letter from the Nobel Prize committee. They were giving her *another* Nobel Prize! This time, she alone would be the winner. It was an amazing honor. Only three other people have ever won the Nobel Prize *twice*!

Marie was afraid that the newspaper stories would somehow spoil the Nobel Prize. She was right.

A few weeks later, the Nobel Prize committee sent her a second letter. After all the newspaper

stories, they wanted Marie to refuse the prize! They asked her not to come to Stockholm.

Marie was not going to miss out on this chance to make history. She told the committee that her private life was private. She was coming to Stockholm and accepting the prize. Marie believed they were giving her the Nobel Prize for science—nothing else. Nothing else should matter.





In December 1911, Marie sat in a room with the king of Sweden. The king gave her the solid gold medal. Marie held her head high and made a speech. A fancy banquet was served with artichokes, fish, chicken, and wine. Her daughter Irene and her sister Bronia were there to share her joy.

It was a thrilling experience for them all, and fourteen-year-old Irene would remember it all her life. It wouldn't be the last time Irene would make that special trip to Stockholm.

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