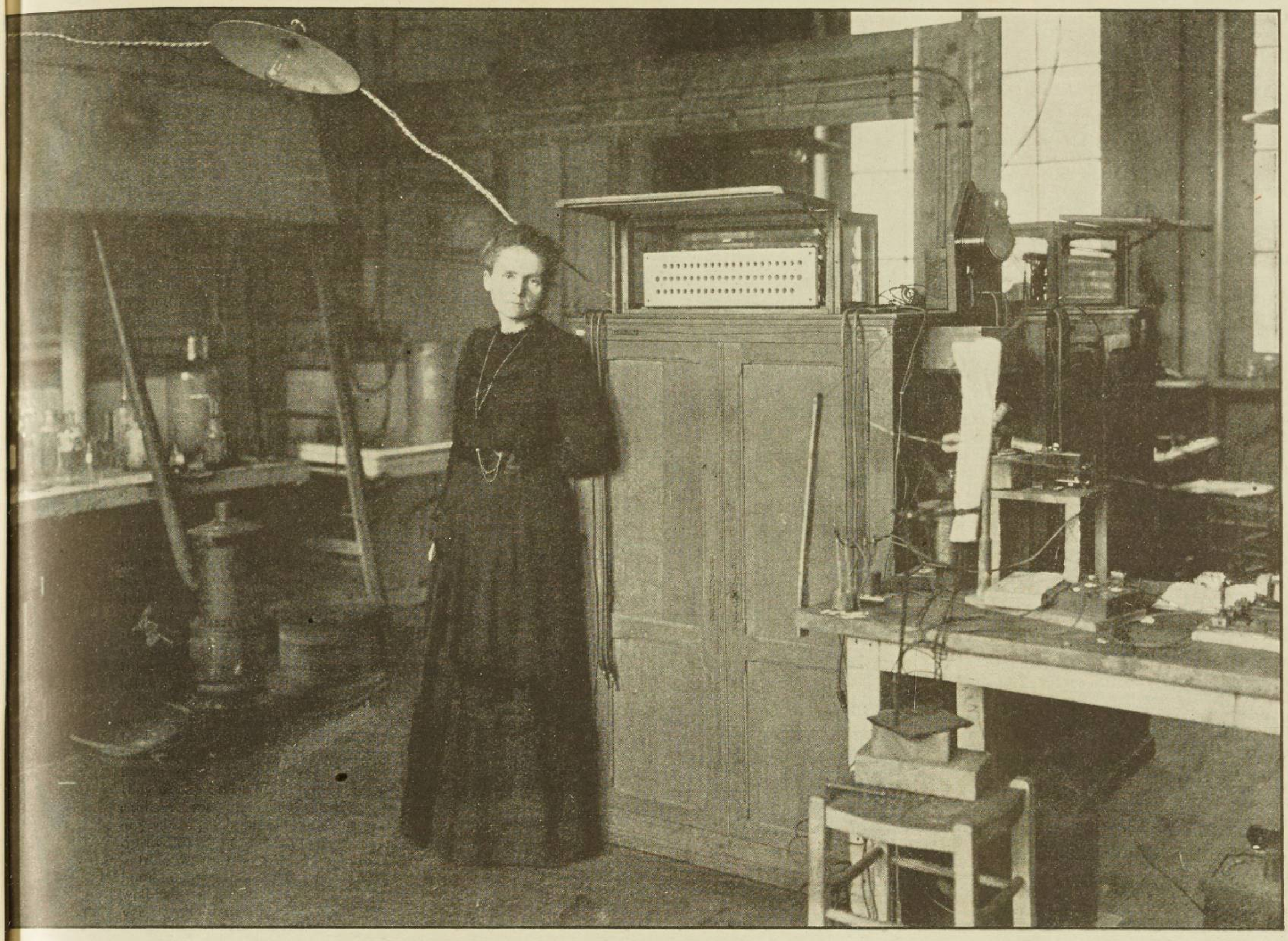


MARIE CURIE, WHO DISCOVERED RADIUM, IN HER LABORATORY IN PARIS

THE GREATEST WOMAN IN THE WORLD

BY MRS. WILLIAM BROWN MELONEY

ONE morning in the Spring of 1898, about the time this country was going to war with Spain, a woman in Europe stepped forth from a shack of a laboratory in Paris with the greatest secret of the century literally in the palm of her hand.

It was one of the silent, unralded great moments of the world's history.

Radium, a hitherto unknown force, had been found, and it was a woman's gift to the world.

The discovery of radium was no accident. It was the triumph of faith over hardship and doubting men.

Marie Curie, with her husband, Pierre Curie, with whose name she shares all of her honors, had labored for many months, running into years, pursuing the elusive power of nature which lay beneath the bosom of the earth.

That was twenty-three years ago. Most of us have heard about radium. Few of us know much about the woman who discovered it.

Time will reach back through the centuries and point to our generation as the age of radium. History will make immortal the name of Marie Curie.

Scientists, laymen and governments have proclaimed this fact.

Cæsar's fame is wider to-day than it was when he set out to conquer the world.

Buddha was known to only a few tribes when he walked the earth.

When Christ died on the cross, His name was not known five hundred miles from Calvary.

And Madame Curie, who, after long, hard years of struggle against resistant nature wrested from the earth the secret of radium, is too poor to purchase the precious stuff for further and much-needed experiments.

We may think that radium is too scientific for us to understand. And perhaps it is. But its uses and effects enter into our every-day life. Men on the battlefields and in the hospitals of France and all over the world bless the discoverer of radium.

Men have grown rich from the great secret Marie Curie extracted from the earth, but she would not reach out her hand to grasp control and corresponding wealth and power for herself nor for her own children.

"I gave the secret to the world. It was not to enrich any one. It was for all people."

Madame Curie said that to me on the morning of May 18, 1920. That is the key-note of the woman.

"It was for all people."

That was the spirit of the mind that had reached into the bowels of the earth for one of the healing secrets of God.

At the beginning of the war there were not enough scientists to do the highly specialized work. And so she went to the front and worked with her own hands. She took her young daughter with her. She gave all she had—her knowledge, her power, her pennies.

Out in Pittsburg, Pennsylvania, there is an enormous plant. Its tall stacks plume the sky with smoke day and night, while its furnaces reduce millions of pounds of minerals to new forms until compressed nature is resolved into that fiery, mysterious power—a grain of radium, one gram of which is worth a million francs.

The men who control this plant count their wealth in millions.

They have cars and servants and palatial homes.

I met Madame Curie first in her institute on a beautiful morning in May, 1920. The Institute Curie is a new building, not a jarring, but certainly a modern, note in old Paris.

TWO things about it are French—its clocks and flower-garden. For the rest it might have been built in America and furnished by Grand Rapids.

The reception-room—a little room perhaps ten by twelve feet—was almost as bare as a nun's cell. There were seven stiff wooden chairs and a plain oblong table. On the walls there were two maps, one of Paris, one of France, and the plainest clock I ever saw in France.

It was a cold, bare room, stripped of all human frivolity and pretense. It was like a blank canvas on which a great character would stand out in bold relief.

The door opened and a woman entered. She was tall

and very thin. Her plain, black-serge dress was partly covered by a black cotton apron. She came toward me with a light, springy step of youthful energy. But there was no youth in her voice nor in her face. Her hands showed the toil of many years. The rounded shoulders and slightly bowed head evidenced a lifetime of desk work. These details registered for a moment and then were lost in the wonder of her face.

It is the face of a medieval saint. Sorrow, courage and calm are stamped upon her. Her very attitude is one of supreme patience, of one who can wait and wait and wait. Her eyes are the cold, detached, impersonal eyes of a scholar. They are tragic eyes—tragic as the wide acres where the youth of France is buried.

When she spoke of France or of the battle-fields where she fought for the lives of men, those eyes melted with tenderness, and she might have been the mother of a *poilu*.

She was a little uncertain at that first meeting about being interviewed. It was unpleasant for her. She had made it a rule to avoid interviews.

If I had found her in one of the marble palaces on the Champs Élysées, I should have felt more comfortable about it.

But the world needs to be told of Madame Curie. I tried to make her understand this. She insisted that her life had been simple and uneventful, just a life of study and work and her home and her children.

"I CAME to Paris when I was young, to study," she explained. "There are many students working in Paris to-day, just as I worked—more advantages perhaps and easier for women. I had no great ambition. My family were all teachers. At first, I think I only meant to teach—to be a very good teacher—and I have just gone on studying and teaching, and working.

"My husband and I worked on radium many years before success came. But we had support in our researches. There were people who believed in the work. And then it came. We did not keep the secret. It was not to enrich any one. It was for all people. We did not even keep enough to provide for our children. I do not regret this, but I have not radium enough here with which to work, because it is so very much needed for the biological and medical work of this institute.

"France needs for her hospitals the radium now here. During the war medical work was started in this institute and it can't be stopped now. We need more radium to carry forward scientific experiments while the work for treatment of diseases should still be going on."

The next time I saw Madame Curie I spent the morning with her at Institute Curie.

As she entered the room—this time in her best dress, the black silk in which her photograph had been made three years ago—she smiled and said: "It was a beautiful attention, sending me the roses of France. It was very extravagant, but they gave me a great pleasure."

Five dollars' worth of roses had given her great pleasure! And she meant that literally. It was no polite mouthing. The rare smile that came into her patient face told more than her words: "They were so very, very beautiful."

I thought of the private greenhouses in Pittsburg.

Madame Curie is remote from the Rue de Rivoli. Science changes; theories and experiments vary from day to day; but clothes—they are to cover the body—and Madame Curie hasn't shopped since the war.

MADAME CURIE is a woman of rare beauty. She has a classical head. The high, broad forehead, the full temples, the generous back, have the lines of an old Greek statue. But the face is not Greek. It is softer, fuller, more human. It has suffering and patience in it.

It has the mother look. Understanding, patient eyes. Deep-set, inquiring eyes, that seem to be looking out into eternity. Steady, attentive eyes, consistent with the firm, sensitive mouth. She has not the muscular mouth of an orator, but the relaxed lips of one who listens much and speaks little.

Every line of her slender body bespeaks patience. She stood in her laboratory, waiting for the ten minutes that come twice each week when the radium emanations are being extracted from the Government's small store to be used in the hospitals, watching in that dim-lit room for the exact moment when the miracle of fire, like a star from heaven, should spring into existence and trickle slowly through a tube fine enough to pass through the eye of a needle.

She leaned slightly against the door of the radium room. She was apparently oblivious of her surroundings. She watched the light coming. She was the epitome of patience. She might have been waiting a million years—even as the world has been waiting—for the miracle about to happen.

The first time I met Madame Curie I asked her to consider writing her biography. There were two arguments. First, it would be done some day, and it would be better for her to give it authentically. And then there was the material reward which she should be reaping—and it would buy radium.

She said she would write or collaborate with some one in writing her life. "It will be a little book. There is not much to tell about me. I was born in Poland. My family were teachers. I was educated in Poland, in Warsaw, until I was nearly twenty-five. That is the first part of my life.

"Then I came to Paris. All of my work, the chief part of my life, has been done here. Paris is my home." Those four words brought the rare smile which is the tender revelation of this woman.

FACTS ABOUT RADIUM

TWENTY-FIVE years ago thousands of tons of lumpish, reddish powder were dumped out of the uranium mines of Bohemia at the disposal of any one who chose to cart it away. Hidden away in this dust were particles of what is now known to be the most priceless stuff in the world.

Radium comes from pitchblende or uraninite, a mineral found in Saxony, Bohemia, Cornwall, Colorado, and a few other places.

It takes months of work to extract from a ton of ore enough radium to cover the point of a knife. All the radium that exists in the world to-day, extracted and purified, amounts to only sixty grams, a quantity so small it could be carried around in a man's pocket.

Pure radium can be determined in five minutes by a wireless-telegraph instrument, by which radium rays are measured. Radium is sold by the weight of the rays measured thus, not by the size or weight of the radium crystal. Radium is the strongest force in the world. The power contained in a gram is enough to raise a battle-ship of twenty-eight thousand tons one hundred feet in the air.

A very little radium mixed with zinc crystals will make an object permanently luminous. This property of radium was utilized especially during the war to make luminous watches and compasses which were invisible to the enemy. Last year there were four million radium watches manufactured in the United States. There are now on the market guns with luminous sights, luminous buttons for flash-lights and fire-extinguishers, and radium-lighted fish bait.

True diamonds can be detected by radium. A diamond held near radium, even if the radium is in an iron box, will glow in the dark. A glass or paste diamond will remain invisible. A skeptical lady asked a doctor to test her ring which was set with four large stones. In the dark only three showed. Then she remembered that twenty years before she had lost one and a jeweler had replaced it for her, at a good price. She had never suspected it of being glass.

The force of radium will pass through any substance but lead or steel. It will pass through a pile of books or through four or five inches of oak or pine wood with equal ease. A piece of radium must therefore never be carried in the pocket in a pasteboard or wooden box, but in a thick lead container. Even when carried in lead, it has the power to make uncomfortable blisters if forgotten.

In one hospital a very faithful night-watchman was told to put a specimen of radium in the safe after the nurse had removed the tube from a patient. He was so afraid to put it away until he had been on his rounds that he put it in his inside coat pocket and forgot it for several hours. Two weeks later he was treated for a big blister on his ribs which took several weeks to heal.

Radium can cause blindness, paralysis, or even death to any one exposed directly to it. Scientists who experiment with it even with the utmost care are therefore in constant danger.

The rays of radium are used in the treatment of diseases, in diagnosing diseases of the eye and in the treatment of cancer, tumors and skin diseases.

"I have worked here in Paris, studied and taugh married and had my children here. They have alwa been here. During the war I was separated from the because part of the time I was in the hospitals at t front. But I was only a few hours away from the and if anything had happened or they had needed m badly, I could have come immediately. During t war, one had to do such things."

She felt she had to apologize for being absent from h children, even in the war.

When the world war started, seven years ago, Mada Curie was at work in her laboratory, spending part of h time in Austria near the radium-fields and part in Pa at the Radium Institute. She was teaching chemist at the Sorbonne and working with other scientists the Pasteur Institute.

With the reports of wounded and dying men increasi day by day, Madame Curie put aside all thought scientific research and offered her services in radio raphy to the French Government for the army h pitals.

It is estimated in the French War Office that m than fifty thousand lives were saved by this science

There were not enough trained specialists to do t hospital work in this department. Madame Curie to her elder daughter and some of her students and w right down to the battle-front, to the first hospital hind the lines, where she trained her assistants a ministered to suffering men.

Institute Curie was closed for the period of the w Laboratories in the enemy countri Austria and Germany, continued to wo undisturbed by the groans of millions suffering men. The cold, analytical min were concentrated on the elusive fa toms of undiscovered secrets.

Nothing but service to suffering m counted with the great Curie for t moment. She was mother and minis to an agonized people. Science could wa

And now she teaches radioactivity at t Sorbonne. She gives lectures and dem strations, and she has the responsibility the direction of the Radium Institute Paris.

I asked if she had ever been to Ameri

"No," she said with real regret, "an have wanted to go so much; but I am mother and I could not leave my childre

A volume in that sentence. She co not leave her children.

LIKE the words: "It was not to enr any one. It was for all people."

Madame Curie's elder daughter Irene twenty years old and is following h mother's work.

"I have had to bring the children myself. Their father was killed, y know, when the baby was only eight months old. After that I could not go America. It is so far away.

"It takes six weeks out of one's life go and come and have time to see very little of that great country."

The radium room is in the cellar, wh it was installed when the Germans thre ened Paris.

Speaking of that she said: "If they h ever gotten to Paris I should have stay right here to protect the place."

I felt no power would have conquered h

I had been through the laboratory, do into the damp, cold cellar where the radi is kept and guarded and where the wo is done. There are four radium roo Three of them were empty. The fou is making radium tubes for governm hospital use. There is not radium enou for experiments and for medical wo

When we returned to the bare little ception-room, I asked the great Cu what she would choose if the whole wo were at her feet.

"A little radium with which to carry further experiments," she replied with hesitancy.

Her answer was not intended as a rebu nor a plea, but understanding of its sign cance reveals human nature's highest pu pulse. It is a challenge to those of us w neither dream nor do.

And life is passing and the great Cu getting older, and the world losing, G alone knows, what great secret.

And millions are dying of cancer eve year!



MADAME MARIE CURIE