

The Romance of Steinmetz, the "Lightning Maker"

The story of Steinmetz, the wizard of lightning.

His romantic flight from his native land.
His indomitable courage in the face of poverty and physical handicap.
His accomplishments in the new marvel of electricity—even to making Jove-like bolts of lightning.

By John Lafitte

When Dr. Steinmetz leaned across the table and told me how the police had run him out of Germany, I was amazed.

It seemed incredible that this man—hailed by the world as the electrical genius of a century—crouching there in his characteristic necktie, knees on the chair and elbows flat on the table, half smiling, half kneeling, with his only brilliant eyes gleaming from the bushy beard that always seemed to burst forth from the pitifully shrunken body had been forced to escape from his native land to escape imprisonment.

Yet, why not? There are closed chapters in many lives. His brain, a wonderfully coordinated thinking machine, in his earlier years, have sought another outlet for its energy than the study of electricity. It is a known fact that for many years after achieving fame in this country, he remained silent about the days of his youth. Only recently has he been persuaded to talk.

His Flight to America

Steinmetz rapidly and painfully necessary on his inevitable long and very hard drive, he gave me the picture of his boyhood, college days, and flight to America.

"I was born in Breslau, Germany, April 9, 1865. I have frequently read that I was the son of an extremely poor family. That is not true.

"Previous to my birth, my father was employed as a lithographer, and, while the salary he earned would not be considered a large one here in America, it was sufficient for the needs of the family in Breslau.

"My parents, Carl and Caroline Steinmetz were living in a flat, or tenement house, at the time of my birth, a plain house, but comfortable in Germany, of course only the wealthier families can afford to maintain separate houses, as is the custom in this country."

Steinmetz was deformed at birth. After the first swift glance at the newborn babe, it was only too obvious that he would always be a cripple.

We can imagine the family physician as gazing at the little bundle in the arms of the mother's arm walking with slow steps from the room to break the news to the waiting father.

No Bitterness in His Heart

It is a tragedy of parenthood that no sixth sense enabled this couple to peer into the future and alibi the high attainment, the honor and respect that awaited their son. That might have assuaged their inevitable grief. Instead, they sorrowed over the son. And when it came time to name him they called him Karl, August Rudolf Steinmetz, as though hoping by a multiplicity of names they could remedy the deficiencies of nature.

Steinmetz himself did not mention his physical handicap. In fact, strange as it may seem, I do not think that he ever thought of himself as a cripple. If there had been any bitterness in his heart, it had died long years ago. In

some subtle, wordless way he conveyed the impression that he had risen above his handicap.

While canoeing at his summer camp, near Schoeneck, quite recently, his little craft upset and he was plunged into the water. He was near the shore, so, without shouting for help, he managed to swim to safety.

He said nothing about the incidents until he had carefully and accurately computed the exact number of strokes he had swum.

Then he started the other members of his party by announcing proudly that he had been swimming, adding, as though for confirmation, the exact distance, figured down to the inches.

"My mother died when I was a year old," Dr. Steinmetz told me. "Shortly after that my aunt and grandmother came to live with us to take care of the house, and to attend to the needs of my father, who had given up his work as a lithographer and entered the employ of the railroad.

"In my early childhood my grandmother was the person whose influence over me was the strongest. She spent most of her time with me. She took my mother's place, and I remember her with gratitude and affection."

No Games—a Lonely Childhood

Steinmetz' childhood must have been a lonely one. When he spoke of these days, he passed over them swiftly. A crippled boy, debarré from the usual childish pleasures, he was thoughtful and quiet, spending long hours by his grandmother's side as she moved about the duties of the home.

When Steinmetz was seven years old, he started to school. He admitted frankly that he was precocious, but carefully added that it was only among the lines of certain studies. There were others which he abhorred, and he gave a little grudge of dislike as he mentioned them. Within a few days after the opening of the school, that instructor had begun to pay particular attention to him. Not only was he set aside from the other students by his physical infirmities, but it soon became apparent that the boy's crippled body served as the housing place for a remarkable mind.

Possibly the instructors considered him a prodigy. However, Dr. Steinmetz has denied this. With a swift lightning of his face, he explained that he did not like the word.

From the first he made remarkable progress at school.

It was useless to ask Dr. Steinmetz to unravel the dreams of his early boyhood. Who can read the mind of a genius? Who, indeed, could hope to understand what passed in the mind of this crippled boy during those early years?

A little later, or while he was attending what is our equivalent of a high school, he became deeply interested in machinery and in everything technical.

When he was not at school, it became his habit to go to the railway station and watch the trains. The puffing engines fascinated him. Wide eyed with excitement, he would hop about examining the stately monsters, sometimes competing in his absorption to go home to his meals.

Led Home by the Ear

But, fortunately for him, his grandmother was a practical woman. She was unversed in the ways of a genius, but it was her firm belief, founded on years of experience, that a hot meal is a better diet for a boy than steam locomotives.

She would find him and lead him home, against his protests.

It is here that an interesting sidelight is thrown on Steinmetz. Senior, the railroad worker, the corner of a small salary. Watching his son's progress, his quick intelligence, it became the overpowering ambition of the father that his boy should receive an adequate education. He wanted the crippled boy to have a thousand times better education than he himself had enjoyed. He was willing to go to any sacrifice to attain that end. He went to work to make it so.

"I owe my father a great debt," Dr. Steinmetz said. "For he was determined that I should have an education, and he helped me to get it. Probably I also owe him a great deal though inheritance for he was interested in science and invention. He talked constantly to me about them; and as soon as I began to read I had his books to stimulate my interest and add to my knowledge."

The real franks of fate, however, that finally handed Steinmetz in the United States as the chief

freeland University. Before, he had been simply a student; now he became a man of action as well. After long talks with his father, he had definitely decided to fit himself for a career as a professor. He felt that this was the proper course, for he was a wizard at mathematics and was studying to specialize himself in astronomy, chemistry and physics.

Indeed, his amazing progress was a continual delight to his father, who roared with laughter when young Steinmetz told him how he had amazed his fellow students by rapidly solving intricate mathematical problems without the aid of pencil or paper.

Steinmetz as a Revolutionist

It seems that life stretched like a charted road before Steinmetz at that time. He was progressing at the university and was rewarded by the instructors as one of the prize men, when he made two new acquaintances, yes, even friends. One was the study of electricity. The other was a fellow student, a Socialist. These two changed the whole course of his life. Indirectly, they gave to the United States one of its greatest men.

Steinmetz became a Socialist. He went into it head over heels. He was not a parlor variety of Socialist, but a revolutionizing secret-password member, who believed in the ideals of Socialism with every fiber of his being.

At that time a Socialist in Germany was an abolitionist in the sight of the police. Suspicion of being a Socialist was enough to bring about an imprisonment. A great many of the members were young students, like Steinmetz, and their meetings were held in secret, and with great care taken to elude the police.

Is it possible that the brilliant young student and phenomenal mathematician who was, after all, a crippled, lonely young man, found in these meetings the mystery, the secrecy and—above all—the fellowship which he craved?

It is odd to note that the very name by which we know Dr. Steinmetz here in America is a product of these secret Socialist meetings. You will remember that his parents at birth named him Karl August Rudolf Steinmetz, yet he is known in America as Charles Proteus Steinmetz. Let him explain it:

How He Got His Nickname

"In the Socialist club, of which I was a member, I was given a nickname by my companions. This nickname was 'Proteus.' It was customary in our club never to address a member except by a special name. We did this for a purpose. If one of my companions, for instance, was interrogated by the police in regard to 'Steinmetz,' he would say he didn't know any such person. To him, you see, I was 'Proteus.' So it was a protection against the police.

"After I came to America, I wanted to be an American, so I called myself simply 'Charles Steinmetz.' But, after a while, I observed that most Americans had middle names, so, of course I wanted to have one, too. I didn't take my original three, however, for that seemed to be more than the average American indulged in. Just at that time one of my old comrades visited me and called me 'ways by my nickname. That gave me the idea of adopting it as a middle name. I like to keep it, for it is associated with a very important part in my life."

At one of the very first meetings of the Socialists that Steinmetz attended, he perched himself on the table, his knees on the chair, as usual, and told his fellow members that if the police raided the meeting he wanted it clearly understood that he for one did not intend to run.

They were silent until they grasped the significance of what he had said. Then there was a muffled clapping of hands. He alone, of all the crowd of hot-headed young men in the dingy collar, could not run. While they had some chance of escape, he had none.

So interested was he in the new adventure that when his friends asked him to accept the editorship of a Socialist paper, he accepted. The previous editor of the paper had been found by the police and imprisoned, but Steinmetz took the job nevertheless.

This of course, occurred while he was still a student at the University and it is worthy of note that during all of the excitement and danger through which he passed he always found time to attend to his studies. His father had no idea that Steinmetz was a Socialist, ascribing his absence at night to visits to the rooms of fellow for mutual study and dis-

the scent, the newly elected editor of the "Red" paper persuaded an itinerant fish man to record himself as the responsible editor. He had hardly stooped congratulating himself on his cleverness when the police confiscated the paper, arrested the fish man, the supposed editor, and were amazed to find that he could not even write his name.

Steinmetz escaped this time. But the handwriting had appeared on the wall. The police were closing in on them and it was only a matter of time before they would be arrested.

Indeed, the police by a swift raid, did succeed in catching several of Steinmetz' friends. These unfortunate young men were thrown in jail and there they remained for more than two years.

From that moment on it is doubtful if the young man drew another easy breath until he escaped from Germany. He lived in a constant dread of arrest and imprisonment, yet he never faltered in his effort to befriend his imprisoned companions nor in his ardent study of electricity, to which he had now, in his senior years become devoted.

He was not surprised when the university authorities called him before them and told him point blank that the secret police of the city suspected him of being a Socialist. After long hours of questioning he was released. The professors showed every disposition to be lenient towards such a brilliant student. But they warned him, firmly.

Steinmetz was now facing ruin. Within a few months of receiving his coveted degree, his career seemed blasted. He realized that he must forsake either his friends or his education. He struggled on for a while longer, however, working in a web of intrigue, shadowed by policemen, fearful of spies.

Did he leave his friends in prison to shift for themselves? He did not. Instead, he developed a scheme whereby he might get into direct communication with them.

Indelible Writing for Prisoners

A mother presented herself at the prison and asked to speak to her son. That was part of Steinmetz' plan. Permission was granted and she carried on a conversation with her boy, under the watchful eye of a jailer.

Just as she reached the door in paying the imprisoned boy casually, handed her a slip of paper on which was written the name of several books. Would she, please bring these books to him to read? The jailer looked at the list, but seeing nothing suspicious about it, let the mother leave with it in her possession.

The paper was duly carried to Steinmetz. He treated it with a solution which brought out the invisible writing that he knew it would contain. For several months communications between the prisoners and their outside friends, were carried on in this manner. In fact, Steinmetz was able to send to his friends minute descriptions and directions for preparations of their legal defence.

Few people have met the little "Wizard of Schoeneck" without being impressed with his intense patriotism. It has long been his habit to buy numerous little American flags, similar to the small ones carried by children in parades, and place them about his home. His pride in his adopted country has been almost pathetic, and the other was addressed to, well, a man whose name Dr. Steinmetz never made known, for a reason that you may see for yourself.

Steinmetz presented a tragic picture as he set in the steerage on that westward voyage. He did not know a word of English. He feverishly studied an open dictionary, determined to conquer the language of his new country before he landed. With his massive head slumped between his shoulders, in a wrinkled suit that appeared several sizes too large for him, a hopeless cripple, a refugee from his native land, he was headed towards an unknown fate. What chance did he have? Seemingly, none.

Yet a few years later this strange half-pitiful student was earning, as chief consulting engineer of the General Electric Company, a salary of \$100,000 a year—said to be the highest salary for an engineer in the world.

The Police Raid Steinmetz

Without moving from his position, without any display of excitement, he looked into their frightened faces, smiled, and said: "I have always contended that if I hadn't become a Socialist I would have been a good astronomer or electrical engineer."

In this matter of fact way he dismissed his unfinished college dates, his degree.

That night he fled to Switzerland.

Deliberate, even in his hurry however, he first went to the railway station, feeling sure that police spies were following him, and bought a return trip ticket to a nearby city. The police, he thought, would reckon that he intended to be absent for a few hours. Again he had solved a problem without the aid of pencil and paper. For when the police raided his home two days later, he was safely in Zurich, Switzerland.

In Zurich, young Steinmetz found several friends, also Socialist refugees from Germany. Of course, he had very little money.

Half of the scanty supply he paid as one month's advance rent for a room in order that he might have a roof over his head. The other half of the money—every cent that he owned in the world—was spent in giving a feast for his friends.

Worked for \$1 Per Week

Once settled in the Swiss city he decided to study mechanics on the side. He thought that he had solved the question of how to live, while devoting most of his time to his studies, by making arrangements to write some papers on astronomy for a local paper. He found, however, that the pay for this work amounted to \$2 every two weeks! He kept at it, and wrote other articles until his income amounted to \$14 every month. He considered this a sufficient amount to live on, and settled back to enjoy his studies.

With true Spartan-like simplicity, he cooked his own meals. Cooking had always been one of his little hobbies. In later years he had shown delight in surprising his guests at his summer camp by going into the kitchen and cooking his own delicious meals. He first found that his cooking was harmless by practising on himself, he explained.

"Germany Meant Jail"

"I couldn't go back to Germany—what meant going to prison—and there was not much chance of a career in Switzerland," he said. "So my thoughts turned to America. One of my new friends in Zurich was a young Dane who had been living over here in San Francisco. When I had been living in Zurich a little less than a year this young man had to go back to America, and he urged me to go with him. I had no money, but he had enough to pay our passage in the steerage and leave a balance of \$20. We had to have this—\$10 apiece—in order to be admitted to the United States."

Before leaving Switzerland, however, Steinmetz armed himself with two letters of introduction from friends to business men in New York. One of the letters was to Rudolf Eickemeyer of Yonkers, and the other was addressed to, well, a man whose name Dr. Steinmetz never made known, for a reason that you may see for yourself.

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Threatened by Authorities

On a smothering, hot Saturday night the vessel plowed her way into New York harbor. The other passengers disembarked, but the people in the steerage were forced to remain until Monday. Steinmetz went to sleep that night with his head pressed close to a porthole in order to get a breath of air of course, and—so that he could watch the lights of the great city. New York. He fell asleep watching the glittering radiance.

In the morning he had a cold, and his head was badly swollen from the effects of having slept in the draft. For some minutes the immigration authorities hesitated about allowing him to enter the United States. They examined his head very carefully. The greatest electrical genius of our age was in imminent danger of being deported because he suffered from a cold!

actions. With the Danish boy he went to Brooklyn and engaged a small cheap room. It had to be cheap. He had just \$10 with which to start a new life.

With his two letters of introduction Steinmetz started out immediately to find a job. He selected the letter which seemed to him the most promising, and, after much trouble, found the office of the man to whom it was addressed.

He went in and seated himself in an ante office. Doubtless he was not a promising-looking applicant for a position. He walked stopped far forward, his body slanting at a perilous angle from his waist, and moved with a quick, jerk motion of his legs.

The letter of introduction was duly presented, and after a long wait, the message came back that: "M—is in conference. He can't see you now."

Steinmetz, slow to realize that the man did not want to see him, hobbled from the office and returned to the little Brooklyn room. The next morning, bright and early, he was back in the office again.

This time the man to whom he bore a letter came to his private door and stood for a few minutes looking his young caller over carefully. He saw Steinmetz, and Steinmetz knew that he had.

This time the message came back curtly.

"He's out!"

Then Steinmetz understood. He has never returned to that office, and I do not think that he has ever mentioned the man's name. If he harbored any animosity over the incident, he never showed it. Just forgot all about it. That has always been his way.

When he presented himself at Rudolf Eickemeyer's factory in Yonkers, however, I received a different reception. Mr. Eickemeyer received the immigrant boy—he was only 25—kindly and as a friend. Of course he did not detect the spark of genius at that time, and consequently believed he was merely doing a kind act to a young German with our friends by putting him to work in the drafting room at a salary of \$12 per week.

Steinmetz was elated. It is doubtful if he thought that the salary was small. The main part to him was that he had work to occupy his mind and time. No one has ever said that he cared particularly for money.

Many years after his connection with the General Electric Company he was asked by a visitor if it was

true that he received salary of \$100,000 each year.

He looked up with a quick smile and said:

"What would I do with all that money."

"As a matter of fact," he went on, "I don't receive any fixed salary at all. I spend what ever I need to spend and the company furnishes the money. Possibly they are paying me \$100,000 a year. I don't know. I budget myself, so to speak. I make out a rough estimate of what I think I shall need for the year. This covers my own expenses and also for my experimental work."

"Sometimes I don't spend as much as I have expected to. In that case the balance belongs to the company. In other years I may spend more than I have estimated, and if I do, the company provides whatever is necessary. If I had \$100,000 every year I should have to devote too much time in spending it or in finding ways of investing it."

The Middle Ground

(Continued from Page Four)

conceive and execute a mass of steel and stone that towered some 700 feet.

"Oh, yes," she said. By the way, that reminds me, they're building a new house down at Hornbrook—do you remember where the road from the ford comes in at Main Street?"

"Mother!" Amy cried, losing patience. "Can't you think about anything but those silly happenings at home? It's just as Luther says, you've spent so much time looking at little things and thinking of little things that don't count, that you can't see anything big."

Mrs. Talbot promptly retired into injured silence. So this ride and many other rides usually ended. The mother decided that the big city was ugly, the big buildings monstrous—she became jealous of the reputation of the little town that, so far, had been all the metropolis she had ever known. The city had been big, mysterious, and wicked before. Now it was huge beyond any conception, and though the mystery was gone upon acquaintance, the wickedness and equality of her infinitely greater than she had imagined.

"You needn't look that way when I talk about Hornbrook," she said once in resentment at Amy's bored expression. "It's got just as much life in its way as this place you're glad to be in."

Amy, seeing no possible com-

"Do you mean that you could have it—and don't take it?"

"Why, I suppose so," he said indifferently.

At any rate, \$12 a week would hardly be considered a favourable start. But then, Steinmetz hadn't been used to favourable starts. I imagine he worked just as hard for that \$12 each week as he even did for the huge sums afterwards paid him.

It was in June when he landed in the United States. Just three months later I was not only able to converse in English, but wrote an article in English which was published in a technical electrical magazine!


He had always been noted as a tireless worker, but the first few months that I worked in the drafting room of the Yankee plant he appears to have escaped attention. His employer had possibly forgotten the young German boy, until an incident, occurred in the drafting room that brought him again to his attention.

There were several answers—one from Ted, one from Mark, one from Luther. The room had its usual Sunday collection of people in it. Clarke shook his head in answer to every guess—and mentioned the name of the director of the great opera company. Amy jumped up in excitement, her brown eyes wide as she waited. "He says he'll have the chorus director hear your voice," Jim went on. "Of course, being sent by him, and wicked before. Now it was if you're at all passable, you'll have a chance."

Amy, to the amusement of Clarke and Ted, and the horror of her mother, threw her arms around Jim and kissed him. "I'm going to sing on the stage. I'm going to be an opera star," she laughed excitedly. "Jim, what a expression. It's got just as much life in its way as this place you're glad to be in. I'm not a grand opera star yet."

(To be Continued)

"I'm as sick as a dog"



is a common expression that makes up in force what it lacks in elegance. When or where or why it originated excites no interest in the victim. Head aches—eyes water—throat smart—sneeze—cough—sore all over.

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