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The Deadly Alternating Current

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WITH MR. EDISON ON THE EIFFEL TOWER.

R. H. Sherard, representing the *Pall Mall Budget* (London), relates as follows his interview with Mr. Edison in Paris:

This is what Edison wrote to me, says Mr. Sherard, when I proposed he should grant me five minutes talk with him:

"All right. Friday about eleven in morning. I'll be sane by that time. My intellect is now making 275 revolutions a minute."

I called at the Hotel du Rhin at eleven o'clock, and was shown up to the handsome drawing room on the first floor. Edison was standing by the mantelpiece. At a secretaire by the window were Colonel Gouraud, Mr. Durer, and others; at the far end the sweet girl wife Mrs. Edison, surrounded by various persons. It is always difficult to begin, for one who has come to annoy, but I plunged into matters at once.

THE ORE-EXTRACTING AND THE FAR-SEEING MACHINES.

"About this ore-extracting machine," Edison said, "it's going to be a great thing. Already we have eighty machines at work in the iron mines. Yes, it is adapted for iron ore only as yet. I am studying the question of a machine for treating both refractory silver ore and gold ore, and shall get them out by and by. Then we shall make more money."

"The far-seeing machine?"—"I have heard," he said, "that some European inventors claim to have preceded me in this, but I do not know anything about their inventions. My machine is getting on very nicely. I do not think it will ever be useful for very long distances, and it is absurd to say that it will enable one to see another ten thousand miles away. In a city, however, it will be of practical use. I don't look for anything further, at least at present."

THE PHONOGRAPH AND THE PRESS.

"The phonograph?"—"We have got it into practical form. Already 1,800 machines are in use in commercial houses, and our factories are now turning out forty machines per diem. I have also, at last, been able to make a perfectly solid mailable cylinder, which can go through the post for any distance without risk of damage. All this has been very hard work. On the tools for making the big phonograph alone we spent \$5,000. I have also created a small model—a pocket phonograph, if you like to call it so—the cylinder of which will take 300 words, the length of an ordinary letter, and which will be very practicable for ordinary correspondence. I have the model here, and you can see it any day you like. These are not, however, yet ready for sale."

"What use can newspaper people make of it?"—"Oh, plenty. It is already used in the *World* office. The machine is placed downstairs. The reporters come in and talk into it. The cylinder is taken upstairs to the composing room, and the compositors set up from its dictation. They attain much greater speed, make more ems in an hour than on the old system, and earn more money."

IMPRESSIONS OF PARIS—"WHEN DO THEY WORK?"

"How are you impressed with Paris?"—"Oh, I am dazed. My head's all in a muddle, and I reckon it will take me at least a year to recover my senses. I wish now that I had come over in my laboratory blouse, and could have gone about unknown and have seen something. The exhibition is immense, larger than our Philadelphia exhibition. So far, however, I have seen but very little of it. This morning, however, I saw a tool which will save me \$6,000, clear, a year. It is a chisel worked by hydraulic pressure. I just saw it, passing by—just a glance. I shall order some, and send them out. They will enable us to reduce our labor by eighteen hands." "That's a good morning's business," said Colonel Gouraud. "Yes," said Edison, and continued: "What has struck me so far chiefly is the absolute laziness of everybody over here. When do these people work? What do they work at? I have not seen a cartload of goods since I came to Paris. People here seem to have established an elaborate system of loafing. Some of these engineers who come to see me, fashionably dressed, walking stick in hand—when do they work? I don't understand it at all."

EDISON'S RELIGION OF WORK.

"Over here we hear wonderful stories of your working. You have the reputation of being able to work twenty-three hours a day for an indefinite period."—"Oh! I have often done more than that, haven't I, Gouraud? As a rule, though, I get through twenty hours a day. I find four hours sleep quite sufficient for all purposes."

Edison pronounces the words "work" and "working" as some do "prayer," "religion." It is also a religion, it is true.

"I see you smoke. It does not harm you?"—"Not at all. I smoke about twenty cigars a day, and the more I work, the more I smoke." Some one remarked, "Mr. Edison has an iron constitution, and does just everything contrary to the rules of health. Yet he is never ill."

UP THE EIFFEL TOWER WITH EDISON.

I asked: "Beyond the far-seeing machine and the rest, are there projects?"—"Any number," said Edison. "When we make our big exhibition in America, I shall have to have several new things." It is perfectly useless to ask Edison for information as to ideas. In him everything is so practical that it seems he cannot talk about what is phantom merely. It is the "what is" with him, and not the "about to be."

Mrs. Edison then asked the Cavalier to do her the pleasure of lunching with her, *chez* Brebant, on the Eiffel tower. Colonel Gouraud asked me to be of the party, and together we went on to order breakfast. *En route* the Colonel asked me to contradict a story which has appeared that he brought to Edison a phonographic message from the Queen. "Mr. Edison received messages from the Queen of Italy, from the King, and from the Prince of Naples. I suppose that is what the story was based upon."

PREPARING TO OUTTOP THE TOWER.

"When on board the ship," said Edison, as we sat down to *dejeuner* on the terrace of the Eiffel tower, *premiere etage*, "they put rolls and coffee on the table for breakfast. I thought that that was a very poor breakfast for a man to do any work upon. But I suppose one gets used to it. I would like one American meal for a change—plenty of pie for a change." He then smashed the roll with his fist.

There were six of us—Mr. and Mrs. Edison, Colonel Gouraud, the Cavalier, and Mr. Durer, the author of a very remarkable brochure on Edison. And we had the world at our feet. There were shrimps among the *hors d'œuvre*. Edison had never seen any. "Do they grow larger?" he asked, and added, "They give a great deal of trouble for small results."

"This Eiffel tower?" I said.—"The work of a bridge builder," said one. "No," said Edison decisively. "No. It is a great idea. The glory of Eiffel is in the magnitude of the conception and the nerve in the execution. That admitted, and the money found, the rest is, if you like, mere bridge building. I like the French," he added. "They have big conceptions. The English ought to take a leaf out of their books. What Englishman would have had this idea? What Englishman could have conceived the statue of Liberty?"

"Will you beat the tower in New York?"—"We'll build one of 2,000 feet. We'll go Eiffel 100 per cent better, without discount."

IS A THOUGHT-RECORDING MACHINE POSSIBLE?

"Could not," I asked, "a machine be made which could be adapted to the head, and which would record one's thoughts, saving the trouble of speaking or writing?" Edison reflected. "Such a machine is possible," he said; "but just think if it were invented. Every man would flee his neighbor, fly for his life to any shelter."

As they brought in the *filets a la Brebant*, I said, and thought of little Dombey, "What is electricity after all?" He said, "It is a mode of motion, a system of vibrations. A certain speed of vibration produces heat; a lower speed, light; still lower, something else."

THE REIGN OF HUMBUG.

"Is there anything in electricity as applied to medicine?"—"There is a great deal of humbug in all that," he said. Then as a careful *maitre d'hotel* brought in the cradled *Clos Vougeot*, and served it with exaggeration of anxious ceremony, he added, "There is a great deal of humbug about wine too. And about cigars. Men go by cost. The connoisseurs are few. At home, for fun, I keep a lot of wretched cigars, made up on purpose in elegant wrappers, some with hairs in them, some with cotton wool. I give these to the critical smokers, tell them they cost 35 cents apiece. You should hear them praise them."

THE EDISON "SANATORIUM."

We talked of cooking and of famous *chefs*. Also of one who recently engaged a French cook at a bishop's salary. "Bright's disease of the kidneys is all the dividend that man will draw," said Edison. He seems to take delight in commercial phrases. It is comfortable to hear him pronounce the words "make money." Commerciality with him is dignified and impressive, vulgar as it is with others. The breakfast was *recherche* in the extreme, but Edison barely touched anything. "A pound of food a day is all I need when

I am working, and now I am not working." One could not help thinking of Chatterton and his crust.

After dessert there was champagne, and toasts were drunk. The Cavalier began. Edison said: "The Cavalier is profuse, but not so much so as another Italian gentleman who once proposed my health, and remarked that even the chickens in his country knew my name.—It's a regular sanatorium," he remarked later on, "so much 'health' being distributed." Again, "All this is new to me," alluding to the ceremonial of our festivities. "If I stay long here I shall too soon be able to get up and make speeches and wave my arms." When the coffee and cigars came in his face brightened up. "Mr. Edison is beginning to breakfast," said the Colonel. "Yes," said Edison, taking an Havana; "my breakfast begins with this."

THE MAN AND THE MONUMENT.

A few minutes later, happening to pass the tower, I saw at its foot again the man, with his face boyish almost for its openness, and the gray hairs over the unwrinkled forehead. Then I looked at the monument first and then at the man. The monument thus contrasted appeared infinitesimally small.

The Deadly Alternating Current.

The East River Electric Lighting Company, at its dynamo house, East 24th St., this city, employs the Thomson-Houston system of electric lighting, using in all its outside lamps the direct current. But in the dynamo room is one machine which generates the alternating current, and this is used to supply the incandescent lights in the building, and, recently, for experiments by the Perry Motor Company. This one machine generates 1,000 volts power, and has not been long in the building.

On September 2, says the *N. Y. Times*, something went wrong with the switchboard connected with this machine, and Darwin A. Henry, the superintendent of construction of the company, undertook to set it right. He climbed up on the short ladder used to reach the switchboard, and started in on his work. He had been thus engaged for about five minutes when he attempted to turn part way around on the ladder. In some way one of his feet slipped, and for an instant he was in danger of losing his balance. Instinctively his arms were thrown up to recover himself. One hand came in contact with the negative terminal on the board, and hardly had he touched it when the other had struck the positive pole. The effect was instantaneous. The unfortunate man's hands remained as if glued to the death-dealing wire, his head dropped over on one shoulder, and in that position he remained for some moments. He did not utter a sound. There were two other men, named Thomason and Smith, working in the room, and one of them after a few seconds caught sight of his chief resting apparently with all his weight against the switchboard. Both men rushed to his assistance, but the man was dead. They tore his hands from the wires and lifted his body down and laid it on a bench. One of his hands—the right one—was terribly burned, the flesh having been consumed to the bone. The other hand was burned, but not so very badly.

Medical help was at once summoned. Dr. L. D. Henderson and Dr. W. C. Feeley were at the superintendent's side within ten minutes, and worked hard in trying to restore animation, but they might as well have tried to put life in a stone. They injected, hypodermically, quantities of brandy. Sylvester's system of artificial respiration was called into use, and they tried with a galvanic battery to bring the man back from death. But all efforts were absolutely useless, and after two hours of hard work the weary physicians were obliged to abandon their task and declare their patient dead.

There had not been a single evidence of life in Henry from the time he touched the wires. When the doctors reached him, the heart had ceased to beat and there was no sign of respiration.

In the opinion of both physicians, Henry's death was instantaneous, and, if the absence of any contortion either in body or face proved anything, it was a painless one. The burns in the hand, both the physicians and the employes in the building believe, were caused when the hands were torn away from the wires and after the man was dead. The separation created an arc, and without an arc there can be no burns.

Mr. Henry was about thirty years old, unmarried, and had been a practical electrical engineer from his boyhood. He was a capable electrician, and had much experience in handling electric apparatus, and was highly regarded by his employers.

The final argument on the question of the constitutionality of the new electric execution law, a question which involves the disputed power of an alternating current to kill, will be held at Buffalo within a fortnight, and this case may have considerable weight in the argument. It is proposed to use an alternating current of from 1,500 to 2,000 voltage in these executions, and it is contended that that force would not be sufficient to kill. In this case a 1,000 volt current, even when only accidentally applied, did its awful work effectually.