

better chance. But Mr. Westinghouse entered the lists personally, made a number of visits to Chicago, and conducted such a hot fight that he secured the contract. The original specifications were dated Feb. 22, 1892, but the bids received were rejected, and new specifications were issued. About 90,000 16-cp incandescent lamps were required. Bids were opened on May 16, 1892, and the contract for supplying, installing and operating the plant for the period of the fair was awarded to the Westinghouse Electric & Manufacturing Company for \$5.25 per lamp. Alternating current was used, and the 1000-hp generators in the service plant were looked on with awe as veritable giants in dynamo-electric machinery. All of the primary circuits except one were laid underground. The largest transformer was rated for 200 lamps. But the most interesting feature of the job was the lamp used. It was the Westinghouse or Sawyer-Man "stopper" lamp, provided with a ground-glass stopper to permit the renewing of the filament, which was operated in an attenuated atmosphere of nitrogen. Iron leading-in wires were substituted for platinum, and the lamp was operated at 105 volts. This lamp never came into general use, but it did not infringe the Edison patents, apparently, and it served its purpose. The upshot of the whole contest and the World's Fair undertaking was greatly to increase the prestige of Mr. Westinghouse's company.

To Mr. Westinghouse was given the honorary degree of Doctor of Philosophy by Union College in 1890, and in 1906 the Königliche Technische Hochschule of Berlin bestowed upon him the degree of Doctor of Engineering. His decorations comprised the Legion of Honor of France, Royal Crown of Italy, and Leopold of Belgium. He was the second recipient of the John Fritz medal and was awarded the Edison Medal by the American Institute of Electrical Engineers in 1912. On behalf of the engineering profession of Germany the American Society of Mechanical Engineers presented him with the Grashof Medal last December. Mr. Westinghouse was an honorary member of the American Society of Mechanical Engineers, of which he was also a past-president, the National Electric Light Association and the American Association for the Advancement of Science. He was president of a large number of corporations having an aggregate capital of over \$100,000,000, the largest of which are the Westinghouse Air Brake Company, the Westinghouse Machine Company and the Union Switch & Signal Company. He was also the head of about a dozen companies abroad, the largest of which are in London, Manchester and Havre. Mr. Westinghouse was married Aug. 8, 1867, at Brooklyn, N. Y., to Marguerite Erskine Walker, who with one son, George Westinghouse, Jr., survives him.

Tributes of Former Associates

It is not in one profession alone that the memory of Westinghouse will live. Kelvin said of him: "George Westinghouse is in character and achievement one of the great men of our time." Physically he was a big man; he also was great in character and mind. Interesting sidelights on his brilliant career contributed by men formerly associated with him and published herewith show how highly he was esteemed, and what was lost in his passing away.

From William Stanley

I can only add my appreciation of the great qualities of leadership that Mr. Westinghouse possessed. His strong, vigorous purpose, his wonderful grasp of the opportunities of life and his high courage overcame

all obstacles and were of inestimable value to the electrical engineering profession and the world.

Great Barrington, Mass. WILLIAM STANLEY.

From Peter Cooper Hewitt

In George Westinghouse the world has suffered the loss of a great and valued citizen and much should be said in honor of his accomplishments and advancement of modern industry. Essentially an American, he had universal reputation and respect.

The vast and diverse works which he pioneered give an idea of his force and energy and illustrate dominant characteristics. Every effort of his genius was expended for humanity in advancing the arts of civilization. As the problems involved in nature's secrets unfolded themselves before him he strained every effort and means at his disposal to turn their use to the benefit of mankind.

He appreciated the enormous danger to humanity that accompanies the harnessing of vast forces of nature for public use, and by his foresight and skill prevented disasters which might conceivably have been of enormous extent.

The memory of George Westinghouse will live through his appreciation of nature's forces and his love of mankind.

New York. PETER COOPER HEWITT.

From Nikola Tesla

The first impressions are those to which we cling most in later life. I like to think of George Westinghouse as he appeared to me in 1888, when I saw him for the first time. The tremendous potential energy of the man had only in part taken kinetic form, but even to a superficial observer the latent force was manifest. A powerful frame, well proportioned, with every joint in working order, an eye as clear as a crystal, a quick and springy step—he presented a rare example of health and strength. Like a lion in a forest, he breathed deep and with delight the smoky air of his factories. Though past forty then, he still had the enthusiasm of youth. Always smiling, affable and polite, he stood in marked contrast to the rough and ready men I met. Not one word which would have been objectionable, not a gesture which might have offended—one could imagine him as moving in the atmosphere of a court, so perfect was his bearing in manner and speech. And yet no fiercer adversary than Westinghouse could have been found when he was aroused. An athlete in ordinary life, he was transformed into a giant when confronted with difficulties which seemed unsurmountable. He enjoyed the struggle and never lost confidence. When others would give up in despair he triumphed. Had he been transferred to another planet with everything against him he would have worked out his salvation. His equipment was such as to make him win easily a position of captain among captains, leader among leaders. His was a wonderful career filled with remarkable achievements. He gave to the world a number of valuable inventions and improvements, created new industries, advanced the mechanical and electrical arts and improved in many ways the conditions of modern life. He was a great pioneer and builder whose work was of far-reaching effect on his time and whose name will live long in the memory of men.

New York. NIKOLA TESLA.

From Calvin W. Rice

Of the many remarkable qualities that come to one's mind in thinking of Mr. Westinghouse, none stands out more prominently than those which characterize him in his home life.

While Mr. Westinghouse had a tremendous capacity