

In the Days of My Youth

By SIR WILLIAM BRAGG

(the Eminent Physicist)

My Radium Finds: I had no radium until a Mæcenas gave me funds for a small quantity . . . All went well. Other results came tumbling out. I knew I had made a discovery."

AS a very small boy I went to the school in the Cumberland parish of which my grandfather was vicar. My father had been to sea for many years, but had settled down to farming. After a year or two there, I was sent to the grammar school at Market Harborough. It is one of my vivid memories of that time that the headmaster used to read out each morning the telegrams from the Franco-German war.

Six years later I went to King William's College, in the Isle of Man, where I had the good fortune to be under a really good mathematical master, D. D.

In a few days I was sent for, and in three weeks I was on board the old *Rome*, 4,500 tons, the leading ship of the P. and O.

The voyage was great fun. Of course, I had to learn some physics on the way: I was going to be Professor of Mathematics and Physics, and however much my degree qualified me to teach the former, the latter was very much an unknown world. In Adelaide it turned out that there was only one elementary class of respectable numbers and a little class of two students who were rather more advanced; and I managed to keep in front.

Sometimes I had queer experiences. There was so much to do in the two subjects that I did not always have the time to rehearse before the lecture the experiments which the laboratory assistant had prepared. But my trust in the reliability of physical laws was always justified. On one humiliating occasion I asked the assistant if he could get me some sodium chloride for an experiment, only to discover a little later that the substance was common salt.

For seventeen years I worked steadily in Adelaide. Then came another crisis.

It had never entered my head that I should do any research work. I was to give the presidential address to Section A of the Australasian Association for the Advancement of Science; the meeting was in Dunedin, New Zealand, in January, 1903. I thought that I could make an interesting address if I spoke of the recently discovered electron and of the phenomena of radioactivity.

While reading up the subject, I came across some results described by Mme. Curie which seemed to me capable of only one interpretation, and that an interpretation which had not yet been suggested. It was known that when the radium atom broke up into two parts, one large and one small, the latter, which was really an atom of helium, was driven into the surrounding air, and these particles constituted what was called the "alpha" radiation. Mme. Curie described experiments which implied that all the alpha particles thus expelled went about the same distance.

This interested me extremely. All ordinary radiations fade away gradually with distance; the alpha particles seemed to behave like bullets fired into a block of wood. But, if this were so, the particle must travel in a straight line through the air, as the bullet does through the block. Now, some hundreds of thousands of air atoms would necessarily be met with on its journey. How did it get past? It could not push them to one side, for it was smaller than they, and the simplest experiment on the billiard table shows that a ball will not go straight through a crowd of others however hard it is hit. It could not dodge from side to side, continually recovering its original direction: that

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together for the general good. They should also stand firm and try to get some kind of a charter which should apply to all competent accountants, and not to any particular section. They must do all they could to make the profession one to be reckoned with. He favored the establishment of a Chair of Accountancy at the University of Adelaide. (Applause.)

Mr. H. P. Ogilvie, vice-president of the institute, proposed "The University of Adelaide." He said the university and

other very materialy. He spoke of Adelaide having taken a leading part in the establishment of a commercial course at the University, and there were now 341 students attending the lectures. He favored the founding of Chairs of Commerce, and hoped some donations would in future be earmarked with such an end in view. As an institute they realised the value of such chairs, which were desirable in the interests of the State generally, and the business community in particular. He assured the university of the support of the institute in any movement put forth. (Applause.)

Professor Campbell (who responded in the unavoidable absence of Sir Archibald Strong) said his first acquaintance with accountants had been in court, and they were certainly a learned body. He alluded to the engineers of Australia being one coherent body which, for one thing afforded protection against "quacks." There was no reason why the accountants should not do the same thing. The university had a function far wider than that ascribed by the man in the street. It was the duty of the university to gather and collate all the available knowledge

ness, and required a great deal of learning. If the university were to undertake any work for the accountants, it must have the support of the profession and the public in general. Then money was necessary for the proper carrying out of the task, and benefactors should be induced to furnish the funds. The accountants must take to their own members the necessity for making available the resources which they were competent to use for such purposes as the institute, or kindred bodies, might think best. (Applause.)

Mr. N. B. Newland, State vice-president, submitted "Our Guests," in a brief speech. Mr. A. E. Clarkson, ex-president of the Adelaide Chamber of Commerce, responded and referred to the accountants as an important section of the community, so much so that they were given ex-officio representation on the Council of the Chamber. As a commercial man, he could say that more and more the accountants were recognised as an important and honorable branch of the business community. He stressed the necessity for qualified accountants being engaged in the commercial houses. As a body they were bringing dignity to the profession, and they could rely on the commercial community rendering them every assistance within their power. (Applause.)

Mr. R. Duncan, president of the Chamber of Manufactures, in his speech remarked that he always regarded accountants as the safety valve of the business world. He favored able men of figure on business advisory boards. Mr. F. Blamey, vice-president of the Federal Institute of Accountants, also replied.

Mr. Gordon James said that he had sung during the evening



Sir William Bragg
From a caricature by Matt

Jenkins by name, who decided my leanings towards mathematics, though in those days classical subjects filled the greater part of the time table.

In 1881 I went as an exhibitor to Trinity College, Cambridge, and set myself to work hard for the mathematical tripos. I came out Third Wrangler.

Then came an incident which may interest my readers. I was walking along the King's Parade one morning with the present Master of Trinity: he was on his way to give a lecture and I on my way to hear it. He asked me if the Senior Wrangler of my year was in for the vacant professorship in mathematics and physics in the University of Adelaide. I said that to the best of my belief he was not. But the question set me thinking. It would not have been asked unless the Senior Wrangler in question was an eligible candidate, and if he was, and was not applying, I might have a chance. I knew no physics, it was true, but then I knew the other had not had any laboratory experience. So the moment the lecture was over I telegraphed an application to the Agent-General in London.

ADV. 26. 5.26

ACCOUNTANTS' DINNER.

A.27

A UNIVERSITY CHAIR SUGGESTED.

The Adelaide council of the Commonwealth Institute of Accountants gave a dinner at the South Australian Hotel on Wednesday night in honor of the interstate representatives of the General Council, which is now in session in the city. Mr. A. L. Stade (president of the South Australian division) presided over a large attendance.

Mr. H. H. Austin, vice-president of the Australasian Corporation of Public Accountants, proposed "The Commonwealth Institute of Accountants." The corporation had worthily maintained the prestige of accountants in Australia, and sedulously upheld the honor of the profession. He thought there should be one community of accountants so that they could present a united front. He also favored an agreement between the different associations