

Register April 13th 1905

RESIGNATION OF PROFESSOR BRAGG.

IMPORTANT APPOINTMENT IN ENGLAND.

PROFESSOR OF PHYSICS AT LEEDS UNIVERSITY.

South Australia is about to lose one of her most distinguished men. Professor Bragg, M.A., F.R.S., Elder Professor of Mathematics and Natural Philosophy in the University of Adelaide since 1886, has decided to accept an invitation from the Vice-Chancellor of the University of Leeds, England, to nomination for the Cavendish Chair of Physics in that institution. He will occupy his present position actively until the Christmas vacation, and subsequently proceed to Brisbane, to preside over the meetings of the Science Association in January. His route to England is not yet settled, but probably he will pass through Adelaide on his journey. The departure of Professor Bragg means a serious loss to the University of Adelaide, but the high office which he has been called upon to fill is a well-merited recognition of the valuable services he has rendered to the scientific world. He came to South Australia nearly 22 years ago with a brilliant academic career behind him. From Wigton, Cumberland, England, where he was born on July 2, 1862, he was moved to Market Harborough, Leicestershire, at the Grammar School of which town he won a scholarship. Similar success followed his studies at King William's College, Isle of Man, whence he proceeded to Trinity College, Cambridge. At that famous centre of learning he won a minor exhibition in 1880, and two years later secured a major scholarship. He studied mathematics under Dr. Routh, and was placed Third Wrangler in 1884. In the same year he graduated B.A., while during the next 12 months he passed first class in part II. of the mathematical tripos, and took the M.A. degree. A few months of teaching at Cambridge, with study at the Cavendish Laboratory, preceded his acceptance of the Chair of Mathematics and Natural Philosophy at the University of Adelaide, during the occupancy of which his fame has gone abroad as an authority on radio-activity.

—Reason for Leaving.—

In connection with his appointment to Adelaide Professor Bragg not long ago related an interesting incident. "From the very beginning the University of Adelaide has been known in the scientific world. Of all the textbooks on hydrodynamics the best is that of Professor Lamb, the first preface of which was dated from Adelaide. When I was a Cambridge student, and glanced often at the title page of this book, I used to be quite fascinated by the 'Adelaide, South Australia,' which was printed thereon. I wondered what sort of place it was, what sort of conditions they were under which the book was written, and whether there would ever be any chance of my obtaining a position like that of Professor Lamb. Perhaps this was the reason why, when I was given only a few minutes to decide whether I would apply for his vacant chair, I walked off to the telegraph office without hesitation." When the professor arrived in Adelaide he thought it was surely one of the most delightful and friendly places in the world, and on Saturday, wife being back over his intervening period of 22 years, he said that opinion had not been weakened in the slightest degree. The all-powerful reason which had operated in bringing him to the decision announced to the University Council on Saturday was that the authorities at Leeds had offered him exceptional facilities for research work. The physics school at Leeds is a large one, with over 50 students, and the instruction of the elementary classes is carried on mainly by assistant lecturers and demonstrators. This will leave Professor Bragg free to deal with the honour students. That the University sets a high value upon the professor's original investigations is shown by the promise to allow time for them, by the placing of two large laboratories at his disposal, and by the intimation that a considerable sum of money will be available for such apparatus as he may require.

In the unostentatious manner which is characteristic of him Professor Bragg, while giving this information at the request of a representative of The Register, added:—"I am very interested in this research work. It has been successful beyond what I should have thought possible, and naturally I welcome the opportunities thus offered me of continuing it. Moreover, I shall have the chance of meeting a great many of these in England, who are interested in the same line of investigation. It is for this reason, and this only, that I propose to leave Adelaide."

—Radio-Activity Work.—

Two months ago Professor Bragg gave an interview to The Register on the original research done at the University of Adelaide. The portion relating to what he had accomplished is here reproduced:—"In regard to my own contributions to mathematics and physics they have been, for the most part, concerned with the new subject of radio-activity. During 1903 I was engaged in a comparison of the results then known with each other, hoping to find the material for a suitable address to section A of the Science Association, which was to meet in Dunedin in January, 1904. I found that a number of strange effects could be correlated by the adopting of a simple but rather startling hypothesis. This was that the so-called 'a' (alpha) rays were to be treated as projectiles shot off from the radium atoms with tremendous speed, penetrating all other atoms which they encountered, and flying over a definite 'range.' Hitherto all writers, though knowing them to be material, had not taken this simple view. The idea of a 'range' was quite new, and the conception that any atom could be traversed by an alpha particle or helium atom, as it was supposed to be, would have horrified any writer of 20 years ago. It was one of the incontrovertible principles of older physics that two atoms could not occupy the same space at the same time. Yet I felt sufficiently sure of my views to include them in the Dunedin address. On returning to Adelaide I learned that Mr. Barr Smith had given £500 to the University wherewith to buy scientific apparatus. With my share I obtained some radium and other requisites for an experimental test of the new ideas. The results were satisfactory beyond all expectation. Not only was my original position confirmed, but a number of other new and important truths came to light. To attempt a description of them, however, would be to write a scientific paper. Even yet I am far from the completion of all the investigations to which these first experiments led the way. Indeed, the lode is widening as I go deeper. There were some extremely anxious and impatient months until news began to come in of the confirmation of the results by other workers. But within a year or two they were completely accepted, and had formed the starting point of many other investigations. In particular Professor Rutherford, of Montreal, had used them as the basis of his famous experiments on the mass and the electrical charge of the alpha particle. Dr. Hahn, now of Berlin, had employed my methods in the investigation of the radio-active properties of thorium. Dr. Levin, of Gottingen, in examining polonium; Dr. Godlewski, of Cracow, in his work on actinium; McClung, of Montreal; Bronson, of Yale; Adams, of New York; and Kucera, of Prague, had confirmed the results or used the methods in various ways. Our own student—Mr. Kleeman—went home to Cambridge, and branched off on lines of his own. He has since published a number of valuable papers. Since the original discoveries the work has gone on satisfactorily, so that two or three papers have issued from this university each year, giving the results obtained up to date; and I trust there may be more to follow. In accordance with the courteous procedure adopted by scientific workers, it is recognised that the University of Adelaide is working in certain directions, and the field is left fairly clear. One of the most distinguished physicists of the day actually wrote to me, with a kindness impossible to forget, asking what particular lines I proposed to follow, as he would endeavour to direct the energies of his research students into other channels. I could only answer that this University would not stand in any one's way, and preferred to take its chance. This is somewhat egotistical, I fear, but I cannot help making it so, for I want you to understand that, as regards mathematics and physics alone, the statement in my letter is justified. Thousands of students read Professor Lamb's book, and with respect to radio-activity, which is so earnestly studied on account of the revelations which it is making relative to the minute yet all-powerful forces of the atoms, every writer and every student must take prime account of the work done here, since it is fundamental to the subject. I am speaking as a South Australian to South Australians."

—Leeds University.—

Although the University of Leeds is only three years old the institution dates in point of time much further back. As the Yorkshire College it was one of the three constituent colleges of the Victoria University at Manchester. The chair for which Professor Bragg will be nominated was founded in honour of the first President of the college, Lord Frederick Cavendish. The previous occupants have been Sir Arthur Rucker, now Principal of the University of London, and Dr. William Stroude, D.Sc., mainly known for his investigations in connection with the application of physics to naval matters, and the inventor of range-finders for naval and military purposes. One type of finder designed for naval use has been adopted by the British Admiralty, and is largely employed on foreign battleships and cruisers. Professor Bragg will not be the only Adelaide professor at Leeds. Old students of the University in this city will remember Professor W. R. Phillips, who occupies the Chair of Law at the establishment to which Dr. Bragg is to be attached. Furthermore, his predecessor in Adelaide, Professor Lamb, is now professor of mathematics at the University of Manchester.

—Professor Bragg in Adelaide.—

To say that Professor Bragg has brought renown to the University of Adelaide is to set down a simple incontrovertible truism. A large number of undergraduates have passed through his hands, and his students have increased from 2 in 1886 to considerably over 200. Apart from his invaluable work in the field of physics, any movement for increasing the usefulness of South Australia's centre of learning had his hearty co-operation and support. He took an active part in bringing about the arrangement by which the University undertook the training of State school teachers—a step which is having a wide beneficial effect upon the primary education of the State. For six years he held a seat as a Governor of the Public Library, Museum, and Art Gallery. Since 1890 he has been a member of the School of Mines Council, and eight years later he was elected to the University Council, on which he sits to-day. He has been ever an ardent worker in the cause of the Australasian Association for the Advancement of Science, and as the President of that body he will be the central figure at the gatherings in Brisbane next January. Papers and addresses, almost without number, he has contributed to publications and societies, and citizens of Adelaide do not forget the instructive lectures he delivered two winters ago on the active properties of radium. Notably among the papers published are "The elastic medium method of treating electrostatic theorems," "The absorption of alpha rays and classification of alpha rays of radium," and "The ionization curves of radium." Early in March last year advice was received from England that Professor Bragg was a selected candidate for the Fellowship of the Royal Society. This is a rare dignity, the highest in the scientific world (conferred on only 15 persons each year), and was conferred upon him principally in recognition of his remarkably successful work in connection with radio-activity. In 1889 Professor Bragg married a daughter of Sir Charles Todd, himself a Fellow of the Royal Society. During a trip to England and the Continent he spent one day with Sir William Crookes and another with Sir William Huggins, of spectroscopy fame. On this trip he received a commission from the South Australian Government to enquire into educational matters in England, particularly in regard to the training of teachers and higher primary education. In closing a cordial interview Professor Bragg indicated that his decision had not been arrived at without much anxious thought. "It is difficult to face parting from the University of Adelaide and from South Australia," he said. "I have met with so much kindness from every one and enjoyed my engagement so thoroughly that I shall leave with the deepest regret."

APPRECIATION BY THE CHANCELLOR.

On Sunday a representative of The Register gave the opportunity to the Chancellor of the University (Sir Samuel Way, Bart.) to express his view concerning Professor Bragg's removal to England. "It is a very great loss," he said, "to the University, but there is the counterbalancing advantage in the knowledge that a professor from Adelaide is being promoted to an English chair. In the cases of Professors Lamb and Bragg, when they were selected by the University of Adelaide and consented to come they would not have come with the brilliant careers open to them in England unless there had been the expectation that their work on this side of the world would not be overlooked, and would be recognised if they wished to change back again. This, no doubt, was one of the factors which induced Professor Bragg to come