

A. Hunter, July 3/15

PROFESSOR BRAGG AND HIS GIFTED SON.

AWARDED THE BARNARD GOLD
MEDAL.

THE ATOMIC STRUCTURE OF MATTER.

News was received in Adelaide yesterday that the Barnard Gold Medal has been awarded to Professor William H. Bragg and his son, Mr. W. L. Bragg.

The Barnard Medal, which is awarded every five years by the trustees of the Columbia University, New York, is one of the most distinctive honors to which scientific men may aspire. How true this is may best be gauged by the roll of men on whom it has already been conferred:—

1895—Lord Rayleigh and Professor Sir William Ramsay.

1900—Professor Wilhelm Conrad von Roentgen.

1905—Professor Henri Becquerel.

1910—Professor Ernest Rutherford.

1915—Professor William H. Bragg and Mr. W. L. Bragg.

Nothing could be more appropriate than that the news of the bestowal of this great honor should have been received in Adelaide on Professor Bragg's 54th birthday, for that happy anniversary occurred yesterday. The medal, the intrinsic value of which is 200 dollars, is conferred for meritorious service to science. As already explained, it is awarded every five years "to such person, if any, whether a citizen of the United States or any other country, as shall within the five years next preceding have made such discovery in physical or astronomical science, or such novel application of science to purposes beneficial to the human race, as in the judgment of the National Academy of Sciences of the United States shall be esteemed most worthy of such honor." The medal is established by the provisions of the will of the late President Barnard, of the Columbia University.

Professor Bragg will be widely remembered as Professor of Mathematics and Physics at the Adelaide University. He married a daughter of the late Sir Charles Todd. His son, originally of St. Peter's College and the Adelaide University, is now a Fellow of Trinity College, Cambridge, and both father and son have won world-wide renown, particularly in connection with their researches into the properties of radium. In their report the committee who made the award pay striking tribute to the work performed by Professor Bragg and his son. They say:—

"Your committee have reached the unanimous conclusion that William Henry Bragg, professor of physics in the University of Leeds, and his son, W. L. Bragg, now a student at the University of Cambridge, should be recommended for the next award. The reasons which have led your committee to this conclusion are briefly indicated in the following statement:—

"The doctrine of atomism, foreshadowed poetically by Leucippus, Democritus, and Epicurus, and raised to the dignity of an exceedingly fruitful hypothesis by Dalton and the modern schools of chemists and physicists, is now approaching the long-sought stage of verification and demonstration. Since the time of Dalton a multitude of investigators have contributed continuously towards the attainment of this advanced stage, but progress has been remarkably cumulative and rapid during the past quarter of a century. The fundamental importance of the several fields of research in which the atomic structure of matter is now being established is sufficiently indicated by the fact that four preceding awards of the Barnard medal have been made for researches in these fields. But this importance is now emphasized anew by the recommendation that the next award of the Barnard medal be made to Messrs. W. H. and W. L. Bragg, father and son, for highly meritorious work in the same fields.

"About three years ago Dr. Laue and his collaborators of the University of Munich produced some remarkable photographs by passing a narrow beam of X-rays through a crystal of zinc blende. These photographs revealed geometrical figures strikingly suggestive of the molecular structure attributed by crystallographers to such minerals. The bearings of this discovery were quickly appreciated by a number of investigators, and extraordinary advances in crystallography, in the theory of X-radiation, and in the application of X-rays to the study of matter, have rapidly followed. In securing these advances the Messrs. Bragg have been pre-eminent. By means of a rare combination of experimental skill and theoretical insight they have been able to show that X-rays are essentially light rays of excessively short wave length, and that crystalline structure is definitely molecular. They have determined the order of wave length of X-rays, and they have also determined the order of the intervals which separate the molecules in certain crystalline forms. In a noteworthy series of luminous publications, and in an equally noteworthy series of masterly public expositions, they have supplied the initial methods and furnished many of the preliminary results which must lead to a still more productive era in the advancement of molecular physics and hence in the advancement of the entirety of physical science. In view of these achievements your committee hereby unanimously recommends that Messrs. W. H. and W. L. Bragg be proposed to Columbia University for an award of the Barnard medal for the year 1915."

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MAGNETIC SURVEYS.

Among the passengers who departed from Adelaide by the Melbourne express on Monday was a South Australian scientist—Dr. C. C. Farr, now Professor Physics at Canterbury College, New Zealand—who is returning to his post after a brief vacation visit to Adelaide, his native city. He is a son of the late Rev. Archdeacon Farr, a former head master of St. Peter's College. Dr. Farr had a brilliant career at the University of Adelaide. After winning exhibitions and scholarships he proceeded to England, there advancing his scientific studies. His New Zealand interests have been mainly devoted to the magnetic survey of the Dominion—a task to which he devoted considerable attention when Director of the Magnetic Observatory at Christchurch. Conversing with a reporter at North Terrace Station yesterday, Mr. Farr remarked that he had just completed, while staying in Adelaide, and had forwarded to Dr. Chree, of Kew Observatory, London, the magnetic survey of New Zealand. The work was begun in consequence of a strong suggestion emanating from the Australasian Association for the Advancement of Science in 1897, and it had been going on, with breaks, ever since. Important geological results were expected from the scientific research. Dr. Farr considered something of the same character should be done in South Australia. That a magnetic investigation was necessary was evident by the fact that the Carnegie Institute had initiated work of the kind in this State, but he thought it should not be left to an "outside" body to bring about a matter which was of undoubted value to South Australia. In New Zealand the investigation had been enthusiastically backed up by the Dominion Government. He understood that under the auspices of the Carnegie Institute a commencement was being made here, and that the work would be pushed forward more vigorously after the conclusion of the war.

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UNNATURALIZED TEACHERS.

Not Wanted in Victoria.

MELBOURNE, July 5.

The attitude of a majority of the council of the Melbourne University was clearly defined during a long discussion to-day regarding unnaturalized members of the teaching staff of the institution. It was decided—"That the engagements of unnaturalized citizens of any enemy country, who may be in the employment of the university, be not renewed at the end of their present term of office." It was stated that the terms of both of the persons discussed would expire at the end of this year.

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INSECT-BORNE DISEASE.

The progress of scientific knowledge in regard to insect-borne diseases, during the past 40 years, was the subject of interesting discourse by Dr. J. C. Verco, at the Prince of Wales Theatre, Adelaide University, on Tuesday evening. It was the second of a series of three lectures on "Romance in Medicine." There was a large and attentive audience. Dr. Verco spoke of the facts and medical fancies of 40 years ago, concerning the stages, periodicity, and kinds of ague; and the causes of anemia and melanin—malaria and marsh miasma. He explained the discoveries of blood parasites and the experiments of Laveran, Richard, and Golgi. The elucidation of the life cycle of the parasite which solved the apparently inexplicable manner in which diseases were carried from mosquito to man and back again, was illustrated with interesting diagrams. The lecturer said malaria was solely due to one variety of mosquito. Draining marshes, filling in ditches, and so on, kerosine spraying, and mosquito-proof houses, were all means of prevention of infection. He related instances in which proper treatment had been almost incredibly successful.

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ELDER CONSERVATORIUM AND NATIONAL ANTHEM.

From C. St. Aubrey Middleton:—"At the conclusion of the concert given by the students on Monday night, the Director (Dr. Ennis) rendered the National Anthem on the grand organ. Surely this is a step in the right direction at last, and I trust the innovation will not be departed from."

✓ Advertiser, July 7/15

MOSQUITOES AND MALARIA.

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VOLUNTEERS AND SACRIFICE.

In the Full Court, before their Honors Mr. Justice Gordon, Mr. Justice Murray and Mr. Justice Buchanan, on Tuesday, Mr. N. A. Webb moved that John Mitchell Sinclair, of the Grange, should be exempt from certain of the rules for admission as practitioners of the Supreme Court. The ground of the application was that the applicant had volunteered for the front. Mr. Justice Gordon said they were proud of him, and of all their boys at the front.

Mr. Webb submitted that the order should be made without the payment of fees. The court had jurisdiction to make such an order.

Mr. Justice Gordon said the bench cordially agreed that in such circumstances no fees should be charged. The country was indebted to Mr. Sinclair, not Mr. Sinclair to the country.