

News and Views

Mme. Joliot-Curie and Scientific Research in France

MME. JOLIOT-CURIE has been appointed Secretary of State for Scientific Research in the new Government just formed in France by M. Blum. Her name will be familiar to scientific readers as that of the daughter of Prof. and Mme. Curie, discoverers of radium, and herself a distinguished worker in the field of artificial radioactivity. M. and Mme. Joliot-Curie have carried out important investigations in various branches of radioactivity which were fittingly crowned by the award to them in 1935 of the Nobel Prize in Chemistry. When the discovery was announced of the positive electron, M. and Mme. Joliot-Curie took up the examination of methods by which it could be produced, and found that positive electrons appeared with neutrons during the disintegration of certain light elements by α -rays. It appeared on further investigation that whereas the neutrons were emitted during the α -particle bombardment, the positive electrons were due to an entirely separate process, and continued to appear after the bombardment had ceased. The new process thus recognised was then shown to be due to the presence of unstable isotopes with radioactive properties, a discovery which was immediately found to be of wide importance. The preparation and examination of these radioactive bodies of short life period, by investigators in numerous laboratories, have afforded valuable additions to our knowledge of atomic structure and the mechanism of atomic disintegration.

Dr. C. N. H. Long

DR. C. N. H. LONG, until recently director of the Cox Medical Research Institute in the University of Pennsylvania, has been appointed to the chair of physiological chemistry in Yale University, in succession to the late Prof. L. B. Mendel. This chair was previously held by another famous American physiological chemist, namely, Prof. Chittenden. Dr. Long took a first-class honours degree in chemistry at Manchester in 1921 and then worked in the physiological laboratory there and at University College, London, for a number of years, particularly on matters relating to the physiology and physiological chemistry of muscular activity in man and the higher animals. The work was done on behalf of the Medical Research Council. From University College, he went to McGill University, Montreal, where he was attached to the Medical Unit of Prof. Jonathan Meakins. There he continued his research, and qualified in medicine. From Montreal he went to the Cox Medical Research Institute at Philadelphia, and now he is going to Yale. Dr. Long thus started as a chemist, then became a physiologist, then a professor of research in medicine, and is now going back again to physiological chemistry.

Mr. W. Dallimore

MR. WILLIAM DALLIMORE retired from the post of keeper of the Museums at the Royal Botanic Gardens, Kew, on March 31, having reached the age-limit after more than forty-five years' connexion with Kew. Mr. Dallimore entered Kew as a student gardener in 1891. He was appointed propagator in the Arboretum in 1892 and assistant curator (at that time called foreman) in 1896. In 1908 he was transferred to the Museums as assistant, and became keeper in 1926. Mr. Dallimore's exceptionally wide knowledge of arboriculture has been of great service to Kew, especially in connexion with the planning and administration of the National Pinetum at Bedgebury, which he will continue to supervise during his retirement. Dr. John Hutchinson, botanist in the Herbarium, has been appointed by the Minister of Agriculture and Fisheries to be keeper of the Museums in succession to Mr. Dallimore.

Bicentenary of Coulomb (1736-1806)

ON June 14 the bicentenary occurs of the birth of Charles-Augustin de Coulomb, the French military engineer and physicist, who is remembered for his work on friction, machines and electricity and magnetism. Born at Angoulême, he was educated in Paris, and entering the corps of military engineers served successively at Martinique, Rochefort, the Isle of Aix, Cherbourg and in Paris. He rose to the rank of lieutenant-colonel, was a member of the Royal Academy of Sciences, and after the Revolution, of the National Institute, and was made a chevalier of the Order of St. Louis and a member of the Legion of Honour. He was intimately acquainted with the civil engineering of his day, and his various memoirs were the result of long and refined experiments combined with mathematical inquiries. He counted many eminent men of science among his contemporaries, such as Laplace, Lavoisier, Lalande, Borda, Messier, Monge, Charles, Berthollet and Mechain, but, wrote Thomas Young, "among all the men of science who have done honour to France, it would be difficult to point out a single individual, who, with regard to the cultivation of terrestrial physics, could at all be put in competition with M. Coulomb". Towards the end of his life, Coulomb suffered much from ill-health, and his death took place on August 23, 1806, when he was seventy years of age.

COULOMB's original investigations fall into two groups, those relating to mechanical subjects and those dealing with electricity and magnetism. It was while he was in Martinique that in 1773 he sent his first paper to the Academy of Sciences. This was on statical problems relating to architecture, and in it he dealt with the strength of blocks of stone, masonry

columns and arches, and embankments. In 1781 he was awarded a prize for his paper on the theory of simple machines, comprehending the effects of friction, and of the stiffness of ropes. He determined the friction between a great variety of substances and applied the results to the study of the launching of ships, ships' capstans and ships' blocks. His "Theoretical and Experimental Researches on the Force of Torsion" was published in 1784, and six years later he dealt with the "Friction of Pivots". Quite early he had turned his attention to magnetism and the compass, and between the years 1785 and 1789 he published seven memoirs on electricity and magnetism. It was in these that he described his well-known torsion balance and enunciated the laws of attraction and repulsion in electricity and magnetism. These memoirs furnished the data on which Poisson later on founded his mathematical theory of electricity. Like many of his contemporaries, Coulomb lost his post in the Revolution, but in the more settled times which followed he became one of the inspectors of public instruction and as such was known for his generosity and kindness. So far as we know, France possesses no monument to this worthy man.

"World Fellowship"

ARRANGEMENTS are now approaching completion for the World Congress of Faiths, which from July 3 until July 18 will meet in London to discuss "World Fellowship". The sessions of the Congress, to which only members will be admitted, will take place at University College, Gower Street, W.C.1; but there will also be a series of public meetings at Queen's Hall, Langham Place, W.1, to which the general public will be admitted by tickets, which may be purchased. The main objective of the Congress is to be neither the appraisal of the various religions of the world, nor any attempt to bring about their fusion, but the discussion of ways and means by which the chief religions of the world, each retaining its individuality, may co-operate in a fellowship of the closest unity to eliminate the passions leading to war, economic injustice and racial and religious antagonisms. Communications dealing with various aspects of the problems which arise will be presented in twenty sessions of the Congress by representatives of the Christian, Jewish, Hindu, Buddhist, Moslem and independent faiths. Among those who have promised their co-operation either from the chair, as readers of papers or by opening debate are H.H. the Aga Khan, Sir E. Denison Ross, the Chief Rabbi, Prof. Nicolas Berdaieff, Prof. S. N. Das Gupta, Dr. Cyril Bailey, H. E. Sheikh Al-Maraghi and Sir Abdul Qadir. A paper by the late Prof. J. S. Haldane on "Science and Religion" will be read. Of the public meetings, the first will be a meeting of welcome and the last a retrospect and summation of results, while the remaining two will be devoted to expositions of "The Supreme Spiritual Ideal" as viewed in Jewish, Hindu, Buddhist, Christian, Muslim and independent thought. The international president of the Congress is H.H. the Maharaja Gaekwar of Baroda, and the chairman of

the British National Council Sir Francis Young-husband. The members of the Congress will be received by the Marquis of Zetland on behalf of His Majesty's Government at Lancaster House, St. James's, on July 8, and a reception will be given by Sir Francis Younghusband in the garden of the Royal Geographical Society on July 4. Particulars of membership, etc., may be obtained from the Organising Secretary, 17 Bedford Square, London, W.C.1.

Exhibition of Historic Scientific Apparatus at Cambridge

THE Cambridge Philosophical Society has been responsible for the arrangement of a large and interesting exhibition of historic instruments and records which was opened by Lord Rutherford on June 8 and will be on view until June 20. Acting on the suggestion and with the unstinted help of Dr. R. T. Gunther, of Oxford, an attempt has been made to collect together old apparatus illustrating the work of well-known Cambridge men, as well as some of the equipment used by students of natural knowledge in former days. The collection gives an idea of the material instruments by the aid of which scientific progress has been made in the University, and it establishes contact with the present day by the inclusion of series showing the progress in the design of certain important pieces of apparatus like electrometers, electroscopes, galvanometers, air pumps, slide rules, microscopes and microtomes. Among the pieces of special interest are the fourteenth century astrolabe believed to have belonged to Dr. Caius, a circular slide-rule designed by William Oughtred and made about 1640, Pepys' Musarithmica, the instruments used by W. H. Miller in making the Standard Pound, and the microscopes of Charles Darwin and of his grandfather Erasmus. The remains of the equipment of the observatories of Trinity and St. John's Colleges, and a number of Maxwell's instruments form important features, while the cabinets of materia medica preserved since the early eighteenth century in the libraries of Queens', St. Catherine's and St. John's Colleges are now shown together for the first time. The microscopes used by Francis Maitland Balfour form another exhibit interesting to biologists.

Population and Production in the U.S.S.R.

PROF. M. POLANYI'S article on "U.S.S.R. Economics", originally printed in "The Manchester School", has now been republished by the Manchester University Press in pamphlet form. This article, which is based on the study of official documents and on observations made by the author during numerous visits to Soviet Russia, gives an interesting account of recent trends besides providing a sketch of the development of the Soviet economy. In dealing with the economic background, Prof. Polanyi points out that the 165 million inhabitants of the U.S.S.R. are sharply divided into a rural and urban population. Of the 40 millions living in the towns, the vast majority are Government employees. They form the basis of its power and are engaged in administration,