education. No less auspicious is the alliance in this good cause between friends of education in the Old World and the New. The Rockefeller Foundation, our own Government, the citizens of London in corporate and in private capacities all share in a memorable achievement." An article discussing the building scheme appeared in our issue of July 9, 1932 (p. 49), and another dealing with the development of science in relation to the University in NATURE of June 24 (p. 896).

Dr. R. A. Fisher, F.R.S.

DR. R. A. FISHER, head of the Statistical Department of the Rothamsted Experimental Station, has been appointed to the Galton chair of eugenics at the University of London. Since 1919, when he first went to Rothamsted, Dr. Fisher has successfully developed statistical theory so as to make application possible to the somewhat special type of data furnished by agricultural experiments, and he has also devised new methods of experiment which have proved very valuable in minimising the disturbances due to soil heterogeneity and other unavoidable irregularities in the experimental material. This is the third professorship obtained by members of the Rothamsted staff during the past twelve months, the two earlier appointments being that of Dr. W. B. Brierley to the chair of agricultural botany at the University of Reading and of Dr. R. H. Stoughton to the chair of horticulture in the same University.

Joseph Nicéphore Niepce

A CENTURY ago, on July 5, 1833, at the age of sixty-eight years, Joseph Nicéphore Niepce, the pioneer of photography, died near his birthplace, Châlon-sur-Saône. Born on March 7, 1765, in good circumstances, Niepce, who was of a meditative and poetical temperament, entered the army in 1792, but after serving for two years had to resign owing to ill-health and failing eyesight. Afterwards, for six years, 1795–1801, he held an administrative post in the Nice district and then returned home and with his brother devoted himself to mechanical and chemical experiments. Having his attention directed to the new art of lithography, he conceived the idea of making pictures by the aid of the sun. Many years were spent before he succeeded in obtaining impressions on plates of polished metal covered with asphaltum. Some of his results were shown to the Royal Society in 1826. Niepce then became associated with his countryman, Louis Jacques Daguerre (1789–1851), by whom, after Niepce's death, the art of photography was established on a practical basis. The first daguerreotypes were produced in 1839, and shortly afterwards the French Government granted pensions to Daguerre and to Niepce's son, Isidore. To-day both inventors are commemorated by statues; Daguerre at Cormeilles and Niepce at Châlon-sur-Saône. In fashioning the statue of Niepce, one writer says: "The sculptor worked for nothing, animated by no motive more selfish than the desire to express in lasting bronze his respect for a great man's memory. If every human being who has had occasion to be grateful to the discoverer of photography had contributed to his work the sculptor might have been royally remunerated, and the statue, instead of bronze, might have been of silver and gold." In the museum not far from the square in Châlon are preserved some of the apparatus with which Niepce made his notable experiments.

Experimental Production of Cancer

THE discussion on experimental carcinogenesis and the experimental transmission of cancer at the Royal Society on June 15 was rather of the form of a symposium which, in spite of compression by the speakers, could not be completed in the two and a half hours occupied. The possibilities of the genetic hypothesis of Boveri and Bauer were not further explored than the brief summary given by the opener, Dr. J. A. Murray. Of the subsequent speakers, valuable contributions to the virus hypothesis were made by Drs. Peacock, Andrewes, W. Cramer and J. McIntosh. The chemical carcinogenic agents and their mode of action formed the subject of an extremely interesting review by Dr. J. W. Cook, who dealt with the possibility of substances of similar action and chemical constitution being formed in the body by non-specific irritants. The biology of the tumours in fowls produced by tar, etc., was described by Dr. Peacock and Prof. J. McIntosh. Prof. A. E. Boycott reminded the meeting of the fascinating possibilities for speculation presented by a combination of the primary hypotheses discussed.

Origins of the General Relativity Theory

THE Gibson foundation lecture, delivered at the University of Glasgow by Prof. A. Einstein on June 20, consisted of a first-hand account of the mental struggles that precede the establishment of new fundamental ideas in science. The special relativity theory showed that velocity was purely relative, and from one point of view the same should be true of acceleration, yet physics seemed to show evidence to the contrary. The attempt to include gravitation in the special theory had to be abandoned. Prof. Einstein came to the conclusion that the key to the real understanding of inertia and gravitation was the experimental result that all bodies in a gravitational field were subject to the same acceleration. From 1908 until 1911 he endeavoured to apply this, but a dilemma arose from which he did not escape until 1912, when he conjectured that the space-time continuum had a Riemann metric. The development of this hypothesis by the aid of the absolute differential calculus of Ricci and Levi-Civita kept Einstein and Grossmann busy from 1912 until 1914. They found the correct gravitational equations, but failed to recognise their physical validity, and thus wasted two years of hard work. Finally Einstein "returned penitentially to the Riemann curvature". "Our final results appear almost self-evident . . . but the years of searching in the dark for a truth that one feels but cannot express; the intense desire, and the alternations of confidence and misgiving, until one breaks through to clarity and understanding, are only known to him who has himself experienced it."