"Eighty-Four Years, 1844–1928," reviewing the activities of the firm since its foundation. These include the publication of many works of medical and scientific interest by well-known authors; a bookselling department, which includes an agency for the supply of standard American and continental works; and a second-hand book department, which contains one of the largest collections in Great Britain of standard and recent works in medicine, surgery, technology, and general science, scarce books when not in stock being advertised for without charge. Finally, there is the circulating library, which contains about 30,000 volumes in all branches of medicine and the allied sciences, as well as books of general scientific or philosophic interest. Attached to the library is a reading and writing room for the convenience of subscribers.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A forestry inspector, Department of Lands and Agriculture, Irish Free State—The Secretary, Civil Service Commission, 33 St. Stephen's Green, Dublin (Sept. 4). A full-time lecturer and demonstrator in anatomy at the University College of South Wales and Monmouthshire—The Registrar, University College, Cardiff (Sept. 7). A lecturer in engineering science for automobile engineers at the Polytechnic, Regent Street—The Director of Education, The Polytechnic, Regent Street, W.1 (Sept. 7). An assistant lecturer and demonstrator in electrical engineering in the University of Sheffield—The Registrar, The University, Sheffield (Sept. 14). A pathologist and lecturer in pathology in the St. George's Hospital Medical School—The Dean of the Medical School, St. George's Hospital. S.W.1 (Sept. 15). A professor of physiology in the Patna Medical College—The Secretary to the High Commissioner for India, General Department, 42 Grosvenor Gardens, S.W.1 (Sept. 19). A professor of mechanical engineering in the Bengal Engineering College, Sibpur—The Secretary to the High Commissioner for India, 42 Grosvenor Gardens, S.W.1 (Sept. 19). The Radcliffe Crocker Travelling Scholarship in Dermatology of University College Hospital Medical School—The Dean, University College Hospital Medical School, Gower Street, W.C.1 (Sept. 30). The William Julius Mickle Fellowship of the University of London—The Academic Registrar, University of London, South Kensington, S.W.7 (Sept. 30). A permanent physicist to the Cancer Research Committee of the University of Sydney—The Registrar, The University of Sydney, Sydney, N.S.W. (Nov. 15). A professor of tropical medicine at the Calcutta School of Tropical Medicine and Hygiene—The Director, School of Tropical Medicine and Hygiene, Central Avenue, Calcutta. A pathologist and bacteriologist under the Kensington Board of Guardians—The Clerk to the Board, Guardians' Offices, Marloes Road, Kensington, W.8. Civilian education officers in the Royal Air Force Educational Service, preferably with practical qualifications for teaching engineering subjects—The Secretary, Air Ministry, Gwydyr House, Whitehall, S.W.1.

Our Astronomical Column.

WHAT BECOMES OF THE STARLIGHT?—This is the title of an interesting article by Prof. H. N. Russell in the *Scientific American* for August. Prof. Russell points out that, on the old conception of boundless space, by far the larger portion of the energy poured forth from the stars would seem to be dissipated in the form of ever-widening and ever-weakening waves. On the conception of re-entrant space, the waves would, after making the circuit of space, go over the same ground again. The question is examined whether the wave energy, which is now considered to come from the annihilation of matter, may possibly be built up into matter again. It is shown that this involves some difficult conceptions. The energy required to form a hydrogen atom would be spread through some 400 cubic feet of space. A reference is made to Dr. Millikan's suggestion that the cosmic rays investigated by him result from the union of 28 hydrogen atoms to form a silicon atom; "it is not easy to see how the 28 electrons and 28 protons can all get to the same place at the same time." But it must be remembered that knowledge of the structure of the atom is only a quarter of a century old, and it is to be hoped that the future may reveal solutions of these difficult but fascinating problems.

DOUBLE STARS MEASURED AT JOHANNESBURG.—Vol. 14, part 4, of the *Annals* of Leyden Observatory contains the measures of double stars made with the new 26½-inch refractor and the 9-inch refractor at the Union Observatory at Johannesburg, by W. H. Van Den Bos, between the dates 1925.6 and 1928.2. The search was a systematic one, the sky south of decl. −19° being swept over, and all stars examined down to the limiting magnitude 9·0 of C.P.D. The result for the region at present covered shows that one star in 16 is double within Aitken's limit of distance, which is 5″ between magnitudes 6 and 9. The power used in sweeping was 420, and the observer notes that he was able to detect the duplicity of stars too close to divide with this power by the blurred character of the diffraction image. The sweeps were made without previous consultation of double-star catalogues, so that the search is quite unbiased, but some known objects might be missed through being near periastron. Several cases of wrong identification in previous catalogues are noted, and it is suggested that in such cases the first to give the right identification has the claim to the discovery.

There are a large number of very close pairs in the catalogue, and many of these are likely to show orbital motion within a few years. Close pairs with equal magnitudes need continuous watching, otherwise there is danger of confusing the quadrants. It is stated that Doberck and Dawson have done this in the case of γ Centauri, and that the period is only half that given by Dawson.

A very interesting triple system is C.P.D. −30° 181; the wider pair has moved through 110° since its discovery by Burnham; the brighter star has a closer companion, discovered by Dawson, the period of which is stated to be less than five years, which is probably the shortest of all visually discovered binaries. The present catalogue contains 141 pages, there being about 11 pairs on each. They are mainly between −19° and −30°, but there are several outside these limits, Castor being included.