

engineering branch, has been concerned with the atomic energy project. The textile section has carried out further work on the rot-proofing of textiles, thermal insulation of protective clothing, the use of synthetic detergents, water-repellants and moth-proofing agents. The corrosion of steel by water is being studied under static and under flow conditions, including the mechanism of corrosion inhibitors. Preliminary data have been obtained on a new type of catalyst for the oxidation of ethylene to ethylene oxide, and an extensive research has been continued on the chemistry of long-chain unsaturated fatty acids. Further work on a new type of propeller de-icing, on the control of frost on standing aircraft, the development of an effective rain repellent for aircraft windows and of a catalyst for the oxidation of carbon monoxide to permit accurate determination of low concentrations in air, promise important peace-time applications. The relation between chemical structure and plasticizer reaction is being studied, while in the aeronautical laboratories the tailless glider was one of the major projects. The hydraulics laboratory completed tests on a model of a Great Lakes' harbour to determine the effect of a proposed pier extension upon sand-bar formation in the harbour entrance. Research on low-temperature lubricants has yielded much valuable information on flow characteristics of greases at low temperatures. Work on artificial limbs has continued in the structures laboratory, making use of processes developed during research on moulded aircraft components. Problems involved in 'panel', or radiant, heating are being investigated, and an important advance in low-cost housing was made in the development of a modular system for the construction of pre-fabricated houses.

## BRITISH ELECTRICAL AND ALLIED INDUSTRIES RESEARCH ASSOCIATION ANNUAL REPORT

THE work of the British Electrical and Allied Industries Research Association throughout the year ended on September 30, 1947, is recorded in the twenty-seventh annual report recently issued.

The field of activity of the Association is perhaps most readily appreciated from a block diagram given in the report, in which twenty-two main lines of research are represented, several of which divide into as many as ten distinct branches. These include extensive studies of insulating and magnetic materials and of gaseous discharge phenomena, in regard to which researches of both a fundamental and of an applied character are in progress. Surge phenomena, communication interference, earthing safety and circuit problems, overhead lines, power plant and rural electrification are also main subjects of investigation.

In the section on heating, cooking and allied problems, reference is made to work in progress on a heat pump installation and to the early publication of a final report on an experimental investigation of the thermal characteristics of a concrete floor heated by buried cables. In connexion with the work on surge phenomena it is reported that a recurrent surge oscillograph has been developed which employs a

sealed-off tube and gives a performance comparable with that obtained with the continuously evacuated type of instrument. Integrating electricity meters provide the subjects of several extensive investigations. A number of these is concerned with the behaviour of instrument jewels, the initiation of a new series of tests on tungsten/diamond and tungsten/sapphire bearings being reported. A detailed examination of the parasitic forces occurring in induction-type watt-hour meters has also been made.

It is interesting to note the wide range of researches supported by the Association in various university departments throughout Britain. These include investigations on the properties of high-pressure, high-temperature steam, work on the fundamental properties of magnetic materials and on the improvement of electrical sheet steels. Studies on the development of spark discharges include an investigation of the build-up of ionization by the Wilson cloud-chamber technique, and work on the high-frequency corona discharge. Experiments on the use of artificial illumination in horticulture are also being conducted in one university department.

In the introduction, the first paragraph deals with the reaction upon the Electrical Research Association of the transfer of the electrical supply industry in Britain to public ownership. The supply industry has provided some 30 per cent of the income of the Association, and the future relation of the British Electricity Authority with the Association is therefore of great importance. It is reported that the chairman of the Authority has confirmed the intention to support the Association and has provided for the safeguarding of the Association's finances during a transitional period in which the new basis will be worked out. The present report testifies to the existence within the electrical industry, both in the supply and the manufacturing spheres, of a spirit of co-operation in research which has built up, by good will and patient effort, a powerful instrument for the scientific and technical advancement of the industry as a whole. Such an achievement is a contribution, by no means inconsiderable, to the vital industrial needs of Great Britain at the present time.

J. G.

## Rh NOMENCLATURE

FOLLOWING the hearing of evidence from interested persons, W. B. Castle, M. W. Wintrobe and L. H. Snyder have reported<sup>1</sup> to the Surgeon-General of the U.S. Public Health Service on the nomenclature of the anti-*Rh* typing sera. The report traces the history of *Rh* nomenclature, summarizes the evidence for and against Wiener's and Fisher's nomenclature respectively, and recommends that the Wiener nomenclature shall appear first on the label of serum containers, followed by the Fisher terminology in parentheses, thus: "Anti-*Rh*<sub>0</sub> (Anti-D)".

The authors have, on the whole, presented a fair and accurate summary of the complex history of the development of *Rh* theory and nomenclature, and of the associated controversies. They have, however, not pointed out that Fisher's notation was put forward<sup>2</sup> a year or more before any discussion of the possible genetic situations. Fisher's essential contribution lies in his postulation of three pairs of antigens, the antigens of each pair separately behaving as though they were the products of a pair of allelomorphous genes. Neither the validity nor the great



convenience of Fisher's notation depends on the precise cytological basis of these facts. The most likely explanation consists in the existence of three very closely linked loci, but one cannot at present rule out the possibility of some such mechanism as that of a single gene with three side-chains each capable of variation. Even for this type of mechanism, Fisher's notation would give a more complete and convenient specification than that of Wiener. It should also be pointed out that Wiener's present nomenclature differs greatly from that originally put forward, and a claim of priority for it can scarcely be based on the fact that his original system was published before that of Fisher.

The compromise reached is an advance on previous American practice, and indirectly will do much to enable workers on the *Rh* factor in different parts of the world to understand one another's language. It is, however, to be regretted that Fisher's notation is relegated to parentheses; while its obvious advantages will ensure its use in research work, the first name on the label will tend to be perpetuated among clinical pathologists.

A. E. MOURANT

<sup>1</sup> Castle, W. B., Wintrobe, M. W., and Snyder, L. H., *Science*, **107**, 27 (1948).

<sup>2</sup> Fisher, R. A., personal communication cited by Race, R. R., *Nature* **158**, 771 (1944).

## PROPOSED INSTITUTE OF RECORDED SOUND

THE Association of Special Libraries and Information Bureaux has taken the initiative, in response to a large number of requests, of calling together representatives and individuals known to be interested in the formation of a permanent means of collecting, and making available to students and others, documentary and artistic material in the form of recorded sound. A meeting was therefore held on March 3 to discuss the matter, and to ascertain what is practicable now and in the near future.

Mr. Frank Howes (president of the Royal Musical Association), as chairman, gave an outline of the proposals already put forward in general terms, and the usefulness of such a potential organisation, started perhaps on the lines of the British Film Institute, was detailed by representatives of such important bodies as the British Museum, the British Council, the British Broadcasting Corporation (which uses sound recording on an immense scale in many forms), the National Register of Archives, the Scientific Film Association, the English Song and Folk Dance Society, the International Folk Music Council, departments of the University of London interested in languages, the commercial and private recording companies, the professional societies, and other individuals.

Mr. A. P. H. Saul described how collections of recorded material have been built up elsewhere, both on the Continent, especially Vienna, over the past fifty years, in Berlin and in the United States; but facilities are totally lacking in Great Britain. As a consequence valuable historical material is being lost, or at the best dispersed in private collections, of which no information is readily available. The interpretations of musicians, the voices of statesmen and poets, the remoter languages, the interesting cases of defective speech, and strange music of other lands are probably all available somewhere, but are denied to serious students of history, anthropology and phonetics.

Since practice is often better than mere precept, the value of such records was demonstrated most effectively by Mr. H. L. Fletcher, who played montage records, with comments, made that morning, from material received from a number of sources. Thus were reproduced the voices of Lloyd George, Asquith, James Joyce, Woodrow Wilson, Vesta Tilly (all pre-1914), Japanese music, an original 1660 pipe organ, a man of eighty recalling the original tune of "Brigg Fair", and modern poets. Also the voices of Gladstone, and, of course, all singers since 1900 are known to be available.

Questions of the copyright in reproductions for practical use, storage, finance, interchange with other countries, research and relations with other interested bodies were generally discussed. The meeting constituted itself a provisional council, having approved the idea that such an institute should go forward, and appointed a committee to study details and make a report.

With Mr. F. Howes as chairman the following were appointed to this exploratory committee: Mr. P. May (A.S.L.I.B.), Mr. A. P. H. Saul, Dr. D. B. Fry (Phonetics Department, University College, London), Mrs. J. Lancaster-Jones (British Council), Mr. D. Shawe-Taylor, Mr. A. C. Cameron (Educational Department, Electric and Musical Industries, Ltd.), Mr. H. L. Fletcher (Association of Professional Recording Studios) and Dr. L. E. C. Hughes (British Sound Recording Association).

## FORTHCOMING EVENTS

(Meeting marked with an asterisk \* is open to the public)

### Tuesday, March 30

MANCHESTER GEOGRAPHICAL SOCIETY (in the Geographical Hall, St. Mary's Parsonage, Manchester), at 6.30 p.m.—Mr. H. E. Faulkner: "The East India Company".

SOCIETY OF INSTRUMENT TECHNOLOGY (at the Royal Society of Tropical Medicine and Hygiene, Manson House, 26 Portland Place, London, W.1), at 6.30 p.m.—Mr. S. S. Carlisle and Mr. B. O. Smith: "An Experimental Electrical Pressure Meter for Measurement of Furnace Roof Differential Pressures".

ROYAL PHOTOGRAPHIC SOCIETY, SCIENTIFIC AND TECHNICAL GROUP (at 16 Prince's Gate, London, S.W.7), at 7 p.m.—Symposium on "Modern Techniques in Stereoscopy and their Applications".

### Wednesday, March 31

MANCHESTER LITERARY and PHILOSOPHICAL SOCIETY, SOCIAL PHILOSOPHY SECTION (in the Portico Library, 57 Mosley Street, Manchester), at 5.30 p.m.—Mr. N. S. Hubbard: "The Place of Philosophy in Christian Civilization".\*

BRITISH INSTITUTION OF RADIO ENGINEERS, MERSEYSIDE SECTION (at the Liverpool Engineering Society, 9 The Temple, 24 Dale Street, Liverpool), at 6.45 p.m.—Mr. J. B. Birks: "The Physical Applications of Micro-Waves".

### Thursday, April 1

MINERALOGICAL SOCIETY (at the Geological Society of London, Burlington House, Piccadilly, London, W.1), at 5 p.m.—Scientific Papers.

INSTITUTION OF ELECTRICAL ENGINEERS (at Savoy Place, Victoria Embankment, London, W.C.2), at 5.30 p.m.—Mr. R. J. Halsey and Dr. J. H. Swaffield: "Analysis-Synthesis Telephony with Special Reference to the Vocoder".

INSTITUTION OF CIVIL ENGINEERS, NORTH-WESTERN ASSOCIATION (at the Engineers' Club, Albert Square, Manchester), at 6.30 p.m.—Mr. F. D. C. Henry: "The Development of Motorway Projects".

ROYAL STATISTICAL SOCIETY, SHEFFIELD GROUP OF THE INDUSTRIAL APPLICATIONS SECTION (in Room B1, Department of Mechanical Engineering, The University, St. George's Square, Sheffield), at 6.30 p.m.—Mr. G. Komlosy: "The Application of Statistical Quality Control to a Steel Strip Mill".

### Thursday, April 1—Saturday, April 3

SCIENCE MASTERS' ASSOCIATION, SCOTTISH BRANCH (at the University, Glasgow).—First Annual General Meeting.