

THE BRITISH SCIENCE GUILD.

AN organisation is being formed, under the name of the British Science Guild, with the object of insisting upon the importance of applying scientific methods to every branch of the affairs of the nation. A memorandum which describes briefly the objects, methods, and proposed organisation of the Guild is now being circulated, and is as follows:—

It has been a frequent subject of comment that, although the contribution of this country to the progress of science has been second to that of no other nation, the English people do not manifest that interest in, and belief in the powers of science which is noticeable among the peoples of the Continent, or of America. In spite of the efforts of many years, the scientific spirit, essential to all true progress, is still too rare, and, indeed, is often sadly lacking in some of those who are responsible for the proper conduct of many of the nation's activities. It is with the view of attempting to remedy this evil, and to bring home to all classes the necessity of applying scientific treatment to affairs of all kinds, that the proposal is made to bring together those convinced of this necessity by founding "The British Science Guild."

The objects and organisation of the Guild, which will be entirely disconnected from party politics, are as follows:—

OBJECTS.

(1) To bring together as members of the Guild all those throughout the Empire interested in science and scientific method, in order, by joint action, to convince the people, by means of publications and meetings, of the necessity of applying the methods of science to all branches of human endeavour, and thus to further the progress and increase the welfare of the Empire.

(2) To bring before the Government the scientific aspects of all matters affecting the national welfare.

(3) To promote and extend the application of scientific principles to industrial and general purposes.

(4) To promote scientific education by encouraging the support of universities and other institutions where the bounds of science are extended, or where new applications of science are devised.

Methods of Attaining these Objects.

- (a) By publications.
- (b) By meetings.
- (c) By conferences and lectures.
- (d) By deputations.

ORGANISATION.

Admission of Members.

All British subjects, both men and women, are eligible for membership of the Guild; it is expected, however, that its members will be recruited principally from the following:—

- The House of Lords.
- The House of Commons.
- Colonial Legislatures.
- County, District, Borough, and Parish Councils; Municipalities; Educational Committees.
- Scientific and Literary Societies and Organisations.
- Commercial and Industrial Chambers and Organisations.
- The Learned Professions.
- Universities, Colleges, Educational Bodies and Graduates of all British Universities.
- Representatives of Labour.

At a meeting of the promoters of the Guild, held, by permission of the officers, at the rooms of the Royal Society on April 20, it was decided that the steps pre-

liminary to the formation of the Guild should be taken by an organising committee, of which the following were appointed members, with power to add to their number:—

- LORD AVEBURY, F.R.S.
- PROF. W. E. AYRTON, F.R.S.
- SIR GEORGE SYDENHAM CLARKE, K.C.M.G., F.R.S.
- CAPTAIN E. W. CREAK, R.N., C.B., F.R.S.
- MR. CLIVE CUTHBERTSON.
- DR. WILLIAM GARNETT.
- MR. SIDNEY LEE.
- SIR NORMAN LOCKYER, K.C.B., F.R.S.
- LADY LOCKYER.
- MR. N. MACCOLL.
- PROF. RAPHAEL MELDOLA, F.R.S.
- SIR GILBERT PARKER, M.P.
- PROF. J. PERRY, F.R.S.
- SIR WILLIAM RAMSAY, K.C.B., F.R.S.
- DR. W. N. SHAW, F.R.S.
- PROF. S. P. THOMPSON, F.R.S.
- DR. AUGUSTUS WALLER, F.R.S.
- SIR HENRY TRUEMAN WOOD.

The organising committee has elected Sir Norman Lockyer president, Lord Avebury honorary treasurer, Lady Lockyer honorary assistant treasurer, and Mr. C. Cuthbertson honorary secretary.

It was resolved that life members of the Guild shall pay, on admission, two guineas, which includes a registration fee of 2s. 6d., and that annual subscribers shall pay, on admission, 5s., and in each subsequent year 2s. 6d. It was also resolved that donations may be accepted.

The committee is now engaged in communicating with those corporate bodies and individuals whose support and sympathy are desired.

A general committee will be appointed, which will subsequently select from among its members an executive committee for the management of the affairs of the Guild. The executive committee will meet from time to time as their chairman may direct, and will formulate such rules as experience may suggest for the approval of the general committee.

The general committee will probably take power to appoint or approve local and special committees, which will act as branches of the Guild.

The following have already signified their general approval of the objects and proposed organisation of the Guild:—

- THE RIGHT HON. LORD ALVERSTONE, G.C.M.G.
- THE RIGHT HON. LORD AVEBURY, F.R.S.
- PROF. AYRTON, F.R.S.
- SIR JOHN WOLFE-BARRY, K.C.B., F.R.S.
- DR. W. T. BLANFORD, F.R.S.
- SIR JAMES BLYTH, BART.
- MR. BRABROOK, C.B.
- SIR GEORGE BIRDWOOD, K.C.I.E.
- SIR JOHN BRUNNER, BART.
- SIR LAUDER BRUNTON, F.R.S.
- MAJOR-GENERAL SIR OWEN TUDOR BURNE, G.C.I.E.
- SIR EDWARD BUSK.
- MR. R. H. CAIRD.
- SIR WILLIAM CHURCH, BART., K.C.B.
- SIR GEORGE SYDENHAM CLARKE, K.C.M.G., F.R.S.
- THE HON. SIR JOHN COCKBURN, K.C.M.G.
- CAPTAIN CREAK, R.N., C.B., F.R.S.
- MR. CLIVE CUTHBERTSON.
- PROF. W. E. DALBY.
- DR. FERRIER, F.R.S.
- SIR MICHAEL FOSTER, M.P., F.R.S.
- DR. WILLIAM GARNETT.
- SIR ARCHIBALD GEIKIE, F.R.S.
- SIR ROBERT GIFFEN, K.C.B., F.R.S.
- MR. HAMMOND-CHAMBERS, K.C.
- PROF. HERDMAN, F.R.S.
- PROF. J. LARMOR, F.R.S.
- DR. SIDNEY LEE.

SIR NORMAN LOCKYER, K.C.B., F.R.S.
 LADY LOCKYER.
 DR. LOCKYER.
 MR. MACCOLL.
 PROF. R. MELDOLA, F.R.S.
 SIR A. NOBLE, BART., K.C.B., F.R.S.
 SIR GILBERT PARKER, M.P.
 PROF. PERRY, F.R.S.
 SIR WILLIAM RAMSAY, K.C.B., F.R.S.
 THE LORD REAY, G.C.S.I.
 SIR WEMYSS REID.
 SIR WILLIAM RICHMOND, K.C.B., R.A.
 MR. E. ROBERTSON, M.P.
 SIR HENRY ROSCOE, F.R.S.
 SIR A. RÜCKER, F.R.S.
 DR. W. N. SHAW, F.R.S.
 MR. ALEX SIEMENS.
 THE LORD STRATHCONA AND MOUNT ROYAL.
 SIR L. ALMA TADEMA, R.A.
 PROF. SILVANUS P. THOMPSON, F.R.S.
 DR. A. D. WALLER, F.R.S.
 FIELD MARSHAL VISCOUNT WOLSELEY, G.C.B.
 SIR HENRY TRUEMAN WOOD.

NEW REGULATIONS OF THE BOARD OF EDUCATION.

NO system of national education is complete which fails to recognise the essential importance of the work of the satisfactory secondary school. Its importance, that is, both as providing a means by which the exceptionally well endowed boys and girls of the elementary schools may continue their education under better conditions, and also as affording an adequate preparation for those pupils who later will become technical students and university undergraduates, or who will without further instruction enter upon the active duties of life. The recent Education Act gave an official recognition to what has long been urged by those who understand our educational needs, that true education from beginning to end is an organic whole. The duty has, in fact, been laid upon the Board of Education of superintending and promoting the supply by local education authorities of education other than elementary. The Board is now the final court of appeal in all matters pertaining to the administration of secondary education.

It is considerations such as these which lead us to regard the regulations¹ recently issued by the Board of Education for the government and administration of English secondary education as one of the most important of the educational documents of recent years. For, since the Board is in a position to reward by substantial grants a due adherence to the regulations here formulated, it is clear that the principles advocated officially will, whether they are right or wrong, exercise a profound influence upon the curriculum and ideals of the schools.

Such being the case, it is gratifying to find that on the whole the regulations are framed on broad and liberal lines, though, as we shall have occasion to indicate, there are dangers which it is imperative those in authority should avoid, and indications that the claim of instruction in scientific method to a place in every stage of education may be disregarded if certain phrases in the regulations are followed too literally.

It will serve to give a clearer idea of the influence the regulations are likely to exert if an attempt is made first to review some of the definitions put forward in the official publication. A secondary school is described as

"any Day or Boarding School which offers to each of its scholars, up to and beyond the age of sixteen, a general

¹ "Regulations for Secondary Schools (from August 1, 1904, to July 31, 1905)." [Cd. 2128.] Price 2d.

education, physical, mental and moral, given through a complete graded course of instruction of wider scope and more advanced degree than that given in Elementary Schools."

Explaining what should be the characteristics of a secondary school course of instruction, the prefatory memorandum to the regulations states that it should be general, complete, and graded in its various branches. The explanation as to the precise meaning to be attached to the description "general" deserves—both because of its fairness and catholicity—to be quoted in full:—

"The instruction must be general; i.e. must be such as gives a reasonable degree of exercise and development to the whole of the faculties, and does not confine this development to a particular channel, whether that of pure and applied Science, or literary and linguistic study, or of that kind of acquirement which is directed simply at fitting a boy or girl to enter business in a subordinate capacity with some previous knowledge of what he or she will be set to do. A Secondary School should keep in view the development and exercise of all the faculties involved in all these different kinds of training, and will fail to give a sound general education to its scholars in so far as it sends them out, whether to further study or to the business of life, with one or other of these faculties neglected, or with one developed at the expense of the rest. Specialisation in any of these directions should only begin after the general education has been carried to a point at which the habit of exercising all these faculties has been formed and a certain solid basis for life has been laid in acquaintance with the structure and laws of the physical world, in the accurate use of thought and language, and in practical ability to begin dealing with affairs."

Secondary education such as is outlined in this paragraph will meet with the approval of every man of science. Education conducted on scientific lines is that which gives a "reasonable degree of exercise and development to the whole of the faculties." If the Board takes care that in interpreting its regulations in the schools the inspectors strive to secure this all-round, healthy mental development of English boys and girls, the hearty cooperation and sympathy of men of science may be depended upon. For to ensure the exercise and development of all the faculties, a training in experimental science is necessary, just as a course in literary and linguistic studies is essential. As the quotation shows, the Board of Education is aware that for a complete education many studies are required, each with its own object and special work. It is important to bear in mind also that the main groups of studies cooperating for the complete education of the child are of equal importance. Just as the study of literature and language can promote the growth of and strengthen some faculties to which practical studies are unable to appeal, so a training in experimental science is the best and only means of ensuring the healthy unfolding of other sides of the human brain. The classical scholar ignorant of the laws and phenomena of nature is an uneducated man, just as is a man of science who has no knowledge of the literature of his own and other countries.

This view of true education is admirably set forth in the statement prepared by the president of the British Association, and revised by a committee including the deputy Vice-Chancellor of the University of Oxford, the Vice-Chancellor of the University of Cambridge, and representatives of the modern English universities, for presentation to the Prime Minister by the recent deputation which waited upon him with reference to increased State aid for university education.

"The men upon whom the nation must chiefly depend for aid under the complex conditions of the modern world must not be entirely untrained in the study of the nature and causes of the things which surround them, or of the