

BRITISH LABORATORY GLASS-WARE.

AT the outbreak of the war the manufacture of glass for chemical and physical purposes was practically a monopoly of "the Central Powers," and, since most British apparatus dealers replenish their stocks in the summer, the supply available in August, 1914, was very limited. Realising the gravity of the situation, the British Science Guild and the Association of Public School Science Masters approached the leading educational authorities asking them to undertake to buy only glass of British manufacture during the war and for three years after it ended; the response was very satisfactory, and more than 75 per cent. of the schools represented on the Headmasters' Conference gave the required promise.

While this action was being taken the majority of the firms of apparatus dealers formed "The British Laboratory Ware Association," which enlarged some of the existing glass houses, and has placed some very satisfactory material on the market. Messrs. Baird and Tatlock decided, however, to open new glass houses of their own at Walthamstow, instead of joining the association; these houses are now in full working order, and the firm has just issued a catalogue. The glass is of two qualities: (1) a hard, boro-silicate glass of practically the same composition as Jena, from which they manufacture flasks, beakers, etc.; and (2) a soda glass, which is principally used for drawing tubing. We have used apparatus made from each material, and find it thoroughly satisfactory in every respect; their "Duroglass" beakers and flasks stand sudden changes of temperature fully as well as did those made abroad, whilst their shape compares very favourably with the early attempts of the British glass-blowers; their soda glass tubing is easy to work, as it shows no sign of devitrifying in the flame, a property which will be much appreciated by those who experimented with British glass tubing fifteen months ago.

Unfortunately the prices charged by both the British Laboratory Ware Association and Messrs. Baird and Tatlock are considerably higher than those charged for Bohemian glass before the war; and if the trade is to remain in this country it will be necessary for a substantial reduction to be made when conditions are once more normal. Without entering upon the political aspect of the case, we sincerely trust some means will be devised for preventing our works and laboratories again becoming dependent upon foreign supplies.

SCIENTIFIC AND INDUSTRIAL RESEARCH.

WORK OF THE ADVISORY COUNCIL.

IN order that the Advisory Council may be in a position to do justice to the branches of industry concerned in proposed researches of great importance which have been submitted to the council by institutions and individuals, it has decided to appoint standing committees of experts. Strong committees in mining and metallurgy have already been constituted, consisting both of scientific men and of leaders of the industries concerned. The Mining Committee will have two sections, dealing respectively with the mining of non-metals and the mining of metals. Sir William Garforth, the well-known coalowner, has accepted the chairmanship of the committee and of the non-metals section; and Mr. Edgar Taylor, of the firm of John Taylor and Sons, owners and managers of metalliferous mines in various parts of the world, has accepted the chairmanship of the metals section. The Metallurgy Committee will also have two sections, dealing in this case with ferrous and non-

ferrous metals respectively. Sir Gerald Muntz, Bart., of Muntz Metal Co., Ltd., Birmingham, has accepted the chairmanship of the committee and of the non-ferrous section; and Sir Robert Hadfield, of Hadfield's, Ltd., Sheffield, has accepted the chairmanship of the ferrous section. The Advisory Council hopes at an early date to constitute a similar committee for engineering.

Up to the present the council has been engaged in work which is mainly initiatory and preparatory in character. For example, in order that investigations already in progress should so far as possible be carried on in spite of the war, scientific and professional societies were invited to submit applications for aid to continue researches for which the necessary staff and equipment were obtainable. Grants have already been made, or will shortly be made, to the Institution of Mechanical Engineers (hardness tests and the properties and composition of alloys), to the Institution of Electrical Engineers (heating of buried cables and the properties of insulating oils), to the Institute of Chemistry (laboratory glass and optical glass), to the Institution of Mining and Metallurgy (methods of extracting tin and tungsten), to the Institute of Metals (corrosion of non-ferrous metals), to the Institution of Gas Engineers (refractory materials), to the Manchester Association of Engineers (tool steel experiments), and to the National Physical Laboratory (optical glass). Other proposals of the same type are still under consideration. Timely and valuable results have been quite recently obtained from the researches carried out by Prof. Herbert Jackson under the auspices of the Institute of Chemistry and from the researches carried out at the National Physical Laboratory by Dr. Rosenhain. The Advisory Council has also recommended a grant in aid of an important new research into the manufacture of hard porcelain, especially for domestic purposes. This has been undertaken by the governing body of the Stoke-on-Trent Central School of Science and Technology, in conjunction with the Staffordshire Potteries Manufacturers' Association, with a view to the establishment of the manufacture of hard porcelain in this country.

Particulars have been obtained of the research work not only of the scientific and professional societies, but also of the universities and higher technical schools, with a view to the establishment of a register of research. The possibility of proceeding to collect in the near future information under seal of confidence as to the research work of particular firms is also being considered.

The training of an adequate supply of research workers will be an important branch of the Advisory Council's work, and the steps to be taken for that purpose will require much careful thought. It is impossible to announce definitive plans during the war, but the Advisory Council is so much alive to the urgency of the matter that it has thought it necessary to take immediate interim action, and has, therefore, made recommendations which, if adopted, will, it is believed, secure that all that is practicable in existing circumstances shall be done.

CHEMISTRY AND NATIONAL PROSPERITY.¹

THE remark of a French *savant* that this was a country where the apothecaries call themselves chemists, might, as one of the consequences of the war, become less pointed than formerly. But it would be an even greater consequence if in future ours ceased to be a country where money was synonymous with

¹ Abstract of an address to the Aberdeen Chamber of Commerce on February 8, by Prof. F. Soddy, F.R.S.