

(2000 francs), for the relief of unfortunate scientific men or their immediate relations; the Gustave Roux prize (1000 francs), for a young French scientific worker; the Trémont prize (1100 francs); the Wilde prize (one prize of 4000 francs and two of 2000 francs), awarded without distinction of nationality for work in astronomy, physics, chemistry, mineralogy, geology, or experimental mechanics; the Lonchamps prize (4000 francs), for the best memoir on work on the diseases of man, animals, or plants from the special point of view of the introduction of mineral substances in excess as the cause of these diseases; the Saintour prize (3000 francs), for work in the physical sciences; the Henri de Parville prize (2500 francs) for original scientific work or publication; the Victor Raulin prize (1500 francs), for assisting the publication of work relating to geology and palæontology; the Houllé-vigue prize (5000 francs); the Caméré prize (4000 francs), to a French engineer for improvements in the art of construction; the Jérôme Ponti prize (3500 francs); the Bordin prize (3000 francs), the subject proposed for 1916, researches relating to the determinism of sex in animals; the Parkin prize (3400 francs), for researches on the curative effects of carbon in various forms, and more especially in gaseous form of carbon dioxide, in cholera, the different forms of fever or other diseases, or, as an alternative subject, for researches on the effects of volcanic action in the production of epidemic diseases in the animal and vegetable kingdoms and in causing abnormal atmospheric disturbances; the Jean Reynaud prize (10,000 francs); the Baron de Jouest prize (2000 francs), for a discovery useful to the public welfare; the prize founded by Mme. la Marquise de Laplace (a complete collection of the works of Laplace) to the first student leaving the Ecole Polytechnique; the Felix Rivot prize (2500 francs), divided between the four students leaving each year the Ecole Polytechnique with the first and second places in the section of Mines and of Ponts et Chaussées.

THE ENGLISH CERAMIC SOCIETY.¹

THE English Ceramic Society, to judge from the latest issue of its Transactions, still continues to do excellent work. Although the present number contains no article of first-rate importance, it is obvious from the general character of the communications, and the nature of the discussions by which they are followed, that the members are fully alive to the value of the society in promoting exchange of experience and opinion on the many obscure problems with which the art and craft of the potter is beset. No indication of the health and vigour of the society could be more significant than the manner in which individual knowledge and experience are made to contribute to the general benefit of the industry. Such a spirit has been far from the rule in times past, for in no other industry have trade secrets and little details of practice been more jealously guarded than in potting. The enlightened example of the society will do much to break down this absurd exclusiveness and short-sighted selfishness. If each thus contributes to the common stock, the general welfare is increased, and the position of the industry as a whole is enhanced, to the collective benefit of the manufacturers and the country generally. In this respect we have something to learn from our enemies. The spirit of co-operation has largely contributed to raise manufacturing in Germany to the formidable position it has gained. If we are to maintain, and especially

¹ "Transactions of the English Ceramic Society," Vol. xiii, Session 1913-14. (Stoke-on-Trent: Hughes and Harber, Ltd., 1914). Price to non-members, 30s.

if we are to increase our pre-eminence as the largest traders in the world, this spirit of co-operation and mutual helpfulness must continue to prevail, and to grow.

The communications in the present issue of the Transactions call for no special comment. The "Symposium on Fineness of Grinding" brought out a considerable difference of opinion as to the relative merits of cylinder- and pan-grinding, and as to the influence of the fineness of the particle on plasticity, contraction, texture, porosity, and "crazing"—all of them points which are capable of a satisfactory solution if attacked experimentally in a scientific manner. These are typical of the kind of problems with which the County Pottery Laboratory at Stoke-on-Trent may be expected to concern itself. The discussion on grinding bore unmistakable testimony to the influence of the human element, especially in pan-grinding. That influence was no less marked in the course of the discussion on "firing," and of the relative importance of "tops" and "bottoms," where opinion was equally divided. The average "fireman" may be (and evidently is in the opinion of some) a rather perverse and obstinately conservative kind of individual, wholly wedded to traditional practice, but if this volume falls into his hands, he may at least be able to retort that he knows more about firing than his betters seemed to know about French on the occasion of their visit to the pot-banks of our Ally! *Verb sap.* T.

EDUCATION IN RELATION TO INDUSTRY AND COMMERCE.¹

Our First Purpose.

WE are now in the midst of the greatest struggle that the British Empire has ever been engaged in. The outcome of the struggle involves not only our existence as a nation, but the existence of those principles and ideals of life and government which we hold dear. Our energies, individual and national, must for the moment all be turned to one purpose, to bring the war to a successful conclusion. The men who are fighting at the front are doing magnificent work, but it is for each of us in his own sphere to do his share in order that at the earliest possible moment the world may be free from the terrors of the war.

In time, peace will come. With that peace there will be renewed the international struggle for trade, and British enterprise must be ready to take full advantage of the great opportunities that will then occur. Individual effort will not be of any great use. Concerted action is essential if we are to retain the foremost place in the world of trade; and just as we are vigorous in the pursuit of the present war, so as a nation must we be vigorous in the pursuit of industrial and commercial supremacy.

The Industrial Army.

How is this supremacy to be attained? It is primarily a question of education. We must have in the first instance an industrial army, capable, alert, and well trained. The production of this army must begin in the elementary schools. The leaving age of school children, for urban districts at least, must be raised to fourteen years, and age must be made the only leaving qualification. Moreover, the children should leave at the end of the educational year in which they reach the leaving age, or, at any rate, they should leave only at the end of the school term in which the leaving age is reached. For this reform we must look to Parliament, as it is impossible for a

¹ Address delivered before the National Association of Education Officers on January 1 by the president, Mr. James Graham.