

## LETTERS TO THE EDITOR.

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**The Explosion at Bailleul.**

THE reports referred to in NATURE of August 28 (p. 511) of the effects observed at Denmark Hill, Norwich, and elsewhere by the explosion of a munition dump at Bailleul at 1.10 p.m. G.M.T. on August 8 suggest that these effects were due mainly to earth tremors caused by the explosion, since the rattling of windows, extending in one case throughout two and a half minutes, is alone mentioned. Here, however, at Harpenden, and also at Luton and Stevenage, an actual sound of a very marked character was heard. The first impression produced in my own case was that a ceiling or heavy picture had fallen in one of the upper rooms, and I at once went round the house to ascertain if that was the case. Everyone in the immediate neighbourhood seems to have heard the noise equally clearly, and it was very generally attributed at first to an explosion of a factory or munition dump four to six miles distant. The noise, which may have lasted two seconds, was preceded by a lesser sound, or perhaps only a tremor, which made one anticipate that something was coming. This, of course, is usual in the case of explosions.

SPENCER PICKERING.

Harpenden, Herts.

**British Well-worms.**

FROM facts which have recently come to light, I am led to believe that there is a good deal yet to be learned about the Oligochaets which occur in our wells and water-supplies. It is now many years since I directed attention to the occurrence of *Pachydrilus (Lumbricillus) subterraneus*, Vejd., in tap-water and elsewhere. The first well-worm to be discovered in the country was named by me *Diachaeta curvisetosa*. It was afterwards discovered that it belonged to the Haplotaxidæ, and is now known as *Haplotaxis curvisetosa*, Friend. In spite of Michaelsen's conclusion to the contrary, this is quite a distinct worm from *Haplotaxis gordioides*, which I have found in this country. Another well-worm, the description of which may be expected to appear shortly in the Quarterly Journal of the Microscopical Society, is *Anagaster fontinalis*, Friend, which has been found in East Anglia. I have notes of other species of worms found in water, including Rhynchelmis, taken in Hampshire, and some which have not been named for want of perfect material. As I am now engaged on the preparation of a monograph of British Oligochaets, it seems very desirable that our knowledge of this branch of the subject should be perfected, and it would be esteemed a great favour if persons who find worms in their wells, pumps, taps, and water-supply would send me the same for identification and record.

HILDERIC FRIEND.

"Cathay," Solihull, August 29.

**THE PROTECTION OF OUR "KEY" INDUSTRIES.**

IT has long been foreseen that one of the immediate consequences of peace would be to subject this country to a flood of manufactured articles from Germany. It has been known for some time past that German manufacturers were preparing, by every means in their power, to

recover and retain their former hold on our home markets. They were steadily accumulating stocks to be "dumped" in Great Britain on the first possible opportunity. It was a policy of despair, but it was the only policy open to them. The salvation of certain of their industries depended on their being able to thwart, by fair means or foul, the expansion of such of these industries as the exigencies of war had called into existence in this country. Our national welfare, indeed, was bound up in these industries. The country was quick to recognise their importance, and the Government responded to public pressure by the steps it took to foster their initiation and development. Some of these steps were of paramount necessity as war measures, but they had a still wider significance. With the outbreak of war the Empire realised, as never before, that it had in large measure failed to perceive the full importance of the bearing of science upon industry. Owing to a variety of causes on which it is no longer necessary to dwell, we had allowed our chief enemy to take over and gradually to obtain almost exclusive possession of certain "key" industries depending upon the applications of physical science, such as the manufacture of synthetic dyestuffs and drugs, analytical reagents and other chemical products, optical glass and instruments, electrical apparatus and magnetos, etc. We had become wholly dependent upon Germany for a large number of articles comprised under these categories which are absolutely essential to the prosecution of war under modern conditions. It speaks volumes for the innate genius of our race that our men of science and our manufacturers, when thus confronted with a national emergency, should have responded as they did to the country's call. We have not only triumphed over difficulties which at one time seemed well-nigh insuperable, but, as is well known, we have also in many cases bettered the example of our enemies, and certain of our manufactured articles have reached a pitch of excellence which Germany never attained.

This pre-eminence—the fruit of so much anxiety and toil—ought surely to remain with us. Our legislators would be false to their trust if they allowed political expediency and party faction to rob the country of the position it has now gained through the circumstances and fortune of a war which was thrust upon it. The common sense of the nation demands that those industries which we have been compelled by the necessities of this war to establish by a great expenditure of effort and capital, and which are everywhere recognised as no less important in times of peace, should be preserved and fostered. "Never again" has become a watchword. But, even apart from any question of security, the country would be blind to its opportunity if it allowed these "key" industries to fall back into their pre-war condition. The few years of their existence are, however, too short to have brought them into a position of stability. There is an enormous amount of leeway to make up. One

cannot expect in four years to reach the position which it has taken forty years of organisation, skill, and enterprise on the part of Germany to secure.

The country, therefore, will welcome the steps which the Board of Trade has taken, in conformity with the Prime Minister's recent statement in Parliament, to protect goods manufactured in Great Britain and Ireland against "dumping," and to check any flood of imports (for instance, from Germany) that might arise from a collapse of exchange so disproportionate to costs of production in the country of origin as to enable sales to take place in this country at prices altogether below costs of production here. It is, of course, too much to expect that this action will pass unchallenged. There is a school of politicians in this country who, like the Bourbons, learn nothing and forget nothing. They are a decreasing faction, it is true, and recent events have tended to submerge the survivors. In a few years they will be as extinct as the dodo. It is a significant fact that the fiscal tenets of the Manchester School are never cherished by a real democracy.

Pending the legislation which is to be introduced into Parliament when it reassembles in the autumn, the Board of Trade under the powers conferred upon it will, as from September 1, 1919, prohibit the importation into the United Kingdom of synthetic dyestuffs, drugs, and "intermediates" needed in their manufacture; also synthetic flavourings and perfumes, synthetic photographic chemicals, and a considerable number of inorganic products and medicaments of which the manufacture had to be started in this country in consequence of the war, and which German manufacturers had intended to "dump" into this country as soon as trade relations were re-established.

In addition to the chemical products enumerated in the schedule of the proclamation, the Board of Trade is taking steps to protect the new industries dealing with optical glass, scientific glassware, laboratory porcelain, and a number of products of which the Germans, by various means, some of them of a very dubious character, had secured a monopoly. This action will, no doubt, occasion great perturbation in the Teutonic mind. It may even amount to dismay. The enemy had probably calculated, and as usual miscalculated, on prejudices which occasionally seem to obscure the recognition of our true interests as a trading community. "'Tis sport to have the engineer hoist with his own petar."

#### THE ORGANISATION OF RESEARCH.

PART of the scheme devised by the Department of Scientific and Industrial Research for the administration of the funds placed at its disposal by Parliament was the formation of associations among groups of manufacturers, and a conference was held on July 29 of representa-

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tives of the associations already formed for the purpose of discussing some of the many problems which have presented themselves in connection with their work.

In the absence of Mr. H. A. L. Fisher, President of the Board of Education, the chair was taken by Sir William McCormick, chairman of the Advisory Council. Sir Frank Heath, secretary of the Department of Scientific and Industrial Research, was also present, besides some sixty to seventy representatives. A great diversity of subjects was thus represented, though some, especially the great chemical industries, were conspicuously unrepresented.

The meeting was informed that nine research associations were in operation, eight more have been approved and are only waiting the licence of the Board of Trade, while twelve others are under discussion. So much having been accomplished in the three years which have elapsed since the idea originated, it may be assumed that a general approval has been given to the scheme by the industrial world, but the initial difficulties are far from being overcome as yet.

Among the subjects discussed at the conference the first was the formation of a records bureau, and the second the difficult and important one of the conditions of employment of research workers engaged by the associations. Other questions related to co-operation among the associations, and the amount and method of assessment of the subscriptions to be paid by the associated firms in addition to the subsidy from departmental funds.

The formation of a bureau of information and for the recording of results secured by research is a matter of the utmost importance. In the first place it is proposed that its task should consist in storing up the results of work done by the associations, but even this will be found very expensive and not free from difficulties, owing to the views prevalent in some quarters as to secrecy. The associations require access to information of every kind, and apparently the representatives assembled have something to learn with regard to the existing sources of much of the information they require, for throughout the discussion no reference was made to the magnificent journals, containing both original papers and abstracts, issued by some of the British and American engineering and chemical societies. It seems to be recognised that a large number of reference libraries will have to be established, especially in the neighbourhood of great centres of industry; but it ought also to be understood that every association will require a library stored with works of reference, and especially journals cognisant of the subjects it represents; indeed, every works which has a laboratory for research must be similarly provided. All this represents a large outlay of money, the amount of which can scarcely be calculated as yet.

The other serious point under discussion concerned the interests of the separate associations, and perhaps more particularly those of the in-