

THURSDAY, JUNE 4, 1891.

*THE BRITISH INSTITUTE OF PREVENTIVE MEDICINE.*

THE progress of bacteriological science, and the amount of exact information which it has shed upon the problems of disease during the last fifteen years, have led several of the Governments of the Continent and America to establish institutes providing for original research, as well as technical instruction, in preventive medicine.

This country, on the other hand, which pioneered sanitary science from its birth, has, strangely enough, been distinctly behindhand in the study of bacteriology (fraught as it is with interest of such vital importance to the health and prosperity of the nation); and of the provision of institutes of the kind which have been established abroad, such as the Pasteur Institute in Paris, the Hygienische Institut in Berlin, Königsberg, Breslau, Wiesbaden, St. Petersburg, Moscow, Odessa, Tiflis, Warsaw, Cracow, Naples, Turin, Rome, Milan, Palermo, Malta, Barcelona, Constantinople, Bucharest, Budapest, Rio Janeiro, New York, Washington, we have no example in the United Kingdom. In these institutions, the study of the morphology, biology, physiology, and chemistry of micro-organisms, whether pathogenic or not, is being actively pushed forward, and a thorough analysis of their subtle influence as causative factors of disease pursued.

In this manner the poisons of the following maladies, the effects of which are among the direst evils to humanity, viz. pyæmia, anthrax, erysipelas, septicæmia, glanders, tubercle, diphtheria, &c., have been isolated, and discovered to be micro-organisms which are now known certainly to be the active principle of the virus. When we reflect that, for centuries and centuries, the crippling effects of epidemic and devastating diseases have been only too well known, but attributed to the operation of all manner of causes, e.g. supernatural agencies, Divine wrath, meteorological and climatic influences, &c., &c., the fact that the real truth concerning the nature of their causes has been ascertained only within the last few years by laboratory research is, in itself, overwhelmingly expressive of the immense value of Bacteriological Institutes and their work.

But their value does not stop here. Knowing, as thanks to bacteriology we now do, the origin of these diseases, it may be asked what has the same science done towards stamping them out and preventing their development, or haply arresting their progress should they unfortunately gain access to, and invade, the tissues of the body. To express ourselves more plainly, the question might be put in this form, "What has bacteriological science done to discover the antidotes of such poisons?" The answer is, that whereas centuries of clinical observation have done very little indeed—by watching the sick and the employment of drugs—towards the direct arrest of the virus of infective maladies, laboratory work, on the other hand, has already provided us, not merely with many invaluable and additional facts to general science on the subject of immunity, vaccina-

tion, i.e. protection before infection, resistance of tissues to invasion by parasitic organisms, &c.; but has given to medical science, what no pharmacopeia has ever been able to do—namely, chemical antidotes which by their specific action upon the virus of diseases alone successfully save human beings as well as the lower animals from death and incapacitating illness.

Of these new methods, perhaps the most noteworthy is Pasteur's treatment of hydrophobia, but others have been already discovered, and are being examined and tested for practical employment in medicine and surgery.

A large institute of this kind, however, is not reserved solely for the investigation of the problems of disease—on the contrary, it has a far wider sphere of usefulness. Bacteriology, which Pasteur showed was the key to the secrets of fermentation, is, of necessity, all-important to many very extensive trades and commercial undertakings. The botanical and biological researches of the Pasteur Institute are thus to a large extent utilized by the French manufacturers, as well as by those of other countries, to their great profit.

The particular bearing of this branch of science has never been fully comprehended by the public, who are not aware what an enormous debt of obligation they owe to M. Pasteur, and to the extension of scientific research, which received its impetus from his genius, and which has resulted in so much direct gain and benefit to the community. In like manner, to agriculture, the questions of changes in soils—such, for example, as nitrification, now known to be due to the action of micro-organisms—are not less important, and indeed essential. A Bacteriological Institute, therefore, has in agriculture, quite apart from the subject of diseases of animals, a fertile source of work of the utmost value and assistance to practical men. But, in addition, there has of later years arisen a branch of chemical industry directed towards the synthetic production of numerous substances which prove to be powerful drugs. The knowledge of these is, of course, incomplete and dangerous until thorough experimental investigation of the action of these substances has been made. In this country, however, our chemists are precluded, by the harassing legislation under which their co-workers in physiology, pathology, and medicine labour, from pursuing this useful line of research, without great trouble and endless restrictions, although such work is solely directed towards the therapeutic relief of disease and suffering.

The chemistry of disinfection offers in itself an extensive field of research which can alone be cultivated in an institution of this kind reserved for bacteriological investigations.

Lastly, in such an institute two subjects of general interest receive special careful attention. These are (1) the technical instruction of medical men, health officers, chemists, and manufacturers, in bacteriology, both in its morphological and biological aspects; and (2) the examination of tissues and substances suspected to be the seat or vehicle of infectious diseases and submitted for investigation and report. The functions of a Bacteriological Institute, therefore, clearly involve interests of the highest national as well as particular or individual import.

Since the formation of the Pasteur Mansion House

Fund, which has provided for the treatment in Paris of many English sufferers from the bites of rabid dogs, some of the members of the Committee of that Fund, as well as of the Mansion House meeting at which it was inaugurated, knowing the importance to the community of having a similar institute in Great Britain, determined to make an effort to establish the same.

A survey of the conditions under which bacteriology is practised in Great Britain is sufficient to show at once the pressing need of creating a centre of the kind, since, although several medical schools and Universities have provided for the teaching of bacteriology to a degree suitable for diplomas in public health medicine, and although in the laboratories of the College of Physicians and Surgeons in Edinburgh, and of the conjoint London Colleges, besides those of University College, King's College, and the College of State Medicine, there is room and provision for a certain amount of original work, still it is quite notorious that the majority of original investigators are driven to go to Paris and Berlin, not only on account of the splendid collection of material and freedom of experiment there, but also for lack of sufficient accommodation in the laboratories of the United Kingdom. To remedy this state of things, and to provide an establishment which would greatly assist the medical schools and technical education generally, is therefore the object of the promoters of the British Institute of Preventive Medicine. The development of the scheme has now arrived at a very interesting point, which, as usual in this country, resolves itself into a contest between the friends and enemies of science. The object of the Institute being purely charitable and scientific, it was from the outset necessary to give its constitution a firm basis, in order to obtain the confidence of the public from whom naturally the cost of creating the Institute is to come. It has therefore to be incorporated, and such incorporation can practically only be obtained by permission of the Board of Trade, which grants leave for the registration of such institutes as limited companies, the word limited being omitted, thus insuring the appropriation of the funds for none but purposes identical with the original object for which they were intended. The Executive Committee of the British Institute, therefore, made through their solicitors, Messrs. Hunter and Haynes, the formal application for such registration to Sir Michael Hicks Beach, the President of the Board of Trade. To their surprise Sir Michael refused to register the Institute, and this without assigning in his letter any reason for his refusal. It is, however, understood that he has done so in consequence of his having received petitions from a few bodies of anti-vivisectionists, among whom are to be found as usual certain names, mostly ecclesiastical, of gentlemen whose intentions, however admirable, are dictated by absolute ignorance of the questions which they presume to discuss.

We understand (though it is incomprehensible how a Minister should have allowed himself to be placed in such a false position) that Sir Michael Hicks Beach alleges privately that by registering the Institute, a portion of the work of which will naturally include experiments on animals, he will be encroaching on the duties of the Home Office, to which department alone, however, as a

matter of fact, is intrusted the administration of the utterly incompetent and harassing so-called Vivisection Act. Nothing can excuse the confusion of mind or ignorance which is thus displayed by an official of the Government, for, as is evident to the merest tyro in law, the question of experimental science has nothing whatever to do with the matter submitted to the Board of Trade. That body has only to make sure that the funds of the Institute cannot in the future be misappropriated to any other object. That is all it is asked to do, and that solely in the interests of the public.

The official seal of the Board of Trade having thus been given to stamp the Institute with the character designed for it by its promoters—namely, that of a charitable and not a commercial undertaking—it would then, of course, be necessary for the Executive Committee to apply to the Home Office for the registration of the Institute as a place where experimental science may be carried on.

With this second registration the Board of Trade has nothing whatever to do, and by taking upon himself the duty of considering this part of its constitution, the President has gone out of his way to raise difficulties in the formation by private individuals of a National Institute, which in other more intelligent and far-seeing countries the Governments have hastened to take the initiative in establishing and liberally supporting.

It is evident that Sir Michael Hicks Beach has been greatly misinformed on this matter, and we look forward with interest to the result of the representations of a very powerful deputation which we learn is to wait upon him on Friday, June 5, at 11 a.m., and which, constituted as it is of distinguished men in all branches of science, as well as of those of the general public who are interested in philanthropic sanitary measures, will point out to him the real facts of the case on which he has to adjudicate, and rescue the question from the erroneous position which it now occupies, owing to his unfortunate readiness to listen to the calumnious assertions of the haters of science and progress.

It is not difficult, we believe, to read between the lines in such a case as this. No beings are more human than Ministers and members of Parliament, or, in fact, all those whose own position or that of their party depends upon popular clamour. Such unfortunates listen like Eve with a fatal fascination to the voice of the deceiver, but, with a taste less worthy than hers, the fruit which attracts them is not that of the tree of universal knowledge, but of the ballot-box. They have hitherto laboured under the mistaken impression that an energetic and noisy group of agitators, leading in their train a few unscientific quasi-public men, were an important political body, and they consequently sacrifice to their misrepresentations the liberties of science and the good of commerce. The day is coming, or is rather come, when the scientific and cultured world will refuse to submit any longer to such a condition of affairs, and when all its branches, physiologists, agriculturists, chemists, engineers, medical and legal men, will unite in a compact body for the protection of their common interests, and we rather welcome the present difficulty, which has served to bring prominently forward the spirit animating them, and which no administrator will do wisely in failing to recognize.