

the mathematical training to be crowded into the first year and a half or two years, when the student is least mature. More of it is being pushed back to the secondary school, and, in turn, into the grades. Mathematical concepts are difficult, and with President Woodward I am inclined to think we are demanding too much, and calling for it too soon. Covering less ground and at a slower pace will help to make better engineers.

The student comes to the engineering school with the notion that he is to be filled up with a lot of technical knowledge, the items of which will be used by him when he is a practising engineer. He seems unable to comprehend that he is in college to acquire mastery over his own powers. He is eager for useful facts and of course he forgets most of those he learns not a great while after leaving college. The forgetting is to be assumed. Under such conditions the task before the teacher of mathematics, and quite as well before the teacher of engineering, is to do his utmost to train his student to think logically and accurately about things. To this end there seems to me nothing so efficient as the solution of a large number of carefully chosen problems. Indeed what is one's life, if it be active, except meeting a never ending succession of problems which must be solved if success is to be gained? If you can teach your student to take vigorous hold of a problem, to first assemble all the facts which bear on the question, then from the facts to reason logically to a sound and safe conclusion, you have started him well whether his aim be engineering or otherwise.

Of transcendent importance is the teacher, his personality, his attitude toward his work, his knowledge of his students, not as a class, but of each as a human being. If we can procure the teacher who can idealize his work, who can show sus-

tained enthusiasm for it and perform cheerfully the drudgery we heard mentioned a few minutes ago, we can safely leave detailed methods to him. Whatever methods such a man adopts in the classroom are likely to be effective.

FRED W. MCNAIR

MICHIGAN COLLEGE OF MINES

#### THE BRITISH MUSEUM OF NATURAL HISTORY

ON July 28 a deputation, which included Mr. F. Darwin (Cambridge), Professor Cossar Ewart (Edinburgh), Professor Sedgwick (Cambridge), Dr. Marr (Cambridge), Professor Hickson (Manchester), Professor Bourne (Oxford) and Professor Graham Kerr (Glasgow), waited on the Prime Minister (Rt. Hon. H. H. Asquith, K.C., M.P.) in support of a petition sent to the late Prime Minister last autumn requesting that advantage should be taken of the present vacancy in the directorship of the Natural History Museum to hold an inquiry into the methods by which the museum is governed. The deputation was introduced by Sir W. Anson, M.P., Mr. Rawlinson, M.P., and Sir H. Craik, M.P.

According to the account in *Nature*, Professor Sedgwick said that zoologists thought it desirable to at once call the attention of the government to the desirability of instituting an inquiry into the methods of administration of the Natural History Museum, and that, if necessary, a widely signed memorial could be sent later on. In concluding a very full statement, Professor Sedgwick said:

We are here to ask for a full official inquiry into the organization and administration of the Natural History Museum with a view to a reasonable treatment of the matter in the immediate future by his majesty's government.

Mr. Francis Darwin especially referred to the subordination of Cromwell Road to Bloomsbury. He said:

Quite apart from the welfare of the Natural History Museum, it seems unfair to expect of the principal librarian that he should be responsible for Cromwell Road in addition to his other heavy

responsibilities. Nor can it be to the advantage of the British Museum that its principal officer should be so occupied. But it is when we look at the other side of the question that the faultiness of the arrangement becomes fully obvious. To choose a man distinguished for his technical knowledge and then to fail to give him reasonable freedom in the employment of his training and experience seems as bad a plan as it is possible to conceive. . . . I believe I am right in saying that when the late director was appointed his freedom was curtailed. It was, I think, unavoidable that in these circumstances difficulties should arise, and I feel very strongly that we ought to make the recurrence of such difficulties impossible; and this can only be done with certainty by making the Natural History Museum an independent unit.

This view was supported by Professor Bourne, who stated that

The Natural History Museum will not be placed upon a satisfactory footing until it is placed under the control of a body of trustees separate from that which is responsible for the control of the British Museum at Bloomsbury.

Professor Hickson pointed out that, notwithstanding the representations made by men of science during recent years, No changes or reforms had been effected, and the administration is practically the same now as it was before the collections were removed from Bloomsbury, and that for seven months the museum has been deprived of the services of both a scientific director and a keeper of zoology.

Professor Ewart directed attention to the present unsatisfactory method of appointment of the director and of the subordinate members of the staff of the Natural History Museum; Professor Kerr said that, owing to the dissatisfaction which exists amongst men of science, it is "essential to hold a careful inquiry into the whole question of the organization and administration of the Natural History Museum before coming to a decision as to the remedial measures to be adopted," and Dr. Marr directed attention to the inadequate representation in the museum of those important branches of geology which are distinct from botany and zoology.

The Prime Minister, according to an official report which has been supplied, replied as follows:

He expressed his profound satisfaction at meeting so many eminent men of science. He pointed out that, as regards the administration of the museum, the trustees are a statutory body with whom the government were powerless to interfere. He confessed himself still unable to grasp in what way the museum failed to perform its functions. The arguments advanced by so many of the deputation as to the management by the trustees applied equally to the Bloomsbury museum. The trustees, men of wide experience and great distinction, were equally cognizant of natural history and archeology. He announced that the trustees were about to appoint a keeper of zoology, and that it was not intended to abolish the directorship, but only to wait to ascertain who was the best man for this responsible position. He sympathized with the view that the director should have a free hand in the management of his department, and promised to convey to his fellow-trustees of the British Museum all that the deputation had suggested.

#### LECTURES IN CONNECTION WITH THE INTERNATIONAL CONGRESS OF TUBERCULOSIS

In connection with the congress, which meets in Washington from September 21 to October 12, a series of special lectures will be delivered in Washington and elsewhere by eminent foreigners. The names of the speakers and the cities in which they will lecture are as follows:

"Studies in Tuberculosis in Domestic Animals and what we may learn regarding Human Tuberculosis": Bernard Bang, of Copenhagen, at Washington, October 3.

"Les nouveaux procedes de diagnostic precoce de la Tuberculosis": A. Calmette, of Lille, France, at Philadelphia, September 26.

"La Lucha contra Tuberculosis en la Republica Argentina": Emil Coni, of Buenos Ayres, at Washington, October 2.

"The Causes which have led to the Past Decline in the Death Rate from Tuberculosis and the Light thrown by this History on Preventive Action for the Future": Arthur Newsholme, of Brighton, at Washington, September 29.

"Social Life and Tuberculosis": Gotthold Pannwitz, of Berlin, at Philadelphia, September 24.

"The Anti-tuberculosis Program—Coordination of Preventive Measures": R. W. Philip, of Edinburgh, at Boston, October 6.