

Editorial

THE ROYAL CANADIAN INSTITUTE AND SCIENTIFIC RESEARCH.

Mr. Frank Arnoldi, K.C., President of the Royal Canadian Institute, has announced that the Institute, with a mature and comprehensive knowledge of the fact that the necessities and welfare of every member of the community and the attainment of efficiency are bound up with the advancement of the scheme of co-operation of science with industry, is about to undertake to promote the establishment within itself of a Bureau of Scientific and Industrial Research. As Professor Haultain observes, in his open letter commending the procedure, it marks the return of the Institute to the channel molded for it in the minds of its founders over half a century ago.

Science and Industry must co-operate if Canada is to make any material advance in the readjustment of industrial greatness, of which this war is the curtain-raiser. The universities have long realized this, and have not hesitated to extend offers to co-operate with the Institute in its move. But, in Canada, as previously in England, there has been some disinclination on the part of the industrial and business man to embrace the advantages which Science has proffered. On the other hand, it has not been the enemy's militarism but the co-operation of Science with German industry that has placed that country where it is industrially. Enemy though it is, the German nation has given the world a great lesson.

Down in the University of Pittsburgh, there is nearing completion a home for the Mellen Institute of Industrial Research and School of Specific Industries. It will provide ample accommodation for seventy researchers besides accommodation for graduate courses. Industrial fellowships constitute the basis of the system, and these are constantly increasing in amounts subscribed for their maintenance by industrialists. We have not the space here to describe the system as fully as we would like; for although in its infancy the Institute has gained world-wide fame through its investigation of the Smoke Problem. Suffice it to state at this juncture that there is every indication of a successful start on the road to the ideal for which it is striving. This ideal may be read from the inscription on the door:

"This building is dedicated to the service of American Industry and to young men who destine their life-work to the Industries; the goal being Ideal Industry, which will give to all broader opportunities for purposeful lives."

In a quiet way the graduates of the Faculty of Applied Science and Engineering of the University of Toronto raised a fund among themselves and have financed a considerable amount of engineering research. The movement has had the closest co-operation of the University of Toronto, and the results obtained in a recently completed fellowship will, when published, be found very valuable.

The Royal Canadian Institute, in its revival of scientific investigation in relation to Industry, will receive warm support from the scientific world, and there is little doubt that the organization will make a creditable showing in making Canadian industry more efficient in its manufacturing practices.

LAYING CONCRETE ON THE LEVEL.

Mr. Geo. H. Gooderham, chairman of the Toronto-Hamilton Highway Commission, is quoted in the daily press as having answered in the following way some criticisms directed against his action in appointing as chief engineer of the proposed highway, an engineer who is not a Canadian:

"I received no less than three hundred applications for the position, some from engineers from Toronto and Hamilton; but there was not one among them who had the necessary qualifications for the work. Some were capable of building a 20-story building, but none were capable of laying concrete on the level."

The layman's intelligence and knowledge of present conditions is no doubt responsible for his belief that of those 300 applications the majority at least were from Canadian engineers; that the applicants felt qualified in technical ability and practical experience to undertake the responsibility of laying a concrete road, and that, considering the present prostration of engineering work, the proposed piece of construction must have attracted the attention of many of our engineers, of broad engineering experience and careful training.

It is painful, in view of the wide publicity and endorsement that has been given the whole project in the technical, trade and daily press, since its inception, that engineers of this country should be the objects of such a remark from an individual who, by virtue of his position, should know better. It points once more to the questionable silence on the part of the engineer respecting his profession and his achievements therein. His ability to lay concrete on the level should not be so conscientiously shielded from the gentle gaze of the interested public.

As for the appointee, who is also a capable engineer, it is no doubt of some little concern to him if the chairman of the commission knows as little about engineering and engineers in their relation to concrete road building as the above quotation implies.

REINFORCED-CONCRETE FACTORY BUILDINGS.

A paper to be read by F. W. Dean at the coming convention of the American Society of Mechanical Engineers (Dec. 1 to 4) presents the advantages of the use of reinforced concrete for the use of factory buildings, such as fire-resisting qualities, great window area, and good lighting, and also some of the disadvantages. It also points out that regular mill construction buildings have shown their fire-resisting qualities when properly designed. The best methods of finishing the floors are discussed and also the application of wood as a wearing floor above the concrete. The difficulties of fastening shafting hangers and machinery are brought out and the extra cost of drafting in consequence of this, as well as the great care required in making provision for everything to be installed. The different methods of constructing floors and the different forms of ceilings are taken up and also the relative costs of concrete and regular mill construction buildings.