

## Letters to the Editor

### ACT RESPECTING THE ENGINEERING PROFESSION

Sir,—The attention of engineers throughout Canada is at present focussed on the draft of the proposed "Engineering Profession Act." Members of the Engineering Institute of Canada will shortly have the opportunity to approve the bill or reject it. In the meantime an interchange of ideas on the subject between engineers is very desirable, and I would ask some space to voice my own observations.

I take it that the general intention of the proposed Act is firstly to raise the standard of what one might call professional capability among men to whom engineering works of importance are entrusted, and secondly to protect qualified engineers by securing better recognition of the value of their services. Taking a charitable view of the draft and interpreting it broadly we find that these results are likely to be attained. In some individual cases injustice may occur, but in general, admission to practice may be secured either on the grounds of past experience or unquestioned ability, or by means of passing an examination or successfully completing a course at a recognized engineering college.

On the other hand those who are less charitably inclined see in the Act an instrument whereby consulting engineers who have been practising for five years previously to the passing of the Act secure for themselves, and any who may be associated with them as assistants, a perpetual and indisputable inheritance. The highly trained engineer employed by a corporation must submit to an examination before he is admitted to the association. A man many years his junior who stuck out a shingle and called himself consulting engineer several years before the passing of the Act has nothing to do but pay his fees.

What guarantee have we that the broad interpretation of the Act will be made, and not the narrow? How shall we read clause 7, paragraph (i)? In any large corporation the head of an engineering department is not materially responsible for the results of his work. The corporation assumes the material responsibility. But he is morally responsible to the engineering profession and the public. The responsibility to shoulder this moral responsibility should undoubtedly entitle him to admission, for he is unquestionably acting as professional engineer. Likewise, his assistants are unquestionably in the service of a professional engineer.

If the association recognize the right of the corporation's paid engineer to admission a somewhat complex problem arises. Any engineer who carries out engineering works in the course of his duties must be registered engineer, unless it can be shown that he is working under the direct supervision of a registered engineer, otherwise he "usurps the functions of a Professional Engineer," and is liable to heavy penalties. This direct supervision implies not merely the affixing of a seal, but an intimate knowledge of the work on the part of the chief. The chief must be qualified to judge whether the safety of life and property is assured, and he must actually satisfy himself that this is the case. The Act is virtually controlling the engineering staffs of private corporations, an undertaking not to be assumed too lightly. Yet it is the individual who is mulcted for infringement of the Act and not the corporation. If the association deny the right of the paid engineer to admission the foregoing difficulties are obviated, but a gross injustice is perpetrated.

Again, the field of the professional engineer's activities is described in embracing terms. There is no distinction between works of greater and lesser magnitude. Is the designer of a boiler of small machine tools, marine motors, electrical apparatus and so forth eligible for admission? If not, is he liable to the heavy penalties prescribed for practising as a professional engineer in as much as he designs and supervises the construction of "steam engines, turbines, pumps, internal combustion engines, . . . electrical ma-

chinery and apparatus, etc."? We engineers have no right to impose such restrictions on the operations of men with practical knowledge.

Section 11 is fraught with terror for the aspiring applicant for an engineering position unless he be provided with the "Open Sesame"—a certificate of registration. He must be very modest indeed with regard to his accomplishments otherwise he is in danger of "acting in such manner as to lead to the belief that he is authorized to fulfill the office of or to act as professional engineer." Before we run the risk of such terrors we want to know that we can obtain admission on our merits.

Another important point is to settle what limits there are to the privileges bestowed upon the professional engineer. There is nothing in the title to show what branch of engineering the holder is proficient in, nor is there anything to prevent a structural expert trying his hand at hydraulic turbine design, or an electrical engineer designing a steel structure. Yet, unless the admission to practise is made fairly and squarely upon the basis of proficiency the Act will bestow upon the fortunate holder of a registration certificate a most unfair advantage over the non-registered man who is an expert in some particular branch.

In conclusion I wish to accord due credit to the committee for the results achieved.

The scope of the Act, however, is so far reaching, and the pitfalls to be encountered in legislation are so many, that I hope and feel sure the matter will be considered at much greater length, and by the engineering body of Canada as a whole, before we are committed to a final draft.

H. S. GROVE.

Lachine, Que., May 15th, 1919.

Sir,—Before voting on the proposed "Act Respecting the Engineering Profession," it is to be hoped every engineer with a vote will carefully read the document as printed in the May Journal. I would particularly ask the attention of those engineers, who are employed professionally by private and public corporations, by industrial concerns and contracting companies, to the provisions of the proposed Act and would respectfully ask them *what earthly chance they have* of becoming "Professional Engineers," protected by such legislation as the proposed Act. From first to last, as with all the schemes for legislation, the bill is for the protection of the engineer in private practice. His status and not his qualification is the criterion as to his eligibility to belong to the new association. Notice, gentlemen, that is is a *new* association, that your membership, whether Associate or Full, in the Engineering Institute of Canada has nothing to do with the question of your being a "Professional Engineer" within the meaning of the proposed Act. Qualification enabled you to reach membership in the Engineering Institute of Canada—qualification will never get you into the "Association of Professional Engineers." It is an entirely separate and distinct organization established or to be established on a provincial basis, and a cumbersome system of inter-provincial licensing is referred to under Section e and g of Article 7, page 412. Quebec members should also refer to the Quebec Act as printed in the By-Laws of the Engineering Institute of Canada, Article 2, Sub-head b, where they will find a clause suggesting that certain individuals cannot be kept out of this proposed association whether qualified for membership in the Engineering Institute of Canada or not. Section b of Article 2 of the proposed Act, page 411 tells us what a "Professional Engineer" may do, but doing these things does not make you or me a "Professional Engineer" under the Act, or even eligible for membership in the proposed association. The last clause of this Section b, together with Section i of Article 7, carefully excludes all such engineers as are employed by other engineers, whether under individuals, companies, or even governments. The question, therefore, arises, "When does an engineer become a 'Professional Engineer'?" It may be argued that the proposed Act is not intended to apply to engineers not in private practice. If so, why should the members of the Engineering