

ENGINEERS—AND ENGINEERS

HARRY BRAGG

That every municipality of any size is dependent upon the skill and probity of a Civil Engineer is an accepted fact.

Not only does the amount of money spent on civic works rest largely with the Engineer, but the way in which those works are constructed also lies with him. The plans he prepares, and the estimates he presents, may be all right; but upon his skill and honesty depend whether those works shall be properly constructed, or whether the municipality is furnished with bad paving, defective sewers, and inefficient water mains.

As this is self-evident, the absolute necessity of having only competent and reliable engineers, follows without any doubt.

It is well known that the Profession of Engineering comprises men of the very best type, both as to technical skill and integrity.

Further, the public is under the mistaken idea that this profession is as closely guarded as that of medicine. And it is generally believed that the Institute of Civil Engineers is on guard against poachers, who would deprive the members of their rights. And, if this were really the case, then the public also would be protected.

Unfortunately, however, this is much too rosy a view of the situation. The Institute does not act in the way indicated, and thus both its own members and the public are, to some extent, at the mercy of those men who claim to be Civil, or Municipal, Engineers but who are, to put it mildly, not technically proficient. Unfortunately, their works do not follow them, but remain with the unwise municipality that has yielded to the temptation to employ a man who, in order to beat the members of the Institute, will work for less than professional fees.

It is correct, of course, that no one should call himself a Civil or Municipal Engineer, who is not properly qualified. But apparently the Institute will not take legal proceedings to enforce this, and so it is not enforced.

Medical men are quite alive to the similar danger to their profession, and anyone who attempts to pose as a Doctor of Medicine is quickly stopped; and one would naturally think that a somewhat similar profession, requiring both time and money from its members in order to qualify, would be equally jealous, and not only resent, but prevent any trespass upon its privileges.

Discussing this attitude of the Institute with one of its members, he explained it by saying that the "big" members, who naturally ran the Institute, were men in big salaried positions, and required assistants, who did not need to possess high class technical ability, as they were working under the supervision of properly qualified men. It was in their interest, therefore, to be able to secure such men at lower fees than they would have to pay to fellow members.

This is all very well in those big industries which employ a Chief Engineer, whose staff is under his supervision. But the unfortunate small municipality which can only employ a single engineer, should be protected by the Institute from its exploitation by an unqualified man.

Beyond this, there is a well-grounded complaint among the less fortunate, but equally qualified members of the Institute, that they do not have the protection which is due them, and that they are met with the competition of these unqualified men, who not only accept lower fees, but also canvas for work, which they cannot do.

Thus, the younger members are handicapped in their attempts to make good because they are members of the Institute and will not descend to the methods of the pretenders.

This is bad enough, but what about the smaller municipalities that may be the victims? They cannot afford an engineer for themselves, so have to secure the services of one in practice. And are almost forced by that public opinion that insists on the "lowest tender" being accepted, and when a "Municipal Engineer" canvasses the members of the Council, he is likely to take the place of the M. E. I. C.

One Ontario municipality solved the difficulty by engaging a student engineer at \$800.00, and then engaging the services of a consulting engineer at one thousand per annum.

Sometimes such a man is quite efficient as even the oldest M. E. I. C. But sometimes the town inherits badly laid sewers, broken water mains, defective pavements, wading pools at street corners and similar effects of unskilful or careless oversight.

TOWN PLANNING IN SASKATCHEWAN

DEPUTY MINISTER J. J. SMITH

A subject of growing interest to all municipalities is that of town planning. Professor Munro, of Harvard University, in his work on Municipal Administration, defines "city planning" as "the science of designing cities, or parts of cities, so that they may, as Aristotle said, be places 'where men live a common life for a noble end.'" Town planning aims to make the municipality more convenient, healthful, efficient and beautiful. Historians tell us that planning of certain physical features of cities for particular purposes was practised in individual cases as far back as the Greek and Roman times. This practice disappeared, however, in the centuries succeeding the fall of the Roman Empire and practically did not re-appear until modern times. Sir Christopher Wren proposed a city plan for reconstructing London after the big fire in the seventeenth century. This plan, however, was not followed. Examples of comprehensive planning were found in America in the plans of William Penn for the city of Philadelphia toward the close of the seventeenth century, and the plans of L'Enfant for the city of Washington at the end of the eighteenth century. According to Professor Munro, the most courageous and in some way the most successful of nineteenth century enterprises in the field of civic reconstruction were those undertaken in Paris during the period of the Second Empire. They gave a new impetus of city planning everywhere. Under the direction of Baron Haussmann, who held the post of Prefect of the Seine from 1853 to 1870, the work of reconstructing a large part of the city along new lines was planned and begun. The undertaking was carried through on a scale that involved enormous expenditures. Urban planning or re-planning is no longer confined to the cities of older lands. In the United States particularly, movements for improved transportation facilities, for housing reform, for better parks and playgrounds, have combined to focus attention upon city planning. During the past few years an increasing interest in the subject has been taken in Canada and several of the provinces have passed advanced town planning legislation. In December, 1917, the Legislature of Saskatchewan passed a "Town Planning and Rural Development Act." During the past year active work under the provisions of this Act has been undertaken. Mr. M. B. Weekes, Director of Surveys, has been appointed Director of Town Planning, and Mr. W. A. Begg, formerly Townsite Inspector for the Department of Highways, has been appointed Town Planning Engineer. Regulations and rules governing the procedure under the Act are in course of preparation. These regulations, when approved by the Minister, will be printed for distribution to the local authorities and it is hoped the municipalities will take full advantage of the powers conferred upon them by this important legislation.

The Public Utilities of Edmonton had a surplus of \$15,453 during October after all capital and depreciation had been provided for October, 1918, activities produced a loss of \$8,333. The results of operation of the civic utilities for the ten months ended October 31, are as follows:—Electric light and power, \$93,973, surplus; telephone department, \$44,258 surplus; water-works department, \$38,482 surplus; street railway department, \$54,810 deficit; power house, \$1,207 deficit.

A case of the municipality "paying the piper" is reported from an Ontario municipality in which the engineer was laying sewer pipes. One of the Aldermen, who happened to be connected with engineering work, and was a practical man, noticed the work one day, and thought the pipes were running up hill. He sent for the engineer, who at first resented a mere layman criticising the work of a professional; but on being compelled to look into the matter, found that he had reversed his plans, and had ordered the work to be done in the opposite direction, so that the grade of the pipes was actually up, instead of down.

There should be found some legal way by which not only the men who have spent time and money in becoming technical engineers, but also the public, will be protected against any men who pretend to be engineers, and who waste through ignorance, carelessness, or worse, the money of taxpayers.