

—plane surveying; design of irrigation works and structure computation of earth work. (5) Administrative engineer on examination—plane surveying; hydraulics; construction work; irrigation; law and practice.

Within four years after the passage of this law 200 men had qualified under it and all had taken examinations except members of the American Society of Civil Engineers. As this is a very sparsely settled state I doubt very much if this law had any effect upon competition.

It is a serious question whether a license law really excludes the incompetent man from the profession. There are quacks still practising in the medical profession and incompetents in the legal profession in spite of the acts governing the practice.

It is suggested that strict governmental supervision of plans, specification and construction of all structures where the safety of the public is involved, combined with laws requiring a high qualification for engineers at the head of the departments, will result in a more effective public protection than any legislative attempt to control the engineering practice.

The qualifications for the heads of departments requiring engineering knowledge should provide for (1) a minimum residence in the country, province or state in order to ensure familiarity with local conditions. (2) Membership in one or more of the three national engineering societies—Canadian Society of Civil Engineers, American Society of Civil Engineers, or British Institution of Civil Engineers. The requirements for admission to the grade of member in all of these societies is high and the tendency is to stiffen the requirements. (3) A minimum amount of experience in the particular line of engineering, a knowledge of which is required in order to fill the position. The above suggestion has greater possibilities in it for public protection than any system of licensing engineers.

The proper method of handling the fake engineer is through the local branches of these national societies. His record can be investigated by them and shown up.

In addition to the above, these local branches can do a considerable amount of advertising which would be considered unprofessional on the part of the individual to the end that the public may be kept in touch with engineering matters and be made to realize that membership in these societies represents high qualifications as an engineer.

NEW EXPLOSIVE.

A new permitted explosive, known as Bellite No. 1, has been sanctioned by the Home Secretary of Great Britain. Its composition is as follows:—

Ingredients.	Parts by weight.	
	Not more than	Not less than
Nitrate of ammonium	65	62
Tri-nitro-toluol	16	14
Chloride of sodium	17.5	15.5
Starch	5.5	3.5
Moisture	2	—

It is stipulated that the explosive shall be used only when contained in a case of Manilla paper, fire-proofed and thoroughly waterproofed with a mixture of carnauba and paraffin waxes, and that the greatest weight which may be used in any one shot hole shall not exceed 20 oz. Four oz. gave a swing of 2.74 ins. to the ballastic pendulum compared with a swing of 3.27 ins. given by 4 oz of gelignite containing 60 per cent. of nitro-glycerine.

LETTER TO THE EDITOR.

Revision of the Patent Act.

Sir,—I believe that your columns are always open to a discussion of matters of general interest and importance to the engineering, manufacturing and industrial public.

Few matters are of greater or more vital importance, yet so little known, as the patent laws of a country, and their administration. Their one broad purpose is to encourage and stimulate improvement, advance or invention in every branch of human activity.

For many years it has been widely admitted that many considerable changes are very badly needed in the Canadian patent act and its administration.

The great growth of the Department of Agriculture, proper, has made ample work to occupy fully the time and attention of both the minister and his deputy. Yet the patent office has developed equally or to an even greater extent. It is the unanimous opinion of all who are experienced in the matter, that the patent office should have a separate and distinct head practically independent of any department though, possibly, nominally subordinate to the head of a department—similar to the arrangement in the United States, after which the Canadian patent law and practice is molded to a considerable extent.

Many very prominent corporations and individual business and professional men, and practically all important industrial associations and societies, have petitioned the government to appoint a commission to look into and revise the patent act and its administration.

Certainly there could be no time better than the present. There is in existence a commission with very wide powers of investigation with the purpose of finding ways and means to prepare Canada for her great future. Revision and administration of the patent laws is certainly one of the matters that will have a great influence upon future prosperity.

Why, then, is nothing done?

Since the enactment of the present patent act, the value and advantages of many of its provisions have frequently been tested. Some of them have been found defective and productive of far more evil than good.

The following suggestions arise from the experience of the leading manufacturing patentees and prominent patent counsellors and solicitors of the Dominion. It is their common desire to overcome these defects, greatly strengthen the validity of patents, remove some of the useless burdens now attached to patents, eliminate a great part of the clerical work of the department, increase the net receipts of the department, remove the more fruitful grounds for misunderstandings on the part of patentees, decrease the cost of patents to the applicants, provide for complete authentic official records in interferences and all other patent matters, eliminate all private bills for re-establishment of forfeited patents, and to avoid the doubt and discrimination of section 44. In general, to facilitate and improve the administration of the department, and encourage and stimulate invention, while at the same time maintaining the rights of the public. To those ends, the following amendments, with attached reasons, are suggested as indicative of the main points only:—

1. Substitution of a single continuous term of eighteen years, with payment of the entire fee at time of filing, in lieu of the divisible term with instalment payment.

The present total government fee for eighteen years is \$60. However, as shown by the records, less than 17% of the patents have more than the first \$20 paid. In the