

SOME SUGGESTIONS FOR IMPROVEMENTS IN THE ENGINEERING PROFESSION*

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WE know that the strenuous and ever-changing conditions of modern life have produced a feeling of unrest which manifests itself in every walk of life, but a careful review of the situation hardly justifies the widely-spread pessimistic views of our status, and much harm may be done by the dissemination of erroneous impressions which have only a partial foundation in fact. The young man just entering upon an active career may be greatly discouraged by the adverse conditions which he is led to believe are inseparable from the practice of his profession.

The most frequently expressed complaints about the profession, by the engineer himself, are:—

- (a) That it is underpaid.
- (b) That it is not sufficiently recognized in the appointments to public office.
- (c) That its influence is not fully appreciated in the community.
- (d) That it is, therefore, on a less desirable plane than the other learned professions.

The complaints which the general public make about the engineer are:—

- (a) That he is narrow in his views.
- (b) That he tries to solve all social problems by mathematical rigidity.
- (c) That he is generally unfitted for business.
- (d) That he is generally a poor executive.

And that by reason of these shortcomings he is unfitted for positions in the public service.

It is well worth our while to carefully consider these complaints, to ascertain how much truth there is in them, and to see where unfavorable conditions may be improved.

First: As to the profession being underpaid.

A committee of the American Society of Civil Engineers has been studying this question and collecting data for several years, and recently rendered a final report, which is based on replies to inquiries from 5,059 members of the American Society of Civil Engineers and 1,319 non-members, or a total of 6,378 engineers, who gave details as to their personal compensation. The American Society of Civil Engineers has 8,149 members in all grades, so that replies were received from 62 per cent. of the membership, but the replies from the non-members is probably a much smaller proportion of the men in the engineering profession not connected with the Society. The report shows:—

The average yearly compensation of the member is\$4,142

The average yearly compensation of the non-member is 3,387

That the non-technical man earns more than the technical man in the first 2½ years of experience.

That the maximum compensation is reached when 30 years of experience is gained, after which there is a gradual decline in the earning power.

While these figures show the engineer to be making a fairly comfortable living wage, it is objected to that they correctly represent the true conditions, first, because

in all probability those replying to the committee's circular are the most prosperous members of the profession; and, secondly, those who are failures are scarcely expected to herald forth that fact, and on this point the committee says:—

"That in considering the replies of those considered cynical or pessimistic, that they have been made by men who would probably have been failures in any other occupation—men who fail by lack of adaptability, or even a fair degree of industry."

If we say that this yearly average would be reduced had we the returns from all engineers, we must remember that it would be counterbalanced to some extent by the income of men now engaged in executive positions in industrial concerns who, perhaps, are not members of the society, and who owe their present lucrative position to previous engineering training.

Many men in the transportation department of the large railroad systems came up through the engineering department. Many of these men are not members of our society, and their salaries are above the reported average. So the young engineer on small salary should be encouraged to know that his daily work may be fitting him for positions of greater remuneration outside of the profession in his more mature years.

Second: That we are not sufficiently recognized in the appointments to public office.

There has been considerable improvement in this respect in recent years. We now find engineers on public service commissions and on many important commissions appointed by the government, but much more might be done by concerted action. We should be as zealous for the welfare of our organizations as the labor unions are of theirs. We should realize that political activity is not necessarily partisan politics, and we could take a much greater part in public affairs than we have hitherto done to the ultimate good of the profession. We should demand recognition for the engineer in those appointments to public offices for which his qualifications pre-eminently fit him, and we should vigorously denounce the appointing powers when such recognition is not accorded.

Third: That our influence is not fully appreciated in the community.

Our profession seems to feel that we are without sufficient influence in the community. I believe this is a mistaken idea. Men possess and exert different kinds of influence, for example, political, financial and social. We are deficient in political influence, due to our own inactivity. We do not aspire to financial influence, but socially we are influential. We belong to a profession pre-eminently respectable. A scandal of any kind affecting our members is a rare occurrence. We are, perhaps, inclined to confuse influence and notoriety, and our influence is quietly exerted. No man is without influence who is industrious and does his duty, and the engineer's actions are always governed by his sense of duty.

Fourth: That our profession is on a less desirable plane than other learned professions.

We are very apt to say that we are not recompensed for our services as are lawyers and doctors, but a little reflection will show us that there are many lawyers and doctors making but a meagre living, and doubtless we all know personally men of those professions who never were in all their lives more than two jumps ahead of the collector.

Regarding the complaints which the public has to make about the engineer, they are in a large measure

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