euphonious name, and probably with loud protestations to the contrary.

Necessity is a hard taskmaster, and he is driving the rank and file of the profession very hard these days. But I also think that wherever an "industrial union" or "industrial council" operates in the industrial unit in which an engineer is employed, he should become a member of such industrial union or council, and learn to associate in a business way with the shop stewards and other "menials," who are our partners in industrial production.

"Self-Erected Mental Pedestals"

We might, and with profit, to ourselves, occasionally sit down at a table and drink a glass of "remembrance beer" with a real "labor leader" of the type common to the A.F. of L. (Some think it more appropriate to pronounce the "L" with a Cockney accent.) Or we might even dine with one of those nefarious "foreign agitators," —possibly English or Scotch, as at Winnipeg,—and absorb more than the bill-of-fare. It would do us good, professionally and otherwise, to know what these men are thinking; for the superb ignorance of most of us professionals upon a great many subjects outside of that for which we have a special training is truly marvellous. We are sometimes worse than ignorant: we are grossly misinformed through the daily press.

The sooner we engineers, and other professionals for that matter, come down from our self-erected mental pedestals and recognize the fact that we are but laborers in the common vineyard—along with the rest of struggling, sweating humanity—the better it will be both for us as a group of professionals and for the community at large.

If we are such superior humans as some would have us believe, why, may I ask, is it so seldom recognized on the payroll? The "boss" always seems to be perfectly willing to give us all the "recognition" we could possibly ask,—anywhere else. Engineers working for industrial firms have a particularly hard time gaining that form of "recognition" which the butcher and baker will accept, but consulting engineers also have a hard time securing fes commensurate with the services which they render.

There is no definite line of demarcation between mental and manual labor, the work of brain or brawn. It requires a certain amount of manual labor on the part of the best engineers in order that they may apply their mental attainments, and the efficient handling of the busy end of a shovel requires a certain amount of mental labor. The work of some professionals suffers materially because of the lack of that amount of manual labor which is requisite to make it most effective, and vice versa. The first bridge engineer probably both mentally designed and physically constructed his own bridge by cutting down a tree so it would fall across a stream.

Chanting Produced Good Concrete

Two instances will fully illustrate my point. A water works engineer, a brilliant technician, re-designed and rebuilt the water works of a city of about one hundred thousand inhabitants at the time I was its commissioner of public works. This man was on the job, both mentally and physically, all the time the work was in progress, and it was done just as he wanted it and at a low cost. What he accomplished certainly could not have been achieved by an armchair engineer who was afraid of the other end of the job.

The other instance is that of two concrete mixers of the continuous type which I was operating in 1907 as a contractor at two different points on the same street. One was manned entirely by a poor grade of labor, and the men shovelled into the sand and stone hoppers of the mixer without apparent rhyme or reason. The result was hoppers that were sometimes full and sometimes empty, and a very unsatisfactory product in the finished concrete was secured despite all the foreman could possibly do.

The other continuous concrete mixer was manned by a group of more efficient laborers, who soon proved their superiority by organizing themselves into a shovelling brigade, each man in his place, and all operating in unison to the notes of a "chanty." They would shovel so many "beats," then rest so many, then again shovel so many; and the shovelling and resting periods were so arranged that the hoppers would get low but never empty. This performance went forward all through the day with both rhyme and reason, which were very apparent in the quality and quantity of concrete mixture produced. Some brains at the busy end of these shovels, for fewer shovels produced more concrete of a superior quality!

It might be stated that the "trade" unions cut through the industries along "craft" or "professional" lines. That is, all the carpenters are in one organization, no matter whether they are building country bungalows, laying factory floors or erecting wooden forms for concrete bridges. This form of union organization has the better opportunity, if it will but use it, to produce, by education, a very high grade of carpenters, men with whom their trade is a profession and who are really craftsmen. By some it is not thought to be a good fighting formation when a strike becomes necessary, either for the men themselves or for the public at large; for the many small strikes which it usually engenders keep industry in a turmoil without anyone except those directly concerned knowing much of what it is all about.

Two Forms of Unions

The other form of labor organizations, the "industrial" unions, do not cut through the industries, but are co-ordinate with the industry in which they are formed, and are intended to include all the employees in that industry. They do not offer the same educational opportunities as do the "trade" or "craft" or "professional" unions, but it seems to me that they do promise to bring about finally a certain harmony in industry which is likely to be of great benefit to the workmen and to the public as well.

Under this form of organization fewer strikes occur, and, when they do, not one "trade," but the entire "industry" goes out, the issue is more clearly joined, and in such a way that everyone is likely to know the cause of the trouble. There is a "trade" strike of the mechanics at the Montreal water works now, and this is the third day of very grievous inconvenience and danger for the public; yet practically no one knew the strike was threatening, and few of us are even to-day in a position to judge the merits of the case.

There is at present a very decided trend in labor circles away from the "trade" and towards the "industrial" method of dealing with difficulties between employer and employee, even when the men are organized along "craft" lines, and I think this trend is in the right direction for the good of the employer, the employee and the public. There certainly has been much to regret in the past working out of the "craft" form of organization, some of the leaders of which were altogether too "crafty"; and nothing is more aggravating than the inability of an employer to keep peace in his own shop, or of the combined employers of an industry to keep peace in their own industry, because he or his representatives cannot get into direct contact with his own men and their directly selected representatives without dealing through some professional "labor leader." The "shop steward" is much nearer to the employer, and much more likely to understand his side of the case than is the old-time "professional" labor leader, who has particularly cursed the American labor movement.

Like Cross-Indexing a Library

There are also many labor "councils," organized on both the "trade" and the "industrial" basis, and one may fairly well judge the thought of the organization by the adjectives which it uses. Such councils may cover a nation, a province, a city, an industry, or merely one plant, but their real object is always to bring together the trades in some district, large or small, for some form of concerted "industrial" action. The largest part of the labor movement now seems to be floating around in a sort of No Man's Land between the two types of organized endeavor; and recently, purely "craft" unions, such as those of the building trades, have, through their