Editorial

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It would seem anomalous to read that the death of a man in his 94th year should have come with astounding suddenness to any one aware that he had attained such a venerable age. But there are great bodies of men, members of national engineering and scientific societies, and men otherwise prominent in public life, many of them young in years and many well advanced, who had never come to realize that a day would arrive when Thomas Coltrin Keefer would be called to his rest. The great engineer has departed-tired in body and brain, bent by the burdens rightly belonging to the past, but giving a pledge of better things for the future of the country, oblivious of the lustre which his many achievements have added to the national civilization he has left behind-tired but filled with contentment and self-respect ; while for those who remain to follow the now well-founded bench-marks which he, as a pioneer, established along waterway and contour, his career rises in eminence above the cloud--efogged environments of modern engineering into the glorious sunshine of achievement. His death has brought to a close one of our best examples of how a man may live his life in a way that will be of greatest service to mankind.

Although the level and the pen have been laid aside, the profession may still continue to seek and gain knowledge and inspiration from the nation-builder's books, essays, lectures and reports. In so much so that while it is true his career has terminated with a fullness of years that in themselves bespeak unusual service and devotion, the works that he established and furthered in the interests of the Dominion, the literature that he left for the guidance of the profession, and the example that he set for the many who would deign to follow his footsteps through the intricate windings of such a noble career, are with us still, embodying many features of the predominant character of the man himself.

THE ENGINEER AS A BUSINESS DOCTOR.

The necessary qualifications for a successful business doctor are: the ability to observe and tabulate the right kind of data, the ability to grasp the essential features of the data thus tabulated, the ability to deduce from this data the correct solution to the problem in hand, and the ability to apply the remedy so as to obtain the best results. He must have patience, perseverance and a faith in the inherent honesty of both the work in hand and the men for whom he is working; and above all he must have a knowledge of his fellow man, with the knack of placing himself in their position, and ascertaining their modes of thought. He must be a good all-round man possessing a large amount of what is commonly called "horse-sense, combining the essential features of the scientist, the detective, the lawyer, and the physician. It is not necessary that he be either an orator or a salesman, the force of his arguments being in the shape of figures.

There is a saying that "Figures cannot lie," perfectly correct as pure mathematics, for two and two always make four, and the root of a number can always be found by the Binomial Theorem; but in statistical work reliable information can only be got by careful study of the various factors in the case under consideration. It is not at all uncommon for two factions of a cause to deduce diametrically opposite conclusions from the same figures, each claiming to be right, while in all probability both are wrong.

An engineer who has been fortunate enough to have had a varied experience on many of the phases of the particular branch of his profession, and during that time has taken trouble to develop and systemize the work on which he has been employed; starting in most cases from the ground up, making out his own forms, and adapting to each piece of work that particular system which will produce the best results; then this man is above all others the best fitted to perform the analysis and dissection of a business preparatory to building it up in a substantial manner.

During the coming decade there should be abundant work for this type of engineer. The country has enjoyed a period of abundant prosperity, during which time there has not existed the necessity for the fine supervision of details so essential to a business that would thrive in less abundant years. It remains, therefore, with the engineer on the one hand, to apply himself to the solution of problems that are not of a purely technical character; and for the business man on the other hand to realize that the man best fitted for this purpose by reason of his peculiar training and experience, is the engineer.

INSTRUCTION TO COUNTY ROAD SUPERIN-TENDENTS.

Mr. W. A. McLean, C.E., Chief Engineer of Highways for the Province of Ontario, informs us' that a course of lectures in highway construction has been decided upon by the Minister of Public Works, Hon. F. G. Macdiarmid, for the benefit of county road superintendents constructing roads under the Highway Improvement Act and subsidized by the Provincial Government.

Mr. McLean is arranging the course, and states that the several subjects will be dealt with by the assistant engineers of his department. All county councils will be asked to send their road superintendents or engineers. As the subjects, although applying more directly to county road work, will include a great deal of general interest, all municipalities are invited to send their road or street superintendents. The subjects to be dealt with are enumerated on another page of this issue.

It is anticipated that this course of instruction will be profitable in various ways; that it will give a considerable amount of direct instruction to county road officials; that it will lead to greater uniformity of work throughout the Province; that it will tend to a clearer understanding of the requirements of the Department; that it will lead to an exchange of experience among the various county engineers; that it will bring the county officials into acquaintance with one another, and will lead road superintendents to inspect work completed or in progress outside of their own counties.