

among the processes that are meeting with fair success.

At any rate, the advisability appears now to be practically demonstrated of laying down roads with bituminous material for a depth of several inches, rather than merely painting the surfaces with tar, and leaving the untarred stones underneath to grind against one another, inevitably producing mud and dust.

ENGINEERS AND LITERATURE.

The study of literature in connection with an engineering course is frequently quoted as being decidedly out of place. The fact remains that many young engineering graduates find the writing of intelligent, comprehensive reports upon the work which is in their charge to be one of the hardest problems with which they have to contend, likewise the most disliked and generally the least satisfactorily fulfilled of all their duties. The failing has often been attributed to engineers in general, until one is forced to admit that it is something with which the matter of training has to do and, therefore, which reflects upon the engineering course.

Against the contention that the study of literature is beyond the horizon of the engineering school are the opinions of a great majority of the older followers of the profession—men whose rank and affluence followed the cultivation of a breadth of reading, the necessity of which they recognized in their early problems. The subsequent study of literature brought them into the possession of a better working knowledge of engineering English, which soon reflected itself in what literary work their profession required of them.

To the engineer of to-day it does more. A study of literature means a study of men, of human character, of selection and adaptation, and ability to deal with men. A study of the writings of others enables him to write, furnishes him with more than a meagre share of a knowledge and appreciation of the best in literature, and enables him to converse, with intelligence and equality, with other cultured men in his and other professions. It broadens his scope of society and business, it means recreation, relaxation and inspiration to him. Finally, the most potent thinkers of the world are, one and all, students of literature. A study, then, that has so much to do with the establishment of a man's standing among his fellow-men, should have prominence in any educational course, and to few courses does it apply more materially than to the engineering course.

EDITORIAL COMMENT.

The American Waterworks Association, at its thirty-third convention, held recently in Minneapolis, announced a membership exceeding 1,000. A new constitution was adopted, its chief feature being provision for the establishment of local sections throughout the country. The convention in 1914 will be held in Philadelphia.

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The first official statement of the new manager of railways for the Dominion Government discloses the intention of creating a 6/10 grade on the Intercolonial, from Montreal to Halifax and Sydney. The change will be affected at the rate of about 100 miles per year, short lengths of the line having to be entirely rebuilt. This

remedying of grades, which are in some instances excessively heavy, will greatly increase the effective hauling power of the I.C.R. locomotives.

Mr. Gutelius further announces the intention to double-track the Intercolonial. A section some thirteen miles in length, between Levis and Chaudiere will be completed this season, and other sections will follow. At present the line from Moncton to Pansac Junction and from Halifax to Windsor Junction is under double track.

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The world's greatest drydock, to provide accommodation at Levis, Que., for the largest ocean liners, is about to be constructed as the first of a series of drydocks and ship repair plants under contemplation by the Department of Public Works. Others will be located at Esquimalt and Vancouver on the Pacific and Sydney, St. John or Halifax on the Atlantic. The contract has just been awarded for the Levis drydock, the cost to approximate \$2,600,000, construction to be commenced at once, and to be ready for use in 1915.

LETTERS TO THE EDITOR.

The Road Congress.

Sir,—The International Road Congress held last week in old London was about as cosmopolitan a gathering as one could hope to see anywhere. There were forty countries or states officially represented, and the list of delegates included the best, socially and professionally, that those countries could furnish. His Majesty the King was Patron. The list of honorary presidents included five of his Majesty's ministers. The presidents of six leading engineering societies of Great Britain were among the vice-presidents, and served, with others, on the organizing committee. It may be of interest to remark that Germany and France were officially represented by the two largest delegations—men, in the main, whose official positions and scientific attainments would lend distinction to any gathering. The proceedings were carried on simultaneously in four different halls adjacent to Parliament and Great George Streets, within a stone's throw of the House of Commons and Westminster Abbey, and in a neighborhood rich in historic associations. The sectional meetings were conducted mainly in English. The remarks of those who contributed to the discussion were invariably abstracted and translated by interpreters for the benefit of those who understood only one language. Generally, the arrangements were satisfactory, and the few disappointments that did occur were usually due to contingencies very difficult to foresee and still more difficult to provide for.

An instructive exhibition of materials and appliances was in progress during the week. This included machinery for the preparation of materials and the construction of roads, proprietary, and other articles and samples of types of highway construction taken from actual roads. Each booth had its demonstrator, usually in frock coat and silk hat, who was gracious and courteous, but not offensively aggressive; who was tolerant of competitors, and who gave one the impression that he understated rather than overstated the merits of his goods. For the Britisher is thorough if he is anything, and depends on the excellence of his article first, and the fairness of his business methods second, to create a market for his products.