

To keep the roads open under conditions similar to last winter, it costs from \$50.00 to \$200.00 per mile, depending upon the location and other conditions,

In 1912 when our system of roads was taken over for maintenance, the highway laws with respect to keeping up the road were not generally interpreted to mean that snow should be removed, for it was an uncommon thing for the local road officials prior to this time to open the drifts. In many places, the fences along the line of the highways were removed and the fields used until the snow passed away. If the thaws caused the fields to become soft, in which condition the traffic would do them considerable injury, in such cases some effort was made to make the roadway passable. This era quickly passed and with the changing and increased traffic, the demands became great for an open highway the year around and in 1913 this responsibility was assumed by the State Highway Department and practically all the main trunk lines were kept open from this time on. The records for the winter of 1917-18, which covered the period from December to March show 22 snowstorms varying in depth up to 16", with drifts ranging from 3 feet to 16 feet in depth, the general average being 4 to 6 feet.

I firmly believe that where statutes permit, and if they do not, the legislative bodies should pass enabling measures at once, it should be no longer an optional matter with the road officials in charge of our highways, for when we consider the enormous winter traffic on some of our roads argument is unnecessary. As an example, we have a case on record of one of our highways when the temperature was down to 25 degrees below zero, and from actual traffic census it showed that over two thousand vehicles passed over the road in twelve hours, the answer is that it is no longer a theory.

PROGRESS, PROSPECTS AND PITFALLS OF THE NEW PROFESSION OF CITY MANAGER

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will be so with the managers. A conscientious manager will be popular one month and unpopular the next. It is but a matter of time when he will have offended a considerable number of citizens by not seeing just their way in matters which if undertaken, would have benefited each of them materially. The ungratified citizen becomes a publicity man against the manager and the harm he is able to do will be in proportion to the friends he has in the community. Therefore, the time will come in the history of each manager just as in the case of superintendents of schools when his best field for effort will be in a new locality.

Small communities are sometimes apt to think the salary asked by an experienced man is excessive, so they will select a young man who may or may not be a good manager material, or a man who has served in various other political offices. Of course I must discuss the matter as it appeals to me. Many professions have been called upon in the emergency to furnish managers. Some cities have sought the usual politicians. This is pitfall number one.

I can see why the engineering profession has been called upon so extensively to furnish managers. I can see why expert financial ability is an asset, why general publicity work might operate to advantage, why Chamber of Commerce men might do good work, but I will never be able to see why a perfectly good, honest plan of government should be prostituted by the appointment of a man

accustomed to judge by political ideals. Human beings cannot help being products of their environment. Especially is this true of the moral senses. A politician will not administer government save as it makes for his own selfish ends. He cannot see further than that. Some of our cities which started right, have been manipulated so as to allow a politician to become a manager thereby discrediting the plan.

A second danger lies in the mere human quality of managers. Power is a hard thing for a human being to stand. A manager must curb his tendency to high handedness, bull headedness or whatever name you may give the quality. Some prominent public officials have not been proof against this trait. I have no doubt that several managers have rendered their usefulness negative by just such a development. It has certainly caused some dismissals.

PUBLICATIONS RECEIVED

Steam Turbo-Electric Stations.—Bulletin issued by the Bureau of Mines, Department of the Interior, Washington, D.C., on the economic operation of steam-turbo-electric stations, by C. T. Hirshfeld and C. L. Karr. Thirty pages, 6" x 9", 5 diagrams. Discusses factors determining fuel economy, distribution of load between main units, boiler room operation and operation of auxiliaries, and contains a bibliography on the utilization of coal and lignite.

Fuel Economy in the United States.—A reprint of article appearing in "Engineering" of London, England, August 23rd issue, by D. Brownlie, B.Sc., F.C.S. Eight pages and cover, 7" x 10", issued by Brownlie and Green Ltd., Church St., Cheetham, Manchester, England.

Engineering Practice.—Published by the Department of Engineering, Johns Hopkins University, Baltimore, Md. Price, \$1.00 per copy. 236 pages and cover, 6" x 9", containing a number of illustrations and three plates. Through the generosity of J. E. Aldred, there was founded at the Johns Hopkins University, about a year ago, a course of lectures dealing with the practical phases of engineering problems. These lectures do not presuppose an extensive knowledge of underlying theory, but lay stress on the tangible and obvious features of present engineering methods. During the past season, which was the first year of these lectures, there were three lectures on civil engineering subjects and three on electrical, while an equal number dealt with mechanical engineering, making nine lectures in all. One lecture was by a Canadian engineer, Julian C. Smith, vice-president of the Shawinigan Water and Power Co., whose address was on the "Growth of Electric Systems." An abstract of Mr. Smith's paper will be published in an early issue of *The Canadian Engineer* and possibly also parts of some of the other papers. The other lectures were as follows:—"Steam-Electric Power Plant Design," by A. S. Loizeaux; "The Relation Between Civil Engineering and Military Engineering," by Major General William M. Black; "The Development of Concrete Road Construction," by Arthur N. Johnson; "Copper Refining," by Edwin Wells Rouse, Jr.; "The Coal Problem," by E. G. Bailey; "The Operation of a Manufacturing Plant," by Ralph E. Thompson; "The Control of Stream Pollution," by Earle B. Phelps; and "The Manufacture of structural Steel," by Bradley Stoughton.