

ENGINEERING DEPARTMENT.

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The apparent magnitude of the task of building sewers and waterworks, and the necessary co-operation of a majority both in numbers and wealth of the citizens seem to be the hold back or reverse lever which retards the growth of many otherwise promising villages and lessens their advantages as places of business and residence, and we purpose presenting a few reasons why even in small towns and villages waterworks and sewerage are very desirable; and why also they are true economy. We hope to divest the undertaking of its apparent magnitude and in a future issue to show that the cost is not excessive and that the best economy even in the smallest village always leads to an efficient system of both water and sewage.

Whenever for the purpose of trade, manufacture, or convenient residence masses of human beings congregate in small towns, villages or hamlets an artificial existence to some extent is inaugurated. Each individual is no longer a law unto himself, neither can each family be a law unto itself. The habits and environments of those surrounding the individual or family must necessarily influence his or its position. The preservation of the health of the neighborhood is important, not only to one but to all; to the rich and to the poor. The poor man's health is his wealth, and wealth will not stop the ravages of an infectious disease when it once obtains a foot-hold, and disease itself is no respecter of persons. It may be that a single infected person will, under bad sanitary surroundings bring infection to an entire neighborhood. So easily are the seeds of disease spread that it becomes only a matter of common prudence to strive to maintain the body in vigorous health by removing unsanitary conditions which tend to lower vital energy.

Pure water, pure air and cleanliness can hardly be preserved in any village or town for any great number of years without resort to a public water and sewerage system. At the back doors of farm and village homes we find another serious evil, either in a defective drain or in the absence of any drain at all. In the latter case, the slops are commonly thrown on the ground and left to take care of themselves, the ground, instead of being soft and absorbent becomes bare, hard and often covered with mould. To a person unaccustomed to it the smell is nauseating. If a drain is used at all it generally ends nowhere, and is often no more than ten or twelve feet long, a little pool at the end catches what passes through it. The miscellaneous refuse from the kitchen finds its way through it and together with the wash water from the bed-rooms it must go through the usual process of decay in the drain or about its mouth. It is the rule, not the exception in most villages that these conditions exist.

Let us now see whether good results have followed where water and sewerage have been introduced. It is a well established fact known especially among the medical fraternity and sanitarians, that since the introduction of public water supply and sewage in cities Typhoid and other kindred fevers have been prevented entirely, or greatly reduced in number and virulence, and yet in unsanitary villages, and in the country zymotic diseases are still prevalent even if they are not increasing. A case is reported where a farm considered the finest in the section, beautifully located, and to all appearances a sanitary paradise, an affliction came, and when the authorities investigated the cause of disease it was found that the well of which the water for the family was taken, was located adjacent to the barn. The reason given for its being so located was that it was easier to carry water for the dwelling than for the stock. Gradually but surely the water was poisoned, the vital energies of the family lowered as the water deteriorated, and when the proper stage was reached, knocked at the door of the house taking away a number of the members of the family and leaving others broken down in constitution and forever enfeebled with disease. All this was due to unsanitary surroundings in what should have been a residence absolutely proof against this class of disease.

The inquiry is a pertinent one, as to how many dwellings in villages are in a similar situation, except that the slop drain and the outside privy (instead of the stock barn) exist near the well.

We therefore say that the construction of waterworks and sewerage in small towns and villages, in their relation to health and comfort are true economy. It has been found from the statistics kept, that the death rate has been lowered from four to six persons in every thousand, where water and sewage have been applied.

Narrow the Road Allowance.

The road allowance of sixty-six feet is considered by many to be greater than necessary. The Galt Reporter, in a recent article, throws out some suggestions that deserve consideration. It says that wherever regularly laid out by a surveyor and very often when "given" or "trespass" roads they are of a width of sixty-six feet. This width was deemed best because, we'll say first, land was plentiful, and next as a provision against snow filling. The practical result is that of this sixty-six feet about twenty feet are used for public travel, the rest lying waste, a temptation to animals wandering upon it, or a nursery for all the vile weeds which spoil a farmer's temper, increase his labor and lessen his profits. As a precaution against snow filling most farmers will admit it is a failure. Now, why not reduce the width of these road reservations to forty feet, sell the remainder, and spend the money realized on the really used roadway. Here and there a deep cutting of some hill would somewhat inter-

fere with this, but the proportion of such cases would be but small. In North Dumfries, small as it is, there are over two hundred and fifty acres of unused road reservation, land lying waste, cared for by no one and producing all that a farmer abominates. Why not sell that land and put it in under cultivation? It would bring some money which could be laid out on the used roads and it would be placed under cultivation and produce money. Let the road reformers look over their own townships and see if a similar state of things does not exist there. And while they are seeking action to result in permanent road improvements, see if one of the necessary means to that end is not the narrowing of the allowances and the reclamation of land now worse than useless.

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In grading or improving a road it is often found that timber and trees planted or growing thereon have to be removed. The rights of a township council in reference thereto are as follows:

By section 527 of the Consolidated Municipal Act of 1892, all roads are vested in the council and by section 550, sub-section 6, the council may pass by-laws for preserving or selling timber, ties, stone, sand or gravel on any allowance or appropriation for a public road.

Section 479, sub-section 20 of same Act provides for by-laws being passed relating to ornamental trees and shrubs growing or planted on any public street, etc., and for their preservation or removal and no owner of adjoining property, pathmaster or any other person is permitted to cut down or injure any such tree without the express permission of the council.

Under the above sections councils have ample power to prosecute or claim damages from any one who cuts down or removes trees from public roads without authority.

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The Ontario Tree Planting Act, chap. 210, R. S. O. 1887, makes provision for planting and preserving trees on any highway by the owners of adjacent land and such trees are to be deemed the property of such owners, but the council may pass by-laws to regulate the planting and removal when necessary of such trees, and any person who cuts down, removes, destroys or injures any such trees without having first obtained permission to do so by special resolution of the council renders himself liable to a fine of \$25. This applies to the person who has planted a tree as well as to a stranger.

The courts have held in reported case of Douglas vs. Fox, Common Pleas, Vol. 31, that the Tree Planting Act applies to trees of natural growth left for shade or ornamental purposes as well as to trees planted by owners of adjoining lands.

Publications Received.

Special report of the financial affairs of the township of York, by A. C. Neff, accountant, published by the township council.

Township of Woolwich; journal of proceedings and by-laws, 1893 and list of voters, 1894.

Report of bureau of industries, municipal statistics.