

Our Old Gravel Roads.

The importance of using the most serviceable material available at reasonable cost, is a question occupying the attention of all progressive councils. The careless expression that gravel, regardless of quality, is good enough for country roads, is not being looked upon as a principle of business conducive to economic road improvement. The improvement of country roads was commenced with gravel, and so long as stones or pebbles, to any considerable extent, were found in bluffs, hills or on the flats, pits were opened up and the material carted to different parts of the township. This may have been a cheap means of making a temporary improvement, but certainly is now proving itself to have been a very inefficient and expensive experiment.

Wherever such material has been used the traffic of fall and spring would so destroy it as to oblige expensive annual repairs. This not only made the work very expensive, but has drawn so heavily on the supply as to have, in many townships, completely exhausted it, and now the councils find themselves face to face with a difficult proposition and are obliged to resort to means for importing material.

Past councils have persistently argued in favor of the local supply of inferior material on the ground of least first cost, and they have refused to consider the economy of better material at greater cost. A combination of the two, broken stone imported, for the foundation, and local material for surfacing, would have left the work easy of removal to a finished work.

The difficulty of the problem, where gravel has been exhausted, is that the inferior material is now in the bottom of the road, and good material cannot be used without resorting to proper implements. In the township of Ekfrid there are more miles of gravel road than in the average township of Ontario, and possibly the people are entitled to more credit for the improvement made than in any township in the province, inasmuch as the material was of poor quality and had to be hauled long distances. The township is of rich soil, thoroughly drained, highly cultivated and the people extremely progressive, so that the roads are an important part of their industrial machinery, are much travelled, and are subjected to severe use.

Good roads must be maintained in this township and no degeneration in their condition will be allowed. Unfortunately their supply of material is about exhausted and Reeve McDougall at the last municipal nomination drew the attention of the ratepayers to this important condition of affairs, and suggested that measures be at once considered for procuring the supply necessary for extending the work of construction and maintaining those already built.

This is a condition which we meet in many townships where an improvement

of the roads in keeping with other improvements had been carried on some years ago, but owing to the depletion of the local supply of gravel no provision was attempted for new material, not even for crushing the stone often to be found in abundance in the same township, with the result that the criticism often made to-day, that many of our roads are worse than ten years ago, is true and fair. This is a matter which councils should keep before them, and where a first class quality of material is now being used, provision should be made for supplying it.

Where roads have been built of gravel by repeated applications, thoroughly consolidated by years of traffic, although now worn and rutted, sufficient depth of material remains to make a first class foundation for resurfacing at moderate cost, if proper methods are pursued.

To place a shallow quantity, (all that is necessary on such a surface) but expecting traffic to compact it, is the greatest carelessness, and absence of workmanship. It is almost impossible to expect the new material to unite with the old, and a large portion of it, during the process, is knocked off by the horses' feet, or is worked out by vibration of wheels; and consolidation, leaving a smooth and uniform surface, is impossible. The only practical method is to cut off the sides of the road where they are too high, with a grading machine, thus raising the centre and giving a proper round to shed the water. Then by passing a steam roller provided with spikes, over the road, break up the surface. When levelled with a harrow, the ruts and depressions are filled, leaving a proper bed for receiving the new surface of broken stone. This, generally speaking, need only be a few inches in depth, but should be thoroughly rolled in by the same roller with the spikes removed.

It is surprising how perfectly, and at what small cost, old gravel roads can be made ideal in this way. Not until the methods of a century, applied to present conditions, are discarded, and modern ideas adopted to suit modern requirements taking full advantage of the work already done, will we be able to realize how cheaply, easily and perfectly first class roads can be obtained.

North Monaghan and Others.

A by-law to commute statute labor at fifty cents a day was submitted to the ratepayers of Orillia township at the last municipal elections, a majority favoring commutation. In discussing the proposed reform the Orillia Packet, prior to the day of voting, published a number of letters from the clerks of various townships, Barton, Toronto Gore, North Grimsby, Clinton, Stamford, Binbrook, Malden, North Monaghan and front of Yonge and Escott, in which statute labor has been already either abolished or commuted. In commenting on these letters, the *Packet* says:

"It will be noticed that while the de-

tails differ widely, the verdict is unanimous that commutation gives much better results than the old statute labor system. This unanimity of opinion where the commutation has been given a trial should be proof enough to the ratepayers of Orillia township that they will make no mistake in voting for the change. The question has been asked, how it is possible that fifty cents in cash should build more road than a day's statute labor, which represents \$1. Whatever the reason, it is perfectly plain that such is the case, as is exemplified in the case of every municipality heard from. The most plausible explanation would seem to be that the performance of statute labor is, as has often been said, a farce, and that there is truth in the statement that much of the labor is never performed. The farmer who believes in good roads and works hard to get them is made to suffer in passing over beats where the call to statute labor is not looked on seriously, but rather as an invitation to a picnic. It is, however, of little use discussing the cause. The fact is plain that commutation at fifty cents a day does produce better results than the statute labor system."

Among the letters, all of which are most instructive, that from Geo. W. Bennett, of North Monaghan, will probably be the most interesting in view of the letter from that township previously published in THE MUNICIPAL WORLD. Mr. Bennett says:

"Yours of Dec. 18th reached me at a very busy time for township clerks. I can scarcely do justice in general terms to this question (*i. e.*) good roads, as we have found it in North Monaghan, other than the plan outlined in the letter of 1898, to which you refer, and which is still, in the main, the principle upon which we work. I may say that any alteration to this plan adopted since has only been of such a nature as to widen the breach between our present system and the hydra headed statute labor.

"In the beginning of the year 1899 our council increased the commutation rate to seventy-five cents per day, reduced the road districts by one, purchased another gravel pit at so much per acre, and also supplied each commissioner with a number of shovels for filling gravel. Those changes, together with a few minor ones in the matter of detail, were adopted after practical experience, and after favorable comment throughout our township. Our system seems complete in every detail, and at present is working excellently. Of course, varying conditions will necessitate corresponding changes from time to time.

"What is of vast importance, our commissioners are, through experience and the progressive literature supplied from time to time, becoming expert and more self-reliant. I mean by the latter that they are becoming independent of the patronage that is frequently bestowed by councillors in view of a coming election, and which in no case can be applied beneficially to the roads. At our nomination meeting to-day, our reeve and treasurer