

Bad Roads.

WHY WE SHOULD HAVE THEM—HOW TO MAKE THEM.

There is an absurd idea gaining ground here and elsewhere that better roads would be advantageous, and that the present methods of building and maintaining them are out of date. In every age and in every country there has been a class of agitators, disgruntled, dissatisfied, endeavoring to overthrow existing conditions. In Russia there are Nihilists, who rebel against the tyranny of the Czar; Spain is at present disturbed by Cuban patriots; in Canada there are road reformers. The last mentioned are turbulent, obnoxious and aim at a state of anarchy.

Bad roads are in every way desirable. They kill time. Farmers have too much time hanging on their hands. They don't know what to do with it all. Time is money. Farmers have so much money, usually, that they can afford to kill time. They have time to burn. But they don't burn their money—just time.

We have enjoyed the benefits of bad roads so long that if they were converted into good roads we wouldn't know how to use them. Every farmer would be as uncomfortable as a Fiji Islander wearing a new suit of clothes and a fur overcoat. How they would perspire! In the meantime the horses perspire.

Bad roads kill horses and help to keep up the price. Good roads would encourage fast driving, and would thereby encourage cruelty to horses. Fast driving is very immoral. With good roads every farmer's son would own a nice top buggy, and would be able to keep it clean long enough to drive into town; and they would want to spend half their time in town. Bad roads keep them at home. They have to "stick to the farm" because the farm sticks to them.

These are a few of the reasons why we want bad roads. But it does not complete list by any means. There are many other matters respecting commerce, society and civilization, which we have not space to even suggest. Of course, if they have been applied, in principle, to other matters beside roads, we would still be without the printing press and the steam railway. We would be without religious and educational institutions. There would be no progress, no civilization. The savages of Central Africa would send missionaries to us.

Still it is evident that we want bad roads. In making them, the first point to observe is that water should be kept in the road as much as possible. Dig trenches along each side of the wagon track, but do not provide a fall, or outlets, to carry water out of the trenches, otherwise they will be drains. These trenches should hold water and permit it to soak into the roadbed, keeping it soft. If the surface of the road should by any means get dry, the tires of vehicles will easily

break through the crust and sink into the soft foundation.

The dirt from these trenches, composed of sod and clay, should be thrown into the centre of the road, so as to secure a good depth of mud. By keeping the roadway flat on the surface there will be little danger of aiding drainage to any extent by the greater height of the centre. The sod, too, will decay, and is excellent to keep a road in a muddy condition.

If gravel must be used on the road, choose a quality containing plenty of sand and clay. This will retain moisture, and will yield easily under traffic in wet weather. There should be plenty of big stones to roll around under the feet of the horses and the wheels of the vehicle. A rotten culvert, standing a foot or so above the surface of the road is almost necessary for the making of a bad road in its ideal state. They break the monotony, carriages and horses' legs.

A road-grader is a good thing with which to make bad roads, although in the hands of an unscrupulous person it may also be employed in making a good road. Care should be taken to choose an operator who doesn't know how to make a good road, and the chances are that he will be successful in producing a bad one. Do not keep one man constantly employed on it, but pass it around for every one and any one to try his hand on. It is just like a plow in this respect. Do not get an experienced man in the first instance, and see that no one gets any experience. When using it on a gravel road always turn the dirt and sod from the shoulders of the road, and the ditches into the centre of the road. If gravel can be covered by this means let the maker of bad roads wear a blissful smile. He has crowned his efforts with success. If the gravel road was previously good, it will be ruined by this treatment.

Use narrow tires. Wide tires have a tendency to keep the surface smooth. Narrow tires cut into the road, and are harder for the horses to pull, but the man who has the interests of bad roads truly at heart must not hesitate. Besides, the horses have to do the pulling. The driver can sit on top of the load and smoke. What use are good roads, anyway? We must have time to smoke.

If these few principles are carefully followed our roads will remain pretty much as they are at present for a number of years.

At an enthusiastic citizens meeting in Chatham, it was decided to establish free swimming baths for the youths of the city. The feeling of those present was expressed by the following resolution: "That after fully discussing the desirability and necessity for a public bathing place we deem it necessary that such an institution be built at once to promote and preserve public morals and decency, to teach the proper art of swimming and conduce to cleanliness and public health."

Report on Roadmaking.

The *Engineering News*, of New York, one of the leading American authorities in such matters, in commenting on the recent report of the Provincial Instructor in Roadmaking for Ontario, says: "This excellent report upon the construction and maintenance of country roads and town streets should be in the hands of every man interested in improvements of this class. The road problem is not only well discussed, but the detail of location, construction, repairs, administration and provision of means for road improvement are all taken up after a very sensible fashion."

The *Surveyor and Municipal and County Engineer*, published in London, England, in the course of an exhaustive review of the report, says: "The oft-repeated phrase, 'history repeats itself,' can scarcely be more true in any connection than in that of the development and progress of road-making. In reading the Provincial Instructor's report one's attention is at once attracted to the similarity in the stages of development of the opening up of lines of communication in Ontario with the rise and growth of the national demand for good roads in our own country.

It is shown that roads have in all times been amongst the most influential agencies of society, and that road-makers have been among the most effective pioneers of civilization. Good roads also enable the natural resources of the country to be developed, and in every way tend to bind society together and to produce that 'healthy spirit of industry which is the life and soul of every great nation.'"

In conclusion, the reviewer says: "The report will be found highly interesting to English municipal engineers, and will well repay a careful perusal."

Stratford's City Engineer.

The council of the city of Stratford has recently passed a by-law appointing W. F. VanBuskirk, C. E., to the position of city engineer. The by-law requires that an office be kept open during regular official hours, and that it be furnished with all necessary instruments, and an assistant capable of operating a type-writer; also that weekly pay sheets be made out in connection with all city work. The duties of the engineers are further defined as being those of an inspector or supervisor, looking after all repairs, measurements, etc., and to make assessments for all local improvements, to attend council meetings, and otherwise assist in furthering the interests of the city.

This is a new departure for Stratford, but is an example which should be followed by a number of other towns and cities in the near future. Every municipality requires an officer of this description to take charge of its public work.