Our Pi

In our struggle for r in the footsteps and re pean nations, where, ir jections were urged, a posed which we meet v

at the present time. Macauley makes gr culties of travel upon lish country roads, at the time when the English armers indulged in the same periodical diversion of working out their road taxes that is provided for in our old-fashioned Ontario Statutes, which we still keep in force for the maintenance of our highways. He states:—"Not so are the English roads of to-day. By experiment, and by the better light of experience, the English people and their neighbors all over the European continent have learned that true economy in the construction and repair of the common roads, as in the construction and repair of the great railreads, consists in the scientific making and the systematic maintenance of these roads according to fixed rules, and under the direction of an intelligent head."

In the perfection of this enlightened system, it is probable that France leads the world. The govern-

Roads.

reform, we are following

ing the history of Euro

beginning, the same ob-he same obstacles inter-

ment maintains a large body of trained engineers in its special department of roads and bridges, to whom is entrusted the practical work of constructing and repairing the common roads. No part of the road system of France escapes attention, and every road is divided into sections, varying in length according to its importance, each section being placed in charge of a man who is held responsible for the constant excellence of its condition.

But our conditions differing in some respects from those of the European nations, I deem it wise to deal with the matter more from a local standpoint than from a general. And having said sufficient to convince any one of the necessity of putting our roads in a state of greater efficiency, I will try to point out how I think it can possibly be done without increasing the cost very materially. And, in order to do this, it will be necessary for me to give you an illustration, from which I can submit figures and draw comparisons. And to do this, will take the Township of Blanshard, in which live, as a typical one, convinced that what is here said in regard to this township will be applicable, with slight variations from local circumstances, to most of the townships in this province.

Generally speaking, this township presents few difficulties in the way of road-making, it being traversed from north to south by the Thames, which has several small creeks running into it. This gives ample opportunity for drainage. Entirely within the limits of this township we have the town of St. Marys, which is the grain market for the surrounding neighborhood, which causes much heavy traffic over its roads, rendering it necessary to keep in good repair its main entrances. All the main roads of the township lead in the direction of the town.

The sideroads are little used, and, consequently, need little attention. The main roads are those on which nearly all the expense occurs, and it is of them I will speak principally.

All the roads of this township, with the exception of seventeen miles of company road that was built under the turnpike and toll-gate system, have been built and maintained by what is known as the Statute Labor System, a proceeding well known to you all, and which it would be superfluous for me to describe here. Although possessing some good features, this system is not the most suitable for the construction and maintenance of good roads, and should give place to a better.

Perhaps it would be necessary for me here to make some reference to the way in which our roads have been constructed. Most of you have had some experience in building, corduroy, and grading. width of about twenty feet was left in the middle of the road allowance, the earth on each side was loosened with a plow to a depth of six to nine inches, and conveyed to the centre by scraper and shovel to a depth of from eight to twelve inches, and about eight feet wide. In places where the ground was high, no grading was done at all, the longitudinal slope being depended on to keep the surface dry. The traffic soon compressed the clay, and pressed it down so that in the majority of cases The traffic soon compressed the clay, it was only from two to five inches above the original level of the land, and where no grading was done the track became passable only in dry weather. On the other hand, the narrow roadway was raised, where the ground was low and wet, to a height of fifteen to twenty inches, making a dangerous place for teams turning off when meeting. This is what was known as the clay, or more commonly and appropriately as the mud road, for many years in use. On this, as a road-bed, pit gravel was hauled and spread loosely to a depth of from eight to twelve inches, according to the fancy of the man doing the work. When the foundation of the roadbed interfered with the natural course of the surface water, culverts were put it. These were usually built of logs, with a plank covering, but sometimes stone sides were built up, without mortar, and a plank covering put on that. The defects of this con-dition of things are obvious. The superintendence of the work is placed in the hands of parties who have no training or experience in the best methods of work, who have given the matter no attention or consideration, and who are, consequently, unskilled and incompetent to make the best use of the time and money spent.

No good roads of any kind can be made and kept without a proper system of drainage, and this fundamental fact is almost entirely neglected by path-masters. In many places no side drains exist at all,

and when they do exist, they are always too shallow.

In the wet weather of spring and fall (the seasons when traffic is greatest) the road-bed becomes softened and saturated, and unable to support the covering. Heavy wagons cut through the gravel and bring up the clay, mixing it with the covering, permanent y ruining the road where it occurs, and rendering reconstruction necessary the following summer.

Too great a depth of gravel is put on at one time, and it is a long time before it is possible to go over it with a heavy load. In this condition traffic seeks the side of the road when possible,

cutting it and bringing the clay on the gravel The gravel is taken from the nearest pit, with no regard to its quality, and always contains too much clay or large stones to make a good road. The large stones are the worst, as they cause ruts on either side from the concussion of the wheel as it drops over them.

Wooden culverts are a constant source of danger, being generally in a state of ill repair. The foundations, as a rule, are not put deep enough, and the water soon undermines them, allowing the walls to fall in, in which condition they are usually allowed to remain until someone complains or the township becomes liable for an accident. Moreover, they are not economical, decaying as they do so rapidly from the alternate wetting and drying to which they are subjected.

The cost in this township for repairs to culverts alone for the year 1889 amounted to almost \$360, and this without any road commissioner's salary, which, if added, would amount to almost another This, of course, does not include a dollar

spent for new ones. To effect an improvement in these roads through drainage is a prime necessity. This can be provided by an open drain on each side of the road, with slopes of ore to one and a half feet and a width of one foot in the bottom. Culverts should be made to last as long as possible, and for this reason they should be built of stone, where stone can be got so conveniently as it can be here. It will always be found to repay the extra cost of construction by its solidity, permanency and consequent safety.

The floor should be made of concrete, to provide bed that the water will not wash out and render the cleaning out easier. The walls should be built on a solid foundation got by digging down to the solid clay, and should always go below the flooring. The mortar used should be made of cement, as it best resists the action of water. A culvert properly built will never need repairing, will be always per-fectly safe, and of no expense save for cleaning out

once or twice a year.

In order that the road covering should be maintained so that extensive repairs will never be needed, minute repairs should be made to the surface systematically, in small patches, as soon as ruts and depressions appear. The road should be constantly undergoing repairs. To have this done the road should be divided into lengths, on each of which an intelligent laborer should be placed, who thoroughly understands his business, to attend constantly at all times to the condition of the road, and for which he should be held accountable.

[TO BE CONTINUED.]

Manitoba Cattle Breeders and the World's Fair.

The committee appointed at the recent meeting of the Manitoba Cattle Breeders' Association to bring before the government of Manitoba the question of having the cattle interests of the province properly represented at the World's Fair waited on Premier Greenway and presented memorial:-

To the Honorable Thomas Greenway, Premier of Manitoba and Minister of Agriculture and Immigration:

We, the representatives of the Manitoba Cattle Breeders' Association, after mature and lengthy consideration, beg leave to bring the following suggestions to the notice of yourself and your govern-

We respectfully urge that immediate steps be taken to ensure a suitable exhibit of Manitoba's live stock at the Columbian Exhibition of 1893, and that Manitoba at once follow the course pursued in Ontario, and that suitable persons be at once appointed to select worthy specimens of cattle; that experienced men only be appointed as selectors.

we beg to suggest the following as suitable judges of beef cattle: John Sharman, Souris; John McTurk, Elkhorn; Walter Lynch, Westbourne; Lester Smith, Wawanessa. Judges of dairy dattle -W. J. Young, Emerson; James McLenaghan Portage la Prairie; James Bray, Portage la Prairie; James Glennie, Portage la Prairie, and David Steele,

Glenboro. We pray that the expenses of selecting animals

may be borne by the Manitoba government.

We would also respectfully request that your government ask the Dominion Commissioner to extend to Manitoba live stock the same liberal treat ment promised Ontario breeders, viz.: That all the expenses of transportation and maintenance from the time the animals leave the owners' stables until they return thereto be borne by the Dominion Government, and that the cost of sending herdsmen with exhibit, and the maintenance thereof, be borne by one or the other government. Inasmuch as the exhibit is of national and provincial importance, and will not be of real benefit to the exhibitor, therefore we feel justified in asking these privileges. The first two requests have been granted to On-

tario breeders; the last is now being considered, and will doubtless be granted.

All the expenses of selecting, collecting, and caring for fruits, grains, etc., etc., are being borne by the State. Why should our live stock be put on different footing?

We further contend that it is of great importance that our fertile plains be advertised to the world as capable of producing superior animals very cheaply, therefore we consider the exhibit of live stock of national importance. The expense of such an enterprise should not be borne by private individuals.

While we speak for the cattle breeders, we would also respectfully call your attention to the pressing need for immediate action in the matter of selecting suitable specimens of the various breeds of horse sheep and swine, and also that a suitable exhibit of range cattle be selected.

We believe that a preliminary selection of stock should at once be made, and that space be immediately applied for, and that a final selection should be made next May or June. Animals selected in the preliminary selection may at the final selection be rejected, if they have not advanced as fast as desirable; others may then be taken in their stead.

We further humbly pray that your government will take steps to at once officially declare Manitoba

herds free from pleura-pneumonia (as they have ever been), and that you will at once issue a formal protest against the action taken by the British govrnment in scheduling Canadian cattle.

We, your petitioners, are alarmed at the reports now current, to the effect that the Dominion Government are again contemplating the advisability of allowing American cattle free entry into Canada that they may be here killed and exported. We as a body formally protest against thus receiving American cattle into Canada to be slaughtered for export, or put up as canned meats, believing that such a course would be very detrimental to the interests of Canadian cattle breeders.

We further pray that a Commissioner be appointed who is well versed in agricultural and stock matters, and whose sympathies are with the agricultural classes.

That there be an advisory board appointed to act as advisers and assistants to him, and that this board number at least ten persons, and that the live stock breeders and farmers be given a fair represen-tation on said board, and that the members of said board be appointed and called together as soon as possible.

Timely Notes for February-No. 1. "HARD UP."

Just now we are treated to various sermons on the "present agricultural depression," from implement men, storekeepers, and even farmers, just as if any observant man in the country did not know that the almost universal condition of the farmers in Manitoba has been one of "hard-upness" for the last four years—ever since '89, at least—that last and worst "dry year." It is, however, only now that we are beginning to speak "right out in meet-in"." "Open confession is good for the soul," and also for the financial salvation of more people than

Mr. Elder, at Brandon Institute, and Mr. Graham, in his letter to the ADVOCATE a little while ago, both make good points, and just what your humble servant has been abused for pointing out beforethat credits, mortgages and chattel mortgages are not the readiest ways to affluence in farming—but better methods and a strict adherence to the motto of "Pay as you go,"-and don't go until you have

paid! I must join issue with Mr. Elder when he advises reciprocity with the States. I believe in "Free Trade," and free trade only. Reciprocity, I contend, would place us almost completely in the power of the "screaming eagle," and as their manufacturers are so much richer than ours, they could run the Canadians out of their own markets, and then we would indeed be between the "devil and the deep sea." No! Don't let us give away our birthright in any such fashion. Better—far better—to put up with the N. P.—No Progress—policy a while longer. till we can compel our government to give us free trade with the world. Then, indeed, would we progress as we should. That's enough of politics for this issue!

IMMIGRATION. The agriculturists of this country are threatened with a great and impending danger in the expected immigration of the rejected of the United States and Europe—those whom the States have discovered at last to be altogether too free-with other people's lives and property—even for that much-vaunted "land of freedom." Let us, as Canadians, take warning from our neighbors, and rigorously exclude the gaol-birds, gutter-snipes and other riff-raff of Europe. Our country bears an enviable reputation for freedom from crime—let us keep it so. We want population, but not to fill our reformatories. No we need farmers—the rural population of Northern Europe—a hardy, thrifty and vigorous class.

THE SURPLUS OF HORSES. It is high time that the importation of horses from the East should cease. We have enough and to spare of nearly every kind of horse required in this country. Take a drive out from almost any town in Manitoba for from ten to twenty miles, and you will find teams, dozens and scores of horses for sale; many good, a few very good, an odd one firstsale; many good, a few very good, an odd one first-class, and some indifferent ones. The prices asked, in nearly every case, are half what the same class of