

direct from the elevators, while the large increase in storage capacity for miscellaneous freight will enable the handling of this material with much greater facility.

The conveyers themselves, consisting of four 36-inch rubber belts, will be electrically operated from the present power plant, the belts being driven by motors placed in the various towers, and the system being so designed that by means of movable trippers, the grain may be discharged to the loaders at various points throughout the length of the galleries.

Four travelling loaders will be constructed to travel on rails along the front of the galleries, thus allowing the loading of boats at any point desired without the necessity of moving the vessels after they have been placed in position. These travellers will also be electrically driven by means of an overhead trolley.

When the work at present under way is completed it will be possible to load two of the largest vessels at the same time, and with great rapidity, as the capacity of the conveyers is some 60,000 bushels per hour at a conservative estimate.

Further extensions to this conveyer system and freight storage will be made at some future time when conditions warrant, as the scheme allows of future development only limited by the amount of dock frontage available.

For the works completed, and those under way and in contemplation, great credit is due to St. George Boswell, chief engineer of the Harbor Commission, who has been indefatigable in his efforts to develop and equip the harbor, and to whom lies the credit for the excellent system described above. Mr. Boswell is ably assisted in these works by Messrs. Taylor and Fellows, assistant engineers.

## GOOD ROADS NECESSARY FOR DEVELOPMENT\*

By A. C. Emmett,

Secretary of the Manitoba Motor League.

**G**OOD roads are an economical necessity essential to all phases of our social and commercial intercourse and a prime factor in the development of the province.

Appreciating the necessity of the situation, a number of organizations have for some years past been endeavoring to foster the movement by every means in their power, but it will not be till public opinion has been thoroughly aroused to the advantages of good roads that the development of Manitoba will proceed along the broad lines that are essential to the progress and prosperity of the province.

The success of the good roads movement depends on educating the public to its many great advantages and convincing them that every dollar wisely and efficiently spent for this purpose is an investment that will pay an interest that cannot be computed in dollars and cents.

The value of good roads to the agricultural community is just as great as it is to the dwellers in the towns and cities. To the farmer it means a greatly lessened cost of transportation and the ability to market his crop at any time. Under present conditions he is dependent to a very great extent on the weather, as with continued rain the roads become practically impassable and the whole business of the farm comes to a standstill. With a good road, weather which puts a stop to work on the land will not prevent his reaching town and taking care of work in the direction of the purchase of supplies that

would otherwise require time when the land can be worked and every minute is of advantage in preparing or harvesting the crop.

Good roads also have a direct bearing on the high cost of living in regard to which we have seen so many discussions in the columns of the public press. In countries where good roads are the rule and not the exception, the average cost of hauling per ton-mile is 8 to 12 cents, whereas in this province it is not a cent less than 25 cents per ton-mile, so that it will readily be seen what a tribute we pay to a poor road. A reduction in the cost of transportation means a reduced cost of living, and every man, woman and child is therefore vitally interested in the road problem.

Looked at from the social aspect, the poor road has an important bearing on the life of the community, as it prevents that intercommunication between the scattered farmers which does so much to relieve the monotony of existence to the average farmer's wife and does away with the desire of the boys and girls to migrate to the city as soon as they are old enough to do so.

The "Back to the Land" movement will never be entirely successful until the road question has been more thoroughly considered and means of communication between the farm and town provided for the settlers who are being asked to take up farms in the various parts of the province. Manitoba has thousands of acres of undeveloped farm land and will be behind in the march of development just as long as it stays behind in the good roads movement.

The present road system is not in the best interests of the people, and no work of a good and permanent character will be done until the system is changed. This can only be brought about by the division of the roads of the country into three classes, *viz.*, the Dominion, Provincial and Municipal highways. With the first class of road, only the Dominion government should be concerned, and they should consist of the leading highways east and west and north and south. The cost should be borne from the consolidated revenues of the Dominion and the work of construction and maintenance placed under the control of the Dominion engineers. The second class of road, which would be known as Provincial Highways, should consist of the roads which, while not being classed as inter-provincial roads, would yet be of direct benefit to the entire province and should be constructed and maintained under the supervision of the provincial highway commissioner, the cost being borne from the consolidated revenue of the province. The third class of road would be known as the Municipal road and would consist of the market roads running between and connecting the main travel routes. These should be the only ones placed under the control of the municipal councils and paid for out of the local taxation revenue.

With this system in force a great deal of the wasted effort and expense would be eliminated and the entire Dominion would benefit from the development which would follow the adoption of a policy of this nature.

Maximilian Groten, mechanical engineer of the Imperial Russian Railways, last week told the members of the American Road Builders' Association, at their annual meeting, that there is great lack of means of communication in Russia, as only about 40,000 miles of highways exist in the entire huge empire. Mr. Groten spoke of the wealth of Russia in the soil, but stated that the absence of a proper system of highways interferes seriously with its development. He wished to enlist the interest of British and American engineers and capital in Russian highway construction.

\*From Manitoba Free Press.