

# GOOD ROADS ISSUE LINKED WITH WAR

## Advocate of Movement Be- coming Converted to Com- pulsory Service Principle

## USE INTERNED ENEMIES

## Interesting Papers on Allied Subjects—Winnipeg Wants Good Roads Congress Next Year

The great war and the good roads issue were intimately associated in a brief but vigorous communication read yesterday at the afternoon session of the Third Canadian and International Good Roads Congress at Sohmer Park. The writer, Mr. Oliver Hezzlewood, president of the Canadian Automobile Federation, and has been in the forefront of the good roads movement since its inauguration in Canada. He was to have presided at the morning session, and was down for an address in the afternoon, but, being unable to attend, he expressed his views succinctly in a single page of typewriting. Unless aggressive action was taken by the Dominion and provincial governments, he said, the carrying out of the plans for good roads was likely to be as haphazard and capricious as the present plans for recruiting for overseas service. The latter system, he claimed, was proving but a repetition of the experience of the promoters of the good roads movement, for many individuals and communities were obviously shirking their plain duty and their responsibility to others and to themselves. Mr. Hezzlewood said that he was rapidly coming to believe in the principle of conscription in all matters of grave public concern, and not alone in recruiting. Canada's whole energies for the time must be devoted to aiding the Allies to triumph, but when that was accomplished, the Dominion and the province should set themselves to carrying out a country-wide scheme of improved roads, thereby taking one of the most necessary steps toward developing fully the resources of Canada. In the meantime, it would not be wise to project any great public works, even such desirable ones as good roads, which might prove a detriment to recruiting. To put 500,000 Canadians into khaki and carry on necessary industries at home would take every available ounce of man-power in Canada, and it would be folly to divert farm labor, for instance, to the making of roads. One form of labor available for the latter work, however, was that of the thousands of enemy aliens interned in Canada, and Mr. Hezzlewood urged that they be employed for this purpose. Reverting to his growing conviction that some form of national service should be imposed for the general welfare, Mr. Hezzlewood said that control over the roads should be taken from county councils and small municipal bodies, and handed over to central organizations, so that in time Canada should have a comprehensive system of highways.

### BRIDGES AND CULVERTS.

Under the chairmanship of Mr. U. H. Dandurand, honorary president of the congress, papers on the allied subjects of "Highway Bridges" and "Highway Culverts" were read, the former by the author, Mr. Lucius E. Allen, engineer for the County of Hastings, Ontario, and the latter, in French, written by Mr. Alex. Fraser, engineer of the Highways Department of Quebec Province, and read by Mr. J. Duchastel de Montrouge, of Outremont. As bridges constitute so large a proportion of the cost of many highways, said Mr. Allen, careful study of their design and construction was necessary. A bridge should be practically permanent in its construction and, to secure this, careful design, selection of proper materials and expert workmanship must be combined. Solid foundation was the first desideratum. There was no standard type of bridge and traffic, climate, geographical features and other local conditions must govern a selection. Future developments must be anticipated, as, for instance, the denudation of forests, increasing the possibility of freshets. As a rule, increases of traffic and heavier loads must also be provided for. Reinforced concrete construction was being largely favored in England, being economical both in first cost and in maintenance. In adopting this type artistic design and finish should not be neglected. If steel bridges were adopted, constant painting was essential, and Mr. Allen said he had seen good steel bridges practically destroyed in 12 to 15 years by neglect of this precaution. In conclusion, he expressed satisfaction that the study of bridges was receiving the consideration it deserved, as this meant that, when the Canadian system of national highways was inaugurated, the bridges built would be worthy of such a great undertaking.

Mr. Fraser's paper on culverts stated that the average cost of permanent culverts on provincial roads in Quebec varied from \$800 to \$1,500 per mile. Concrete culverts only were used, and while the Quebec makers in the past had not always adopted the best methods of manufacture, a movement was now on foot to organize in order to secure a standard product. No matter how good the quality of the product there was danger of failure unless it was properly placed, and the need for intelligent and experienced foremen was imperative. To safeguard traffic the culverts should be the full width of the road surface, and to secure the unobstructed flow of water, right angle connections between ditches and culverts must be avoided.

### WEST WANTS CONGRESS.

Mr. A. E. Cunningham, representing the Lethbridge Board of Trade, spoke briefly. The importance of highways to the country, he said, would be understood when it was remembered that practically every bushel of Western Canada's 300,000,000 bushel yield must pass over some highway in its first stage of transportation. Great interest was being taken in roads in Alberta, and, when the Canadian National Highway was built, it would find Alberta's good roads ready to be linked up with it. The West was eager to secure the next congress for Winnipeg, and an invitation to that effect might be expected before the present gathering closed. Good roads were a magnet that would draw the whole Dominion closer together.

The closing feature of the afternoon was an illustrated lecture by Prof. J. Crandell, of the Pennsylvania State College, on bituminous roads. "You



couldn't put an \$8,000 house on a mud foundation," he said early in his lecture, "and it would be equally foolish to use a mud foundation for a road that costs \$8,000 a mile." After getting a good foundation, thorough rolling was half the game in building the road. The modern bituminous road was the result of a happy combination of the chemist, the manufacturer and the engineer. The lantern views and moving pictures accompanying the lecture were watched by hundreds of the delegates.

#### MORNING SESSION

Mr. L. B. Howland, president of the Ontario Motor League, occupied the chair at the morning session. Mr. A. C. Emmett, secretary of the Automobile Club of Winnipeg, spoke on the attitude of legislatures to the good roads movements, which is becoming much more favorable as the economic value of good roads is realized. For many years the grants made were meagre, but many provincial governments had now passed good roads acts and the various municipalities can obtain substantial grants towards definite and well-defined plans of road improvement in country districts.

In Manitoba the Government gave 50 per cent. of the total cost of construction of all permanent roads, and paid one-third of the cost of dirt roads. No provision was made, however, for maintenance, which was a weak spot in many road acts, so that even roads that were well constructed were ruined through lack of funds to maintain them. Municipalities should provide for maintenance for a period of time equal to that of the bonds issued in payment of the construction work.

Better results would be obtained if the construction of all main highways was undertaken by the Dominion Government, all second-class main highways by the provincial governments and all third-class subsidiary roads by the municipalities.

The paper of Mr. Gabriel Henry, Quebec Government Engineering Department, dealt with gravelled roads, and was read by J. Duchastel de Montrouge, of Outremont. Mr. Henry pointed out that one of the advantages of well-constructed gravelled roads was that they could be made to serve later as foundations for a more costly top course, and one of greater resistance if traffic increased and circumstances demanded, just as earth roads made an excellent foundation for gravelled roads. He emphasized the importance of perfect drainage for the surface and subterranean waters, these two conditions being indispensable for any road.

The congress unanimously passed a resolution endorsing the establishment of a Dominion Labor Bureau system, permanently administered by a non-political commission, as a national organization indispensable to the adjustment of post-war conditions and the replacing of thousands of able-bodied soldiers in civilian employment when peace is declared. Miss E. St. John Wileman spoke on the subject, and the resolution was moved by Mayor Ballantyne, of Montreal West, and seconded by Alderman Munro, of Outremont.

J. Duchastel de Montrouge, city engineer of Outremont, gave a paper on the laying of brick pavements in Outremont, emphasizing the need of the strictest supervision in laying them, and claiming that when properly constructed they will wear smooth without being slippery. They are the most sanitary pavements known, being easily cleaned and absolutely dust-proof; they are practically noiseless, and are economic in the long run, as they required very little attention and maintenance, and can be easily cut through when required and repaired at small cost without any cumbersome plant. The cost of the pavement laid on Laurier avenue was \$3.80 per yard.