

## BETTER ROADBEDS FOR ECONOMY AND SERVICE IS URGED

Experts Declare Taxpayers Are Losers If Highways System Is Not Built for Heavy Trucks.

Are the capacities of motor trucks to be limited to the present wear and tear ability of the roads now being built in this country, or will the trucks be built according to other needs and the roads made progress in proportion to the tax on their strength?

The Chinese bind the foot to fit the shoe rather than construct the shoe to fit the foot, and that seems to be the present idea in American road building. Cost of road construction per mile at the present time is rather high, but the question is: Would it be cheaper in the long run to build roads that will carry loads and carry them for years, or save money now and let future generations build some more when these get so bad they are no longer worth using?

### GOOD ROADS NEEDED

Where would our railroad system be now if locomotives and cars had been limited by the former light weight rails and flimsy road bed construction? And where will the rapidly developing system of truck transportation be a few years hence if we do not meet the problem of the roads upon which they are to run, squarely and intelligently?

Last July, upon the departure of the United States Army Motor Convoy, dispatched by the War Department from Washington, D. C., to San Francisco, Secretary of War Baker said that one of the great problems before our people was that of improved hard surface highways.

### FEW IMPROVEMENTS

Mr. Baker was speaking from knowledge gained by the experience of our officers in France. They had seen a country saved by its highways—saved because the French have always considered their roads part of the system of national defense. Over the whole of France there extends a network of hard surface roads; every town and village is connected to its neighboring town and village by an improved highway.

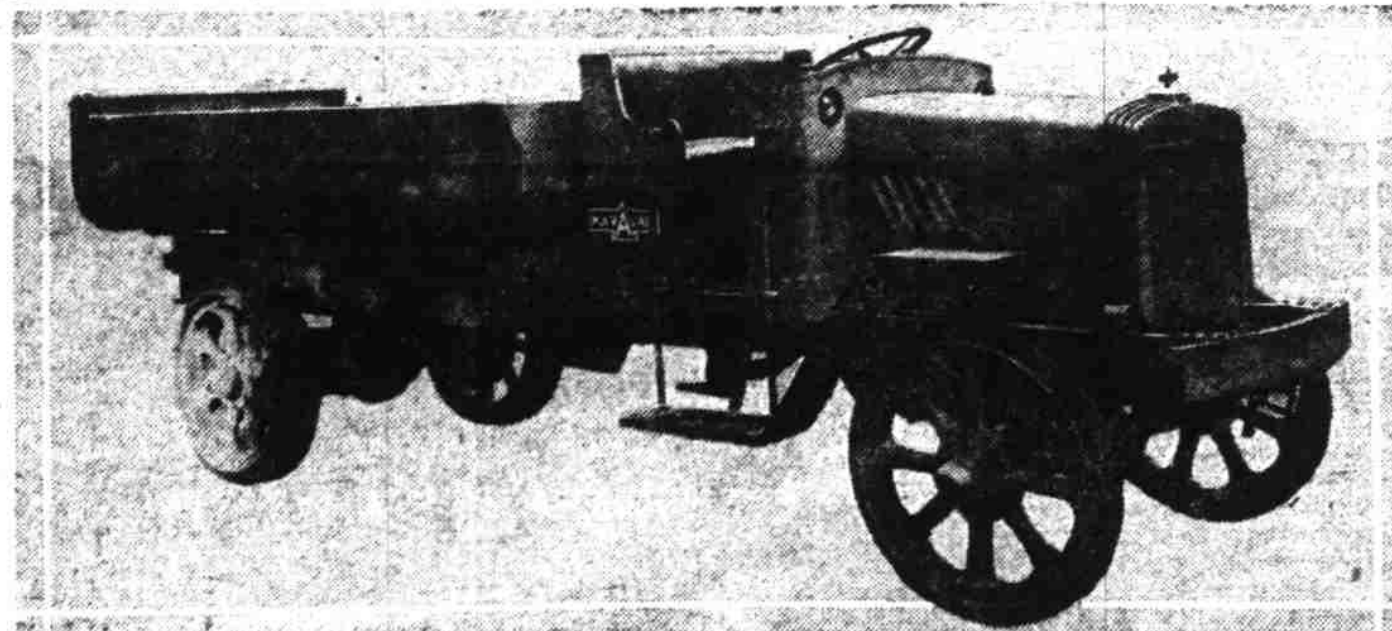
Take, on the other hand, the conditions in this country. If one were to start in a motor car from New York to San Francisco practically every type of road, including trails, would be encountered. West of Chicago there are very few improved roads until the California line is reached. In Illinois, Iowa and Nebraska there are dirt roads that are practically impassable in wet weather. Such improved roads as we have in the East and in parts of the West differ greatly in construction; everything from water-bound macadam to concrete is represented.

### REGULATION OPPOSED

If our highway system is to be anything better than an immense failure it must be built up with an intelligent understanding of present and future requirements. And it must not be left to local whims and prejudices. For example, consider some of the laws proposed at the last General Assembly of Illinois.

A series of provisions, the effect of which would be to limit the size of commercial vehicles to 4-1/2 tons carrying capacity, except when used solely with-

## A PORTLAND-BUILT MOTOR TRUCK



New Karavan truck, manufactured by the Karavan Motors company, which is built here in Portland by the Oregon company. Its makers say it is destined to become one of Oregon's most important products.

in the limits of more than 20,000 population.

A regulation limiting motor trucks of 2-1/2 to 3 tons rated carrying capacity to speeds of 7-1/2 miles per hour on business streets; motor trucks of 3-1/2 tons capacity and over to six miles per hour.

### HEAVY TRUCKS BARRED

Provision for a maximum limit of gauge of seventy-five inches, measured center to center of tire would have made necessary the scrapping of half the heavy-duty motor trucks in service.

Prohibiting operation on the highways outside of cities, villages and towns of any vehicle which weighed with its maximum load in excess of seven tons. The effect of this would have been to prohibit anything larger than a two and one-half to three-ton motor truck.

It seems strange to think that in this country the only practical overland route from the Atlantic to the Pacific has been provided through the Lincoln Highway Association, which is simply a group of individuals who are generously and enthusiastically giving their time and money to the prospect.

The consideration of highways brings up several questions. How are they to be provided? How constructed? And what restrictions are to be placed upon their use?

### OFFER TWO SYSTEMS

The logical method—gained from our experience in France, and from an analysis of our own needs—is to have two systems or roads: National Highways, constructed and maintained by the federal government, and state highways, constructed and maintained by the states.

The former would be the main lines and their location would be determined by the topography of the country and the density of the population. The latter would be laid out to serve local requirements.

In construction they should be hard surfaced. The concrete road seems to be proving satisfactory. They should be sufficiently wide to permit safe passing of vehicles, and provided with suitable bridges and culverts of steel and reinforced concrete.

### PROPER ROADBEDS

The main restrictions upon this would be, of course, the weight of the loads. The bridges and culverts must be built to sustain a maximum load, and this maximum figure must be set only after fair consideration of the part trucks are to play in hauling the nation's freight. It is not unreasonable to surmise that in a few years, wherever proper road-

beds are provided, much of the freight now carried by the railroads will be carried by trucks. It would be a criminal waste of money to build roads that will prove inadequate. Also it would be a waste of money to build roads designed for some extravagant figure in tonnage. Eleven tons would undoubtedly be a reasonable figure, considering both the present and the future. But, at any event, let's not be Chinese about it.

## Standardized Auto Is Greater Success Truck Makers Learn

Truck makers throughout the United States have realized the necessity of standardizing their product.

Parts makers producing an individual unit are in better position to manufacture that alone than those who are making many parts. The nation has recognized the value of the assembled truck made up of standard units, and it realizes that every unit must be absolutely O. K. to insure the business not only of the manufacturer of the truck, but also of the manufacturer of the parts. The life of the parts maker and his business depends upon his making the best possible unit. The use of these units by many concerns enables that parts maker to establish large industrial plants, to employ the highest paid and best engineering talent in the country, and to install the most modern, up-to-date machinery. By specializing in an individual unit, the maker is able to provide a cheaper, but at the same time a far superior product.

There is an element of advantage in the service provided through this specialization. Repair parts for a large percentage of assembled trucks can be procured almost everywhere in the United States and in foreign countries. The principle of the standardized truck is right, because the product is made up of parts, each unit of which is 100 per cent in its own field.

## Auto Truck Made of Concrete Next

We have concrete ships. Now we are to have concrete railway trucks. These trucks, carrying a load of 55 tons (10 per cent overload), have just passed the most crucial tests. The great advantage of concrete trucks are that they

do not need painting, maintenance costs are practically eliminated and they last much longer than wooden trucks. Plans are under way for the production of a considerable number of these trucks. It is too much to expect that concrete will be utilized for the bodies of passenger cars, but it is possible that we shall see the advent of the concrete motor truck at no very distant date.

About 10 per cent of the 80,000 miles of highway in and about New York state is improved under the state and county systems.

## PORTLAND ENTERS INTO FIELD OF MAKING TRUCKS

Local Concern Is Formed of Several Men Prominent in Financial Circles of This City.

Oregon actively enters the automotive manufacturing field with the organization of a local company for the purpose of manufacturing the Karavan truck. The Karavan Motors company, with a capitalization of \$100,000, is the name of the new concern, with E. D. Van Dersal as president, Fred Hesse, vice president and consulting engineer, W. L. Boise, secretary, and George H. Peters as engineer in charge of construction. The directors will include several men prominent in local financial circles.

The truck will be manufactured and marketed under the name Karavan, and will be manufactured by the Hesse-Martin Iron Works, at East Ninth and Taylor streets. Numbers of large government contracts secured by the company will enable it to begin construction very shortly on a large quantity basis. The division devoted to manufacture has on the payroll many men expertly familiar with truck construc-

tion, and the company has arranged for other men with a highly trained knowledge of gasoline engines and of chassis building to take care of the details of the work. The enterprise has been planned from the manufacturing end with great care to preclude the possibility of inefficient administration. The sales division of the company will be under the direct charge of E. D. Van Dersal, who has located temporary salesrooms at 254 Burnside street. The sales plans do not at present include a national campaign, but for the time being the territory west of the Rocky mountains will be thoroughly covered, and the Oriental trade, fitted apply for the name Karavan, will also be the scene of extensive operations.

### MEN ARE WELL KNOWN

E. D. Van Dersal, promoter of the new company, is one of the pioneer automotive men in the local field, having been associated with the business here for the past 10 years. He introduced the Studebaker light delivery in 1911, and was later salesmanager for the Studebaker corporation. He managed the sales of the Federal truck company here in 1914, and during the period between 1915 and 1918, was the Oregon distributor for the Oakland Six. He has but lately given over the agency rights for Oregon and Washington for the Garford truck to the present distributors.

Fred Hesse has been for some years in the iron and steel business in this city, and at present is the head of a large plant on the East side, the scene of the manufacturing operations for the Karavan truck.

W. L. Boise is a prominent Portland attorney who has been active for some time as a champion of Oregon industries and an enthusiastic booster of Portland pavilions. His connection with the Karavan company is an outcome of his long interest with the local transportation problem.

George H. Peters is a transportation expert with an experience of 15 years in the Western field. It is to Peters that the Karavan truck owes its rugged

design, and is largely a result of his finished engineering skill. His familiarity with haulage conditions has been a prime factor in the arranging of the details for the manufacture and commercial marketing of the carrier.

### BEGIN DELIVERING SOON

The contracts for parts to be used in the construction of the truck were placed with Eastern manufacturers early in 1919. The first experimental job turned out by the builders appeared in the fire prevention parade last fall, and later the Corvallis fire department was furnished with fire apparatus mounted on a Karavan chassis. Shipments of parts are now coming to the plant, and deliveries are expected to commence about the middle of March.

One feature of Karavan manufacture is that the trucks are not sold with any definite tonnage capacity rating marked, such as is known to be noted in trucks of other makes. The truck is designed solely with the idea of improving hauling conditions in the Northwest, and provide a carrier that may be bought on the ground, thus insuring more prompt deliveries than might be

possible with the plant many miles away in a Middle Western city.

An Oregon product and catering to the wants of companies having a total payroll valuation of \$150,000,000, the Karavan company's carrier is designed to keep here as much as possible of the money expended for automotive equipment in the West. Officials of the company declare that had the entire automotive equipment now owned in the Northwest been purchased in this section of the country, 40 per cent of the total might have remained in Northwestern hands instead of being sent East.

**Autos Cost Billions**  
The total value of the passenger cars and trucks produced by various automobile concerns in this country in 1919 was \$1,807,594,584, which is exclusive of the wholesale value of bodies, spare tires and accessories to equip the vehicles. There were 1,848,187 passenger cars produced and 205,142 trucks turned out.

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## Announcement

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