

# BIG MOTOR VEHICLE INCREASE IS SHOWN FOR UNITED STATES

### ALMOST TEN MILLIONS OF MOTOR DRIVEN MACHINES REGISTERED DURING LAST YEAR

A total of 9,211,295 motor cars including commercial vehicles were registered last year in the 48 states and District of Columbia, according to figures compiled by the Bureau of Public Roads of the United States Department of Agriculture in a study of revenue available for road-building purposes. There were also registered a total of 238,145 motorcycles. The registration and license fees, including those for chauffeurs, operators and dealers amounted to \$142,034,104.26. As compared with 1920, the data for 1920 represent an increase of 27 per cent, or 1,642,488 motor cars. This increase alone lacks but 4 per cent of being equal to the total registrations of the United States six years ago.

In 1920 in the State of New York alone, the number of motor cars registered, including commercial vehicles, exceeded the total cars registered in the whole United States in 1919. Furthermore, the revenues derived from registration in the State of New York in 1920 was about equal to the entire registration revenues of the United States in 1912.

The use made of the revenues has changed with the passing of years. In 1906 the total registrations were approximately 48,000 cars, paying a gross revenue of about \$193,000. (Arizona in 1920 paid approximately that amount.) In 1906 the gross registration revenues were equal to less than three-tenths of 1 per cent of the total road and bridge expenditures for that year.

The registration revenues in 1920 were equal to about 25 per cent of the total road and bridge expenditures for the calendar year 1919. In 1906, practically none of the motor vehicle revenues was applied to road maintenance or construction, while in 1920, 96 per cent, or a total of \$17,957,150.50 was used for this purpose. The remaining 4 per cent not applied to road work was expended very largely for number plates and in carrying out the provisions of the motor vehicle registration laws in the several states. Of the total amount applied to road work 78 per cent, or \$17,531,582.57, was expended under the control or supervision of the several State Highway Departments.

### Increasing Amount Spent for Road Work

For a number of years the general tendency toward devoting an ever-increasing portion of the motor-vehicle revenues to road work under the control and direct supervision of the State Highway Department has been very noticeable. Prior to 1912 only a very small portion of the motor-vehicle registration was devoted to this purpose. In 1920 76 per cent of the revenue, or \$17,531,582.57 was applied to road work under the direct supervision of the State Highway Departments and in addition \$20,465,575.94 was applied to road work by counties or other local supervision but with little or no direct supervision from the State Highway Departments.

### Limit Load of Motor Trucks.

At the beginning of 1921 there were still seven states in which motor trucks were registered at the same rate as passenger cars, but in recent years there has been a very decided tendency in most states to increase the fees required for motor trucks over and above those required for passenger cars. This increase is usually based on the weight of the trucks and its carrying capacity, its horse-power, or a combination of these factors. The most general practice seems to be toward definitely limiting the maximum total weight of the vehicle and load, the registration fee on the capacity of the truck. Some few states have adopted a scale of fees which in actual practice, serves to make the registration of very heavy trucks impracticable.

# SUPER-SIX HUDSON TRAVERSES DESERT IN FAR-AWAY LAND

### WORD "DESERT" ROBBED OF TERRORS BY HUDSON SUPER-SIX, IN CLAIM OF CHISUM.

Toney Chisum, president of the Amarillo-Panhandle Automotive Association and local Hudson-Essex dealer, says:

"The word desert sounds forbidden enough right here at home where we know there are such places, but few so far from cities that man no longer hesitates to cross them. Over in China there is one, the Gobi, long famous for its size and desolation. It was this desert that A. Nalozemoff, manager of a gold mining company recently crossed with his Super-Six."

"The road, an old caravan route north from Peking over the mountains is the only free way into Siberia and Russia and the far east. It is impossible to find a more difficult test for a motor car in China than over this route. The Hudson driven by Mr. Nalozemoff made the trip over and back, nearly 2,000 miles, and carried a load of five persons, with large quantities of baggage and spare parts."

"The road is very diverse in character, at times following an old river bed, shingly and boulder strewn, rocky, hilly, and even mountainous, the long flat stretches of the desert, long patches of loose sand, stretches of swamp, whilst between these there are places where the surface is almost perfect extending for long distances in undulating slopes. Over these latter the Hudson at times attained a speed of sixty miles an hour."

Chicago has 52 miles of docks with railroad facilities.

# Troops Guard Ohio City



The Springfield Ohio jail and troops guarding it, with machine guns to prevent race riots following the conviction of Patrolman Joseph Ryan. Ryan was shot by a negro while trying to disperse a mob that gathered outside the jail after an attack on a young girl. Troops were then called out.

# WIRELESS SIGNALS INSURE SEA CRAFT FROM FOG TERRORS

### GOVERNMENT PLACING SAFETY DEVICES FOR PROTECTION OF COUNTRY'S SHIPPING.

The Secretary of Commerce announced last night that in view of the important development of a radio compass by the Bureau of Standards, three wireless fog signals would be immediately installed at the entrance to New York harbor through the lighthouse service. Each of these three stations is equipped with an automatic radio set sending out signals continually during fog or thick weather. They may be picked up on shipboard by means of the new radio compass which indicates the direction from which the radio signals are sent

out, and by taking observations on the distant stations the captain of a vessel may determine his exact position without being obliged to rely on the former unsatisfactory method of locating himself by the sound of whistles and fog horns.

These signals have been developed as the result of co-operative experiments by the Bureau of Standards and the lighthouse service, and more especially through the research work of the Bureau of Standards in improving the radio compass. It differs from all other systems in use for determining radio direction in that the navigator himself can determine radio bearings just as he uses his magnetic compass for bearings in clear weather and he does not have to depend upon expert radio operators. The other advantage is that the sending apparatus is easily installed and can be operated by the regular lightkeepers without any skilled personnel, and that any number of vessels at sea, equipped with radio compasses may obtain their position at the same time without interference.

These signals have been installed on Ambrose Channel and Fire Island lighthouses and at Sea Girt lighthouse, and will operate on a wave length of 1600 meters, the international standard

# INBUILT STAMINA INSURES SERVICE ASSERTS JOHNSON

### A LOCAL STUDEBAKER DEALER CALLS ATTENTION TO FACTS GENERALLY OVERLOOKED.

"To the owner who sits complacently behind the wheel of his car," said C. F. Johnson, of the Johnson-Johner Company, Inc., local distributors of the Studebaker, "free from the worries of mechanical troubles, there is seldom a thought as to what is behind a good car's inbuilt stamina that enables it to stand up and give service under every possible road condition in every part of the world."

"Quality never finds its way into an automobile by accident. It is due to certain reasons, to the presence of high grade materials; skillful engineering; exacting tests in laboratories, in the factory, and on the road; constant inspection throughout the process of manufacture. And these in turn mean that the manufacturer must be big enough and have resources and equipment enough to make sure that the standards laid down are rigidly adhered to."

"Nor can the importance of tradition be overestimated. Seek the reason for any great, long-lived manufacturing success and you will find that the concern in question has not only held to ideals of quality but has possessed the facilities for seeing to it that quality was built into its product. In material design and workmanship it has 'made sure.' This has been Studebaker's experience."

"Some sage has said that the training of a child should begin with its grandparents. In like manner it may be said that the inspection of a car should begin with the raw materials. Not only does Studebaker specify highest quality materials, but they check up on all suppliers, subjecting the materials to the most rigid and searching tests to make absolutely sure they measure up to specifications."

"With them even the smallest bolt receives careful consideration and an individual material specification made for it. Chrome-nickel and chrome-vanadium steels are used on parts where a combination of toughness, hardness and exceptional fatigue properties are demanded, and the physical properties are increased from fifty to seventy-five per cent over those obtained by the use of the nonalloy steels. And so it goes throughout the car. In each case the material is used that will give the best results in the particular function it must perform."

"The Studebaker research and experimental laboratories, unequaled in the industry, represent an investment of approximately \$100,000 and employ 100 skilled men, each holding a college or university degree. For such signals. The lighthouse service plans to establish other stations near the entrances to the principal ports and at other important points on the Atlantic and Pacific coasts, as rapidly as necessary funds are provided. Because of the great risks and uncertainties attendant on the navigation of vessels during fog, it is expected that this development will be of the greatest value in increasing the safety of navigation. The Chicago packing industry dates back to 1835."

### THE "GOLD STAR SHIP."

There is genuine inspiration in the plan of that American woman who is organizing a pilgrimage of the mothers of boys who fell in the war to their sons' graves in France. It is proposed to charter a ship, to be known as the "Gold Star Ship," for this purpose. This to begin with; but the idea is a much bigger one than the associated expression of grief and pride of 500 or so mothers of slain American soldiers.

What gives the project exceptional interest is the fact that it is proposed to make the sojourn of these bereaved American mothers an French soil the occasion for a striking dramatization of the deep desire and sole determination of the mothers of the world in a demand on the governments of the nations that there shall be no more war. A great convention of representative

mothers of sons done to death in the conflict, mothers from all the belligerent countries, to be gathered in Paris. And this convention is to go definitely on record in protest against the hanging and the chicanery of the so-called statesmen and diplomats which every little while so callously and stupidly consign thousands and millions of the flower of the world's manhood to be cannon fodder while making desolate the hearts of the mothers of men.

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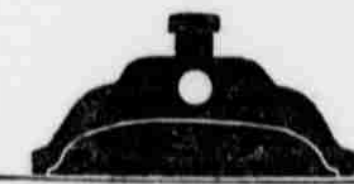
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