

PIONEER AUTO TRUCK USED STEAM POWER

First Self-Propelled Carrier Dismal Failure.

IT RAN ONLY SEVEN MILES

Crank Shaft Broke Under Strain and Vehicle Was Abandoned by the Roadside.

Related realization of transportation visions which the creators of the steam wagon had for it, is seen by ship-by-truck advocates in the transportation role the motor truck is assuming today.

The men who in the early part of the 19th century brought forth the steam wagon labored long and spent much money experimenting before they gave way to the conviction that its transportation range must be fixed by steel rails.

A monument in Nebraska city tells of one of their last ventures. The monument stands on the spot where this venture had its start, and only seven miles from where it ended. The inscription on it reads:

"Steam wagon, invented and owned by Joseph E. Martin, first self-propelled motor vehicle manufactured by John A. Reed of New York, landed at Nebraska City from steam wagon, built July 1, 1852. Started for Denver, self-propelled, July 22, 1852. Disabled and abandoned seven miles out."

Pioneer Vehicle Sold for Junk.

Few of the scores of persons who took part in the grand welcoming reception given at Nebraska City upon the debarcation of the big wagon, and rode in the straggling line of the town that day, are alive now. They believed it would make scheduled trips between Denver and Nebraska City, hauling big loads and solving the local short-haul transportation problem.

But a crank shafting which broke when it was a few miles out on its maiden trip spoiled its doom. It was left on the roadside until a mill owner who wanted its boiler paid \$200 to its owner, who had spent thousands on it.

The roads were too much for the delicate parts and its weight was too much for the country's foremost transportation authorities. C. A. Morse, assistant director of operation of the United States railway administration, expressed himself recently as believing that the time may come when the steel rails of light traffic extensively operated short lines will be torn up and their right of ways converted into highways for trucks.

Other transportation experts and many ship and truck advocates express the same trend of thought.

The greater possibilities of the motor truck on the highway, when compared with the steam carrier on branch line rails, are indicated for the whole United States by the figures for a typical state, writes E. Parr, chief of the Firestone ship-by-truck bureau, at Akron, Ohio, in a letter to the Portland branch of the bureau, touching on the use of the motor truck as a feeder of the railroad.

"In a few more years, the mileage is 12,000 miles. The highway mileage is 77,000 miles.

Truck Valuable as Rail Feeder.

"Replacement of some of the service performed on this railroad mileage—wherever it represents light traffic branch lines which are operated at heavy cost by the main lines—is only part, and a small part, of what the motor truck probably will do in a few more years. Its bigger and more important function lies in its ability to fill up the gaps between the producer on the 77,000 miles of highways and the stations on the 12,000 miles of railway.

"By doing this it will not only feed the main-line railway, but also bring the near-by producing farm closer to the city market. When it is operating on a network of routes, the farmer will save money and the consumer should benefit by the fuller markets thereby created."

Thus it is that the advocates of the motor truck—a lighter and yet sturdier vehicle are taking up and carrying to fulfillment the visions which the creator of the steam wagon had for it.

ROCKHILL MADE SALES CHIEF

Goodyear Advances an Old Hand to Newly Created Office.

The automobile industry generally, and the tire world particularly, will be interested in announcement by the Goodyear Tire & Rubber company of the creation of the position of sales manager, and appointment to that position of L. C. Rockhill, widely known in the trade.

The appointment, coming when Goodyear is able to announce the close of the 1919 season in its remarkable history, with a total gross sales of \$185,000,000, attracts wide attention to the man who will direct the sales policies of the American industry, whose activities reach to the far corners of the world.

Mr. Rockhill has been with Goodyear for something over 12 years. Previous to that he was in the advertising department of a Cleveland newspaper. His first service with Goodyear was in charge of the repair department, a subdivision of the automobile tire department, handling repairs and adjustments. He was successively made manager of the mechanical department, manager of the automobile tire department and assistant sales manager in charge of tire sales.

The Goodyear announcement is in line with the company's consistent policy of recognizing ability and rewarding loyal service in its ranks. Mr. Rockhill's advancement to the position of sales manager follows naturally, by virtue of his long experience with sales work.

2-CAR GARAGE HAS ONE DOOR

L-Shaped Building Has Opening at Angle.

A two-car private garage in Chicago is enabled, by an ingenious patented arrangement, to accommodate both of its occupants with a single door of ordinary size, without any confusion or maneuvering. The garage building is L-shaped, and the door cuts across the corner of the "L" at a 45-degree angle. Either car may thus be driven straight into its particular slot or out again, without interfering with the other.



THIS IS A NICE JACK-POT TO BE IN—WHAT?

IT WAS THE CHEVROLET'S ANTE, AND IT MADE GOOD.

It happens to be just one of a good many interesting touring situations into which Jesse G. Sills, scenic moving-picture camera man, of Portland, in his Chevrolet touring car in the course of his past summer and fall in search of scenic pictures. This particular photograph was taken by Mr. Sills, showing the Chevrolet in one rather difficult situation in the Cascade mountains. It got out all right. Mr. Sills bought his Chevrolet a year ago from the Fields Motor Car company here, and it has given him sterling service.

ROAD BUREAU BROADENED

GOODRICH TO GATHER HIGHWAY TRANSPORT DATA.

Raymond Beck to Continue on Wider Scope Work That Was Started in 1911.

Prompted by a healthy growing demand for highway information and charts from highway transportation engineers and advocates, C. E. Goodrich, local Goodyear manager, announces that the national touring bureau of the B. F. Goodrich Rubber company will be broadened to include the dissemination and distribution of all highway transport data.

Henceforth it will be known as the Goodrich travel and transportation bureau. The new institution will adhere strictly to the following policy: "To promote highway transport service and to co-operate with all forms of transportation by land, water and air, in obtaining a more extended and efficient use of their respective facilities."

Through its country-wide organization of branches, depots and dealers the bureau has distributed upwards of 150,000,000 pieces of touring information to the motoring public and its accomplishment in stimulating touring has been one of the biggest individual efforts in good roads building. In 1919 it distributed nearly 5,000,000 state highway maps.

Raymond Beck, who acted as field engineer of the United States highway transport committee during the war, has been chief of the bureau since its inception in 1911. Among the highway transportation experts on the travel and transport bureau advisory board are: Robert C. Hargreaves, formerly secretary of the highways transport committee, and S. V. Norton, Goodrich truck tire sales manager and author of "The Motor Truck as an Aid to Business Profits," and "Motor Trucks of America."

BLAME BOYS FOR AUTO THEFT

Indianapolis Police Figures Show Youngsters Are Offenders.

Figures compiled from the books of the Indianapolis police department show that the detectives assigned to the theft of motor cars have succeeded in recovering two-thirds of the stolen cars in the last four months. The reports show that most of the people convicted of unlawful possession of motor cars are boys between the ages of 17 and 22. A conservative estimate on the value of the cars stolen would place the total at \$218,500 for the four months. The police have recovered \$129,000 worth of stolen cars. Out of the 423 cars stolen they have recovered 278.

LINCOLN HIGHWAY TERMINUS

Los Angeles Declared Logical Coast End for Continental Road.

The location of the big Goodyear plant at Los Angeles has greatly stimulated interest in establishment of a branch of the Lincoln highway leading from Ely, Nev., to Los Angeles, a distance of 770 miles. Ely is the first big town reached after

ONLY ONE SHORT DETOUR NOW ALL THE WAY FROM PORTLAND TO ASTORIA.

This detour, between Deer Island and Goble, is made necessary by the building of a new concrete bridge at this point. It is very short, not over 100 yards, and the detour is traveled and reasonable in any weather. Incidentally, this one detour is the only bit of unpaved highway now from well this side of Deer Island all the way to Goble, Rainier, and half way on to Clatskanie. The picture shows a Franklin car starting to make the detour on a recent run to Astoria.



500 OVERLANDS PER DAY

PRODUCTION IS BEING INCREASED TO 600 DAILY.

Army of 12,500 Employees Engaged in Building New Car Enthusiastic Over It.

The Willys-Overland company continues its remarkable progress in building Overland Four, the light car which has introduced a new standard of easy-riding comfort in its exclusive feature of the three-point suspension springs.

Word comes from Toledo that the production of Overland Four has now reached 500 cars a day. The various factory departments are engaged in spirited rivalry to accomplish their part of the operation so that production may reach 600 Overland Fours a day. Getting production up to 500 a day on this new type of motor car is an instance of loyalty and intelligent co-operation on the part of a working force of 12,500 employees.

This record is further interesting in view of the fact that there are now no street cars in Toledo, the citizens having voted for an ordinance. The railway company took the city at its word and sent its street cars into Michigan. Despite this, the Willys-Overland factory has had an attendance of 100 per cent of its 12,500 workers since Toledo became trolleyless.

To get them back and forth from their homes each day the Willys-Overland company has organized a complete transportation system of trucks, autos, jitney buses and other conveyances. But, at that, it means long walks and very early breakfasts for thousands of the Overland workers. But they get to work every day.

There is so much interest and enthusiasm among the workers in the Toledo factory over Overland Four that the company has taken steps to provide a demonstration of the new car's unexcelled easy-riding qualities to every man and woman in its employ. The free-ride-for-all program is now being arranged. Nothing like this, it is said, has ever before been attempted by any automobile plant. It is explained that the Willys-Overland management in providing the demonstration merely acceded to a general request from the workers in the plant.

Gearset Lubrication.

In filling the gearset put in the lubricant to a depth of about half the height of the gearbox. That is, have it come about even with the center of the main shaft. This will submerge the countershaft, and bring the face of the main shaft gears into the lubricant. It is important to see that the packing rings are tight to prevent leakage where the drive shaft emerges from the gearbox and where the shaft from the clutch enters it.

Metallic bumpers have been substituted for the rubber bumpers, and instead of being attached to the frame to protect the housing and brake shafts from coming in contact with the frame when severe bumps are struck, are fitted on top of the rear spring seat. The metal bumpers are substantial enough to sustain the most severe jolt and prevent any injury to the brake shafts and housing, and once installed are permanent.

The over-size braking surfaces insure safety in operation. They grip instantly and give simultaneous and even application. The service brakes are of the external contracting type and the emergency brakes are of the internal expanding toggle type. They are easily adjusted to meet the varying conditions to which they are subjected.

Turn corners to the left by going around the center of the street intersection.

ANOTHER COLE FEATURE

REAR-AXLE HOUSING NOW IS MADE IN ONE PIECE.

Tests at Cornell University Demonstrate It Twice as Strong as Two-Piece Housing.

"Notable among recent improvements embodied in the Cole Eight," says F. W. Vogle of the Northwest Auto company, "is the one-piece housing of the rear axle. It is one of the most stalwart and rigid units to be found in any passenger car."

"This one-piece pressed steel housing in tests made at Cornell university was found 300 per cent stronger than those of the two-piece type. Equipped internally with helical bevel gears, it operates with positive silence and the car has a smooth, quick pick-up. The housing is absolutely tight and requires no grease or oil cups."

"The large inspection plate of the Acro-Eight rear axle makes the interior mechanism accessible always, and when removed affords a large opening through which adjustments may be made. The axle is of the full-floating flange drive type, underslung in its attachment, and the drive is more flexible and secure attachment to the chassis, eliminates use of a heavy torque arm, and reduces weight of the axle."

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HUDSON IN TOUR OF THE DALE FRONTS

Super-Six Blazes Trail Many Tourists Will Follow.

ARMY MEN PRAISE AUTO

Three-Year-Old Car Stands Up Under Strain of Hard Trip Taken by Two American Officers.

Blazing a trail which will be followed here to come by untold thousands of American tourists, a Hudson super-six completed a ten days' trip over the battlefields of Northern France and Belgium, according to word just received by C. L. Boss of the C. L. Boss Automobile company, Hudson distributors here.

"The journey was remarkable mainly by the excellent service rendered by the car, which was three years old and had been run 29,000 miles," said Lieutenant J. H. Morrissy, who piloted the Hudson.

"Despite the unusually severe strains and tests that naturally ensue on touring through European battlefields," continued Lieutenant Morrissy, "the car was in good condition and running as smoothly at the end of the journey as it was at the start."

"In the ten-day leave period allotted to members of the United States cruiser and transport forces at the completion of its work in returning troops, I felt that I could make much better use of my time if I took my Hudson across."

"With another car I might have feared to do this because of the difficulty of obtaining replacements in case of breakdown. However, I had implicit confidence in my Hudson."

"We started from Brest with six passengers and an extra heavy load of baggage. In addition it was necessary to carry a reserve supply of gasoline, 50 gallons in all, owing to the scarcity of French gas."

"The run to Paris, 235 miles, was made without the slightest difficulty. The following day we went to Amiens, through the Somme battlefields to Lille and in the six days following visited Ypres, Ostend, Zeebrugge, Ghent, Brussels, Liege, Louvain, Cologne, Coblenz, Luxembourg, Treves, Verdun, Rheims."

"Then we returned to Paris after covering a total of more than 1100 miles. Our only difficulty on the trip, despite the fact that roads through Flanders and northern France have not been repaired yet and numerous shell holes make it hard going for the car, was due to the water in the gasoline, a common trouble over there, and a small number of punctures due to shrapnel splinters."

"When the age of the car and the exacting demands made on it during this trip, but for the past three years, are considered, its present performance appears to be marvelous. To my mind it is a wonderful tribute to the inherent quality of the Hudson."

STEWARD TRUCK ABROAD

71 IN ONE SHIPMENT TO FOREIGN PURCHASERS.

American-Made Vehicles Are Sold Cheaper in Europe Than the Foreign-Made Trucks.

"Foreign countries are fast beginning to realize the efficiency of motor trucks made in America," says F. H. Nash, of the Atterbury Truck Sales company, distributors of Stewart trucks here.

"In the majority of cases trucks made in the United States can be sold in foreign lands at a lower price, including freight and handling, than foreign-made trucks. This, of course, is due to standardized manufacturing methods, which enable American truck makers to turn out their product in great quantities."

Recently the Stewart factory at Buffalo shipped 71 Stewarts, 51 of them going to Cape Coast, Africa, and 20 to London, England. These will be followed in the near future with a large shipment to Copenhagen, Denmark. At the present time, the Stewart Motor corporation has distributors in the leading cities of 27 foreign countries."

INCLINE BRIDGES NEW ROAD

Contractor Solves Traffic Problem in Novel Way.

MOON TRUCKS FOR EVERY PURPOSE

The Garford Motor Truck Company, Lima, Ohio Motor Trucks of All Capacities

The Huskiest Truck of its class in the world

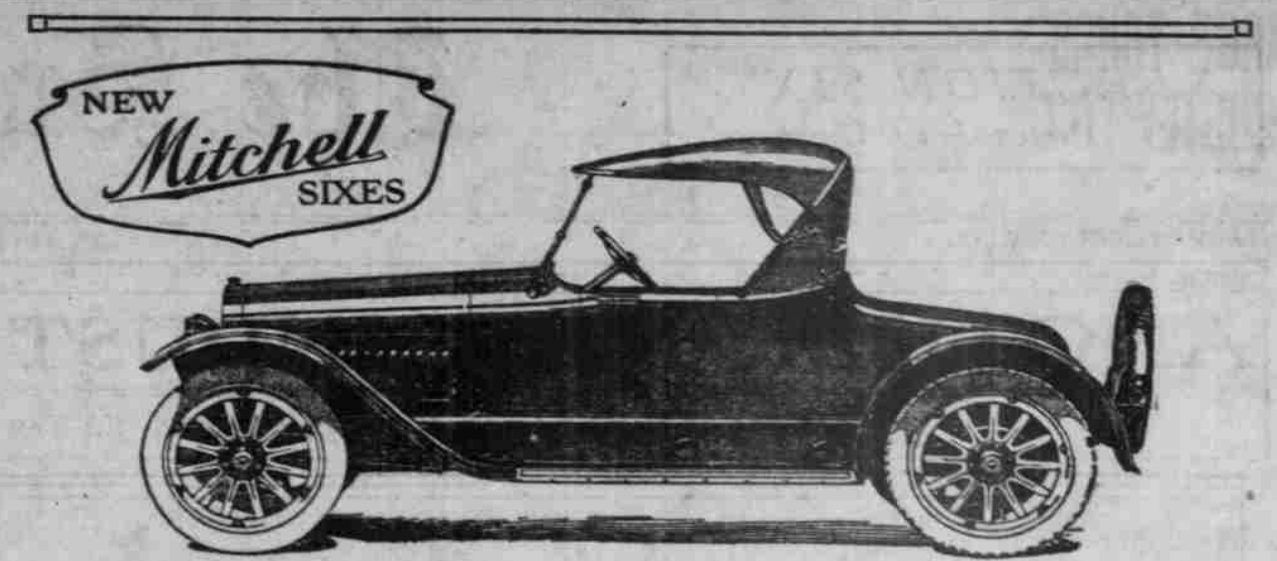
An adequate stock of parts USERS KNOW

Garford Oregon Motor Sales Co. Wholesale and Retail

Eighth and Davis Streets Portland

MOON TRUCKS FOR EVERY PURPOSE

The Garford Motor Truck Company, Lima, Ohio Motor Trucks of All Capacities



That Smartest Roadster Another Mitchell Creation

THERE are many surprises in this new three-passenger model, all of which you will appreciate. In point of appearance, this Mitchell Six leads its class. It is extra roomy; finely finished.

The major betterments are found in the chassis. Over two years of revisions, based on sixteen years' experience, have brought scores of improvements.

Many of them mean more strength, more endurance, lasting wear, longer life. They cut down operating and upkeep costs. They mean more power, more comfort.

Built to Last

Time has shown that old-type Sixes aged too rapidly. Many elements contributed to this fault. So Mitchell factories added new machinery and equipment costing over

5-Passenger Touring Car \$1690 120-Inch Wheelbase \$1900 6-Motor 3-Passenger Roadster, same price

5-Passenger Sedan \$2400 4-Passenger Coupe \$2300

7-Passenger Touring Car \$1875 127-Inch Wheelbase—\$2000 All Prices f. o. b. Factory

MITCHELL MOTORS COMPANY, Inc., Racine, Wisconsin

Mitchell, Lewis & Staver Co.

Broadway at Oak—Portland

\$300,000 in order to make these new-day cars endure.

Radical tests have been installed. An exacting inspection system has been created. Better materials and finer workmanship are employed.

Many vital parts are larger and stronger. Brake efficiency has been increased. A new-type disc clutch is added. Long cantilever rear springs give greatest riding ease and do not break in use.

Many refinements have taken place in the Mitchell motor. Utter smoothness, balance and fit save much waste of power, give longer life and result in economy.

Throughout the car, new standards are incorporated. Combined, they are creating a nation-wide sensation. They represent a value unapproached in this class. Come see these fine but modest-priced cars.

connection of north and south side boulevards in Chicago was held up by conditions of labor and material the impatient engineers decided to expedite matters and relieve traffic congestion in a novel way. North-bound autoists early this fall found a surprise awaiting them in the shape of a huge incline of wood, bridging the unfinished section and offering a new way out of the business district. The incline is 200 feet long, 20 feet wide between rails, and rises 12 feet, making an easy 6% per cent grade. The big structure was completed in an actual working period of 48 hours, and gave immediate relief to the traffic situation.

Idaho Highway to Be Hastened.

LEWISTON, Idaho, Dec. 6.—(Spe-

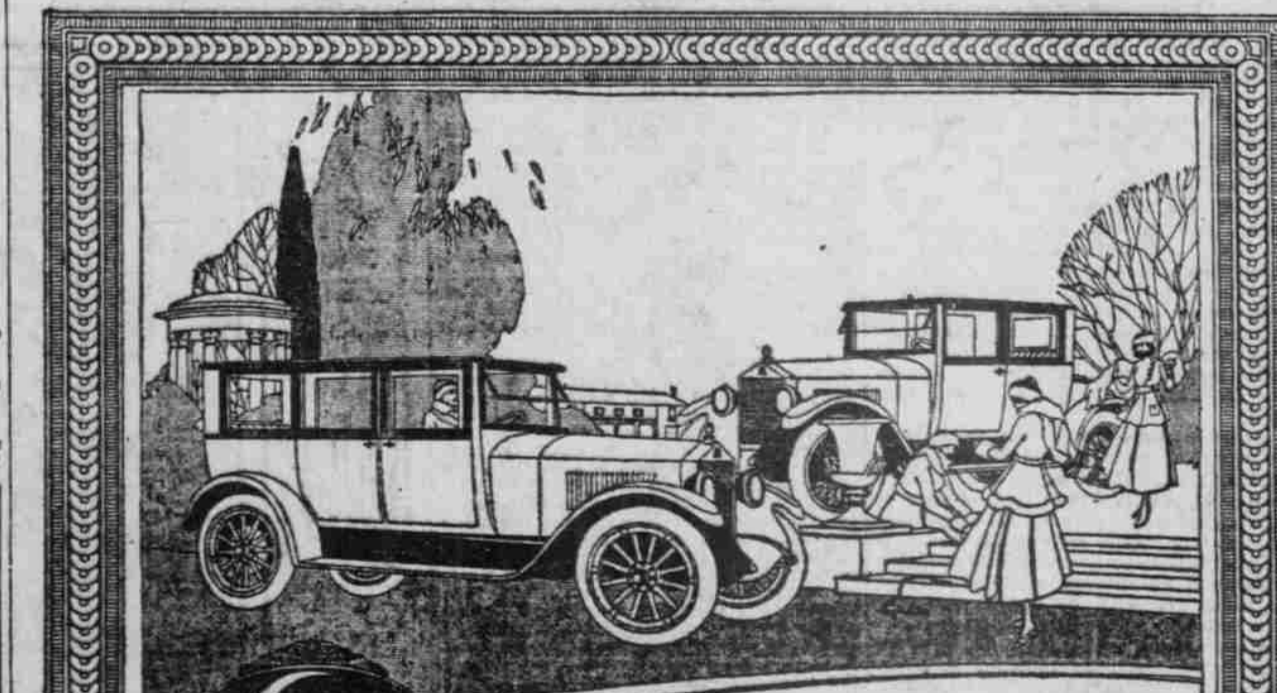
cial)—G. W. Wallace, C. W. Steen and J. S. McKisick are the new commissioners for the Waha-Tammany highway district, which will soon undertake the completion of the highway to Lake Waha. This will be one of the finest macadamized roads in the state when the remaining seven of the total 32 miles of road are completed. It is intended to hasten the construction of an extension of this road over Craig mountain to Cullasaca in the near future.

GERMANS UNDERSELL BRITISH

Automobile Lighting and Starting Sets in Competition.

Reports that German goods are beginning to enter Great Britain have been received by the department of commerce. Included are automobile lighting and starting sets selling for about \$250, a price that is \$100 less than the English manufacturers are able to make.

The board of trade has announced that it may find it necessary to restrict imports from countries where the exchange is so low that importers have a special advantage over the domestic producer. In making this announcement the board of trade had Germany particularly in mind. Whether the board will prohibit the importation of German goods on the score that the exchange is so low that it gives the Germans special advantage in competing in the British market remains to be seen.



MOON Buy Moon Closed Car Comfort

Own a car which is comfortable every month in the year. Moon manufacture builds elegant, luxurious and comfortable motor cars at prices which are within the bounds of reason.

The interior furnishing and equipment of the Moon Sedan and Coupé are unquestionably correct. Their design is delightfully modern—the large wide doors and all coach work as carefully finished as a fine, old grandfather's clock.

Driven by that famous, flexible and light Red-Seal, Moon-Continental Motor—these models are now on sale. Make an early appointment to see their surprising value for yourself.

The C. H. S. Co.

Distributors 65 North Twenty-third St., Near Washington Marshall 1428

MOON

Built by MOON MOTOR CAR CO., St. Louis, U.S.A.