

MOTOR INDUSTRIES TREMENDOUS ASSET

Economic Value Is Shown to Be Countrywide.

ARMIES OF WORKERS BUSY

Automobile Not Only Helps Business in Cities, but It Stimulates Agricultural Progress.

America's commercial and industrial supremacy has resulted from one American attribute—capability to accomplish a given task in the shortest space of time, says a writer in Automobile Topics. With the American manufacturer time is the most valued element. Any factor which saves time is his benefactor. Consider the contribution to time-saving in industry made by the automobile. It has created new industries and machinery. It assures the early delivery of material. It assures the early clearance of the finished product.

All industry has learned an invaluable lesson from the manufacture of automobiles. It has learned the lesson of "quantity production." Prior to the establishment of the automobile industry our manufacturing business was conducted under methods which fell far short of efficiency. The automobile was of revolutionary character. It assured the early delivery of material. It assured the early clearance of the finished product.

Growth of Industry Steady. The growth of American industry since 1900 is an accomplishment unparalleled. The automobile is conceded to have been a big factor in the stimulation of this progress. It has opened new markets. It has given added buying power to the thousands employed in its manufacture. It has created new industries and revived old ones. It has increased, by its recreative powers, the efficiency of industrial workers.

Statistics are given by figures in the statement that human efficiency has been increased 66.7 per cent by the automobile. This increase is equivalent to adding 4,000,000 men to the man power of America. Consider what this increased man power means to industry.

As an industry the automobile leads the field of manufactured products. In 1919 the gross sales of automobiles, tires and accessories totaled \$1,614,154. In 1920, the year 1,574,016 vehicles were produced. At the close of 1919, 7,558,318 automobiles were registered for licensed operation in the United States, or one automobile to every 14 persons.

Armed Forces Employed. More than 300,000 people, equivalent to ten army divisions, are directly engaged in the manufacturing of motor vehicles. More than a million of the thousands employed in the rubber business, the gasoline industry or the innumerable other activities dependent upon the automobile are employed in its industry.

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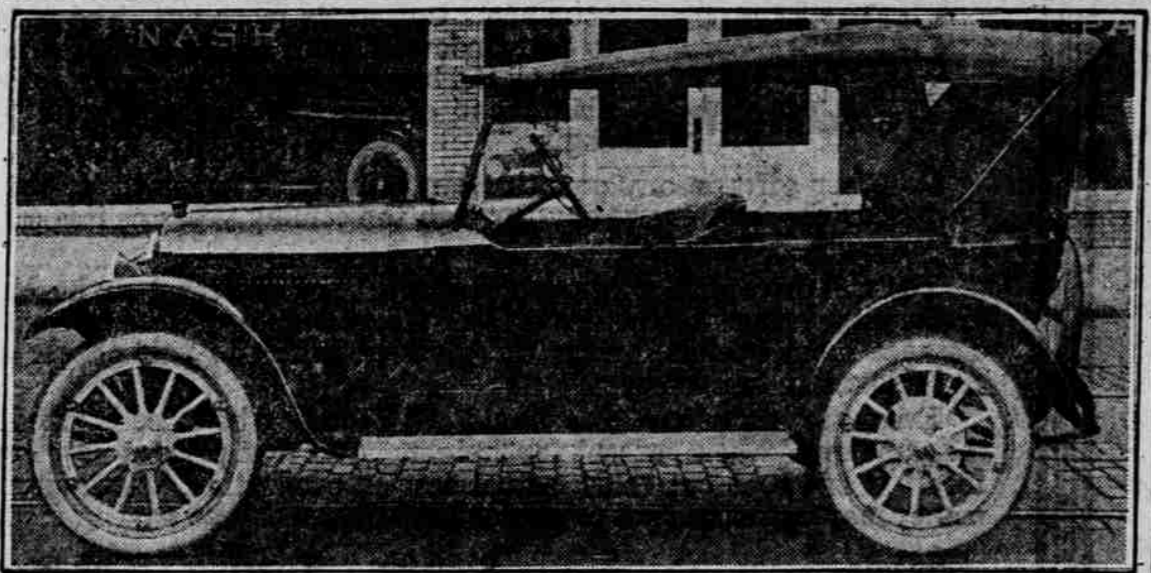
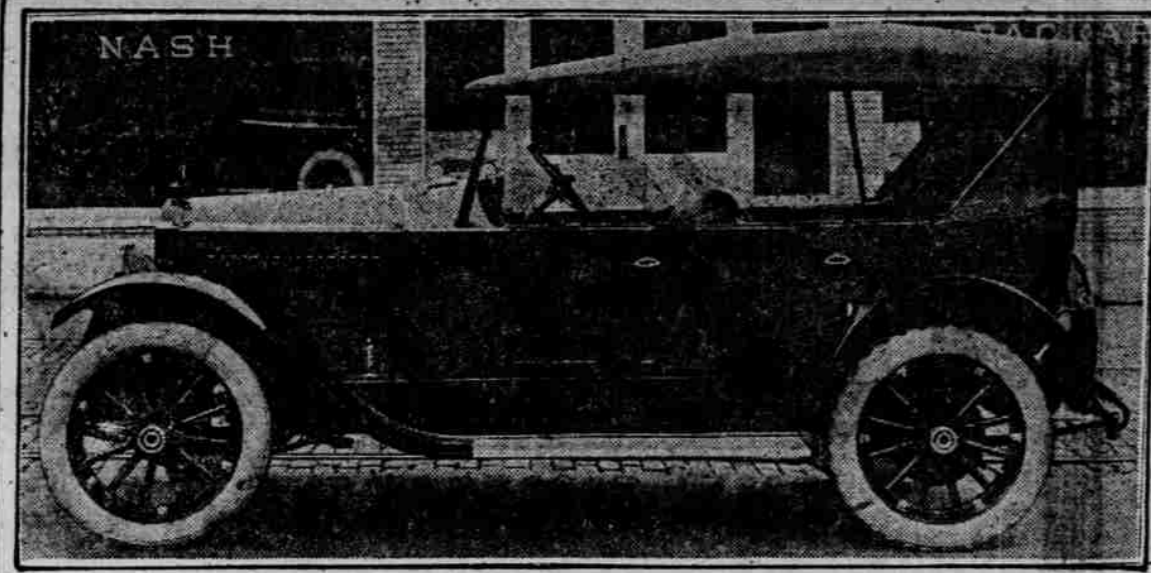
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HERE'S TWO NEW CARS THAT PORTLAND MOTORISTS HAVE BEEN EAGER TO GIVE THE ONCE OVER.



Above—The new Packard single six, vest-pocket edition of the big Packard twin six. Below—The new Nash four, smaller than the Nash six but on smaller lines. Both the above new models arrived in Portland a week ago and have been on display throughout the week at the Portland Motor Car company quarters, Tenth and Burnside streets.

GERMANS BUILD TRACK

REFUSAL OF ENTRY CAUSES SPEEDWAY ERECTION.

Five-Mile Steel Surfaced Motor Course Near Hanover, Is Tenton Plan.

INDIANAPOLIS, Dec. 18.—Because the management of the Indianapolis motor speedway company would not permit German cars to be entered in the last race and at the time intimated that they would not be received until they are accepted in other lines of sport, seems to have spurred the Teutons to build their own race course and play by themselves in their own backyard.

Whether German motorcar builders will attempt to enter cars in the coming 500-mile International sweepstakes race for a purse of \$50,000 cash, May 24, over the bricks of the Indianapolis motor speedway is not known. Entry blanks have not yet been sent out and it will be some time before the former foe of the allies will have an opportunity to even attempt to enter the competition.

The Germans are contemplating a five-mile steel surfaced course near Hanover. This will be an innovation in speedway if the plan is carried out, for there never has been a track surfaced with steel. Most specially constructed speedways are wood, the Indianapolis course being unique in that it is built of brick and concrete.

Heretofore most of Germany's racing progress has been gained in the other fellow's balliwick. It is said the German speedway will be made of steel plates over a foundation of trussed concrete. Its circumference will be five miles and it will be 140 feet wide within the diameter of the track. It is proposed to erect a gigantic building containing private assembling plants and testing laboratories; by this means it will be possible for the various designers to co-operate in securing the best results with new models.

GREAT SAVING IN TIRES

RECENT REDUCTION BY RUBBER COMPANIES PICTURED.

Sum Saved in One Year Would Build Hard-Surfaced Highway From New York to Pacific.

A transcontinental hard-surfaced highway stretching from New York to the Pacific could be built with the money which American motorists will save next year as the result of the recent reductions in the price of automobile tires and tubes. What's more, enough money could be left over to build a first-class battleship for Uncle Sam.

The recent reduction in the prices of tires and inner tubes will mean a saving to the 8,000,000 American motorists, says the B. F. Goodrich Rubber company, of approximately \$180,000,000. In other words, the country's annual tire bill of about \$1,000,000,000 will be chopped down to \$850,000,000.

Anyone who has trouble in juggling such big figures can get an idea of what this saving will amount to by remembering that a mile of good hard-surfaced durable highway can be built for about \$35,000, and that a cross-country road could therefore be built with the amount saved—with quite a few millions left over.

The average motorist's tire bill for a year amounts to about \$125. Next year, because of the reduced price, \$18.75 will be lopped off of this amount. This individual saving does not mean that the tire will last longer, but that it is considered that 8,000,000 motorists will save the same amount, the total clipped to a dizzy height.

The reduction in tire prices is expected by the Goodrich company to stimulate the increased use of motor cars because a decrease in the cost of motoring tends to influence many prospective owners into the buying mood.

Reds Beaten With Aid of Trucks. During the recent drive of the bolshevik forces against Warsaw the motor truck saved the day for the Poles. Motor trucks and buses were pressed into service at the height of the city's peril and soldiers were carried to the front. As a result, Warsaw was saved from the soviet menace.

Careful on wet pavement. Careful on wet pavement.

WEEKLY AUTO QUIZ

TO give information relative to those little problems which frequently confront and baffle the amateur motorist is the purpose of this department. Questions prepared by experts are asked in one issue and answered the following week in simple and concise language.

Starting in Cold Weather.

1. An extreme method in starting an engine in cold weather, after priming and choking have been employed without success is to apply heat to the carburetor and inlet pipe. Use boiling water or hot sandbags by applying directly to carburetor and inlet, then crank the engine to start. Heat more efficiently vaporizes the gasoline and makes it readily combustible. The spark plugs may also be heated and replaced in the cylinders.

Emergency Ignition. 2. Six dry cells are usually sufficient for emergency ignition purposes, when no other source of current production is used. If dry cells are connected in place of a dead storage battery, do not allow the current from a generator to pass through them, as they are not made for recharging.

Adjusting Carburetor. 3. The spark control lever should be in the retard position when first adjusting the carburetor. This is the idling or slow-speed adjustment. When the engine runs well, advance the spark and try accelerating the engine's speed by opening the throttle lever to obtain proper high speed adjustments.

Location of Spark Plug Points. 4. Spark plug points too close together will not allow the engine to run slowly, as the flame area or amount of expansion of the burning gas charge will be too small. A large charge of mixture will burn more quickly than a small amount, therefore when more fuel is admitted to the cylinders, as happens during high speed, the engine will operate more efficiently, but on slow speed when a small charge is admitted the engine will miss fire.

Overheating of Engine. 5. Deposits of lime on walls of water jackets or in radiator, frayed or constricted hose connections at radiator, jacket or pump, mud caked between radiator cells, water pump broken, an air lock in the cooling system or frozen water are all cooling system troubles which, if neglected, will cause overheating of the engine.

Use of Graphite Not Advised. 6. Because of the small passages leading to bearings of the engine in a forced-feed lubricating system the use of graphite mixed with the motor oil is not advised, for clogging of these passages may result.

When Stalling on Hill. 7. When a car stalls while attempting to climb a hill do not try to coast backward down the hill. The first thing to do is to apply the emergency brakes. Lock the lever in place, shift transmission to neutral and crank the engine. When it starts throw out the clutch, shift gears to low speed, keeping the emergency



UNITED MOTORS SERVICE INCORPORATED SERVICE DEPARTMENT OF Delco KLAXON REMY GENERAL OFFICES DETROIT, MICHIGAN

WILD RICE FOR GASOLINE

LOUISIANA IS INTERESTED IN NOVEL EXPERIMENT.

Millions of Dollars Worth of Gas Might Be Secured From Waste Marsh Land.

NEW ORLEANS, Dec. 18.—Louisiana is particularly interested in experiments now being conducted with a view to converting the farm straw-stack into a fuel gas. While the straw stack is supposed to blossom most luxuriously in Kansas, there are about 4000 square miles of thick-grown wild rice straw going to waste every year on the Louisiana marshes.

Technically, the cereal in question is not a rice at all, but a form of wild barley. The yield of this straw to the acre is somewhat heavier than that of wheat or barley, and the land on which it grows in Louisiana is flooded mudflat, useless for anything else, so that if this straw can be made to produce approximately \$20 an acre in fuel gas, as Kansas chemists have announced, there is some \$30,720,000 worth of gas going to waste every year on the marshes of southern Louisiana, enough to drive all the automobiles in the United States for some time, even at the present price of gasoline. So far, no other use ever has been found for this straw.

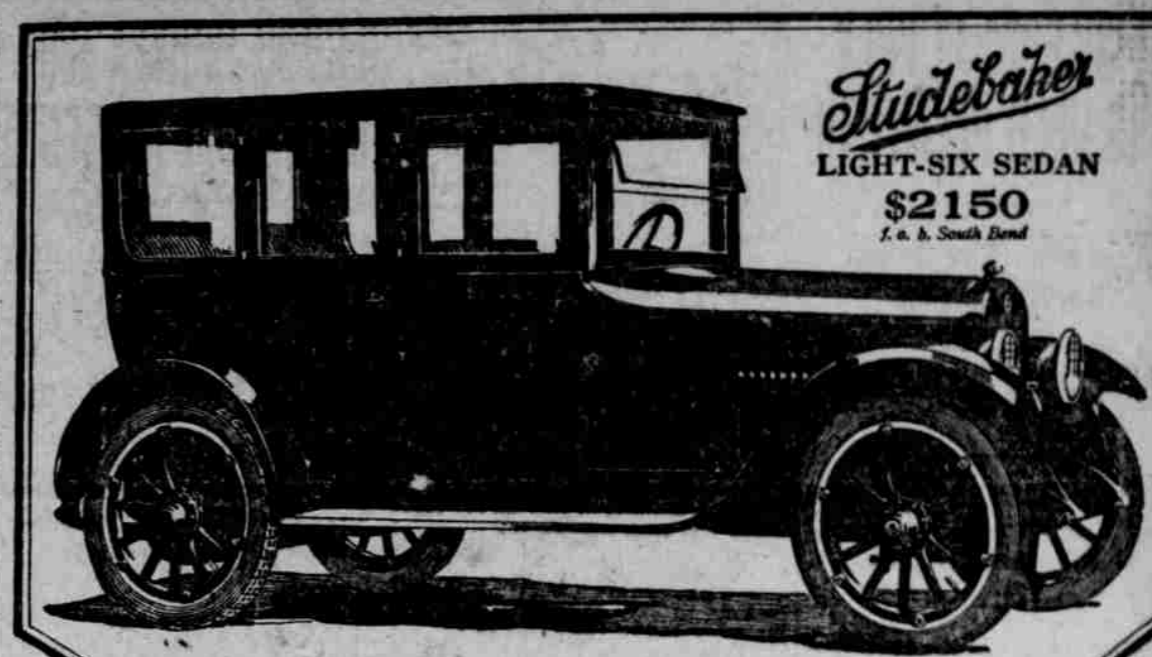
This "wild rice" grows so densely that a man scarcely is able to push his way through it, and travel over this section of marsh has to be in a pirogue or a pole-boat following the many small, shallow waterways which cut it here and there. The straw is three to four or five feet in height, topped with heads similar to those of rice, whence the common name.

Motor fire apparatus are replacing horse-drawn vehicles in Boston.

let 'er rain! SAMSON CORDS don't skid!



Samson quality is tangible; it is proved in performance. The entire strength of the Samson organization is concentrated on the constant safeguarding of the quality that has brought so much success to this Western tire. Buy from your dealer. Morris Tire & Accessory Company Edward B. Morris, Proprietor, 14 North Broadway Phone Broadway 3402.



The Gift Supreme for All the Family America's Greatest SEDAN VALUES There never was a better time than now to place your order for a Sedan. And while you're doing it, better choose a Sedan that gives you the maximum value—in quality, performance, appointments and enclosed car comforts . . . in other words, a Studebaker Sedan!

Such quality as you find in a Studebaker-built Sedan—such stability of design and refinement of appearance—is possible only because of Studebaker's great resources and manufacturing experience, and the fact that these cars are built complete by Studebaker in Studebaker factories.

THE LIGHT-SIX SEDAN 5-passenger; 40-horsepower; 112-inch wheelbase Low-hung, instantaneously responsive, easy to drive, and remarkably safe and comfortable. Its light weight, in combination with its mechanical efficiency, insures unusual economy in gasoline and tires. In its quietness of power and freedom from vibration, it sets new standards in closed car comfort. Distracting noises and disconcerting body vibrations have been eliminated.

\$2150 Cord Tire Equipped f. o. b. South Bend

THE SPECIAL-SIX SEDAN 6-passenger; 50-horsepower; 119-inch wheelbase Everything essential to the owner's satisfaction, pleasure and comfort has been provided. Nothing that would add to comfort and convenience—to protection and utility—has been neglected. Its four doors offer easy entrance and exit for all passengers. Its performance and appearance are combined with features of appointment that every connoisseur of closed car quality will quickly appreciate.

\$2750 Cord Tire Equipped f. o. b. Detroit

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