



First For Usefulness

WITHOUT the motor car modern business would be impossible. In saving time and making it possible for the man of affairs to transport himself quickly and at a minute's notice the motor car is indispensable.

First among business men's cars comes the GRANT SIX. It is the most economical car which offers the size, power, comfort and fine appearance which the business or professional man or the prosperous farmer now demands.

Its extreme economy and comfort make the GRANT SIX an ideal car for salesmen, collectors, doctors and others who use a motor car many hours a day. Its dependability, based upon mechanical refinement and advanced design, is a quality that takes front rank in importance under present conditions.

GRANT SIX owners average 20 miles to a gallon of gasoline, 900 miles to a gallon of oil, 7000 miles or more from standard tires.

Price, \$1245 f. o. b. Cleveland

MANLEY AUTO CO.

Eleventh and Oak at Burnside
Phone Broadway 217

GRANT MOTOR CAR CORPORATION—CLEVELAND

TRUCK RESTRICTIONS OFF

MANUFACTURING ON PRE-WAR BASIS ALLOWED.

Months Will Be Required to Get Back on Old Schedule, Detroit Expert Declares.

All Government restrictions have been removed from the manufacture of motor trucks. But it will be months before the released plants can get back to pre-war schedules, especially where they were at full speed on munitions. This information was sent to Portland from Detroit by F. Ed. Spooner, connected with the motor industry. He has for years been the recognized information bureau of the industry in Detroit, having been connected with automobile exploitation since the very first days. He is one of the pioneers who was graduated from the bicycle to the auto.

"We are going through a temporary depression while the motor industry is trying to catch its balance," said Spooner. "Problems of labor and materials and the momentum gained in munition-making all have to be overcome. Thousands of women have been working in the plants making munitions, but they can't do the heavier work on motor cars."

"There will be no grand rush into production for the simple reason that the factories cannot do it. And until the plants are turning out large numbers of cars the prices will not take big drops. It will be a long time before automobiles can be bought for what they could be before the war."

"Organizations have been disrupted. Many of the passenger car executives have gone to the truck and the tractor. Materials have been depleted. Some plants are caught wholly bare. Others, of course, had many cars partially completed when the war came. These, of course, will be the first to market. The motor car maker is not alone in his troubles. There are the parts and accessory makers. They are even more demoralized than the auto manufacturer."

QUICK STOPPING ESSENTIAL

MORE ATTENTION IS GENERALLY PAID TO SPEED.

National Brake Inspection Movement Indorsed by Leading Motorists and Officials.

"Pickup," "getaway," "dash," are the most familiar terms to the everyday motorist or truck-driver, according to John J. Younger, supervisor of engineering, Motor Transport Division, War Department. With the demands of modern day life, motorists have been giving their entire attention to speed with no thought of how quickly a stop can be made.

It is time to put on the brakes, says Younger. The National Brake Inspection movement, which has the indorsement of leading automobilists, police officials, and Government experts, will accomplish good if it does nothing more than call the attention of motorists to the necessity of a regular inspection of their brakes.

In fast rail traffic, both with the steam railroads and electric trains, the first requisite, says Younger, is the rapidity with which the engine can stop. This point is exemplified by the exactness with which the New York City subway trains come to a dead stop. The engineers in charge of these trains

TRUCK TURNS BATTLE TIDE

DRIVER RUSHES AMMUNITION UP TO MARINES.

Four Motor Transport Men Volunteer and Three Are Caught in Barrage and Killed.

The victory at Chateau Thierry—that furious engagement which turned the tide of the war forever in favor of the allies—was made possible through the performance of a single motor truck. How this came about is related by Captain Guy A. Whitcomb, of the Motor Transport Corps.

"The Marines, who were smashing the last German offensive, were running short of machine gun ammunition," said Captain Whitcomb. "Their commander telephoned back for more. The motor transport commander called for four volunteers from among his 90 trucks—and every driver volunteered. He chose four, loaded the trucks with 50,000 rounds apiece of machine gun bandoleer ammunition, and they set out—four trucks made in Detroit, turned out of the Packard factory just a few months before. Three of them were caught in the German barrage and their cargoes blown up and their drivers killed. The fourth made his way through with the priceless 50,000 rounds that put the finishing touch on the American victory and saved the day at Chateau Thierry."

"The driver made his way back to the transport park and reported in these words: 'Sergeant Anderson reports, sir, the delivery of 50,000 rounds, and requests permission to make another trip.' But his Captain noticed the blood pouring from the Sergeant's wounds, ordered him to the hospital, and the brave Anderson died 10 hours later from 14 shrapnel wounds."

Captain Whitcomb said that 14 per cent of Pershing's entire force is classed in the motor transport, and that the number of trucks on the American flag overseas would be hardly believable to most people.

Pitted Valves.

The average car owner does not seem to realize that grinding will not cure a badly pitted valve head and seat. In cases where this condition exists the valve should be removed and smoothed down on a lathe or valve resetting tool and the seat should be similarly treated before the two are placed together for the grinding that will give them perfect contact.

Tractors on Canal Work.

Tractors will probably be used to haul boats carrying coal over the Chesapeake & Ohio Canal from Cumberland, Md., to the capital. Army officials are now surveying the canal to determine the feasibility of this plan and terminal facilities.

AUTO RUNS PRINTING PLANT

Overland Pressed Into Service When Power Plant Fails.

The old adage that "necessity is the mother of invention" is evidently working full force wherever occasion calls upon Yankee ingenuity. A recent example was the use made

TRUCKS AID PLANE OUTPUT

REPUBLIC HAULS WALNUT LOGS FOR PROPELLER STOCK.

Motor Power Utilized in Loading Cuts Down Force Needed in Logging Work.

When the history of the great world war is written, historians must pay tribute to the remarkable exploits of allied aircraft in hastening the final day of victory. And no phase of military activity has contributed more to the breaking down of enemy morale. As a weapon for the waging of relentless offensive warfare the aeroplane has proved its worth in the destruction of huge enemy munition dumps and the scattering of enemy troops wherever efforts were made to concentrate them for attack.

A little slow in getting started, perhaps, but no one now doubts the great part America's aircraft programme played in the winning of the war. Every facility at the disposal of our Government, every resource, was pooled to make the quantity production of fast scout, combat and bombing planes a reality. And a digest of the facts surrounding the capitulation of the central powers brings the realization that their crumbling was due in large measure to the efficient work of our aviators, and those of the other great powers associated with us.

Hundreds of owners of big walnut groves throughout America quickly responded to the country's need for lumber from which to fashion the huge aeroplane propellers. No more serviceable hardwood could be found. Walnut trees that had stood for years, perhaps for centuries, in peaceful farming communities or high up on the mountain sides, were attacked with axe and saw by armies of woodchoppers. Soon the great logs were flowing into the mills and woodworking shops in an endless stream, to be cut up and skillfully turned into the great two-bladed propeller shafts that pulled our fighting craft through the air to victory.

In one of the great Virginian walnut groves, where thousands of feet of lumber have been felled to meet Government requirements, a ton-and-a-half Republic truck has been continuously in service hauling the logs out of the woods, over rough mountain roads to the mills. To facilitate the work of loading the heavy logs on the truck, the owner of this Republic devised a novel contrivance that has proved highly efficient. By attaching a bracket to the propeller shaft, on which he fastened an ordinary log chain, it was only necessary to jack up the rear end and shift into low gear to hustle the logs aboard. Winding the chain around the shaft, which, with the bracket, made a very serviceable pulley, rolled the logs off the skids and onto the truck quickly and with little effort.

Naturally, this method of loading put a tremendous strain directly upon the propeller shaft but, according to the owner, without in the least damaging the truck or causing any mechanical trouble whatever.

By means of this original, even though crude, method of loading, the Republic owner was able to make a quicker getaway and maintain a faster schedule, to say nothing of the money he saved that would have otherwise been spent for extra help.

Early Auto History.

On March 17, 1900, 50 persons had been licensed to drive automobiles in Chicago, including one woman, who was the first of her sex to secure a license to drive a motor vehicle in that city.

Signing Important Roads.

In order to assist business concerns in the efficient use of motor cars

This Man Has Cut Tire Cost In Half.



Charles C. Gates, E.M.

How Millions of Dollars are Being Saved

You have followed many great industrial advancements.

The bicycle, the automobile and now the truck, and if you are a car owner you have kept pace with the development of tires.

The pneumatic tire has made the automobile of today possible, but it has been the source of more trouble and expense than any other part of your car.

Like every other motorist you have said: "Some day inventive genius will put an end to this."

Your prediction has come true and like many other great inventions it has come out of the necessities of the World War and the genius of an American engineer.

Charles C. Gates, Engineer, has already put millions of dollars back into the pockets of American motorists. The "Half-Sole Tire" is today the wonder of the automobile world—it is revolutionizing the whole tire industry.

Gates has made possible 10,000 to 15,000 miles out of a single set of tires—he has taken ninety per cent of the worry out of driving by putting an end to puncture trouble.

—and still the Gates Half-Sole Tire costs only 1/2 as much as you are now paying for ordinary tires.

Is it any wonder that today more than 350,000 American motorists are using Gates Half-Sole Tires and that the largest business houses in the United States have grasped this saving.

To you and to every car owner this Gates Half-Sole Tire means an outright saving of 1/2 in cost and more—it means better tire service for everybody.

If you are a car owner it will pay you to investigate.

There are now over 800 authorized service stations of Gates Half-Sole Tires in the United States. The list below gives the names of those in the nearby territory.

OREGON

- Hillsboro Garage Company
- Hillsboro
- Heights Garage
- Hood River
- Furnas & Lucas
- Klamath Falls
- C. H. Leighton
- Gates Half-Sole Service Station
- La Grande
- Frank Doollittle
- Lebanon
- B-Street Garage
- McMinnville
- Morris-Barber Company
- Marshfield
- F. H. Roberts
- Medford
- Stull & Heid
- Newberg
- Geo. Buchholz
- Oregon City

- J. S. Hutchinson & Son
- 70 Sixth St., Portland
- S. S. Montgomery
- 177 S. Commercial, Salem
- Cates & Co.
- The Dalles
- Ackley & Miller, Tillamook
- Tillamook
- N. Becker & Son
- Woodburn
- Bradley Tire Shop
- Pendleton

WASHINGTON

- St. John & Titus
- Centralia
- Twin City Auto Company
- Chehalis
- Peters Garage & Machine Works
- Cherry & Cherry
- Vancouver

Applications are now being considered for the following points where authorized dealers will be appointed before January 1st.

OREGON

Ashland, Roseburg

Look for this sign



REGISTERED U.S. PAT. OFFICE

The Half-Sole Tire has been developed and perfected by The Gates Rubber Company, at Denver, The name "Half-Sole Tire" is registered in the U. S. Patent Office and no other firm or individual has the right to use it in connection with the advertising or sale of tires or tire accessories.

THE BEAVER GARAGE

200 UNION AVENUE NORTH. PHONE EAST 304.

When your car needs overhauling or when in trouble on the road, just call East 304 and have an expert do your repairing. Prices moderate and all work strictly guaranteed. Vulcanizing done reasonably.

Service station for Miller Gear to the Road, Fabric and Cord Tires.

COMPLETE LINE OF ACCESSORIES, OILS, GREASES. One Trial Will Convince You of Our Reliability.



SERVICE on HYATT BEARINGS

BEARINGS SERVICE COMPANY

PORTLAND BRANCH 24 North Broadway Phones: Broadway 1799, A 2444



Columbia



You can not operate your motor car conveniently this winter if your storage battery gives trouble, which it may do because of cold weather. If you are not operating your car this winter we can save you the expense of a heavy repair or replacement expense of your storage battery next spring. While your car is in the battery should be removed and recharged regularly from a source of current supply independent of the generator on the car. Otherwise it will sulphate and suffer permanent injury.

Columbia Storage Battery Service Station

Repairing and Recharging Telephone Broadway 646 100 NORTH BROADWAY (at Gilliam)