

### TRUCK OF QUALITY IS CHEAPEST IN END

Some Vehicles Are Expensive at Any Price.

### FACTS ON MAINTENANCE

**Improper Diagnosis of Trouble One Big Cause of Expenses in Shop Upkeep.**

If the truck industry were not cluttered up with so many cheap vehicles that in some manner get to the operator who can least afford to run them, there would not be the need for the elaborate shops that many of these owners have. The trouble made in the beginning in buying trucks of unknown quality, but having invested in such trucks that give trouble, the next best thing is to learn how to keep them running—avoid unnecessary delays in the shop.

One of the greatest time wasters is improper diagnosing of trouble, resulting in a dismantling of too much of any one unit and a general fussing around until the faulty part is found. To avoid this calls for a good foreman or a well-trained driver. If there is a small shop without a foreman and the crew does the work.

**Competent Men Required.**  
The good mechanic or foreman or driver should educate himself on the particular truck as to be able to tell exactly where the trouble is and just about what is causing it. This education cannot be had in a day, which shows the vital importance of getting competent help to operate and care for the trucks.

One fleet owner who used 12 trucks of one make discovered that all of the trucks gave persistent clutch trouble. This operator did not wait until all the trucks came in a second time, but studied the design of the clutch to determine why there was so much trouble. As a result he devised a little addition to the clutch in the form of a stronger part which eliminated all the trouble. This was cheaper than keeping on repairing the old parts or replacing them only to have the new parts break in service.

Difficult solutions of troubles are encountered when the trucks are of a make no longer manufactured or of foreign make or a make that has no service station within a reasonable distance of the shop. These trucks must be taken into consideration while the trucks are running, for it must be expected that some time or other they will require repair.

**Must Be Prepared.**  
The truck operator must anticipate trouble. The time to learn how to remove a power shaft or to change a tire after the truck comes in for repairs, but long before the actual work is necessary. An owner operating one or three trucks may not have need for removing the engine more than once a year, but he should have the necessary equipment in the shop, use the same, or, if not, he must be sure that the service station or a nearby repair shop can properly take care of him. This means it must have the up-to-date equipment to get the engine out quickly. It means knowing the assembly of that particular truck.

### CRUDE RUBBER IS SCARCE

### HEWITT TIRE DEALER TELLS OF DIFFICULTIES.

In unsettled periods makers have no small difficulty in getting material. The wonderful importance of the rubber producing industry is not appreciated thoroughly by many motorists. When a tire is worn out and a new one is desired, little thought is given to what is represented by filling the order.

The automobile is said to owe its success to the invention of the pneumatic tire and consumers are accustomed to think more about the power plant in a car than they are the tires. Just as much, or probably more, energy and resources are represented in the tires with which the car is equipped as are necessary to produce the entire automobile.

### COAST MAY GET A GLIDDEN

Famous Tour Could Be Held From Border to Border.

Ever since it was announced several months ago that the Glidden tour would be restored in 1920 there has been more or less agitation to have this famous automobile classic conducted next year on the Pacific coast. It has been run in practically every part of the country except west of the Rocky mountains. According to reports, Charles J. Glidden, donor of the trophy, has authorized the contest board of the A. A. A. to put it up for final disposition in 1920.

The Glidden tour always has been conducted in the interests of automobile manufacturers and it is regarded as the fairest conducted and most severe test which cars have been subjected. The reputation today of some of the best-known makes of automobiles can be attributed to experiences gained from competition in the Glidden tour.

The donor of the trophy has asked that the manufacturer of the country appoint a committee and take up the subject of the run some time this month.

### AUTO LICENSE GAIN BIG

82,141 CARS REGISTERED IN OREGON BOOKS.

SALEM, Or., Nov. 8.—(Special).—There were 82,141 automobiles, 3,000 chauffeurs and approximately 2,500 motorcycles registered in the office of the secretary of state at the close of business Tuesday. During the same period last year there were registered a total of 64,302 automobiles and a corresponding number of chauffeurs and motorcycles.

A small army of girls is now at work addressing applications for licenses for the year 1920 and these will be passed in the small Saturday morning. On November 11, the date upon which formal registrations begin, all applications received prior to that date will be put into a receipt and licenses will be issued in the order in which they are drawn.

Mr. Butler urges that all persons who own automobiles and fail to receive their applications by November 11 should write to the secretary of state a consignment of license plates, sufficient to cover all registrations for the year 1920, has been received at the secretary of state's office, and will be sent out as fast as the applications are returned properly signed and being the address of the applicant.

### NEWBY IS WITH BETHLEHEM

Veteran in Motor Car Game Joins Big Truck Organization.

C. R. Newby, veteran of the automobile field, has been appointed field manager for the Bethlehem Motors corporation. Mr. Newby was for years connected with the former E. M. F. company, the Studebaker and the Maxwell companies as a district manager, branch manager and general sales executive, and he is known from one end of the country to the other.

### W. H. BANES

Distributor Ore. and Wash. 44 N. Broadway, Portland, Oregon. Phone Broadway 3327. Tabor 3000.

### BUICK HISTORY ONE OF VALVE-IN-HEAD

This Type of Motor Developed Greatly in Few Years.

### ENGINEERS ALWAYS BUSY

Present Buick Motor Is Evolution From Marine Engine Type Used Way Back in '93.

Back in 1893 when Buick was building marine motors of the valve-in-head type, internal combustion motors were being built in very small quantities, and as there was little in the way of established precedent to

the cars we are now building are the best motors we know how to build today. Yet I have no doubt that the coming years will bring about other improvements, because the field is such an inexhaustible one in which to work that for years we have found some means each season of making our motors more powerful, durable and economical.

Development Has Been Steady. "A good many years ago we thought there would never be any better type of electric light than the old carbon filament lamp. But we know better now. And we thought the same thing about sewing machines, and phonographs, and steam engines, and reapers and a thousand other manufactured products.

"I think this illustrates the folly of claiming that any product is the last word in design or construction. The only guide we have—we who live in the present—is a just comparison with similar products now being marketed. "Our engineering laboratories are equipped with every kind of scientific apparatus for making such comparisons as far as different types of motor car units are concerned and from the results of our tests we are satisfied that there is no other motor built that can equal the Buick valve-in-head motor in power, economy and general all-around efficiency. "It has taken us a long time to develop the Buick motor to its present



Model R 3 Hup snapped in front of Astoria reservoir immediately after A. B. Manley of the Manley Auto company had driven it over the lower Columbia river highway to make delivery through Maunula Bros., Hup dealers at Astoria, to Henry Lemlar of Seaside.

If it is decided by the manufacturers to conduct another tour, dealers and motorists of the Pacific coast states will exert their united influence to have the event cover the states of Washington, Oregon and California, or border to border.

follow, theory dominated practice in almost every branch of motor engineering. In consequence, during the years that followed, the engineers bunted themselves in experimenting with different types of design in an effort to overcome the difficulties that are always encountered when new and complicated mechanisms are built for public use.

A few years later when the possibilities of the motor car began to be dimly realized, and when Buick activities were being directed to the development of motor cars, Walter L. Marr cast his lot with Buick. Unlike many of the designers of that time, Mr. Marr believed in sticking to the one type until he had really proven to his own satisfaction that the theories which appeared to him were either right or wrong.

**Valve-in-Head Efficient.**  
Mr. Marr was a staunch advocate of the valve-in-head type, because its simplicity was backed by all that was then known of thermal efficiency and formed a more logical basis for development work than other types.

After a time he was joined by E. A. Waters. These two men have been designing Buick cars for years and are without question the leading authorities on valve-in-head motor construction in the automotive engineering fraternity.

Together they have experimented with practically every known type of internal combustion motor, and the small engineering laboratory in which they first started to work has now grown to far greater proportions than those of the whole Buick factory at that time.

The development work is still going on, and the possibilities of the valve-in-head design have not yet been exhausted. In Mr. Marr's opinion there is no possible means of telling when perfection in this type of motor has been reached.

"The point is," he said, "that each succeeding year finds a number of improvements in the Buick valve-in-head motor. This is because of the ceaseless research work that we are carrying on. The Buick motors in

ments about shipments are also being received from the other factories. Whenever a shipment arrives it doesn't take Mr. Manley long to get action, as he demonstrated last week when he hardly gave a sleek new model R-3 Hupmobile time to wash its face before he had it zipping along the paved byways of the lower Columbia river road. He had promised the Maunula brothers of Astoria, recently returned from active military service, that he would give them one of the first 1920 Hupmobiles to reach Portland.

Before releasing the new car to Maunula brothers and seeing it turned over to its ultimate owner, Henry Lemlar of Seaside, Mr. Manley visited St. Helens, Clatskanie and Seaside, appointing new agents for the Hupmobile line in those towns.

He found the lower highway in good shape. "In their 11 years' effort as motor car builders," said Mr. Manley, "the makers of the Hupmobile have had two primary aims in mind, to build a good car and to make that good car a good-looking car. They certainly have succeeded."

**TRAILER IS MIGHTY USEFUL**  
Extra Loads Can Be Handled Easily by Use of Equipment.  
Many farmers and fruit growers are finding the trailer and semi-

### HUPMOBILES ARE COMING

MANLEY AUTO CO. AT LAST GETTING FEW AUTOS.

One of First of New 1920 Models of Hupmobiles Goes to Astoria Dealer.

Nothing slow about A. B. Manley, distributor of Hupmobile, Grant, National and Stearns cars, whose name appears as the feature word in the sign decorating the automobile establishment which pioneered the new automobile row in upper Burnside street.

The four well-known automotive lines which Mr. Manley represents have not been delivered in recent months anywhere near as fast as Mr. Manley had prayed for; while the situation is improved, there is still a waiting list reminding of a Janitor's scoreboard at one of the popular Portland apartment houses.

Hups are beginning to come in ones and twos. Encouraging announcements about shipments are also being received from the other factories.

## Announcement

We beg to announce that we have secured the distributing agency for Garford Motor Trucks in Oregon and the counties of Clarke, Klickitat and Skamania in Washington.

The Garford Motor Truck Company, Lima, Ohio  
Motor Trucks of All Capacities  
Distributors and Service Stations in all principal cities

Wholesale and Retail

## Garford Oregon Motor Sales Company

Wm. Cornfoot, President  
T. M. Geoghegan, Vice-President and Manager  
Ed C. Hurrie, Service Director

E. N. Wheeler, Secretary-Treasurer  
J. A. Haley, Sales Manager

Park and Davis Streets  
Portland, Oregon

At home and abroad, in peace and war, the Garford has shown the same rugged efficiency—the same sturdy dependability—which gives it distinction in the transportation field.

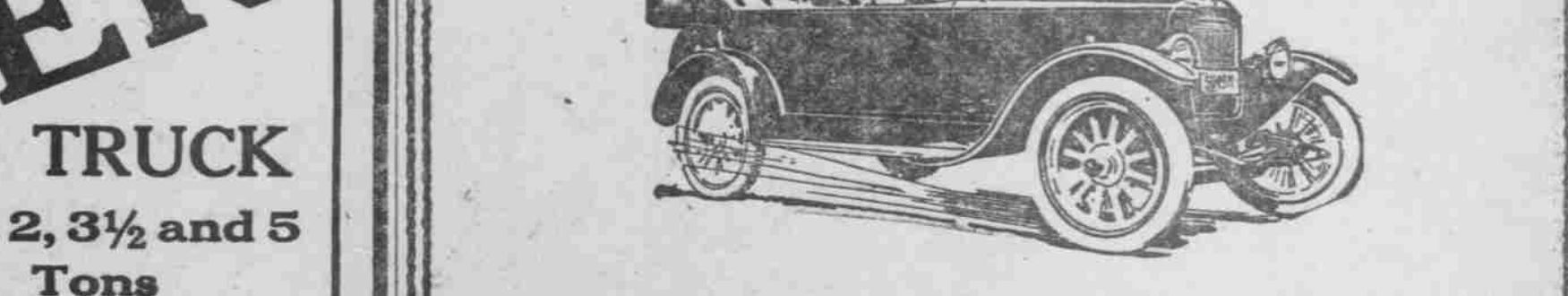
Complete stock of parts and up-to-the-minute service.

**USERS KNOW**

Beauty—Service—an astonishing range of Power—all embodied in the peer of all light cars—the

# BRISCOE

Splendidly built, handsomely finished, and backed by a record of continuous satisfaction to thousands of owners.



**W. H. Wallingford Co.**  
Distributors for Oregon and Southern Washington  
16th and Alder Phone Bdy. 2492  
Some Good Territory Open for Live Dealers

**MORE EVIDENCE**

## BRUTE STRENGTH

That prime necessity in a motor truck—is built right into the

C. C. Cady, } Also  
Hillsboro, Or. } "Buys a Master"

# MASTER

## TRUCK

1½, 2, 3½ and 5 Tons

Two Drives { INTERNAL GEAR  
TIMKEN WORM

## Oregon Motor Car Co.

Distributors  
BROADWAY AT BURNSIDE

**MORE EVIDENCE**

In far eastern countries, where much of the rubber comes from, there are no suitable harbors. After the natives have labored for days, beset by all sorts of conditions, to get the rubber to the coast, the product yet is so far removed from seagoing transport that the rubber must be

trailer one of the most useful pieces of farm equipment. The light two-wheel and four-wheel high speed trailer is used with runabouts and touring cars for hauling small quantities of farm products to market which otherwise would go to waste or be fed to livestock.

Too much time would be lost if these small lots were taken to market with horse and wagon, but a round trip to town with the family car and a trailer loaded with a few hundred pounds or half a ton can be made in a couple of hours or less. Produce handled in this way includes

milk, butter, eggs, live poultry, fruit, vegetables and even live pigs, calves and cows. The car is used at other times without the trailer for all customary purposes.  
Put whatever alcohol you use in the radiator.