

STOP TIRE ABUSE URGES FIRESTONE

Valuable Pointers on How to
Do It Given by Head of
Firestone Company.

CARE OF RIMS IMPORTANT

Use of Tires to Fit Rims Is Essential, but Standard Rim Should Be Selected; How to Avoid Loss From Rim Cutting.

BY H. S. FIRESTONE,
President Firestone Tire & Rubber Co.
Liberal spending of money helps business—when it is spent efficiently. Tire abuse is a form of liberal spending, but it is certainly not efficient spending. It would not be encouraged by any good business man. What we want is not a hoarding America but an efficient America. Stop abusing your tires—and put your money to efficient purposes.

In the early manufacture of tires, it was realized that the beads should be constructed in shape and measurement to a standard. The importance of secure fastening and correct seating of tire on rim has been evidenced by the care and rigid specifications which tire manufacturers have followed in the construction of beads, although not adhering to any particular standard as to construction of side walls, tread portion of tires, number of plies of fabric or thickness of materials.

At present both American tires and rims are made to their respective standards or approximately so, and thereby safety and efficiency are insured to a large degree; it is also possible for a customer to use tires of any American manufacture.

Inspection Stamp Important.
The guarantee of all standard companies makes it very clear that the warranty does not cover tires used on rims which do not bear the official inspection stamp of the Society of Automobile Engineers.

On account of the danger that rims applied to wheels will be drawn out of round and especially the danger that such rims will become underlined in circumference, the official inspection is now extended to cover completed wire wheels. In the future, wheels are not acceptable to any tire company, and tires are not guaranteed thereon, unless such wheels bear the inspection stamp.

Even though rims bear an inspection stamp, it should not be taken for granted that they are all right—sometimes they are damaged in application to wheels or in service—therefore it is advisable to examine carefully. Some straight side rims on the market were manufactured by simply bending down the clinches of the regular stock used for clincher rims. They are not a good fit for straight side tires and in many instances account for breaking above cables, pinched tubes and other injuries. Some types of split rims, particularly of the straight-side style are difficult to tighten uniformly on the wheel.

Rim Cuts Explained.
Under such circumstances the rims spring out of round, also shift sideways at split. If the clamping or fastening device is not correct the rim may sag in places and wherever it is low or much out of round the tire will be high from rim to rim, pinched tubes and blowouts are not an uncommon result.

Protection from rim cutting is not to be obtained by any particular type of tire but depends rather upon the design, quality and usage. No good tire of any standard type will be cut by any standard rim, if properly used. On the other hand, if the tire is abused, it will be injured if subjected to abuse. Under inflation, denting and irregular rims, excessive loads, tire fillers and wire reinforcers are the common causes for cutting and breaking above beads.

The flanges of a rim may be battered down and become rough from running a tire deflated for a considerable distance; the next tire applied is sure to be cut above the beads. Tires carrying heavier loads than those for which they are designed may develop breaking at the beads where engaged by clinches of rim.

Rust Should Be Removed.
If rims become rusted from water working around beads when tires are run soft or through neglected cuts in the tires, or from neglect to put proper fittings on the valve stem, the rust should be removed with emery paper and rims painted with a coating of aluminum, graphite and oil or other good preservative solution. When applying a tire, be careful that flap does not slip underneath bead and crowd it in clinch of rim.

Under the impression that they are oversize, it is not uncommon for tires to be applied to rims of wrong size. For example, using 36x4 1/2 tire on a 36x4 rim. The diameter of this rim is approximately 28 inches and the diameter of the beads of this tire approximately 27 inches (Q. D. Clincher type), or approximately 26 inches (regular Clincher type); therefore it becomes necessary to stretch and strain the beads considerably. Moreover, the 4 1/2 inch beads are not constructed to fit a 4-inch rim and will not engage properly in the clinch. Good results cannot be secured when the beads are strained and crowded in this manner. The correct oversize tire for 36x4 rim is 37x4 1/2.

When removing tires from rims, do not overlook pushing the valve stem of tubes up far enough in tires so that it will not be necessary to pound fastening device of rims in order to release beads of case. Rims are sometimes dented from pounding them in this way.

Proper Design Essential.
When chafing, cutting or breaking extends all around beads on both sides, repairs are expensive and not to be recommended. If the injury only extends for a short distance over one or both beads, a skillful repair man can make a good job at a reasonable cost. A successful tire must be properly designed, i. e., the shape suitable for the size of the section and a correct balance is an essential thing; the tire must be strong enough to render good service, but not too thick, heavy or stiff to prevent distribution of strains and stand the flexing action in side walls.

Reinforcers Bad for New Tires.
It is not advisable to use reinforcers in new tires because they tend to flatten the tires similar to under-inflation and in many ways interfere with the design and intended action.

If made of flexible material and well constructed, reinforcers are a good thing for old tires having separations and breaks in the fabric and which would not, without reinforcement, be serviceable. Under such circumstances, reinforcers strengthen the tires, protect in-

ner tubes from being pinched by the fabric and make it possible to secure a great deal of extra mileage.

GARAGE MEN HAVE BANQUET

Prospect for Business This Year Felt Especially Good.

Members of the Garage and Repairmen's Association held a banquet at the Seward Hotel Wednesday night. R. D. O'Brien was toastmaster, and about 30 were present. Various members reported unusually good business for this time of year, and some of them declared that twice as many cars as formerly will receive attention this year. A serious problem now before the garage and repairmen was discussed, that of obtaining sufficient skilled help, as the Government



Edward E. Cohen,
Manager Oldsmobile
Co. of Oregon.

is taking many of the best mechanics and will require many more. J. B. Kelly, president of the California Garage and Repairmen's Association, was present and told how successful that organization has been in his state.

DAUGHERTY IN AUTO BUSINESS

Former Shoe Merchant in Western Motor Car Sales Company.

Announcement was made last week by Roy Hemphill, manager of the Western Motor Car Sales Company, Chalmers and Hal twelve distributors in Oregon and Southwestern Washington that James Daugherty has become actively and financially associated with the company. He has been elected secretary-treasurer of the corporation. Mr. Daugherty is a well-known Portland business man, having formerly been a member of the Daugherty Shoe Company, wholesale shoe dealers.

TIRES ARE SOLD BY CARLOAD

Archer & Wiggins Have Fine Success With Diamond Tire.

Archer & Wiggins in the past two weeks alone have delivered seven carloads of Diamond tires and tubes to distributors in the Northwest. They received another carload for delivery for Spring orders this week and have more on the way. The sales of the Diamond tire were largely increased in 1917 over those of 1916 and prospects for 1918 are fine.

DODGE SWITCH ENGINE

LIGHT AUTO EASILY HANDLES
HEAVY FREIGHT CARS.

Dodge Car Dealer Relieves Congestion by Putting Dodge to Work Switching for Railroad.

The field of activity in which the motor car operates to the advantage of modern man is almost without limit. Witness the application of this truth by a resourceful Providence, R. I. man. When the freight car shortage became serious several months ago, the Providence Sales Company not only found it difficult to obtain shipments from the factory, but had an endless amount of trouble in getting the cars unloaded when they finally arrived in Providence. This was due to insufficient switching facilities and a bad congestion of the railroad yards.

Sales were too heavy to tolerate delays, so the manager of the company decided there had to be a remedy. He brought out one of the oldest Dodge Brothers motor cars he had and went down to the yards to do a little switching of his own. The experiment worked. Although the car had seen more than 20,000 miles of service, it applied itself energetically to the task of moving freight cars weighing about 20,000 pounds each, "kicking" them up to the platform where they could be unloaded. Thereafter the same plan was tried several times, each time with success.

There are more ways than one in which the motor car can prove itself indispensable.

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You need the Republic in your business to reach out and broaden your hauling radius and quicken your business stride, to lower your hauling cost per ton, per mile and per year and increase your net profit. You get these results with Republic construction and Republic-Torben Internal Gear Drive.

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Adjusting Tappets.

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More SPACE TAKEN

Oldsmobile Company of Oregon Expands Quarters.

GROWTH IS REMARKABLE

Edward E. Cohen, Manager of Concern, Is One of Pioneers Here in Automobile Business, Which He Entered Back in 1905.

The Oldsmobile Company of Oregon has just signed a lease for the entire building on the quarter block at the southwest corner of Broadway and Couch streets, a part of which they now occupy.

The lease will give them much needed additional room to handle their large business in Oldsmobile cars. They will take possession of the additional space on February 1. This will give them two stories, 90 by 100 feet, making them one of the largest establishments in the Northwest handling one make of car exclusively.

Edward E. Cohen, manager of the Oldsmobile Company of Oregon, is one of the pioneers in the automobile field in Portland. He has been engaged continuously in the automobile business since 1905. He is an expert mechanic himself, and service is his hobby.

Mr. Cohen believes that an Oldsmobile owner is entitled to every consideration and help in learning all that is to be known about his car, and with the increased facilities and conveniences afforded by the new quarters, the Oldsmobile Company will be able to give service second to none.

The growth of the Oldsmobile in Oregon has been remarkable. Sixty-five Oldsmobiles were sold in 1916, the first year the company was operated under Mr. Cohen's management. Two hundred and thirty-four Oldsmobiles have already been disposed of under the 1918 contract.

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CO-OPERATION IS URGED

J. N. GUNN TELLS HOW MOTORISTS CAN HELP IN WAR.

President of United States Tire Company Asks Voluntary Mobilization of Motor Cars.

"President Wilson's message to Congress, setting forth his reasons for mobilizing the railroads under Government control, inferentially, imposes upon automobile users and manufacturers the need to co-operate voluntarily with the spirit of the message of mobilizing the automobile through individual initiative," said J. N. Gunn, president of the United States Tire Company.

"Several weeks ago Colonel Samuel P. Colt, president of the United States Rubber Company, in an interview, urged automobile owners of both passenger and commercial cars to use their cars more and more to relieve the transportation pressure on the Nation's railroads and merchants' delivery service. Other leaders in the country's business, not alone those in the automobile industry, have since urged that this advice be followed. It has met with unanimous approval.

"Individual economy should be practiced to the end that no waste shall result. It is not necessary to assume that national economy means curtailing the use of automobiles.

"The natural function of the automobile, both passenger and commercial, is the transportation of man and merchandise for short hauls. If this is realized, a tremendous amount of railroad mileage may be diverted from short hauls to long hauls, and just that much pressure on the railroads' transportation facilities relieved.

"National economy means readjustments, but not necessarily curtailment of the market for commercial and passenger automobiles. Nor will it reduce the use of automobile tires or other accessories necessary to the efficient operation of a motor car.

"The national need calls for constructive economy in the operation of automobiles, but not in unthinking curtailment.

"It is my firm belief that, when we have satisfactorily ended this war, the automobile and kindred industries will find a market for all the goods they can produce. Many concerns are being called upon by the Government for war products. This will spur these manufacturers on to a use of their remaining facilities in even greater efficiency than has ever been known before, so that during and after the war all their facilities will be required."

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BALKY MOTORS CURED

WINTER DRIVING NO LONGER OFFERS DIFFICULTIES.

Three New Paige Devices Assure Instant Starting in Winter and Full Flow of Power.

"The ideal car for winter driving," says Harry M. Jewett, president of the Paige-Detroit Motor Car Company, "is one that will start instantly in any weather and proceed at once under a full and uninterrupted flow of power.

"Until this winter it has been impossible to attain such an ideal. No matter what price a man paid for a car, when zero weather arrived he was up against the same starting troubles as the owner of the cheapest vehicle on the market.

"An expenditure of \$5000 did not secure him freedom from a balky engine on cold winter mornings and it has been rather humiliating to the owners of these expensive cars—all dolled up with their luxurious fittings—to stall in front of the garage on a winter morning or in front of the theater on a cold night.

"While we do not make cars of the ultra-expensive type, we determined to solve the cold-weather problem and we believe we have succeeded. We have three devices on our enclosed models, in combination exclusive with the Paige, which make winter driving practical, providing instant starting in zero weather and an immediate and continuous flow of power. These three devices are the electrical gasoline heater, the super-heated manifold and the automatic valve-polishing device.

"In winter weather a car refuses to start because the fuel is too cold to vaporize and the carburetor is cold. We determined, therefore, to heat the fuel. This is accomplished by the electrical gasoline heater, which is something like an electric toaster. With this device you can have a warm carburetor and perfectly vaporized fuel, which assures instant starting even in the coldest weather.

"In winter the engine stutters and kicks and you may have to drive half a mile before you are getting a full and smooth flow of power. That is because a small cold manifold prevents an even flow to all cylinders. We have remedied this by our new super-heated manifold.

"A third evil, very annoying in winter, is the accumulation of carbon deposits on the valve seats which prevents full compression. The motor is

weak because it does not get its full charge. We have solved this problem with an automatic valve-polishing device which keeps the seats of the valves always clean and uncontaminated. Thus perfect combustion is secured and this device, with the aid of the super-heated manifold, assures at once the long-sought full and uninterrupted flow of power in the coldest weather."

GREASE REACH ROD A-PLENTY

Lots of Lubricant Needed for Attachment That Controls Wheels.

Between the steering arm with its ball end at the bottom of the steering gear and the double steering arm, which is part of one of the wheel spindles, there is a reach rod, which controls the movement of the front wheels in accordance with movement of the steering wheel. Although the reach rod is not liable to rattle in new cars, it does get noisy in time and the sound is frequently hard to locate.

To take up play in this part, threaded plugs are provided on each end, which can be screwed up inwardly by means of slotted ends, which take a screw-driver. These joints should be packed with grease every six months, the end being unscrewed and the cavity filled with lubricant. Some of these rods are fitted with grease cups and in cases

where this is not done it is good practice to install a leather boot, which may be had for the purpose.

Fitting Shaft Bearing Shown.

In replacing a bearing on a front wheel spindle for which it is a tight fit the car owner sometimes slips the bearing on the taper end of the spindle and then used the wheel as a hammer to force it home, wheel and bearing sliding into position on the spindle at the same time. This is poor business, as the strain on the bearing may break the hardened shoulder of the inner race, which is meant to withstand wear but not shocks of this kind. The best way of accomplishing this work is to slip a short length of pipe over the spindle, the inner end resting against the inner race of the bearing. By hammering the outer end of the pipe carefully the bearing will slip into place without trouble.

Grease Lubricant Suggested.

During the colder half of the year gearcases packed with grease will cause the gears to run practically without lubrication, because the grease sticks to the walls of the housing and little if any gets to the gear teeth. Oil not grease is the proper lubricant for the gearcase at any rate during cold weather.

Come to a full stop before crossing railroad tracks.

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