

STAR AUTOMOTIVE SECTION

Airplane and Auto Combined
An Argentinian has invented an airplane designed to rise directly from the ground or to run along a road like an automobile.

New English Solid Tire
A new automobile tire of English invention is made of solid rubber with large, deep chambers cut into it from the side, which is fitted against the wheel rim.

Automatic Windshield Cleaner
Operated by a vacuum motor connected with an automobile's intake manifold by flexible tubing, a new

windshield cleaner is kept constantly in motion as long as a valve on the motor is kept open.

Coat Falls Make Overalls
The fall of a duster coat designed for automobiles can be wrapped around a wearer's legs and buttoned to form loose trousers.

Air Gauge on Valve Stem
To lessen the labor of testing the air pressure in an automobile tire a new gauge forms part of the valve stem and is covered with a heavy glass dust cap that is transparent.

BAN IS LIFTED AGAINST DOGS

But Cats Are Taboo From Yosemite Park

LOS ANGELES, June 25.—Federal authorities in charge of Yosemite National park have lifted the ban against admission of dogs, reports the California Automobile club of Southern California.

But cats must still stay out. Only rodents within the national preserve may keep cats "to rid them of rodents," say the authorities.

The Yosemite is the first of the national parks of the West into which dogs may be brought. Officials of other parks may follow suit. The new ruling permits motorists to take dogs with them, but they must leave their pets in the automobiles.

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New Device to Prevent Carbonizing and to Increase Power of Fuel

That five steam is a positive aid to an internal combustion motor has been recognized as a fact for many years by automotive engineers but they have been at variance as to the best means of applying it. A number of ways have been tried and one by one they have apparently failed in some particular.

Now comes the Acme Steam Carburetor, an auxiliary of the regulation gasoline carburetor, invented and made by Seattle people, whose present users are acclaiming it as a marvel of efficiency and power production.

Prevents Excessive Heat
According to a number of eminent chemists of other parks may follow suit. The new ruling permits motorists to take dogs with them, but they must leave their pets in the automobiles.



JOHN S. BAISDEN
Phone Elliott 2441
UNION AT NINTH

AUTOS INCREASE ON THE STREETS

More License Plates Counted by Motor Man

"That greater dependence is being placed upon the automobile during this year of 1921 is clearly indicated by the increasing number of new 1921 automobile license plates seen on our streets and thoroughfares," says W. L. Kinsel, secretary and treasurer of the Kinsel Motor Car company.

"Reports now coming in from dealers in all parts of the country clearly indicate an increased buying, which may, if kept up, absorb all the new passenger cars in the hands of distributors."

"Without a doubt, the year 1921, with its increased responsibilities for America's business men, will see a greater and wider use of the passenger car for strictly business purposes, because the average owner has come to appreciate the ability of the automobile to enable him expend greater efforts without a corresponding increase in physical or mental effort."

Care Will Reduce Charges for Tires
Tires have improved so much in quality in recent years that even when abused a good tire gives such a good mileage that the motorist is usually satisfied that he got his money's worth.

But motorists continue to show disregard for a few simple rules, and their carelessness greatly increases their tire bills. The three ways in which this carelessness manifests itself chiefly are under-inflation, scraping along curbs and bumping into curbs and obstructions, according to the observations of the service department of the United States Tire company.

Improper inflation costs more than all other faults put together, it is pointed out. Tires should be pumped to the same figure in summer as in winter. The expansion of the air in the tires in hot weather is so infinitesimal that it should be entirely disregarded, and the tire pumped up to the prescribed figure.



FR

\$1,200.00 IN CASH PRIZE

AND \$1,200.00 IN CASH W

All you have to do to win these prizes is to save the vote-coupons advertisers on these two pages give you with all cash purchases of \$ or more as follows:

\$ 1.00 cash purchase	10 votes
2.00 cash purchase	20 votes
3.00 cash purchase	30 votes
4.00 cash purchase	40 votes
5.00 cash purchase	50 votes
10.00 cash purchase	100 votes

And So on Up

If at the close of the first big contest, December 15, 1921, you have most votes to your credit, the grand prize of a brand new Ford touring car will be yours. The second big contest will then follow and the Ford touring car will be awarded at the end of the following six weeks, June 15, 1922.

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will be divided in twelve monthly installments of \$100.00 and will be awarded as follows:

First Prize	\$50.00
Second Prize	25.00
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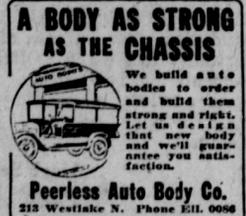
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Long Life of Rubber Fools Trade Experts

AKRON, Ohio, June 25.—The real cause of the slump in the rubber industry was a miscalculation by certain manufacturers in figuring that an automobile wears out six tires a year. The number is less than four a year.

The specific error was in figuring the mileage of the average tire—that it would run only 6,000 miles, when actual practice has proved 9,000 miles.

This 50 per cent error means that 50 per cent more source of supply of raw material has been developed than can be used. The same with purchases of raw material, and development of manufacturing and distributing facilities. Also 50 per cent more tires were produced than could be used in a reasonable time.

Insiders say that the tire industry will come back. It expects to restore itself and enjoy greater prosperity than ever by getting some of the money now going into steel mills, trolley wires and power houses.

They say it costs \$100,000 a mile to lay completely a mile of street car track and that this sum would buy a lot of tires.

A six-wheeled bus, seating 45 people, is undergoing every imaginable test on Akron streets. It was designed and built by one of the big tire companies.

Will this bus prove a formidable competitor of street cars? The tire company thinks so.

Gears



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AUTO TIPS

Care of Cooling System
If it has not yet been done, the cooling system should be drained entirely of all traces of anti-freeze mixture and flushed with clean water. Put a solution of baking soda and water in the radiator and run the engine for 30 minutes. Then drain the radiator again. This will remove all scales that may have formed from the anti-freeze mixture.

Removing Spark Plug
When the spark plug gets rusty and won't come off, build a shallow dam of putty around the top and fill it with kerosene. Let the kerosene soak in for 12 hours. This will loosen the rust and the plug can be unscrewed.

A Radiator Filter
Fit a faucet to the bottom of a pan and use this device to fill the radiator. It can rest on the hood while the radiator is being filled. This eliminates considerable bother and work in filling the radiator.

To Stop Brake Squeak
To eliminate squeaks in the brake system, remove the wheel and band and cut out a short bit of lining between the rivets under the anchor. The lining will hold just as firmly as before.

If Brakes Fail
If you are coasting down hill the brakes fail, the thing to do is throw off the switch and let the clutch. This would check the the engine would have no power to propel it and the piston, on the upwards on the compression stroke would meet a resistance in pressure.

Oil Grooves
Oil grooves in bearings should be V-shaped. If cut U-shaped, grooves forming a sharp angle, shaft would tend to scrape or dig from the shaft. The angle of cut avoids this and permits proper distribution of the oil.

If Wheels Wobble
If you find a tire wears fast the rest on the car, test the wheel to see if it is properly aligned. Jack the car at that end and spin the tire to see if it runs true. Or be neighbor's car and drive behind own to see if the wheel wobbles. Wobbly wheels eat up tires quickly.

Cause of Galloping Motor
Owners of cars with small-bore cylinder engines sometimes find it to obtain proper idling. The rolls instead. This trouble is caused when the spark plug gap is set too close. It can be cured by increasing the gap and cleaning plugs.

Oily Spark Plugs
If the spark plugs are constantly fouled, this indicates leaky rings. Or it may be caused by piston pumping oil. In this case vacuum produced when the engine is throttled down, draws up oil from crankcase past the piston rings, a sign of an overdose of oil in crankcase.

One Cause of Noise
The noise in the motor can often be reduced considerably by installing adjusting screws in the valve. These points are subjected to considerable wear and often wear down to an extent that the valve timing is affected.

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