

IDEA IS HELD WRONG

Heat Effect on Tires Not as Generally Supposed.

LOWER PRESSURE HURTFUL

Experiments of Diamond Rubber Company Engineers Show Increase Is Not as Great With Temperature at High Point.

BY F. L. REYNOLDS.

Quite often you read in your morning paper of some new and wonderful discovery made by science. You are not startled, because man has grown accustomed to the rapid advance of science. You take the new discovery as a matter of course. You adjust your ways of living to fit the new discovery and pass it by as you would a birthday—something that time is sure to bring.

It will be no surprise to motorists to learn that science again has come to their rescue. This time discarding one of the long cherished theories regarding tires.

Since the time the first pneumatic automobile tire was built in America, 16 years ago, it has been the popular belief among motorists that the air pressure in an automobile tire increases greatly on a hot day. Acting on this misapprehension many motorists are accustomed to running their tires at low pressure, at times even deflating them, during the hot summer season. Experiments conducted by the engineering staff of the Diamond Rubber Company recently proved conclusively that increased pressure in an automobile tire, due to the heating of the tire, is less on a hot day than on a cold day.

Temperature Cures Pressure.

These experiments were worked out on the basis of the proved theory that the absolute air pressure in any container such as a tire, the volume of which remains constant, is in direct proportion to the absolute temperature.

The absolute pressure is obtained by adding the atmospheric pressure of 14.7 pounds per square inch to the gauge pressure. In order to obtain the absolute temperature add 460 degrees to the temperature Fahrenheit. 460 degrees being what is known as the absolute zero. Applying this rule, a formula can be worked out which will give the final pressure due to increase in temperature in the tire when running.

Actual tests show that a 34 by 4 tire inflated to a pressure of 72 pounds a cubic inch and run 25 miles in one hour under average conditions on a day when the thermometer stands at freezing (32 degrees Fahrenheit), the temperature will increase 35 degrees. But on a day when the thermometer is at the mean temperature (62 degrees Fahrenheit), and the same tire is given the above test of 25 miles in one hour, then the increase in temperature of the tire will be 34 degrees.

Final Pressure Shown.

The experiments showed the final pressure in the tire to be 73.1 pounds a cubic inch and the final temperature to be 67 degrees when the thermometer stood at 32 degrees, an increase of 4.1 pounds a cubic inch. When the thermometer stood at 62 degrees the final temperature was 97 degrees, an increase of 6.6 pounds a cubic inch. When the thermometer stood at 90 degrees the final temperature in the tire was 122 degrees and the pressure was only 77.2 pounds, an increase of 2.5 pounds a cubic inch. As a matter of fact the increase in pressure would be slightly less, since the greater bending of the tire and consequent greater friction and generation of heat.

From the above it should be clear that the pressure in a tire should not be decreased on a hot day, as is commonly supposed, for the simple reason that it is impossible to obtain an increase in the pressure, due to the heating of the tire in service, sufficient to in any way injure it.

Seeing the World Awheel.

William P. Mason, Jr., of Troy, N. Y., and Arthur Lyman, of Minneapolis, have started on one of the most extensive motorcycle tours of the world yet undertaken by riders of the two-wheeler. Scotland, England, Holland, Austria, Italy, Switzerland and France are included in their itinerary for this summer. In the Fall the boys will be joined by George Harding, of Philadelphia, and will then tour the Balkan district, Greece, Egypt and the Holy Land. They expect to be gone about a year.

Motorcycle in Emergencies.

Motorcycle Officer Gus Neuman, of Gary, Ind., recently averted a serious accident by the speed with which he overtook a runaway horse on the main streets of Gary. The horse became frightened and immediately headed for the business section. During the past year he covered 5000 miles on his two-wheeler.

Motorcycle Notes

A MOTORCYCLIST has been detailed to paint white bands on the telephone posts along the route taken by the Hoosier Motor Club on its tour to Los Angeles.

After a chase of about 24 squares, Motorcycle Policeman Harrison Williams, of Phoenix, Ariz., overtook a runaway horse and succeeded in stopping it before serious damage was done.

A feature of the police festival held in New Orleans, La., June 30, was a race staged between motorcyclists of the force.

Leslie Vandam, of Greencastle, Ind., who is 60 years old, is an enthusiastic motorcyclist. During the past year he traveled 5000 miles on his two-wheeler.

W. C. White, of San Jose, Cal., has just returned from a 1650-mile motorcycle trip in Mexico and reports the roads in excellent condition. He only encountered one puncture on the entire trip.

Rev. Father McGinty, of Lansing, Kan., is one of the most enthusiastic motorcyclists in Eastern Kansas. His territory is about 20 miles in extent and he covers it easily and quickly on his two-wheeler.

Two Bay City, Mich., motorcyclists are planning a trip which will bring them into the capital cities of each

state in the Union. The riders will distribute advertising matter concerning Bay City en route.

The Wanderers' Motorcycle Club of Toronto, Canada, has grown so rapidly that it has become necessary to secure larger quarters.

Nine hundred and ninety-five members were added to the Federation of American Motorcyclists during the month of July.

Arthur Goddard and James Hough, of Aurora, Ill., have started on a 1200-mile motorcycle trip to Cairo, Ill. These riders are traveling for pleasure and in addition will advertise the home-coming celebration which will be held in Aurora this summer.

Elbert Hubbard, philosopher and author, will take part in the motorcycle tour to Denver to attend the F. A. M. convention to be held there July 22-26.

During a five months' membership campaign conducted by the Toronto (Canada) Motorcycle Club, Wilfrid Morrison secured 113 new members for the club.

A Trulett and Percy Hall, of Hoquiam, Wash., are making a motorcycle tour of California.

Rev. C. W. Wharton, of Rensselaer, Ind., and his bride, are going to spend



George D. Stacy, Portland Motorcyclist, Who Is Making Name for Himself.

their honeymoon touring the continent on a motorcycle.

W. M. Fleming, of Salem, Or., has started on a motorcycle trip to report R. I. Mr. Fleming is not making a trial of speed but is merely traveling for pleasure, and expects to spend from four to six months en route.

POLICE DEFEND DRIVERS

AUTOISTS HELD FAULTLESS IN MANY ACCIDENTS.

More Caution on Part of Pedestrians

Advised as Means of Lessening Injuries.

New York and Chicago traffic police of long experience say that a large percentage of accidents attributed to motor cars are not the fault of the automobile or of the driver. They say not only are many accidents caused by horse vehicles, street cars and other forms of wheel vehicles, but that if the public would exercise a little more caution, and if children were taught to keep out of the roadway, the number of street accidents would be much diminished.

"In many cases pedestrians seem deaf, dumb and blind," is the way Fred Vogler, Hudson and Red man, puts it. "In the language of the traffic police they 'go to sleep' in the center of the street. The roller skate is responsible for more accidents to children than is the motor car. Children's bicycles operated by small boys and girls of from 4 to 8 years of age possibly come next. Ice skates have long been prohibited on the streets in many cities; why not roller skates as well?"

"Traffic regulations against motor cars and other vehicles are rigidly enforced. Yet the same traffic regulations are totally disregarded by pedestrians. Motor cars are under such perfect control at almost all times that given half a chance the driver readily can stop his machine in a short distance. In almost all cars, the power of the brake is sufficient to pull the car to a dead stop within a few feet.

"If sidewalk traffic was as strictly regulated as street traffic, as is done with vehicles, a great many accidents would be avoided. A person who is supposed to use the sidewalk and to cross streets at the proper crossings under direction of the traffic officer has no more right to disregard such laws than has the driver of the street vehicle."

BUICK MAKES GOOD RUN

LONG UP-CAST TRIP MADE WITHOUT ANY TROUBLE.

H. L. Fitchard Drives New Car From Redlands, Cal., to Independence, Or., in Few Days.

H. L. Fitchard, a young man who was reared at Independence, Polk County, is now at that place on a visit to his parents, and in Portland this week, and called on the Howard Automobile Company to tell Manager Mel G. Johnson of his recent successful trip in a Buick model 34 roadster from Redlands, Cal., to his old home, at Independence.

Mr. Fitchard has been employed in the automobile line in Southern California for several years, and the journey was undertaken that he might pass the summer with his parents.

"My car was new and stiff when I started," he said, "and my first day's trip was to Bakersfield over mountains and desert, yet I did not boil the water once. In fact I did not boil it once on the entire trip, though other cars that I met the first day all had water bags on the side and filled up every time they stopped."

"My second day's trip was to Fresno, where I arrived about 3 P. M. after an easy run. From there the third day took us to Sacramento, a good long run on a very hot day. The fourth day I ran from Sacramento to Red Bluff, where I began to get into the hills, although not bad ones."

From Red Bluff to Shasta Springs there are mountains all the way, but good roads, and it was not until the sixth day that I ran into rain and only went as far as Coles. They told me

Every Goodrich Tire is a "first"

You always know when you buy Goodrich Tires that you are getting all the "best" that can be put into tires, and that you will get that "best" from them.

Forty-three years of buying crude rubber, compounding it and manufacturing things of it means a lot. It means that the rubber, which is the life of your tire, is compounded so that every bit of the buoyancy, resilience, resistance and tough, mileage-giving wear is retained.

It is the Goodrich principle of Unit Molding which makes each Goodrich Tire—tread, body and all—a single, layerless structure full of life and durability.

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The thick tough tread, the layers of pure rubber, the side strips, the bead, the layers of fine stout fabric—all are unified inseparably in the Goodrich single vulcanization.

That is the reason why you are free from the dangers caused by weak spots or dead places which come from over vulcanizing which cooks the life out of the rubber.

The usual guarantee goes with each Goodrich Tire, but remember that the tire itself makes good. Unit Molding puts the guarantee in the tire—gives it the liveliness and road-resisting quality which insure you long, continuously-uniform wear and service.

Goodrich dealers, Goodrich branches and Goodrich service stations are alertly ready to satisfy the wants of the tire user immediately. You can get any size or style in Goodrich Tires—but only one quality. Write for our free folders telling you how to get the best service from any tire.

Any car you own or buy will be equipped with Goodrich Tires if you simply specify them.

The B. F. Goodrich Rubber Co.

Branches and Service Stations in Principal Cities, Dealers Everywhere.

Portland Branch: 325-327 BURNSIDE STREET

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Write for Goodrich Route Book, covering the auto tour you select. These books are sent free on request.



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FOREST DIVISION IS MADE

Minam Office to Be in Baker City

Under Supervisor Barnes.

LA GRANDE, Or., June 25.—(Special.)—The division of the Minam and Wallawa National forests, which has been under consideration for some time, has been completed. Deputy Supervisor Barnes, formerly of Wallawa, now has offices in Baker, and is acting as supervisor of the Minam National forest.

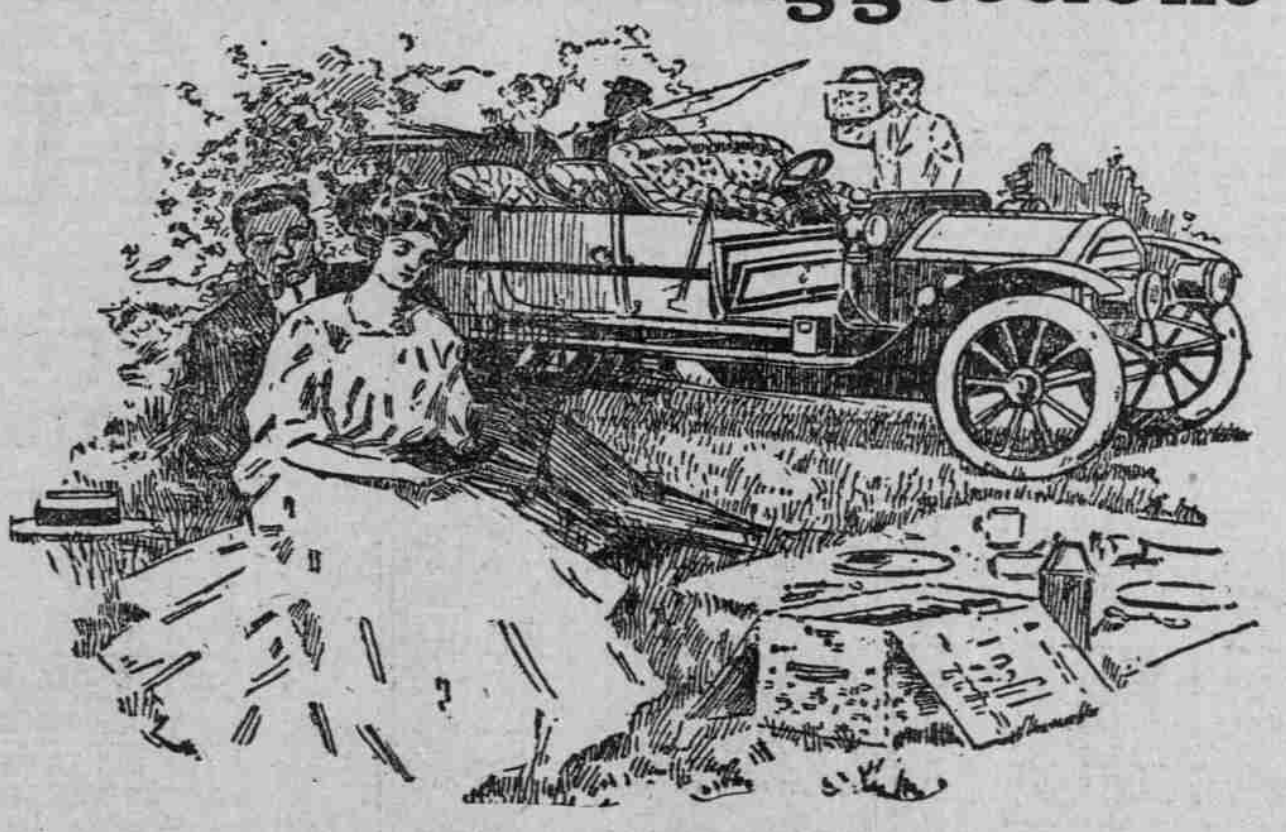
The Minam National forest is in that part of the Wallawa National forest lying south of the Minam Eagle Cap

on the south fork of the Innahwa River.

The Wallawa forest will now comprise all that part lying in Wallawa County except a small portion lying south of the Innahwa River. N. J. Billings, deputy supervisor of the Wallawa forest and formerly from the Fremont National forest reserve, Lakeview, now has charge of the Wallawa office. Supervisor Harris being on a trip in the northern part of the reserve, where he is overlooking telephone installation preparatory to battling with the forest fires this summer.

St. Louis Black Hand gang now demand payment of blackmail on the instant plan.

Seasonable Suggestions



Much pleasure can be added to your outing by being well provided with the proper equipment. A few hints:

- Refrigerator Lunch Baskets
- Thermos Lunch Outfits
- Thermos Bottles and Jars
- Drinking Cups
- Auto Trunks
- Folding Pails and Basins
- Gauntlets
- Dusters
- Caps
- Robes
- Extra Tires and Tubes
- Emergency Sleeves
- Tire Rollers
- Folding Stools

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OUR AIM: SERVICE AND COURTEOUS TREATMENT

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Seattle Store—817 East Pike St.

Owners of Pleasure Electrics—

We Guarantee These Tires 10,000 Miles—two Years

Nearly everybody now knows that Motz Cushion Tires are easy-riding and trouble-proof, but do you realize the great economy of these tires?

Do you realize that every set of Motz Cushion Tires is guaranteed for 10,000 miles—two years?

Do you realize that the upkeep cost on a set of Motz Cushion Tires is practically nothing?

Do you realize that four, not five, of these tires make a complete set?

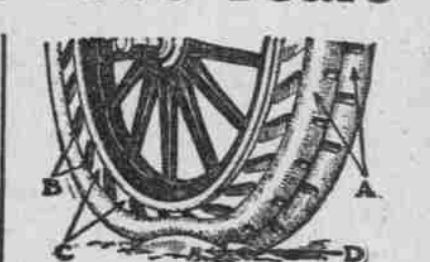
What if the initial cost of Motz Cushion Tires is a trifle more than pneumatics, is not the additional cost paid back ten times over?

They Ride Easy

Motorists and motor car makers once thought that only pneumatic tires could be easy-riding and resilient, but Motz Cushion Tires upset all calculations. Thousands now know from experience, from using Motz Cushion Tires, that they were wrong. They know that no pneumatic, except under excessive speed, is more resilient than the Motz.

Note the construction of this remarkable tire. Note the double, notched tread (A in picture), which prevent skidding and distribute the weight to the sides. The sides are undercut (see B), which allows free action of slantwise bridges (see C). These bridges are elastic. They give and yield like the air in a pneumatic tire. Note D in the picture, showing shock-absorbing qualities when tire runs over a stone.

Needless to say, Motz Cushion Tires end all punctures and blowouts.



MOTZ Cushion Tires

All Leading Electric Car Makers Adopt Them

The demand for Motz Cushion Tires in two years has multiplied tenfold. On every boulevard, in every city, wherever electric cars are used, Motz Cushion Tires predominate. All leading pleasure electric manufacturers have adopted Motz Cushion Tires as standard equipment.

New Tire Book Ready

Motz Cushion Tires fit any standard clincher, universal quick-detachable or demountable rim.

Our latest Tire Book is now ready for mailing. Don't fail to get a copy. Send a postal today and get acquainted with the tire that gives utmost riding comfort, utmost convenience, utmost mileage, utmost economy. Give specifications—name of car, model, size of rims, etc.

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