

OREGON HAS A FUEL FOR AUTOISTS RIGHT AT ITS VERY DOOR

Denatured Alcohol Has Many Qualities as Fuel and Is Made From Sawdust.

COST 11 CENTS A GALLON

Relation for Constantly Increasing Cost of Fuel Seems to Be in Establishing Local Factories.

By Ralph J. Staehli.

The United States government is authority for the statement that a substitute for gasoline or at least an active co-worker with the present motor spirit may be manufactured right here and in many other localities throughout the United States. H. B. Oakleaf, whose specialty is forest products, in a little chat with the writer, pointed out some of the salient facts in the situation and showed how communities in the northwest could make their own motor fuel.

The substance is just plain denatured alcohol, originally ethyl alcohol, denatured to avoid the government tax on ordinary grain alcohol.

Possibilities Are Immense.
Mr. Oakleaf said that in quantity it should be made here on the Pacific coast at a cost not to exceed 12 cents per gallon and possibly a cent or two lower.

The possibilities of producing it are said to be immense. For instance, in taking a trip down the Columbia river, or through any part of the northwest for that matter, one sees hundreds of saw mills and a little bit to one side, the refuse burner, a place where all the saw ends and saw dust and such waste is burned up under the open sky.

Engineers have said that it is but a question of time when our tonnage will be moved by alcohol instead of gasoline.

The government has been advocating the more extensive use of alcohol for some time. Other sections, which are not so fortunate in the matter of cheap material from which to produce it, such as mill waste, have other materials which can be handled as cheaply as this waste product of the lumber industry.

Forest Service Issues Bulletin.

The government forest service has just issued a bulletin in which are set forth rather terse hints in relation to the cost of gasoline. It says: "The value of most of the wood waste produced today is limited to its use as fuel in the production of power at the mill. Methods for its closer utilization have been worked out, but compared to the total, the amount so utilized is almost negligible."

"Furthermore, most of the large lumber mills produce so much more waste in excess of the amount necessary for power that the waste burners are still in use, involving not only the loss of large amounts of wood, but an actual fixed charge on the mill. The waste which is not utilized is almost negligible."

"Owing to the bulkiness of the stuff, a limited amount of handling is absolutely imperative. The mechanical condition of the waste is one of the greatest stumbling blocks to its use for ordinary purposes. Saw dust and shavings are too finely divided to be of use in the manufacture of paper or pulp production. For those purposes the fiber has been made too short or too much too much increased in the process of reduction, so as to make its use impossible."

Wood Contains Cellulose.
"Another objection to handling for any of the present uses is the fact that wood waste contains in all forms from the mill, from small slabs to the finest saw dust, Septa having passed into the various grades for the specific purpose is too big a task, so the satisfactory use must be the one which will make it in any and all forms."

"Except in some cases, as in factories using only one or two species of wood, or in some mills manufacturing only a few species, as for example, the yellow pine mills of the south, the non-homogeneity of the waste has operated against its efficient utilization of the waste material."

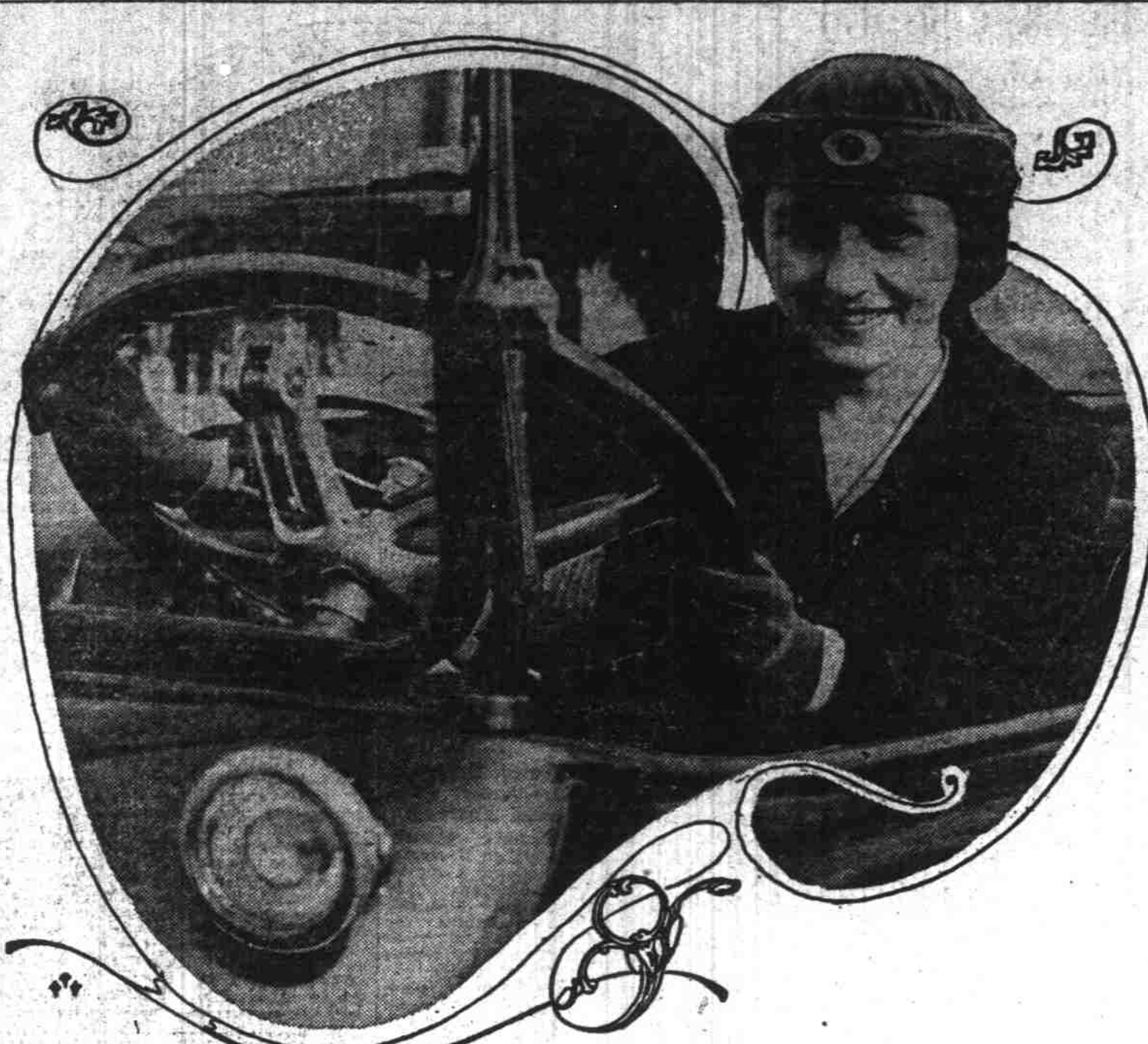
"All woods, however, have one point in common, and that is the fact that they all contain more or less of the cellulose which makes up the fiber of the wood along with an incombustible substance called lignin. Any process which therefore can make use of this cellulose would, therefore, overcome the objections regarding size, as larger pieces could readily be reduced to smaller form mechanically."

Process of Manufacture.
"The process, briefly, consists of distilling saw dust or hogged and shredded wood with dilute mineral acid in from 50 pounds or more of steam pressure. This converts part of the wood in a mixture of sugars. The latter then are fermented, producing wood alcohol."

Demand Exceeds Supply.
"A supply of the motor fuel problem will show that the production of mineral fuels such as gasoline, motor spirit and such, is not keeping pace with the production of automobiles," said Mr. Oakleaf. "Alcohol seems to be the only solution to the problem, for if alcohol can be produced from wood waste, a tremendous supply of raw material is available at present and will continue to be so in the future."

"Alcohol can be produced from straw, cotton, fruits and almost any kind of vegetable waste, so it can be

TAKES KEEN PLEASURE IN MOTORING



Miss Edna Florence, niece of Dr. E. A. Vaughan, 761 Knott street, an "outdoor girl," popular in the younger circles of Irvington. She drives a Cadillac.

produced locally in almost every section of the country."

"It will run in almost any motor with but little change in the equipment."

Gasoline becomes volatile at blood heat, 98.5 degrees. Ethyl alcohol becomes an explosive gas at a temperature of from 158 to 175 degrees. That, of course, indicates that alcohol would be rather hard to start in a cold engine. In fact it would be almost impossible in the cars as they are today. The process would be either to start with gasoline or else have some kind of a super-heater to start the alcohol gas. At any rate, the application so as to form an explosive mixture is a matter of detail. The fact that alcohol takes a higher temperature to make it volatile would in many ways be in its favor. It would be much safer to handle and insurance on autos and garages probably would be lessened.

Alcohol gas also can be compressed much more than gasoline. In the present day high speed motors this would be a point much in its favor and would mean increased efficiency. Some modern engines compress to 50 pounds of pressure. This pressure could be almost doubled for alcohol use, resulting in more powerful explosion.

Would Get Rid of Smell.

The use of alcohol would do much in the congested sections of the city, to alleviate the foul smelling gases and the smothering eyes, which result from passing through an avenue where a few busy motors are purring away.

The reason that alcohol has not been used, chiefly, is that it costs about 11 cents to produce it, whereas gasoline costs but 6 cents per gallon. However, with the greater demand on gasoline, a substitute, or at least a co-worker, will be put out soon and the government officials think it highly probable that alcohol will be the ultimate motor fuel.

There are now but two plants in the United States which convert wood waste into ethyl alcohol. One is in North Carolina and the other in Virginia. There was one in Seattle at one time, but, owing to the wrong equipment, the sulphuric acid used made the cost of maintenance inordinately large. Better methods would have enabled the plant to produce alcohol at low cost from the cheap material on every hand, says Mr. Oakleaf.

Just one other factor in favor of the alcohol is, that its explosion does not produce nearly as high a temperature. It is absolutely clean, and according to those who have experimented with it, is said to be an ideal fuel for the internal combustion engine.

Kansans Spend Big Amount for Upkeep

C. W. Myers, head of the Kansas state motor car license department, has just compiled a set of figures showing the tremendous supply of \$13,140,000 a year on the maintenance and upkeep of their cars. His figures are based on the license records showing ownership of 25,000 cars, exclusive of those in the hands of the dealers, within the state.

RECORDS IN AMERICA COUNT FOR NOTHING IN FRANCE, ENGLAND

Automobile Judiciary, With Customary Aloofness, Recognizes No Performance.

Should Eddie Rickenbacker, the famous Maxwell pilot—or any of the other speed demons of premier fame—celebrate the first race of 1916 by rolling 300 miles in two hours, or some such revolutionary figure, the result could be nothing more than an American record. No such thing as a world's record can be successfully claimed when the feat is accomplished in the United States, under the sanction of the American Automobile association.

This strange and anomalous condition arises from the fact that, with characteristic European aloofness, the automobile judiciary across the sea recognizes no performance in America as really authentic.

Despite the fact that many recent American records excel those on the books of the automobile clubs of Great Britain and France, recent compilations of European records plainly ignore these and still refer to venerable European feats as world's records.

The American Automobile association, after vainly trying to secure mutual recognition which would result in a real table of world's records, has temporarily given up the battle and modestly refers to all marks established under its jurisdiction as American records—only this, and nothing more.

An immediate effect of this condition is to rob the endurance champion Maxwell touring car of the technical right to claim a world's title.

The Maxwell—a stock touring car—recently completed, under A. A. A. sanction, a run of 22,923 miles without a motor stop. The best prior American record was less than 13,000 miles. In Europe the best prior mark was less than 17,000 miles—to the credit of the Rolls-Royce. Yet the Maxwell can qualify merely for an American record, and the stolid British will doubtless continue to regard the Rolls-Royce as the world's endurance champion until its record is beaten in the limits of their tight little isle.

Were reciprocal rules in operation, the Maxwell would undoubtedly be granted a world's record certificate. Under its present policy, the A. A. A. can, however, grant merely American certificate of record.

In the meantime, however, there is no occasion for American sportsmen to feel symptoms of pique. Regardless of the technicalities, they have the satisfaction of knowing that the Maxwell—a popular priced American car—has handsily eclipsed the best record of the one particular car on which Europe has relied for exemplification of motor endurance—a car of the highest price, and one which bases a large share of its reputation on a non-stop tour of nearly 20,000 miles, but herewith rendered obsolete.

Well Known Man Joins Distributors

Lawrence G. Nicolai, well known in automobile and newspaper circles on the coast for a number of years, has just become identified with the organization of W. Leavitt & Co., Pacific coast distributors for Overland and Willys-Knight motor cars. Mr. Nicolai will have charge of the advertising of this concern and the editorial and publicity and promotion work in this territory.

Mr. Nicolai was formerly in charge of the automobile department of Los Angeles, Seattle and other Pacific coast papers. Prior to that time he held similar positions in the east, having charge of both the editorial and advertising ends. He is therefore well equipped to take charge of his new duty.

Mr. Nicolai is one of the pioneer automobile editors in the country, starting in with the Washington, D. C.

Post, the year that John Willys started to manufacture the Overland car. He has been in close touch with the organization and personnel of the Overland factory during the past 11 years. In leaving the newspaper field and affiliating himself with the Overland distributors, Mr. Nicolai was largely prompted by his confidence in the factory behind the car and J. W. Leavitt & Co., Pacific coast distributors.

While Mr. Nicolai will make his headquarters in San Francisco he will spend much of his time traveling the territory and visiting the various Overland branches from Seattle to San Diego.

St. Louis Closes One Big Street to Horses

Announcement that one of the main thoroughfares of St. Louis probably will be closed to horse-drawn vehicles for all time may mark the beginning of a new era in city cleanliness.

Moore's "Tropics" pictured a city in which the horse had disappeared completely as a draft animal; and, whether or not the city fathers of the Missouri city have this Utopian dream in mind, the proposed action may be taken as the first step toward its realization.

This is not the first instance in which a town bans horses has been proposed. Several years ago, when the manufacturing district near the Indianapolis speedway was laid out, it was the idea of Carl Fisher, its promoter, to prohibit horses from its streets.

In fact, the district was christened "Horseless City." It is quite possible that, when the section does develop, as was anticipated originally, it in reality will be a horseless town.

Meanwhile, St. Louis may take precedence as the first city to reserve some of its streets for motor only, an example that possibly soon will be followed by other municipalities.

There are no city dwellers but can mention a street in their home town that could be improved from an aesthetic and sanitary standpoint by the prohibition of the small percentage of horse traffic that now uses it—and that without any great hardship to the horsemen themselves.

Doane is of the opinion that the San

ST. LOUIS PEOPLE CAN WRITE BOOST LETTERS AS WELL AS WE CAN

Portland Man Gets "Come-back" to One of His Come-and-See-Oregon Epistles

MISSOURI IS SOME STATE

It Has One End of Every Bridge, Cackling, Hens, and Gum Shoe Politicians.

Just how to answer some of the replies which he is receiving to the letters sent during "letter writing week" is the problem which C. F. Wright of Ballou & Wright has on his hands. Almost every man that he wrote to has "come back" with an answer that leaves some room for doubt as to whether the man is taking the thing to heart. Below is the answer he received from W. K. Norris of the McQuay-Norris company, St. Louis.

Your letter of the 27th singing the praises of your glorious state of Oregon, received. Did you ever see the Missouri mule in his native haunts? Did you ever visit the "slimy" mud people at home? Do you realize that St. Louis is the fourth largest city in the United States; mainly because the "leak proof" piston ring is made there.

Do you know that the Missouri hen lays more eggs than any other hen and has a greater demand for her eggs because she advertises cackles? Do you know that Missouri is the home of the greatest number of politicians in the world? Do you realize that and that these same politicians might be interested in the manufacture of automobiles if the country continues to go dry?

They import Oregon Apples, which flows past our door, would be clear were it not for the emptiness of the muddy Missouri into same as that the mud which makes the Missouri muddier than any other mud in the northwest. Did you ever see the steel bridge over a mile in length without a little approach to one end?

I know that you have not considered any of these things, yet we have them all in Missouri. Should I not show you in the city of St. Louis as a gold mine? We pay a large sum of money to find another representative capable of yours.

If it were not for the liberal of power and people here in the state of Missouri there would be but little market for the world famous Ho-Fish apple. We pay a large sum to eat one of those apples. That which we have not in Missouri is what you call the use of traveling. When the good Lord planted a little of heaven at one end of the East bridge.

Gates Are Wide Open.
I visited your wonderful Columbia river highway, the Columbia river, your hospitality of your people, but we are in Missouri. The gates of our city are wide open and nothing would please me more than to have Mr. Portland enter with you and save the trouble of me.

After reading this, Mr. Wright is still wondering what town is at the end of the bridge, such that one approach is invisible.

Business Affected By Pleasant Days

Portland Dealer Tells Result of Little Rain on Buying Public Car Is Well Suited to Oregon Demands.

Just to show what a little light on the automobile business will do for the Portland dealers, is mentioned the following instance.

Manager Doane, of the Oregon distributors of the Saxon and Paige cars, reported that on one bright day recently, when people began to take to their motors and hit me regularly, he sold one Saxon Six touring car and two Saxon four cylinder roadsters.

However, ever since the show, the Saxon has been enjoying a splendid run in spite of the weather which was anything but conducive to motoring. Just one week which may be taken as an indication of what to follow in this year, turned over two six-cylinder roadsters, two six-cylinder touring cars and one of the smaller roadster. Besides that, several wholesale dealers bolstered out a week's business.

Doane is of the opinion that the San

MOTOR TRACTOR FOR LUMBER YARD USE



Lumber yard tractor built by the Gerlinger Motor Car company in operation.

Another field has been opened up to the motor truck—a field that offers large possibilities to commercial vehicle men in the Pacific northwest. Within the past year the Gerlinger Motor Car company has built several special tractors for use in lumber yards and they have given such good service that Mr. Gerlinger announces that they will be regular part of his truck department from now on. The suggestion for the Gerlinger tractor came from a Washington lumber man who saw the possibility for increased efficiency in large lumber yards by the use of a small motor truck. The Gerlinger tractor is considerably shorter than a regular motor truck, the rear wheels being just back of the driver's seat. No body is used. An attachment on the rear provides for hooking on the trailers used in lumber yards.

UNSEEN, UNKNOWN PARTS OF CAR ARE AMONG MOST VITAL

Manufacturer Tells of Things Little Considered by Buyers; Highly Important.

Of the more than a thousand parts used in the construction of even the lightest and simplest automobile, how many does even the most careful and prudent buyer consider?

President George A. Kinsell, of the Kinsell-Kar, as one who believes that only a very few of the units necessary to produce a completed car are given an instant's thought. Selection is made upon specifications, appearance and perhaps a driving demonstration of a practically new machine.

"Yet a great many things that count vitally in the ability, comfort and longevity of a car are seldom even mentioned by a customer," says Mr. Kinsell. "For instance, there are hundreds of bolts, nuts and screws. Whoever thinks of asking about the quality of these?"

"Yet they are to the car what the ligaments are to the human body. They hold together—or they don't."

Therefore, manufacturers of good cars are as careful in the selection and inspection of them as the more conspicuous features. There are many grades of screws, nuts and bolts; and it is possible to make a great saving in cost of construction by using the lower grades of soft metal and imperfect threads.

"Riding comfort—in the abstract—is one of the first considerations of the average motorist. But here, again, inquiries and tests are almost invariably superficial. Few stop to think that there are many qualities of cushion springs and curled hair stuffing, and that comfort that will last through years of service depends upon the nature of them and other factors. As a prominent manufacturer of curled hair recently wrote to us: 'Poor upholstery transmits thousands of little jars to the base of the passenger's spine, fags him and kills his pleasure. Many a car has been called a hard rider when it was only the upholstery that was at fault.'"

"To go further, the windshields we buy for Kinsell-Kars have the welded type of tubing while many other cars have shields that have tubing locked together in a seam. The advantage of the welded type is that it is stiffer and watertight. The other kind costs less and shows it in wear. Yet, whoever stops to ask about this detail?"

"These are a few little things that indicate why there is such a variance in the price of cars, and also in the kind and length of service they give."

An iron ship weighs 37 per cent less than a wooden one of the same dimensions and, loaded to the same depth, will carry 15 per cent more cargo.

High Mileage Not Exceptional With Mitchell Cars

Representative Mileage Records of Cars on Their Original Hyatt Bearings

F. E. Slason, Plainville, Kansas, 1909-Buick...261,800	J. J. Moore, Philadelphia, Pa. 1911-Ford...147,751
James Lewis, Shelton, Conn., 1909-Mitchell, 218,734	John Fraser, Jr., Milwaukee, Wis. 1908-Buick...139,523
J. W. Norman, Paint Rock, Tex. 1909-Mitchell, 183,537	Geo. R. Mason, Des Moines, Ia. 1910-Maytag...135,000
Sam Deck, Darlington, Ind., 1910-Mitchell, 175,875	J. M. Bertoleto, M. D., Reading, Pennsylvania...1910-Mitchell, 127,681
J. D. Albright, Bowie, Texas, 1911-Ford...172,653	Jas. W. Hines, Minneapolis, Minn. 1910-Hudson...120,256
Ed. G. Druding, Ellsworth, Wis. 1909-Ford...171,418	Linus Kiene...1910-Mitchell, 120,000
S. T. & E. R. R., Stockton, Cal. 1909-Mitchell, 160,100	L. N. Burnett, Dallas, Tex., 1909-Flanders, 116,557
Jacob Stark, Chicago, Ill., 1906-Logan...148,150	F. L. Witte, Oneonta, N. Y., 1908-Ford...113,561

The above table, compiled and published by the Hyatt Roller Bearing Co., shows that high mileage is the RULE with MITCHELL CARS.

The second, third and fourth places are held by MITCHELL CARS—out of 16 high mileage cars 6 are MITCHELL CARS.

AVERAGE high mileage not only demonstrates GOOD bearings but also proves that the car is right throughout.

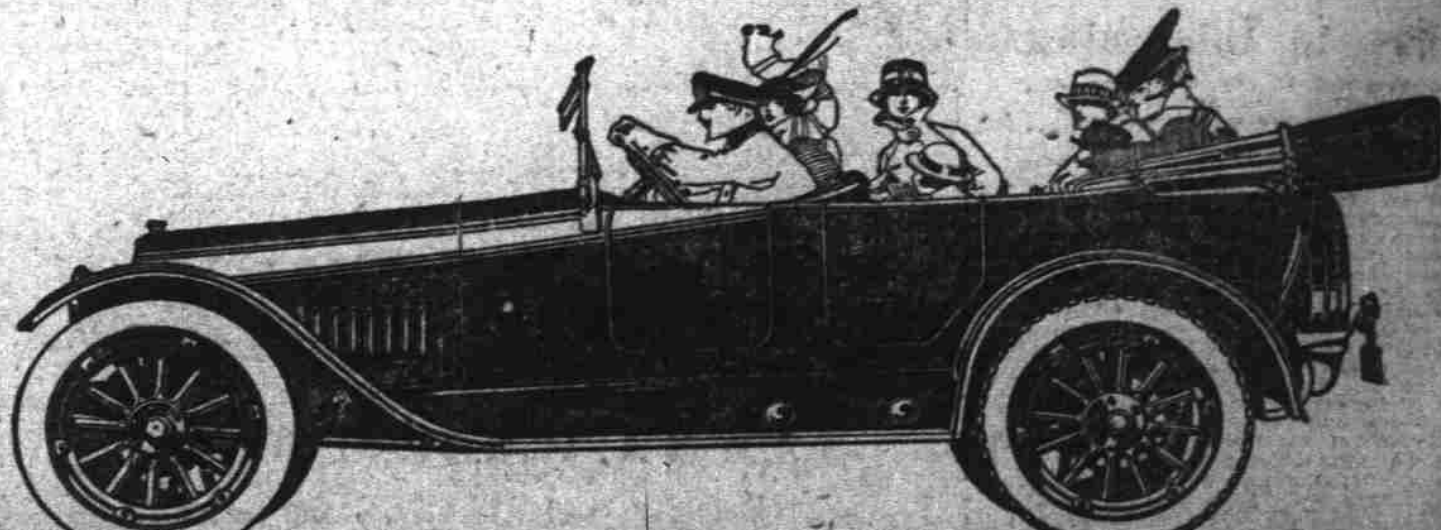
COME AND SEE THE LATEST MITCHELL—THE SIX OF '16

Get Your Mitchell Now and Enjoy

THE DELIGHTS OF EARLY SPRING DRIVING

MITCHELL, LEWIS & STAVEL CO.

EAST MORRISON AND FIRST PORTLAND, ORE.



PREPARE A GOLD MEDAL IN A FEW HOURS

"Pape's Cold Compound" Is the Surest, Quickest Relief Known—It's Fine!

Relief comes instantly. A dose taken every two hours until three doses are taken will end gripe, misery and break up a severe cold, cough in the head, chest, body or lungs. It promptly opens clogged-up sinuses and air passages in the head.

Don't stay stuffed-up! Quit blowing and snuffling! Get your head clear! Nothing else in the world gives such prompt relief as "Pape's Cold Compound," which costs only 25 cents a large dose. It acts without assistance, tastes nice, causes no inconvenience. Be sure you get the genuine. Don't accept something else just as good. Resist any cheap "Pape's Cold Compound" if you want to stop your cold quickly. (Adv.)

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