

### CARS NOT READY TO USE ALCOHOL

#### Columbia University Professor Makes Exhaustive Tests With Fuel.

Dr. Charles Edward Lucke of Columbia university, who has been making some very exhaustive tests with alcohol as a fuel for internal combustion engines, delivered an address the other day to the mechanical branch of the association of licensed automobile manufacturers.

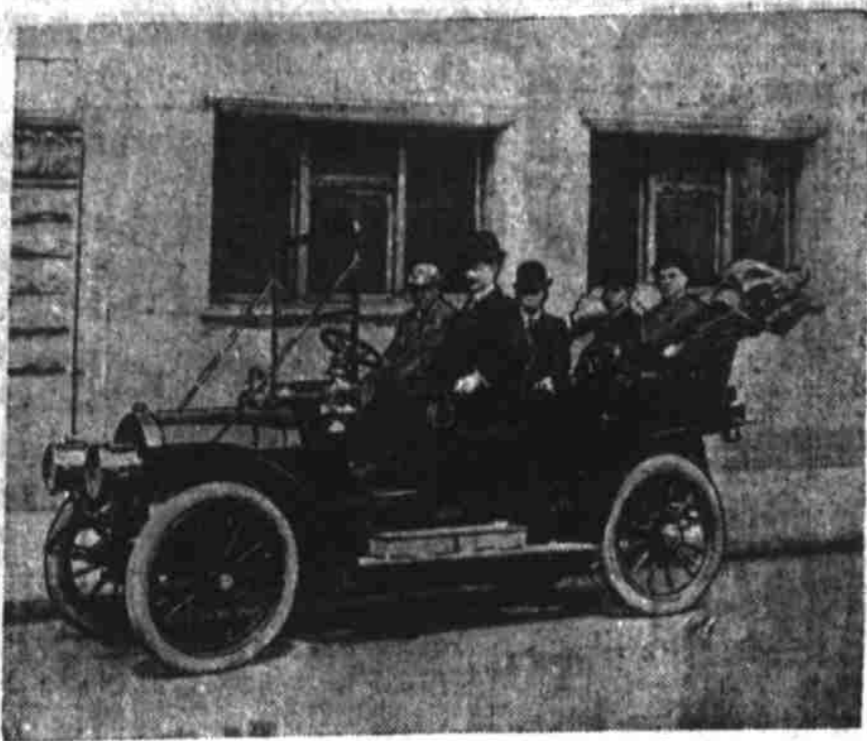
Dr. Lucke's remarks were principally in making comparisons in the tests he had made with the use of alcohol for gas engines for locomotion as compared to those for stationary use. He pointed out clearly to the branch that with certain types of engines he could start with alcohol as easily as gasoline, by the use of a spray carburetor with the ordinary intake valve. He said that he did not feel that the time was opportune for a universal adoption of alcohol for practical use, especially in automobile engines, owing to the absolute necessity for a minute adjustment of carburetor and ignition which would not be had in automobiles, owing to the inexperience of many drivers and owners.

The vagary of alcohol as a fuel was clearly pointed out by Dr. Lucke, who explained that during his experiments conditions arose and developed to an amusing standpoint. One incident noted was that in his tests on a two-cylinder motor with crank case compression, he found that the excess vapor which had not exploded with the first charge on the in-take, escaped through the crank shaft and could be ignited. In many instances the vapor could be ignited at the exhaust. In nearly all his tests, however, a good consumption had been attained and the standard of thermal efficiency of the motor maintained.

E. R. Hewitt, who has been experimenting with alcohol for commercial purposes, gave some interesting data on the results of his work. Mr. Hewitt adapted an engine to the use of alcohol for a five-ton truck. On gasoline with a full load, it's miles on a gallon of gasoline could be had. On using the motor without readjustment, only over two miles per gallon of alcohol could be gotten, but on raising the compression from 75 to 130 pounds he was able to get over five miles to the gallon of alcohol.

He pointed out that it was necessary in this case to place the carburetor as near the engine as possible in order that the mixture would be sent into the cylinder not less than 72 degrees. In cold weather he was able to overcome the loss in the vaporization by surrounding the in-take pipes with the water jackets which kept an even temperature for the vapor until discharged into the cylinder. It was the consensus of opinion that for commercial work, alcohol in the near future, would be the most economical fuel to be used.

Keep one ear open for any unusual sound, such as a knock or pound. Any piece of machinery will eventually wear, and this wear must be taken up. When a knock begins, do not delay, but make the adjustment at once.



One of the most handsome turnouts on the streets of Portland is the Studebaker touring car of G. F. Johnson, general manager for the northwest of Sherman, Clay & Co. It is an aristocratic looking seven passenger 30-horsepower Model H touring car.

### BEACH OF OCEAN FOR RACE TRACK

#### President of Auto Club Goes to Make Personal Investigation.

Lewis Russell, vice-president of the Portland Automobile club, goes to Seaside and other coast points next Wednesday for the purpose of investigating the feasibility of holding a series of automobile races during the summer with the ocean beach as a track.

This idea has been under consideration by the club members for several months, but the visit of Mr. Russell to the coast is the first action that has been taken to materialize the plans.

If the seashore west of the city is eventually utilized as a race track for the machines, the Portland club will be the first association on the Pacific coast to have the very sand of the ocean beach as a race course.

On the Washington side there is a stretch of beach that is more than 20 miles in length. The sand at low tide is always beaten by the washing waves and perfectly smooth the entire distance. The beach all along the line is level enough to answer the purpose. In fact the track is ideal for the purpose and would be one of the finest automobile courses in the world. The beach and

roads for entrance could be put in shape for a few hundred dollars.

"The only way this can be decided is for some one to make a personal investigation," Mr. Russell said yesterday. "If the club members decide that the beach is to be converted into a race course for automobile speed contests there is no reason why several events could not be held during the coming summer."

In addition to the stretch on the Washington side, in front of The Breakers, there is another in Oregon, extending from Astoria to Seaside. This is about 18 miles in length and while it is not as near perfection as the other beach, I am sure it would answer the purpose."

### DONT FOLD YOUR ARMS.

It Causes Flat Chest and Round Shoulders—Natural Position. From the Family Doctor.

By folding your arms you pull the shoulders forward, flatten the chest and impair deep breathing. Folding the arms across the chest so flattens it down that it requires a conscious effort to keep the chest in what should be its natural position. As soon as you forget yourself down drops the chest.

We cannot see ourselves as others see us. If we could many of us would be ashamed of our shapes. The position you hold your body in most of the time soon becomes its natural position. Continuously folding your arms across the chest will develop a flat chest and a rounded back.

Here are four other hints which should be made habits: Keep the back of the neck close to the back of the collar at all possible times. Always carry the chest farther to the front than any other part of the anterior body. Draw the abdomen in and up 100 times each day. Take a dozen deep, slow breaths a dozen times each day.

### For New Drivers

Before starting off on a run be sure that the radiator is full. An engine can be ruined in a very few minutes by neglecting this.

Too much stress can not be laid on the importance of keeping your cylinders clean by flushing out frequently with kerosene. Oil, no matter how good, will carbonate somewhat. The cylinders should be treated once or twice a week to a liberal bath of kerosene.

Don't neglect your oiling system; don't guess, but make sure that the oil is feeding properly. A small amount of

oil in the right place will forestall a big repair bill.

Take the time to go over all nuts and bolts periodically. A few minutes' use of the wrench each day will prevent many a breakdown. Some nuts have a tendency to work loose; these can be held in place by steel lock washers.

Running tires either too soft or over-loaded are common abuses. Tires should be pumped up so that with the weight of the car upon them there is no perceptible deflection under the load. If you value your tires, under no circumstances run them when deflated, or they will be ruined beyond repair.

If the batteries are tested occasionally with an ammeter, and all connections kept clean and securely fastened down with pliers, not with your fingers, much of your ignition trouble will be prevented.

When grinding a valve do not use too much emery powder. A little emery powder, No. 120, and a good deal of kerosene mixed with oil will grind a valve faster and do a better job than a large quantity of emery powder.

When punctures occur it is not advisable to rely on patching, particularly in the summer; the surest remedy is to have the puncture properly vulcanized.

Strain all gasoline through a funnel in which has been fitted a chamois skin. This will remove any trace of water from the gasoline and save a lot of annoyance. It is well worth the time and trouble.

Gasoline is useful in testing the radiator for leaks, as it flows through smaller openings than water and can thus be depended upon to indicate minute apertures.

The various electrical connections are apt to become corroded. Rub them clean and coat with a little vasoline. You can not get a good electrical connection with dirty terminals.

The vibrators in the coil should be occasionally tried up. Use a small dead smooth file, and only remove enough of the platinum points to make an even surface.

The correct distance for the points of a sparkplug is one thirty-second of an inch.

As you value your life, don't neglect the brakes; test them thoroughly to be sure that they hold. As soon as the brake lining shows much wear have the brakes re-lined. If you delay the rivets will eat the drums; these take time to renew, besides being somewhat expensive.

## Nance O'Neil and Bronson Howard Engaged '08 Mitchell Automobiles

Mr. Bronson Howard, the noted playwright, has placed his order with the Mitchell Motor Company of New York, New York City and Brooklyn Distributors, for early delivery of a Model I Mitchell Touring Car. Mr. Howard used one of our '07 models.

Miss Nance O'Neil (actress), who is now finishing an extended professional tour of the United States, has sent her order direct to the factory from Denver, Colorado, for a Model I Touring Car, to be delivered to her at some point in the East the latter part of the present month. Miss O'Neil is an enthusiastic autoist, and an expert driver of cars herself, and her action in selecting a MITCHELL carries with it its own story.

The varied classes of people who are universally buying 1908 MITCHELL Cars especially very forcibly proves our claim that our latest models are foremost in reliability, durability, design and finish also, despite the fact that we are marketing our cars at prices far below those of any of our worthy competitors who produce cars that rightfully come in the MITCHELL class. Rigid investigation of our claim, and comparison between the different makes of automobiles is solicited from all unprejudiced persons.



SEE '08 THE Mitchell GET A DEMONSTRATION

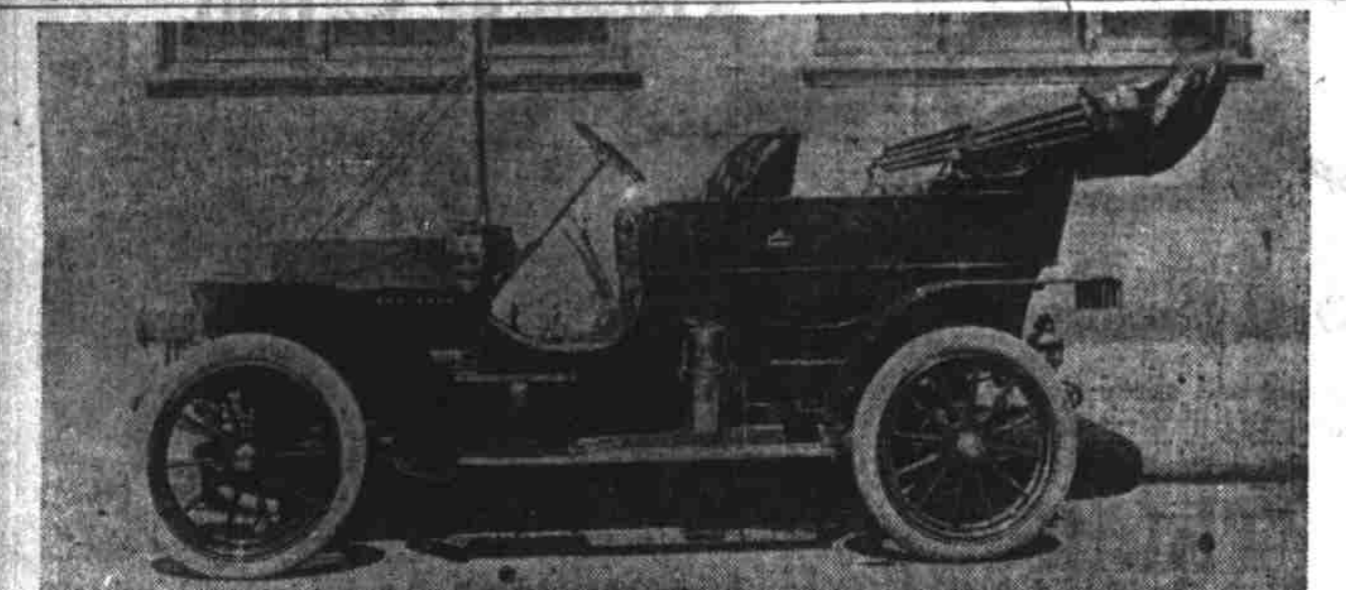
### THEN WE LEAVE IT TO YOU—

Only asking that you act on your own judgment, not on the advice of competitors who have other cars to sell. We guarantee you more automobile value for your dollars than you can get in any other machine on top of the ground.

SEE OUR AUTO TRUCK ON THE STREET IT'S A DANDY FIRST COME—FIRST SERVED



FIRST AND TAYLOR AND EAST SECOND AND EAST MORRISON STREETS



The Above Cut Is of a Cadillac 25-Horsepower 4-Cylinder Touring Car Sold by the Covey Motor Car Co.

## THE TALE OF THE Tourist

- (1) List' to "The Tale of the Tourist" Car! The automobile that's a winner by far— That's built on the coast and fulfills every boast, And travels like lightning and then some—almost.
- (2) The "Tourist," too, has a well-deserved fame, And victories unnumbered make brighter its name; The car was designed for the "roads of the West" And has bravely made good in every hard test.
- (3) Here are points that bring fame to the "Tourist" car: 'Tis strongly constructed, runs smoothly—no jar; Alike on the desert or rough mountain road— It eats up the distance and carries its load.
- (4) Then, built on the coast, 'tis a matter of pride That the car is so good and its fame be so wide. Competitors try, but they cannot compete, For every car of its class, has the "Tourist" beat.
- (5) In speed, hill climbing, endurance, then, too, Economy trials the tests have been true, And Forty-One Silver Cups do attest That the judges decided the "Tourist" best.
- (6) The price of the "Tourist," thirteen hundred, is low, Type "K," two-cylinder, the one you should know; Twenty-two twenty-four, that is the power— That's made the "Tourist" the car of the hour.
- (7) Of course there are others, of a higher-priced type, But every "Tourist" is a winner and that is a "pipe," Type "S" being our best and latest design— And "O," our famed Roadster, handsome and fine.
- (8) Type "N" and type "T" are as fine as can be And each type is one that is sure to please thee; The price and the power increase with the letter, But send for our catalogue, then you'll see better.
- (9) Here are some things the "Tourist" has done: Forty-seven times started and won forty-one; Once finished second and twice finished third, Just won every race in its class,—in a word.
- (10) In the three races lost, the cars that did win Had really no right in the race to begin; They cost three or four times the price that we charge, And then the percentage of gain was not large.
- (11) But we have to go out of our class to compete, Everything in it we easily beat. The "Tourist" is as handsome as any on earth, A western production of marvelous worth.
- (12) If a "Tourist" is broken, our factory is near, Five days by water; by rail, two from here. We at once send the parts, when they come, in a minute, The "Tourist" is ready—again its right in it.

By G. KENNEDY PALMER, Author of Sunny Jim and Spotless Town.

