

## ALCOHOL MAY BE SUBSTITUTE FOR MOTOR CAR FUEL

Possibilities Furnish One of the Most Interesting Industrial Problems and Opens Line of Investigation.

The possibilities offered by the use of denatured alcohol as fuel for internal combustion motors furnishes today one of the most interesting industrial problems and opens a line of investigations in which governments and motor owners are equally interested, says a writer in a recent issue of American Motorist.

The most important result of investigations carried on by the United States geological survey is contained in the evidence that properly designed internal combustion motors using alcohol or gasoline will consume about an equal volume of fuel per unit of power. The averages of the minimums of consumption values give a like figure of eight-tenths of a pint per hour per brake horsepower for gasoline as well as for alcohol. In this comparison it is of decided interest that the thermal value of alcohol is only about one-half that of gasoline of present-day standard—a fact which explains the persistence of the experimenters better than anything else.

### There Are Obstacles.

The manufacture of industrial alcohol itself presents no difficulty. The obstacles in the way of a more general adoption of alcohol as motor fuel lie in the difficulty to find a raw material that can be procured sufficiently cheap to render the making of denatured alcohol for fuel use profitable. At the present time most of the materials that have furnished denatured alcohol heretofore, such as grains, potatoes, melons, beets, etc., find a ready sale in the food market at prices too high to permit their use as a basis for alcohol.

The question then is to discover a substitute so cheap as to make the manufacture of denatured alcohol cheap enough to compete with the fuels now existing.

The Department of Agriculture has taken a commendable interest in the question by instructing the public in methods of manufacturing alcohol out of corn cobs, refuse from canning factories, cactus, sawdust, etc.

When the government regulations are made so liberal that denatured alcohol can be manufactured and sold as are most other commodities a great point will have been gained by those in favor of this development.

From the foregoing it should not be assumed, however, that alcohol may be used advantageously in the automobile engine of present design. Alcohol requires a special carburetor for its vaporization and the fuel must be pre-heated. On the other hand, it is also true that by utilizing alcohol vapor under higher compressions than are customary for gasoline engines alcohol will give the same or greater efficiency than gasoline.

### New Lexington Car

#### Is Shown to Public

The new Lexington Minute-Man Six model, about which so much has been rumored in the trade during the last few weeks, has just been formally announced by Frank B. Ansted, head of the Lexington company of Connersville, Ind.

It is easily one of the most attractive offerings of the year. With a long, low, striking body, a graceful double cowl, an exclusive style of radiator, luxurious upholstery and splendid finishing, it immediately ranks in appearance with cars selling at \$2,000 and upwards. The Lexington price, however, is as striking as the lines of the car, in view of high material costs. It is listed at \$1,585.

As predicted, this latest Lexington offering has many outstanding and original features in cars of its price class. In every way it is larger than the other Lexington offerings. It has a wheelbase of 122 inches, 34x4 inch tires and an unusually roomy body for carrying five passengers. In fact, there is so much room in the tonneau that a most novel auxiliary seating arrangement has been carried out which makes it possible for seven to ride in the car with comfort.

The extra seating arrangement consists of two chairs which fold directly into the floor of the car and when not in use they take up no space.

### Haynes Motor in Fourth

#### Year Without a Change

This month sees the Haynes "Light Six" motor started on its fourth year of its history. Since its appearance in the automobile world three years ago this motor has not undergone a single radical change, a fact to which the Haynes people point as being highly significant when it is recalled that designs of numerous other makes, produced contemporaneously, long since have had to be discarded. The first carloads of "Light Sixes" to leave the Haynes factory at Kokomo, Ind., went to San Francisco and Chicago.

Three years is a long time for any motor to continue in popularity, and in this achievement the Haynes company and every Haynes "Light Six" owner may well take pride," said Charles J. Corkhill, local Haynes representative, in speaking of the remarkable newcomer in the automobile world. The six-cylinder motors built before the summer of 1914 with their big bore and long stroke were cumbersome and uneconomical, and it was only the fact that the automobilist appreciated smooth flowing power that kept this type of machine on the market.

### Goodrich Manager Makes Odd Discovery in Old Tire

Prospectors are hitting the trail of an automobile tire out in the northwest as the result of an odd discovery by W. B. Stewart, manager of service at Goodrich branch of Spokane, Wash. Mr. Stewart was inspecting a few days ago an old tire received from Kalispell, Mont., and noticed that a neglected cut had admitted a small quantity of black sand to the interior of the casing. As he examined this sand, he and behold his eyes fell upon some gleaming yellow grains. An expert of long experience was consulted. He pronounced the grains to be pure gold—declared furthermore, that the proportion of yellow metal made the sand especially good. . . .

## Briscoe Shows Worth on Economy Test



Twelve hundred and ninety-seven and seven-tenths miles, over heart-breaking roads, on forty-eight gallons and two quarts of gasoline, or an average of 26.7 miles to the gallon for the entire distance, is a record that any cross-country driver would be

expected to boast about. This performance, which is nothing out of the ordinary for a Briscoe car, was made by Charles F. Hopkins, Jr., in a brand new Briscoe car from Jackson, Mich., to his home city, St. Augustine, Fla.

## Shortest Man in World Deals With Tallest Auto Salesman

The smallest man in the world owns a Maxwell car. Not only does he own it, but he drives the famous motor vehicle.

Little Lord Roberts is the man claiming the honor.

He is just thirty inches tall. Lord Roberts purchased a Maxwell after careful inspection of automobiles suitable to his size. He bought the car of the retail branch of the Maxwell Motor Sales corporation at Albany, N. Y.

While the smallest man in the world was buying the car the sale was being made by the tallest salesman in the service of the Maxwell company, A. S. Gilchrist, who sold the car, stands six feet four and one-quarter inches high.

It was an odd sight when Lord Roberts tilted back his head to gaze up at the tall salesman.

Gilchrist found it difficult to look straight enough downward to see his small customer. The two opposites hit it off well and closed a deal.

"When I walked into the Maxwell salesroom I expected to have to look

up to the salesman, but I did not contemplate stretching my neck at an angle to sight more than six feet," said Lord Roberts after making his purchase.

Extensions on pedals and levers were necessary before the midget was able to drive his car.

His first attempt at holding the wheel wasn't very encouraging. As he was going down the main thoroughfare, accompanied by a Maxwell salesman, the smallest man in the world was halted in his drive.

A "cop" believed the salesman was allowing one of his children to "monkey" with the steering wheel. Satisfactory explanation was made and Lord Roberts finished his first lesson.

After becoming familiar with the extension pedals and levers, Lord Roberts expects to challenge Ray McNamara, the Maxwell company road engineer, to an intercity road race.

## PACKARD SALESMEN IN UNIQUE CONTEST

Synthetic Foot Ball Games, Cup Races and Various Other Devices Engage the Men.

"Through the mediums of synthetic foot ball games, cup races and various other devices," asserts H. F. Orr, of the Orr Motor Sales company, "every member of every Packard sales organization throughout the country is engaged these days in at least two sales contests with his fellow Packard salesman. Two original contests contrived by the sales department at the factory created so much enthusiasm that they rapidly expanded into seven different forms of rivalry."

The salesmen of Packard trucks in the principle cities are lined up in two foot ball teams. Team progress is recorded on a gridiron, and for touchdowns, goals from field and so on, certain points are added to the team standing. The carriage salesmen are entered in a cup race. In an effort to determine the sales supremacy of the organization, carriage and truck men are competing in an inter-departmental contest. Besides, there are rivalries among the used car salesmen and the recent classes of graduates from the Packard carriage sales school.

### Other Competitions.

To add to the interest, the dealers in the two largest groups of Packard distributing points have formed competitions within their own organizations.

The objects of these contests are organization building, and the development of the individual salesman. In the truck division's foot ball game, special attention is given to orders for future delivery, a form of selling that requires of the salesman a good grasp of real big business. In the carriage sales contest, the effort is to outstrip the record set for the corresponding weeks last year. Every indication is that the carriage men will succeed in passing their mark, because sales of the new series Twin Six are larger at the beginning of this season than they were in the first six weeks of the 1917 season.

Persistent Advertising Is the Road to Success.

# National

## Advanced Type "Sixes"

The lines of the new six-cylinder National are not ordinary lines. The performance of the new six-cylinder National is not ordinary performance. The satisfaction delivered by the new six-cylinder National is not ordinary satisfaction. Users invariably speak of it as an uncommonly good car.

Complete Range of Body Styles in Both

## Six & Twelve Cylinder Models

1-Passenger Touring Car, 4-Passenger Sport Phaeton, 4-Passenger Roadster, Convertible Sedan  
The Six Sedan \$2890, The Twelve Sedan \$3420  
Open Car Prices—The Six \$1995, The Twelve \$2395

NATIONAL MOTOR CAR & VEHICLE CORP., INDIANAPOLIS  
Seventeenth Successful Year



## THE T. G. NORTHWALL CO.

Omaha, Neb.

LUTE MORSE, Lincoln, Neb. S. R. NELSON, Atlantic, Ia.  
DEAN BROS., York, Neb. OSCAR CARLSON CO., Dannebrog, Neb.

## COMFORTS OF HOME IN STUDEBAKER CAR

Automobile Clothes Press and Suspension Bed Part of Equipment of Car Driven by Los Angeles Physician.

How to carry several changes of raiment, spotless, perfectly creased, without wrinkle or rumple on an automobile vacation across the continent, is a problem too knotty for the mullin minded designers of automobiles to solve. The modern motor car is a vehicle of comfort and luxury, but, like all man-made things, there is room for the delicate touch of the eternal feminine.

The answer to this latest requirement of the cross-country tourist has been supplied by the wife of a prominent Los Angeles physician who, with her husband, is now "somewhere in America," enroute to the Atlantic coast in a six-cylinder Studebaker car.

**Solved By a Woman.**  
This motorist, with the inventive turn of mind, has designed and made to order the modern "automobile clothes press." It consists of a khaki bag with a wide mouth, into which is sewn three cross bars or curtain poles, the whole enclosed by a wide flap.

From the three curtain bars depend in vertical position from three to six regulation coat, trouser and skirt hangers. The entire unit, being suspended by two metal hooks from the rear top bow in the tonneau, permits carrying a number of suits suspended full length and as free from dust and wrinkles as though hanging in the wardrobe at home.

Another interesting novelty of this Series 18 Studebaker car is one of the new "Suspension Bridge" full-length automobile beds which suspends crosswise in the car just above the tops of the seats, leaving the tonneau and back seat for a dressing room for the two occupants. A 10x18 khaki tarpaulin, spiked at the four corners, serves in day time to carry the entire bedding outfit, lashed securely to the running board, while at night it covers the entire car, making the sleeping quarters as snug and cozy in a rainstorm as the drawing room of a Pullman or the stateroom on an ocean liner.

### Farmers Buying National Highway Touring Sedan

That the farmer appreciated the business and pleasure value of the automobile as soon as any other class of citizens has been apparent, of course, almost since the beginning of the auto industry, but that the man in the rural districts is taking to the closed car and all-year driving may be somewhat of a surprise.

In fact, that their new National Highway touring sedan contained a particular appeal to farmers wasn't borne in upon officials of the National Motor Car and Vehicle corporation until it began receiving an unusual number of orders from some of the dealers in the big farming districts, notably in the middle west.

"The farmers have begun buying these cars; we never figured on a particular market among them for the touring sedan type," reported the dealers.

As there had been no advertising nor other selling effort to appeal to farmers as a class, the officials asked for particulars.

"We haven't been making a drive to sell these new touring sedans among farmers," wrote a National dealer. "The cars have been selling themselves."

### Makes Good Time From New York to Portland

From New York City to Portland, Ore., a transcontinental trip of 3,489 miles, in exactly twelve and one-half days' driving, is the remarkable record recently established by Dr. Robert H. Ellis of Portland in a Franklin

## The Pride of Possession

Viewed as the reward of merit, eliminating false aspects, man's pride in his possessions is a virtue, not a fault.

In the better things of life this sentiment often decides the matter of happiness, for contentment dwells with the man who contemplates with satisfaction that which is his own,—his family, his home, his business, and his motor car.

Certain it is that the pleasure of motoring is less keen when the owner must make excuses for his car, and does not feel just pride as he mentions it by name.

The purchaser who gets his name near enough to the top of the waiting list to be able to secure an Oldsmobile, experiences to the full the pride inevitably accompanying the possession of an automobile which stands out prominently among America's 1917 fine cars as the best value of the year.

The accomplishments of the Oldsmobile factory for nineteen years are synonymous with the big events of automobile history. The mature and harmonious judgment of the competent is built into the Model 45 Oldsmobile.

Please compare Oldsmobile values only with those of the best motor cars, measuring power and performance with power and performance, finish with finish, trimming against trimming, equipment with equipment.

You are offered a wide selection of body types, all built upon the dependable Oldsmobile chassis; seven- and five-passenger touring cars, embodying comfort, luxury and refinement,—these are indeed ideal family cars; the Club Roadster, a popular sporting model, fellowship for five; the Standard Roadster, rakish and roomy,—an extra seat for two makes hospitality a privilege.

Advantages of the eight-cylinder motor are: Without excess weight; an abundance of power that is smooth, sustained and responsive. Sumptuous appointments; superb riding qualities; the realization of your greatest expectations under every load or road condition. These cars truly fulfill every promise inevitably pledged and always associated with the name "Oldsmobile."

We are eager to demonstrate any of the 1917 Oldsmobile offerings and to prove convincingly our trustworthiness

PRICES	
5-passenger Convertible "8" Touring	\$1467
5-passenger Convertible "8" Touring	\$1467
5-passenger "8" Club Roadster	\$1467
5-passenger "8" Touring	\$1185
5-passenger "8" Roadster	\$1185
5-passenger "8" Roadster	\$1185
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J. C. Lansing, Mich.

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