# GIFFARD WAILS OF GAS WELLS RUN DRY

## Thirty-Cent Market for Petrol Is Seen and After That What? Is Asked.

## CONSUMPTION IS GREAT

**Substitute Already Become Necessary—Benzol, Kerosene and Denatured Alcohol Each Considered From All Angles.**

BY WALTER GIFFARD.

Wait but a little while and the gasoline famine will be upon us, and when all the gasoline wells have run dry, what then? Why, after that the deluge—of kerosene, benzol, denatured alcohol and petroleum distillate carburetors.

This is not meant in the least to be a pessimistic article, far from it, but it is really time to look the gasoline situation full in the face, to see exactly what the situation is and to prepare for any emergency.

We are told upon good authority that within a year the price of gasoline will go up to 30 cents. Some people predict such a rise in April or May, and that price of 30 cents will apply only to regions close to the distributing stations of the oil companies. The traveler in the deserted regions, in the mountains, will have to pay anything from 50 cents to $1 for his "gas." Think of it! Thirty cents for what two years ago could be bought retail for a trifle more than a dime!

**Reason for Increase Told.**

Of course there must be some reason for this increase in price and a careful study of just a few facts will show that an increase in price is bound to occur, or is "furred to de end," as McIntyre and Heath would say.

There are some 1,700,000 automobiles in the world and America has the cool million, exclusive of commercial vehicles. What is a fair average distance that these machines cover in a year? Five thousand miles is none too much to allow, a trifle over 400 miles a month, or roughly 14 miles a day. A truck or commercial car will average far more, as figures of experts give it that the average truck does 35 miles a day.

Let us work that out in gasoline figures. Light cars will do from 12 to 15 miles to the gallon, heavier cars will do from eight to 10, while the still bigger lords of the roads do well to get six to eight miles to the gallon. Light trucks give about the same, while heavy trucks don't do more than three or four miles per gallon.

Along those lines, then, and taking the pleasure cars in their due proportion, we shall not be exaggerating if we allow 500 gallons a year to the pleasure cars and 2000 gallons per annum to the commercial vehicles.

**Output Steadily Decreasing.**

At this figure the total gasoline consumption by motor-propelled road vehicles in the United States is, in round figures, 700,000,000 gallons a year. That gives one furiously to think!

Each gallon of gasoline is the product of 10 gallons of crude petroleum; in other words 7,000,000,000 gallons of petroleum have to be subjected to fractional distillation. The entire output of petroleum in the United States in 1912 was only 220,000,000 barrels, or 8,240,000,000 gallons, leaving a very small amount comparatively speaking, (1,240,000,000 gallons) of crude oil for all the stationary engines, motorboat engines, farm tractors, fire engines and such like.

Petroleum experts say that the output last year was even less than in 1912, though the consumption was by no means stationary, showing a large increase.

Add to that the horrible fact that some of the Eastern wells have already run dry and it will be seen that there is just cause for alarm.

**Less "Gas"; More Cars.**

Yes, but we have oil wells in California nowadays. True enough, but the oil wells there, and in Texas, and Louisiana, only yield about 2 per cent of gas from the crude petroleum, so that they do not make up for the wells that have run dry.

In the face of this diminishing supply we have more and more automobiles; we have them covering greater distances every year due to improved roads and the gradual elimination of a "closed season," which was responsible for keeping machines in the garage during the Winter.

What is the situation in a nutshell? First of all, an increasing number of cars; secondly, increasing demands by each individual car; thirdly, a stationary or even failing supply of crude petroleum; fourthly, lack of the best distilling plants for extracting the greatest amount of gasoline from the crude oil; and fifthly and lastly, an increasing number of heavy trucks which are the big users of gasoline.

What is the solution?

Evidently some other fuel.

But what?

People in every walk of life, scientists, engineers, private owners, one in Portland for example and several in California, have been experimenting with one or other form of fuel, each of them and all of them anxious to win one or other of the high prizes offered by the Automobile Association or some similar institution. By their efforts there have been brought to light substances which some one, in the concentrated quintessence of optimism, might term a motorcar fuel, but always there has been, until recently, something in each which has been objectionable.

**Benzol Used Abroad.**

The only really promising materials are benzol, kerosene and denatured alcohol.

Benzol is a coal tar product, used extensively in Germany, where the subsidized vehicles are compelled to use it. France, too, working for once with Germany, is also endeavoring to foster the use of benzol. The reason is plain. European countries are making a strenuous attempt to make themselves independent of the rest of the world as far as automobile fuel is concerned, for gasoline or petrol already costs anything from 30 to 40 cents a gallon. The only objection to benzol is the impossibility, at any rate at present, to produce it in anything like sufficient quantities.

Then we have the old "coal oil" or kerosene. Every one has heard of Ray Harroun's kerosene carburetor, which he used in the cross-country tour of the Hoosier motorists in his Henderson car. He did not use any gasoline at all throughout his trip, and if I remember right the total cost for the journey worked out at something over $6 for each of the men in his car. Another kerosene-equipped car is now on a tour of the world, so that the possibilities of this fuel at any rate are substantial.

Several things which militate against its use today may be remedied in the near future. One of the biggest objections is the lower rate of vaporization, which is being compensated for by the use of pre-heating devices or by special arrangements in the carburetor.

**Denatured Alcohol Comedy.**

Kerosene when thoroughly gasified leaves but very little carbon and has a smokeless, odorless exhaust. The trouble with it is in starting when the engine is "cold." Self-starters, the injection of heated air into different points of the intake manifold, or the use of a little gasoline at the outset, have been resorted to with good results, and it seems certain that very soon kerosene will be largely used. At present it is only about one-third as costly as gasoline, but its universal adoption would spell an increase in price of course.

In the great serio-comic melodrama entitled "Why Denatured Alcohol Is Taboo," red tape, politics, revenue troubles and popular prejudice play leading roles. Alcohol, scientifically, is even more suitable than gasoline. It shows a greater efficiency at any one compression, but it does not seem possible that motorists ever will be able to use it, just because of fear by the Government that if the motorist was carrying liquid fodder in his gas tank, the fumes would inebriate him and render him unfit to drive.

A hundred million gallons of denatured alcohol could be produced annually from the refuse on the farms, sawdust, "green" potatoes and such-like, without affecting the agricultural output in the least. Its use would lead to increased cleanliness, and yet it must not be done. Perhaps in the sweet by-and-by, when motor-driven vehicles are running without any fuel at all, people will not object to the use of denatured alcohol, but by that time we all may have given up motoring, what?

# PIT COACHING REAL DOPE IN AUTO RACES

## Blackboard and Paint Way 'Gil Dobies' of Track Tip Off Racing Speed Fiends.

## POSITION FIRST ESSENTIAL

**Roscoe Fawcett Says Game Worked to Death in California—Speedometers Record Exact Rate and Are Large.**

BY ROSCOE FAWCETT.

LOS ANGELES, Cal., Feb. 28.—(Special.)—Very soon it will be up to the wiseacres to sally forth, brandishing a hatchet for the sideline coachers in the automobile race game.

In football the professional signal bureaus were slipped a double dose of paregoric a few weeks ago, yet, sideline coaching in the automobile speed business is worked to death.

According to Oldfield, Tetzlaff and a host of other human juggernauts, 80 per cent of the success of the driver depends on his pit management. And a few squints around the course, prior to the Vanderbilt Cup and Grand Prix races at Santa Monica, last week, would seem to bear out this assertion.

Gil Dobie, Hugo Bezdek, Dr. E. J. Stewart and those other famous gridiron exponents of the sideline flash would have blushed with shame had they witnessed the infinite detail and the deadly accuracy of the coaching corps in the auto classics.

**Pit Signaling Important.**

In pit signaling the most important matter is the communicating of the driver's position in the race to him as he speeds down the causeway. It is also essential that he be kept aware of the position of the leading car; then, how far behind he is, and the average of the winning car and his elapsed mileage.

In football sideline signals are flashed surreptitiously by the use of handkerchiefs, cigars, moving of the hat or of posture; in baseball the signals are heliographed from the bench or from the coacher's box by change of position or by word signs.

But in the automobile race game there is no need for secrecy.

The "dope" is painted on a blackboard in front of each pit, and is flashed to the driver following that particular chart. A rival driver may happen to pass at the same time, but he has troubles enough of his own and has no time to figure out his opponent's information.

**Jockeying May Be Game.**

The pit manager usually handles the coaching himself. Johnny Aitken and Ray Harroun are credited with being two of the foremost pit men in the speed business. Aitken, it will be recalled, handled the victorious Peugeot pit at Indianapolis last May.

Good pit managers do not go at things blindly.

Ofttimes they'll send two or three drivers out of the same pit, each labeled with different instructions. Perhaps one man will be relied upon for his consistency and his time gauged accordingly; another may be shoved into the fray to break a record and he naturally works under altogether different pressure.

Again, a driver may be sent out to jockey some much-feared rival.

That's the pit manager's business and Leon Shettler has had some crackerjacks mobilized here during the past fortnight.

Generally, too, the mechanician carries numbered sheets, of which he tears off one each lap. This private checking system is valuable in that it militates against the driver's chance of running by a pit when it's time for gas and oil.

Barney Oldfield and some of his rivals also tote stop watches. Barney invariably knows his exact speed at any given time.

The writer had the pleasure of acting as mechanician for Oldfield in a 52-second Coast record jaunt around the Country Club track in Portland a couple of years back, and Barney's uncanny knowledge of times was one of the most vivid impressions of the dizzy ride.

**Dope Well Prepared.**

Oldfield and leading rivals as well try out the courses thoroughly in advance. Thus they become familiar with the correct rate of speed at which to pilot their cars on the various stretches and what speeds to employ for the turns, so as to total up a winning average for the lap.

A new wrinkle in the automobile race game—at least it's a new one on us—is the motometer, a device which bears the same relation to the mechanician as the thermometer to the incubator expert and the aneroid to the balloonist.

By means of this odd contraption the mechanician knows the exact temperature of his motor at all stages of the going. Formerly steam from the radiators furnished the sole danger signal.

Speedometers, of course, are carried by most drivers to give them their speeds on the straightaways and on the curves. On the turns the speedometers are particularly valuable, for the driver does not have to rely upon his own judgment of velocity. He knows the speed each turn will absorb and he gauges his engine accordingly.

The speedometers employed in these big race affairs differ radically from those which usually land in Judge Stevenson's "emulation" parlors in Portland.

They record the exact velocity of the benzine buggy.

This is an unusual feature in itself and is worthy of mention as an aftermath of any Vanderbilt cup siesta. Said trophy cups, by the way, are big enough to hold 20 cents' worth (if you know the bartender) and would make valuable acquisitions to the fighting strength of any of our modern dreadnoughts.

# "SIX" NOT PLANNED

## Henry M. Leland Denies Report of Company Intention.

## POLICY IS UNCHANGED

**While Experimentation Has Been Carried On to Considerable Degree, Yet Determination Is to Adhere to Present Plan.**

Henry M. Leland, president of the Cadillac Motor Car Company, and recently elected to the presidency of the Society of Automobile Engineers, corrects an erroneous impression which seems to prevail in some quarters with regard to the future plans and policies of his company.

"We could scarcely expect to control," says Mr. Leland, "the very considerable volume of 'mouth-to-mouth' advertising which the Cadillac receives. It would keep us busy if we were to attempt to confirm or deny the many and varied reports that are constantly being circulated concerning the Cadillac. But when a misunderstanding or misconception of our methods, plans or policies is liable to creep into this sort of gratuitous publicity, we consider it a duty we owe the public as well as ourselves to correct whatever inaccuracies may unwittingly be reported.

"We have experimented, it is true, with engines of six cylinders; in fact, we have built a number of such cars in the past four years. We have tested them to the utmost; and we have compared them, point by point, with some of the most highly regarded 'sixes' which we had bought for just this purpose. It may be interesting to note, in this connection, that we did not find a single 'six' which in our opinion outpointed our own in these exhaustive tests. Most of them, in fact, were outpointed by our own. These experiments may have been the basis of rumors that we were to market a six cylinder, but this company has no such intention.

"At one time or another our experimental division has built automobile engines of almost every conceivable type and size. We made two-cylinder cars some years ago, and it was rumored that we were to market such a car—but we never did. We have also made three-cylinder cars, and it was rumored that we were to market them, but we never did. And in the same way the rumor that we contemplate the marketing of a Cadillac six is without foundation. Our experimental division, which we believe to be the most thorough in the entire industry, is ever active. No expense is ever spared in testing, investigating and experimenting; no stone is left unturned in our efforts to discover and provide that which will demonstrate itself to be best in principle and in practice.

"Our tests, investigations, experiments and comparisons have demonstrated conclusively, that our four-cylinder engine affords the highest degree of all-around efficiency obtainable, coupled with greatest economy of operation and maintenance. Furthermore our tests have proved that such an engine as the present Cadillac power-plant, in connection with a properly designed two-speed axle, produces not only an extraordinary range of operating flexibility, but an extraordinary degree of operating and maintenance economy and marvelously luxurious riding qualities, while reducing friction and consequent wear to a marked degree and reducing vibration almost to the vanishing point.

"With this knowledge to guide us, we certainly have not the slightest idea of departing from our present policy."

**NEW SIX-PASSENGER MODEL WHICH MAKES APPEARANCE IN PORTLAND.**

W. S. DULMAGE, OREGON DISTRIBUTER, AT WHEEL OF HUPMOBILE.

## CHEHALIS FORMS AUTO CLUB

**New Traffic Ordinance to Be Submitted by Organization.**

CHEHALIS, Wash., Feb. 28.—(Special.)—The Chehalis Automobile Club was formed here Tuesday night, there being a large attendance of auto owners and enthusiasts at the meeting. O. J. Albers, a well-known attorney, was chosen president; T. C. Rush and T. J. Long, vice-presidents, and J. E. McDonald, secretary-treasurer. These men and two others, T. R. Behrend and W. E. Bishop, constitute the board of trustees.

Another meeting will be held soon when an emblem will be adopted and other matters of interest considered. A traffic ordinance for Chehalis will likely be submitted to the city commission and the latter asked to pass regulations that will be safer for auto drivers, teamsters and other vehicle owners, as well as for pedestrians.

**Records Allowed to Stand.**

At a meeting of the contest board of the American Automobile Association held last Wednesday at headquarters, the following official records were allowed, after satisfactory compliance with rule 78: One mile circular dirt track records, 50 miles—45:32, Disbrow, Simplex-Detroit, September 29, 1912; 200 miles—3:21:48, Mulford, Mason, Columbus, July 4, 1913.

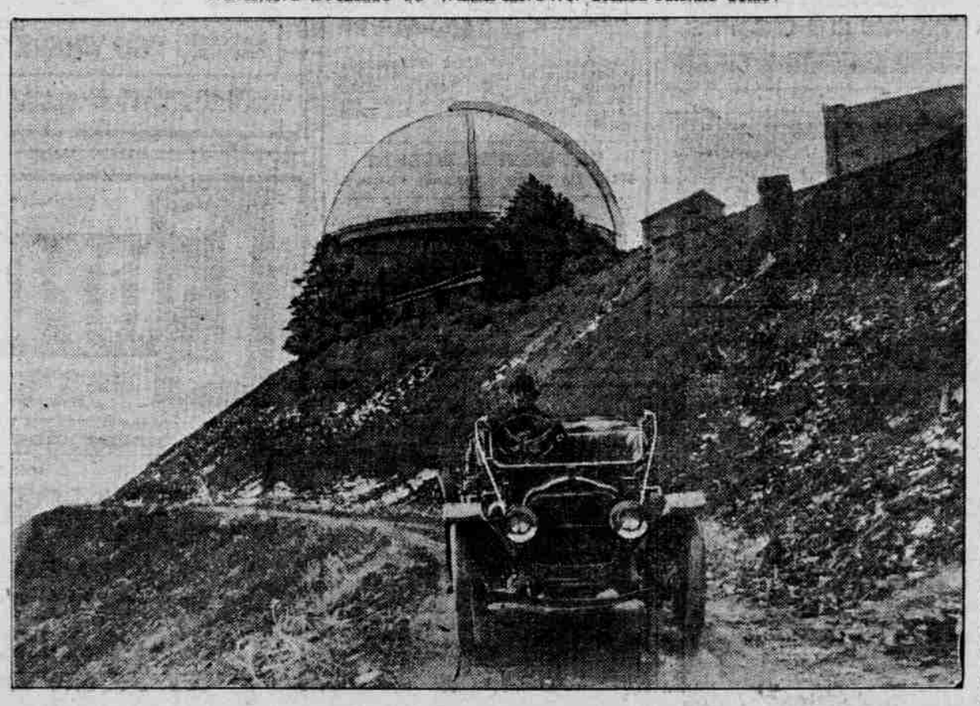
**Mexico Motor Highway Completed.**

The City of Mexico and Puebla are now joined together by a beautiful automobile highway. The road passes near the famous Popocatapetl volcano.

**Minnesota to Build Miles of Road.**

The State Highway Commission of Minnesota plans to begin the construction of 10,000 miles of permanent state roads this Spring, to connect the various county seats and market centers. The state has $1,500,000 to distribute among the counties which, with the county funds, will make $5,000,000 for state roads. All the work will be done under the direction of the state.

**NEARING SUMMIT OF WELL-KNOWN CALIFORNIA TRIP.**



BY THE LICK OBSERVATORY.

One of the most beautiful and interesting as well as one of the most accessible motor runs in California is that from San Jose to the top of Mount Hamilton, from which point the observatory of the Lick telescope strikes the dominant scenic note of the Santa Clara Valley.

Recently a party in a White Thirty went over the run to test the grades and to secure photographs and data of the trip.

The going was good after the ascent and natural drainage began, and the trip was found to be an easy one for motors to accomplish. The scenery made a marked change from the Santa Clara Valley. From the reservation line at Smith's Creek Bridge, the grades grow steeper, but except at the very last are not severe.

The panorama from the observatory site is a wonderful one. To the west it is bounded by the purple indented line of the Coast Range as background for the vivid green of the nearer lying Santa Cruz Mountains. South, the mountains overland again foreshorten the view. East it expands and the snow-crowned Sierras far across the hidden San Juaquin Valley mark the misty horizon. The opening cleft that leads to the Yosemite can be plainly seen. To the north lies the full beauty, Saw Tooth Canyon, Livermore and Mount Diablo. Then the Coast Range, with Oakland snuggling at its feet, and the magnificent sweep of the great bay that Portola found. The San Bruno Mountains cut off San Francisco, but Tamalpais' uprearing head localizes the city and the Golden Gate.

**Owners Will Tour to Fair.**

About 300 owners of Studebaker cars in Phoenix, Ariz., are planning to tour together next year to the Panama Exposition in San Francisco. The route will lead directly across the Great American Desert.



## EASTERN OREGON ROADS O. K.

**No Snow and No Obstructions Is Report After Trip.**

The roads in Central and Eastern Oregon right now are in better shape than they have been for a year. There is no snow or anything of an obstructive nature and the service of boats between Portland and The Dalles has been resumed.

This information, valuable to many motorists who might be thinking of taking a trip down through the counties at this time of the year but who have been hesitating from fear of bad roads and bad weather, was sent in last Thursday by Harry C. Hayes, traveling representative for the local branch of the Howard Automobile Company. He and C. L. Huff, of the Huff-Noble Auto Company of Prineville, Or., last week shipped a Buick 35 touring car to The Dalles and then drove the rest of the way, 150 miles, to Prineville. They made the trip in eight hours.

"The first 90 miles," wrote Hayes, "are a good test on any man's driving, but the last 60 are excellent. No fear of snow; all departed."

**Show Business Said to Pay.**

At the close of the Rochester automobile show, Peck & Arnold, Studebaker distributors, published in a signed advertisement the names and addresses of more than 20 persons who had bought Studebaker cars during the week.