

ALCOHOL-BENZOL MIXTURE FOR USE IN AUTOMOBILES

French Government Makes Plans for Supplying Fuel Needs for Motors After War is Ended.

WOULD USE SAME ENGINES

Possible Difficulty in Obtaining Gasoline to Be Overcome by Adoption of Different Fuel.

Immediately after the war it is the intention of the French government to put on the market for the use of motor cars only, a quantity of not less than 22,000,000 gallons of alcohol. This cannot be used alone in the present type of internal combustion engine, and as there is no desire to change the engine to absorb the new fuel, suitable mixtures will have to be made with this alcohol. It is estimated that after the war there will be available a total quantity of 15,000,000 gallons of benzol. The dyeing industries and perfume makers will require 3,500,000 of this, leaving 11,500,000 available for motor car use.

Fifty-Fifty in Use
A mixture of 50 per cent alcohol and 50 per cent benzol is suitable for engines as they exist at present, with no other changes than slight modifications to the carburetor. The Chalmers automobile company of Paris made use of this mixture for two years with very satisfactory results, only abandoning it owing to the fluctuations in the price of alcohol. On a 50 per cent mixture the supply of benzol will not be sufficient to absorb all the alcohol available, and it is impossible to mix the alcohol with gasoline, owing to the fact that alcohol is not soluble in gasoline. If the two were used together the gasoline would be used up first, leaving a fluid too rich in alcohol to be suitable for the carburetor. The Paris Compagnie Generale des Voitures, which controls most of the taxicabs of Paris, has discovered, however, that a very suitable mixture can be obtained by 50 per cent alcohol, 25 per cent benzol and 25 per cent gasoline. The benzol will dissolve both the alcohol and the gasoline, making a homogeneous mixture. On this mixture the whole of the 22,000,000 gallons of alcohol which could not be absorbed completely owing to the limited supply of benzol can be made use of in present type engines.

Aim to Assure Home Supply
Before the war France imported 66,000,000 gallons of gasoline, most of this coming from America. It is estimated that the quantity required during the first year of peace will be 132,000,000 gallons, and as the great increase in the use of motor cars in America makes a further supply from the United States somewhat doubtful the authorities are seeking as far as possible to assure a home supply. There is practically an unlimited supply of alcohol available from France and the French colonies, but, as is well known, this fuel cannot be used alone without important modifications in the present type of engine, and it cannot be mixed with gasoline. This reduces the French to a mixture of alcohol and benzol, which is already well known and was used to quite a considerable extent before the war.

Produce Synthetic Alcohol
Under the government plan, which consists of a state monopoly of alcohol, steady prices will be assured and important users of motor cars will be induced to adopt this fuel. As a compensation and as a remedy for the alcohol shortage in the supply of alcohol produced from beets, synthetic alcohol now is being produced by the calcium factories in the Alps and other mountainous districts of France. By reason of the war these factories have been obliged to enlarge to an enormous degree, and although not able at the present time to produce synthetic alcohol in any great quantities they would be in position to produce it under very economical conditions on the return of peace.

Before the war France produced comparatively little benzol, and although this fuel was used exclusively by Paris taxicabs, most of it was imported from Germany and from England. Since 1914 the gas companies have been obliged to extract the benzol from the coal treated by them. This extraction reduces the calorific quality of the gas, but not, however, to a very serious degree. It is not thought that the government will allow the benzol to be left in the gas immediately peace conditions return. Supposing only 20 grams of benzol per cubic meter are withdrawn, there will still be a total supply in France of 15,000,000 gallons.

Cause of Irregular Firing
Moisture gathering on the exposed part of the porcelain of the spark plug will often cause irregular firing. This trouble may be cured by greasing the porcelain with vaseline or hard grease.

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28x3	\$ 8.10
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38x4	\$25.50
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PACIFIC NORTHWEST ESPECIALLY FAVORED



George Pearson Jr.

COAST BUSINESS IS DECLARED GOOD

George Pearson Jr. Has Just Finished Survey of Conditions in Pacific Northwest.

George Pearson Jr., Pacific coast manager for the Chalmers Motor Car company of Detroit, has just finished a survey of conditions in the Northwest and other parts of the Pacific coast and is preparing a very favorable report to send back to factory officials. Mr. Pearson in his report says: "Business on the Pacific coast is exceptionally good and there is plenty of money in circulation, due, in a great degree, to the high wages received by all classes of labor. Ships are being built by the hundreds from San Diego to Seattle. In Portland and Seattle alone more than 36,000 mechanics building ships are receiving the highest of wages, and many of these men are buying motor cars. Notwithstanding the first, second and third Liberty loans, the bank clearings are larger than in any preceding year and more money is on deposit. As an example, many cities in Oregon, Washington and California have already subscribed their quotas for the third Liberty loan, the city of Portland heavily oversubscribing her quota of \$10,550,000 in three days. People out here are busy, all having something to accomplish. Everyone looks prosperous and you see no loafing on the streets, as there is employment for everyone. We certainly look for a banner year for Chalmers cars." From San Diego, Cal., to Seattle, Wash., and from Seattle to Denver, the Chalmers with the Hot Spot motor is being wonderfully received. To back this up by actual figures, just 1529 Chalmers cars have been contracted for by Pacific coast Chalmers distributors from January 1, 1918, to June 30, 1918, or 3258 Chalmers cars for the yearly period.

Tighten Engine Bolts

In some cars looseness of the engine bolts, those holding the motor in place, may cause misalignment of the engine and serious trouble may result. If there is even slight looseness of the bolts it may permit the motor support to hammer and pound and in time the supporting arm may actually break.

From 1 Truck a Month

TO

186 in 1917

(our third year)

—makes Today's Record read Every 3d Truck in Oregon is a

REPUBLIC

Why? Because of our completely equipped repair plant, Mr. Roberts' personal supervision and a \$25,000 stock of parts. Priced at \$1945 to \$4885 in Portland.

ROBERTS Motor Car Company
Oregon Distributors
Park and Everett, Portland

TRAINING SCHOOL GETS DISTINCTION

Army Has Selected Maxwell Institution as a Model for Instruction.

The government of the United States has selected the Maxwell institution to brand as the model one. The much sought honor came to the company unexpectedly, according to a report received by C. L. Boss, Maxwell distributor for this section. The army is the branch of the government responsible.

For years the Maxwell company has conducted a training school for dealers, salesmen, owners and mechanics. Pupils get a course of instruction for a period of two weeks without charges, when completing the course the graduates are capable of properly caring for Maxwell automobiles.

The constantly growing army demands mechanics far in excess of the supply. Motor mechanics are among the first needs in winning the war. The better the army mechanics the smoother running is going to be the delivery of supplies and ammunition and guns to the front line soldiers.

Repair men, mechanics and officers of the army were picked by the commanding officers of Camp Custer, Mich., for special training. These men were to be sent to school for a high class, special instruction on motor car construction and repairing.

Maxwell School Selected
That the Maxwell automobile school was selected as the best opportunity because of the quick, thorough training given is a strong endorsement of the Maxwell policy.

Camp Custer first picked the most desirable place for instruction, then the men to take the course were chosen. Those first sent to Detroit to be taught in the Maxwell school were:

Lieutenant Bland, Lieutenant H. M. Rogers, Corporal William Corolla, Sergeant George Rich.

The men were segregated from others in the school and put through the entire two weeks course in a special class. Instructor Guy DeLong extended every courtesy to the army men, who diligently applied themselves to their work.

E. M. Carey, a lieutenant in the reserve corps, aviation service, is another warrior taking instruction on the engine and electrical parts of a motor car. He expects a "call to duty" any day.

After finishing their work the army men return to their particular units for actual duty. Corporal Corolla, Battery D, Regiment 330, field artillery, was

enthusiastic over the thoroughness of the instruction. When he reached Camp Custer the things he had learned astounded him—did so to such an extent that he voluntarily wrote back telling of the wonderful training.

Praises System
"I can say that after working in auto factories and in garages for several years I did believe I knew a little of everything, but I'll say that the Maxwell has a system of teaching that no other factory has, and I learned more in Mr. DeLong's care than in all previous years of work," the corporal stated.

"It's a grand institution," he wrote. All of the army men who have attended the school show their appreciation of the course by being good students, working hard and acknowledging the benefit they have derived.

"I am a booster for the Maxwell school," declares Corporal Corolla. The school is known throughout the entire country. Newspapers have devoted their columns to telling the public about it. It is maintained by the factory to properly teach any Maxwell man or owner the best methods of repairing and caring for their cars.

A dealer is not taking advantage of his opportunity if he has not sent his mechanics at least to the Maxwell school. These men would return to him capable of doing better work, giving customers better satisfaction, and incidentally the dealer would reap what he has sown by the increased sales of cars and trucks.

Rust Falls Victim To This Solution

Make a solution of 1 part sulphuric acid to 10 parts water and dip in it the parts from which it is desired to remove rust. Next dip them in a bath of hot lime water and keep them in it until they have become so hot that they dry immediately on being taken out. Then rub the parts with dry bran or sawdust and they will be found to be perfectly clean and may be painted with fireproof paint, blued or nickelled.

Injunction Granted Against Road Tax

An injunction has been granted by the circuit court in Gilliam county restraining road district No. 1 from levying a 10-mill tax which was voted at a special election for the purpose of improving the Columbia river highway in Gilliam county. The decision of the court was based on the fact that there was no budget provided for expending the money. It is understood that an appeal to the supreme court will be taken.

BRAKE INSPECTION IS NEW PROPOSAL

Insurance Men Say 60 Per Cent of Accidents Are Due to Overlooked Defects.

Washington, April 20.—Prominent automobile, police and insurance men throughout the United States are backing a national movement for the inspection of automobile brakes. The agitation for such a movement has grown out of the success in bringing about the proper suppression of glaring headlights, which, in the opinion of those high in the automobile world, is the lesser evil of the two.

The matter is receiving nationwide attention and it is not impossible that legislation may be instituted before this session of congress closes, looking toward regular inspection of brakes.

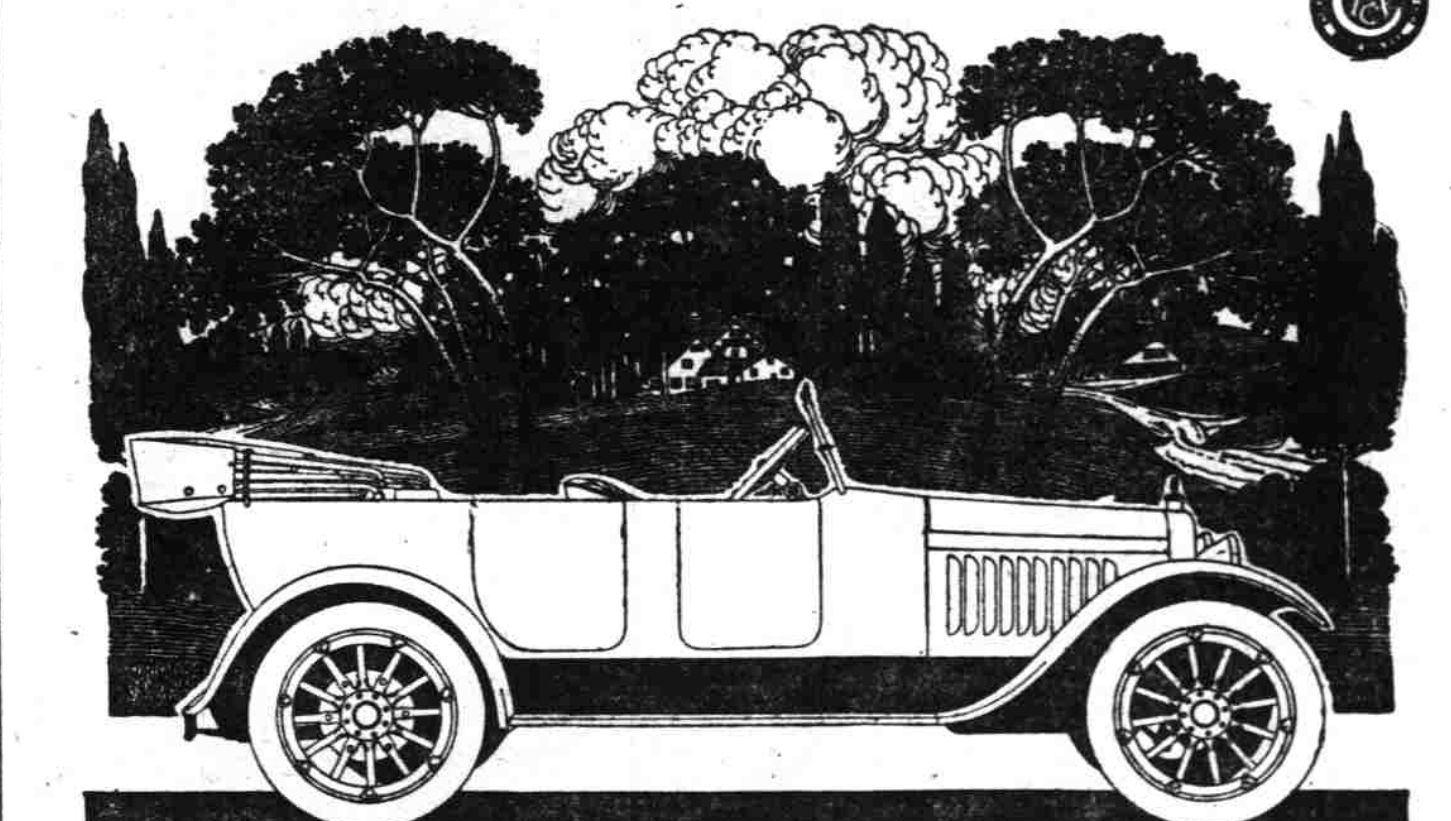
Accidents Due to Poor Brakes
The object of this movement is to prevent the ever increasing number of fatalities, which are daily occurrences, especially in the larger cities, due to imperfectly adjusted and defective brakes. T. D. Pratt, executive secretary of the Motor Truck club of America, says: "Our experience has shown us that 60 per cent, or more, of the automobile accidents are caused by brakes or steering gears being in poor condition, and the large proportion of this percentage is due to poor brakes."

Although no compulsory legislation has been passed to date compelling such an inspection, it has had the endorsement of such officials as Arthur Woods, former police commissioner of New York city, and Francis M. Hugo, secretary of state, New York. The popularity of the movement, those who are interested in it say, must rest upon the always voluntary support of automobile owners.

Frequent Inspection Proposed
The plan of the brake inspection movement is to prevail on every motorist and truck owner to have his brakes inspected by his dealer at the opening of the season and at frequent intervals thereafter. It is called to his attention that the brake rods can usually be turned up two or three times before new brake lining is needed. A simple adjustment of the equalizer will frequently make the brakes safe instead of dangerous.

As the movement grows, some official seal will be devised which will be placed on the car showing the date of last inspection. The one proposed is a small seal disc bearing the words, "Brakes inspected, 1918."

An engine that translates gas into a new kind of thrilling power through the "Hot-Spot" and "Ram's-Horn" Manifold—Chalmers devices



Power to take a hill, and power to pass the other fellow are still claimed by many car makers; but here's a car that puts such expressions into the dark ages of automobilism.

It is the current Chalmers, equipped with the famous "Hot-Spot" and "Ram's-Horn" Manifold, which wrings from gas more power than was ever taken out of gas before.

But not merely brutal power (for that it has), but a newer kind, a softness of power that is as thrilling to bear witness to as the technique of a great musician.

Accomplished how? By those two great devices: a "Hot-Spot", which fairly cooks the gas, then "cracks it up fine as a powder", and the "Ram's-Horn" Manifold which "sets it down" in the combustion chambers with celerity and without disturbance.

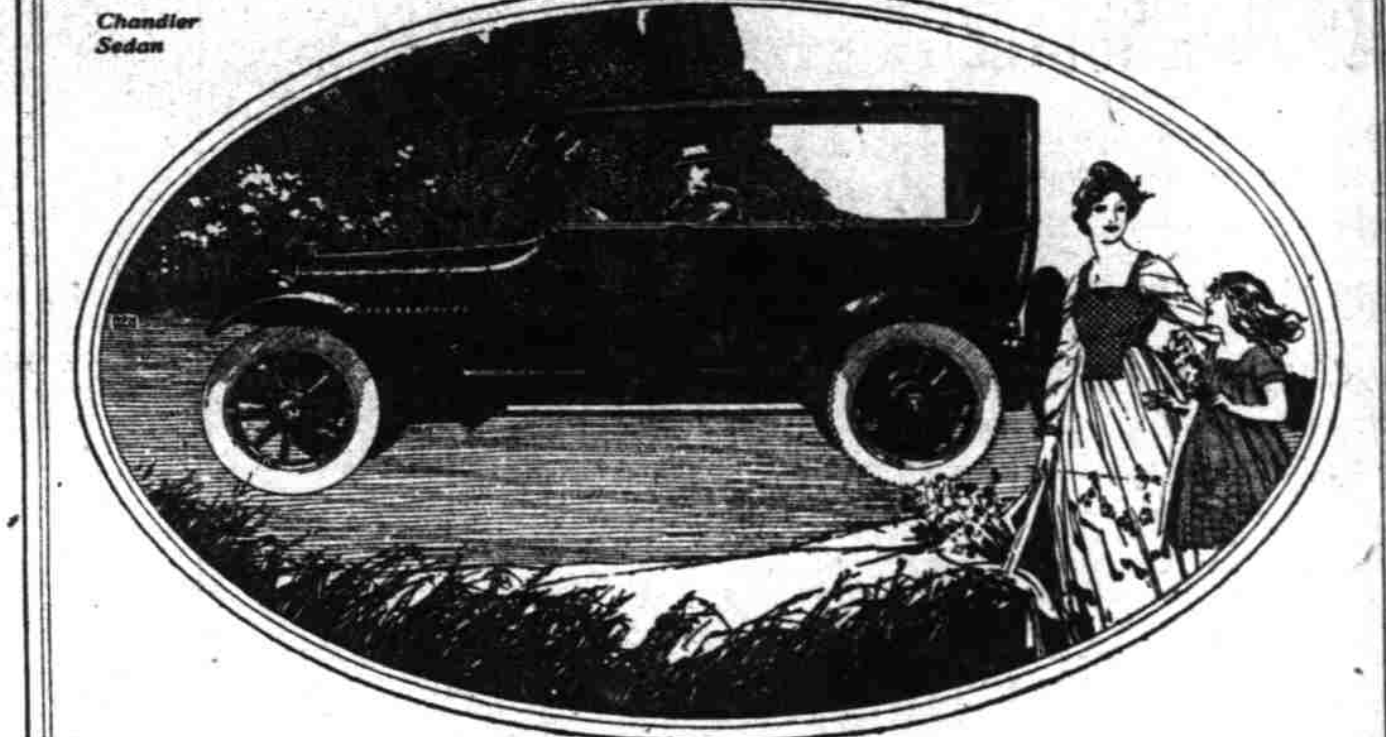
So that when the spark touches it off, it gives nothing but power; soft, harnessed, controlled power that you will never forget once you have had its feel.

TOURING CAR, 7-PASSENGER	\$1615	TOURING SEDAN	\$1950	TOWN CAR LANDAULET	\$3025
TOURING CAR, 5-PASSENGER	\$1565	CABRIOLET, 3-PASSENGER	\$1775	LIMOUSINE, 7-PASSENGER	\$2925
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This sedan body is instantly convertible from an entirely enclosed car to one fully as open as a touring car with top up. Windows may be lowered away or entirely removed and the window posts are removable. The body is most substantially constructed—built by Fisher—and stands the stress even of rough country roads. The upholstery is of a serviceable grey cloth material.

Mounted upon the famous Chandler chassis, distinguished particularly for its great motor, this sedan offers motor car value only approached by other cars selling for hundreds of dollars more.

SIX SPLENDID BODY TYPES			
Seven-Passenger Touring Car	\$1595	Four-Passenger Roadster	\$1595
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