

# INDUSTRY HAS 100 PER CENT OF CONFIDENCE

### Co-Operation and Enthusiasm Are Urged by Head of Kissel Motor Car Company.

By G. A. KISSEL, President Kissel Motor Car Co.

The war is now over and our battle for right and justice has been won. Our faces are now turned towards a new era of unbroken promise. We have a large debt, due to war expenditure, but happily we have plenty of money to pay it with. Our country is physically uninjured, our factories, buildings, fields and machinery are intact.

The Automobile Show this year finds America with more wealth, mineral and agricultural, than in the whole of Europe, and we will start more prosperously and with much greater possibilities than any other nation on the globe.

With all these facts before us, it puts the question of cheerfulness and satisfaction for the close of 1919 entirely up to ourselves. The average American business man, as well as the financial powers, have every confidence in this country and its recuperative powers, and are more than willing to go ahead and take those average risks needed to proceed without delay.

**To Get and Share.**

It is up to us of the motor car industry—manufacturing, wholesale or retail, to make our plans now for getting our just share of business. Just so would our country lose its present world power position if the financial and business interests of our government did not plan ahead and proceed with such plans.

We can all obtain the greatest results by concentrating to a definite purpose or ideal, then with it, the fullest co-operation of all interested. Just so did Woodrow Wilson do when he set out that "Right and justice was the purpose and ideal which mean Americanism," regardless of life or financial loss, and concentrated on that at all times, as well as co-operated with and had other countries co-operate with us to that end, even for the future by the establishment of the league of nations.

**To Concentrate on a Design.**

It is our purpose to make good automobiles; to supply that trade calling for a better car—a car of individuality of design, detail, finish and appointment. To that end, we will concentrate on one-passenger

car chassis namely, the custom-built chassis, with several body styles, making such betterments as has been necessary to have it as nearly 100 per cent perfect as possible. The prices will be moderate, yet always consistent with material and labor conditions—consistent with material and to enable us to maintain that class of mechanical perfection with bodies of personal refinement and appointment necessary for a class product consistent to enable us to use only the best materials and methods, treating such materials to insure long life—consistent to enable us to have as near 100 per cent perfection as possible. The all-year car which has made possible motoring in comfort during all 12 months in the year, will be continued in two or three models on the same custom-built chassis.

When our government called for assistance, we gladly offered our plant, organization and facilities, even to sending to the front 250 men. When we were asked to produce a large daily output of trucks on a very short notice, we first thought it impossible, but with the American spirit of concentration, co-operation and hard work, we were able in a few months to do what previously seemed impossible.

It is with the same spirit of enthusiasm and co-operation that we are now proceeding with a definite ideal ahead of us.

### Time to Change Subject From War to Good Roads

By WALT MASON.

We've talked so long of shell and shot, of captains and of kings! The time has come at last, I wot, to speak of other things. Let's turn our thoughts from Petrograd to places nearer home; we need good roads and need them bad, and hence this stirring poem. For years we've struggled through the muck, weariness and grief, and only said: when we were stuck, "It is no time to beef." We floundered through the muddy pools, across the reefs and bars, and lost our horses and our mules, and mired our costly cars. We said, "Until this war shall cease, our woes can't be discuss; but when arrives the dawn of peace we'll have good roads or bust."

We've talked so long of battle fronts that we may find it hard to turn to other milder stunts; our spirits may be jarred. We've railed so long at Kaiser Bill that we may think it stale to talk of grading down a hill or filling up a vale. But it is wise to talk good roads instead of bones and blood; the farmers cannot haul their loads because of endless mud. There is no bottom to the pike when comes a sudden shower; I cannot scorch as I would like, at 50 miles an hour. We've harped so long on treason vile it's hard to break away; but we should talk good roads a while and start the work today.

# Proper Motor Fuel Gives Efficiency And Economy

### Poor Combustion in Cylinders Causes Waste of Power; Should Buy Gasoline Produced by Refining Company and Be Sure of Getting Best Grade on Market.

By DONALD McLEOD LAY.

Although the war is virtually over and gasless Sundays have contributed an interesting chapter to the ancient history of American motoring, patriotic owners will not readily forget the lessons of economy and the efforts to obtain maximum efficiency accentuated in so many ways under war conditions. It may be timely, therefore, to point out the most important factor in the situation—the character and quality of the gasoline.

On stopping to think the matter over, it is not difficult to realize that it makes a very great difference in the amount of fuel consumed by any motor car if the combustion which takes place in the cylinders is not complete. It means that a large proportion of the driving energy, or power, contained in an inferior grade of motor fuel, which, by the way, is usually unbranded, is not utilized, but goes to waste. Instead of aiding in operating the car, the imperfectly vaporized, unburned portion simply increases the sever-

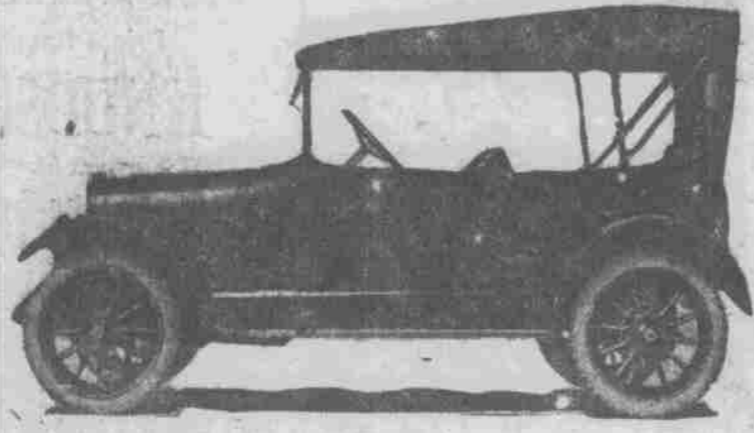
ity of the wear and tear on the mechanism. It forms carbon deposits on the valves and in the combustion chambers and, in liquid form, penetrates to the crankcase, where it increases friction and reduces power by "cutting" the protecting film of lubricating oil away from moving parts.

On the other hand, when the motorist makes it a practice to buy gasoline produced by a reliable refining company he may be sure of getting the best grade of motor fuel that is commercially practical under present conditions. He is certain of maximum fuel economy, provided his carburetor is correctly adjusted, and he knows that he is keeping the proportion of waste to the minimum.

**Considered Uniform.**

Many motorists consider gasoline as a standard, uniform product. Either they do not know, or they pay no heed to, the fact that, all over the country, the motor fuel of today varies even more widely in composition and characteristics than in price.

It is because of this carelessness that motorists frequently are induced to buy cheap gasoline, unsuspecting that inferior fuel usually contains compounds of sulphur or other foreign matter. Such is the chemical constituency of these extraneous compounds that they break down under the intense heat and high pressure of the combustion chamber, forming acids, which, even in minute quantities, have an



Dort

injurious effect on the engine and, besides pitting and otherwise damaging valves and valve seats, they eat into the piston metal and cylinder walls.

As a rule, these deleterious results of combustion from inferior gasoline soon penetrate the crankcase, injuring the piston and rings on the way. When they mingle with the lubricating oil they cause disintegration of the oil and formation of fur-

ther injurious matter. Thus lubrication is impaired to a marked extent and friction, loss of power and wear are greatly increased.

**Covers Wide Range.**

Gasoline is not a homogeneous liquid. It is merely a physical mixture of hydrocarbons, frequently covering a wide range of volatility. In other words, various parts of the mixture vaporize at different temperatures under identical conditions. In this respect gasoline corresponds to crude oil, from which it is derived. Crude oil, also, is not a chemi-

cal combination but a blend of compounds made up of hydrogen and carbon.

Of course, crude oil differs in properties and characteristics, as it is obtained from wells widely scattered throughout the world. It naturally follows that the gasoline produced from each crude retains the peculiar properties of its parent crude. For this reason, many gasolines, as primarily refined, are not suitable for use as fuel in an internal combustion engine. In these cases it is necessary to mix in gasoline produced from other crudes possessing the requisite volatility or other property which is lacking.

Natural gasolines are those obtained by the first step in refining—heating the crude in a large vessel called a crude oil still. First, the heat drives off the dissolved gases, and then the lightest gasoline. These are followed by heavier gasolines as they vaporize under the increasing heat. Pipes carry the gasoline into condensers which are kept cool by water, where they resume liquid form.

**Cracked Gasoline.**

Cracked gasolines are rapidly coming into more common use. These are produced in a number of different ways, some of the widely used methods being the Rittman, Burton and Hall processes. The methods of "cracking" gasoline are more or less complicated and may be summed up as based on the principles of pressure, decomposition by heat and distillation.

Casing-head gasolines are obtained by condensing gases from crude oil wells under pressure. These gases are sometimes passed through heavy oils which absorb the gasoline. These are then released by distillation. "Casing-head" gasolines are so volatile that they evaporate too readily for commercial use. Thus they are almost always blended with heavier grades for use as motor fuel.

When motoring first became popular a rapidly increasing demand was created for gasoline, which, up to that time, had a comparatively small market. Motor vehicles multi-

plied so fast that refiners gradually came to a realization that commercial production of highly volatile gasoline on a scale sufficient to meet the demand was not practicable. Therefore they set about combining, or blending, gasoline varying in gravity and having boiling points that covered a wide range of temperatures.

**Gradually Changed.**

Naturally, both carburetors and engines have been gradually changed to meet these variations in fuel conditions. This factor, indeed, has exerted a very strong influence on modern engine design, and has even figured to a considerable extent among considerations in car design. Hot air intakes, hot water-jacketed manifolds and carburetors and many other methods of pre-heating and otherwise facilitating vaporization of fuel have been prominent features of automotive engineering during the last few years.

Frequently motorists have blamed the gasoline when the whole trouble was due to the absence of the necessary equipment for preheating the fuel before it was fed to their engines.

Thus, most of the established brands of gasoline for automobile use now on the market are blends of various kinds and grades of gasoline. The manufacturers aim to produce a fuel that (a) has sufficient volatility for starting the engine; (b) sufficient body to prevent loss by evaporation to any appreciable extent when in containers; (c) does not contain injurious for-

mal distilleries and breweries whose business is being curtailed by legislation against the use of grain for manufacture of intoxicants, have the apparatus and skilled labor requisite for the production of industrial alcohol from these wastes. They should welcome an opportunity to continue operation, utilizing such products.

Alcohol can be blended with gasoline to produce a suitable fuel that will avoid the difficulties of starting a cold motor on alcohol alone, and without any change in the carburetor or the compression of the engine.

Alcohol can be produced at the paper pulp mills in this country at a cost of 15 to 20 cents a gallon at the present time, and if all the paper mills suitable for the purpose were equipped with the necessary plants they would have a combined capacity of 15,000,000 gallons a year. Waste from sugar mills and waste vegetable products provide other sources for the production of alco-

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# Industrial Alcohol May Become New Fuel for Use in Motor Cars

### Although this country produces about two-thirds of the petroleum of the world and produced more gasoline last year than ever before, investigations are being carried on by the National Automobile Chamber of Commerce with a view to exploiting the use of mixtures of alcohol and gasoline in motor vehicles.

The production of industrial alcohol on a large scale would help materially to increase the supply of motor fuel.

Nearly all the automobiles in Norway and Sweden are operating on alcohol made from waste sulphite liquor from paper pulp mills. Alcohol is also used in automobiles in Spain, where the sale of gasoline for use in passenger cars has been prohibited.

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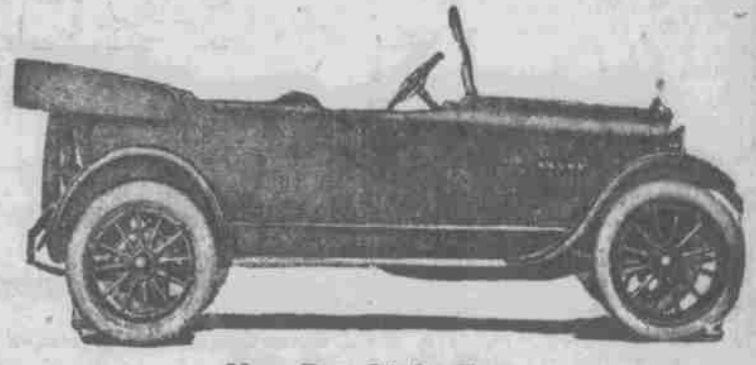
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Hudson Super-Six



New Reo Light Four

# The ROAMER

America's Smartest Car

LET Sarah Bernhardt enter a room and instantly her personality will dominate the gathering. The same holds true of the ROAMER, no matter in what company it is driven or parked. If you tool a ROAMER through traffic or journey with it about the boulevards or highways, you will be conscious of an unflatteringly flattering homage of glances—and the one thought uppermost in the minds of everyone you pass will be: "I wonder what car that is?"

You can ransack the country and not find another American-made car like the ROAMER. If you wanted to rival its utter distinction you would have to go abroad to find it in the Roll Royce, the Fiat, the Isotta Fraschini, the Lancia and the DeDion Bouton.

See the ROAMER at Booth "B" in the Annex at the Show.

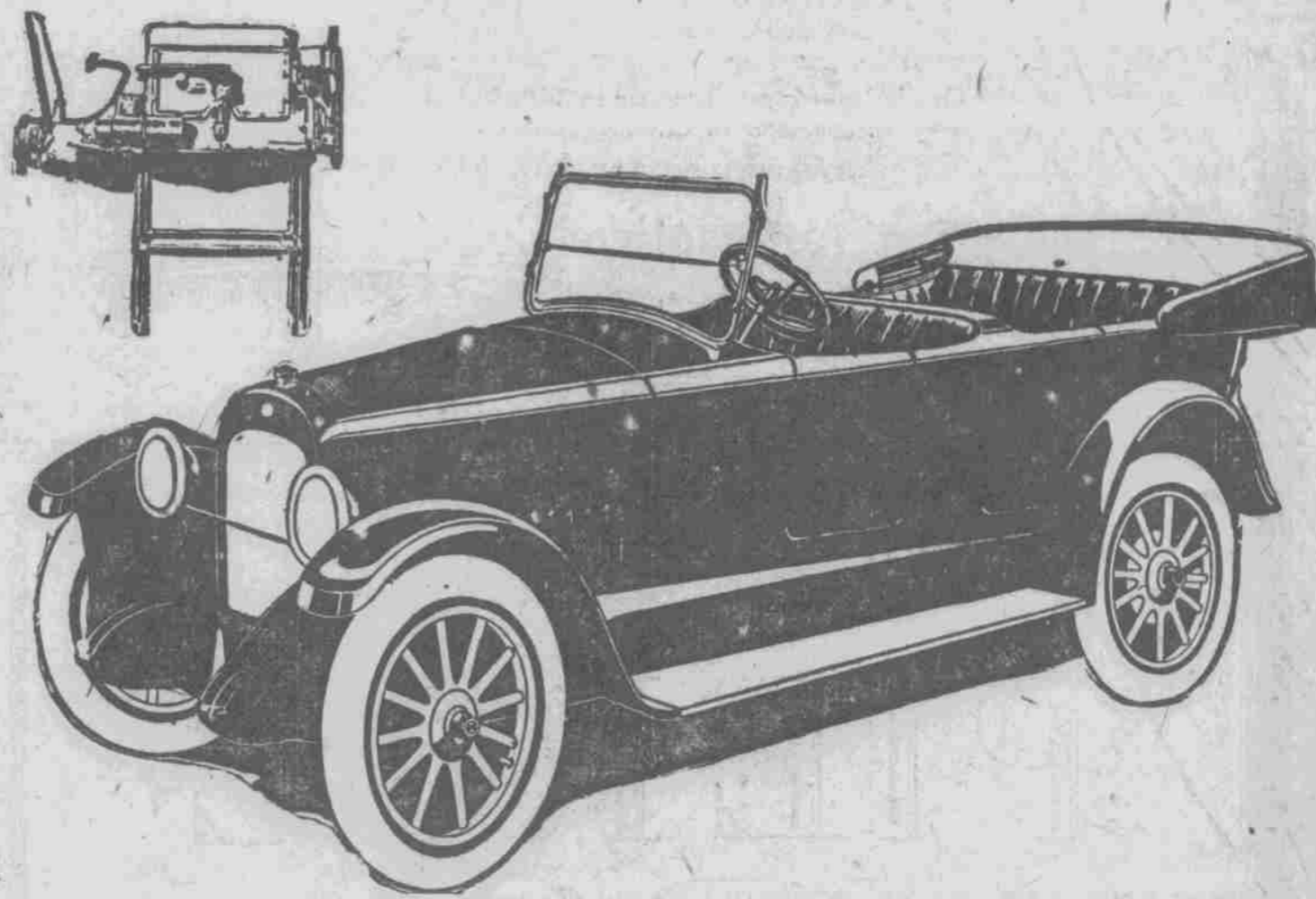
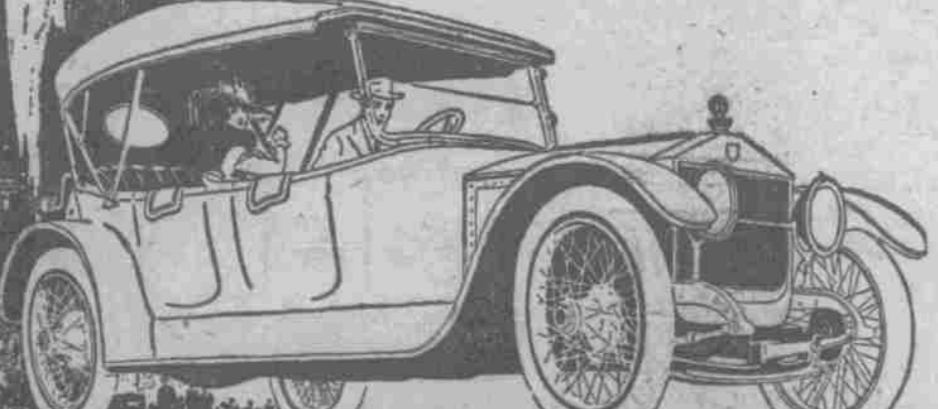
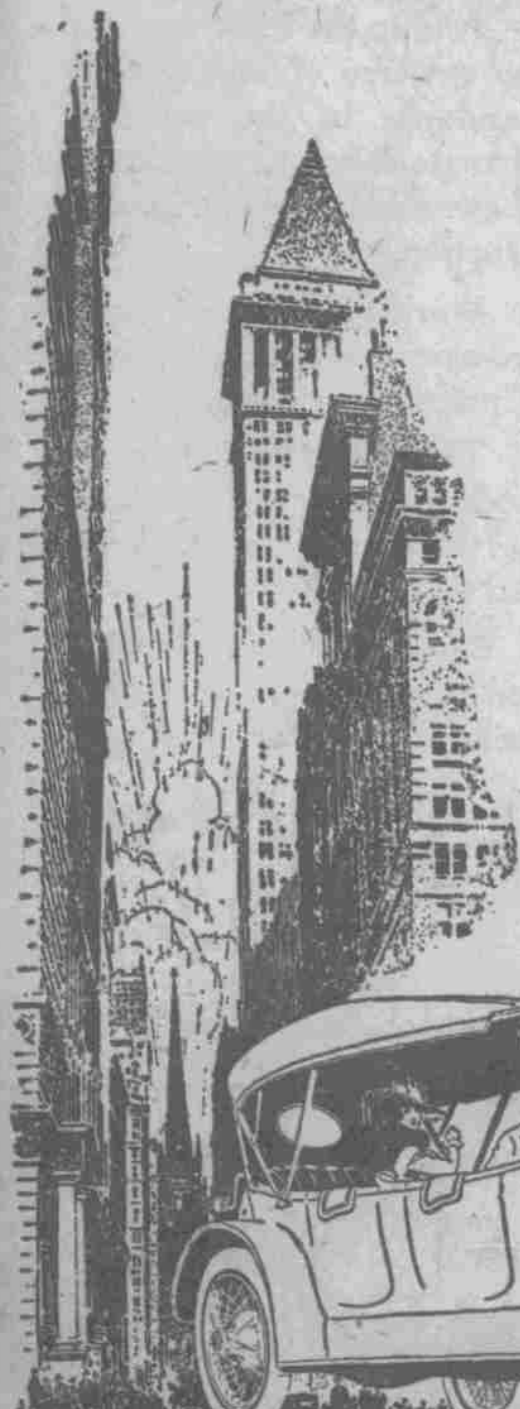
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THE perfected valve-in-head motor of the Nash Six has demonstrated the fact that it is powerful, economical and quiet to an unusual degree. Its unusual power, economy and quietness place it in the front rank of America's leading motor car values.

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