

CALLS KEROSENE POOR FOR MOTORS

Dodge Engineer Warns Against Attempt to Substitute It for "Gas."

By RUSSELL HUFF, (Chief Engineer of Dodge Brothers.) It has come to my notice that motor car owners here and there are considering the use of kerosene as a substitute for gasoline.



RUSSELL HUFF.

They heard that we did it successfully in our factory, when the recent power restrictions due to the coal strike made it necessary for us to operate our machinery with hundreds of Dodge Brothers engines, to avoid laying off 15,000 men. And now they want to know why kerosene cannot be used generally, if we did it in this case.

The answer is not as difficult as it might seem. If these gentlemen who make the proposal had more than the faintest idea of the difficulties we had to overcome before we could use kerosene even to operate our stationary factory machinery, where the power developed, the load and the temperature are all constant, they probably would be a trifle less enthusiastic about the economy of the prospective experiment.

At the very outset, therefore, I consider it advisable to warn any owner of a Dodge Brothers motor car that the chances are that any attempt to substitute kerosene as fuel will prove disastrous. He may possibly go along nicely for 15 or 20 miles on a long, uninterrupted stretch of country road, provided his speed is high enough to call for the maximum power of the engine, with a resultant maximum generation of heat. But the minute he stops long enough to let the engine cool, or tries to operate in traffic, he will encounter trouble.

In order to burn kerosene in an engine it is necessary to have a great abundance of heat. Otherwise the kerosene, which is heavier than gasoline, will not vaporize. Instead, part of it burns and the other part, in the form of small globules, collects on the piston head and walls of the cylinder.

These globules might work past the rings and down into the crank case, thereby diluting the oil so quickly that frequent changes of the oil would be necessary to avoid burned out bearings and scored cylinders. The change would have to be made so often in fact that the additional expense of cylinder oil would more than offset the saving obtained by the substitution of kerosene for gasoline.

When we decided to burn kerosene in

the engines installed to furnish power for our factory machinery we immediately made provisions to obtain the extra heat which we knew would be required to do this successfully. The solution was found in a nicely fitting metal cover extending the full length of the exhaust header, with only the rear end left open to admit air. As this cover retained the heat ordinarily radiated from the exhaust header it immediately raised the temperature of the air entering the rear opening, so that this air was in effect pre-heated as it passed into the regular hot air stove leading to the carburetor. The fact that this stove itself was much hotter than it would be under normal usage also was of material assistance to the augmenting process.

We found also that there was about a 20 per cent. reduction of power with the use of kerosene, which would be a vital consideration with any one attempting to use the same device for road purposes. Moreover, as is always true in the case of kerosene consumption, even in engines designed for its use, it was necessary to start with gasoline and run for several minutes to arrive at the proper temperature. This means that a motorist would have to equip his car with an extra tank, one for gasoline and one for kerosene, not to speak of the equally necessary extra pipe line to the carburetor and the extra shut-off valve.

The great objection to kerosene for road use, therefore, is its non-flexibility. It is entirely too troublesome in starting and stopping. From the fact that ordinary city driving requires only from five to twelve horsepower, it may be readily seen how difficult it would be to maintain a temperature sufficient to insure complete vaporization.

HAYNES MAN SEES NEW ERA ON WAY

How Says Intensive Selling Methods Will Be Necessary After a Time.

"The time is not so very far distant when automobiles priced at \$2,000 and over will have to be sold through intensive selling methods, because of the keen competition which is certain to accrue," says S. M. How, general sales manager of the Haynes Automobile Company.

"For the last year there has been a great and unusual demand for automobiles of all descriptions. The insatiable cry for dependable cars still exists, but the big problem with most all of the automobile factories is solely one of production. Almost every factory can boast of a roster of a thousand or more unfilled orders.

"This state of affairs has brought about something more than the fact that automobiles are needed and wanted by people the world over. It has led executives to higher ambitions. It has induced the men who control the outputs of large automobile factories with the desire to fill as big a part of this demand with their product as they possibly can. You can pick up almost any automobile trade paper and read about some mammoth factory or factory addition being started or contemplated. The daily newspapers contain similar items. There are also many writeups announcing new automobile productions. All these things must surely indicate future trade monopolies and keen competition ahead.

"This year there is plenty of room for all. In fact there is a demand for a great many more cars than will be manufactured. It seems that everybody wants an automobile. To-day it is not a question of selling, but one of filling the demand. How long is this favorable situation going to last? Certainly there will come a time when the gap between supply and demand will not be so pronounced. When this time comes it will call upon every bit of resourcefulness that automobile merchandisers possess to influence the car buying classes to choose their particular cars. Intensive selling methods will consequently have to be called into operation.

"Eventually the automobile business will go through what is called the process of elimination. A new era will be reached.

"It will be the survival of the fittest. In this era there will, of course, be found hundreds of thousands of auto-

mobile buyers, but they will show their preference and choose from a limited number of kinds of automobiles. There will be no room for the car that was hastily designed without regard for the user's interest. Only the well known cars that have stood the test of time will be considered by the astute purchaser. Countless cars will be engulfed in this vortex of discrimination. Countless cars will be eliminated. The future success of automobiles will depend entirely on the amount of prestige they will accumulate from day to day through consistent performance in the hands of owners.

"To easily imagine what the future of the automobile industry will be one need only recall to the mind the process of elimination experienced by the typewriter and the cash register business. One can quickly count the remaining institutions that control the present outputs of these daily necessities. The public, however, is responsible for this situation, and rightly so, because the public invariably demands the quality product. These monopolies exist to-day because those large institutions have demonstrated to the buying public that they are better equipped and qualified to produce those requirements. The many other concerns which had equal opportunities at the start failed to compete because they did not prepare for that inevitable time when supply meets demand and the process of elimination follows.

"Now what about the automobile industry? The automobile industry ranks third in the list of America's industries. It is experiencing an unusually successful period of prosperity. The wise merchandisers are preparing for the time when they will have to sell in the wake of keen competition. Keen competition brings with it its expensive methods. Numerous automobile dealers and manufacturers will not be ready to meet the expense and force of unremitting competition. They will be forced to drop out of the race unless they have planned far enough ahead to cope successfully with the grueling task of selling in highly competitive times.

"It is not the intention to give a negative impression about the future of the automobile business, but it is desirable for all concerned to realize that the time is not so very far distant when it will be necessary to sell cars in the same decisive manner that one typewriter to-day is sold in preference to another.

"The whole matter of future business resolves down to the necessity of a good product plus intensive selling methods to sell the public on that product."

OWNER'S TASK MADE EASY.

An example of the trend in automobile design to simplify the task of the owner who cares for his own car is to be seen in the Essex. Although so sturdy built as to resist the roughest usage, every superfluous part has been eliminated. The engine is simply a clean block of metal only twenty-three and a half inches in length over all. Points where adjustments may be necessary are so easily reached and so simple that a woman can make them. All excess parts, which mean only added complications, have been eliminated. In every detail the Essex chassis is a fine example of what can be accomplished by the automobile engineer.

ANDERSON

In What Other Car is There Such Value as This? 6

THE owner of an Anderson not only enjoys consistent mechanical performance, but rides with the knowledge that his car has the snap, the buoyancy, the verve, that cannot fail to arouse enthusiasm. The Fifty-five Horsepower Red Seal Continental Motor, combined with other component parts of acknowledged leadership, assures a completely satisfying performance. Power, speed, flexibility, absence of vibration, delicate responsiveness, trouble-proof operation are innate characteristics of the Anderson Six.

Underslung and semi-elliptic springs, deep cushions of curled hair, the conforming tilt of the seats set a new standard in riding comfort.

Anderson bodies are custom-built in Anderson factories. For over thirty years the Anderson Motor Company have been foremost coach builders—all of their experience, skill and appreciation of the finer elements of body building are embodied in the Anderson Six.

Either in the Convertible Roadster or Touring Car, the Sport Car or the Sedan, the stately lines demand attention and admiration.

particularly noteworthy for the absence of rattles and squeaks.

The framework is of seasoned oak and ash, braced and counter braced; it is

Twenty-one distinct operations impart a lustrous and enduring finish, a finish that fully measures up to the artistry of the coach work.

In what other car is there such value as this?

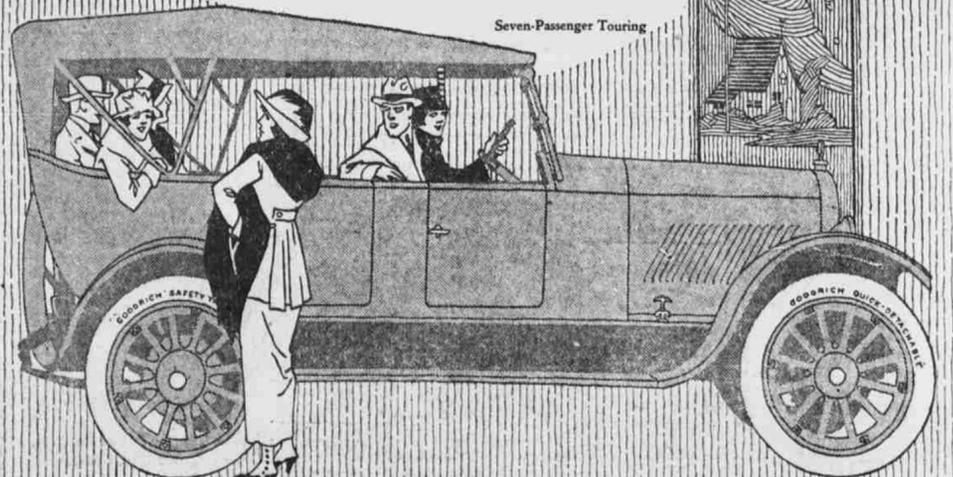
ANDERSON SIX	
Seven-Passenger Touring	\$1850
Five-Passenger Touring	1775
Convertible Roadster	1775
Convertible Sedan	2650
Four-Passenger Sport Touring	1835
Four-Passenger Coupe	2550
F. O. B. Rock Hill, S. C.	

See the Anderson Exhibit at the Grand Central Palace or at the showrooms of our distributor, the

SIDNEY B. BOWMAN
AUTOMOBILE COMPANY
Broadway at 52nd Street

Brief Specifications -
7-R Continental Motor, Rayfield Carburetor, Remy Starting, Lighting and Ignition, Custom-built Bodies, 120-inch Wheel Base.

Anderson Motor Co.
Rock Hill, S. C.



"Be true to your word and your work and your friend"



HERE, in a line, is a philosophy of life and of motor car making. A motor car that remains true to a fine conception, to a high standard of workmanship and to its owner, needs neither praises nor apologies—it is its own evidence of worth.

At the Peerless factory we have had a habit ever since 1901 of working from the inside out, rather than from the outside in.

We have not surveyed the field to discover what type of car would sell easiest, we have watched other makers with interest but have not allowed them to influence us. We have started from a logical beginning, planning a car which should bear the Peerless name proudly, selecting the particular type of skilled workmen and the special materials which would produce it, letting these costs determine the price.

Those who appreciated such a car and could afford this price bought it—because they knew it would be true to them.

This was the method which arrived at the great two-power-range principle that has made Peerless famous. Having found and perfected the application of this principle, we have remained true to it. When you see the 1920 Peerless Two-power-range Eight at the Automobile Show, you will see a car which has not been fundamentally changed for five years. Yet it welcomes comparison with the newest models of all other cars.

Touring Car or Roadster \$3900 Coupe \$3500
Sedan \$3700 Sedan-Limousine \$3900
F. O. B. Cleveland; subject to change without notice

THE PEERLESS MOTOR CAR CO.
Cleveland, Ohio

Peerless

2 POWER RANGE EIGHT

VAN CORTLANDT VEHICLE CORPORATION
1896 Broadway, at Sixty-third St.
Phone 8763 Columbus Service Station, 642 West 57th St.

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Deakins & L. A. D. Motors Corporation
Dougherty & John Van Beauden
Kinsman & Van A. G. Gifford
Newburgh: Farrer Motor Company
Peekskill: H. J. Gifford
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CONNECTICUT
Hartford: Russell P. Taber, Inc.
New Haven: White Motor Co.
Bridgeport: Arthur L. Clark Co.
Waterbury: W. H. Phoenix
Dorset: Lombard Motor Car Co.
Meriden: John R. Hall Automobile Co.

NEW JERSEY
Newark: J. W. Mason & Sons
Paterson: Jackson Motor Corp.

Pennsylvania: O. A. Reed
Perry Amherst: Union Gasco Co., Inc.

