

then that it was undesirable to increase the proportion of alcohol, but that with the proportions named the only difficulty involved was a slight amount of trouble in starting up the engine from the cold in the early morning.

As regards the power developed, it was impossible, without taking exact quantitative measurements to notice any difference between the results given by petrol and by the mixture of alcohol and benzol. The cars seemed to run just as well on the mixture as upon the spirit for which they were originally designed. In the matter of mileage, benzol alone gave upon the average better results than petrol alone. The difference was, however, only three or four per cent. The 50 per cent alcohol-benzol mixture gave on the average of all the competing cars mileage results which were just about equal to those obtained with petrol. Some cars did distinctly better with the mixture, while others did distinctly better with the original spirit.

Just before the outbreak of war quite an interesting test was made with a Charron car on Brooklands. This car was tested at certain fixed speeds when running on petrol, benzol and methylated spirits. The only adjustments made were in the carburetor jets. Four tests were made at twenty miles an hour. At this speed the car covered forty miles on one gallon of petrol. The mileage covered on a gallon of a 50 per cent mixture of benzol and methylated spirit was thirty-two and a half, while a gallon of methylated spirit alone sufficed for twenty-three miles.

At the higher speed of thirty-five miles an hour, the comparison was slightly more unfavorable to the methylated spirits, probably because the fuel was less suited for use when the piston speed was high. The engine, however, ran quite regularly and gave no trouble. Moreover, when the car was tried all out, there was no appreciable loss of speed when the methylated spirit was used instead of petrol. The tests were conducted in the summer, and no difficulty was experienced in starting up.

At about the same time, various alcohol fuels were invented in which alcohol was mixed with ether in the proportion of about 65 per cent of 35 per cent. Out of these fuels was tested by the Royal Automobile Club and gave very satisfactory results. It was certainly impossible when driving in a car using this fuel to detect any inferiority in the running in comparison with the results given by petrol. In fact, one had an impression of slightly better pulling power on hills. As regards engine starting, the fuel was par-

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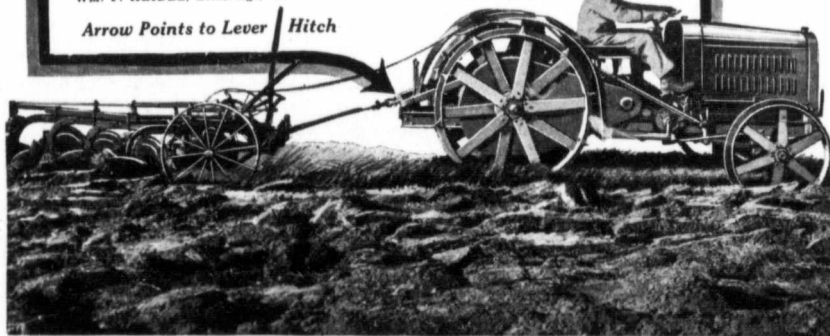
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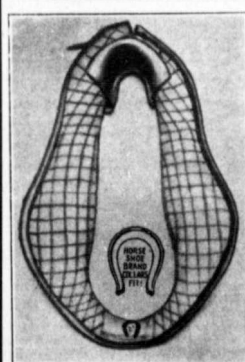
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