

**MANUFACTURER OF MOTORCYCLE GAINS FROM WAR**

**Extraordinary Work Performed During Great Struggle; Much Done Toward "Improving Breed."**

The motorcycle has, beyond question, performed extraordinarily valuable work in all theaters of war, and especially on the western front, but it is rather to be doubted whether, apart from the fact that war conditions have imposed upon them a test of strength and durability such as they never underwent before, very much has been done directly toward "improving the breed" of these machines.

This state of affairs was only to be expected, as with the exception of their use in the earlier days as mounts for machine guns, they have been employed to the number of about 50,000 almost exclusively in an auxiliary capacity for dispatch work and upon the lines of communication; in this function reliability and the facility of furnishing repairs and replacements have been more important than any other considerations. In consequence a high degree of standardization has been sought and achieved, with the result that the military and air force motorcycles today are almost exactly similar to those sent out at the beginning of the war. This does not mean that valuable lessons have not been learned, for atrocious road conditions have disclosed numerous weaknesses which have called for immediate remedy, but the full extent of the knowledge gained will not show itself until the new designs appear and invite the custom of the private user.

**On Western Front.**  
Out of the numerous makes before the public in 1914 very few succeeded in coming up to the standard of war requirements. On the western front practically only two types have been continuously in the service under the R. A. S. C. administration, and one only under that of the R. A. F. The last is a single cylinder model with all-chain transmission, and the others, single and twin-cylinder machines, driving through chain and belt. Other makes have been used to a less extent on other fronts. As might have been supposed, the principal troubles have been the result of severe wear and tear due to mud and dust, and breakages caused by a combination of high speed and abominable road surfaces. Of the two R. A. S. C. motor-cycles one was much heavier than the other, and for this reason showed a rather better performance on the highway. But the lighter type was not without its advantages when ploughed fields and bypaths had to be explored for a course.

**Spills Frequent.**  
Spills and other misadventures were naturally frequent and the more exposed parts of the machine such as handlebars, mudguards, carriers, and footrests, suffered extensively, but it would be impossible to cavil at the general reliability of the power and transmission units. Certain minor ailments, of course, manifested themselves—clutch-slipping for example—but replacements of stouter design wrought a cure.

If the pre-war standard of engine and gear fitness was equal to the demands made upon it, the same cannot be said of frames and forks. Seeing, however, that British motorcycles were made for British roads, one can hardly be surprised at a percentage of failures over shell-holes, pot-holes and worn-out pave. One thing has at least been definitely shown, and that is that a well-designed machine will go almost anywhere, roads or no roads, and with such mechanical progress as one knows has been quietly taking place, its range of utility will be very greatly extended.

Motorcycle constructors will not be slow to take advantage of the valuable experience which has been gained in aircraft, and more especially aeroplane engine design. Better material and technique will lead to a notable reduction in weight, and it is obvious that adequate springing, force and lift, will remove the only excuse which exists for making the machine heavy, namely, encouraging it to "hold the road," with a light rider. One is confident of finding the post-war model very much more weather-proof than formerly, and it is to be hoped that efforts will be made to render it rideable in the wet without special clothing.

**Solo Engines.**  
The single cylinder models adopted by both the R. A. S. C. and the R. A. F. have been extensively used for sidecar work, and, strangely enough have, in this form, shown themselves even more reliable and roadworthy than as solo machines, as well as notably superior to certain twin cylinder combinations, which were employed for passenger carrying to a limited extent. This is to be ascribed to the fact that the passenger attachment considerably reduced speed and kept the road shocks within the capacity of frames and spring forks. One would not on this account prophesy that the "big-single" is the side car mount of the future, but it must at least be conceded that in war conditions its virtues have been prominent, and that it has enhanced its reputation as a "get-there" outfit, almost ideal in point of simplicity and reliability. These points assume an even greater importance when it is remembered that in a very large number of cases the management of side car combinations has been quickly taught to men and women previously unskilled in this art.

It is clear that an immense future for the motor cycle is assured, and it has emerged from its war ordeal triumphantly as an indispensable instrument of transport.

**Sandpaper Block.**  
For the car owner who does his own tire repairing a mighty handy tool is a block of wood about a foot long and three inches wide on which is firmly tacked a sheet of sandpaper. This is used for cleaning around cuts in the casing. Similarly smaller sticks with sandpaper wrapped around them are useful in cleaning around punctures in the tubes.

**First Yank Into Hunland After Armistice Signed**



The first Yank to enter Germany after the armistice was signed was Sergt. James Reese Brewer, Motorcycle company No. 305, motor dispatch service, expeditionary forces, according to dispatches received from France.

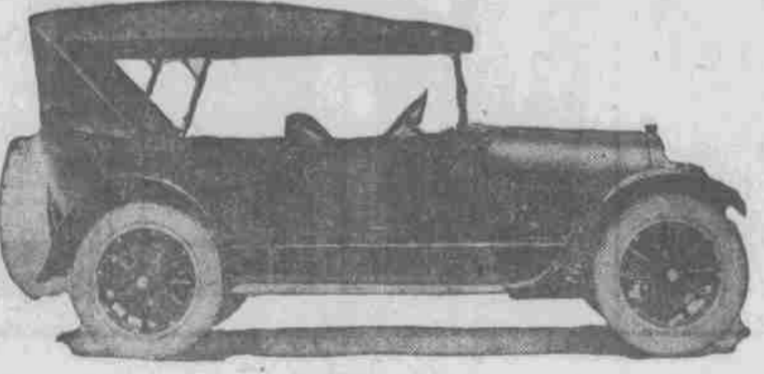
Incident to Brewer's entry into German territory, the young sergeant rode a Harley-Davidson motorcycle of which kind innumerable quantities are performing unsurpassed service in the motor dispatch service.

The dispatch read: "This picture was taken in Germany November 12, 1918, by a German man photographer in a small town across the border and shows the German retreat across the Rhine. The driver of this Harley-Davidson did not know at the time the picture was made that he figured so plainly, but a month later an M. D. S. man riding through this town found this picture in a German photographic shop, so of course he bought all they had. He was absolutely the first American soldier to enter Germany."

It was learned that Sergeant Brewer led a platoon of motor dispatch drivers on Harley-Davidson motorcycles into Germany the day after the armistice was signed.



Mitchell Touring



Cadillac Eight

**Touring Car \$925**

**FUEL ECONOMY IS DISCUSSED BY AUTO ENGINEERS**

**Problem Taken Up in Detail at New York Auto Show; Prime Factors Are Considered.**

The problem of fuel economy in automotive engines was discussed extensively at the annual meeting of the Society of Automobile Engineers, held during the automobile show in New York. Such items as first cost, reliability, ease and comfort of operation were the prime factors receiving the attention of the owners of passenger cars and commercial vehicles at one time. However, the enormously increasing demand for engine fuel is compelling all thinking users to study conservation, the engineers concluded.

An important contribution to the study of the problem was made in a paper presented by Dr. H. C. Dickinson of the National Bureau of Standards before the annual meeting of the society. Dr. Dickinson, who is in active charge of research work pertaining to automotive engines, including the Liberty and other airplane engines, at the Bureau of Standards, declared it important for automotive engineers to investigate at once the fuels available for their industry and to determine the number of car miles or ton miles that can be obtained from the total supply remaining.

"Of fuels in sight for motor vehicles we have only petroleum products, alcohol, benzol and possibly shale oil distillates," he said. "Before all of these can be used successfully it is necessary to adapt our engines to handle them properly. It remains to be seen whether it will be best hereafter to sell two or three different kinds of liquid fuels, one less volatile than the other, or whether it would be more advantageous commercially to concentrate on a combination fuel and adapt all engines to use it."

The present trend of development favors gasoline and kerosene, and efforts are being made to construct appliances for gasoline engines, enabling them to utilize kerosene as well.

**Goes to Waste.**  
"The brake/thermal efficiency of automobile engines running under average load conditions is 10 per cent or less. In other words, 90 per cent of the heat of the fuel now goes to waste. Some of this loss is due to operating with a 25 to 50 per cent richer mixture than is necessary. This causes carbonization and lubrication difficulties with no resulting advantages. With better carburetion it would probably be possible to run an additional million cars without the present total gasoline consumption."

able result it will be necessary to put the best minds to work on the problems involved," he said. "Researches and tests will have to be more extensive and more thorough than in the past. No one company and no one laboratory will be able to find the whole solution. It is necessary for all concerned to share in this work if we are to carry out our object of conserving the available supply of engine fuel."

**Hebb Motor Co. Has Contracts Closed for 2,000 Trucks**

With contracts for delivery of trucks amounting to 2,000 already closed, the Hebb Motor company of Lincoln, began a banner year with the Patriot truck. Distributing agencies have been established in the states of Nebraska, Kansas, Arkansas and Colorado, in which states the 2,000 trucks contracted for will be sold. The durability and service of the Patriot truck has appealed extensively, not only to the city trade but also to farmers, who find it more economical than the team.

With the steady influx of orders the company will have no trouble taxing the capacity of their large new plant to the limit this year. Though hampered somewhat by war regulations in the out-purchase of trucks, the company quickly established a large business foundation for the manufacture and sale of the Patriot truck. The simplicity of the construction of the motor and economical upkeep of the truck has won for the Patriot a distinction in the automobile world.

**Life of Tire Prolonged by Tire Filler Company**

A new creation in the rebuilding of automobile tires is evinced in a composition of rubber and durable fabric that is placed to exact measurement inside the new casing or partly worn tire to strengthen the life of the tire and increase the mileage. Omaha autoists are introduced to the novel development, that already has gained extensive popularity, by the Universal Tire Filler company, 2005 Cuming street.

The troubled motorist need worry no more about tire guarantees and blow-outs in the use of the tire filler. The lasting qualities which make a guarantee of 100,000 miles possible are contained in the composition, together with the resilience of the "air" tire. The filler is not a liquid. The substance is unaffected by heat or cold, hence the temperature of the casing is kept lower when doing road work than when air is used, giving more mileage than air, according to William Anderson, manager of the Universal Tire Filler company.

Though the company has been established in Omaha but seven months, more than 100 local business houses have begun using the new creation.

The limiting factor in a great many roads extensively used has been antique bridges built in the days when light buggy traffic was the rule. Gradually the state departments are overcoming this handicap to travel by replacing these structures by solid concrete spans. In 1917 \$47,500,796 was expended in this way in the United States.

Your territory may be open. See us for dealers proposition.

**DORT**  
Quality Goes Clear Through

The soundest reasons for your owning a Dort are furnished by the actual experiences of Dort owners.

What they say as to the competent performance and marked economy of this car is, we believe, the truest index to the real value of the Dort.

They will tell you that it stays "tuned up" a long time. That it does not require frequent adjustment.

They will speak in the same satisfied terms of the mileage it gives in gas and oil, and on tires—longer mileage per gallon you will find than what is commonly regarded as good mileage.

They will tell you also that it is a very easy riding car, that it does not bump you and jar you on bad roads as many light cars do.

Now these are qualities of the Dort that you can easily verify for yourself in a single ride. They are the fine results of the high standard of Dort manufacture.

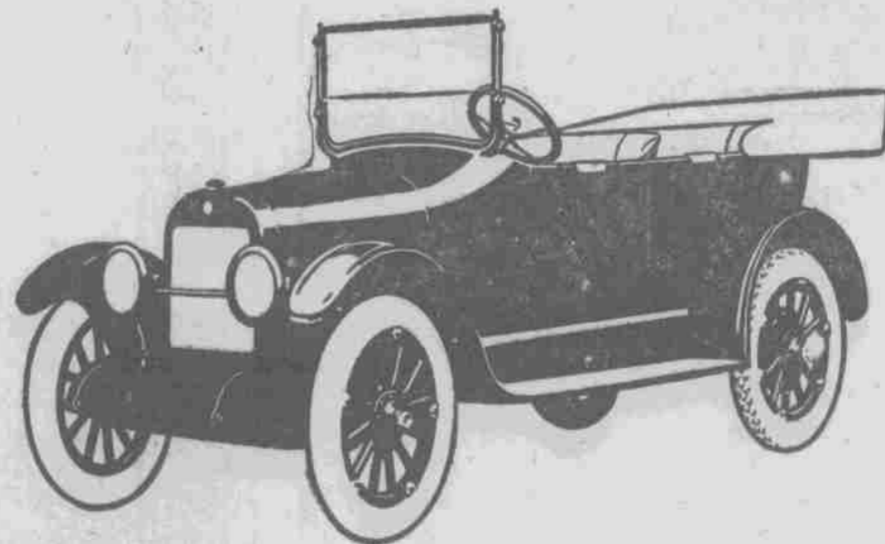
They contribute, together with the well known Dort simplicity and accessibility in construction, toward making the Dort the desirable car to own that it is.

We speak specifically of Dort accessibility and simplicity because it is important that you should know just how simple and accessible the Dort is.

Perhaps the best way we can make this clear is to say that when you should feel it desirable to "tune up" or "dope up" or adjust this or that part you can do it yourself easily, quickly and inexpensively. Ask yourself how many cars could show you such simplicity.

And of course it is almost needless to point out that the simpler a car is, the freer it is from possibility of trouble.

At a Dort exhibit at the Motor Show you will find a full line of the Dort models. We urge you to make sure to see these cars for they are truly fine examples of able engineering practice and sound, careful construction.



**TOOZER-GERSPACHER MOTOR CO.**

Distributors for Nebraska and Iowa.

2211-13 Farnam St.

OMAHA

We are exhibiting on the stage at the show in the same space we have had for the past three years.

**DORT MOTOR CAR COMPANY**

Flint-Mich.