

# MOTOR TRUCKS IN EUROPE DOING WONDERFUL WORK

## Under the French Scheme, as Originally Adopted, Practically Every Manufacturer Was Able to Enter With His Standard Types.

By DONALD McLEOD LAY of "The Automobile."

Within the past few months the necessity for utilizing motor trucks and automobiles in the expedition into Mexico after Villa, has brought home very strongly to the car and truck engineers and manufacturers as well as to the United States army officials the fact that ordinary commercial vehicles are not suited to military requirements. All these men have been interested in the work of motor vehicles in the European struggle and have watched closely for any salient feature in design and manufacture resulting from the experiences brought by war conditions. Still there are numerous points that have not been brought out very strongly but which a review of the development of the motor arm of the service in the European armies throws into relief.

At the outbreak of hostilities it was estimated that there were 100,000 motor vehicles in use with the French army, 18,000 of these being trucks, including 1,100 buses, 200 four wheel drive tractors, fifty motor searchlights and 100 special vehicles. When the British expeditionary force first established itself in France it was estimated that its motor vehicle equipment comprised 2,500 to 3,000 machines, the great bulk of which were requisitioned among motor truck users and manufacturers' stocks. The British army's subsidy system at that time having progressed very little beyond the paper stage.

In comparing the equipment of these two armies the French vehicles were then far superior to the English for military purposes, the latter being of such diversified types that they were not suitable for working together in convoy formation, some of them in operation in convoys having speed abilities varying from 7 to 17 m.p.h. Not only were they of different makes but the bodies were of all kinds, for the trucks had been taken direct from private service without even removing the advertising matter with which they were usually almost covered. These convoys worked fairly well on level ground, but as soon as hills had to be negotiated the slower vehicles and the defective ones dropped

was based on the Leyland chassis and practically ordered manufacturers to abandon their own designs, no matter how good these might be, except that provided by the war office. As a proof of the indifference which this scheme met from the manufacturers the last British army trials before the war comprised only three vehicles as compared with 110 trucks participating in the last French trials at that time. Under the French scheme, as originally adopted, practically every manufacturer was able to enter with his standard types, there being no preference for bevel drive over worm or chain, for a particular type or position of motor or for a certain class of gearbox. The field was even left open to steam, gasoline and gasoline-electric machines, the preference being that the trucks should be capable of doing good work on the road individually and collectively. Year by year the regulations and tests became more stringent without, however, interfering with the general design. Thus a type of vehicle of uniform size, power, weight, speed, body, clearance, etc., was developed throughout the country so that when the war broke out practically all the best trucks in France were subsidized types. When called into actual service some of the features on which the army insisted, although of little importance to the private user, were justified. They are the use of springs, sufficient clearance, radiator guard, uniform bodies, towing hooks front and rear, three fuel carburetors and tanks allowing a big range of action.

Four wheel drive early in the war proved its value for armored car purposes, since such a machine driven and steered at both ends would be capable of traveling over any country and of high speed on good roads. It would also be able to get out of difficulties at a rapid pace from which it would otherwise be inextricable. Four speeds forward and two reverse were mentioned at this time as being desirable for these vehicles. Four wheel drive tractors also found favor with the army service early in the war, these vehicles being found much more efficient and serviceable than



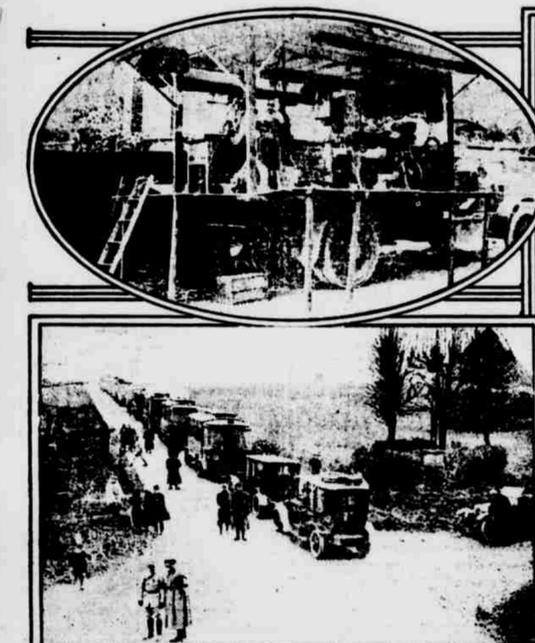
What an alluring sight on a hot day! What a morsel for a parched throat! But you cannot get it at a soda fountain. It is a Paige automobile climbing Mount Hood. E. M. Dalley, who has just taken new and larger quarters on Broadway at Sixty-first street, can show you a brother of the car shown in the picture. Then you will understand why this car was able to make its sensational mountain climb.

bring guns and adequate armor protection was later adapted by the French army to its artillery work. Later, the 75 mm. gun was extensively mounted on 80 horse-power chassis, a pivot carried on the steel platform and bolted to the frame members carrying the gun, at the left side of which the gunner's seat was attached. When brought into action the chassis was raised from the ground sufficiently to remove all weight from the springs, but not to lift the road wheels, this raising being done by four hydraulic jacks, one at each corner of the chassis and simi-

lateral headquarters, where they were attended in temporary hospitals before being carried to the rear by trains and finally distributed to the hospitals by more automobile ambulances. The great defect in the organization at that time was the inadequacy of the motor system for removing men from the hospitals just behind the firing line, wounded men frequently having to spend fifteen to twenty hours lying on straw in freight trains when touring cars could have brought them back in three to four hours. The Ford ambulances used by the American ambulance corps in France did

workshops but no machine tools, most of the truck repairs being undertaken by the car and truck factories. Mobile repair shops consisting of two or three trucks completely equipped with machine tools, etc., were found to operate most effectively twenty-five miles from the front, it generally being possible to convert buildings at various points into repair shops, the equipment being readily shifted from point to point.

## Motor Trucks Prove Their Worth in the Great War.



In the upper left hand picture is shown a Pierce-Arrow repair truck—the operating room in the truck hospital, which may be any where behind the front. To the right is a fleet of trucks ready for a long run with provisions. In the lower left hand corner are troop transporting buses drawn up behind the French lines. The other photograph shows a Rolls-Royce armored car which hauls a naval gun on a special twin-tired chassis.



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back, thus delaying the entire convoy. Hilly country also necessitated towing and repassing, which of course was slow, many radiators being smashed owing to cars running backward down the hills due to the lack of provision of springs. With a closely spaced procession a rear movement of a few feet would be sufficient to cause an accident. These defects were known to the officers in charge of the motor vehicle services, but of course there was no time to remedy them when war had been declared. The French authorities, however, had been working on this problem long enough—eight years—to have created what may be termed a model type of truck in all the factories. These vehicles, although differing considerably in design, were uniform in power, size, speed, load capacity, body, clearance, tire size and in such details as radiator, radiator guard, main and secondary carburetor. The English subsidy specifications

for hauling guns and for being used in ammunition. The French artillery was greatly strengthened by heavy guns mounted on special chassis fitted with four solid stuts capable of lifting the wheels from the ground and thus providing a solid platform. Many of the 155 mm. guns were drawn by four wheel drive tractors instead of horses. After the guns were in position the tractors were run into under the same as horses, being easily separated, however, and always ready to be brought into action to haul the gun out of a difficult position without actually exposing themselves. The French made a light four wheel drive motor in large numbers which was designed to pull a useful load of six tons. These vehicles were found very useful. Lighter type of high speed chassis class with double bottom gears, so that the driver could race either front or rear, and of reverse gears and two quick

## HOUPPE IS NOT WORRYING.

If Strike Comes He Will Find Way Out.

Harry S. Houppé, president of the Hudson Motor Car Company of New York, is a believer in preparedness, not only for the country at large, but also in his own business. While the majority of the local auto-

## HUPMOBILE SHOWS PROWESS.

Capital to Capital Car Tackles Hard Climb.

The capital to capital Hupmobile party which J. Walter Drake of Detroit is sending on a 25,000 mile trip around the United States to inaugurate the roads of the United States reached New York yesterday from Trenton on its way to Hartford, the capital of Connecticut. The car is being driven by E. S. Salisbury and G. H. Lane, both of Detroit. W. A. Krom is with the party taking moving pictures. J. S. Patterson, former Chicago and New York automobile editor, is writing the story of the trip. The party left Washington last Monday and was sent on its long journey by United States Good Roads Commissioners Logan W. Baker. Letters are being carried from President Rowe of the American Automobile Association and President Charles Evans Davis of the National Highway Association. From Washington the party went to Annapolis, Baltimore, Harrisburg, Dover, Del., Philadelphia and Trenton. Moving and still pictures are being made of the trip as well as written accounts. While in New York the party was entertained by Charles E. Rees of the Charles E. Rees Company, local Hupmobile distributor. The car was driven up Fort George Hill in high test to show that such things do not trouble it. It is the purpose of the Hupmobile Company to show that the particular automobile achievement of note in each big city is not beyond this one.

## VELIE'S BIGGEST YEAR.

George Garland Stirred by Factory Activities.

George Garland, local Velie agent, returned from the factory last week more enthusiastic than ever over the outlook for "Velie's biggest year." Mr. Garland went to Motline to increase his allotment of cars and to be sure that deliveries would be made smoothly. He says he found the place filled with agents on the same mission, and all so enthusiastic that the factory really took on the aspect of a bargain counter rush. The factory is now turning out forty cars a day. Mr. Garland is receiving orders for every twenty-four hours, and does not expect to have any difficulty in getting them regularly. To forestall any delay incident to railroad troubles the factory sent cars here by express, and they arrived yesterday. The factory is also making extensions in its truck plans because of unusual demands from all quarters. Fifty-two trucks were sent to the Mexican border recently in one shipment, and other large shipments are being made ready for Eastern points.

## AUTOMOBILE EXCHANGE

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## NEW JEFFERY CAR MEETS ALL NEEDS

Poertner Is Enthusiastic Over the Many Features That Improve and Refine It.

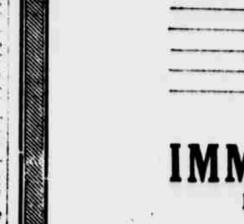
Proclaiming it a car without vibration at any speed, William C. Poertner, president of the Poertner Motor Car Company, the metropolitan distributor for the Jeffery, has just announced a new six cylinder model. The new Jeffery is the embodiment of many refinements, both in its mechanical makeup and in its design. "Despite the rising cost of materials and in face of the fact that most automobile manufacturers are boosting their prices, the new Jeffery Six is being offered at \$1,250, or 148 less than the price asked for the old six," says Mr. Poertner. "This is due both to the exhaustive resources of the Thomas B. Jeffery Company and to the fact that 93 percent of all parts going into the new car are manufactured in the Jeffery factory. Outside of its freedom from vibration, the dominating features of the new car are its long, low hammock swing body and its graceful, sweeping lines. The rear axle has been redesigned so as to permit underlong springs. Thus the car has been considerably lowered without materially affecting its road clearance. This change has also lowered the line of vision 7 1/2 inches, while the various revisions in body construction have made the car one that the passengers sit into instead of on. "Experienced motorists say that the Jeffery engineers have achieved a notable triumph in the design of the new car's crankshaft, the real secret of its smooth performance. The crankshaft is considerably overcast and inherently balanced, requiring no artificial attachments of any kind. Its large size eliminates all chance of contortion or twisting, and thus inhibits the slightest vibration. This is true, too, regardless of what speed the motor is driven. Larger bearings insure extra long life. "Another important change is in the wheel base. It has been lengthened to 125 inches—the looness of the car making it look at least a foot longer. A pitch of sixteen degrees has also been given to the chassis to make it conform with the asymmetrical lines of the car as a whole, also adding much to the racy appearance of the new Six. "The Jeffery designers have been unsparring in their efforts to obtain maxi-

## HOLLANDER'S NEW SALESMEN.

Two Veterans Added to Force for Fall Campaign.

As part of its preparation for an active fall business campaign the Hollander-Randall Company has added Louis E. Weed and Daniel W. Sullivan to its sales force. These two Automobile Row veterans will sell H-A-L twelve

## Now We Have "Maxwell Elite"



Harry J. De Bear, manager of the local branch of the Maxwell Motor Sales Corporation, 1808 Broadway, has just placed upon the market another striking Maxwell creation known as the Maxwell "Elite" model. This model is proving popular, as it is a convertible roadster touring type to seat either two or four persons comfortably. This car is extremely foreign in design, is painted a battleship gray and trimmed in red patent leather. The rear seat is entered through the front door, the back of the front seat next to the driving seat folding forward to permit of passage. In this respect it is very similar to the high class motor double bottom cars which have created such a sensation in motordom this season.

### ORNITHOLOGY

If you want to put wings to your car give it POLARINE—the friction-proof, carbon-proof oil that makes your motor sing like a bird.

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automatic engagement type of starting apparatus. The lightest touch on the switch button starts the motor—as easy as pressing your horn button. "Those who see the car invariably remark about the mechanical nicety with which the car's accessories are fitted into it. Take the tire pump, for instance. It is driven direct from the transmission, and it is so designed that there is no longer any need to remove the floor boards before it can be operated. All that is required is that the same wrench used on the demountable rims, or a plain, every day screw driver, be inserted through a slot in the floor. The air hose is always attached and ready for use under the driver's seat, and is equipped with gauges to show pressure."

## New Jeffery Six Seven Passenger Touring Car.



imum riding comfort. The control levers have been lengthened so as to relieve the driver of any necessity of bending over while the driver has been further benefited by making the seat he or she occupies a full inch wider than the other front seat. "The front seats are upholstered in bucket style. The rear seat, together with the auxiliary seats, also reflect the same amount of care. They have been designed to support correctly the backs of the passengers, thus insuring long trips with little or no fatigue. To ride in the new Jeffery is like lying in a big, soft library chair. "The motor, Jeffery built, develops fifty-three horse power and is capable of driving the car smoothly and evenly at any speed up to sixty miles an hour. It is economical on gasoline, while the oil consumption is given as 400 miles to the gallon. Equipped for the road, the car weighs 3,150 pounds. Its shipping weight is 2,950 pounds. "One of the most striking advantages of the new car in a mechanical way is its new starting and lighting equipment. This, a two-unit, Jeffery-Bijur system, represents the latest development in the

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