We understand that improvements in the position and pay of Civil Assistant Surgeons also are in contemplation, and that an announcement regarding both classes may be expected before long.

MOTOR NOTES FOR MEDICAL MEN.

By H. MASSAC BUIST.

POINTS ABOUT THE PARIS MOTOR SHOW.

THERE is not very much to encourage the medical man in the exhibits at the first international show of passenger cars, tractors, pedal-cycles, utility motor vehicles, motor cycles and accessories opened at the Grand Palais, Paris, after an interval of six years. The display is thoroughly representative of the French industry, as well as of the Swiss. It shows, too, that the Italian and Belgian factories have got going again. The absence of German and Austrian cars is more than compensated by the increase of American exhibits; but the only names to represent the British industry are Austin, Cubitt, Daimler, Leyland, Sizaire-Berwick, Sunbeam, and Wolseley. One American manufacturer has boasted that, as he sells twice as many cars in France as any French maker, there is no occasion for him to go to the trouble and expense of exhibiting at the Grand Palais. That it should be possible for anyone to be able to make such an observation with even a shadow of truth sufficiently indicates the embarrassing situation in which the French industry finds itself after the great effort of the war.

Broadly, it has had to shun the problem of producing the cheap car. The new mass production Citroën car, mentioned in these notes early in the year, materializes tardily at this show, but at a price nothing like as modest as that originally mentioned. There are practically no examples available for report, nor is thirty-five cars a day "mass production" in the American sense. Thus new French manufacturing programmes are much akin to our own. As to the established French builders who made good in the pre-war period as well as during the campaign. Renault, the figurehead of the Gallic industry, still has the pluck to stick to the production of cars calculated to be of service to medical men; but he has had no option but to increase the price by approximately 50 per cent. Any one who knows the circumstances of the European industry in this transition period will appreciate the great enterprise he has shown in keeping the price down as much as that. His raw materials are costing him at least twice as much as before the war—the actual rise in cost of all the materials that go to make a French car is 325 per cent.—and his labour is correspondingly dearer, therefore he must be using better manufacturing methods to be able to offer cars at such a relatively small increase in price.

These increases, however, are matters of the utmost seriousness to the medical man, whose income as a class does not average an increase of 50 per cent., far less 325 per cent., because there has been a war; but whose taxes have risen 200 per cent. or more. From his point of view, therefore, the Paris Salon, which is representative of the French industry and only suggestive of the motor industries of other countries, is a disappointment, particularly because it shows that the majority of French makers have shunned the problem of the cheap car and have taken the line of least resistance in these difficult times by making detail improvements of design on more or less conventional lines and improving the material and product in general without reference to cost, depending in the meantime on the fact that there is a ready market at any price for whatever they can produce that is worthy of their reputation.

THE INEVITABLE DEVELOPMENT OF BRAKE SYSTEMS.

Of course, there are some new-comers, some of whom have ideas in design that are at least of passing interest, but the majority of this quite small group may be ignored. They will not survive the motor slump in a year or two, even if they go the length of reappearing in the Automobile Show at the Grand Palais in 1920, which is also doubtful. As far as the current exhibition goes it indicates that the future of the French industry rests with the firms we knew before the war. In the gross they have devoted attention to the larger and more powerful types of cars, which do not interest the medical man except where, in

this detail or that, they suggest features of design which may presently be incorporated in cars of the sizes and power calculated to be of service to him.

For instance, there is a tendency, in the case of larger cars particularly, to furnish brakes to all four wheels on the Perrot diagonal control system proved successful on Argyll cars years ago, otherwise totally ignored by the British industry, and employed with amazing success by Peugeot and Delage in the Grand Prix race a month before war broke out. The front wheel brake becomes more and more necessary as cars grow lighter and engines are made more efficient. The application need not be confined to any class of vehicles. The objection always brought against it is that it brings complication and adds weight; but neither need be great, and there are many features incorporated in the standard chassis which could much more readily be spared than a correct and scientific solution of the problem of giving the driver the option either of reducing the braking strains on his tyres by half, or exercising in moments of emergency twice as much braking power as he has at his command by the conventional system of design in which the effort is applied to the back wheels only. Undoubtedly we shall presently have small cars with brakes to all four wheels. The medical man needs them to keep down his tyre bill, and to increase the safety factor, especially if his practice is in hilly country. Meantime such features are only available in the larger French cars, the lead of Peugeot and Delage being followed, for instance, by a no less notable firm, Hispano-Suiza, of aero engine achievement, in its new nominal 37.2 h.p. six-cylinder model.

ENGINE FEATURES.

On the part of the leading firms there is some intelligent adaptation of aero experience, because they furnish evidence that they know precisely what features of aircraft practice not to apply to a proposition for car service. While these developments will presently become available in cars suitable in price and power for the medical man, at present both in this country and in France engines with aluminium cylinder castings and steel liners are chiefly being supplied to the more expensive cars, as instance the new six-cylinder Armstrong-Siddeley and the Napier post-war chassis, both with overhead valve engines, and the new Hispano-Suiza, whose producer's ability to design an aero engine may be gathered from the fact that the total production during the war was over 50,000 aero engines, of which over 33,000 were built in France. But Hispano-Suiza neither introduces an eight nor a twelve cylinder car engine; instead, it embodies aero-engine practice in a six-cylinder car engine. Against this we have in the exhibition one toy scale eight-cylinder engine of the V type by another maker who did not achieve distinction as a designer of aero engines; and we have some followers of the pre-war lead of Delage in making small six-cylinder engined cars, as the A.C. people are doing in this country with their post-war model. The fact is, to-day it is possible to simplify a six-cylinder engine so that it is no more formidable, from the owner driver's point of view, than the pre-war four-cylinder type. Of course it has a great advantage in acceleration, but we should do wrong to conclude that it will presently oust the four-cylinder type by reason of giving a better balance; one has only to make acquaintance with the post-war Vauxhall type with Lanchester balance gear to realize that by such means it is possible to give a four-cylinder engine all the smoothness characteristic of a six.

In the main, most of the improvements seen at the Paris Show are not for medical men, for the simple reason that they are embodied in the larger and more expensive vehicles. But they interest him indirectly, because the retainable new features of the most expensive cars of one year become embodied in smaller, moderate priced cars of next season or of the one after. Other features of the Paris Show—including the displays of vehicles of the smaller sorts by newcomers from the aircraft and aero engine industries, such as Voisin, Farman, and Le Rhône—will be touched on later.

M. JEAN LOUIS CALVET of Béziers has bequeathed his estate, valued at £40,000, to the University of Montpellier, the interest to be applied annually for the best essay on the cure of cancer.