MOTOR NOTES FOR MEDICAL MEN.

By H. MASSAG BUIST.

LIGHTENING THE BURDEN OF COSTS.

MEDICAL men will be quick to appreciate the intelligent treatment which Mr. Austen Chamberlain has accorded motoring in the current Budget. The effect of the various Government proposals should begin to relieve doctors within the next week or ten days. Thereafter there will be no occasion to obtain licences to buy motor fuel; the supertax will have to be paid no longer; the medical man will have to pay only the single tax on the gallon of petrol at half the rate paid by the general public; the petrol vendors will be practically freed from control, and the best quality spirit will be available to the public in place of being monopolized by the flying services, so that the quality of the petrol will improve while its price will be substantially reduced. Moreover, though in the case of the medical man under these new conditions the amount of duty he pays per gallon of petrol used is not a heavy burden as we count costs in the post-war period, nevertheless, if he chooses, he can escape it altogether by using benzol, which is duty free to the motorist as it is to the dyer or other user, because in the course of a war in the submarine era and an age of flying and motor transport this island nation discovered the vital need of having an industry for the home production of motor fuels, so that to-day a large and growing benzol industry exists. Its development is merely the beginning, and it is a matter of national security as well as of economy that it should be developed to a much greater extent. Should any emergency arise we should want motor fuel on a much faster scale than the amazing rate at which it was used in the German war; while from the mere point of view of national finance it is essential to produce everything possible in these islands, both to reduce occasions for the exportation of money and to provide the maximum employment. Post-war benzol seems satisfactory in quality, but perhaps the best advice is to use one gallon of benzol to two gallons of petrol until we have wider experience of benzol.

CARS NOW BEING IMPORTED.

Two other items in the Budget affect motoring. The original scheme of the Board of Trade was that there should be no car imports until September, as it is recognized on the commercial side that after five years of war activities, and in face of the abnormal cost of raw materials and labour, our industry cannot expect to be working on a peace basis before that period. On the financial side it is of course pre-eminently undesirable to export a single pound on the acquisition of anything that can be bought here, where we are already paying a million a week by way of out-of-work doles, and the purchasing value of the sovereign is appreciably less than ten shillings. As regards the shipping situation, too, the first need is still for food-stuffs and raw materials.

Even in America, where the motor industry has only been directed to war activities for a brief period and, even so, kept mainly on its ordinary classes of work, there is no pretence that the motor manufacturers of the United States can get back to peace conditions this year. Most of them describe themselves as going slow, and statistics reveal that they will be 700,000 cars short of their home demand this year. But the Americans, who have doubled their national wealth as the result of this war, like the experience so much that, in place of resting on their achievements, they are making more strenuous efforts than ever to increase their national wealth in the future. Therefore they are making unprecedented efforts to increase export trade, which they intend to pursue no matter how short the home market goes. The reasoning is sound. The world's industries have been so enormously inflated during the war that it is only a matter of time until there will be over-production all round. That is when every nation will stand in sorest need of export trade. American industry intends to have a hold on the biggest export trade in the world against that crisis, for it knows that, once established, no nation but the Japanese could dislodge it; whereas if part of the current shortage of cars in America were to be made up by imports from Europe, such business

when lean times come will lapse automatically, since they can produce so much cheaper than the heavily taxed, war impoverished countries of the Old World. So the American importers were resolved not to wait until September to bring cars into this country, and they had an instrument ready to their hands in the permits granted to individuals not wholly dissociated from politics by the Board of Trade to bring cars into this country despite our need of food-stuffs and raw materials, and in the issue they have just wrung the concession whereby between now and September there may be imported half as many cars as were imported over a similar period in 1913.

HOW LABOUR GOVERNS CAR COSTS.

Mr. Chamberlain, however, while unable to make the importation of cars as profitable to the Exchequer as the bringing in of tobacco, which Mr. Bonar Law has described as being "nearly as profitable as bringing in gold," has contrived that one-third of the value of each car imported shall go to the Exchequer by way of duty. That does not disturb the American importers. Their scale of production is enormous and the costs are infinitesimal compared with our own, especially as American labour, while just as keen as our own on high wages, is better educated and is therefore eager to give output for money. For instance, it is sometimes advanced as an excuse for raising the wages of British labour that the American worker often takes home more money at the week-end than the Britisher; but if we entirely draw up the curtain we discover that the direct labour charges on producing a completely equipped 20-30 h.p. American car are £20; whereas for a British car of the same capacity they are more than ten times as much. What must be the situation, then, now that Japan is entering the motor manufacturing industry, with wages averaging about one-tenth of American wages and on American systems of production? If two Japanese workmen be worth only one American workman in the matter of output, still the Japanese will produce at one-tenth of American labour costs, which in turn are one-tenth of ours. The point seems to have escaped the students of manufacturing conditions the world over, yet not many years will pass before we shall be confronted with the results of this complete change in the situation. Its interest to the medical man is not merely academic. On the one hand he can foresee clearly that the world situation will ensure a speedy return to the production of cheaper and yet cheaper cars, while, on the other hand, if he is resident in the British Isles it is abundantly plain either that labour will have to become educated or that the national expenditure will reach a scale that cannot be maintained.

THE DOCTOR'S CAR MUST BE A BUSINESS PROPOSITION.

At present the conditions of car production in this country are wholly artificial and uncertain, therefore the risks are great; yet the need to provide employment is paramount. It cannot be pretended that the average cost of the cars issuing from our factories to-day is practical from the point of view of the average medical man for whom a motor vehicle is an essential part of his business equipment, which ought, therefore, to be available on terms that make it profitable to him to acquire such an instrument. There are, of course, exceptions here and there where relatively good value for money is offered. I do not know a single manufacturer who likes charging as much as he is compelled to ask for his current products. Some say that if the problem began and ended in their own works they think that by the autumn they could get back to something like a reasonable basis, because by then people would really be looking for work, as the Government can scarcely go on devising new unemployment doles; but the motor manufacturers are dependent on other industries, such as the steel, which, in turn, is dependent on the coal industry, with which the Government has dealt in a fashion that has permanently upset the basis of production of every engineering industry in this country from the raw material to the finished product. Oil and electricity will have their effect within the next three or four years, but it is not possible to foresee at present how they will give our industries all the steel and raw materials they need at competitive prices.

In the meantime, our motor manufacturers are really living from hand to mouth; but the Chancellor of the

Exchequer has his eye on the unemployment doles as well as on revenue, therefore he offers some sort of encouragement to industry to take the extraordinary risks of manufacturing at this period, when none can foretell how soon that relatively small section of the public which can afford and is willing to buy 1919 motor cars practically irrespective of price will have been supplied.

PENALIZATION OF NEW DESIGNS.

Between that market and the normal market of cars there is a vast price gap which most British manufacturers do not see their way to bridge, though all are trying to solve the problem by this means or that. Every manufacturer is very keen to embody in his car every lesson he has learned in the last five years; but if he alters his design to this end—often the change has been evolved to enable the given part to be made at a fraction of the former cost with a fraction of the labour, yet to give better service—labour says: But this is an entirely new proposition, and we must see that we get as much for making it. The price labour is getting in the factories now for working on an article of precisely the same design as it did before the war averages more than 100 per cent. more. When the new design of a given part comes up for consideration, the prices being demanded by labour on the average are such as to bring the cost of production up to at least the same cost had the old design been maintained, despite the fact that there may be only a quarter, or perhaps one-tenth, as much work in the production of the given new-style part. It is only another version of the nation's old enemy, the *car canny* policy, and it is a version which of course makes manufacturing enterprise impossible once the small section of would-be motor owners to whom money is no object has been satisfied. There is one solution of the problem which seems inevitable, and possibly the problem will not be solved until it comes automatically into operation with the lapse of time. The general public which keeps our motor industry in employment cannot afford wholly impossible highly priced cars. It will therefore be impossible for them to buy, and it will only want three months' demonstration of the fact to educate labour; but, unfortunately, that lesson will have to be taught at great risk and cost to the industry, because how can the individual manufacturer foretell to a week when the present limited market shall be overstocked and the real wide market of supplying medical men and others with cars at practical costs shall alone remain?

AMERICAN METHODS NOT YET PRACTICAL HERE.

One other point in dealing with this extraordinary transition period as it affects motoring and the medical man. It may be asked, Why does not the British industry reproduce American factories and production schemes exactly? There are several answers, among which the following brief ones may suffice.

It is observable that under our taxation and labour conditions no American manufacturer has any intention of availing himself of any of the magnificent American style munition factories on the market to set up, at less cost than he could do in his own country, a complete plant for duplicating his enterprise in conjunction with British trade union labour. Of course, there are American car assemblers, and semi-manufacturers, in this country, who work with non-union labour, and who are, incidentally, charging the public 100 per cent. more for their 1919 products than they were for their 1914 vehicles.

Some of the most enterprising and successful firms in the British industry have conferred together to see whether the case could be met by pooling their factories and making cars on the unit system or parts-specialist scheme. Expert investigation reveals that it cannot be done, in part because of transport costs. Even so they have not given up the pursuit of the problem; on the contrary, they have gone into the matter in such detail as to discover that it would need a capital of over 3 millions to set to work in the only practical way, by establishing an entirely fresh and self-complete enterprise exactly reproducing all the essential features of the American scheme, and there would not be any prospect of a return on the capital for some three years, even if all went well with the enterprise. Would scores of thousands of the British public invest in British enterprise on such terms? Statistics founded

on investigation of investors' lists of existing motor companies reveal that such numbers would be needed to support it. Though money could not be found that way, possibly it could be found by an aggregation of motor firms subscribing the necessary capital and guaranteeing out of their profits 5 or 6 per cent. interest for three years. But this is held to be impracticable because of the already proved attitude of labour in regard to the introduction of new processes of manufacture and new phases of design, and because it is beyond the power of the human mind to foretell accurately what will be the world condition in regard to motor-car production three years hence. The chances appear to be at least ninety-nine in a hundred that, instead of having a profitable business, it would be found that the motor industry of the world is hopelessly over-produced by then. Everybody who has studied the matter at all at first hand knows that over-production is a mere matter of time. For my part, I look for it to occur between twenty-four to thirty months from this date. In the meantime the medical man will realize than any number of practical minds are grappling with the problem of how to give him as speedily as possible what he needs in the matter of a car at the price he can afford to pay for it.

REPORT OF THE REGISTRAR-GENERAL FOR 1917.

The report of the Registrar-General for the year 1917 follows the lines of its recent predecessors, and, both in matter and arrangement, maintains the superiority over other official collections of vital statistics which has for some time characterized the publications of Somerset House.

Births, Marriages, and Deaths.

The total civilian population of England and Wales in mid 1917 was estimated to be 14,085,300 males and 19,625,700 females. The populations at ages have been estimated by taking into account the numbers added to and withdrawn from each group, so far as that portion of the population is concerned the estimates for which in 1915 were founded upon the National Register count of that year. A combination of methods has been applied to the remainder of the population. Death-rates are based throughout upon civilian deaths and populations. A different population has been used for computing birth-rates, because married men in the services given occasional leave remain an effective element of the population so far as the birth-rate is concerned. The total population estimated for this purpose is 37,578,234, and the local civilian populations for birth-rate purposes have been obtained by increasing the estimate for death-rate purposes to the extent by which the birth-rate population of the whole country exceeds the civilian population.

The marriages numbered 258,855, giving the lowest rate yet recorded. The births numbered 668,346; 117,174 fewer than in 1916. In 1913 the crude birth-rate was 24.1 per 1,000, in 1914 23.8, in 1915 21.9, in 1916 20.9, and in 1917 17.8. Taking the average rate for the decennium 1871-80 as a standard, the 1917 figure is almost exactly 50 per cent. of the rate prevailing before the downward trend manifested itself.

The war has of course contributed powerfully to this decline; to what extent peace will contribute in restoring effective fertility remains to be seen.

In all, 486,965 civilian deaths were registered in 1917, corresponding to a rate of 14.4 per 1,000; corrected to the 1901 standard population, the standardized rate is 13.5. A lower rate has been recorded thrice—namely, in 1910, 1912, and 1916, but if allowance is made for the deterioration in physical quality of the existing civilian population of males—owing to military selection—there is reason to suppose that the rate in 1917 was, as an index of mortality, inferior to that of no other year. The standardized rate for females, which increased from 12.4 in 1914 to 13.2 in 1915, declined to 11.7 in 1916, and declined a little further, to 11.4, in 1917.

Child Mortality.

The most remarkable feature of the death-rates at ages is the very low mortality at ages 0-5 in both 1916 and 1917. When account is taken of the effect of the declining birth-rate in diminishing the proportion of exposed to risk at the earliest and most dangerous age, the rate for 1917 is found