into consideration, and is calling a special meeting to discuss it.

Medical men in England are urged to take note of these facts and to beware of accepting appointments to lodges in this State without being fully assured that the appointments which they are accepting are approved by the New South Wales Branch of the British Medical Association.

THE MOTOR SHOW FROM THE MEDICAL MAN'S POINT OF VIEW.

FRESH FEATURES AND HOW TO REGARD THEM.

By H. MASSAC BUIST.

THE twelfth yearly motor-car show that opens at Olympia, Kensington, on Friday, November 7th, under the patronage of the King, has many features of interest to the medical man. Some present temptations he will be well advised to avoid; for the doctor, perhaps more than any other class of motor user, wants nothing in the guise of an experimental or insufficiently tried development in the equipment of his car. True, he has a right to be as keen in his quest of luxury as any, for he has to use his machine at all hours and in all weathers; and it is precisely for that reason that with him reliability is, or should be, ever a foremost consideration. While a large number of medical men have already gained a wide motoring experience, others have yet to take to the use of the car. It is therefore opportune briefly to discuss the main points of view from which medical men will approach this exhibition.

PRICE.

At the outset the price limits for a complete vehicle may be taken as ranging from below £200 to about £500 as a maximum. A few years ago that would not have given a very wide choice. But to-day it means that the higher sum specified is more than sufficient to procure a car capable of developing a maximum of 50-h.p., weighing at least a ton and a half, and equipped with all the latest devices for starting the motor by electrical means and lighting the car on the same principle. Indeed, this year the exhibits can be grouped conveniently into price and power classes by the medical inquirer who sets out with a fixed sum in his mind. In regard to this I have often observed that men have subsequently repented of their choice between three or four cars they had in mind when the final decision has been taken merely on the point of pounds instead of guineas, or of a few pounds one way or the other. When it comes to a close matter like that, the final choice should be made always by a personal consideration of other points than price. Value should be set against value to see whether the dearer or the cheaper article by a narrow margin will suit the individual better. Moreover, there is only one man who can satisfactorily decide which is the best car to suit a given medical man—himself.

TO AVOID BEING MISLED.

When, as is generally the case, the class of car sought is determined by what the purchaser can afford, the best practice is to allow about ten pounds in the hundred above as well as below the sum finally decided on; in other words, a £40 range for investigation, as it were, in the case of the £200 machine, a £50 range in the £300 class, and an £80 range in the £400 to £500 class. Further, when considering price, do not be misled by catalogue engine rating, Treasury horse-power taxing, or even engine dimensions, because the motor manufacturers of the world employ very many different systems of construction. Thus, one maker's 12-h.p. car with a high speed, high compression engine of the most modern sort, will give more actual horse power than another's 25-h.p. vehicle of low compression, narrow range of working revolutions, and possibly three and four times the volume.

In regard to demonstrating as a means helpful to enable one to judge performance, there are pitfalls for which one should be on the look-out. In the case of a demonstration car, you want to know whether the carburettor has a larger jet orifice than in the vehicle as it will be supplied to you; also what amount of petrol it is using. Observe systematically the manner in which it is demonstrated

to you; also whether the driver is manipulating the clutch when he is showing what can be done on the direct drive, and whether the clutch has been oiled so that it will slip somewhat. In some cases you can disregard the speedometer on the demonstration car. I have come across more than one that has been adjusted to register higher than is correct. When hill-climbing qualities are being displayed, be careful to observe how you approach each rise. There is no credit in climbing any rise without changing gear if you have to rush at it, any more than there is in demonstrating fast speed qualities on the flat if the machine has to take a long time to get into its stride. As a careful user of the vehicle yourself, in both those circumstances of service you would not rush round corners and blind turnings, therefore you would have to be changing speed continually if the car were yours. The medical man, indeed, should be particularly mindful not to succumb to the top gear or through-drive mania when he is making up his mind concerning the choice of any particular car. On the contrary, he particularly wants a machine the gears of which will be easy to change, and the motor and clutch details of which will not cause a jerk every time the gears are changed, whereby the machine is racked and tyres are destroyed.

SOME PRACTICAL ADVICE.

The journeyings of a medical man are not confined to main routes. Accordingly many doctors are limited as to the size of car they can take by the necessity of negotiating tortuous and narrow country lanes, such as call for an ample wheel-lock and a limited over-all length of car, also, in many cases, for a wheel-track of not too great width. The car, however, should be always proportionately wide for its size and height from the ground if it is to be stable and safe on the road. Under this head mistakes of design have been made in certain light car patterns that are too narrow, and the centre of gravity of which is accordingly too high.

Another feature to which attention should be drawn is the design of the brakes. The rubbing surfaces should be of proportionately large area, and the means of application should be easy, so that only a light touch is needed by foot or hand, with no consequent skidding or squeaking sounds; in point of fact, these are by no means eliminated yet from certain constructors' brake systems. Means of adjustment should be accessible; on the other hand, a type of brake that is always in need of adjustment should be avoided, and one chosen that makes ample provision for wear, so that no appreciable degree of wear occurs for lengthy intervals. If the brakes are coarse of action the owner will be running up an unnecessary tyre bill.

THE ERA OF ELECTRIC CAR LIGHTING.

We have had electric car lighting systems for years as accessories to the equipment of the vehicle. The keynote of the 1914 programme of the middle and small powered car makers is the incorporation of electric car lighting systems in the initial design of the chassis as part and parcel of the entire scheme, not only to enable the purchaser to receive better value for money by obtaining the vehicle and all such accessories for an inclusive sum, but also because the scheme allows the dynamo machine and other details to work under the best conditions, and so to reduce wear and tear to the minimum, and ensure a maximum degree of reliability. Many failures of electrical apparatus in the past have been due to the fact that chassis designers have made no provision for it. It has therefore had to be tacked on to the car as best the accessory maker can contrive, a mode which certainly does not provide a fair chance of testing the machine.

To-day, fortunately, the medical man has not to buy that sort of machine, for on quite a number of cars of moderate price electric lighting systems are part and parcel of the standard equipment. I would notice particularly under this head the 12-h.p. Rover model, which is sold complete as a four-seated vehicle with the famous Leitner dynamo and Rotax electric lighting equipment for £350. Again, all but the smallest Star types are standardized with dynamos and electric lighting sets, as are the 16 and 20-h.p. Darracq models, and the 16-22 h.p. Napier four-cylinder chassis, which is sold with C.A.V. electric lighting set. Another system, again, is the provision as standard in the design of the chassis of means for working the electric lighting dynamo, which

can be fitted, together with all equipment, for an inclusive extra cost of only £10, as in the case of the Belsize product, wherein batteries, side and tail lamps are, in any case, provided as standard. In other words, there is no reason why the medical man, even on a small-powered car of low price, should be without the advantages of electric lighting equipment to-day. Even on the 10-h.p. four-cylinder Singer light car a complete electric lighting set is included for the cost of 190 guineas. It is hardly necessary to say that all electrically started cars are supplied as standard with electric light.

THE MECHANICAL STARTING OF ENGINES.

The movement for the production of mechanical engine starters has made great progress during the year. Yet it would be misleading to imply that in this country we have arrived at the age of the mechanical engine starter as part and parcel of car equipment. On the contrary, it is rather the exception than the rule. As was the case with electric lighting systems until quite recently, so with electric engine starting devices to-day; the attitude of the average motor manufacturer is, in effect, that he is willing you should have such a device fitted to your chassis as an extra, for though he admits that the apparatus is likely to work satisfactorily, he is not yet willing to standardize and guarantee it. What is commonly called the process of "speeding up," however, is so much in evidence at this show as to leave little room for doubt that a year hence it will have become the rule to fit engine starting devices as standard and the exception not to do so. Among the higher priced cars, the special six-cylinder Daimler chassis is furnished as standard with a C.A.V. friction contact electrical engine starter that gives six ampères at twelve volts; while the six-cylinder Sheffield-Simplex chassis is standardized with the American U.S.L. system, whereby the ordinary flywheel is replaced by the armature of the dynamo. The six-cylinder Lanchester chassis is standardized with that firm's adaptation of the Delco system, with which the Cadillac Company inaugurated the whole movement two years ago. From Italy comes a new 35-h.p. Lancia chassis on which the Rushmore electrical engine starter is standardized, while the small six-cylinder Delaunay-Belleville chassis is also equipped with electrical engine starter, as are all the Métallurgique types, save the smallest of the series.

If we come to consider cars sold as complete motor vehicles ready for the road within the price limits specified in the opening portion of these notes, however, the choice of cars with electric starting equipment is narrow. At the top of the list is the 30-h.p. Cadillac, which has now proved its pioneer system in the hands of over 33,000 owners during the period of over two years and has just received well-earned recognition from the Royal Automobile Club in awarding it the Dewar Trophy for 1913-14 for the most meritorious performance in any of its officially conducted trials of cars and car apparatus towards the development of the movement. The Oaklands six-cylinder, an American car that has been on the British market for about a season and which is of a moderate price, is fitted with a Delco engine starter, as is the new six-cylinder American Hudson car and the American Hupmobile with the Westinghouse system, while from Scotland comes a remarkable vehicle in the 15.9-h.p. Arrol-Johnston car, supplied as a complete four-seater vehicle with electrical engine starter and lighting set for £360. Another outstanding proposition is an American one brought forward by the Willys-Overland Company that has been two seasons established in this country; it offers a 25-h.p. four-cylinder car complete with all accessories and the Gray and Davis system of engine starter for £275. This is possible by reason of the scale of the enterprise. In America the manufacturing year begins earlier than in Europe. Between last August and the end of July next the Willys-Overland factory at Toledo is being run on a scheme calculated to result in the production of 50,000 of these complete vehicles. The American Mitchell and Kirt cars have also electric engine starters, as has the White.

FEATURES OF MANUFACTURING POLICY.

The tendency for European manufacturers to exploit fewer types grows apace, the majority of the British

makers confining their activities to the manufacture of three models at most, whilst several have come to the one-model proposition. In the expensive high-powered cars the Sheffield-Simplex firm has abandoned two of its types and makes a 30-h.p. six-cylinder chassis only this year; while in the middle size the Rover Company no longer makes the 18-h.p. vehicle, but, instead, concentrates entirely on the output of the 12-h.p. model. Wolseley, Napier, Sunbeam, Austin, Deasy, Standard, Swift, Vauxhall, Arrol-Johnston, and Argyll are among the concerns that make three types apiece only. On the other hand, Clement-Talbot adds a fifth model to its programme in a nominal 15-h.p. four-cylinder chassis with a piston travel 10 mm. longer than the 12-h.p. type but the same cylinder bore.

In the main, however, the elimination of programmes concerned with the production of several models per firm is accompanied by increase of output, chiefly concerned with one type out of the series. Hitherto America and Britain were almost singular in the fact that the majority of their motor-car manufacturers have their own body works. By distinction the more general practice in France and on the Continent is for motor engineers to produce chassis only. Hence most British concessionaires of foreign cars have in the past had to standardize some one type of body on the most popular size chassis for marketing in England.

THE TREND OF CONTINENTAL EFFORT.

A fresh policy is inaugurated in the case of the Italian industry, however, by the enterprise of its pioneer motor manufacturing firm, the Fiat Company, in bringing its products within purse range of that public which has not hitherto been able to afford such machines. For this season it has embarked on a minimum output of three thousand 12 to 15-h.p. four-cylinder light car chassis of 80 mm. cylinder bore by 120 mm. piston travel, to be sold complete with four-seater body, hood, screen, lamps, and other details for £375, the feature of the policy being that in details of design the vehicle exactly reproduces the distinctive Fiat constructional practice.

If we turn to the French industry it is to find that the now thoroughly reorganized Darracq enterprise brings forward a three model programme of cars rated respectively at 12, 16, and 20 horse-power, each of the four-cylinder sort, and all supplied as complete vehicles within the purse range indicated for the medical man. These cars, moreover, are the first machines hailing from a French factory for the design and production of which a British motor engineer, Mr. Owen Clegg, is responsible. Hence in constructional details they are particularly suitable for home service. The two lower powered models have the underhung worm drive, the newest fashion being followed in having half elliptic rear springs hung below the back axle. The De Dion programme is quite notable for two features, the first being that small four-cylinder models are now available at prices at which it was formerly possible to obtain only single or two-cylinder types. The other feature is that the eight-cylinder, V-set motor, which this firm has pioneered in car practice, and which has quite distinct qualities of service, including extraordinary flexibility, is now brought within the range of the medical man by the introduction of a 24-h.p. model. In another category, too, is the exhibit by the Peugeot firm of a four-cylinder 6-h.p. "Baby," which is probably the smallest light car on the market. It is retailed, completely ready for the road, for £170, having been improved in various features, as by the provision of a third forward speed, while still retaining the original feature of a double bevel back axle, whereby two speeds are available there.

Turning to Germany, we find that one of the three pioneer houses in that country—the Adler firm, represented in this country by Morgan of Old Bond Street and Long Acre—introduces a 9-h.p. block-engined, four-cylinder water-cooled light car, sold complete with two-seater body, either of the tandem or the side-by-side sort, for 200 guineas. Thus from abroad some very notable propositions are being introduced in various classes.

This year the Ford Company follows the example of the Studebaker Corporation—that has marketed the Flanders and E.M.F. cars, and which this year introduces a six-cylinder Studebaker model complete, with electrical engine starter—in absenting itself from the exhibition.

THE CYCLE OR LIGHT CAR.

In the British section it is plain that there has been a big development in what is styled the cycle or light car department. In this connexion, however, it falls to note that sundry manufacturers—as instance Humber—are not showing their cycle-cars at this exhibition, but are holding them over for introduction at the Cycle-car and Motor-cycle Show, which will follow it at a week's interval. The Swift Company, on the other hand, supplements its two new four-cylinder car models by the latest edition of its two-cylinder cycle-car, which has now been improved in sundry details—as instance the substitution of a pressed steel frame for the tubular sort formerly used and the furnishing of an H-section front axle in place of the tubular sort. In other words, in this case the cycle-car characteristics have been eliminated, motor-car practice alone being exploited now. The price of the vehicle is £140. It employs a car form of power transmission through gearbox to rear live axle; whereas the 10-h.p. Pilot light car is wellnigh exceptional among vehicles displayed at this show in exploiting the friction mode of power transmission. The Standard four-cylinder light car, which has now been in the service of the public for a season, is shown with a few slight improvements that make it still better value for money, the price complete being £195. In the class above this a notable policy is the introduction by the Humber Company of a 10-h.p. model sold as a four-seater vehicle complete with screen, lights, and rainproof hood for £250. The Belsize small car has been improved in minor details.

CARS OF QUALITY NOW AVAILABLE.

A feature this year is that the 10-h.p. Austin car, which embodies a great deal of the firm's distinctive constructional features, is now brought within the range of the medical man of moderate means, in that the chassis price complete with tyres is £260. The Siddeley-Deasy Company introduces a 14-h.p. light car which is incidentally interesting in that this is the first four-cylinder vehicle in which the Daimler-Knight double-sleeve valve engine is produced as a one-piece casting. The novelty in this chassis, however, will be found, as in the case of the new 20-h.p. Daimler car, in the back portion, the worm-driven back axle and three-speed gear-box being a unit combined with a torque tube and radius rods, so that many joints are eliminated from the construction, and the whole of the drive from the road-wheels is transmitted to the midmost cross-frame members. In both these vehicles the back suspension is on the cantilever spring system initiated by Lanchester. In the case of the Daimler car the foot-operated expanding brake works on a rearward extension of the overhead worm shaft in the back axle. The Napier Company introduces its new 16 to 22-h.p. four-cylinder model which has an increased bore measurement in combination with valves set on the slant and other improvements which make it an appreciably more powerful model.

ADVANCE MAINLY CONFINED TO DETAILS.

The Star Company's policy of middle-priced cars now embraces the fitting of electric lighting sets as standard, in combination with prow-shaped coolers and sloping dash. In the main, however, general mechanical advance is represented chiefly by further simplicity and by making full use of the better metals now available for manufacturing, as instance the 12 to 16-h.p. Sunbeam car, which comes under the machines below £400 in price complete with body; in this there has been no re-designing of the springs, but very much improved riding is achieved by using chrome-nickel steel for those members. Straker-Squire uses chrome-vanadium steel for the springs. A great deal of attention has been devoted by makers to isolating their cars from engine vibration by supplying slightly flexible drives of one system or another as between clutch and gearbox and as an addition to the universal joints ordinarily furnished to those details. Again, it is becoming a very general practice to make the gate and the change-speed lever extensions of the gearbox proper, thereby entirely isolating those details from effects of frame flexion.

I propose next week to deal individually with certain exhibits at the show, ranging from big vehicles, which nevertheless come well within the £500 price limit, such

as the complete 16 to 20-h.p. four-cylinder Wolseley and the new Cadillac model with electrically controlled two-speed back axle, and electrical heating for the carburettor to ensure the petrol vaporizing readily in the coldest weather. All the driver has to do is to touch a switch on the switchboard on the dash and in thirty seconds the carburettor is at boiling heat. Yet the amount of power used only represents the equivalent of keeping the tail lamp alight for about an hour and a half. The loss is replenished to the batteries a few minutes after the engine has been running.

THE LUNACY AND MENTAL DEFICIENCY ACTS.

CONSTITUTION OF A NEW BOARD OF CONTROL.

ON November 1st the Mental Deficiency Act, 1913, came into operation "as respects the constitution of the Board of Control, and the appointment of the secretary, officers, and servants of the Board." In all other respects the Act does not come into operation till April 1st, 1914.

In due course the names of the three paid Commissioners, including the Chairman appointed by His Majesty, were published on the first day of the month as follows: Sir William Byrne, K.C.V.O., C.B. (Assistant Under Secretary of State for the Home Department); Arthur Rotherham, M.A., M.B. (Medical Superintendent of the Darenth Asylum); and Miss Mary Dendy (Hon. Secretary of the Lancashire and Cheshire Society for the Permanent Cure of the Feeble-minded).

The existing Lunacy Commissioners are, by virtue of their office, paid Commissioners of the new Board of Control, which came into being on November 1st. It will, therefore, be composed as follows:

Sir William Byrne, K.C.V.O., C.B. (chairman),
Dr. C. H. Bond,
Dr. E. M. Cooke,
Dr. S. Coupland,
Miss Dendy,
Mr. B. T. Hodgson,
Mr. S. J. F. Macleod, K.C.,
Dr. F. Needham,
Dr. A. Rotherham,
Mr. L. L. Shadwell,
Mr. A. H. Trevor.

The four unpaid Commissioners will be appointed later.

Sir William Byrne was a member of the Royal Commission on the Feeble-minded.

The Act gives powers for the appointment of fifteen Commissioners, of whom not more than twelve shall be paid. At present the Government proposes to appoint eleven paid Commissioners only. This would seem to leave four unpaid Commissioners to be appointed. These appointments have not yet been made. As there is nothing in the Act to show what will happen to the four unpaid Lunacy Commissioners, it is possible that some of these may be continued in office on the Board of Control.

The powers and duties of the Commissioners in Lunacy under the Lunacy Acts, 1890 to 1911, will be transferred to the Board of Control "as from the commencement of this Act"—that is, presumably, from April 1st, 1914.

If this be so, then apparently both the Lunacy Commission and the Board of Control will exist concurrently during the next six months, after which the Lunacy Commissioners will only exist as an entity separate from the Board for any purposes (if there are such) which do not come within their powers or duties under the Lunacy Acts, but it would seem that for all practical purposes they will be merged in and their duties transferred to the Board of Control.

It seems clear that the Board now constituted must forthwith appoint an Administrative Committee under Section 22 (5), to which will be entrusted certain powers and duties enumerated in the Schedule to the Act—namely, the supervision of local authorities, certification and approval of premises, provision and management of State institutions for dangerous defectives, administration of grants, and other administrative duties that may be assigned to them, all being powers and duties of the Board under this Act.

No doubt the newly-appointed paid Commissioners will be members of this executive committee, but it can hardly be doubted that there will also be a strong representative