MOTOR CARS FOR MEDICAL MEN.

NOVELTIES AND TENDENCIES REVEALED AT THE OLYMPIA SHOW.

By H. MASSAC BUIST.

THE yearly international motor car show, which the Society of Motor Manufacturers and Traders opens to-day (Friday October 22nd), under the patronage of the King, at Olympia, Kensington, will be available daily, Sunday next excepted, until 10 p.m. on Saturday, October 30th.

The general motoring conditions in prospect for the ensuing year, as far as mechanical and trading developments are revealed at this exhibition, were reviewed in these columns last week. It may be added now that 45.6 per cent. only of the makes of cars on the home market are of native origin, 25.4 per cent. being French, 12.7 per cent. American, 7.5 per cent. Italian, and the rest Canadian, Belgian, German, Austrian, Irish, Spanish, or Swiss. Four-cylinder engines are the predominant type, representing 54.6 per cent.; but six-cylinder types have increased greatly in number, constituting 36.6 per cent. There is only one twelve-cylinder engined car—the steel sleeve valve 50/150 h.p. Daimler mentioned last week. But the number of eight-cylinder engined car types has been increased from sixteen to twenty, all the new eight-cylinder engines being single line constructions, the most noteworthy of which is the 35-h.p. Sunbeam. Of the score of types, three only have the cylinders V set in blocks of four.

No fewer than twenty-seven new six-cylinder engined models are introduced, the majority by British constructors, ranging in size between 2 and 3 litre cylinder content. This confirms the tendency disclosed at the Paris show a week previously, where every native manufacturer except three presented a six-cylinder engined car type. Moreover, of that trio, two are known to have "small sixes" on the stocks.

Twelve new four-cylinder engined car types are introduced at Olympia, chiefly in the light car categories. There is only one three-cylinder engined car on the British market, but there are three two-cylinder types, two of them being two-stroke engines.

NEW SIX- AND FOUR-CYLINDER ENGINED CAR TYPES.

It is not possible, however, to form a definite idea of what will be the demand in regard to the number of cylinders employed, because we are on the threshold of a motoring year in which the public of moderate means requiring cars of moderate power is being offered for the first time practical six-cylinder engines. It is therefore assured that this coming motor year will witness the conversion of vast numbers of those who already own cars from the four- to the six-cylinder principle for a given power. Moreover, the situation at the moment is partly disguised by the effects of the coal strike, since some manufacturers have stocks of four-cylinder engined cars to-day, as of other types, which should have been disposed of by last July at latest. Therefore they are not exhibiting all that they had planned to display.

For the present it will be enough to say that new style six-cylinder engined cars should be studied on the stands of the following makers: Armstrong-Siddeley, Aster, Austin, Bean, Brocklebank, Daimler, Delage, Donnet-Zedel, Humber, Lagonda, Lea-Francis, Minerva, Oakland, Renault, Rochet-Schneider, Standard, Steyr, Sunbeam, Talbot, Vulcan, and Wolseley—certainly an assorted variety. Among new four-cylinder engined cars the following should be studied: Ansaldo, Citroën, Cluley, De Dion-Bouton, Fiat, Gillett, Humber, Lancia, Overland (Whippet), Riley, Rover, and Singer, some of them from curiosity merely. Medical men do not need two- or three-cylinder engines nowadays. Nor are eight- or twelve-cylinder types yet marketed at prices, and in sizes, suitable for the general practitioner.

DETAILS TO BE NOTED.

When making a tour of the show the medical motorist should look at such details as the attachment of the springs on cars, as there are some interesting examples

wherein ordinary bolts and shackles have been replaced by Belflex and such-like compositions that need no lubrication. While "one-shot lubrication" is not available, and in many senses is not desirable, for the kind of car necessary to his purpose, he will find that grease-gun lubrication is being standardized to an increasing extent, which is to his immediate purpose. He will observe also many examples of the pressed steel dash so designed as to carry the petrol tank conveniently, accommodate the instrument board neatly, and constitute a rigid cross-brace for the car frame. At last there is a general tendency towards tidy instrument board schemes as standardized.

In bespoke coachwork, finished in paint and varnish, attention should be drawn to the use of new style aluminium castings. Again, in fabric bodies which are very much in vogue, the problem of the fading of colour schemes other than jet black has led to introducing a new style covered body with fabric-covered upper portion and metal panelled lower portion. By this means the lower part and the bonnet of the car can be painted one colour and will therefore match each other throughout the life of the car. There is a welcome tendency to discard the use of lacings and even of cloth in the interiors of covered cars, and to upholster seats, panels, and so forth in plain shades of quite soft cowhide, which is as suitable for this purpose as it is unsuitable for open bodies.

SIX-CYLINDER ENGINES.

It matters not to the medical man whether six-cylinder engined cars are marketed as such, or as "light sixes"; what he wants to know is what they cost to buy and to run, and what advantage they are to him day and night all the year round.

For a given power or cylinder volume, the fuel bill might be a little more; but it would take a great deal of motoring to make it 40s. a year more with a six-cylinder than with a four-cylinder car. As constructed, however, the lower priced, smaller powered, six-cylinder engined car with developed transmission system, superior suspension, and saving of unnecessary weight in details, has a petrol bill approximately equal if fast speed is not indulged in. But where hills have to be climbed, if the motorist wishes to save time he must spend a trifle more on petrol, though there is no occasion for the tyre bill to be heavier if he uses his brakes with judgement and does not "hunt" the engine. If he is willing to go uphill at the same speed as he would with a sluggish four-cylinder engined car of the same actual power, then his petrol bill with a six will be a trifle lighter. But with a six-cylinder engine he will save both time and nervous strain, which are of the greatest importance to the class of motorists I am addressing here. There is not the same necessity to change speed with a six-cylinder as with a four-cylinder engine; in other words, a man with professional problems to solve will not also drain his energies by concentrating on physical tasks when journeying from one patient to another.

POINTS ABOUT NEW CHASSIS TYPES.

At this show the medical man may therefore be advised to examine the £18 tax, 2,230 c.c.m., overhead valve, six-cylinder engined, £345, five-seat Standard car that has been produced with all-weather equipment and, of course, four-wheel brakes. He will see that, though the taxation rating is a few pounds more than he might wish to pay, nevertheless the cost price for a car of this performance is so much below expectations that he will enjoy several years of use before the extra amount of money he must spend in tax will bring up the cost of the car to the limit he had in mind for this class of performance and service. Further, the general belief in the House of Commons is that our present taxation, on the principle of rating engines, will be abolished next year in favour of a fuel tax. This is not an expression of my personal opinion, but merely an incidental record of the present political atmosphere.

This Standard car follows the characteristic practice of the firm, providing ample accommodation and great strength as well as entirely original body construction. The new six-

cylinder engine is rated at 18/36-h.p. Certainly the general lay-out will interest the medical man. For those for whom this is too ambitious, Standard devotes the rest of its enterprise to concentrating on the 14/28-h.p. £275 overhead valve four-cylinder engined car which it introduced at the last show. The performance of this car is remarkable, eclipsing anything Standard has done before. Improved bodywork is available on all types, the developments including increased headroom, a higher windscreen, higher side windows, the extensive use of metal in place of wood in the construction of the body frames and doors, the standardizing of automatic windscreen wipers, and the provision of a special scheme of finishing that renders each body largely immune from the ills to which paint and varnish treatments are subject.

CONTRASTED EXAMPLES.

Reverting to six-cylinder engine practice, in another direction we find remarkable enterprise by Armstrong-Siddeley, whose chief novelties are a "long" 18-h.p. model and a "short" 18-h.p. model, the latter being a 20-h.p. R.A.C. rating, 2,872 c.cm., six-cylinder overhead valve engined machine capable of 65 m.p.h. on top gear, and listed as a Taunton tourer complete at £450, the weight being 30½ cwt. This is therefore another type of six-cylinder engined car, perhaps more ambitious, which nevertheless comes within the class which some medical men require. But this world-famous engineering house, that built Sir Alan Cobham's engines for his flight to Australia and back, introduces other lower-priced propositions, as in the 14-h.p. four-cylinder overhead valve engined chassis at £230, which is available as a Sandown tourer complete at £360, and as a Broadway four-door saloon at £15 more only, the latter having particularly smart lines. Armstrong-Siddeley's 1927 range of cars is very comprehensive, alike in variety of designs, in scale of prices, and in engine ratings. I have merely drawn attention to one or two leading features.

Humber, the pioneer of the cheap four-cylinder water-cooled engined car more than a score of years ago, whose post-war production has been concerned almost entirely with four-cylinder cars, nevertheless finds an insistent demand for a six-cylinder engined type. It meets that by bringing forward, after a long period of trial, a nominal 20/55-h.p. 3,075 c.cm. overhead inlet and side exhaust valve engined £21 tax car with four-wheel brakes, a range of speed from 5 to 60 m.p.h. on top gear, a 10 ft. 10½ in. wheelbase, a track suitable for overseas service, with general constructional principles characteristic of the firm, including Perrot type four-wheel brakes with semi-servo shoes which are enclosed in weatherproof covers, at a chassis price of £570, or the five-seater complete at £725. Humber is one of the relatively few firms that use front-wheel brakes in association with the transmission brake, a compensating device being fitted between the two. The firm also introduces an entirely new 14/40-h.p. 2,050 c.cm. four-cylinder overhead inlet and side exhaust valve engined, £460, four-door, five-seat tourer, and a two- or three-seat three-quarter coupé with dickey at £575. Special attention has been devoted to designing this new middle-size engined car to function smoothly and to do a large proportion of its work on the direct drive.

IN THE MIDDLE RANGE.

Lagonda supplements the £13 tax, 14/60-h.p., four-cylinder, overhead valve engined chassis introduced last year by bringing forward now a £16 tax, 16/65-h.p., overhead valve, six-cylinder engined chassis with a right-hand controlled four-speed gear-box, a single dry plate clutch, a spiral bevel driven back axle, and six internal expanding brakes employed on the four-wheel principle. A stripped chassis is shown as well as another surmounted by a saloon *de luxe* body with partition, and seating two persons in front; three are accommodated on the rear and two on occasional seats. The standard type saloon, not shown, costs £795, the chassis with tyres being listed at £570. The engine has forced feed lubrication. Detachable wire wheels with Dunlop tyres are standardized on a 56 in. track. A grease-gun is used for lubricating the chassis.

Ansaldo, an Italian firm known in this country for its six-cylinder engined practice, may be said to be working also

in the opposite direction, in that it now supplements that enterprise by introducing a new four-cylinder, 1,325 c.cm. engined, 9 ft. wheelbase, 4 ft. 7 in. track chassis with a fabric universal joint between the engine and the three-speed gear-box, the open propeller shaft having two metal universal joints. The design shows that unnecessary cost has been eliminated without sacrifice of quality. The somewhat unusual practice of mounting the engine and the gear-box on a pair of heavy steel tubes attached to the cross-frame members, while it simplifies assembly, also reduces the time necessary for taking out the units when repairs are required. An overhead camshaft is employed. The forward suspension is unusual in that a transverse spring is used in front, the two main leaves having rolled eyes. In place of attachment to the axle by means of a shackle, a T-member is used with the stem sliding in a cylindrical boring in the axle and butting against a coil spring. A leather gaiter protects the slide from wind and dust. Anchorage to the axle is by means of a U-shaped member of circular section, the two ends of which pass through eyes in the actual forging and are secured by a nut. The loop is anchored to a cross-frame member. The three other Ansaldo models are being continued with practically no change.

MORE FLEXIBLE FOUR-CYLINDER PRACTICE.

While few medical men will have any use for the chief Alvis novelty, a 12/50-h.p. sports saloon capable of a speed of 70 m.p.h., the standard four-cylinder engined chassis has great attraction because of the unusual flexibility of the power unit, the roadworthiness of the chassis, and the sturdiness of the construction. This is a type which the firm has developed consistently during a period of years; it is now made only with overhead valve engines. The detail modifications introduced for 1927 in the standard chassis are all sensible and progressive; thus, for instance, a spherical bearing mounting is used for the cross-shaft operating the clutch. A lower gear ratio is furnished to the steering-box to enable low-pressure tyres to be used with ease. Longer wear is assured by the provision of wider brake shoes. A cross-tube, the downward end of which is mounted on spherical bearings to ensure that its movement shall be free of any binding that might be caused by frame whip, is now employed for stiffening.

The nominal 15-h.p. four-cylinder engined Triumph car of 2,169 c.cm. content aims at all-round good road performance in association with economical running, the four-wheel brakes being hydraulically operated. The five-seat all-weather touring car is listed complete at £395, the upholstery being in serviceable antique finished real leather. The five-seat four-door saloon shown is listed at £100 more, the upholstery being in enamelled brown furniture hide. The lines of the body are smarter this year.

Apart from the retention of established types, De Dion-Bouton enterprise for 1927 takes two main directions. Very substantial reductions have been made in the cost of all models, amounting in some cases to £190. Yet all chassis have been improved in detail, none now lacking four-wheel brakes, a four-speed gear-box, and cantilever rear springs. These models are supplemented by a new 12/26-h.p. type and by a 20-h.p. type, the former being a side-valve engined machine, with Ricardo pattern detachable cylinder heads, which, for the rest, practically follows the firm's well proved constructional practice. Detachable wire wheels are standardized with large tyres, and the radiator is high enough to give a level line from its cap along the saddle of the bonnet to the high waistline. The standard four-door six-seater is listed at £375 only, the four- or five-seat *de luxe* torpedo with wire wheels, or with wood wheels at option, at £425, the three- or five-seat *de luxe* torpedo at the same price, the three- or five-seat *de luxe* three-quarter coupé at £495, and a four- or five-seat *de luxe* four-door saloon at the same price.

MORRIS'S IMPROVED SUSPENSION.

Probably the medical man will agree with the man in the street that the new range of Morris prices—the number of models available are too numerous to mention here—is amazingly attractive. But he is not likely to agree that the flat radiator is the most important mechanical improvement made in the chassis. On the contrary, the medical

man will appreciate that the change from three-quarter to half-elliptic rear suspension is a very much more material development, because it vastly improves alike the road-worthiness and the riding qualities of the car. Valuable, too, is the introduction of a pressed steel dash, affording a rigid cross-brace to the chassis and providing a convenient means for carrying the petrol tank (now increased to seven gallons capacity), as well as forming a mounting for the new instrument board, which is a really practical improvement, all the dials being grouped neatly in a central oval flanked by cubby-holes for parcels on either side. More conveniently controlled and better brakes are furnished this year. The adjustments provided for the steering rake and for the clutch and brake pedals will be appreciated; also the better system of controlling the ignition and the carburetter. All these details can be studied conveniently by the exhibition of developed Morris-Cowley and Morris-Oxford 1927 types.

Few novelties are likely to interest medical men, especially those working overseas, more than the latest Morris development shown in stripped chassis form. This is a 2,513.28 c.cm., side valve, four-cylinder engine 15.9-h.p. R.A.C. rating, four-wheel-braked chassis with Dunlop reinforced tyres, and semi-elliptic springs fore and aft, retailing at the provisional price of £245, the open four/five-seater with four doors, completely equipped, costing £325. The complete car weighs 26 cwt., and is capable of a high rate of speed because it has a gear-box with four speeds forward in association with a dry single-plate clutch. The three-quarter floating-type back axle has an overhead worm drive. All the brake-cam operating spindles are carried above the axle in a position where they are not liable to damage on rough roads. This car has a minimum ground clearance of 10½ in., a track of 56 in., and a wheelbase of 9 ft. 6 in.

All Morris coachwork types have been improved considerably by the provision of a higher waistline, deeper and more comfortable seating, and greater leg room. Wide doors are fitted to both the Morris-Cowley four-seat and the saloon types.

As it is impossible to show all the Morris products in the limited space on the stand at Olympia, a special exhibition is taking place during the show period at the Acton premises of Messrs. Stewart and Arden, within easy reach of Olympia by omnibus, every Morris-Cowley and Morris-Oxford chassis type and body type being on view there.

TEMPTING PRICES.

No firm in the British industry catering for the motorist of limited means but considerable ambition has gone ahead in the last year as has Clyno of Wolverhampton. Now it offers the two-seat nominal 11-h.p. type with front-wheel brakes, bulb horn, and windscreen, among other additional equipment, at £160 complete, which is £10 less than the cost of a car of this type last season without those accessories. This policy applies also to the four-seater, which has been reduced in cost £17 10s. and has additional equipment, including a windscreen wiper, four-wheel brakes, and a hood envelope. The same remark applies to the higher powered Clyno, which is now an ex-13-h.p. rater, being re-listed in developed form as a 12/28-h.p. machine, every example of which has the firm's system of front-wheel brakes and complete equipment, though each developed type is listed at a lower price than last year: for instance, £40 less in the case of the four-seat 12/28-h.p. type, now priced at £220 complete; and so on. The improved four-door saloon sells at £250 complete.

I referred last week to the 850 c.cm., overhead camshaft operated, overhead valve, four-cylinder engine Singer "Junior," introduced at £148 10s. as a four-seater to supplement the firm's two other models, the four-cylinder engine one of which is now renamed simply the "Senior" type. The six-cylinder engine model is styled the "Six" type. The "Senior" is presented this year with improved coachwork, the details embracing wide, roomy bodies and pneumatic upholstery covered in real leather. The equipment is complete. Four-wheel brakes are standardized on all these models, the four-seater costing £220, the two-seater the same price, and the saloon £40 more. Certainly the six-cylinder Singer, which was introduced

last year, is offered at a very competitive price—namely, £325 for a four-seat touring car complete, and £25 more for the saloon.

The exhibit by Gordon England, long known as specialists in Austin cars, is particularly interesting this year by reason of the proved practicability of its wholly original three-point design of body scheme, to which extensive reference was made in these columns on its introduction last year. It differs altogether from the flexible fabric type in that it is built and mounted to accommodate variations in chassis form. These bodies, which are neither heavy nor unduly expensive, may now be studied in detail and variety.

With a radiator that is a reproduction on a lesser scale of the six-cylinder engine Waverley, this firm introduces a nominal 7-h.p. £100 car with a four-speed gear-box, four-wheel brakes, and a horizontally opposed, water-cooled, two-cylinder engine with side valves, the rating being 7-h.p. The detachable wire type wheels are shod with balloon tyres. Electric lighting is standardized. The body is designed to be large enough for two adults and two children, and is equipped with a hood and a windscreen.

For the ensuing season Bayliss-Thomas offer two chassis, both with overhead valve four-cylinder engines and gear-boxes having three speeds forward; the £10 tax 1,247 c.cm. engine type being listed as a four-seater complete at £225, and the £12 tax 1,496 c.cm. engine model as a four-seater complete at £240 and as a saloon, complete, at £325.

POINTS ABOUT ACCESSORIES.

With the facilities provided by the enlarged building at Olympia the industry concerned with the production of accessories for motor vehicles presents a collective exhibit almost bewildering in its quantity and variety. Therefore a mere hint of a few phases of interest can be mentioned here. Thus, apart from its exhibit in the carriage section of various cars with Mann, Egerton and Company's bodies, this firm shows in the accessory section, at Stand 348, an ingenious car-washing outfit, an electrical air compressor and tank, a pressure cleansing tank, a paint-spraying pistol, a breakdown equipment, a car overhauling plant and tools, and a petrol consumption test tank which enables any owner to make an accurate record of the fuel consumption over a given route. The *Autocar's* "miles per gallon tests" are undertaken with these tanks, which are quite small and give visible reading at any moment.

Again, at Stand 424 A. W. Gamage, Ltd., show an ingenious ashtray, a series of radiator cosies, some attractive cushions, and a wide range of driving mirrors and motor horns. This firm also shows for women motorists rubber heel protectors designed to obviate damage to the most delicate shoe when driving, and which are, nevertheless, quickly slipped into place.

No accessories are subject to more rapid developments than sparking-plugs, owing to the necessity of making them withstand greater heat in proportion as standard engine efficiency is raised year by year. Under this head Lodge (Stand 447) shows a new sparking-plug; this is the latest form of the well known C3 type that is fitted to a large number of prominent British cars this year; it is packed in a new container. Plugs for all other purposes are also shown by the firm.

The latest types of Zenith carburetters are shown on Stand 505, including a new plate type filter that forms an excellent adjunct to the carburetter, non-corrosive bronze rings being employed.

In regard to motor fuel, there is an interesting exhibit by the British Petroleum Company, an all-British concern with refineries at Llandarcy in South Wales and at Grange-mouth in Scotland, employing 20,000 British workers. "BP" spirit for cars is displayed at Stand No. 219 by the suppliers of the fuel for the machine that won the Light Aeroplane Contest at Lympne. The Anglo-American Oil Company, marketers of Pratt spirit, were the first to realize the importance of the guarantee label which they now feature at Stand 270. Many types of petrol pumps, lubricating oil cabinets, and the "depth-o-meter" gauge for recording the contents of underground tanks are shown; also swing arms for use with pumps.