THE MOTOR CAR SHOW IN RETROSPECT.

By H. MASSAC BUIST.

THE Motor Exhibition which closed at Olympia, Kensington, on November 16th contained such a multitude of novelties, all chiefly of a minor character, that it has been almost impossible to make acquaintance with all in the eight days during which the display has been open to the public. But the first and last impression is still that the main advance has been the tendency to fit self-starters and the further growth of the use of electric lighting systems, for plant are now being made on a smaller scale to suit middle and low-powered cars and slender purses.

SELF-STARTING APPLIANCES.

The self-starters of the electrical sort are fitted to the Cadillac, the White, the Crossley, the Lancia, and the Lanchester, the last-named firm using the Delco or Cadillac system where required.

The Crossley system, which has not been previously mentioned in these columns, consists of a dynamo mounted alongside the engine and chain-driven from the crank-shaft, epicyclic gear being contained in an extension of the dynamo bracket. The mere movement of a dashboard lever interposes this sun and planet gear between the chain drive and the dynamo spindle so that the dynamo has a 20 to 1 reduction when it is starting the motor, while the moment the engine begins firing under its own power the gear goes out of action in automatic fashion. In the event of back fire the drag on the brake that applies the epicyclic mechanism automatically releases the gear, which adds about 15 lb. weight to the dynamo. When the dynamo drives the motor, it is series-connected in automatic fashion by the lever on the dashboard. As the engine is driving the dynamo, the dynamo works a shunt wound generator for the purpose of charging the battery of accumulators which supplies the current for lamps and for starting apparatus. The Lancia has a Bosch auxiliary engine starting magneto mounted on the dashboard, and depends on the cylinders being already charged with gas.

The Adler, the Clement, the Star, and La Buire firms make use of the spring system, three of them using the Ever-Ready pattern already described in these columns, while the La Buire device is a combined spring and hand arrangement worked from the driver's seat by a side lever similar to a brake one. By means of a steel cord this lever works a ratchet starting crank in place of the usual starting handle. The lever is assisted by a spring. The ratchet starting crank is fitted with a centrifugal disengaging clutch that flies out of action in automatic fashion immediately the engine begins to turn under its own power, and which is also designed to free itself in the event of back-firing.

ELECTRIC LIGHTING.

Dynamo lighting sets are being fitted to an increasing number of cars. Thus the C.A.V. type, with the dynamo driven from the rear end of the cam-shaft, is fitted by Armstrong-Whitworth, Austin and Mass, while on the Daimler the same device is belt-driven from the front end of the cam-shaft, on the Brasier it is belt-driven from the water-pump shaft, and on the 20-30 h.p. Picard-Pictet it is driven from a pulley behind the clutch. On the Arrol-Johnston and the Briton the Rotax-Leitner type of dynamo is belt-driven from the cam-shaft, while on the Vulcan it is belt-driven from a pulley between the clutch and gearbox. The Deleo system on the Cadillac is shaft-driven by the magneto-spindle, and on the Lanchester it is chain-driven from the transmission shaft behind the gearbox. The Scott-Crossley type of dynamo is driven by an enclosed chain from the crankshaft of the Crossley car. The Rushmore dynamo on the Lancia is belt-driven from the propeller shaft just behind the gearbox, and the Blériot dynamo on the 20-30 Picard-Pictet model is belt-driven from a pulley behind the clutch, while the Ducellier dynamo is mounted alongside the magneto on the Sheffield-Simplex, and is driven by a separate spindle. The Brolt type on the Standard is belt-driven from an aluminium pulley between the clutch and gearbox, while the Lorraine-Dietrich has the C. J. L. machine.

IGNITION.

In regard to ignition devices, not only the Bosch but several other makers come forward with magneto machines completely enclosed against the intrusion of dirt, dust, and damp, these machines being fitted as standard on quite a number of cars, including, of course, the Rolls-Royce. We may take it, indeed, that the enclosed magneto machine will be a general standard fitting in the course of a few years' time. The matter for marvel is that so many ordinary magneto machines stand up to their work so well in wet weather.

REFINEMENTS TO ELIMINATE VIBRATION AND RATTLING.

A number of devices have been introduced at the show, too, to prevent coachwork rattling, as instance notably the Van den Plas door-catch, whereby when the door is closed it is gripped tight to the remainder of the body on the Métallurgique chassis.

Absence of rattling as well as efficiency are aimed at in such devices as those for providing adjustment of an automatic sort to prevent the fan-belt slipping, as instance, notably, the Benz, Crossley, and De Dion practices. Another idea for preventing engine vibrations, causing either drumming or minor rattles of the coachwork, has been devised by Mr. Lanchester by furnishing a couple of spindles, each weighing only five pounds, and rotated in opposite directions at double the crankshaft speed. At high engine revolutions these serve as a check of no less than half a ton of force on the unbalanced forces of the engine, and give running as smooth as that on the best six-cylinder motors.

In regard to the question of suspension, while the great majority of the vehicles are fitted with supplementary shock absorbers, the explanation of this is chiefly that the firms responsible for them are interested in these accessories, for, frankly, the best sprung cars of the day are in need of no such auxiliaries, which rather increase the original plunge than act as any material check on the rebound, for which purpose only a very few of the devices have been designed, such as the Gabriel "Snubber," which has nothing whatever to do with the original plunge of the spring, but which comes into operation only when the act of rebounding is occurring. The fact is, the ordinary supplementary coil spring or telescoping pneumatic device came to us first from France, where roads are in much worse condition than here, and where, in consequence, the average chassis is supplied to the user with springs of a stiffness that would almost alarm the average British user. Such springs can stand softening by supplementary devices, which, nevertheless, do not interfere with the sufficiently stiff action of the main spring in preventing the axle bumping against the frame of the car when traversing pot-hole roads. But British cars for average home service do not, or should not, need any such thing unless the springing is mighty bad. Further, these devices are apt to increase lurching tendencies of the body at corners, which are not pleasant, also to let the tread of the tyres and the under portion of the mudguards come into contact when going over lumpy roads. We may take it that great and sudden as has been the vogue for the supplementary shock absorber, it will not endure as a general fitting for many seasons more.

THE CYCLE CAR AND MOTOR CYCLE SHOW AT KENSINGTON.

POINTS FOR THE MEDICAL MAN OF SLENDER MEANS.

On Monday next there will open at Olympia, Kensington, the third annual exhibition promoted by the Cycle and Motor Cycle Manufacturers' and Traders' Union, Limited, when there will be presented not only the latest models in motor cycles, which will be found to contain far more complete equipment than before—so much so, indeed, that one may be surprised at the amount which a motor cycle is expected to carry nowadays—but will also be notable as the first year in which the big manufacturing houses have come forward with propositions in the guise of cycle cars—that is, machines of a limited engine capacity (1,100 c.cm.) and chassis weight (6 cwt.), so that the running costs shall be down to motor-cycle