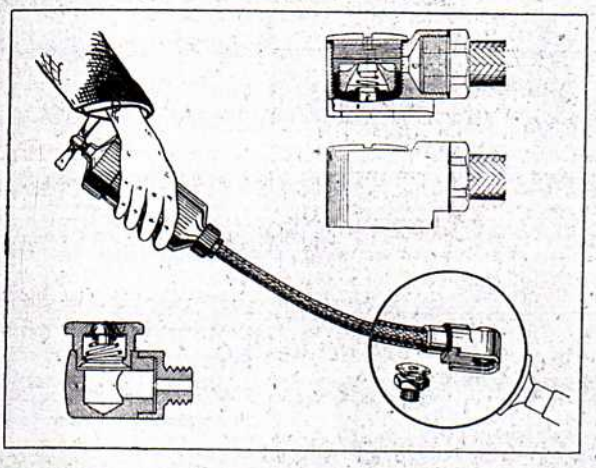
TECALEMIT

A New Greaser System for Chassis Lubrication

A NEW high-pressure lubrication system for motor vehicle chassis has been introduced by Tecalemit, Ltd., of 10, Little Portland Street, Oxford Circus, London, W.1, which will make lubrication of the chassis mechanical details more efficient and a much less dirty and inconvenient operation than it has been where screw-down greasers have been used.

It has the advantage that it can be installed in all cases where the usual type of screw-down grease lubricators have been used.



TECALEMIT GREASE LUBRICATION: The Tecalemit grease-gun, and how it is easily applied by drawing the coupling across the end of the grooved greaser. Inset: A section of the hooking-on nozzle at the end of the flexible tube and an elbow type greaser.

It consists of two essentials—a grease-gun of special type and a special grease plug for the parts to be lubricated.

These plugs are supplied in all the sizes of threads to suit the parts which are now fitted with the ordinary greaser, and are intended to replace them on the chassis to which the new system is to be fitted.

The grease plug has no cover, but is fitted with a non-return ball valve. It has a flange at the head to fit a sliding connection at the end of the metallic flexible tube of the grease gun. The gun being loaded the sliding end fitting is slipped over the plug and pulled towards the operator, when the connection is at once made. Screwing down the plunger of the gun forces the grease through the non-return ball valve.

It is obvious that the gun can be used in otherwise inaccessible positions without the need for crawling beneath the car and without soiling the hands or clothes. When the grease-gun is applied there is no screwing off of grease covers and no replacing them after charging the lubricator. The ball valve ensures entry of the grease and the closing of the greaser after the grease has been forced through. A pressure of 1,000 lbs. to the square inch can be developed, which will force the grease through the tightest and most obstructed bearing. The pressure drives out all dirt and grit and hardened grease, and replaces it by new grease lubricant, which may be made to ooze out through the bearing surfaces, indicating that the lubrication has been completed. Tecalemit lubricators can be supplied in all sizes of threads, and in some cases with a straight fitting which can be pushed into a parallel hole and expanded in it by a simple, hardened tapered ferrule, driven in by a punch and hammer in such cases where threaded holes are not supplied. This particular application is known as the "Quick Fix" grease plug. Plugs are also made with big screwed ends to screw into the standard shackle bolt tapped ends. They are made straight or with elbows to offer accessibility in awkward situations.

In cases where the grease has become hardened in a pin or bearing or joint, a special "Booster" pump is provided—very useful for garage work. This will develop a pressure of 5,000 lbs. per square inch, and will clear the most refractory bearing or pin, after which the usual grease gun supplied with the system can be used for ordinary renewal of the grease lubricant. This booster gun has a fitting to attach to the ordinary gun by means of which it can be readily filled from the latter.

The ordinary gun is filled from a special container in which the Tecalemit grease lubricant is supplied. This latter constitutes a convenient method of filling the gun. The cylindrical box grease container has a piston with a hole in the centre. After removing the covers of the grease tin and of the gun, the body of the latter is pressed down on the piston in the tin, and the grease rises up and fills the gun in a cleanly and non-wasteful manner.

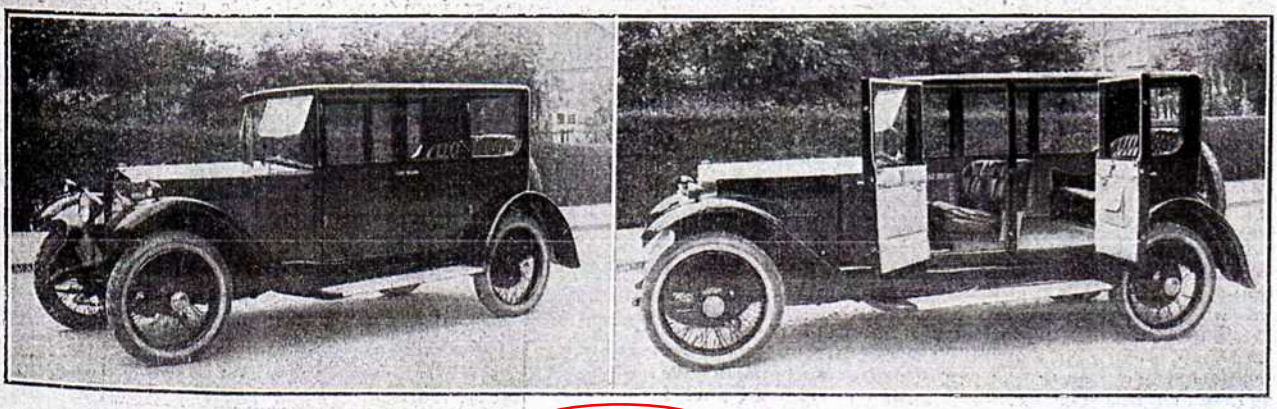
So that, with the new system the filling of the gun and of the greasers on the car is effected easily. Two sizes of the containers are supplied—one 2¼ lbs. and the other 5½ lbs. The amount of lubricant contained in the latter is sufficient to fill the grease gun sixteen times.

The firm supply a very interesting booklet dealing with the system, which has been adopted by more than 500 manufacturers of motor-cars, etc., and giving full prices of the guns, booster guns, containers and grease, and the threaded and plain end grease plugs for replacing those already on the car. Motorists would do well to investigate this new system, which offers easy and quick and certain and cleanly chassis lubrication.



The French Grand Prix on a Track?

M. RENE DE KNYFF is reported to have said at a meeting in Paris the other day that the French Automobile Club is considering the question of running its Grand Prix race in alternate years on the Chasse motor-racing track, which is now in course of construction.



A special 3-door saloon, mounted on latest 2-litre Diatto chassis, supplied to Dr. W. Paul, of Kingston. Coachwork by the Surbiton Coach and Motor Works, of 82, Brighton Road, Surbiton. Note the special construction of doors opening from top of chassis frame, so allowing a low body with ample head room for entering. The front screen is "V" fronted and sloped slightly.

THE AUTO.
Established in 1896.
Founder and Editor: Stanley Spooner
36, GREAT QUEEN STREET, LONDON, W.C. 2
Telegrams: Truditur, Westcent, London
Telephone: Gerrard 1828

CONTRIBUTIONS

Articles on automotor technology and touring, or of other interest to motor vehicle users, are invited, especially from overseas

Photographs of beauty, curiosity or other interest are also in request, whether made in the British Isles or elsewhere in the Empire

All contributions should be addressed to The Editor, should bear the name and address of sender, be adequately protected against damage in transit, and accompanied by directed and stamped covering for their return if unsuitable

SUBSCRIPTIONS
(Subject to Revision)

	To U.K. Addresses	To Overseas Addresses*
3 months	3 6	4 4
6 months	7 0	8 8
12 months	14 0	17 4

* *European subscriptions must be remitted in British currency*

ADVERTISEMENT COPY

Matter and blocks for insertion in each Thursday's issue should be in the Offices by first post on each Saturday, if proofs required, or on Monday if not. Small corrections can be accepted up to 12 a.m. on each Tuesday

REMITTANCES

Cheques, Postal Orders, etc., should be made payable to the Proprietors of the "AUTO." and crossed "London County and Westminster Bank, Ltd., Account Payee Only." All communications upon Advertisement or Commercial Matters should be addressed to The Manager of the "AUTO."

CONTENTS

DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in the following list:—

1924	
Mar. 15	J.C.C. General Efficiency Trial.
April 27	Targa Florio.
May 3	J.C.C. Spring Meeting at Brooklands.
,, 18	International Road Race in Poland.
,, 30	Indianapolis Race.
June 21	J.C.C. London–Manchester Reliability Trial.
June (end)	Reliability Trial in Poland.
July 7	Belgian Grand Prix Race.
,, 26	J.C.C. Hill Climb, South Harting.
Aug. (last week).	French Grand Prix Race.
Sept. 7	Italian Grand Prix Race.
,, 20	J.C.C. 200 Miles' Race.
Oct. 7	Hill Climb at Frognersaeteren, Norway.

EDITORIAL COMMENT

Roads One of the most interesting debates in the House of Commons of late was that which took place on the 6th inst., when Lieut.-Col. Guinness moved to reduce one of the Ministry of Transport votes by £100. It was made clear that the motion was not intended as a vote of censure on the present Minister of Transport, but rather as an offering of friendly advice to one who was in a difficult position. The debate resolved itself into an appeal by members representing rural constituencies for more and larger advances from the Road Fund to assist them in the maintenance of local roads. As Viscount Curzon pointed out, this organised attack on the Road Fund by members representing rural areas is no new thing, but has now become a hardy annual. We are glad to see that the Minister of Transport was not misled by it, and that he quietly but firmly pointed out that the Road Fund is derived from the taxation of motor vehicles, and is primarily intended for the improvement of important through communications by road, and that in giving his decisions the Minister must pay regard to the importance of the road to the community as a whole. He also pointed out that the rural authorities would be very considerably worse off if there was no Road Fund, and that the present method of dealing with the money does give the rural districts more money than otherwise they would get, and is a real relief.

Lieut.-Col. Moore-Brabazon asked for a statement of the policy of the Government with regard to the size of the Road Fund, as he could see claims being made upon it from every quarter of the country, and, finally, the motorist would be looked to to pay for all the roads throughout the country, which he in no way deserved to have to do. He thought it would be a relief to the car-owner to know to what limit the tax was to go. Mr. Gosling, however, refused to be drawn. It was impossible to say what the resources of the Road Fund would be before they stopped. The money was allocated for five years, and, he added, he might not be in office for so long.

Among other important points which were raised in the debate was one by Sir Douglas Newton, who asked whether something could not be done to prescribe building lines along our main highways. Every day buildings were being put up which in a few years' time would have to be taken down and compensation paid to their owners in connection with road-widening. He also put in a plea for a certain sum to be set aside every year for the building of new roads, a point which was taken up by Major G. F. Davies, who dwelt upon the importance of roads in the development of the country districts. The more the roads were made before the traffic was there the more would the traffic be developed in due course. In other words, the moment they began to improve the road facilities in the interest of the small-holder or the farmer, the more would they attract additional traffic. Another useful suggestion—that a way should be devised of encouraging the use of pneumatic tyres on commercial vehicles—was put forward by Viscount Curzon, who also asked that there should be more stringent regulation of traction engines.

The motion was eventually negatived, but it certainly provided a good debate which should not be without results.

"AUTO" MOTOR JOURNAL

"AUTO." ROAD-TRIALS

By EDGAR N. DUFFIELD

LXII.—THE 15.5 H.P. DIATTO

I BELIEVE it was about a year ago that I first made acquaintance with the 2-litre Diatto, introduced to the British market, as the 1923 Model 20, by Captain Cyril Durlacher, A.M.I.A.E., of 6, Upper St. Martin's Lane, London, W.C. 2. My impressions of last year's model were recorded faithfully. From memory, the only faults which I could find with the car, as tried, were that the gap between its fourth and third speeds was unnecessarily wide, that the clutch seemed to spin sufficiently to compel double de-clutching for really neat downward changes, that the engine scored more on power than on silence, that—a car bred in a racing stable—it was nicer above than below 40 m.p.h., and that the standard bodywork was a little too "Continental" for my taste.

I review the mild criticisms of a year ago because of the complete elimination of ground for them in the 1924 car which I have just tested, over a stretch of roads particularly well known to me. There is still the elaborate use of polished woodwork on the inside of the body, certainly, but it is now oil-polished, giving a semi-flat finish, in place of the former French-polishing, and in every respect the coach-building and equipment are vastly improved. I cannot remember, in fact, any car which has more markedly "come on" in twelve months than has this, the improvement being inspired not only by energetic voluntary betterment on the part of its producers, but also by their sympathetic reception of all suggestions put to them by their British concessionaire, who has not hesitated to send across ideas occurring to his customers, as well as to himself. Most European constructors are exceedingly deaf to suggestions offered by Britons, but—to judge by what Captain Durlacher tells me, and the improved look and feel of the car—the Diatto people regard their business in an eminently practical and sensible manner, at least weighing, if they do not act upon, every word of every hint offered to them.

Essential chassis-differences from the 1923 model are very few. We now have the same bore and stroke, 79·7 by 100 mm., giving 1,995 c.c. (the shade under the 80 mm. just bringing the cylinder-capacity within the 2-litre category), an overhead camshaft gear-driven from the fore-end of the crankshaft, a duplicated set of rockers—the idle members tending most effectively to damp-out any vibration of the rocker-shaft due to slight inequality of spring-strength, as time proceeds. We have a Marelli magneto in place of the old Bosch, but Bosch lighting and starting are still standardised, as also is a Zenith carburettor, of the triple-diffuser pattern. All the accessories are positively driven; even the two-bladed wooden cooling fan is gear-driven. Cooling remains as it was, with a very simple means of blanking-off any desired proportion of the radiator-surface, extra-large, as on all cars built for mountainous work.

Lubrication seems unchanged; the clutch is identical, except that its weight has been noticeably reduced, and its spinning has departed with the excess weight. It is still of the single-plate dry-running type. The gear-box is merely better made, and is now an outstanding proof of the fact that Italians can cut gears nicely, given money, time and the right stuff and tools. Even if one had to make twice as much use of this component, in urban traffic, as one need make, nobody could object to the sound of the transmission, which is equally good either as to the pinions in the gear-box or the spirally-hobbed bevels of the final drive.

Speaking of gears, the 1923 car which I tried had, I believe, about a 5 to 1 fourth speed. This year's fourth is only 4·16 to 1, which makes the car much pleasanter on the level, and the third has—so to speak—been made to meet the fourth half-way, by a great reduction of the gap. The third speed is now a most delightful, exhilarating gear.

Another matter in which improvement has been effected is that of braking. Both hand and foot brakes are excellent. Four-wheel braking is still an extra. *Why* anybody should specify it, at an extra cost of £30 or so, I cannot understand, even when it is Diatto-Perrot four-wheel braking, as used on the "sports" Diattos which did so very well both at Barcelona and Monza during the past season.

The suspension remains perfect, at all speeds—*not* because there is anything unconventional about it, but because its designers have appreciated the fact that springs do their work best when they are seen and felt to be doing it least. The names of Bugatti and Diatto are closely associated. Whether some of the first Bugattis were built by the Diatto people, or it was that they first used Bugatti motors, I neither know nor care; but I do know that the two principals are good and old friends, and they evidently think alike as regards suspension, and share my contempt (or at least *pity*) for people whose idea of a well-sprung car is one that can be rocked about, boat-fashion, by putting one's foot on its running-boards.

After a look around the car—during which Durlacher, John and I were joined by Major H. O. D. Segrave, on his way to pay a call at the K.L.G. works—we got aboard. As Segrave wanted to see what the car was like, I suggested that Capt. Durlacher should drive as far as the Robinhood Company's works. My first experience was therefore that of a passenger, and this was almost as pleasing as was that at the wheel. Apparently there were no policemen at play either on Putney (while Durlacher drove) or Kingston (during my trick) hills. We went up Putney Hill on third; went up in such style as made me reflect that we might be on a Gaillon class-winner, had the air not been so keen. Sitting in the rear, getting full benefit of the exhaust boom, I honestly could not get a suspicion of the sound of the gear-box, although the silencer was kept in full operation. That suggests good gear-cutting, does it not?

Segrave having pronounced it An Motor-Car, and presented its owner with a cab-fare in the shape of a set of very special K.L.G. plugs, I took charge, firmly refused to give my artistic colleague the benefit of the very neatly-mounted rear wind-screen, and we set out on the real job.

Then it was that I could get full measure of the

improvement effected in a single season. If Durlacher had been a shade more salesman than engineer, he would have gone home by 'bus, because this thing made me itch to own it, positively *itch!* I fall in love almost as easily as I fall out, but seldom with the precipitancy of this morning, because this car is so very much my type of car—full of life, yet glued to the road around every corner, absolutely splendid in the hands, fitting the body beautifully (though no change was made of driving-seat position, despite its owner's being four to six inches taller than I am, and proportionately army and leggy). The head of the hand-brake lever was a little of a reach for me, certainly, to the left. I still do and always shall prefer right-handed control; but that is the only departure from standard which I would specify if I were buying a Diatto, and paying twice its current price for it. Before I forget, this price is £650 with Sankey wheels, £670 with Rudges, or £700 with Rudges and four-wheel braking, this last item being something quite unnecessary, in my opinion, while the standard brakes remain so amply, so pleasantly efficient and sweet.

On the flat the comfortable maximum speed of this touring model would seem to be round about 65 m.p.h. One can have it fitted with a "sports" engine, giving a maximum of 80, for an extra £25, but the tourer does its 65 so very easily, with so little either of actual or evident effort, that this £25 is another piece of expenditure which I should regard as extravagance on the part of anybody who will do most of his driving on British roads.

I took every excusable opportunity of using that lovely third, although I went through Kingston on fourth, just to see how slowly the engine would pull. With a more carefully-adjusted carburettor the car would throttle-down to 5 or, at any rate, 6 m.p.h. on top, and run perfectly.

This Diatto is not a light car. I should guess that she would scale 22 to 24 cwt., with her two spare wheels aboard, and that is quite a load for a nervy 2-litre motor, nowadays; but the way her engine takes hold of the weight, even on that 4·1 to 1 fourth, and walks away with it from a dead crawl, is most gratifying. It is emphatically "a fast touring car." It will do the "giving the girls a treat, along the front," sort of business, but it is still seen at its best in the forties. It will now, however, behave in the most docile fashion right through its top-speed range. But at cruising speed one enjoys its suspension as one cannot running more slowly, and the engine is so really silky up to anything from 2,500 to 3,000 that one is apt to cover a lot more ground than one realises, especially in March sunshine.

Examining the motor after a brisk run, I found it very clean. Although when we removed the cover of the valve-gear we found everything swimming in oil, the exterior of the crank-case was almost unsoiled, and there was not a blob anywhere, so that I could readily accept the assurance that the engine had not been wiped-off for 1,000 miles. Even 50 miles of lively travel will put a lot of oil outside *some* firms' joint-facings, but the Diatto is obviously very prettily put together.

All three electrical accessories are lined on the near side of the motor, the contact-breaker of the Marelli mag. being beautifully accessible, and incidentally having a short, sturdy blade-type spring which looks much less likely ever to tire than does the conventional and circumferentially-arranged, watch-spring pattern. The Bosch dynamo and starter-motor are cradled most conveniently, too, leaving only the water-pump and carburettor on the off side of the motor.

Lately I have taken to giving more attention than I did formerly to steering-gear boxes. Here is a very elegant little production, looking tiny, really very small in diameter, but appearing smaller than it is because of the unusually long thrust-blocks top and bottom of the worm-shaft. The steering connections are very racy, the fore axle is a picture; in fact here is a car which I call of "my" type because it looks just as nice, I am sure, naked as with its elegant body-work.

No matter who tells me that chassis are intended to be hidden, I like still to think that there is something pretty inside my body-work. It is, I suppose, like the possession of a very fine watch, say a Vacheron et Constantin—for practical purposes no more useful than is my faithful old Waltham, never seen more than three times a day by its owner, hidden in his pocket hour after hour, and yet a great pleasure to him because he knows that it is in his pocket, and that if he takes it out it will be as beautiful as it is serviceable.

I would not set the Diatto above some other Continental productions; I would not rank it above a number, and a steadily increasing number, of English cars; not even above a few Americans; but it happens to be just the sort of car which appeals to me, and for people who like the sort of car which I like, this is one which they will like very much indeed, especially at its price.

The body lines, too, appeal very much to me. The continuous line of bonnet-radius, cowl-edge and panel-coaming is most pleasing. The treatment of seating, the upholstery, are matched only by the very fine work on the Steyr (formerly the Alpine-Steyr), and when I consider that all this body-work, and a four-panel V-sectioned screen—as firm as a rock in its supports—a metal-sticked hood encased in an envelope of the leather used for the upholstery, little arm-rests for the rear passengers, wing-wells for *two* spare wheels (though only five wheels are included in the price, either Sankey or Rudge), and so on, and so forth, cost only £155 above chassis-price, delivered in this country, I see that Italy is beginning to get a hold on the body-building business—something she had, until War-time, rather tended to ignore.

The car which I tried has been run only 5,000 miles, perhaps because Capt. Durlacher finds it very difficult to persuade his clients that their cars will be just as good as his, so that so many of them steal his new demonstrators as soon as he gets them running perfectly. But she was thoroughly sound everywhere, as to body-work and equipment, and an exceedingly desirable machine. Not meat for everybody, I know; but very tempting eating for those able to appreciate a real man's car, of moderate weight and economical maintenance, really nicely turned out, at an all-in price of £42 per h.p. of tax-rating, with Rudge wheels—which is (we must remember) only the price-ratio of the Vauxhall Fourteen, and therefore, as it has to include one-third import-duty and shipping charges, cannot be considered high.

yours, the sooner I shall get my particklers. If you sets quiet for five minutes, I shall *get* my particklers an' you can go on. The firs' race ain't till 1.30 today, any'ow! Meanwhile you can raise the dead, but you won't get no further," he concluded as he sauntered back to the "Yes, you did," match. I *hate* people who say "further," instead of "farther." For two pins I'd have told him so, too. Nasty, red-faced, black-moustached brute! I took his number, on both sides of his collar, to make sure. Impudent fool!

But the editor saw what to do. "Constable," he said, "One moment, my man!" To my intense astonishment the policeman came back to us.

"Yessir?" he enquired. Dash it all, even a policeman recognises the editorial mien, the calm, unassertive dignity, the potential triumph of Mind over Mattah!

"While I would not—ah—for worlds, constable, be the means of your losing any of your 'particulars,' do not you think that the amenities of transport would—*ah*—be fostered, furthered, improved, if you made those two louts shift their nasty vehicles out of the downward half of the road? There is much traffic on the up road, and we *must* get on. We *really* must get on! My presence is required urgently at Winchestah." And he frowned.

The policeman saluted, and went back to Box and Cox.

"Now then, there!" he said. "Shift your little 'am an' eggs out o' the way, there, you two! You go forward, White 'Eather, and you—'Enry Chaplin & Sons, Limited—you tuck in be'ind 'im, or I shall run the two of yer in, an' lively! *Come* on, there, the pair o' yer! Slap it *abart* a bit! Get a *move on*! *Pawss* erlong, there; *pawss* erlong!"

England will never go Red. The two lorry-men looked at him, jumped to their seats, one went forward with much noise, the other backed with more noise, and in a tick the block was cleared, and we continued on our way. The two lorries were still more or less on a corner. To pass them I still had to go on the off side of the White Line. But we could get going again. Once more the editor had saved the city, so to speak.

As we proceeded, he complimented me on my care on corners, on my driving (even on the straight stretches), always well in to my near side.

"Really, Biggs," he said. "if all people drove as you and I drive, there'd be *no* accidents, *no* delays, *no* congestion, and *no* need for White Lines! But while there are even a minority of inconsiderate people about, it seems to me that we must have White Lines, I fear, Biggs, my boy; we *must* have White Lines."

"But many people take no *notice* of 'em, sir!" I pleaded.

"No," said the editor, "That is so, Biggs! But it's a good thing to *have* 'em, you know, as a *reminder*, a kind of *memento-mori*, don't you think?"

"Perhaps you're right, sir, I said; "Perhaps you're right!" One has, you see, to keep to windward of editors. Otherwise, I regard White Lines as only half the battle. The only White Lines of any real use while *some* people use motor-cars are going to be ferro-concrete White Lines, three feet in height, eighteen inches in thickness—kerbs running from one end of every road to the other, and even then some of the blighters would tittup over them, if you ask me!

No; I am *not* a White Liner. As I said before, if you cannot make a man thirsty (or whatever it was) by Act of Parliament, you may lead him to the water, but the mill will never grind while it gathers no moss, and a bird in hand's worth two in the bush, so why cry "Wolf!" day after day, or even "White Lines," I ask you?

That White Lines remind many of the thoughtless, the forgetful, of their duty to their fellow road-users, I do not for a moment doubt, and I suppose that is *something* for which to be thankful; but I fear that we must have Black Shirts as well as White Lines, to deal with *some* of the beasts we all meet nowadays!

Records on 1½ Litre Talbot

A 1,500 cc. TALBOT, driven by Major H. O. D. Segrave at Brooklands on Monday, August 31, succeeded in establishing eight new international records. The speeds (subject to official confirmation) are as follows:—

From Standing Start

Kilometre.—74·44 m.p.h. (119·800 k.p.h.
Mile.—82·21 m.p.h.

From Flying Start

Kilometre.—114·71 m.p.h. (182·615 k.p.h.).
Mile.—113·24 m.p.h.
Five Kilometres.—182·463 k.p.h.
Five Miles.—113·12 m.p.h.
Ten Kilometres.—179·811 k.p.h.
Ten Miles.—111·71 m.p.h.

Brooklands Autumn Meeting

AN exceptional entry has been received for the B.A.R.C. Autumn Meeting, to be held at Brooklands on Saturday, September 12, the last open handicap meeting of the season. For the eight races on the programme, ninety-three cars have been nominated, including a number of cars which have not previously raced on the track. Amongst the big cars entered are a Leyland-Thomas, the 8-cyl. Ballot, the 8-cyl. Bugatti, 350 h.p. Fiat, the Wolseley-Viper, several Bentleys, a Crossley, a De Dion, a number of Austins, and Mr. Scriven's 6-cyl. Felix, which has now been christened "Mother Goose." Owing to the damage sustained in his accident at Boulogne, Mr. J. G. P. Thomas will not be able to race his record-breaking Leyland-Thomas, but he himself will be driving two other cars. The first race is timed for 2 p.m.

The Italian Grand Prix Race

THERE were seven starters in the Italian Grand Prix race at the Monza track on Sunday, and three countries were represented. Italy had three Alfa-Romeos and one Diatto, France a Guyot, and America two Duesenbergs. The Alfa-Romeos set the pace, Campari holding the lead for the first thirty laps, then giving way to Milton on a Duesenberg for a round or two until Brilli-Peri secured the lead and kept it to the end of the 800 kiloms. His time was 5 h. 14 m. 33 s., so that his average speed worked out to about 95 m.p.h. Campari, on another Alfa Romeo, was second, and Milton third, with de Paolo on another Alfa-Romeo, the only other finisher, fourth.

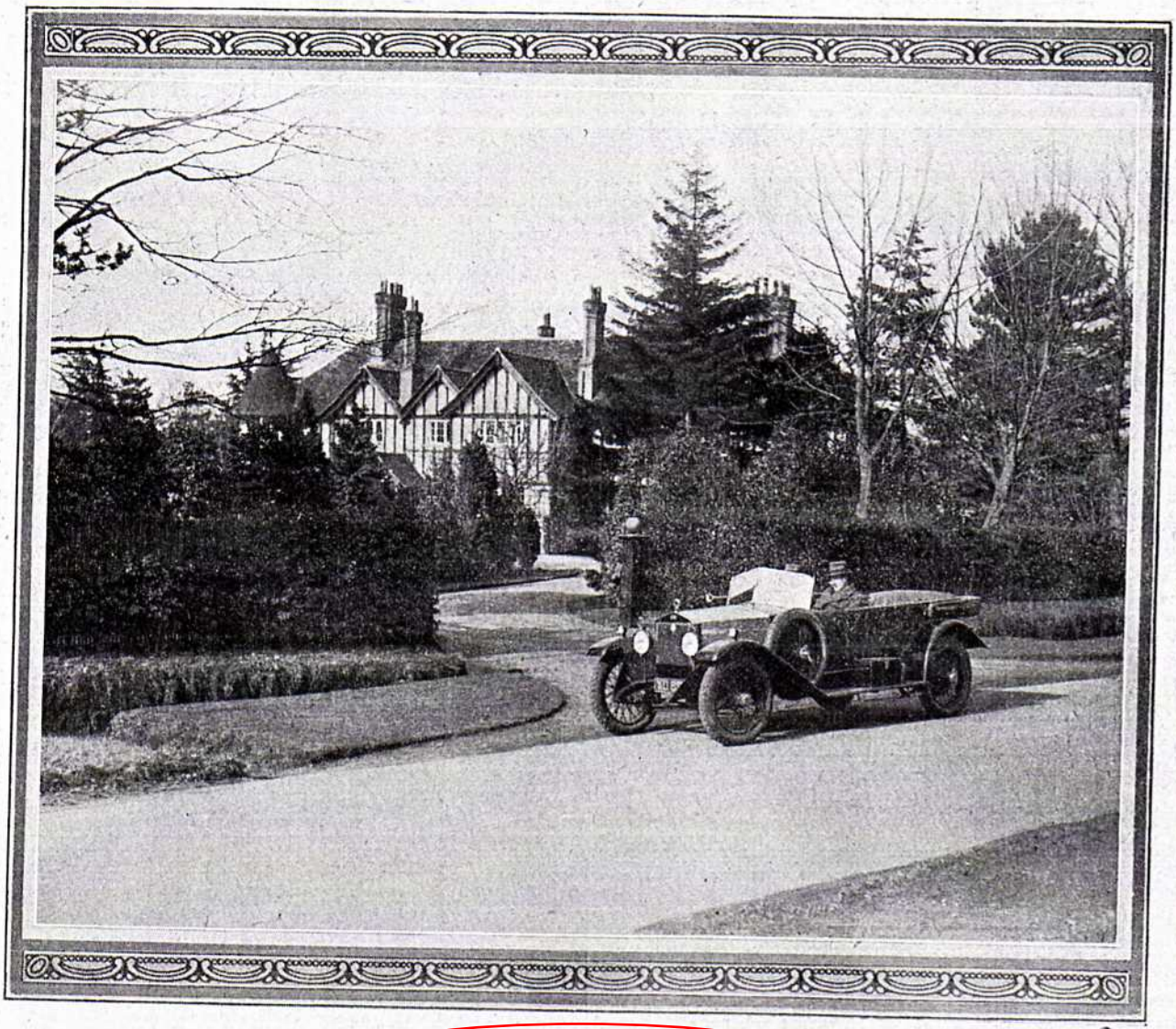
There was also a race for voiturettes over the same distance. This drew eight entries, including five Bugattis, two Chiribiris, and one Eldridge-Special. This time it was the Bugattis which made the running. Eldridge only survived one or two rounds, while the Chiribiris were in bad luck and were both out before the half distance. Four of the Bugattis finished. Constantini being first in 5 h. 44 m. 46 s.—an average of 85 m.p.h.—with F. de Vizcaya second, Foresti third, and P. de Vizcaya fourth.

The AUTO -MOTOR JOURNAL

ESTABLISHED 1896

FOUNDER AND EDITOR: STANLEY SPOONER

No. 1,210. (No. 11, Vol. XXIX.) MARCH 13, 1924 [Price 2d.



THE 1924 TWO-LITRE DIATTO:

This standard touring five-seater's qualities are candidly discussed upon pp. 223-224.

but take up little space when folded, and are really comfortable. The interior passenger compartment is upholstered in Bedford cord. The car is mounted on 32 by 6·20 balloon tyres. One of the features of this body, which will be much appreciated by those who sometimes want to drive and sometimes to be driven, is that it can be instantly converted from a saloon

How the tool box is stowed in conjunction with the spare wheel carrier on the Cubitt.

to a limousine and *vice versâ*. The price is remarkably reasonable at £500. The fourth exhibit consists of the landaulette (Model L-4) a new design of great roominess to accommodate folding seats for the two extra passengers. Four very wide doors are fitted, and the hood and the upholstery of the front seats are carried out in real leather, the rear being in Bedford cord. It has 32 in. by 6·20 in. balloon tyres, and the price is £525. The mechanical arrangement includes four-cylinder engine, 80 by 140, thermo cooled, with aluminium pistons, Ferodo clutch, separate four-speed gear with side control, Hardy shaft and worm drive, and semi-elliptic and full cantilever springing. The chassis price of the short (10 ft. 1 in.) wheelbase is £260, and of the long (10 ft. 7 in.) £275. The makers are Cubitts Engineering Co., Ltd., 55 and 56, Pall Mall, London, S.W. 1.

DAIMLER. **Main Hall—170.**

The Silent-Knight sleeve-valve engine is, of course, the power plant of all Daimler carriages, and the new Daimler method of isolating the bodywork from the chassis is one of the distinguishing features of these very handsome vehicles. The 45 h.p., six-cylinder Daimler enclosed landaulette de luxe, described by the makers as the largest car in the world, has the Daimler sleeve-valve engine, 117·5 bore by 130 stroke, and the Daimler automatic carburettor, magneto, and battery and coil ignition are fitted, and the Lanchester patent vibration damper, a single-disc clutch with fabric lining, sends the power to a four forward speed and reverse gear, and five B.S.A. detachable wire wheels, with 895 by 150 Dunlop cord tyres, are fitted. The body, by the exhibitors, seats seven persons, including the driver; it is painted dark lake with black mouldings, and with upholstery in fawn cloth. The chassis price is £1,400, and the complete carriage £2,250.

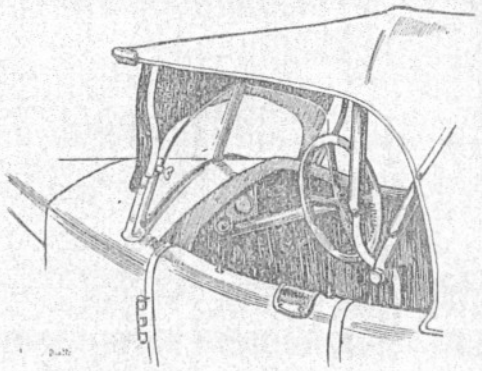
The 16 h.p. Daimler saloon.

How the front brake operating cardan-shaft is arranged on the Daimler, showing also the attachment of the shock absorbers.

The 35 six-cylinder saloon de luxe has an engine 79 by 130, and has a similar mechanical specification as the 75. It has 835 by 135 Dunlop cord tyres, an 11 ft. 10 in. wheel base, and five B.S.A. detachable wire wheels. Lanchester's patent vibration damper is fitted, and the Daimler automatic carburettor and pump and trough lubrication. The body by Daimler's, is of a most luxurious type and seats five persons. It is painted and varnished black, and the upholstery is in black Morocco leather. The chassis is £900 and the complete saloon £1,300. Then there is the 20 h.p., six-cylinder landaulette de luxe, 73·5 by 10·4 bore and stroke. It seats six persons and has 835 by 135 Dunlop cord tyres, and a wheel base of 11 ft. 7 in. Painted dark blue, with cloth upholstery, it makes a most graceful and imposing vehicle. The price is £1,100, chassis £600. The 16 h.p. model will attract attention as being a most useful and conveniently powered vehicle for town work. It has a saloon body, seating four persons, and is painted Daimler grey and upholstered in black leather. Low-pressure tyres are fitted. The mechanical specification includes a six-cylinder, sleeve-valve engine, 69 by 94, with a Treasury rating of 15·7 h.p. Daimler's automatic carburettor and Lanchester's vibration damper are fitted. The ignition is by coil and accumulator. The clutch is of the double-plate (cork lined) type. The gear gives three speeds and the drive is by Lanchester worm, as in the case of the other Daimler models. Dunlop low-pressure tyres are used on B.S.A. detachable wire wheels, and the wheel base is 9 ft. 10 ins. The price of the complete car is £660. The chassis price is £450. The makers are the Daimler Co., Ltd., Daimler Works, Coventry.

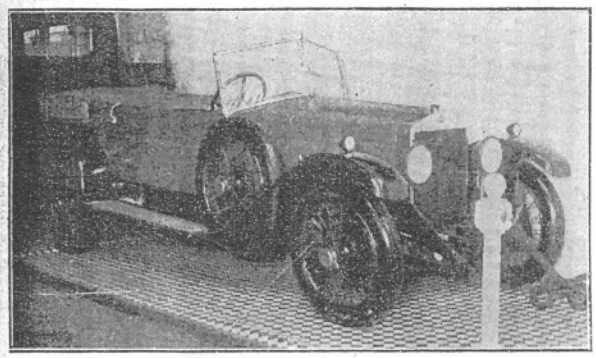
DIATTO. **Main Hall—166**

The famous Diatto car made by the Soc. Anon. Auto., Diatto of Turin, Italy, and shown by the sole concessionnaire, Cyril Durlacher, is exhibited as a two-seater super sports, and a four-five seater touring car. The latter has a very handsome four-door body, and is provided with any complete equipment of screen, hood, full lamp set, side windows, etc. It is upholstered in antique leather and painted chamois



The V-shaped windscreen with its front hood flap on the Diatto two-seater.

colour. The price, complete, is £611 10*s*. The chassis has a 2-litre four-cylinder engine, 79·7 by 100. The overhead camshaft and valves and the detached head are features of the engine which has forced oil lubrication, and water circulation by pump. The magneto is the Marelli and Solex carburettor and Lenna lighting and starting set. The dry disc clutch and four-speed gear are integral with the engine



The Diatto Car.

with a central gear control, and an enclosed shaft in spherically mounted torque tube takes the power to the hellical bevel-driven semi-floating rear live axle. The sports model has semi-elliptic springs at rear and front. The standard model is shown with cantilever rear springs, and Hartford shock absorbers are fitted front and rear on the sports model. The wheels (steel or wire optional) carry 820 by 100 tyres. The touring car shown has four-wheel brakes the standard chassis without four-wheel brakes, and fitted with Sankey detachable steel wheels, is priced at £415. There is a very interesting super-sports model shown which has a chassis substantially as just described. The chassis weight is 16½ cwt., and the equipment includes revolution counter, speedometer, etc. The open two-seater sports body by Victor Broom, Ltd., with which this chassis is mounted is exceptionally handsome, and sporty looking. It is upholstered in dark red real antique leather, and the price is £706 10*s*. The chassis price is £550. The address is 6, Upper St. Martin's Lane, London, W.C. 2.

DODGE BROS. Main Hall—92

The new Dodge cars shown include the 17-24 h.p. chassis and a touring car with an American body. The chassis sells at £245 and the American tourer at £325. There is a fine English-bodied tourer at £395 on the same chassis, also a special saloon at £435, a landaulette at £495, and one at £525. The American tourer has side curtains, monometer, automatic screen-wiper, and a nickel-plated radiator. It seats five persons comfortably. The engine has a bore of 3⅞ ins. and a stroke of 4½ ins. and a Treasury rating of 24 h.p. It has side-by-side valves, pump-water circulation, pump-and-splash lubrication, high-tension magneto, special design carburettor, three forward speeds and reverse, central change. A Yale lock is fitted on the transmission case. There is a multiple-disc clutch, spiral-bevel final drive, chassis lubrication by high-pressure grease gun, external contracting and internal-expanding brakes on rear wheels, wooden artillery wheels with steel felloes, five 32 by 4 ins. straight-side cord tyres, 9 ft. 8 in. wheelbase, 4 ft. 8 in. track, fitted with North-east dynamo, electric lighting and starting, wing lamps and special safety stop light at rear, 12-volt Exide battery, speedometer, ammeter, petrol gauge, dash lamp, oil gauge, and tool kit. The price of the standard chassis with windscreen, scuttle, bonnet, wings, and running-boards and tool-box is £245. There is an English-bodied touring car with rigid all-weather side curtains, painted grey and upholstered in antique leather to match. It is fitted with five disc wheels and balloon tyres and spring gaiters, and has a driving mirror, licence-holder, eight-day clock, automatic windscreen wiper, luggage grid, and adjustable rear windscreen. As shown, the price is £395. There is also a very handsome four-door saloon seating five persons. It is painted in dark blue and upholstered in grey mohair velvet, and provided with an exhaust heater in the floor and sun and rain guards. The price is £435. The saloon is shown with all steel body at £445. The landaulette has an English coach-built body—two in front and five inside. It is upholstered in genuine antique leather.

The Dodge Brothers Saloon.

An enclosed chain from the timing gear drives the fan, pump and magneto on the Dodge.

The price is £495. There is also an English landaulette with two occasional seats and a superior equipment. It is upholstered in Bedford cord, has an automatic windscreen wiper, and the price is £525. The makers are Dodge Bros. (Britain), Ltd., of Stevenage Wharf, Stevenage Road, Fulham, S.W.

DURANT. Main Hall—223

The Durant exhibit shows the various types of body work on the 15·6 h.p. Durant chassis, with four-cylinder *monobloc* engine with detachable head pump cooling and forced lubrication. Three big main bearings carry the crankshaft, and the chain-driven camshaft is at the side, operating side valves. A single dry plate clutch is used and transmits the power to a separate gear box, with central control, which drives an open cardan shaft, transmitting the power to the three-quarter floating live axle. Two Spicer joints are used in the shaft. The springs are of the semi-elliptic type. The brakes are of the internal-expanding type on the drums of the rear wheel. The price of the chassis is £170 with tyres. The five-seater Standard touring car, which is exhibited, has comfort tyres and an 8-ft. 6-in. wheelbase. It is fitted with all-weather side curtains, opening with the doors, and the price with five tyres, is £188. There is also on exhibition the Rugby five-seater saloon. Its price is £320. The Durant special touring car—a five-seater—is shown with special English coach body finish. The price is £198. The makers are Durant Motors, Ltd., of Slough, Bucks.

The Durant Rugby Model.