

"THE CAR THAT HAS MADE
LIGHT-CAR HISTORY."

Vide Graphic.

1915

MAKERS

The Calthorpe Motor Co. (1912) Ltd.



CALTHORPE

MINOR CARS

THE
Calthorpe Motor Co. (1912) Ltd.
BIRMINGHAM

Works: CHERRYWOOD ROAD

♦ ♦ 1915 ♦ ♦

THOSE who hesitate starting on a motor tour because of fears of breakdowns should consider well the triumphs of Calthorpe MINOR CARS. They have proved their reliability under all conditions, and demonstrated their superiority in many speed trials & hill climbs.

Telegrams - - CHASSIS.

Telephone - 135 VICTORIA.

THE CALTHORPE MINOR—

FOREWORD.

THE passing year has seen the light car on its trial, a critical motoring public sitting in judgment. In many respects its advantages were already established: it was known to be so light on petrol and tyres that the upkeep bogey, which had scared so many thousands of would-be motorists, had vanished; its smart, racy lines emphasised the ugliness of the spider-like imported cheap car. But would it climb? Had it speed? Would it last?

The determination of these important points, whilst naturally eliminating many light cars and cyclecars, served but to add distinction to the wonderful little Calthorpe Minor. Prominent in every important Test, it emerged triumphant from them all, adding new laurels to a name inseparably associated with progress in motordom. Its magnificent performance in the already historic A.C.-U. Six Days' Trial "to destruction," over grass-grown mountain tracks and river-bed surfaces, in which it was the ONLY Car to gain FULL MARKS and GOLD MEDAL, ranks first as the sensation of the year's Light-Motoring events. In the Style Cop Hill Climb it literally swept the board, gaining no less than SEVEN CUPS, GOLD AND SILVER MEDALS.

But it is road work under ordinary conditions that should weigh most with the prospective purchaser of an autocar; and it is in this respect that the Calthorpe Minor is supreme. A car

THE MINIATURE CAR-DE-LUXE.

LOOKS LIKE A CAR—RUNS LIKE A CAR.

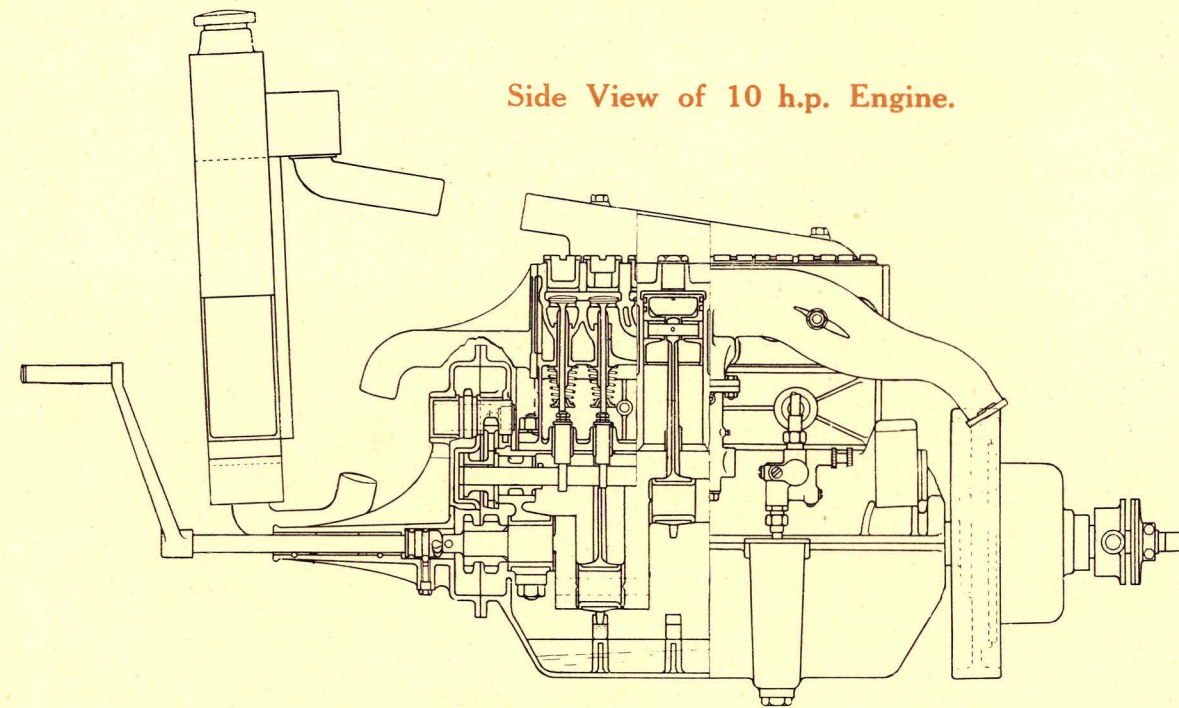
FOREWORD—continued.

that will make light work of a 1,404 miles' tour of India, across rivers, up mountains like the Bhore Ghaut, over long stretches of description-defying roads, covering as much as 207 miles in a day, and all **without a single mechanical hitch**, will do anything. The 10 h.p. Calthorpe Minor did it, averaging 47 miles to the gallon—just the regular standard model, driven by a private owner! (See *Times of India*, April 8th, 1914.)

If you want a turn of speed, you can get it out of your Calthorpe. If you like a car that climbs, the Calthorpe Minor (as the *Light Car* says) "simply revels in mountaineering." Its trim, racy lines delight the eye; its marvellous responsiveness makes it as easy for a woman to drive as for a man. It is offered at the lowest price a thoroughly reliable, lavishly-equipped car can be produced. Most enthusiastic of all its owners are those who possess quite a number of other automobiles, but when out for the sheer joy of motoring take their Calthorpe Minor.

Before purchasing a light car, take a spin in a Calthorpe Minor. We shall be delighted to arrange this at your convenience (through your nearest agent), upon hearing from you, without putting you to any expense or placing you under any obligation.

SILENT LIKE A CAR—AND IS A CAR.



Side View of 10 h.p. Engine.

LOOKS LIKE A CAR—RUNS LIKE A CAR.

SPECIFICATION.

CHASSIS DIMENSIONS.—Wheel Base, 8ft. 3in. Dash to end of frame, 6ft. 8½in. Width of frame, 2ft. 10½in.
Track, 3ft. 8in. „ to centre of rear axle, 5ft. 11in.

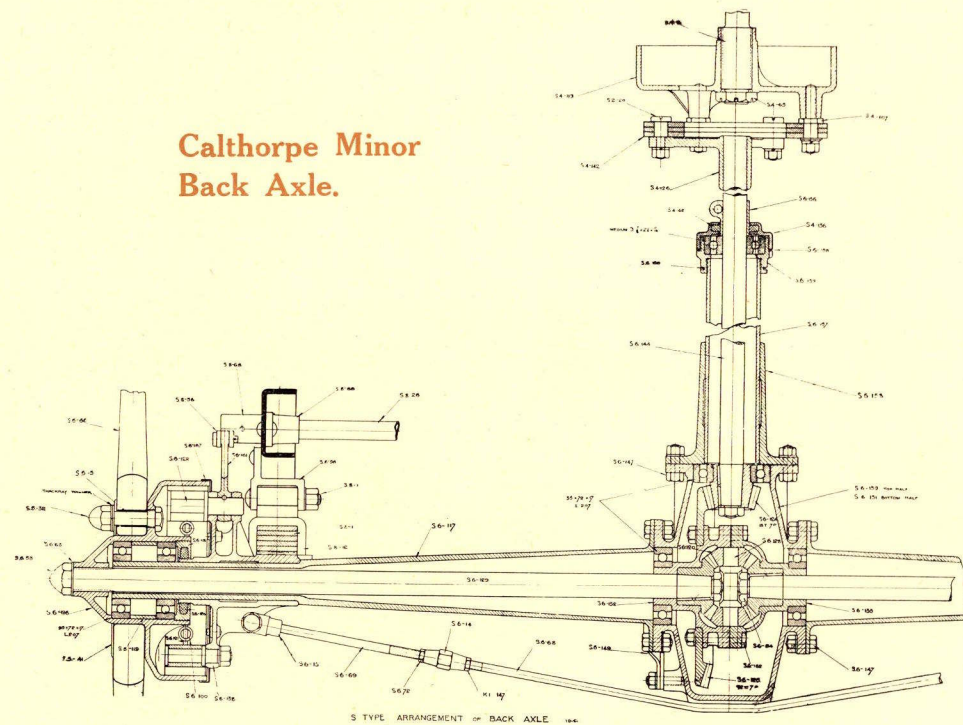
STANDARD WHEELS.—Five Sankey Detachable Steel Wheels, 700 × 85 m/m.
Tyres : Palmer Cord three-ribbed, 700 × 85 m/m.

ENGINE.—The four cylinders, 62 m/m bore × 90 m/m stroke, are cast en block with the valves arranged in single file on one side. The valves are made of special nickel steel, and are operated by a solid camshaft running in three white-metal bearings, and driven by a silent chain. All tappets are adjustable, and are offset from the camshaft to minimise wear, the whole of the valve mechanism being enclosed in oil-tight easily detachable covers. The pistons are fitted with two rings at the top, and hardened steel gudgeon pins and bushes. The connecting rods are of high tensile steel stamped to the minimum weight, the big ends being adjustable, and fitted with heavy die-cast white-metal bearings. The crankshaft, which is of exceedingly rigid design, is carried in adjustable die-cast bearings, the bolts securing the caps being carried up to the base of the cylinders, thus taking all strain off the crankcase. A plunger pump, operated by an eccentric on the camshaft, forces oil to the crankshaft bearings and also to troughs beneath the connecting rods, on which scoops are formed, so as to give constant lubrication at all speeds.

IGNITION is by high tension Magneto having variable timing, and driven by a silent chain from the crankshaft through a serrated quickly detachable coupling, providing a fine adjustment.

SILENT LIKE A CAR—AND IS A CAR.

Calthorpe Minor Back Axle.



LOOKS LIKE A CAR—RUNS LIKE A CAR.

SPECIFICATION—continued.

STEERING is by worm and worm wheel, the former being carried on adjustable ball bearings. All steering levers are steel stampings, and all steering joints are of the ball type, being self-adjusting and fitted with lubricators.

FRONT AXLE.—The steering heads, which swivel on chrome vanadium steel pins, are fitted with phosphor bronze bushes. The front hubs are mounted on adjustable ball bearings.

FRAME.—This is of channel section pressed steel, inswept at front to give a large steering lock.

SPRINGING.—The usual type of half elliptic springs are fitted to front and back axle, all springs being of good length and width.

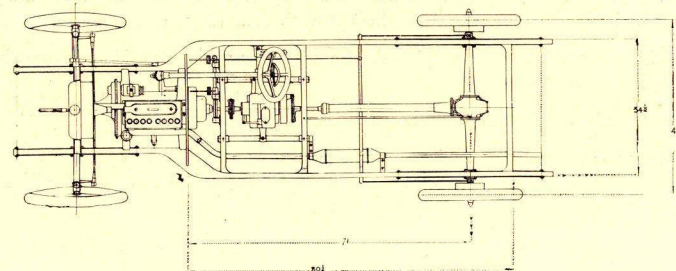
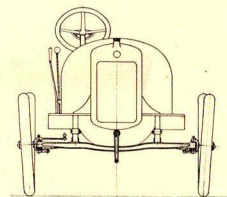
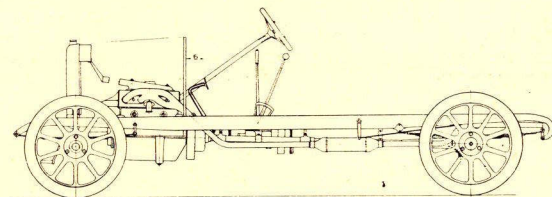
BRAKES.—These are all internal expanding, with interchangeable shoes, and are amply sufficient in size. The foot-brake acts on the rear hubs, thus relieving the transmission of most breaking strains, while the hand-brake acts on the drum at back of gearbox, and is only intended for holding the car while standing, and for emergencies.

CONTROL.—Both the throttle and ignition control levers are placed in a most convenient position above the steering wheel. Foot Accelerator also is fitted.

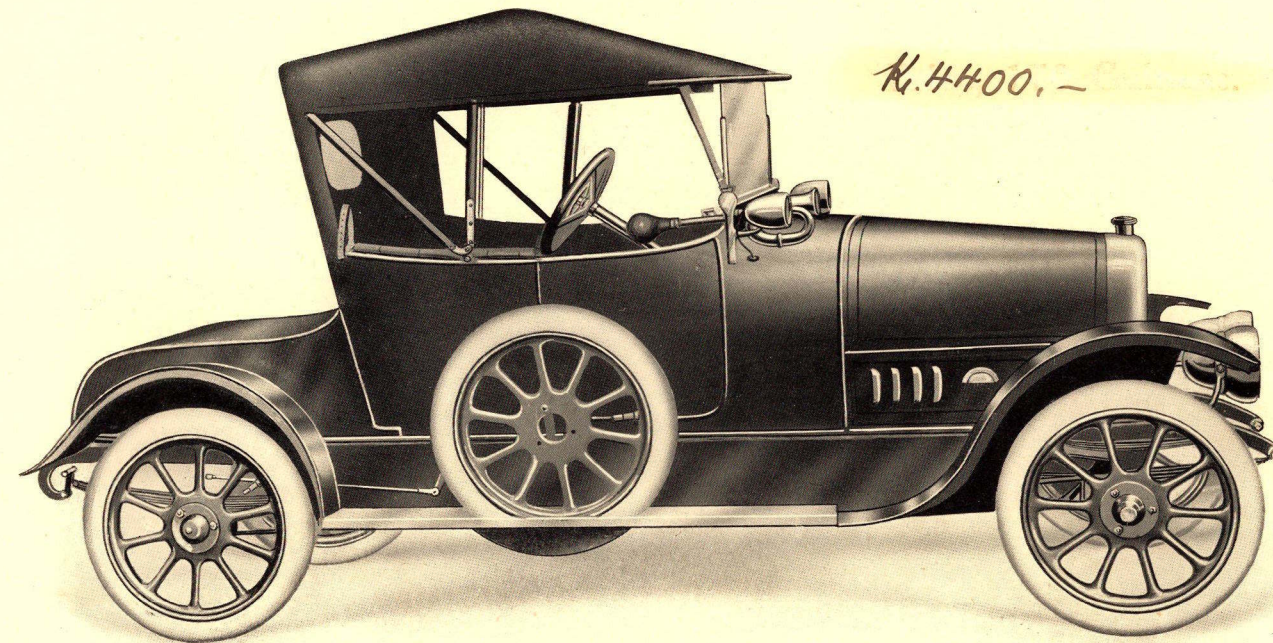
UNDERSHIELD, Protecting engine and gearbox, of a non-rusting material.

BODY.—All bodies fitted to Calthorpe Minor Chassis are well designed, of pleasing appearance and very luxurious finish. On all bodies the petrol tank is enclosed in the dome-shaped scuttle dash, and only the best leather is used for the upholstery, with the exception of the coupé, which is upholstered in cloth.

SILENT LIKE A CAR—AND IS A CAR.

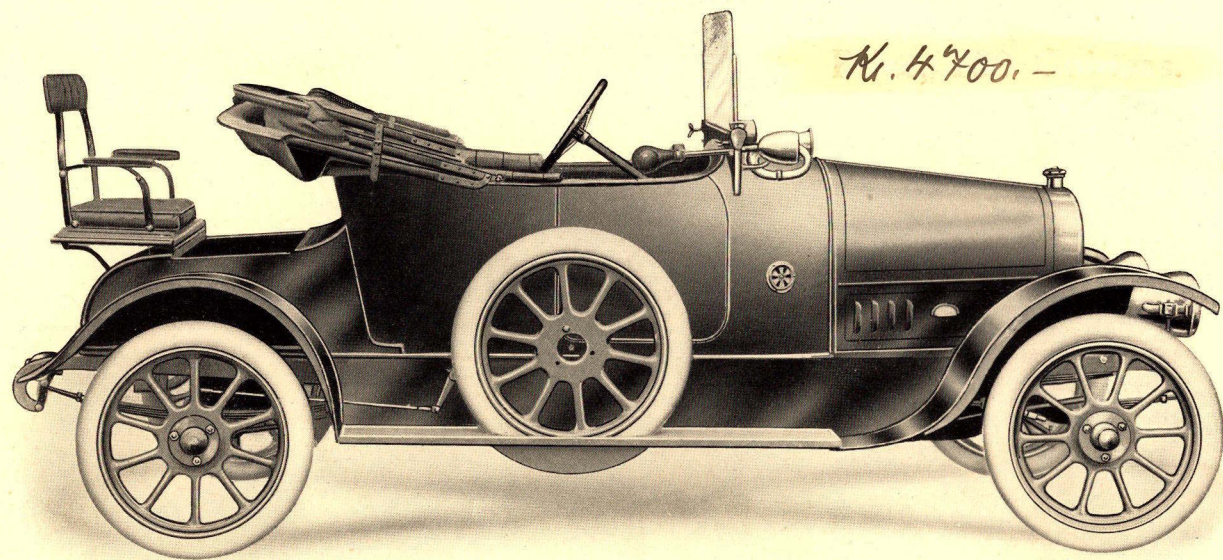


View of
10 h.p.
Calthorpe Minor
Chassis.

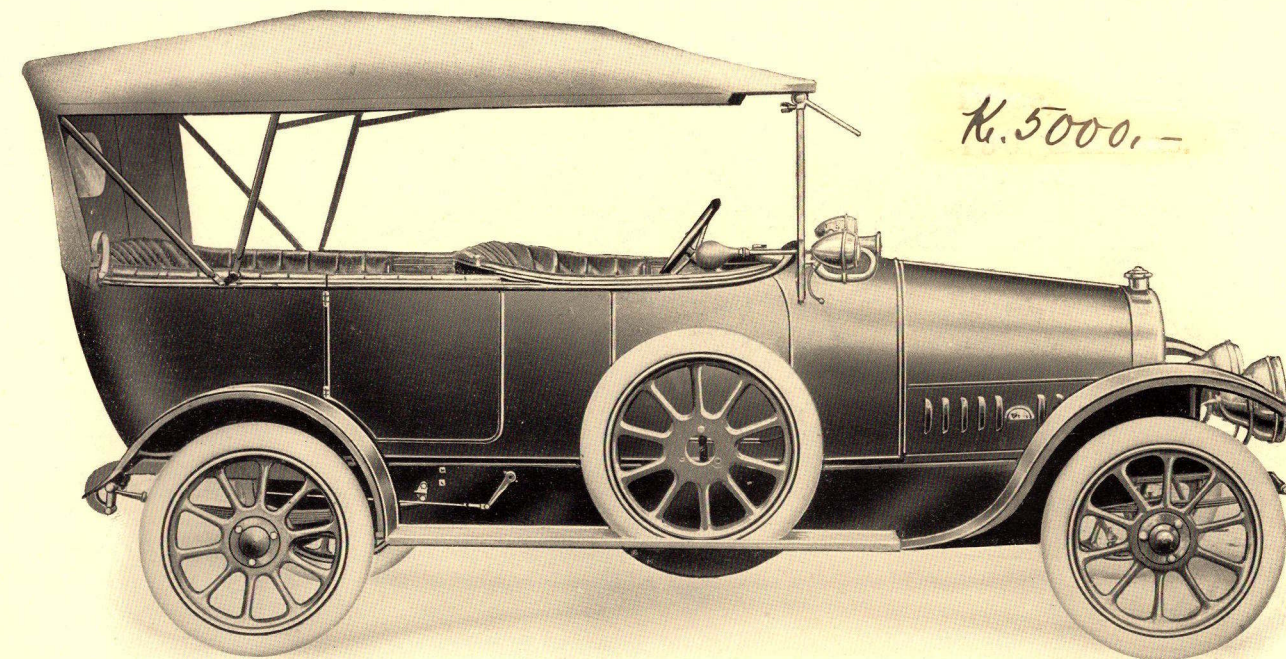


K.4400.-

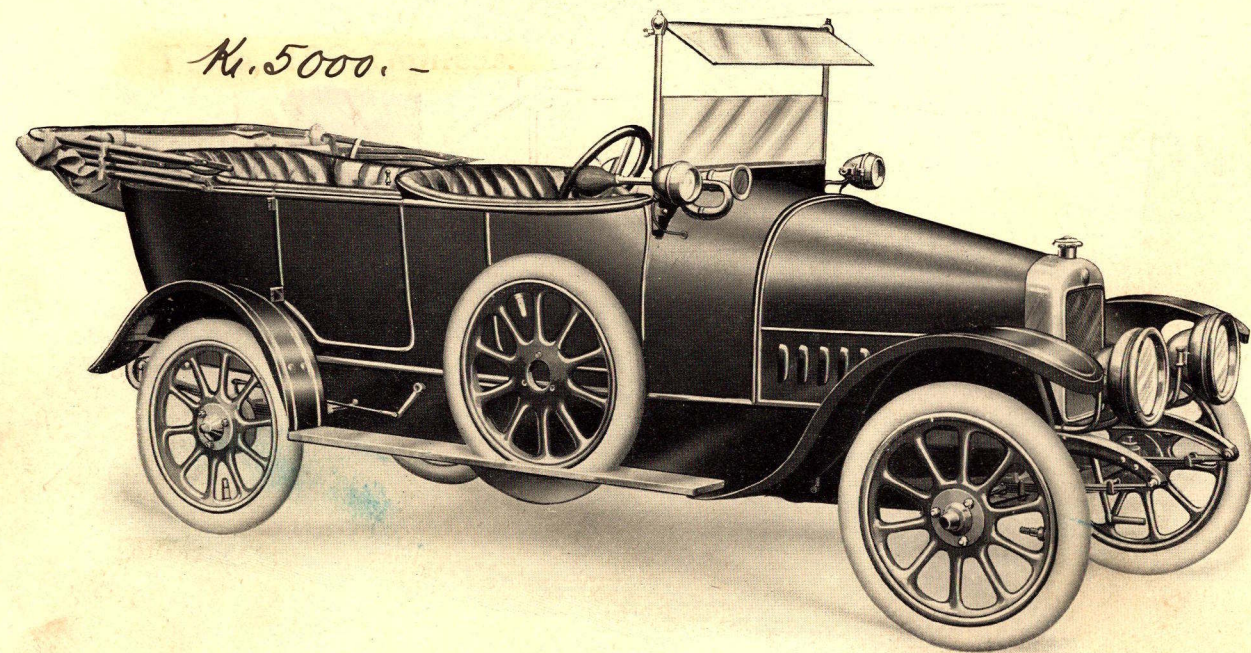
10-h.p. CALTHORPE MINOR 2-SEATER.



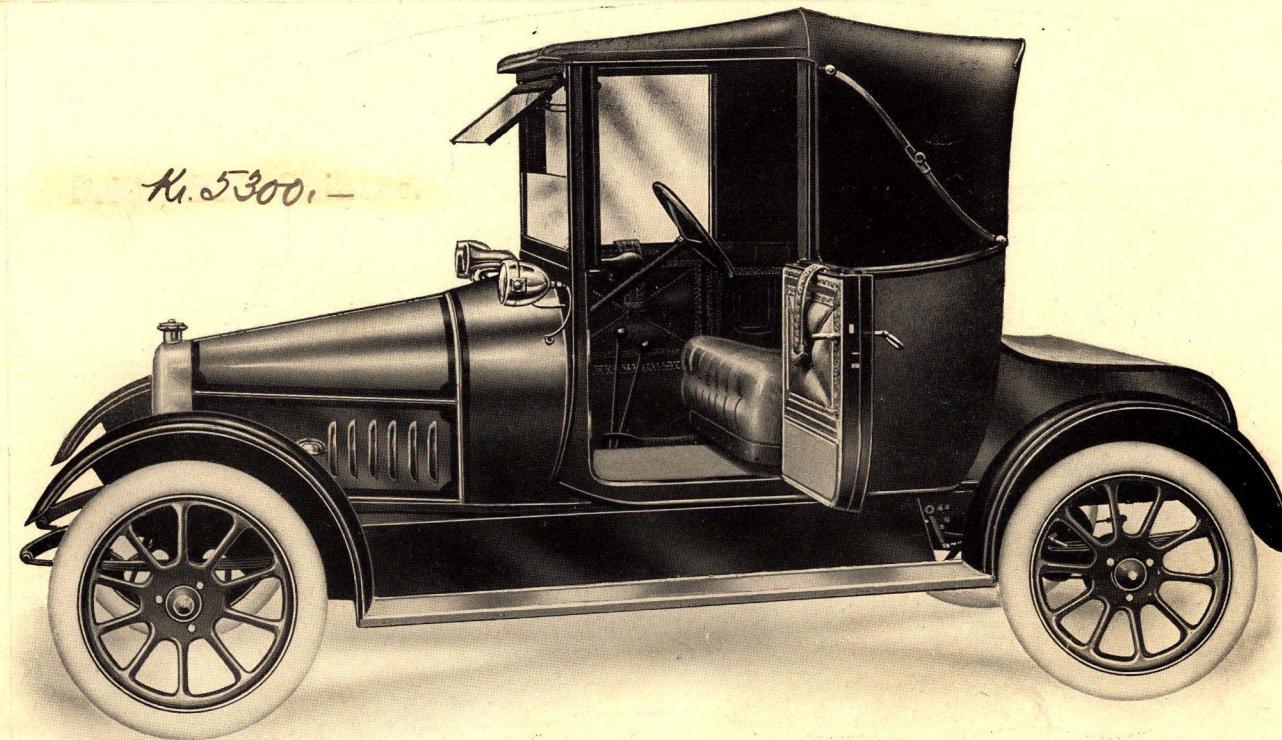
CALTHORPE MINOR 3-SEATER (Grand Duke Michael Type).



CALTHORPE MINOR 4-SEATER TORPEDO.



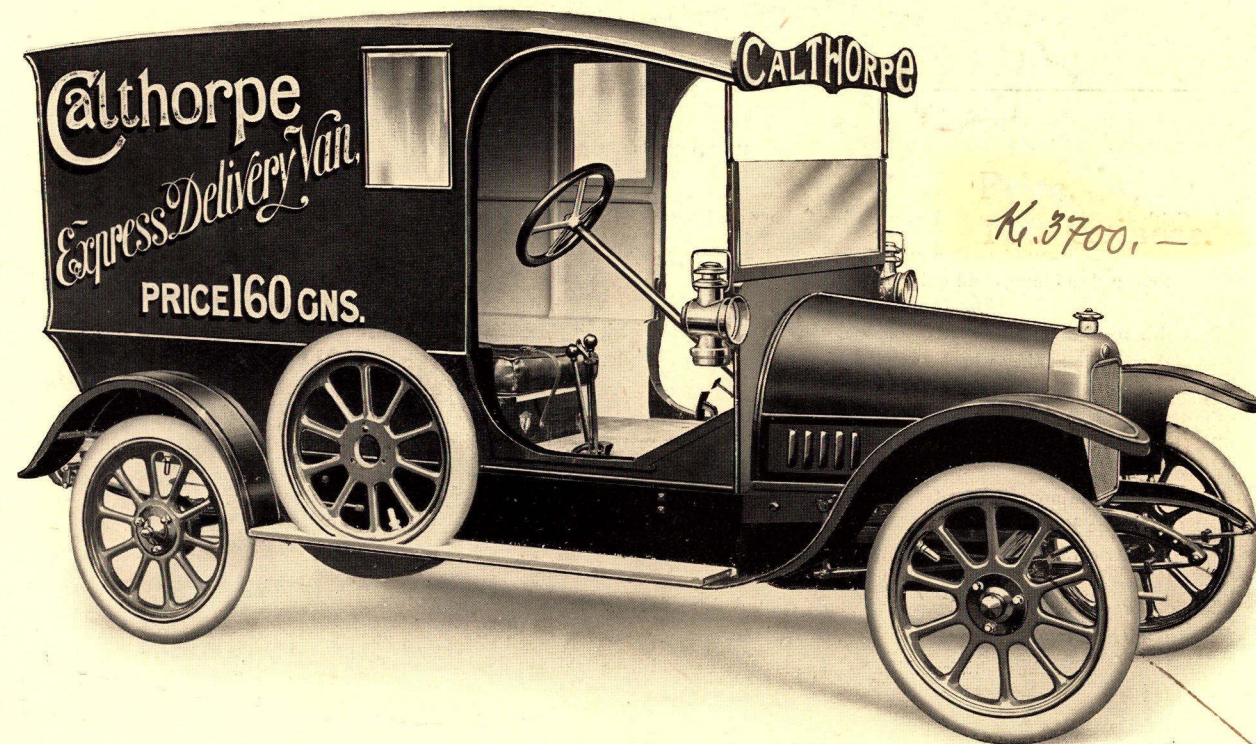
CALTHORPE MINOR 4-SEATER TORPEDO. (One-Man Hood Folded Down).



10-h.p. CALTHORPE MINOR COUPE.



CALTHORPE
MINOR VAN.



CALTHORPE MINOR VAN.

THE CALTHORPE MINOR—

PRICES.

- 1 Calthorpe Minor Delivery Van, with five Palmer cord tyres, 700×85 oil side and tail lamps, and all tools **3700-16.**
Screen, head lamps and writing extra.
- 2 Calthorpe Minor Two-seater Torpedo, complete with cape hood, single folding screen, including five detachable Sankey wheels, five Palmer cord tyres, two acetylene head lamps, two electric side and tail lamps, horn and all tools complete ready for the road **4400** „
- 3 Grand Duke Michael type (two-seater torpedo with dickey seat), same specification as above... .. **4700** „
- 4 Calthorpe Minor Four-seater Torpedo, fitted with one man hood, double folding screen, two acetylene head lamps, two electric side lamps and tail lamps, five Sankey wheels, five 700×85 Palmer cord tyres, complete with horn and all tools **5000** „
- 5 Calthorpe Minor Coupé, luxuriously finished, upholstered in best cloth, fitted with spring cushions, five tyres, two acetylene head lamps, two electric side and tail lamps, and all tools **5300** „
The finish of the Calthorpe Minor Coupé is equal to the best coach-built bodies obtainable.

THE MINIATURE CAR-DE-LUXE.

LOOKS LIKE A CAR—RUNS LIKE A CAR.

Weight of Standard Two-seater	...	...	...	10 cwt.
Weight of Coupé	...	...	...	11 „
Weight of Four-seater	...	...	...	11½ „

The petrol consumption of the two-seater averages 40 miles to the gallon and of the four-seater 35 miles to the gallon.

All designs, weights and measurements must be taken as approximate.

Illustrations are likewise given only as a general guide, but are not binding in detail.

We herewith reserve the right to make constructional alterations of any part described in this catalogue if considered advantageous, or to revise our prices without notice.

SILENT LIKE A CAR—AND *IS* A CAR.

THE CALTHORPE MINOR—

TERMS OF BUSINESS.

CONDITIONS OF PURCHASE.—Purchasers of Calthorpe Minor Cars will please note that they do so on the distinct understanding that the vehicle purchased shall not be exhibited either directly or indirectly at any exhibition in the United Kingdom of Great Britain and Ireland without the written authority of THE CALTHORPE MOTOR COMPANY (1912) LIMITED.

PAYMENT.—Net Cash. One-third of the total cost with order, and the balance upon receipt of invoice when car is ready.

DELIVERY.—At Works. We can generally arrange for a competent driver to deliver customers' cars, but do so at customers' own risk. Wages of driver and expenses only charged.

GUARANTEE.—The following guarantee is given in lieu of all implied guarantees, which are hereby excluded in the event of any defect being disclosed in the car (apart from tyres and accessories for which we are not responsible) we undertake, on the return of the defective part, carriage paid to our Works, within six months from the date of purchase, to carefully examine it, and if found faulty through bad material or workmanship, to replace the defective part free of charge. We wish it to be clearly understood that our liability is confined to the replacement of the defective part, and that all labour, time and other expenditure is charged for. In no case are we to be held responsible for contingent liability of any kind. This guarantee does not apply to cars used for hire, racing, nor to defects caused by wear and tear, dirt, misuse or neglect. Defective parts must always be sent carriage paid, together with chassis number, date of purchase, and as far as possible the particulars of the conditions under which the defect became apparent.

THE MINIATURE CAR-DE-LUXE.

LOOKS LIKE A CAR—RUNS LIKE A CAR.

TESTIMONIALS.



Best of Four Makes.

“Hestleth,”
Castlegate,
Penrith.

Dear Sirs,

I have recently bought one of your Calthorpe Minor Cars, and thought I should like to ask for one of your little booklets on the driving and *management* of these little cars.

At the same time I should like to say that I have had four cars of other makes before, but the little Calthorpe is, in my opinion, the best and most satisfactory car I have ever driven.

Yours faithfully,
A. M. TIPLING.

“Very Nice in Traffic.”

Cranford, York Avenue,
Crosby.

Dear Sirs,—I am writing you a few lines in appreciation of the Calthorpe Minor Car which I got delivery of this week. We drove it home without the slightest hitch of any kind, in most atrocious weather, the roads being in a wretched condition. However the little car showed its capabilities and never faltered the whole of the way—nearly 100 miles. I have had the car out to-day, and found it very nice to handle in traffic. It has been much admired already, and I think you will soon have some more orders from this neighbourhood.

Yours faithfully,
JOHN F. KIRBY.

SILENT LIKE A CAR—AND IS A CAR.

THE CALTHORPE MINOR—

TESTIMONIALS—continued.

A Day's Run in Scotland—260 Miles!

Airdrie,
15th August, 1914.

Gentlemen,

Further to my letter to you from Gairloch, Rosshire, about 29th June, regarding behaviour of Calthorpe Minor, I now wish to say that while at Gairloch, which boasts the worst and most hilly roads in Scotland, I did 800 miles (on various excursions up and down the West Coast) and finished up with doing *in one day* the journey back to Glasgow and thence out here, 260 miles in all. On the way north I averaged 25 miles per hour. On the way south I did not hurry but find I averaged 23 miles per hour. Most of the 800 miles were done on the worst section of road gone over in the Scottish Reliability trials, and I am glad to say I experienced no trouble whatever beyond two punctures.

I did 2,500 miles without any trouble before setting out on that tour. On my tour I did between 1,300 and 1,400 miles, and I have not spared her.

Wishing you every success during the remainder of the season and all further seasons,

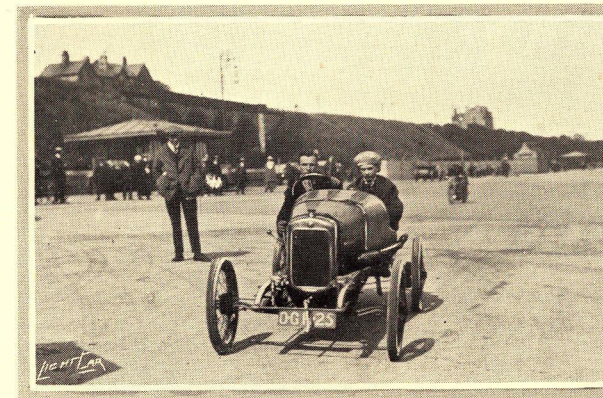
I remain, yours faithfully,

ALEX. MACINTYRE, M.B.Ch.B.

P.S.—You may make any use you choose of this letter as of my former one.—A.M.

THE MINIATURE CAR-DE-LUXE.

LOOKS LIKE A CAR—RUNS LIKE A CAR.



“Over 50 Miles to the Gallon!”

Gentlemen,
688, 690 & 692, Attercliffe Road,
Sheffield.

I have been running one of your Calthorpe Minor Cars since January last and have great pleasure in telling you how delighted I am with the running of it. It will do over 50 miles to the gallon even on these heavy Derbyshire roads, and have made several non-stop runs of over a 100 miles.

Yours faithfully,
JOHN S. WALLEY.

Wonderful Value.

Central Criminal Court,
Old Bailey, E.C.

Dear Sirs,—My Calthorpe Minor is now running excellently, with the exception of the Clutch being a trifle harsh, but that no doubt will soon disappear.

I should be obliged if you could supply me with an oiling chart.

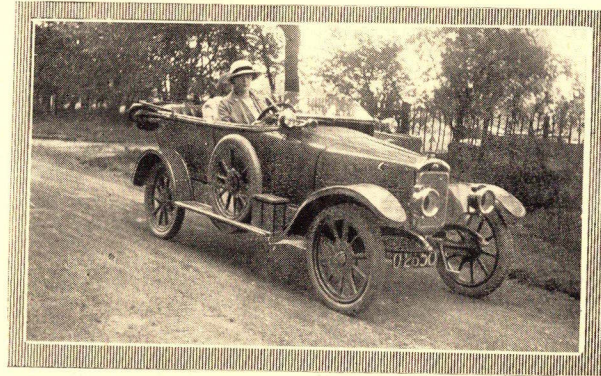
I was pleased to see that you were not letting the Singer keep all the records. I have seen no other car so perfect in detail at such a low cost price.

J. AVORY TICKELL.

SILENT LIKE A CAR—AND IS A CAR.

THE CALTHORPE MINOR—

TESTIMONIALS—continued.



Dear Sir,—We write you a few lines re the Calthorpe Minor car, as we have received the three cars and are very pleased with them.

We have sold one to Dunedin, the purchaser driving the car a distance of 260 miles in very bad weather, in places the water being over the floor boards, the car made a non-stop run. Enclosed letter as received from him.

Re the larger cars, we hope to give you an order in a few days.

Climbs Well.

Gentlemen,

I have one of your Minor Cars bought from the Wrexham Garage Co. I am glad to say it is giving me every satisfaction and climbs well.

Will you kindly send me a copy of the Booklet on the Clutch, and oblige,

Yours truly,

HUGH O. RICHARD, M.R.C.V.S.

Dolafon,
Corwen.

A New Zealand Experience.

Christchurch,
New Zealand.

Yours faithfully,

STOREY & CO.

THE MINIATURE CAR-DE-LUXE.

LOOKS LIKE A CAR—RUNS LIKE A CAR.

INDEPENDENT EVIDENCE OF THE LIGHT CAR'S EFFICIENCY.

Private Owners' Experiences.

Six Thousand Miles on a Calthorpe Minor.

I have been the proud possessor of a Calthorpe Minor for five months, during which time I have never had the slightest trouble of any kind. The machine hitherto has done 6,000 miles, this distance showing that I have not had it boxed up in the garage; neither has distance nor weather been studied at any time, as the car has been in constant use.

I think my longest drive has been to Great Yarmouth, a distance of 190 miles (there and back), during the first week in December, when the roads were very bad, but having full faith in my little car, I started from Birmingham at 11 a.m. and completed the return journey the next day without the slightest delay or trouble. I also competed in the Sutton Coldfield open trial, and had a successful run.

I am an absolute novice, and am far from being mechanically inclined, but during the recent snow I decided to overhaul the car, as a slight knock was occurring. I admit I was rather inclined to let someone do the job for me, as it seemed rather a tough proposition, but thinking that a little practical experience was worth a lot of theory, I commenced. My first job was to examine the big ends, so by undoing six nuts I took off the undershield and then the bottom half of the crankcase, which I found a very simple matter. I then disconnected the bearings, and I was more than surprised to find there was not a fraction of wear of any kind. After thoroughly cleaning the various parts, I took down the radiator and washed it out, and then commenced on the cylinders. These I took off, and on removing the pistons, found they were coated with a fair amount of carbon deposit, which, however, was of a very soft nature, so the trouble of scraping them was very little. After thoroughly cleaning all other parts I commenced to re-assemble the engine, which was all done without the slightest trouble.

SILENT LIKE A CAR—AND IS A CAR.

THE CALTHORPE MINOR—

EVIDENCE OF THE LIGHT CAR'S EFFICIENCY—continued.

To avoid worry and delay, as soon as each nut is taken off and the part removed, the nut should be replaced at once, and then there will be no difficulty in finding the various nuts and bolts. I washed out the gearbox and back axle, and by Friday my work was done. For a novice this was a simple and interesting job, and one which speaks volumes for the simple design of the Calthorpe Minor. I was very interested to give the car a run to see if all was in order, so on the Sunday decided to go to Cheltenham, a distance of 52 miles. The roads were in a terrible state, and to go by train would have been very convenient, but nevertheless I decided to go by road. It was 10 a.m. before I started, and my first stop was at Evesham, a distance of 30 miles. Thinking I might have left the water unions loose, I thought I would require more water, but I found my work was all complete, and the little engine running extremely well.

After my arrival at Cheltenham, I had another look round, but still there was no trace of trouble, and my idea was now to get back before dark. My return journey was to be with passengers, as my two sisters wished to return with me. After the luggage had been strapped to the running board and fastened to the spare wheel, and when we three were comfortably seated, away we started, and arrived home before 6 p.m. I felt a very proud and fully-fledged mechanic, but, of course, my success was due to the very clever and simple design of the car. Although it is only called a two-seater, we had no trouble or inconvenience at all in carrying the extra passenger, and our combined weight was over 30 stone.

As regards running expenses, they are very light; I get 50 m.p.g. of petrol, 300 m.p.g. of oil, and my tyres have not yet been changed. In fact, I find driving a light car much cheaper than a big twin motorcycle, on which the comfort was very different. The Calthorpe is capable of attaining a speed of just over 50 m.p.h., and its climbing abilities are really surprising for so small an engine, for I have successfully climbed such well-known hills as Farlow Bank, Flagstaff Hill, Birdlip, and Sun Rising Hill.

Birmingham.

BARON MORTIMER.

THE MINIATURE CAR-DE-LUXE.

LOOKS LIKE A CAR—RUNS LIKE A CAR.

A STRENUOUS PRIVATE TEST.

Sedbergh.

As a reader of your journal I have been studying the experiences of light car owners and their little mounts. To me, who live in this hilly district, the article in your issue of 25th May on the doings of a Stellite car over the R.A.C. Trials course, was particularly interesting. I am the owner of a three-seater Calthorpe Minor and would like to let your readers know what this little car is capable of doing.

A short time ago I tried Kidstones Pass and the speedometer only dropped to 12 m.p.h. at the steepest portion. This was after rain, but the road was not so bad as at the time of the trials. All our moorland roads have shocking surfaces, being quite capable of shaking a car to pieces in a short time unless well constructed, and as for tyres I do not know how they stand it all. Up to date I have only had one mechanical stoppage, and that was due to my substituting a spring in the oil pump in place of the one supplied by the makers. My apologies are due to the makers for not trusting them to know what is best, and I make it here unconditionally.

My first gear ratio is 11 to 1, so you will see that it is not a necessity, even here, for all light cars to be geared lower than this. At the same time there is in my opinion a decided advantage in having a low second gear, say, 8 to 1, as this will do nearly all the climbing, and it is only on gradients of 1 in 6 and over that first is needed. So far my tyres, which are 700 mm. by 85 mm., are unpunctured.

Since the Calthorpe Co., much to my disappointment, did not enter for the recent R.A.C. Trial, I have taken it upon myself to vindicate the hill-climbing powers of their car over all the bad bits of road. Have any of your readers been over the Fell from Summerwater to Beechden? Anyone looking for a good test could not do better than try this on a real wet day. The surface as a rule is cobble overgrown with grass, and the altitude reached is 1,870 feet. Kidstones Pass is child's play compared with it.

H. V. DOVETON (Capt.).

SILENT LIKE A CAR—AND IS A CAR.

A FEW CALTHORPE MINOR SUCCESSES.

The Waddington Fells Hill Climb, making fastest time and winning on Formula.

The President's Silver Cup, at Shelsley Walsh Hill Climb, and the

Caerphilly Hill Climb, Cardiff, making fastest time and winning on Formula.

Winner of the 6-hour Race at Brooklands.

Colmore Cup. 2 Gold Medals.

A COMPLIMENT TO CALTHORPE.

"The British light car industry has been paid a high compliment by the fact that the Grand Duke Michael of Russia has just taken delivery of a smart little 10 h.p. Calthorpe Minor.

"This not only emphasizes the statement that Great Britain holds the lead where the light car is concerned, but it also establishes the fact that this class of vehicle does not rely entirely for its popularity on the man who cannot afford a car. It is interesting to note that the Grand Duke Michael first had his attention called to the Calthorpe at the Olympia Show, but it is not unlikely that, as a keen motorist, his decision was influenced by the large number of record performances and hill-climb successes which stand to the little Calthorpe's credit."—*The Motor*.

THE CALTHORPE MINOR established 12 months ago the following Records which still remain unbeaten as we go to press:—

1 kilometre	...	...	average speed 77.4 miles p.h.	5 hours	...	...	...	average speed 66.10 miles p.h.
1 mile	...	...	" " 76.77 "	6 hours	...	...	" " 65.54 "	"
10 miles from standing start	"	"	" " 70.95 "	300 miles	...	...	" " 65.51 "	"
4 hours	...	...	" " 65.87 "	400 miles	...	...	" " 65.46 "	"

Colwyn Bay Speed Trials, Fastest Time and Gold Medal.

Sutton Coldfield Hill Climb on Style Cop; the Calthorpe Minor swept the board, gaining no less than 6 Gold and Silver Medals, besides winning the G. W. Hands' Cup.

A FEW CALTHORPE MINOR SUCCESSES—continued.

A 1,404 MILES TOUR IN INDIA.

The *Times of India* of 8th April, devotes practically two pages to an illustrated description of a magnificent 1,404 miles tour in India, **not** on a 60 h.p. car with every conceivable provision and equipment—but on just an ordinary standard model of the 10 h.p. Calthorpe Minor, driven by a private owner, entirely without the knowledge of the Calthorpe Motor Co.

Here are the outstanding points of this wonderful performance—a performance that would have done credit to any car of many times the rating:—

1,404 Miles—Across Rivers—Up Mountains and over stretches of description-defying roads.

"... at the 145th mile from Bangalore the road was exceedingly bad ... no difficulty was experienced in running through the river, which was from nine to twelve inches deep.

"... there was considerable water in the river and the ascent and descent were very stiff."

NOT A SINGLE MECHANICAL HITCH ALL THE WAY.

"No mechanical troubles of any sort were experienced either on the outward or the return journey."

47 MILES TO THE GALLON ON PETROL.

"... Petrol consumption for the whole run worked out at 47 miles to the gallon."

CLIMBED THE BHOR GHAUT WITH PASSENGERS AND LUGGAGE.

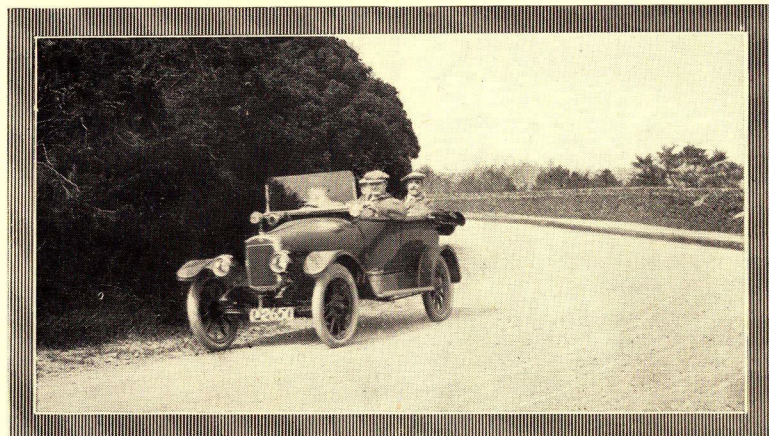
"... started up the Bhor Ghaut with three people instead of two, and three suit cases. The car, however, did not seem to mind the extra load, although the gradient is very stiff."

BEST DAY'S RUN—207 MILES.

"What does any ordinary trial or hill-climbing contest mean when placed alongside such a marvellous performance as the above? It is this steady **doing things**—this getting **there**—that holds the Calthorpe Minor aloof from its competitors, in a class altogether its own."

SIX-DAYS' A.C.U. TRIAL.

The only Car to obtain MAXIMUM MARKS AND GOLD MEDAL in the English Six-Days' Trial was the 10 h.p. CALTHORPE MINOR.



CALTHORPE MINOR FOUR-SEATER IN THE ISLE OF MAN.

The trials day by day as reported in THE LIGHT CAR, 15th July:—

- MONDAY . "Undoubtedly the finest climb was made by the little Calthorpe."
- TUESDAY . "Easily the fastest ascent was made by the Calthorpe."
- WEDNESDAY . "The Calthorpe accelerated in a wonderful manner."
- FRIDAY . "The Calthorpe again simply streaked up (Holmfirth Hill)."
- . "The Calthorpe simply flew up (Outhbridge Hill)."
- . "The performance of the light car is very creditable, for it has not only climbed all the hills, but has simply flown up them."

The Light Car and Cycle Car, 13th July, commenting on what they describe "The A.C.U. Test to destruction over grass-grown tracks and river bed surfaces," says:—

"It is almost impossible to exaggerate the severity of the trial, and when it is remembered that out of the total entered, over 60 per cent. retired altogether, some indication of the terrific test imposed on the machines will be gained.

"The performance of Mr. Burgess on the Calthorpe deserves special mention. To lose no marks at all in a trial of this freakish and almost unprecedented character is an accomplishment which must move the entire motoring world to admiration, not only for the sturdy, speedy and reliable little machine, but also for the skilful and intrepid driver. This performance is undoubtedly a landmark in the history of the 'new motoring.'"

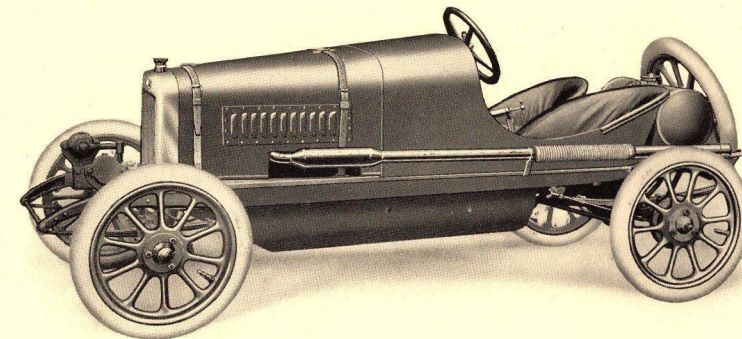
THE CALTHORPE MINOR—

THE ELIXIR OF MOTORING.

A Trial Run on the International Calthorpe Racer—Vivid Description of Road Racing at 60 m.p.h.

In the following Article, which appeared in the "Light Car and Cyclecar" of September 21st, Mr. McMinnies of the "Light Car and Cyclecar" gives his impression of a 200 miles run on one of the Calthorpe I.O.M. Racers.

INTERNATIONAL GRAND PRIX MINOR RACER.



One of the Racers built for the I.O.M. Race.

THERE are two kinds of motoring enjoyment. One is the pleasure that comes from gently ambling through country lanes on a sunny day and watching the changing face of the landscape and the effects of the lights and shades on the distant hills. But this makes no appeal to me. The other kind of enjoyment is full of life, and is of a more exhilarating type.

Out on the open road with the wind and speed sending the moisture flying from one's eyes, the roar of the exhaust drowning everything, and the rain of boiling water from the radiator cap combining to add still more to the

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impression that one is wrestling alone with the elements! But to this there is still to be added the fearsome joy of clinging desperately to the steering wheel of a bouncing, roaring car that is devouring the miles at the rate of one per minute.

You can see the road for miles ahead, and yet, despite that, you are continually coming on bends and landmarks before you realize it. This is owing to the fact that you are probably travelling two or three times as fast as you usually do.

Then again there is the additional thrill of not being quite certain whether you are going to keep on the road at all, for at 50 to 60 miles an hour, a light car wants a deal of holding, and a bad bump may send you several feet into the air, followed by a series of wobbles which are somewhat disconcerting. But the thrill is there, and the feeling of battling with the elements and the excitement of speed provide the real joys of driving.

Such are my impressions after a week-end on the International Calthorpe racer. This was entered for the Dangerfield Trophy Race, and is reputed to be able to do 80 m.p.h. under favourable conditions. Indeed, this actual machine has been on the Isle of Man course, where it put up a very astonishing and creditable performance.

The little car, stripped of all superfluous accessories such as windscreen, hood, mudguards, lamps and horn, looked innocent enough, but the raucous note from the long asbestos-lagged exhaust pipe betokened the power stored away under the long blue bonnet. There is no dashboard proper on the machine, and one can look right down to the flywheel and to the back cylinder from the driver's seat.

It was rather difficult to get into the latter, for, as a matter of fact, the seat had been built for a much shorter man than myself. However, once there, I was firmly wedged in between the bucket seat and the steering wheel. In front there was about a couple of yards of bonnet, ending in the radiator cap, and behind there was the spare wheel and a large cylindrical brass tank for the petrol.

We were off! My passenger, his cap reversed, his coat buttoned up to the chin, smuggled down into the other bucket seat, which was slightly staggered to the one in which I sat. It soon began to rain. The sensation of speed over the sodden roads with the wind and rain beating into one's face was glorious. The milestones flitted past and the little machine evinced a great desire for annihilating gradients of 1 in 10 on top gear at high speeds.

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ACCELERATION IS MAGNIFICENT.

Forty miles an hour seemed as 25 on an ordinary car. Acceleration is magnificent, and when the throttle pedal is depressed there is a snatch at the back, which is the bucket seat hitting you, so tremendous is the pick-up.

The Cotswolds were selected for the test, as they provide some wonderfully open expanses of well-surfaced roads, but even on this ideal testing ground there were few lengths where one could let out so fast a machine as the Calthorpe. When I say that it would practically climb from Cheltenham up to the Cotswolds towards Northleach at 50 miles an hour, one can realize the speed of it.

Downhill it was tremendous. The hum of the exhaust and the tremendous wind pressure made it practically impossible to hear anything at all as we were careering along over some of these open Wold roads. The most thrilling part of all was when a leap more severe than the rest set up a wobbling of the machine, which it was not at all easy to counteract at speed, but, generally speaking, the little car held the road well.

In front it was fitted with Houdaille shock absorbers, and at the rear, as the shock absorbers for the axle had not yet arrived, straps were fitted between the chassis and the back axle to prevent the rebound of the body being excessive. But even then I could have wished the machine had been underslung, as I feel certain that it would have increased its stability at really high speeds, and, after all, it should be possible to make it perfectly safe to drive over a bumpy road at 70 to 80 miles an hour, despite its light weight, if the centre of gravity were sufficiently low. One has only to watch the Continental racing car to see how it holds the road, and this is on account of the fact that the weight is distributed evenly between the two wheels and carried very low.

A STRANGE SENSATION.

Goggleless, half-blinded with wind and rain, it is no easy matter to see distinctly. The road ahead assumes a blurred appearance, and though you can see there is something perhaps half-a-mile off, you have no idea of whether it is a pedestrian, a horse and cart, or another motorcar. Then, again, at a very high speed you get that strong impression of the road coming towards you instead of your coming towards the road. The white ribbon seems to be rushing towards you, faster and faster. Objects in the far distance approach slowly and then whisk past on each side with marvellous acceleration. It is a strange sensation, but this is the real elixir of motoring and the thrill is there.

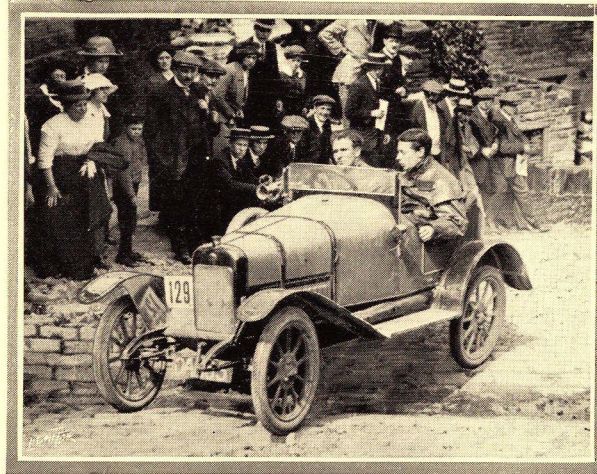
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Like many more wandering motorists, I have had a varied experience of hotels and inns, and I discovered two good harbours of refuge when out with the Calthorpe. One was the inn at the top of Birdlip, where I decided to spend the night, as I was sopping wet and covered with mud, as one might imagine, after 80 miles on a mud-guardless car.

I find that there are four kinds of hotels: first, the big, expensive hotel which does you well, and at which you have to pay exorbitant prices; second, the big, expensive hotel which does you badly, and where you also have to pay exorbitant prices; third, the small country hotel which does you well, but charges the same price as the large hotel; and last, and most important, the small country hotel which does you well, and for which you are charged a reasonable price. The hotel at the top of Birdlip I consider comes under the fourth category, for although I had tea, bed, and an excellent breakfast, the bill only came to 5s., so I shall make the hotel at the top of Birdlip my headquarters again at no distant date. There is a good garage there, too, and an ostler who seems to understand how to wash a car, for it may well be imagined that the Calthorpe required a good deal of washing to make it presentable again.

Six Days' A.C.U. Trial.



A Sample of the Course.

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A.C.U. Six Days' Trial.



Calthorpe Minor taking a Hair-pin Corner.

CROMWELL'S ARTILLERY.

The other discovery is probably already well known to motorists. It is a quaint, old-fashioned cottage in Berkswell, some seven or eight miles from Coventry. Right in the middle of the Forest of Arden—Shakespeare's land—stands an old brick and oak-beamed cottage that has been turned into a tea garden. There is a shed for your car, and an expanse of garden under the green, shady trees where one can have tea if inclined, and a quaint oak-panelled dining-room which cannot be more than 6ft. or 7ft. high. The ceiling is supported by vertical oak beams at various points.

Though I was the only one to tea that day, every table was neat and well laid, each with its spotless white cloth, as if a great number had been expected. Unfortunately it is impossible to obtain rooms there, otherwise it would be an excellent centre for a holiday. Near by, the old church of Berkswell is said to be marked with the shots of some of Cromwell's artillery, but I had to get on, so could not inspect this interesting relic of bygone battles.

Altogether about 200 miles was covered on the Calthorpe without a vestige of trouble, and it was with regret that I returned it whence it came to seek the more rapid, but not more reliable, London and North-Western Railway back to London.

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THE 1915 CALTHORPE MINOR.

Longer and Stronger Frame—Differential and Driving Bevels Increased in Size—
Improvements in the Engine.

The following Article appeared in the "Light Car and Cyclecar" on September 21st, 1914.

ONE of the most popular and at the same time most successful light cars this year has been the Calthorpe Minor. Not only by its meritorious performance in the A.-C.U. steeplechase trial at Sheffield, but in many smaller events has it performed with consistency.

The experience gained in these events has taught the makers where improvements are necessary, and these small alterations will be found on the 1915 machine, which will be marketed in several different models with two and four seats.

The most noticeable alteration is in the frame. This is longer and very much stronger than before. The rear springs are now shackled at the rear ends as well as the front. The differential and back-axle gear have been increased in size, and by a new design of case it is now possible to inspect the gears without taking the whole axle down.

The whole job is infinitely stronger than on the 1914 models. The brakes, too, have been increased in size, a feature which will be found to have received attention on other makes of light cars for next season.

The engine has been improved in several small ways, and gives three or four more horse-power than the old one did. Larger valves and a freer and larger exhaust piping contribute to this.

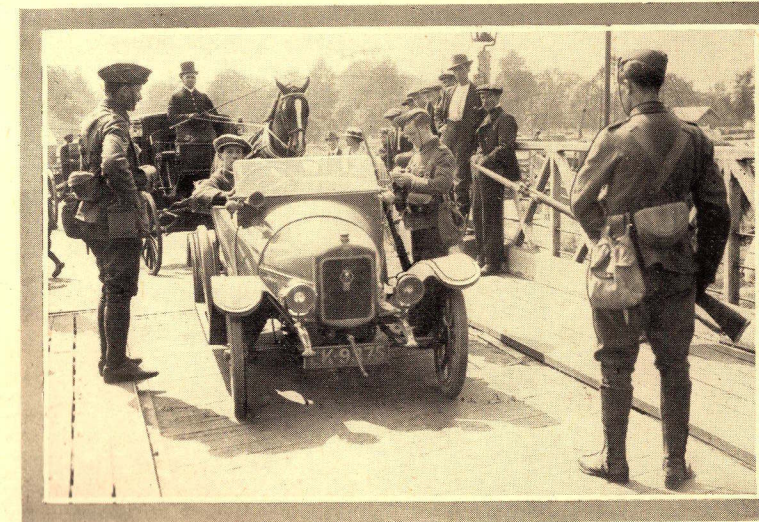
The water circulation arrangements and outlet pipe are of more generous proportions. The gudgeon pins have also been improved, and are now much stronger than on the 1914 machines.

A Claudel-Hobson carburettor is fitted, and Palmer tyres are another item of the specification for 1915. The price has been increased slightly, and stands at ~~4.44~~400 for the standard production.

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LOOKS LIKE A CAR—RUNS LIKE A CAR.

— Driving in War time. —



A VISIT TO THE WORKS.

Unlike many other light car manufacturers, the Calthorpe Motor Co. were not caught with a large stock of cars when war was declared. They were then preparing their 1915 programme, with the result that they have not a single 1914 model in stock at the present time. A recent visit to their works, which, by the way, have been completely re-organized, with extensive additions to cope with a very much larger output for next season, revealed the fact that the Calthorpe light car has had a most successful season.

The makers, however, are not content to rest on their laurels, and when it is known that all the vital parts of the chassis and engine are made of the famous B.N.D. steel, which is very expensive, it will be seen that every endeavour is being made to produce an excellent article.

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B.N.D steel, as everyone knows, comes from Belgium, and it is lucky indeed for the Calthorpe people that a few days before war broke out on the Continent, they received enough B.N.D. blanks from Belgium to make up into 700 cars.

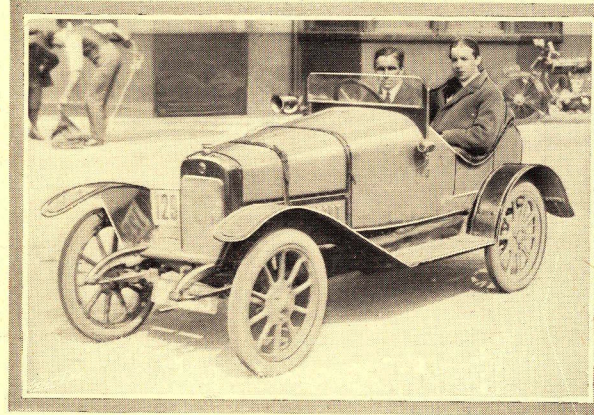
A very thorough system of testing various portions of the mechanism is in vogue at these works. Every engine, for instance, is run for six hours on the bench, and must give its proper amount of power before it is passed for the erecting shop.

Then back axles are run in on a special bench, a little emery being used with the oil in order to polish up the bevel wheels and thus eliminate noise, which might otherwise be distasteful to owners. The axle is then taken down, the emery washed away, and the axle re-assembled, greased up and built up into a complete car.

In addition to these tests, all the parts that go to make up each unit of the car are also tested. First of all they are tested in the rough. They then go on the machines and are made into all kinds of odd little bits, each one of which in its turn has to pass the viewer and his gauges before going into the store as a finished and perfect part ready to be handed out to the mechanics assembling or building up the complete car.

Such a fine art has the viewing or inspection of parts become that certain parts have in addition to pass a test for hardness, which is determined by allowing a tiny hammer in a sealed glass tube to fall on to the piece of metal being tested. The amount of rebound of the hammer is measured and indicates the hardness of the metal. By this method small, soft patches in metal can be discovered.

The Winner of the Six Days' A.C.U. Trial.



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*We are indebted to "The Light Car and Cyclecar"
and "The Light Car" for the loan of several
electros reproduced in this Catalogue.*

