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Tribute to George Lanchester

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Your Trustees have great pleasure in sending you this interesting account on the life of George Lanchester, written by Adrian Zealand, a member of our Lanchester Trust. We would be delighted to receive any articles or stories from other members, via our website: www.LanchesterTrust.org

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George Herbert Lanchester [1874-1970]: A Fiftieth Anniversary Tribute

George Lanchester was a talented mechanical engineer of considerable inventive genius, who by his great diligence and attention to detail worked his way up through the Motor Company he helped to found. Though somewhat overshadowed in the public mind by his elder brother Frederick's dazzling career as one of the leading automotive and aeronautical engineers of his time and engaged in some very big subjects, he was nevertheless immensely successful in all of his many and varied ground-breaking achievements.

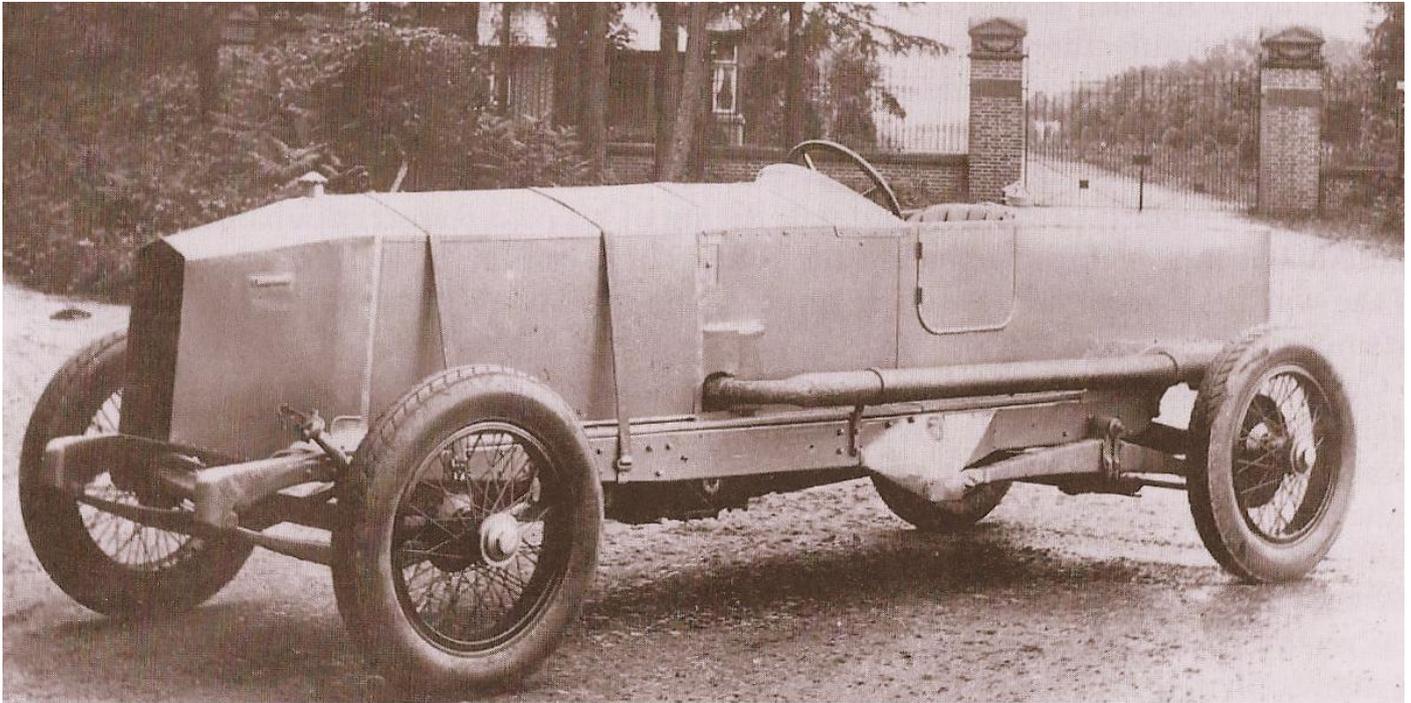
'Mister George', as he was affectionately known, began his career in 1889 at the tender age of 15 at the Forward Gas Engine Company in Birmingham, where Fred was Works Manager. Four years later he showed great promise by taking over his brother's position, when Fred left to pursue a full time career as a research scientist. Between 1894-98 the two brothers worked together on the development of a single-cylinder petrol-powered passenger car. As there was no established auto-component industry then, much had to be designed and constructed from scratch. Most of this detailed work was undertaken by George both for the first Lanchester car and for two subsequent prototypes.

In 1899 they were joined by their middle brother Frank to found the Lanchester Engine Company, with George as a Production Manager, but with a much wider remit. He quickly developed deep insights into the nascent techniques of auto-production methodology.

Following liquidation of the Engine Company in 1904, the triumvirate formed the Lanchester Motor Company where they were both directors and principal owners. By 1914 George had officially become its Chief Engineer. A new car model, the 'Sporting Forty', was his first main project, displaying for the first time a frontal power unit under a conventional bonnet, departing from the original and unique mid-engined format.

Production was short-lived with the imminent outbreak of the First War, in which the firm focused on military and transport vehicles. But the advent of peacetime enabled George to radically improve the car's design and with continued brilliant refinements of his own conception this top-of-range conveyance lasted for a whole decade. Initially priced between £2,750 - £3,000, the 40 was a serious

rival to the contemporary Rolls Royce. Although he drew on his experience of other WW1 engines including the overhead camshaft aero-engine, much of the revolutionary design of his 6 cylinder unit of over 6 litres with 2 spark-plugs per cylinder came from his own fertile mind. Interestingly several chassis were taken off the production line to Brooklands racing circuit for testing by George and other experienced speed drivers. The 40 proved to be a sturdy race engine, and with scarce modification it broke some speed records, in one case covering 100 miles at an average of 104 mph, with 120 mph as the highest speed attained. Although these tests provided useful technical data for the company, surprisingly this was never used for publicity.



This same power unit was also used to good effect in the 6-wheel, 4 wheel drive armoured car which George designed in the late 20s using an armour-plated chassis with comprehensive protection for the mechanics. Fire power was by 2 machine guns, and this so-called `mobile fortress` went into almost immediate service. With modifications, it later saw action in various theatres of the Second War.

At this period attempts were made to diversify the car range down-market and George brought forward proposals for a less expensive luxury model of 16 hp. But these unfortunately went unheeded by his Board of Directors, whose lack of foresight made the business un-resilient to the economic downturn of the late 20s, and which, when its bankers foreclosed an overdraft, caused its demise. It was taken over by the BSA Group and its future products lost their special, distinctive identity.

George remained with Lanchesters but now in a non-executive position. Sadly both he and the Company were rather shamefully treated by BSA, and in 1936, at the end of his 5-year contract, during which time his new designs were routinely passed over, he left to join Alvis. BSA's loss was very much Alvis' gain. He became an almost immediate hit as head of the Motor Vehicle Section, first updating elements of current models, then designing successors to the flagship brands `Silver Eagle` and `Firebird`. In this he deployed established principles and methods from BSA such as buying-in components to minimise costs. His new 6-cylinder engine was placed in a more forward position on a new lightweight but rigid box-section chassis to maximise internal passenger space. Alvis was well pleased with this work, and with war clouds building over Europe, George was moved to its Mechanical Warfare Department to use his vast and highly relevant experience gained in WW1 to develop some light tanks, tractors and armoured cars.



At the outbreak of war in 1939 he moved to the Sterling Armament Company as Consultant and Technical Advisor, engaging in small-arms design and specifically the development of an `automatic carbine`. This was to be a first both for George and the War Office in creating a machine gun. Precious design time was saved by basing it on a captured German fire-arm, and it was made capable of both single handgun cartridge and automatic fire. It could also take a bayonet for close-quarter fighting. By mid-1941, after intensive prototype testing, it was pressed into land force and naval service .

After the end of hostilities, George transferred to Sterling`s subsidiary, Messrs. Russell, Newberry & Co. where his projects included a return to a more familiar field of cylinder-head designs for industrial diesel engines. He finally retired aged 87 in the early 1960s when the firm changed hands.



George Lanchester died in February 1970, admired and respected as a great design engineer by his colleagues in the profession, and endeared to family and many friends by his integrity, kindness, thoughtfulness, zest for life and strong sense of humour. A `Midas Touch` could be said to characterise the diverse range of work and interests which occupied him over a long lifespan. His incisive, imaginative intellect combined with assiduous industry seriously cut it with the many challenges and

problems which confronted him. His considerable legacy should inspire and motivate us all. Hopefully this brief appreciation of his considerable qualities and attainments will go some way to commemorate an heroic career.



I am indebted to the Lanchester Legacy volumes as main source material and to its author Chris S. Clark [www.Lanchesters.com] for permission to use text and illustrations.

By Adrian Zealand.