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SIR RICHARD FAIREY, M.B.E., Hon.F.I.A.S.

Honorary Fellow

5th MAY 1887 - 30th SEPTEMBER 1956

(*President of the Royal Aeronautical Society* 1931-1934)

MAN IS GREATER than his achievements, though the latter often have greater historical impacts.

Charles Richard Fairey was a man greater than his achievements, great though they were. He will be remembered by all who knew him, by those who were associated closely with him in work or in play, as "a proper man, as one shall see in a summer's day."

In February 1938 he gave a broadcast account of his early days.

"I had a somewhat pampered childhood as the only son of a large Victorian family, and believe me, that is a very soft job. My father was a City merchant in comfortable circumstances and in due course I went to a public school. Then came a shock. On my father's death the family discovered that they were virtually penniless."

At the age of 15 he started working with the Jandus Electric Company in Holloway, in 1902, at a wage of 5s. a week. The managing director of the Company was alive to the potentialities and characters of those who came to work for the firm. The youthful Fairey was given the privileges of a premium apprentice, so that he obtained that early practical training which the successful engineer must have. For theory he paid out a few of his hard earned shillings each term to the Finsbury Technical College, where one of his teachers was the famous Sylvanus Thompson.

For five nights a week he studied hard.

"On leaving the factory," he said in his broadcast, "I had an hour in which to get home, have tea, and go down to Finsbury—that was four miles from the factory and penny tram fares counted. They were cable trams in those days up the City Road—much faster than a horse bus. I saw my first motor bus during one of these journeys. Nevertheless, in due course I managed to pass my final examination as an electrical engineer."

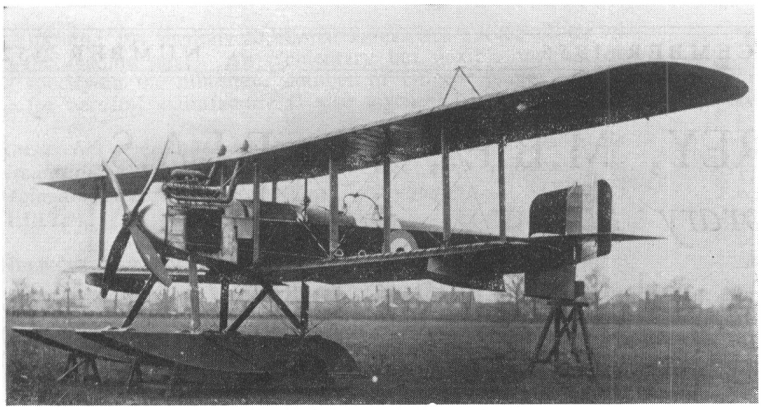
For his firm, at the age of 18, he carried out a job at Heysham Harbour with considerable success, and over thirty years later commented, "I then got a swollen head and a few months afterwards the sack."

There is nothing more stimulating to a man of the right temperament than to get a swollen head followed by the sack. Richard Fairey had taken four subjects in his courses at Finsbury Technical College, and one of them enabled him to become an analytical chemist with the Finchley Urban District Council. As a side line, so he could become wholly self-supporting, he added to his earnings by teaching engineering subjects at Tottenham Polytechnic and the Finchley Technical College.

Sir Richard Fairey. From the portrait by Cuthbert Orde, painted for the Society.

At an impressionable age he had learnt the great lesson that increased wages come from increased output.

Those were the days when the gramophone and the telephone were somewhat primitive, strange and exciting; when most shorthand typists were men; when gas mantles were more common in private houses, on railway stations, and in street lamps, than electric bulbs; when cigarettes were 5½d. for 20; when a cut off the joint and two veg., followed by a substantial suet pudding and a cup of coffee cost 1s. or less; when the motor car followed the red flag and Edward VII was on the throne.



The Fairey Campania (Rolls-Royce Eagle) 1916.

In 1903 the Wright Brothers flew in America; in 1906 Santos Dumont made the first aeroplane flight in Europe; and in the same year the young A. V. Roe was to win a model aeroplane competition at Alexandra Palace. Four years later, at a meeting of the Kite and Model Aeroplane Association, C. R. Fairey won the first prize for a monoplane model, which flew 460 feet. One of the judges of the competition was Major Baden-Powell who had been President of the Aeronautical Society from 1901 to 1907.

The Fairey Monoplane (prophetic entry in the list of competitors!) was good enough for an enterprising London store to pay a generous sum of money for the right to reproduce it. Fairey soon found himself constructing a full-size monoplane, with a 20 h.p. Advance engine, on behalf of Everitt and Edgecumbe at Hendon. The open fields on which he carried out his taxying trials and short hops became the Hendon Aerodrome.

His model had, inadvertently, infringed an early patent of J. W. Dunne, who had developed a highly stable tailless aeroplane with swept-back wings. This infringement led to a meeting with Dunne, and in 1911 Fairey took up a position as manager to the Blair Atholl Syndicate which was building Dunne machines at Eastchurch in the Isle of Sheppey. Fairey was very much concerned with making four of Dunne's aeroplanes while there, a first class apprenticeship for the future.

"Then followed the most blissful period of my life," he declared, speaking of his Eastchurch days. "Here I was at last in the middle of things, getting flying experience with whoever would provide it, studying the structural and other problems in connection with the Dunne aeroplane and enjoying myself very much indeed. They were amazing machines we flew in those days: queer frail apparatus with wing loadings as low as 2 lb. to the square foot and weighing sometimes 30 lb. to the horsepower; far more thrilling and enjoyable to fly than modern aeroplanes."

Eastchurch was the very cradle of British aviation. At that time Alec Ogilvie had a shed next to one used by J. W. Dunne. There, also, was Harris Booth, who had been working for a time at the National Physical Laboratory. Later, at the Admiralty (with Harold Bolas) he prepared the famous memorandum on a modification of the Three Moments equation for a beam with end loads, which led to the well-known Berry functions. There, too, was Francis McClean, T. P. Searight, Vincent Nicholl, F. G. T. Dawson, Maurice Wright, Gordon Bell, Horace and Oswald Short and many others who did so much to give British aviation such a wonderful start. Dawson, Nicholl and Wright were all, later, to help Richard Fairey to found and build his Company. No wonder Fairey called it "the most blissful period of my life," for he was working side by side with those who gave their hearts and energies to the greatest adventure in the world's history, the conquest of the air, as he gave his own heart and skill and energy for the rest of his life.

In 1913 Fairey joined Short Brothers to work with that brilliant aviation genius Horace Short. When the firm opened their new factory at Rochester, Fairey left the Isle of happy memories.

He had early visualised having his own organisation, being able to build his own machines; but neither the naval nor the army mind was to be easily convinced, even when, in the summer of 1914, it became clear the

The Fairey III F 1926. One of the famous series III which was built in many versions.

The Fairey Fox 1925. Two-seat day bomber which had a maximum speed of 156 m.p.h.

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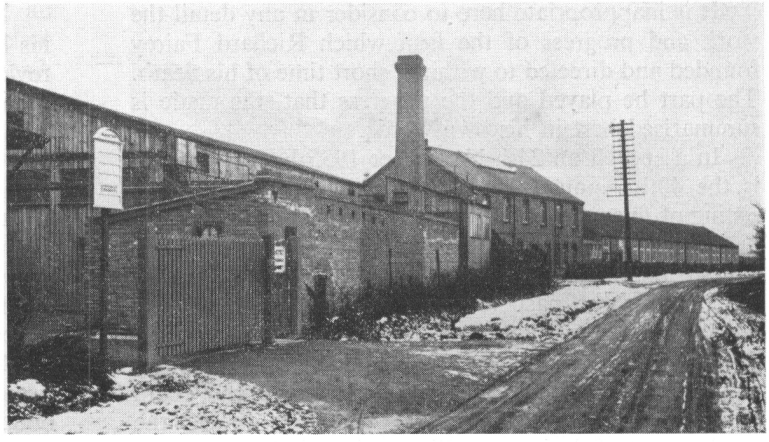


The Fairey Aviation Co. Ltd. Works, Hayes, 1918.

war was very close, that any more aircraft companies were wanted. When the war did break out, Fairey, like Maurice Wright and Vincent Nicholl, tried to join the Royal Naval Air Service, but was told by Sir Oliver Swann to stay where he was, and not argue, "as there were less than six aircraft designers in the country!"

In 1915 he registered the Fairey Aviation Company and was backed in his adventure by Dawson and Nicholl and Maurice Wright. Dawson was invalided out from the Dardanelles towards the end of 1915 and was able to join the Company and give it great help with its early finances. Following the end of the war both Nicholl and Wright were able to add their experience and knowledge.

Short Brothers gave their late chief engineer a splendid start by giving the Company its first real job, to build a dozen Short seaplanes, which were flown in the first instance by Sidney Pickles, who thus became the firm's first test pilot. For launching and testing these machines, Admiralty sheds were obtained on the Hamble River, so forming the beginning of the Hamble works of the Company.

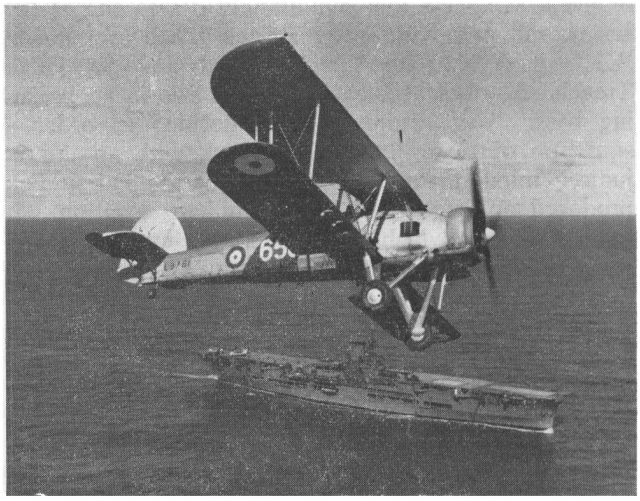
Further excellent experience came with an order to build one hundred of the famous Sopwith $1\frac{1}{2}$ Strutters. Richard Fairey was not only learning fast by the practical urgency of the demands of the first war in which aircraft were used, but he found himself plunged into the throes of the constant expansion of works and men necessitated by those demands. He had to know everything in those days, from aircraft design to works organisation, from understanding the mentality of Government customers to solving the aerodynamic, structural, maintenance and repair problems which were endlessly waiting for immediate solutions. It was an experience, as it was for all young aircraft firms which were to expand to unbelievable proportions only twenty years later, after surviving the order-starvations of the twenties. Fairey was then, and for years afterwards, in and out of the drawing office far more often than was expected of managing directors.

He had become convinced before the First World War ended that the most urgent problem to be solved was to find a way of increasing the speed range and the lift.

In June 1916 he produced the variable camber wing, the essence of which was a flap, hinged on the rear spar, and running along the whole length except for the ailerons, which were differentially controlled. The pilot had a handwheel to enable him to adjust the flaps. The pressure distribution did not follow expectations, and heavy strains came on the operating gear, but finally difficulties were overcome, and many aircraft were produced using the variable camber wing. In 1936 Fairey was awarded the Wakefield Gold Medal of the Royal Aeronautical Society, for his invention.

The first machine to be designed and built by the Company was the twin-engined fighter, the F2. The works began with a wooden shed taken over from the Army Motor Lorry Company in Hayes. The first Naval machine was the Campania which began as a two-seater reconnaissance seaplane. It had a Rolls-Royce Eagle engine and ended as a three-seater with the same engine.

The long-range monoplane (Napier Lion) which set up a World's Distance Record in February 1933 by flying from Cranwell to Walvis Bay, non-stop, a distance of 5,309 miles in 57 hr. 25 min.



The Fairey Swordfish 1935, which served throughout the War in many roles.

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It is inappropriate here to consider in any detail the work and progress of the firm which Richard Fairey founded and directed to within a short time of his death. The part he played and the progress that was made is summarised best in his own words.

In a speech on 24th November 1955 he said, "This is the 40th Anniversary year. The first factory, consisting of five wooden sheds on the site where the Hayes plant now stands, cost £807 6s. 8d. The first offices, a brick building, still stands. . . .

"During the past 40 years we have designed and built 109 different marks of aircraft, of which 48 were distinct types, ranging from small single-seaters to four-engined flying boats. . . . I think that we can claim that the remarkable Fairey Fox of 1925 altered the whole trend of design of military aircraft."

In a lecture to the Royal United Services Institution in February 1931, he spoke of the genesis of the Fox. "In 1921, when it was desired to find a replacement for the DH.9A, the specifications asked for a speed less by 6 m.p.h. than that of the obsolete machine. The result was the Fairey Fawn, an inferior machine, after spending five years and much money. At this period the Air Ministry was not giving the designer a sufficiently free hand. I therefore took the Fawn specification as representing the Staff requirements and had built a type to those requirements from the designer's point of view without any restrictions other than those directed by common sense. Perhaps in that matter the designer had too much of his own way! Still it set a new standard for two-seaters which was higher than the existing standard for single-seaters."

Captain Norman Macmillan, who was Fairey's chief test pilot, demonstrated the Fox to Sir Hugh Trenchard, who was the Chief of the Air Staff at the time. Writing in *The Aeroplane* in the 40th Anniversary year, he said, "I remember the occasion as if it were yesterday. After my flight demonstration the Chief of the Air Staff asked me to accompany him apart from all the others and we walked out on the grass of the airfield well out of earshot. There the C.A.S. asked me what I really thought of the Fox; did I think it was an aeroplane that could be handled safely by young and less experienced pilots of the R.A.F.? I told him frankly it was one of the easiest and most viceless aeroplanes I had ever flown. We walked back to the hardstand and Sir Hugh Trenchard looked at Dick Fairey and said in his booming bass: "Mr. Fairey I have decided to order a squadron of Foxes." Looking back with an unprejudiced mind, there is no doubt that the Fairey Fox produced an impact on British military aviation. It forced progress which had become stagnant, and in a short time, speed, which had remained unchanged for many years, except to slow down, was almost doubled. And this was achieved with little increase of power. The secret lay in aerodynamic design which absorbed far less power than ever before in R.A.F. history. If Richard Fairey had no other achievement to his credit that one alone would serve to perpetuate his name in aviation history."

His chief designer at the time was M. Lobelle, and with him that brilliant mind—P. A. Ralli.

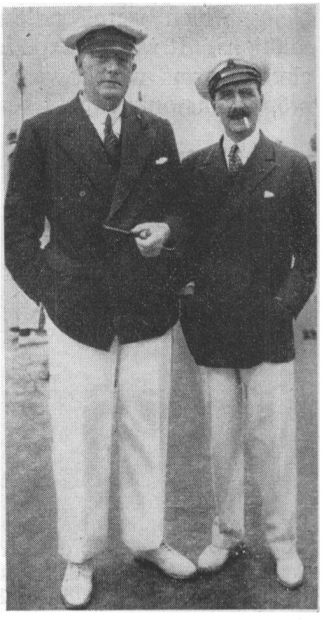
Fairey, in his 1955 Annual General Meeting speech, his last one on these occasions, added, after his general review, of the Fox and other machines: "We have pioneered not only aircraft but, for example, such things as variable pitch propellers, stressed skin structures, and the first free coupled engine. And we are still pioneering today in guided weapons, hydraulic control apparatus, precision casting and the specialised application of plastics and other new production methods. . . . Today we are developing the largest helicopter and the smallest helicopter, and what we believe to be the fastest aeroplane."

And how proud he was when his belief was confirmed when the Delta 2 flew at over 1,100 m.p.h. and obtained the World's Speed Record. On 26th April 1956, a bare five months before he died, he made a trenchant, vigorous speech which showed he had lost none of that great Elizabethan spirit which had come down to him from his forefathers.

"I am glad to say, in these days when it has become fashionable to criticise the British aircraft industry, that this recent record has silenced the critics and brought most generous tributes in their place. . . . It was true that as an industry we lack the almost awe-inspiring equipment which is available for the American aircraft industry—vast wind tunnels, supersonic and hypersonic; test chambers of enormous ranges of altitude and temperature; and runways some 20 miles in length. We lack these things, but we have the speed record. Indeed we also have the height record taken by Wing Commander Gibb on a Bristol-engined Canberra last year. Additionally, Great Britain holds the land speed record and the water speed record and thus I see no reason why as an engineering country we should humbly accept second place . . . ."

In 1922 he was elected President of the Society of British Aircraft Constructors, a position he held until 1924. In 1923 he became a member of Council of the Aeronautical Society, upon which he served, save for a break of one year, until 1936.

The severe setbacks to the aircraft industry, due to lack of Government orders and the Government economy axe, had had its repercussions on the Society's membership. But by 1923 the slump was reflected in its income. The deficits were such that the Secretary resigned and a member of Council was asked to act as Honorary Secretary.



Richard Fairey with M. Louis Breguet at Deauville, August 1927.

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It was mainly through Fairey's influence that an annual grant was made by the S.B.A.C. to the Society to help it in its difficulties. It is a generous grant which has now been made for over thirty years, without any conditions as to its spending. In many ways over the next few lean years Fairey himself contributed to the Society's funds, in the best way of all it seemed then, by paying the bills for those functions which the Society had to undertake to ensure its prestige in those difficult times. He would never allow the Secretary to skimp any function just because the Society could not afford it. As a personal note I must record here that I had to consider my own position as the Secretary in the early 1930's, for there were expenses to which I had committed myself before becoming Secretary. Fairey learnt, through a member of Council, that I was contemplating resigning and insisted on paying the expenses the Society then could not have paid by an increase of salary.

Richard Fairey was elected President of the Society on 30th May 1930. In the summary of the year's activities published in December 1931 there appeared an appreciation of Fairey's help, ending with the words "Mr. Fairey's first year of office has coincided with one of the most severe financial depressions this country has experienced, but his generous help has enabled the Society to come through with its finances unimpaired."

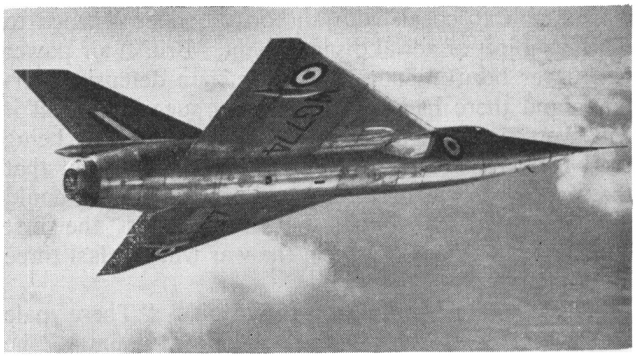
If there ever was a fairy godfather in the anxious years of building, Richard Fairey was that godfather of the Aeronautical Society. He always felt that the success and prestige of the Society must depend upon a flourishing technical membership, and in reply to a suggestion of mine he wrote, in April 1927, "I have made it a rule among my technical staff that for anyone who will sit for the Associate Fellowship examination and pass it, I will pay the whole expenses, plus entrance fee and one year's subscription."

This was a powerful addition to the Society's funds and membership, an example quickly followed by T. M. Sopwith, of the Hawker Engineering Company; Commander J. Bird, of Supermarine's; Mr. J. Siddeley, of Armstrong Whitworth's; C. C. Walker, of de Havilland's; and Mr. Thomas, of Bristol's.

The Council early recognised the importance of creating an Endowment Fund which would provide a steady income the Society could use as required. But the years immediately following the First World War were not conducive to the raising of considerable funds. Fairey, despite the difficulties, managed to increase the fund considerably while he was on the Council. In 1937 he contributed £10,000, in a seven year deed, to the Fund, giving a lead which ultimately was generously followed by many members of the aircraft industry.

The twenties and early thirties were years of great air achievements, not only in flying, but in research and development. In 1931, Lord Amulree suggested to Fairey, as the President, that the Society should found a special medal for important achievements leading to advancement in aeronautics.

Medals cost a considerable sum of money to found, for there are the designs to be made by a medal expert, and the steel dies from the drawings and so on. Fairey



The Fairey Delta 2 (Rolls-Royce Avon), which set up a World's Speed Record for Great Britain, flown by Mr. Peter Twiss, on 10th March 1956, of 1,132 m.p.h.

undertook to pay the whole of the heavy cost of what are now known as the British Gold and Silver Medals for Aeronautics. The first awards were made in 1933, and the list of recipients includes some of the most famous names in British aviation. Fairey very rightly suggested that the designs of the medals should themselves commemorate early achievements in the history of British aeronautics. The Gold Medal, with its portrait of Sir George Cayley and his model aeroplane of 1804, commemorates the Father of British aeronautics; the Silver Medal commemorates the work of Henson and his machine of 1842 and of John Stringfellow's model of 1848.

Many members of the Society will remember the Great West Aerodrome, the flying field of the Fairey Aviation Company, now submerged by London Airport. On 5th May 1935, Richard Fairey gave the Society the free use of the aerodrome for the first of a series of Flying Garden Parties to be held on it. He paid all the expenses involved and provided the additional staff and organisation required so that the Society would not find itself facing heavy bills. Some fifteen hundred members and their guests attended, and its success was evidenced by the fact the attendance increased every year, until in 1939 it had reached over 6,000.

During the Second World War, Sir Richard was in America as head of the British Air Commission. In 1942 he received his knighthood for his work in Washington. The task which he undertook taxed his energies to the full and strained his heart. An operation, which prolonged his life for some years, nevertheless forced him to take life more slowly and carefully.

Sir Richard never became reconciled to the compulsory acquisition of the Great West Aerodrome, for he had not been able to protest at the time. In 1949 the Society again enjoyed the hospitality of an aerodrome under his aegis at White Waltham, and again in 1950 and 1951.

Fairey had "a heart with English instinct fraught," and on many public occasions he did not hesitate to show that heart to the world. In January 1922 he spoke of the drastic cuts in the Air estimates.

"It had always been axiomatic that Great Britain must rely upon her own strong right arm and not upon the goodwill of her neighbours. If this country once establishes itself as the first Air Power in the world, it

will be able to speak with authority and be listened to on the subject of aerial disarmament. British air power had never been intended for other than defensive purposes and there had never been any suggestion that it will ever constitute a danger to other nations by being used for offensive purposes. . . . They were told that they would starve in three months if the Navy could not hold the sea routes, but if they lost the first advantage in an aerial attack, the war will not last three months."

He could be biting on occasion. "These pale intellectuals who don't deserve their own country," he said of those who had been running down the land in which they lived, and of some builders in between the wars, "These miserable hucksters of jerry builders who pawn the countryside for a mess of cottages."

In a speech he made in January 1927 on Aviation, he said bluntly, "I have been frank and have suffered for it. A man is expected to make a conventional, standardised speech in this country, otherwise he was a 'Red' or what Mr. Lansbury would term 'hard-faced.' Well, it is better than being sloppy faced."

On occasion he spoke in very moving terms. On 22nd December 1949, he and his fellow directors entertained nearly 300 guests. They were employees who had served the Company for over a quarter of a century, many for over thirty years.

"I am not one of those who ordinarily flinch at the ordeal of public speaking," he began his speech on that occasion. "Never have I been so anxious to make a good speech and never have I felt so inadequate to do so," and continued,

"When a large body of men and women hundreds strong have spent their lives in the same service in close company with each other working to the same ends, suffering the same triumphs and disappointments, it forms a bond between us hardly equalled by any other human experience. We have been together for what is virtually a lifetime. . . . We have had a common object, a common interest and a common purpose throughout our lives and we become thereby a family, held together by bonds and feelings which the passage of time can only tighten."

Fairey was an all-round sportsman, a first class shot, fisherman, and helmsman. He was the great country squire and, in another age, would have raised his own regiment of horse, or sailed the seven seas to the terror of the Queen's enemies. There is a great affinity between sailing and flying, both technically and psychologically, and many leading figures in the aeronautical world have become as well-known in yachting circles. He was a member of a number of yacht clubs and Commodore of the London Yacht Club.

He was, however, not always prepared to accept things as they are, just because they had always been that way. He was a man of great independence of mind, one who wanted to know Why even more than How. When he gave his mind seriously to yachting he could see no reason why he shouldn't be able to take the wind out of the sails of his competitors, by using the wind tunnel to find out how he could put more wind into his own sails. When his chief aerodynamicist had

One of the last photographs to be taken of Sir Richard Fairey —at Bermuda.

obtained the results of various settings of sails on the yacht model, Fairey asked one of the leading helmsmen, whose skill was unquestioned, to look at the model, and to set the sails to get the best results.

He set them exactly as the wind tunnel results showed they should be set! The wind tunnel experiments on sails then stopped.

Fairey was a man of great personal courage. "As a physician of his who had the privilege of advising and treating him for more than a decade," wrote the American Dr. Paul D. White, "I wish to pay tribute to his great courage and patient endurance in the face of illness which would early have crippled a less stout-hearted man. At the end he accepted the risk of an essential operation hoping that he might survive to continue his career to help others."

Sir Richard Fairey was a great President of the Royal Aeronautical Society. In his heyday he served it, guarded it, gave it of his own great heart, and left it strengthened beyond measure. His name will loom large in its annals.

"How beautiful is the battle,
How splendid are the spears,
When our banner is the sky
And our watchword *Liberty*
And our kingdom lifted high above the years.

"How purple shall our blood be,
How glorious our scars,
When we lie here in the night
With our faces full of light,
And death upon them smiling at the stars."

ALFRED NOYES.

J. LAURENCE PRITCHARD.

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