

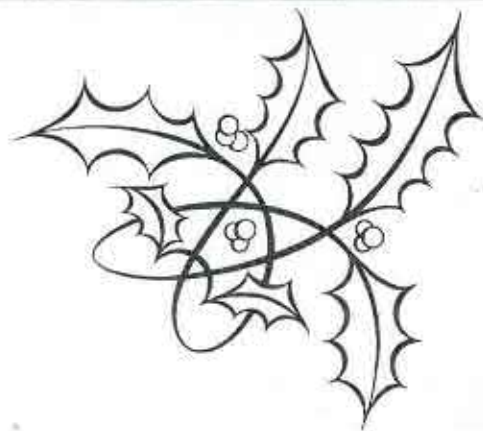
ENTERPRISE

DECEMBER 1958

PRICE TWOPENCE



Season's Greetings



ENTERPRISE



DECEMBER 1958

PRICE TWOPENCE

The internal magazine of the de Havilland Companies

HATFIELD · STAGLANE · LOSTOCK · CHESTER
CHRISTCHURCH · FARNWORTH · HITCHIN · LAKEFIELD
LEAVESDEN · LONDON · MANCHESTER · PORTSMOUTH
STEVENAGE · WELWYN · SYDNEY · TORONTO
JOHANNESBURG · WELLINGTON · NEW YORK

Goodwill Within the Enterprise and Beyond

GREETINGS to all readers of *Enterprise* and to everyone throughout the many de Havilland factories and other establishments large and small. May they and their families have a happy and a merry time at Christmas and all good fortune in the coming year.

The same greeting goes forth to all our agents and representatives spread over the globe, and to innumerable friends with whom we have business associations everywhere. The de Havilland publications—including the new *Sportsmag* of de Havilland Canada—carry the Christmas message right through the international community to which we all belong.

It is the only greeting of its kind that is universal, happily given and received everywhere. Having originated in the belief of a few it has become the world's annual reminder of man's common interest and purpose.

Life is strange indeed. Some of us are working on weapons of the most diabolical kind and nothing could be farther from our thoughts than that we might ever have to use them. Others are developing very interesting equipment

and engines and aircraft of outstanding usefulness.

Who is to say that the weapon is not the most useful product of the lot if it makes war ridiculous?

But wherever our business takes us—ask any field service engineer—we find the same general outlook and aspiration, to get along, to eliminate the major insecurities, to better ourselves, to benefit fairly from our individual efforts, to enjoy our companionships. It is the most contradicted platitude.

At any rate Britain's objectives as a nation and our own attitude as an industrial concern are clear to the world. When we appear at the customer's airport it is for the plain reason that we need business, we must export because we cannot avoid being big importers; we cannot give anything away, but we aim to supply good value and service.

Without a doubt the clear relationship that arises from this motive of exchange and profit from personal endeavour is standing Britain in good stead at the present time and offers our best hope in dealings overseas and among ourselves at home.

APPOINTMENTS TO THE BOARDS OF DIRECTORS

Aircraft Company

At a meeting of the Board of Directors of the de Havilland Aircraft Co. Ltd. held at Hatfield on Monday, November 10, Mr. C. T. Wilkins, Chief Designer, Hatfield, and Mr. John Cunningham, Chief Test Pilot, were elected to the Board. The appointments took effect from December 1.

Mr. Harry Povey, who for many years was in charge of production, retired from the Board on November 30.

Mr. R. E. Bishop, hitherto Design Director, is now appointed Deputy Managing Director. Mr. R. M. Clarkson is appointed Research Director. Mr. Wilkins becomes Chief Designer of the Company.

Sir Geoffrey de Havilland is the President of the Company and the Board of Directors now comprises:

MR. W. E. NIXON	Chairman
MR. A. F. BURKE	Deputy Chairman and Managing Director
MR. F. E. N. ST. BARRIE	Director
MR. R. E. BISHOP	Deputy Managing Director
MR. R. M. CLARKSON	Research Director
MR. A. S. KENNEDY	Director
MR. C. T. WILKINS	Chief Designer
MR. J. CUNNINGHAM	Chief Test Pilot

MR. C. T. WILKINS

Mr. C. T. Wilkins, O.B.E., F.R.Ae.S., has had thirty-one years of experience in aircraft design and is one of the most knowledgeable technical men in the industry. He has been in the de Havilland Aircraft design office for almost all of this long period, and was appointed Chief Designer at Hatfield on December 1, 1954.

Born in 1905 and educated at Brighton College after the first war, he obtained his early aeronautical training with Vickers at Weybridge, serving for two years in the shops and one year in the drawing office.

He first joined de Havilland at Stag Lane in 1928, in the drawing office, which was then very active on development of the Moth; and in 1929 he learned to fly and took his pilot's A licence at the London Aeroplane Club there. He left the company for experience elsewhere from 1930 when the world trade recession brought hard times to our company. For a year and a half he was in the drawing office of the Cierva Autogiro Company where he was engaged on interesting early work with autogyrating helicopters. He also spent six months in the design department of Handley Page Ltd.

Mr. Wilkins rejoined the de Havilland Company in 1932, returning to the Stag Lane drawing office, and he has been occupied on practically every D.H. aircraft design project since then. From 1937, when Mr. R. E. Bishop took over the major design responsibility, Mr. Wilkins has been his right-hand man, heading the senior design team, which over many years has suffered but little change in its principal personalities. The younger men, most of them products of the de Havilland Technical School, have been brought along according to their aptitudes, several rising to high positions, and many owe a debt to him for his guidance and encouragement.

He was of course closely concerned with the swift and successful work on the Mosquito during the war, and he has been occupied with every phase of the major task on the Comet.

It was particularly in respect of the Comet that Mr. Wilkins was made an O.B.E. in the Queen's Coronation Honours in 1953, although the citation made reference to

the notable part that he had taken in the design of military as well as civil aircraft.

His appointment as Chief Designer at Hatfield late in 1954 occurred when, under Mr. Bishop as Design Director, the responsibilities of the two main design offices were delegated and Mr. W. A. Tamblyn, A.F.R.Ae.S., A.M.I.N.A., was made Chief Designer at Christchurch, specialising in military aircraft. At that time Mr. Wilkins assumed charge of civil design, and he has thus been responsible for the development of the Comet 2 for the Royal Air Force and of the Comet 4 for the British Overseas Airways Corporation and other airlines. His present duties as Chief Designer of the Company of course embrace responsibility for the D.H.121 jet airliner for British European Airways.

MR. JOHN CUNNINGHAM

Mr. John Cunningham, D.S.O., O.B.E., D.F.C., D.L., has been Chief Test Pilot of The de Havilland Aircraft Company since October, 1946, when he succeeded his friend Geoffrey de Havilland. He has been responsible for the flight development of all de Havilland aircraft, civil and military, from that time, and is renowned for his outstanding work in bringing to fruition from its inception and through all its stages, the world's first jet airliner and the only fully developed jet airliner at this date, the Comet. On the progressive marks of this aircraft alone he has flown as captain 2,500 hours, and it cannot be the purpose of the present brief note to expand upon the technical magnitude of this contribution to the progress of aviation.

Mr. Cunningham, although only 41 years of age, has been with the de Havilland organisation for more than 23 years and has followed his career with a classical singleness of purpose.

Born in 1917 and educated at Whitgift he entered the de Havilland Aeronautical Technical School in September, 1935. In the same year he joined No. 604 Squadron of the Auxiliary Air Force, and learned to fly in the Avro 504N. His first position in the Company, in 1938, was as a member of the light aircraft development department and he started test flying with Geoffrey de Havilland that year on the D.H.94 Moth Minor (Gipsy Minor 90 h.p. engine).

Mobilised with his squadron just before the outbreak of war in 1939 he was at once engaged in night-fighter work, at first on converted Blenheims, later on Beaufighters and Mosquitoes. He became the leading night-fighter pilot of the R.A.F., and was primarily responsible for the flight development of the radar technique which brought such remarkable results in the defence of Britain. He was awarded the D.S.O. with two bars and the D.F.C. with one bar, and by March, 1944, when he was 26 years old, he was posted to Headquarters, 11 Group, as Group Captain, Operations.

Mr. Cunningham returned to civil life as Chief Test Pilot of the de Havilland Aircraft Company. He continued in the R.Aux.A.F. until June, 1946, becoming Commanding Officer of the re-formed 604 Squadron in March, 1946. He gained the 100 km. closed-circuit record in a Vampire (Goblin engine) in August, 1947, and the world height record, 59,446 ft., in a Ghost-engined Vampire in March, 1948. He made the first flight in the Comet on his birthday in 1949.

He was appointed an O.B.E. in King George's Birthday Honours List in 1951 and in that year was awarded the British Silver Medal for Aeronautics by the Royal

Aeronautical Society for outstanding work as a test pilot. He was awarded the Gold Medal of the Royal Aero Club in 1956, and received the Harmon International Trophy at the hands of President Eisenhower in October, 1956, for "outstanding contributions to the development of commercial jet-propelled air transportation" with particular reference to having flown the first jet airliner around the world in December, 1955. He was appointed Deputy Lieutenant of the County of Middlesex in 1948.

Engine Company

At a meeting of the Board of Directors of the de Havilland Engine Company Limited held at Leavesden on Tuesday, November 11, Mr. W. F. Shayler, Commercial Manager, and Professor A. D. Baxter, M.Eng., M.I.Mech.E., F.R.Ae.S., F.Inst.Pet., Chief Executive of the Rocket Division and the Nuclear Power Group, were elected to the Board, Mr. Shayler becoming Sales Director. The appointments took effect from December 1, 1958.

Sir Geoffrey de Havilland is the President of the Company and the Board of Directors now comprises:

MR. A. F. BURKE	Chairman
MR. H. BUCKINGHAM	Managing Director
MR. W. E. NIXON	Director
MR. J. L. P. BRODIE	Engineering Director
DR. E. S. MOULT	Technical Director
MR. M. G. ASH	Financial Director and Secretary
MR. W. F. SHAYLER	Sales Director
PROFESSOR A. D. BAXTER	Chief Executive Rocket Division and Nuclear Power Group

MR. W. F. SHAYLER

Mr. W. F. Shayler joined The de Havilland Engine Company in 1951 when he was appointed Commercial Manager. In this position he has been concerned with directing the work of the Company's Business Division, covering engine sales and service. His association with de Havilland and the Airspeed Company which later became a part of the Enterprise, covers a period of more than 21 years.

Born in 1899, William Frederick Shayler was educated at Marling School, and his subsequent career has been entirely devoted to aviation. He learnt to fly at the London & Provincial School of Flying at Stag Lane in 1917 and then served in a fighter squadron with the Royal Air Force during the last year of the Great War. In 1921 he rejoined the Royal Air Force, and served in Nos. 1 and 17 Squadrons at home and abroad.

In 1927 he went to Canada to take a commission with the Royal Canadian Air Force, where he became an instructor. Two years later he resigned from the R.C.A.F. and joined a Toronto flying school which operated some of the first Gipsy Moths to be exported to Canada. In this capacity he became well known to many early Canadian aviators, some of whom are now Senior Executives in The de Havilland Aircraft of Canada Ltd.

Later Mr. Shayler became General Manager of a company operating a flying school and charter business in Ontario. In 1932 he formed a new company, Northern Skyways, operating in north-west Quebec. This company was one of the first operators of the Fox Moth on floats, and this particular aircraft gave outstanding service carrying prospectors, personnel, and equipment into the mining areas, and penetrated as far north as Hudson's Bay.

Following a period of more than six years in Eastern Canada, Mr. Shayler returned to England in 1934 and was appointed Sales Manager of Pobjoy Airmotors and

Aircraft Ltd. He joined Airspeed as Business Manager in 1937, and carried high responsibilities during the war period. In 1950 he was appointed to the Board of Airspeed as Commercial Director.

He took up his position as Commercial Manager of The de Havilland Engine Company under Mr. Buckingham, then Business Director, in September, 1951, following the integration of the Airspeed and de Havilland Aircraft Companies. He has thus been responsible for the contractual and business departments of the Engine Company for seven years.

PROFESSOR A. D. BAXTER

Professor A. D. Baxter, M.Eng., M.I.Mech.E., F.R.Ae.S., F.Inst.Pet., joined The de Havilland Engine Company in 1957 as Chief Executive of the Rocket Division and the Nuclear Power Group, two important sections of the organisation, the significance of which is recognised by the Board of Directors in making this appointment.

He was educated at Liverpool University and served his apprenticeship with the Daimler Company in the years 1930-1934. He learned to fly in 1930 and was commissioned in the Reserve of Air Force Officers from 1930 to 1935. After completing his apprenticeship he was a research engineer at the Institution of Automobile Engineers for a period of two years. Then in 1935 he joined the Royal Aircraft Establishment and was initially concerned with the flight development of exhaust-driven turbo-blowers.

With the advent of the aircraft gas turbine, his subsequent career with the R.A.E. was one closely associated with the pioneering development of this new prime mover and later forms of jet propulsion. In this work Professor Baxter collaborated with Mr. Hayne Constant and Dr. A. A. Griffith. Among the activities with which he was particularly concerned were the development of the early Metropolitan Vickers axial flow engines, flight testing of the first reheat systems, and the design layout of the research facilities at the Pyestock gas turbine test site.

In 1944 he joined the newly formed Gas Dynamics and Supersonics Division of the R.A.E. where he worked on ramjet and rocket research. This early association with rocket propulsion was continued when he was appointed as first Superintendent of the Rocket Propulsion Department of the R.A.E. at Westcott, a post which he held for more than three years.

In 1950 he was elected to the newly created Chair of Aircraft Propulsion at the College of Aeronautics, Cranfield, and in this capacity he built up the now extensive component and engine test facilities of the Aircraft Propulsion Department. He became Deputy Principal of the College in 1954.

He joined the de Havilland Engine Company in October, 1957, as Chief Executive of the Rocket Division and the Nuclear Power Group. His connections with de Havilland, however, date back to the early days of the war when he discussed Goblin combustion problems with senior engineers in the Company. Later, he was in a position to assist with the initial experiments performed at Hatfield with hydrogen peroxide rocket engines.

Professor Baxter's long and detailed experience in all types of heat engines and power plant is evidenced by his wide academic interests and his membership of many professional bodies. In this respect he is a Committee Member of the Government Scientific Advisory Council. He is a S.B.A.C. representative on the Combustion and Propulsion Panel of the Advisory Group on Aeronautical Research and Development to NATO, and serves on the Council of the Royal Aeronautical Society. He is also a Committee Member of the Aeronautical Research Council.



Retirement of Mr. H. Povey

MR. H. POVEY, F.R.Ae.S., who retired from the Board of Directors of The de Havilland Aircraft Co. Ltd. on November 30 1958, is a production engineer without peer in the aircraft industry. Combining as he does a keen perspicacity, great energy and a compelling personality, Mr. Povey has brought to bear a wealth of practical experience and a knowledge of aircraft engineering which few can equal and which none can apply with more telling effect.

From 1914 when he first went to the Royal Aircraft Factory at Farnborough, Mr. Povey was continuously concerned with the design and production of aircraft, engines and propellers until, in recent years, he was compelled by the march of events to turn his genius to the problems of long-range missile production.

Born in December 1890, Mr. Povey served his apprenticeship with Bellis and Morcom in Birmingham and later worked in the design office of the Wolseley Motor Car Company—in the same Birmingham factory where Sir Geoffrey de Havilland had previously been employed. At the outbreak of the 1914 war he joined the Royal Aircraft Factory, Farnborough, as a draughtsman and was later appointed an assistant designer, remaining there for three years.

Mr. Povey's first association with de Havilland occurred somewhat indirectly when in 1917 he took the post of Works Manager of May, Harden and May Ltd., a subsidiary of the Aircraft Manufacturing Co. Ltd. at Hythe, Hampshire, who were building the Rolls-Royce-engined F.2A flying-boats with which the Royal Naval Air Service were carrying on a relentless war against U-boats and Zeppelins over the North Sea.

After a period with the British Nieuport Company in Cricklewood, where he worked under the late Mr. H. P. Folland, Mr. Povey rejoined the de Havilland team in 1924, nearly four years after the formation of the de Havilland Aircraft Company. For two years he worked in the design office—a period which included the conception of the Moth and which set the Company for the first time on the road to success. He was appointed Chief Inspector of aircraft in 1926, a responsibility which was soon extended to cover the new de Havilland engine. In this capacity Mr. Povey created the engine inspection organisation for the very first Gipsy and all models up to the Gipsy Six; he was responsible for certifying more than 6,000 production engines.

In 1934-35 the de Havilland Company decided to embark on propeller manufacture. Mr. R. Hutchinson, as Chief Production Engineer (Engines) at that time, was studying the production of propellers. He died before getting the project under way and Mr. Povey was then chosen to go to America and study the production and inspection methods of the Hamilton Company. On his return to England he undertook, in addition to his other responsibilities, the introduction for the first time in this country of the new propeller manufacturing technique, which he established in the factory at Stag Lane.

When later he concentrated again on inspection he was in the unique position of carrying responsibility for aircraft, engines and propellers, and he continued in this exacting position until shortly before the war, when separate engine and propeller divisions of the Company were formed.

In 1938 Mr. Povey was appointed Production Manager of the Aircraft Division at Hatfield, his succession to this post coinciding with a decision by the Company to embark on all-metal construction. The first result, the Flamingo, was an outstanding aircraft and a credit to design and production teams alike. But for the war which precipitated cut short his career the Flamingo might well have made a significant impact on the world's air-transport business.

Mr. Povey's considerable influence in the formative years of the de Havilland Companies must inevitably take second place to his achievements in wartime, a period in which his name became most closely linked with the Mosquito. The early struggle, in 1939 and 1940, to arouse official interest in the Mosquito concept is too long a story to recount here; suffice it to say that the up-hill task culminated in 1941 in huge production orders out of all proportion to anything that the de Havilland organisation had ever contemplated.

With characteristic vigour Mr. Povey entered the fray, a battle which called for a high degree of technical skill to devise the unique production tools needed for the Mosquito. It demanded furthermore an outstanding administrative ability to co-ordinate the wide and rapidly



expanding network of sub-contractors which, large and small, were introduced and adapted into Mosquito production.

The first Mosquito sortie was flown by the R.A.F. in September, 1941, and in the same month Mr. Povey flew to Canada to repeat at the de Havilland plant there the task of setting up in double-quick time a Mosquito production organisation. There were many problems, including the need to use different material specifications from those used in England, and different equipment. Numerous sub-contractors had to be appointed, and they were found throughout Canada, from Vancouver in the west to Windsor and London in the south and Montreal in the east. A great task was upon him to initiate, at that period, the very advanced engineering methods in these widely-dispersed factories.

The first Canadian Mosquito flew within 12 months of the initial drawings being received, and by the end of the war more than 6,600 Mosquitos had been built in Great Britain, Canada and Australia. Nor was this all: Mr. Povey must be credited with much of the planning under which some 2,500 Tiger Moths, Queen Bees, Dominies and Oxford's were built at Hatfield between 1939 and 1945.

He returned to England in 1944 as Chief Inspector (Aircraft), and was appointed General Production Manager in 1945. Since the war Mr. Povey's main pre-occupation has been with the production of the Comet, which called for elaborate tooling and many new fabrication techniques, all evolved against a relentless timetable, but this achievement must not disguise the magnitude of the other peacetime work for which he has been responsible. In 1948, for instance, before rearmament became a national policy, he brought into commission the de Havilland Chester factory which, in subsequent years, has built Comets, Doves, Herons, Vampires, Venoms and Chipmunks to a total of some 3,750 aircraft in ten years. Production from all D.H. factories reached a peacetime record of nearly 900 aircraft in the year 1952.

The Hufford stretch press and the Pirax bonding machine were two of the more important aids to manufacture which Mr. Povey was quick to recognise, and he did much to pioneer their introduction in this country. Advanced methods of precision rivet manufacture occupied him as the war was coming to an end and became a feature in all de Havilland aircraft.

He was interested in the Redux process of metal bonding from its earliest days; de Havilland's first use of this was in the Hornet for cementing metal to wood, in 1942, and

later he developed the technique and employed it extensively in the Dove, Heron, Comet and all types. He lectured on this subject to an international meeting at Cambridge.

In January, 1951, still responsible for production, Mr. Povey was appointed a Director of the de Havilland Aircraft Company, in which capacity his profound experience and practicality have been most valuable to the Board.

When the Airspeed Company and de Havilland became fully integrated in 1951 it was Mr. Povey's job to reorganise the production of the Portsmouth and Christchurch factories as part of the larger group. Also in the early 'fifties he was consulted about the manufacture of de Havilland fighters by Hindustan Aircraft Ltd., Bangalore, twice flying out to India to advise, and he arranged the appointment of a British technical team to develop factory efficiency there.

In May, 1952 he received the Royal Aeronautical Society's Bronze Medal in recognition of his outstanding work in building the Comet jet airliner and in May, 1953, he was granted a Fellowship of the Society. His paper on the planning and construction methods of the Comet, presented to the Society in April, 1951, is remembered as one of outstanding technical and historic interest, likewise the R.Ae.S. branch lecture, more general in character, on engineering methods and organisation, which he gave at Cambridge University in 1957.

In 1956 Mr. Povey applied his abilities in a new and highly exciting field—the manufacture of long-range ballistic missiles, for which his extensive experience and his flair for investigating and adopting new methods particularly fitted him.

Needless to say, the Standing Committee on Production of the Society of British Aircraft Constructors, has long had Mr. Povey's eager support. He has served on the Committee since 1946 and regrets that he must now retire from it, for he holds it in high esteem and regards it as a valuable asset to the country.

Mr. Povey has always actively promoted understanding both technical and psychological, within the factories themselves, and he played a leading part in the formation in 1944 of the de Havilland (Aircraft) Engineering Society. Aiding out of less formal but extremely useful meetings during the most difficult war years, the Society has been of considerable value and Mr. Povey was its President for

several years. His chairmanship at lectures and particularly during discussions has always been lively and highly realistic.

Indeed, the clarification of issues and inculcation of the co-operative spirit through engineering integrity and individual responsibility have always been uppermost in Mr. Povey's mind, and these principles have helped forward his continuous efforts to create a loyal and enthusiastic staff. He has often said how grateful he is for the support that his men have consistently given him.

Of the many happy events in Mr. Povey's long career, the "first flights" and other moments of modest felicitation, none are treasured by him more than those occasions when he has been privileged to show something of the Company's work to members of the Royal Family. During the grim days of 1940—it was on August 15—when Flamingoes, Tiger Moths, Oxford's and Dominies were being turned out, and the Mosquito was coming along, the late King George visited Hatfield and Mr. Povey conducted him around the works. While His Majesty (with young Geoffrey de Havilland) was inspecting the interior of a Flamingo which was being completed for his use, Wing Commander Fielden, now Air Commodore Sir Edward Fielden, Captain of the Queen's Flight, turned to Povey and said "I bet you he'll require a Class 1 mod!" and as the King emerged he asked for an altimeter and an A.S.I. to be fitted in the cabin.

In March, 1952, Mr. Povey escorted H.R.H. The Duke of Edinburgh on a tour of the factory and flew with him in the Comet 1; and a few weeks later he conducted H.M. Queen Elizabeth The Queen Mother and H.R.H. The Princess Margaret on a similar visit. He also recalls explaining Mosquito production to the Governor-General of Canada, H.E. The Earl of Athlone, at Toronto during the war.

It is said that nobody is irreplaceable, and Mr. Povey hands over with confidence his last responsibilities for de Havilland production. But his departure removes a forthright and commanding personality that will be difficult to replace, a personality that has influenced the industry and leaves its stamp on the Company. By those who had the privilege of serving, and learning, under him, Harry Povey will always be remembered with respect for his ability and energy and with affection for his candour, his cheerful robustness, and above all his stalwart character.

AUSTRALIAN DE HAVILLAND APPRENTICES GAIN TOP STATE HONOURS

Two apprentices from de Havilland Aircraft's factory at Bankstown, Sydney, have recently been named the outstanding Sheet Metal Work and Aircraft Fitting apprentices in N.S.W. for this year.

They are 20-year-old Max Elbourne of Yagoona and 23-year-old Bob Hoy, who has recently transferred to Qantas Empire Airways in Lae, New Guinea.

In advising de Havilland that the awards have been made to these apprentices, the Apprenticeship Commissioner, Mr. E. M. Boland, stated that the honours bestowed upon them were based on pride in craftsmanship, workshop and technical college training and general citizenship. The award was primarily due to the Company's efforts in training the apprentices and teaching them the finer points of their trade.

Another of our apprentices, Doug Laycock, was selected as the leading aircraft-fitting apprentice in 1954. Doug, now 24 years of age, is still with our Australian Company as

an aircraft draughtsman, a position he has held since the award was made in 1955.

It is pleasing that Max Elbourne has gained such a high honour. Since his apprenticeship commenced in 1954 Max has made consistently steady progress and has won numerous awards, including several from the Granville Technical College and our own internal awards. This year, he won the Albert Brandt Memorial Prize granted to the student obtaining the highest marks for the Sheet Metal Trades Course at all metropolitan technical colleges. Max is interested in sport and is known in the district as a promising Rugby League player. He was chosen to represent Bankstown in the Present Cup for 1956 and 1957, but was unable to play owing to injuries.

Max's mother, a widow for many years, also is employed at de Havilland as an assistant in the canteen. Mrs. Elbourne stated that the granting of the award to her son was one of the high-spots of her life.



FIRST ROYAL FLIGHT IN COMET 4

His Royal Highness Prince Philip's first flight in a Comet 4 was on October 28. He flew from London to Ottawa to attend the world conference of the English Speaking Union. With H.R.H. Prince Philip in this picture are, left to right, Mr. Basil Smallpiece (Managing Director, B.O.A.C.), Mr. G. J. H. Jeffs (London Airport Commandant), Sir Gerard d'Erlanger (Chairman B.O.A.C.) and Sir George Cribbitt (Deputy Chairman, B.O.A.C.).

ANOTHER AUSTRALIAN DOVE AMBULANCE

Photographed at de Havilland Bankstown factory at the official Handover Ceremony of a new Dove Aerial Ambulance for the Northern Territory Medical Service were (left to right) The Minister for Health, The Hon. Dr. D. A. Cameron, T.A.A. Pilot, Captain J. Slade, who will be in command of the aircraft and the Managing Director of de Havilland Aircraft Pty., Mr. L. J. Brade.



TAXI SERVICE BY BEAVER

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Aerotaxi, known affectionately as "AVIANCA's little Brother," operates 150 airports in Colombia, South America. Started in 1948, Aerotaxi is now to the businessmen and ranchers of Colombia, synonymous with the word "Economy." Experience has shown that the Beavers used on scheduled service cost 40 per cent. of ground transportation expenses without counting the risks involved in the latter and the time lost.



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R.A.F. COMETS LOG 14,000 HOURS



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Providing jet transport support to V-bomber moves is among the vital rôles played by the R.A.F.'s Comet 2 fleet. Air Chief Marshal Sir Harry Broadhurst piloted the Vulcan, seen here at Nairobi. Lady Broadhurst travelled by Comet. The combined force was en route for Rhodesia where Sir Harry was paying an official visit.

MECHANISED PRODUCTION CONTROL



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At the present time industry is seeking more systematic and detailed planning to control all activities involved in the manufacture of products. The possibility of mechanisation was explored and developed by our Candian Company who have adopted the I.B.M. Tabulator which lists, prints and adds reports data. Here a DHC-4 Caribou takes shape on the assembly line at Downsview where I.B.M. high-speed electronic machines helped greatly in cutting time losses and expense in the fight against time before the aircraft's first flight on July 30, 1958.

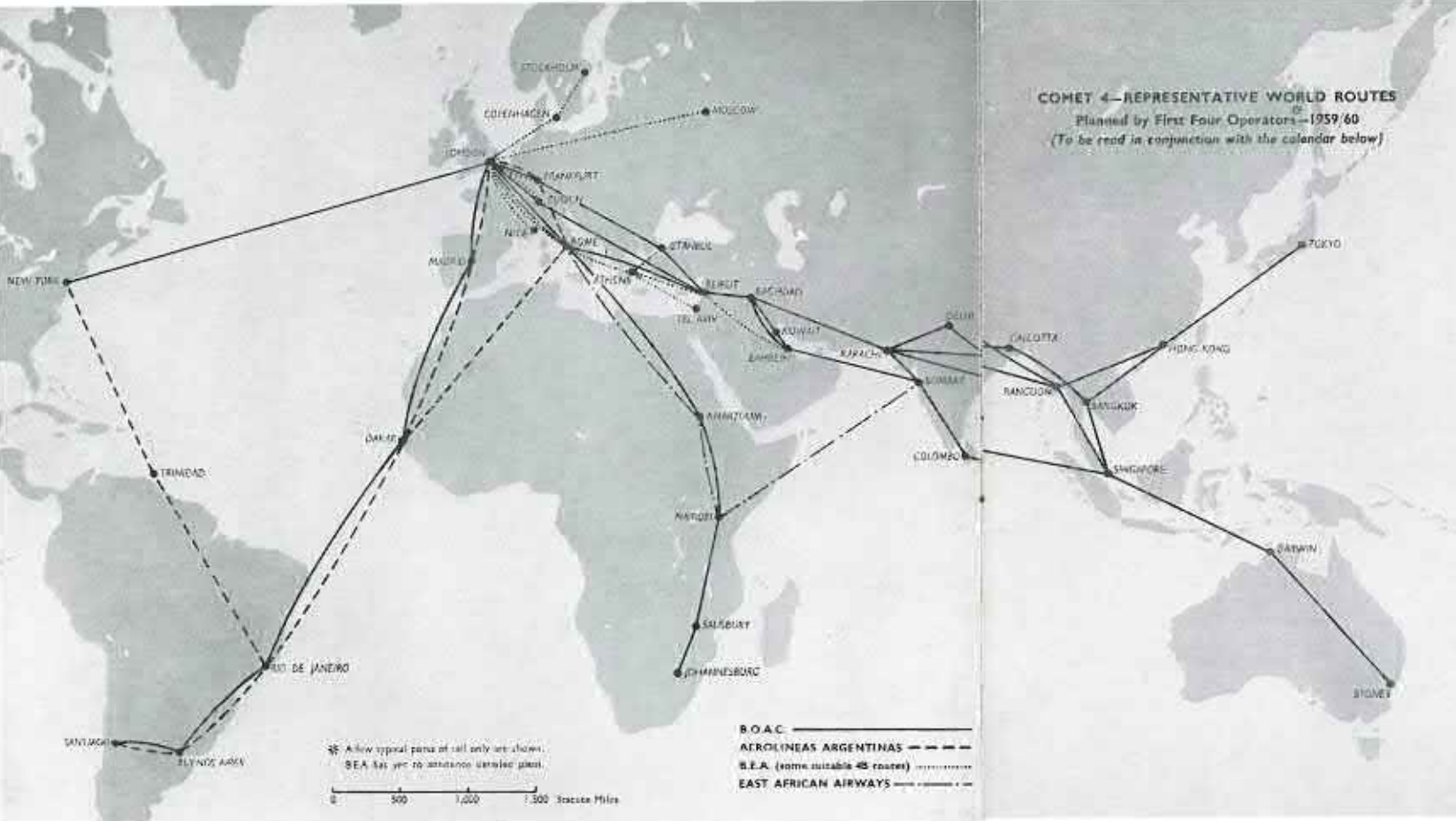
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ARGENTINE AIR CREW COMET TRAINING



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The first contingent of Aerolineas Argentinas air crew arrived at Hatfield at the end of October for Comet 4 ground and flying training. They join the 50 or so Argentine ground engineers, the majority of whom started their course in September. Some of the first 40 engineers from the Argentine are seen here, in the Hatfield Assembly Hall, examining the Ekco Cloud Collision radar scanner in the Comet's nose.



training, satisfactory completion of the 100-hour shake-down trials in August and September (recorded in the October *Enterprise*) and prompt delivery of the first four Comet 4s to the Corporation have meant much to the overall effort to bring the Comet 4 into service earlier than was originally intended or expected.

By April, 1961, the 19 Comet 4s of B.O.A.C. should be flying at the rate of 73,000 aircraft-hours a year, which is equivalent to more than 32 million miles.

Aerolineas Argentinas are planning an annual utilisation of 3,000 hours per aircraft shortly after their inaugural Comet jet service to New York in May, 1959, and this will later be increased to 3,800 hours. By June, 1960, their fleet of six Comet 4s will be covering some 10 million miles per year.

To this must be added the operations of East African Airways (two Comet 4s) and B.E.A.'s six Comet 4Bs. Assuming a conservative utilisation of 2,250 hours a year for each of B.E.A.'s Comet 4Bs and 2,500 hours a year for each of the East African Comets, these eight aircraft together will produce a further 18,500 flying hours, more than 8 million aircraft miles a year.

The geographical extent and timing of these plans are shown below.

The shake-down trials, from Hatfield to New York and back (August 10-12) for P.N.Y.A. quietness approval (granted October 3), to Hong Kong and back (September 8-14) and to Canada, Central and South America and back

Airlines Plan World-wide Comet 4 Operations

Initial users will fly 50-million miles a year

Here is some information about the extent to which the Comet 4 operations are expected to build up over the next couple of years.

The Editor regrets that the historic event of the Comet's re-entry into public service was not given greater prominence in the October issue of *Enterprise*, which however was due to the remarkable achievements of B.O.A.C. in starting the London-New York operation as early as October 4, within four days of the formal delivery of the first two Comet 4s.

THE British Overseas Airways Corporation's plan to start daily Comet services between London and New York on November 14 was achieved as *Enterprise* closed for press. The honour of having operated the first-ever jet service on this blue-ribbon route (from October 4 when a westbound, and an eastbound service were flown) was thus followed by operating the first daily-

frequency service between these two cities. An engineering labour difficulty had delayed a little the B.O.A.C. crew-training programme and had interfered with the intended weekly frequency from October 4 to November 14, so that in fact westbound services were flown on October 4 and 10, eastbound services on October 4, 6 and 12.

Excellent progress in the earlier stages of

COMET PLANNING CALENDAR

For First Four Comet Operators

	B.O.A.C. (from London)	AEROLINEAS ARGENTINAS (from Buenos Aires)	B.E.A.† (from London)	EAST AFRICAN AIRWAYS (from Nairobi)
October 1958 November 1958 May 1959	Weekly to New York Daily to New York 4 a week to Tokyo	4 a week to New York 2 a week London (2 routes) 7 a week Santiago		
July 1959	2 a week to Hong Kong			
August 1959	Increase to 6 a week to Tokyo			
September 1959	2 a week to Singapore			
December 1959	5 a week to Australia via Singapore			
Jan./Feb. 1960	2 a week to Santiago			
February 1960	4 a week to Johannesburg			
April 1960	1 or 2 a week to Salisbury		Some suitable routes: Nice Rome, Athens, Istanbul, Cyprus Tel Aviv, Persian Gulf Moscow German traffic centres Swiss traffic centres Scandinavian capitals	
June 1960		Increase to daily New York 4 a week to London Santiago services as above		In 1960 To London Also to Bombay

† B.E.A. has yet to announce detailed plans.

(September 16-27) were made without any spare-parts' backing along the routes flown, yet there were no delays in schedules which had been strictly laid down in advance. The British Air Registration Board had required that only one aircraft (it was G-APDA) be used for all of these flights as a demonstration of satisfactory operation and serviceability before allowing the type into public service.

Because the airfield performance of G-APDA in the course of the shake-down trials attracted marked interest from airline operations managers and air crew (many of whom were on board for various sectors of the flights) the following extracts from the co-pilot's report are reproduced to afford more specific information in respect of particularly interesting airports among the many that were visited:

The Comet showed its low-speed docility at Bombay on September 10 during a demonstration to Air India officials. A monsoon shower lowered the already poor weather conditions to 350 ft. and 1 mile of visibility. A visual circuit was nevertheless made in these conditions — a task rendered more difficult by the presence of a large hill on the extended centre-line of the runway. The final roll-out onto the QDM of the runway was made at 100 ft., a tribute to the powerful ailerons and low wing-loading of the Comet.

The Comet's runway performance at Mexico City surprised local airline executives. The aerodrome has a runway of only 8,200 ft., and yet is 7,340 ft. A.M.S.L. The temperature at the time of take-off was plus 18°C., i.e., 17°C. above standard. The Comet

lifted off after a run of only 6,900 ft., and then proceeded direct to Lima, a distance of 2,680 statute miles. All other aircraft, limited by runway performance, have to make one or more fuel stops en route.

The Comet's performance was outstanding on the Rio-Caracas sector. This stage is 2,830 statute miles and the track lies directly across the "Matto Grosso." The single runway at Rio, although almost at sea level, is only 7,300 ft. long.*

For this long sector, we were loaded to 156,000 lb. A.U.W. Taking off at mid-day, in zero wind, with the outside air temperature at plus 27°C., we passed the end of the runway at 300 ft., gear up, well established in the initial climb. The Comet then devoured the intervening distance in 5 hr. 51 min., arriving overhead Caracas with enough fuel to divert to San Juan.

* Editor's Note: There is no need to lengthen the runway — 7,300 ft. is a reasonable length for a sea-level airfield by Comet standards.

The immediate success of B.O.A.C. Comet 4 operations, and the speed and comfort of turbo-jet flying have resulted in an immediate demand for seats; already there is a waiting list for passengers, which it is to be hoped will be shortened with the increase in frequency.

B.O.A.C. expects to have five Comets by the end of November, and more than 1,000 hours of Comet 4 flying experience; the further extension of services is dependent upon the rate at which crews can be trained. Ten crews had to be trained for New York services and ultimately more than 100 Comet crews will be required to fulfil B.O.A.C.'s plans.

Crew-training is straightforward and



Captain G. T. Greenhalgh, M.B.E., Flight Manager (Designate) of B.E.A.'s Comet 4B fleet, has a long and distinguished airline career with more than 15,000 hours, which include experience on several de Havilland types. Captain Greenhalgh is currently serving as Flight Manager, Viscount No. 3 Flight.

B.O.A.C. plan 8 hours' flying for pilots with Comet 2E experience, 10 hours for those with early Comet experience and 12 hours for those without previous jet experience. This is actual first-pilot time and a similar number of hours are spent in a training capacity in the "jump seat" between the pilots. Ground training for those without recent Comet experience takes five weeks.

An important part of the syllabus — for both air and ground crews — is familiarisation with the Comet's systems. Much of this is done on the Comet 4 Systems Trainer designed and built by de Havilland to cut down training time.

The Systems Trainer has proved invaluable for giving instruction in the handling of the Comet's power-supply system and for practising emergency cockpit procedures, etc. The time spent in this relatively inexpensive trainer will reduce the heavy demands on the Redifon Comet Flight Simulator.

Comet 4 commercial operations across the Atlantic have been notably trouble-free and B.O.A.C. justifiably feel, as a result of Comet 4 experience, and because of their previous Comet experience amounting to almost 30,000 hours, that the Comet has already passed through the early stage during which on all aircraft minor operating difficulties may be encountered and defects in the various systems can be expected to cause delays in service.

de Havilland have had some experience of operating the Comet 3 from ice and snowbound runways, and the Comet 1As of the R.C.A.F. have encountered no difficulties in Arctic conditions. Nevertheless, B.O.A.C. Comets are being fitted out with thrust reversal next year, this fully proven system having been publicly demonstrated this year on the Comet 3B at the S.B.A.C. Flying Display at Farnborough.



New York-London at 580 m.p.h. — The inaugural trans-Atlantic eastbound flight on October 4 was also an "unofficial" record. Mr. Basil Smallpeice (B.O.A.C.'s Managing Director) and Captain Tom Stoney, D.F.C. (Comet Flight Manager), have reason to look pleased. The Comets are now flying the Atlantic twice a day, once in each direction.

Practical experience confirms that there are no unusual crew problems associated with Comet 4 operations, pilots having no difficulty with conversion. From the navigator's point of view work may in theory be at a rather higher intensity because of the compression in time of flight; in practice, however, trans-Atlantic Comet navigation has proved easy. Good Loran coverage is available for most of the flight, and radio contact with either side of the Atlantic or the two weather ships, *Charlie* or *Juliet*, is maintainable through all but fifteen minutes or so of the flight; the Comet provides a smooth platform for Astro if required. Navigational aids that are directly interpreted by the pilot are however invaluable and it is probable that Decca/Dectra will shortly be installed in B.O.A.C. Comets, providing the pilot with a continuous pictorial indication of his exact position throughout the flight.

Passenger reaction has been unanimously favourable; the four-abreast standard-class seating is deservedly popular and there is plenty of room for the cabin staff to provide the usual incomparable B.O.A.C. Monarch service.

From the public address system, over which the Captain briefs his passengers on the new and exhilarating experience of jet travel, to the serving of a luxury meal in conditions as steady, and as smooth as (and somewhat quieter than) a West End restaurant, B.O.A.C. takes good care of you. The size and arrangement of the passenger accommodation enable the operator to provide a personal element in the cabin service which travellers particularly appreciate.

The Comet has proved by practical demonstration to leading airline people the world over that it goes anywhere using to-day's runways without extension or restriction. Now the passenger will decide.



First-class Comet service. The 48-seat layout is well suited to B.O.A.C.'s luxurious Monarch service. The cabin staff seen at work in the forward cabin (16 sleeper-seats) served in G-APDA on the Hong Kong proving flight in September. As the fastest trans-Atlantic carrier the Comets carry the G.P.O. mail.

Christmas!—

How The Year Has Flown

Cheerful reflections from D.H. people up and down the Country.

CHRISTCHURCH

This section of the magazine was initiated by the editorial department in this factory and so we set an example in counting our blessings for the past year. This is possibly easier for us to do than for many of our other colleagues throughout the Enterprise.

Although we too share the effects of economies practised at all of our factories we nevertheless have a sunny side to look upon.

At our work we have seen the Sea Vixen go into full production, fly with the Ministry of Supply and the Navy on an extensive series of trials, and we now await with eagerness the hand-over to the Navy of aircraft destined to form "Y" Flight of No. 700 Squadron at Yeovilton. Direct pride from this production achievement is shared by Portsmouth and ourselves, but we are sure that all of our other factories will throw back their shoulders with equal vigour when the Navy take delivery of their latest all-weather radar-equipped fighter. In just the same way perhaps as we have shared the strong sense of pride in the Comet, whose reflected glory we bask in, but the structure of which we seldom see.

In sport we have, as always, had an enjoyable year in which well over a dozen active sections have participated almost continuously. Our clubhouse, extended to more than three times its size and officially opened by Lady de Havilland last year, has continued to draw crowds to its premises, and we in our turn have continued to increase the amenities afforded by this lovely setting — the private estate of Wingfields.

This year our sports day was more heavily patronised than ever and our frequent club dances and other multitudinous forms of entertainment have become noted throughout the district. We are proud that next year we shall be the host to other colleagues in the Enterprise, when the Butler Trophy is again contested for; and are confident that we can, in an ample way, repay the hospitality shown to our own people in past years by our former hosts.

In looking toward the New Year for success to our efforts at both work and play and the continued family spirit within our factory and with others in the Enterprise we are confident that we can overcome with a smile any adversities forced upon us in the future in the same way that we have done in the past.

ENGINE COMPANY

1958 — A year of more than our share of triumphs mingled with the annual disappointments which each club encounters as it progresses. The year started very auspiciously, when, for the first time in its history, the club team competing in the Colindale and District Darts League managed to win the Championship of the League — a wonderful conclusion to a season of ups and downs, and an ultimate result that was not achieved until the very last match of the competition had been played.

A further success in the darts world was achieved by our Leavesden team, who provided the winner of the Singles championships of the Watford and District Business Houses. This, of course, was Stan Willman, who is employed in the Machine Shop in No. 1 Factory, Leavesden. This success was followed by disappointment when the Football section of the club once again failed by the proverbial hair's breadth to land one of the trophies for which they compete each year. They had a very good run in the Herts Intermediate Cup competition, and achieved the distinction of reaching the semi-final round, only to lose to their bogey team, St. Albans City Reserves.

As our memory goes back through the year, we recall Open Day, which was held at Leavesden in June, and which proved to be, according to thousands of our members who attended on this occasion, the Open Day of Open Days.

Later in the year we had the pleasure of staging the first-ever exhibition promoted by our newly-formed Arts section, and most will recall the excellent pictures which were on view in the Leavesden and Stag Lane clubhouses.

Our Motor club, too, can look back on the year with every satisfaction. Membership maintained a very high level, and its many members enjoyed a variety of competitions.

A short time ago we enjoyed that day of days when the Engine Company promoted the Butler Trophy Competition for the first time in several years. This day is recent enough for us to remember the beautiful weather that helped to make it such a success, and which was crowned for us by the prowess of our team in regaining the trophy in the face of fierce competition. Those members who attended the cabaret dance in the evening will recall with pleasure the excellent entertainment provided,

including "Can-Can" dancers, vocalists and comedians.

So we approach the festive season, and we are sure that the Christmas parties which will be held again this year will once more prove to be a source of much pleasure and excitement to old and young alike. We gladly take this opportunity of wishing all our colleagues in the sister clubs a very Merry Christmas and a successful and prosperous New Year.

FARNWORTH

Whilst the past year has proved to be in many ways, a difficult time, we can feel, be justifiably proud of our record. This has been a period when, by our team spirit, we have proved that Farnworth stands on a solid foundation; we have been able to deal with the most difficult transition from one design of missile to another without any drastic emergency methods. Moreover, the Mark I missile has been handed over to the production factory on a sound basis. We should all remember that our main purpose is to assist the Hatfield design team in the development of new techniques and processes, and this, we are sure, will be our prime function in the ensuing months, not only on the Mark IV missile, but also on Alternators and the L.R.B.M., project.

Let us then look back with pride, forward with eagerness, and always remember how Farnworth is spelt:

FAITH in ourselves!
ATTENTION to detail!
RUSH! Rush! Rush!
NEW processes, new ideas!
WORK to be proud of!
OVERDUES to disappear!
REMINDFUL of our responsibilities!
TRUTHFUL always!
HAPPY at our job!

LOSTOCK

It has been suggested by our friends in the South that the theme of this issue of *Enterprise* should be "A Cheerful Yearful," but to the more pessimistic of us in Lancashire, more aptly it might be termed "A Doleful Bowlful." The fact that we have experienced one of the worst summers in living memory has not helped matters. However, the clouds are dispersing, and we are again able to adopt a more optimistic attitude towards life in general.

A reduction in personnel hit several of the sports and social sections, more particularly the Dramatic, Tennis and Ladies Hockey sections, and new members are being sought.

To a number of our senior officials who left earlier in the year we shall always be indebted for the encouragement and practical help they gave us.

As for the present, the enthusiasm in most of the sections continues. We are running two

teams in both Association and Rugby Union football with moderate degrees of success, but with full marks for sportsmanship in spite of a number of unfortunate injuries. Table-tennis players are again doing quite well in their various leagues, but we are certainly in need of new recruits for Badminton. Our newer sections, Chess and Rifle, are gaining momentum and we now have the ladies taking an interest in the latter. Our Swimming gala was again a great success from the club angle, but we were badly let down by the Northern Counties Association over the 220 yds. Free-style championship event, only three men putting in an appearance out of eight entries from the Northwest. The Dramatic section has had to suspend operations *pro tem*, but an endeavour is being made to revive the Ladies Keep-Fit section.

By the time these notes are published, we shall have had our Annual Christmas Dance at the Palais (which has recently been entirely redecorated in the "mecca" tradition), and the Children's Christmas Parties will be in full swing, and we would like to wish all our friends a Happy Christmas — and a "Cheerful Yearful" in 1959.

HATFIELD AIRCRAFT

January: First thrust-reverser installed in Comet 3, G-ANLO.
February: Sweden ordered 12 Vampire T.11 aircraft; B.E.A. made a decision in favour of D.H.121.
March: R.A.F. Comet 2's completed 5,000,000 miles flying.
April: Comet 4 rolled-out; Comet 4 made first flight; Venezuela ordered five Vampire T.11 aircraft.
May: Aerolineas Argentinas ordered six Comet 4's.
June: Comet 2E carried out "touch-and-go" tests at New York; Mr. A. F. Burke was elected President of the S.B.A.C.
July: Comet 4 satisfactorily completed all its tropical trials.
August: The Comet 4 flew from New York to Hatfield in 6 hours 16 minutes; The Comet 3B made its first flight; East African Airways ordered two Comet 4's.
September: The Comet 4 flew to Cairo in 4½ hours; from Hong Kong to Hatfield in 16 hours 16 minutes; Ghana ordered two Heron aircraft; TWO COMET 4's WERE DELIVERED TO B.O.A.C.
October: Comets went into weekly service with B.O.A.C.; R.C.A.F. Comet 1A crossed the Atlantic in 3½ hours; Argentine air and ground crews arrived at Hatfield for Comet training.
November: COMET 4 WENT INTO DAILY SERVICE WITH B.O.A.C.
December: Who knows — all eager for further Comet news!



ABOUT OURSELVES

HATFIELD AIRCRAFT

T.K. FLYING GROUP: When the London Aeroplane Club at Panshanger closed, a number of de Havilland Technical School students, led by Tim Longley and Neil Harrison, decided to build themselves an ultra-light aircraft. This group called itself The T.K. Flying Group after the original technical school design. The series started with the T.K.1 in 1932 which was flown in the King's Cup Air Race in 1934. The design was developed into the T.K.2 which flew in 1935. The T.K.3 was abandoned and the T.K.4 crashed. The T.K.5 also was abandoned at the beginning of World War II.

In 1955 the aircraft chosen by the T.K. Flying Group was the Turbi designed by the late Frenchman, Roger Druine. Permission was then obtained from the Hatfield Technical College to commence work on this project in their Ground Engineering laboratory. Alterations to the drawings were necessary to accommodate the 62 h.p. Walter Mikron engine chosen, a tail-wheel and brakes were added to the design. Two years after Mr. Peter Masefield (then Chief Executive B.E.A.) had officially started the project in March, 1956, the sub-assembly detail work was completed at the College.

The Company then gave permission for the aircraft to be taken to Leavesden, where production went to an advanced stage. The plane

Neil Harrison with Mr. Pat Fillingham before a test flight.



was finally assembled and rigged at Hatfield.

On August 9, Mr. Pat Fillingham took the machine up on its maiden flight. The same afternoon Neil Harrison, the group's pilot, flew the plane for some 20 minutes; by the following week, the aircraft had flown 5 hours. Harrison then flew the aircraft down to Bordeaux to a light-aircraft rally, where he took third place in his category—a magnificent achievement. Present members of the T.K. Group are:—T. J. R. Longley; N. F. G. Harrison; C. Batten; J. W. J. Young; M. S. Rana; J. S. A. Musto; D. G. Bader; D. H. Wingate and C. J. Marsh—several others having left the company during the two years of the construction.

FORTHCOMING CHRISTMAS EVENTS

Boxing Night Gala Carnival Dance, Friday, December 26, with the Don Frank Orchestra, in the club hall.

New Years Eve Ball in the club hall with the Terry Neill Quintet, Wednesday, December 31.

FARNWORTH

BOWLING: A very successful season finishing as runners-up in Div. 4 of the B.S.S.S. league and providing the winner of the President's cup for the best individual bowler in the league—R. Biggins.

An inter-departmental League-cum-K.O. competition comprising 20 teams was launched and seen through to a fitting final. This was won by our Lakefield entry who, by fact of their close proximity, are almost blood relations; but certainly not bad blood!

TENNIS: By far the best season ever! The 'A' team won no honours but gave pride of place to the 'B' team in the Walkden League who, besides winning the League Championship carried off the Second Division Challenge cup for the second year running. In addition A. King won the Individual Singles Championship of the Northern Group.

CRICKET: Having gained promotion and won the "caps" competition the previous year, the elevation to a higher section was viewed by many as a minor calamity. All worked out well, however, and a most satisfactory season ended in a safe half-way position being achieved.

It was not possible to run the Inter-departmental Cricket K.O. owing to ground trouble. It is hoped that this has now been cleared up and that in future there will be no hitch.

BADMINTON: Once again the junior team caused what fireworks there were by having a good run in the Pearson cup, losing by only one

"ace" in the semi-final. The senior team consolidated its position in the 'C' division of the league after gaining promotion, and should have little difficulty in maintaining its status. The 'B' team has gone quite mad by winning the first six games in a row!!!!!! This betters any of the previous season's results.

DARTS: No league team is playing at present but entries in local and other competitions keep interest going. An Inter-departmental competition is in the offing.

RIFLE: This is a new venture, and is showing signs of being a success. There is already a peculiar jargon being introduced into casual conversation, whilst over 60 members have enrolled. After only two months a friendly match was arranged against the N.W.E.B. rifle club where after a good night's sport we lost by just one point. Other matches are being arranged and N.S.R.A. certificates and badges shot for.

TABLE TENNIS: After a successful three years this section through lack of support came to an untimely end. However, recently a virile and young team has been formed and from a small beginning much is hoped for in the future. The present record of three matches won, one drawn and one lost shows the trend.

AUTOMOBILE: This goes from strength to strength, and with H.P. restrictions removed who knows to what heights the membership will rise? In addition to the various motoring activities, the social side of the club is quite active and the big event—the Annual Dinner—is now due.

GOLF: Although our members usually belong to a wide variety of other Golf clubs, the response is excellent when various factory competitions are played. We have yet to beat our Lostock rivals, but with a steady increase in standard and a better control of competition nerves, this may yet be achieved.

FENCING: A demand has been made to form this section, but at the moment the services of an honorary instructor is the main requirement.

INTER-FACTORY COMPETITIONS: In the Butler Trophy our percentage of representatives has fallen, but we still send along our best available who take a valuable part in the events. We are looking forward to the day when we shall enter our own team in this competition.

The Nixon Trophy was regained by the Northern Group when numbers from our factory selected to play, increased a little.

Each year the winning differential is decreased slightly in the Sorley Trophy competition. The final "leg" taking place shortly gives us hope that with the help of Lakefield we may further narrow the margin.



Roger Biggins being congratulated by his captain, Fred Bridges, on winning the President's Cup (Bolton and District Bowling League Industrial Trophy) with Tommy Rose (Chairman) looking on.

CHESTER

BOXING: The second Annual Boxing tournament, staged in the canteen under Welsh A.B.A. Rules, took place on Friday, October 31, 1958.

From the outset the Committee was determined that it should be a success. It was—and the organisers may well be satisfied with their programme of 16 bouts which gave the spectators an exceptional evening's entertainment. The boxers are to be congratulated on the high standard of skill and the spirit evident in the ring; all boxed aggressively and in a most sportsmanlike manner.

The highlight was a featherweight contest between Gnr. McCarthy of the 38th T.R.R.A. and West Ham A.B.C. who was the reigning champion of Western Command and represented the Army, and T. Edge of Shell A.B.C., A.B.C. International and Army Champion 1957-58. The three rounds were an exhibition in the art of boxing. Fortunes varied in each round; Edge just got the verdict after a telling last round in which his punching was more consistent. L/Cpl. Puntin of the 11th Hussars gained a points verdict over R. Treacey of the de Havilland Engine Co. A.B.C. This was an excellent fight between two strong "bantams." M. Clegg and L. G. Williams were our only representatives in the Light and Welter classes. Both boxed well but in each case they met stronger and more experienced opponents.

(Continued on page 180)



Mrs. A. W. Turner, wife of the General Production Manager at Chester, presenting to Capt. Holmes of the 38th T.R.R.A. the Vice-President's Trophy on behalf of the Boxing section of the Social & Athletic Club, to be competed for within the Regiment.

No tournament however, can be conducted so successfully without the high standards set for the evening by the 11th Hussars, the 38th T.R.R.A. and the Amateur Boxing Club who produced the boxers; the officials, who so ably refereed and judged the contests; the M.C.'s — Chief Whip — Seconds — gloves and other back-room stewards; and last but not least Mr. Warren and his carpenters for constructing the ring.

A further promotion is eagerly awaited and hopes are high that would-be boxers will now support the Boxing section, so that many more de Havilland, Chester names can be added to a future "Bill of Fare."

GOLF: The section was able to play off the Captain's prize and Committee prize before the season's end. Both competitions were held at the Wrexham Golf Club, the Captain's prize-winner being J. F. Leigh with 34 points, and runner-up Mr. N. Lappin with 32 points. The winners of the Committee prize were L. Gatten and N. Lappin with J. Dodd and C. Reid runners-up.

JUDO: The section now has a strength of 24 including three ladies; it is a very happy team and new members will be welcome on any Tuesday or Thursday evening.

A grading in which members fought for a belt was recently held in the Works canteen. Ten of the section participated and the grading was undertaken by Mr. Frank Pearson a former employee and now a "Black Belt" in the Budakwai, London. Several members of the section attended a display at Liverpool and witnessed an excellent performance. The lime-light was stolen by Mr. Kiozumi, 7th Dan, who incidentally is 70 years old.

A Judo display will be given in the Works canteen on February 6, when it is hoped Mr. Kiozumi will be in action, together with at least four other "Black Belts."

ARCHERY: At the Overton Archers end-of-season "Roving Shoot" held on October 12, 1958, our team gained second place, with G. Cheetham, Engineering, winning a medal for second place in the individual competition.

The presentation of prizes will be made at the section's Annual Dinner and Social evening, which will be held at the Bars Hotel, Chester, on Saturday, January 3, 1959.

An extensive winter indoor programme is arranged and two teams have been entered in the British Archer Indoor League. Shooting takes place in the Sports Pavilion Range every Wednesday and Thursday evening, and anyone who would like to try their skill at Archery will be most welcome on either of these evenings.

BADMINTON: Owing to the scarcity of lady players of team standard it has been found necessary to withdraw from the Chester and District League for this season. As an alternative it is intended to build up the section for re-admission to the League next season, and a hearty invitation is extended to all ladies interested.

The Flintshire County Tournament was staged in the canteen and attracted some sixty entries. Our members did exceedingly well against strong opposition. Roy Brunning and Neville Warren were successful in winning the Men's event. Roy and his partner, Mrs. Warren, reached the semi-final of the Mixed event but could not really be expected to win, as they carried the heaviest handicap of minus 10 one hand — rather too much.

BREVITIES: In the Interdepartmental Darts Knockout Final, Comet Fuselage were victors over Redux.

After losing their first two matches the Rugby team has improved appreciably, losing only one of their last four games.

CHRISTCHURCH

FOOTBALL: Although the statement that Association football is the most important sport played by teams representing our sports and social club is open to contradiction, there is no doubt that our football section is important in Bournemouth sporting circles. (We invite criticism with our eyes wide open from the groups who have lately commenced, with loud cries and mutterings, to chase an odd-shaped ball on a plot adjacent to the "real" football pitch).

For many years our team has maintained its position in the premier division of the Bournemouth Football League, whilst the reserves have in other divisions of the League shown themselves no mean exponents at the game, as the hardware displayed in our clubhouse will prove.

One thing only, the football section lacks — supporters. (Are we to believe that other factories suffer the same lack of support?) Week after week a game equal in entertainment value to any provided by professional teams is witnessed only by the same handful of wives and relatives of the players and by committeemen. Our thanks go out to those staunch followers with their sponges, bottles of evil smelling oils, ointments and, of course, in times of less dire emergency, little flags that are waved so vigorously when the ball goes out of play. The galling part of this comes on Mondays when members of our section overhear remarks addressed in caustic terms about local professional football and how often it is not worth paying to see. Your answer then, friends, is surely to come and watch your own workpeople playing an entertaining game. We may never reach the Cup Final, but at least this drawback will cost you nothing!

RUGBY: Up to date this season we have won three matches and lost four, our best win being the defeat of a very strong team from Esso at Fawley. We lost our local "derby" with New Milton, but felt we were among friends as so many of our D.H. people play for the New Milton team. Casualties so far in recent matches include an eight-stitch cut when we played Christchurch and a broken leg when we met S.R.D.E. Against this debit, however, we have welcomed several new players who are already showing great form. W. Pearce, Labs., is again this season's Captain and Chairman; L. Dunman, Inspection, has taken over as Treasurer, with C. Grier as Secretary.

Our first dance held on November 1 was enjoyed by a large crowd who capered to music by Les Simester and his band. Local impromptu humour was supplied when we were forced to eject rather unceremoniously a party of youths who gate-crashed the event and conducted themselves in a less gentlemanly manner than is usually the practice at Wingfields clubhouse.

Our annual stag party will be on Monday, December 22, followed in the New Year by a trip to Twickenham on February 28.

SAILING: To the continuous dance music of the Milward Craven Quartet, our Sailing section, now one of the strongest off-shoots of the Sports and Social Club, celebrated their fourth Annual dance and trophies presentation at Wingfields on Saturday, November 15. The main hall, attractively decorated with sails from our G.P.14's, nautical flags, and a large display of photographs depicting their prowess in many races, soon filled with supporters and members who have grown to expect nothing but the best from this active section.

Spot prize and novelty dances punctuated the evening's activities until the time came for Mrs. H. de Havilland, wife of the section's Commodore, to present trophies.

The Napier Trophy, contested one blustery week-end in June between ourselves and Lockheed, was received by Major de Havilland on behalf of the Christchurch winning team. On view was the Sea Vixen trophy which, through inclement weather has not yet been raced for, is intended to be the token of annual contests between our sailing section and the Christchurch Sailing Club.

AMATEUR DRAMATICS: During the summer months this section has produced, under the direction of Douglas Dalton, the one-act farce, "Holiday Eve." Performed in Wingfields clubhouse in September this amusing play was so well taken that we felt justified in entering the local Drama Festival with this same farce. Results are not known at the time of going to press.

On December 12 and 13 at the Priory Hall, Christchurch, there will be staged the lengthy comedy, "Down Came a Blackbird" by Peter Blackmore. This is probably the most ambitious play that our group has yet undertaken, but with a staunch cast of eight it is expected that once again we shall play to packed houses.

Christchurch footballers take time off to relax at a recent Bournemouth Football League social function.





Nixon Trophy Competition—Chester, September 13. Mr. Frank Cunningham (Chairman, Lostock), receiving the Trophy from Mr. J. C. Corby (Manager, Chester). Also in the picture: J. T. Leese (Sports Sec., Chester); P. R. Board (Sports Sec., Lostock); T. Goslin (Sports Sec., Farnworth); A. Donaldson (Chairman, Farnworth) and R. Windass (Chairman, Chester).

LOSTOCK

THE NIXON TROPHY: Once again the Nixon Trophy has been returned to Lostock. The winter games were played at Chester on Saturday, September 13—a fine day for a change—and although Chester were able to reduce the arrears suffered here in the summer games, we finished with a fair margin of points ahead. After tea Mr. Corby handed the Cup to our Chairman, Mr. F. Cunningham. Many of the party took advantage of an opportunity of seeing one of the completed Comet 4's before its flight to Hatfield.

SUPERVISORY STAFFS ASSOCIATION: On Saturday, October 18, a party of S.S.A. members visited Messrs. Leyland Paint and Varnish Company at Leyland and were able to gain first-hand knowledge of the various processes entailed in paint manufacture and application.

Friday, November 14, brought the Annual "Ladies' Evening" at Lostock, attended by the President, Mr. H. G. Sturgeon. Approximately 190 people enjoyed a buffet supper and dancing to the Lancastrians Band. It was a

most successful event and Committee members are to be congratulated on excellent arrangements.

PORTSMOUTH

FOREMEN'S SOCIAL AND DANCE: At the Cambridge Hotel Ballroom, Southsea, on October 31, the Foremen's section of the Portsmouth Branch of ASSET held their annual dance and social evening. Mr. Arthur Hart, as MC for the evening welcomed all the members, their wives, and guests before leading the assembly into an evening of full entertainment. The ballroom soon resounded to the party spirit, the programme including many prize-winning novelty dances and competitions; of course, the latest craze—hula-hooping could just not be left out!

Guests for the evening were colleagues of the Christchurch Foremen's Association led by their Chairman, Mr. Bill Cooper, and Secretary Mr. Harry Emmerton. Mr. Cooper thanked the Portsmouth hosts for a very happy and enjoyable evening, and on behalf of his association invited their "Pompey" colleagues to the Christchurch Annual Dance. The

evening closed with the lusty singing of Auld Lang Syne.

ARCHERY: To round off a very successful season the Portsmouth Bowmen held their first section championship competition at Moneyfields Avenue. The keenness of the competitors produced some good shooting in poor light, and the results of the event were:

Gentlemen: 1st J. Bone. 2nd D. Cole.
Ladies: 1st Mrs. F. Girdle. 2nd Mrs. V. Count.
Handicap Winner: C. Harrison; *Most Golds:* D. Count; *Most Hits:* B. Barnes.

The Archers' President, Mr. L. J. Woodward presented the winning medals, and is indeed very proud of his section. Since its inception just two years ago the Portsmouth Bowmen have made tremendous strides, some of its members having gained county distinction. To celebrate the second birthday an Albion Round open competition was held at Moneyfields Avenue sports field. The competition attracted some 70 archers from far and wide over southern England, and when mingling with competitors on the field, nothing but praise could be heard for the organisation of the event. This promises even greater support for a more ambitious competition next season.

HATFIELD PROPELLERS

FOOTBALL: Although gaining a point from their first match, the First XI have not maintained the early promise shown, and have collected only three points from five league matches played, their one victory being at the expense of D.H. Leavesden by 5 goals to 2. This compensated somewhat for their defeat at the hands of Leavesden in the semi-finals of the Butler Trophy Competition.

The team have also beaten their neighbours, the Aircraft Company, in both the Aubrey and Herts Intermediate Cup competitions.

The Second XI won their first two league encounters but have since run out of that winning vein. In the Herts Junior Cup they won through the first two rounds but were then handsomely beaten by a local club, Wheathamstead United.

The section is holding its Annual Carnival Dance on December 13, at the Aerodrome Restaurant, and if this proves to be as successful as last year, then a very pleasant evening is foreseen for the footballers and their friends.

MOTOR: Our President's Trophy Rally on August 31 was enjoyed by more than 50 starters—an all-day event with "Tellus", navigation road sections and driving tests in the car park, it offered something for everyone.

September 23 came and our "Search" was on, a large entry turning out for this combined quiz and treasure hunt with, as just one of its unusual features, a mass start!

"Standing room only" was the cry at the film show in October. Shots of racing and rallying in the sun left us all eager for more.

The above should have been this issue's write-up but truth will out—both the well-organised rallies had to be cancelled for lack of entries and fewer than 10 members saw the film show! Buck up Hatfield, don't you want a Motor Club?

SAILING: The 1958 season tailed-off with very little sailing due to poor weather and—let's admit it—not very much co-operation from experienced members. By the end of this month both "Fireflies" will be away from the Thames for a refit, and will not go back until April. With hopes of wider activity next season, the acquisition of a trailer is being discussed.

ENGINE COMPANY

FORTHCOMING EVENTS

Saturday, January 17 and 24, 1959—Leavesden Children's parties.

Saturday, February 7, 1959—London A.B.A. Junior Championships, Stag Lane clubhouse.

Friday, February 13, 1959—St. Valentine's Dance, Stag Lane clubhouse.

The Editor would like to wish, on behalf of all *Enterprise* correspondents, and in fact, all readers, a speedy recovery from recent illness, to Mr. John Holt, our Engine Company's indefatigable Sports Secretary. Good health and prosperity in the forthcoming year, John!

★

It is a very happy occasion when Portsmouth Archery section secretary Mrs. F. Girdle receives her medal from Mr. L. J. Woodward—no need to say "cheese" for the photographer!



This picture shows members of the Propeller Company's photographic club looking at prints at the first bi-monthly competition held at Hatfield. The club, which is obviously flourishing, started a year ago under the Chairmanship of Mr. C. C. Williams.





"Those were
the days . . ."

DAVID
SNGOON



"And the interior designer once said you don't
really need any, we go so fast . . ."

DAVID
SNGOON



"How would we look
in granite, skipper?"

DAVID
SNGOON

CUSTOMS



"Like the Comet, eh?
Not too big, not too
small, but just right.
And she'll go anywhere
and pay her way . . ."

DAVID
SNGOON



"Well, yes, I did put
up quite a few ideas
myself when de Havil-
land were designing the
thing . . ."



DAVID
SNGOON



"I believe the Danish
Blue is only English
but the Cheddar and
the Cheshire are
genuine New Zealand."

DAVID
SNGOON



The missile is checked before flight.

A Firestreak is unloaded from a Javelin after flight. The missile is light and easy to handle, a point appreciated by R.A.F. groundcrew.



Air Commodore E. L. Colbeck-Welch, O.B.E., D.F.C., until recently Commandant of the Central Fighter Establishment with W/Cdr. G. H. Melville-Jackson, D.F.C., Commanding Officer of the R.A.F. All-weather Development Squadron, which is based at West Raynham, and Flight-Lieutenant R. Jones.

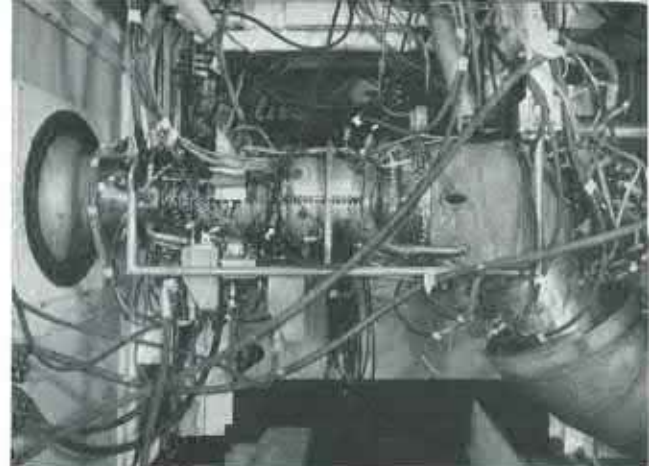


Firestreak with the Royal Air Force

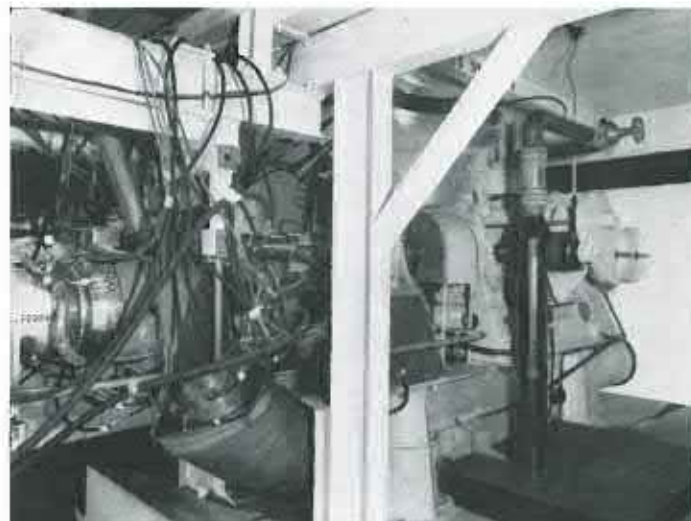
*Our guided missile
at R.A.F., West Raynham*

Gnome Progress

Production of the new Gnome turbo-shaft engine is planned to start during 1959, and for some months now extensive work has been under way at the Engine Company and at a number of major sub-contractors to ensure that manufacture proceeds according to schedule. The photographs on this page illustrate some of the facets of this concerted effort.



Development testing of the Gnome was initiated towards the end of August and has proceeded at a high pace since then. The engine is shown here on a specially modified test bed at the Engine Company's Test Establishment at Hatfield. The engine exhaust is ducted away at the bottom right-hand corner of the picture.



The power developed by the Gnome during test running is absorbed by a Heenan and Froude water brake, via an intermediate step-down gearbox - the connecting shaft-cover between this and the rear of the engine is apparent at the centre of the picture.

The Gnome intake casing is a casting in magnesium alloy by Kent Alloys Ltd., and it is shown here (below) being poured.



The oil sump shown being cast in magnesium alloy is supplied by J. Stone & Company (Charlton) Ltd.





The Butler Trophy comes South—Engine Company—the winners!

Butler Trophy, 1958

Fine Win by Engine Company

ball was played, quick, skilful—and above all—it was clean! Congratulations Engine Company, well fought Portsmouth, and better luck next time!

On the bowling green Christchurch were confounding all the pundits; by losing only one game in six they ran out easy winners. Over at the showroom the chess players were having to do some pretty quick thinking, each game being limited to one hour only. Eventually Engine Co. won, with Hatfield Aircraft runners-up.

As usual, many were attracted to the table-tennis event where some very attractive tennis was being played by some very attractive players (we refer to the lady contestants). The energy with which the players conducted their games made even the onlookers feel tired, but to see them at the Butler Trophy dance in the evening, you would think they had rested up all day!

During the course of an exceedingly good lunch it was learned that Christchurch had won the Rifle event, with Northern Division close on their heels. The next result to come in was golf, a win for Northern Division. Most competitors found the course rather difficult despite it being in excellent trim.

By mid-afternoon excitement grew apace as further results came in; Portsmouth, Engine Company and Hatfield Aircraft equal winners at darts; Hatfield Props—winners at table tennis; Portsmouth winners at billiards and snooker. The chess result, with a win for Engine Company and the football result clinched matters however, and Engine Company received well-merited congratulations from all present.

The whole programme was a great credit to the organisers when one considers that some 250 competitors and officials had to be transported from all corners of England and North Wales, accommodated, fed and fêted, and with a split second programme to adhere to. Genial Arthur Holt, Secretary of the Sports and Social Club, deserves particular mention for the very efficient manner in which the competition was conducted.

At the Butler Trophy Ball held during the evening at the Leavesden Canteen, the Butler Trophy and other awards were presented to the winners by Mrs. Nixon, wife of the Chairman and Managing Director of de Havilland Holdings. Mr. Nixon, after giving his warm congratulations to the winners, expressed the desire to see the Trophy go even further south next year. For the past two years the host club have won the event and it is Christchurch who are hosts next year; how about it, seafishers?

Bowls: Competition ran high, — Christchurch were eventual winners.



★
Contestants in the "Driver of the Year" contest staged at Chester recently.
★



Our Contribution to Road Safety

Inter-Factory Driving Competition at Chester

TRANSPORT drivers from throughout the Enterprise gathered at Chester on Saturday, October 18, to compete for the "Enterprise Lorry Driver of the Year 1958" and for team and class events. The competition was run on very much the same lines as the "National Lorry Driver of the Year" which was reported in the August issue of *Enterprise*.

The competition generally is designed to test the skill of the driver, braking judgment and manoeuvring being at a premium and fundamentally based on normal driving hazards encountered in the course of a driver's everyday work. Competitors had first to undertake a compulsory oral test on knowledge of the Highway Code, conducted by Chief Inspector W. Johns of the Flintshire Constabulary. The marking for this and all other tests was on a penalty basis. The driving tests themselves were divided into three classes (a) Vans; (b) rigid, dropside lorries; and (c) articulated vehicles. Each class then underwent tests in parking, driving through, and reversing back through, a gap of the driver's calculation, and in backing his vehicle into a simulated loading-bay. Throughout all tests the rear windows of the vehicles were blacked out, as would be the case if a load were carried that obstructed rear vision.

While watching the skill with which the drivers carried out these most intricate tests, particularly in the case of the articulated vehicles, one gained the impression that they could safely park a double-deck omnibus in a cycle rack!

The "Enterprise Lorry Driver of the Year, 1958" Trophy was won by T. Perrie of Chester who put up a really brilliant display in winning

the class "A" event and then giving a near-faultless performance in the final, which he fought out with L. G. Lanceley of Hatfield, winner of class "B" and J. Kirby of Chester, winner of class "C."

The guiding star behind the event was Mr. J. Morton, Transport Manager at Chester, very ably assisted by his lieutenants, A. E. Paddock and G. Huxley, also of the Chester Transport Department.

Of course no such event could take place without the encouragement and support of the managements of the many participating factories. Chester as hosts were particularly fortunate in the considerable amount of help and encouragement they received from Mr. Rowsell, Commercial Manager, and Mr. Turner, Production Manager. The organisation, such as marshalling, timing and judging, was superb, as was the catering.

The whole competition ran so smoothly that there was even time to run an articulated vehicle demonstration for the benefit of late-comers at the end of the contest.

Results:

Class A. 1. T. Perrie; Chester
2. J. Gibbs; Christchurch
3. S. Bright; Chester

Class B. 1. L. Lanceley; Hatfield
2. R. Crompton; Chester
3. B. Saxton; Christchurch

Class C. 1. J. Kirby; Chester
2. C. Lanport; Leavesden
3. B. Hale; Hatfield

Enterprise Lorry Driver of the Year, 1958: T. Perrie; Chester.

Inter-factory Driving Competition Trophy: Chester.

Winning Team Trophy:

T. Perrie
R. Crompton
J. Kirby } Chester



Measuring the skill of one of the entries in Class B.



"The Unicorn" a pub set within the premises of a well-known Bristol wine merchants.

BOOKS have been written, lyrics have been sung, princes and beggars have extolled wine's virtues. Nearly all of us will purchase a bottle or so to enjoy with our Christmas dinner, be it a vintage Port such as a "Martinez" of 1934 at 36s. or may be a Red Burgundy — Beaujolais "Moulin a Vent" of 1955 at 10s. 6d. Nothing will enhance your festive board more than when at your table, graced with those you love, there is served a wine, to improve the appetite, to gladden the heart and to pledge friendship.

It was with thoughts such as these that we received a most timely invitation to visit the cellars of a distinguished British firm of wine merchants, there to see how they cope with the heavy seasonal demand. The firm has been in business since 1796 so we were quite prepared to see evidence of antiquated methods and tradition-bound processes. These we saw in plenty, but only where modern science has not bettered them. Mechanisation has been adopted very successfully and with no detriment to the end product.

Bottling



The Christmas Spirit

Enterprise keeps a watchful eye on the Yule-tide wines that will grace your festive board.

Although much wine is bottled in the country of origin (Domaine Bottled), by far the greater bulk is shipped to merchants, in casks or butts, there either to mature in the wood awhile or as is usual with the lighter wines, to be bottled and laid down for a few years, the exact time being dependent on its vintage properties. During our visit the bottling department were working full-out to meet the great demand for their famous Oloroso Sherry "Bristol Cream." Sherry, which is produced from the juice of white grapes, grown in the vineyards around the town of Jerez de la Frontera in South-west Spain is blended from wines of different years as well as vineyards. Basically there are only two styles — "Fino" which is a dry, pale Sherry and "Oloroso," a rich, golden type. By careful blending on the part of the merchants sherry is produced to suit all palates. These range from the very dry "Tio Pepe" to the sweet nut-brown known as "Copper Beech."

First comes the blending when selected butts, each containing 108 gallons are emptied into vats with a capacity of 2,200 gallons. The

Warehousing



Inspection

satisfactory blending completed, it is pumped gently through to the bottling machines which fill, label, cork, seal and pass onto a conveyor belt for packaging. No wines or spirits can leave this building, however, until customs duty has been paid. All cellars and storerooms are double locked, one key being held by H.M. Customs and the other by the proprietors.

We found the seasonal rush well under way and production was nearing its peak. By spreading the production load over several months and so building up stocks they did not envisage having to enforce overtime or night-shift working. We were assured there would be no shortage of our favourite Christmas Cheer. Quite a big trade is done in special Christmas Cases, either for presentation or for your own consumption. These cases range from 30s. to about 7 gns., the most popular containing Champagne, Sherry, Burgundy, Claret, Hock and of course a Port.

From the bustle of the bottling and packaging department it was an amazing experience to step down into the cavernous vaults where lie thousands and thousands of dust-coated bottles, each containing the slow maturing product of the grape. Wine being a living thing needs time to grow to maturity, though certain areas produce a wine that matures quite rapidly and is best drunk young — for instance Burgundy, Claret, or Hock. On the other hand Cognac is left in the cask over 50 years before bottling. Good Port is also very slow to mature. A customer not possessing a cellar may purchase a promising vintage and leave the bottles in

these vaults until they are ready, knowing they will be kept in perfect conditions of stillness, temperature and ventilation. No extra charge is made for this service. In another section of the vaults is contained a full-size replica of a typical English Inn of bygone years. Over the genuine Tudor door hangs its sign "The Unicorn." This opens to disclose a cosy room, heavy with its oak-beamed roof and antique furniture. A large open fireplace is aglow and here the visitor may sit and reflect on those good old days when ale (real ale) was 2d. a pint and a dozen of sherry could be purchased for 5s. The room is tastefully decorated with antique objets d'art including a well-preserved spinning-wheel. Possibly of most interest is the collection of old wine bottles, adjudged the finest in the country. By means of cleverly illuminated colour transparencies at the windows one finds it hard to realise that you are in fact many feet below the busy streets of Bristol.

Through the centuries much has been written by distinguished gastronomes on the choices of wines to go with various courses, their recommendations being of great assistance. Do not be misled however for it is *your* palate that you must satisfy and any wine that does that should be your choice.

Choosing wine for the Christmas dinner, if your main course is Turkey then try a White Burgundy or Hock, both quite inexpensive. What better with the Christmas Pudding than a crusty Port or Brown Sherry.

MERRY CHRISTMAS!



A Christmas selection

APPOINTMENTS

AIRCRAFT COMPANY HATFIELD

Mr. R. G. McCoy, B.Sc., A.F.R.Ae.S., A.M.S.L.A.E., has been appointed General Manager of the Aircraft Company with effect from December 1. He joined the Company in May, 1953, as Deputy Service Manager, becoming Manager in April, 1954, and had been responsible for the Service Department until July, 1958, as well as acting as Assistant to the Managing Director from January, 1956.

Mr. D. R. Newman, A.F.R.Ae.S., has been appointed Chief Aerodynamicist of the Company with effect from December 1. Mr. M. Herrod-Hempstall remains responsible for administration in the Aerodynamics and allied departments. Mr. Newman joined the de Havilland Aeronautical Technical School in April, 1936, and has been in the Aerodynamics Department since May, 1938.

Mr. F. H. M. Lloyd, hitherto Commercial Sales Manager and Contracts Manager, was recently appointed Sales Manager of the Aircraft Company. He is well known as the head of the Comet sales team and has travelled the world a great deal in recent years.

Mr. J. A. Grace was appointed Commercial Manager. Both are responsible to the Managing Director and Mr. Grace continues to be responsible for the Spares Department.

Mr. N. G. E. Dunlop, C.A., was appointed Assistant Commercial Manager.

Mr. J. C. Corby, O.B.E., Croix de Guerre, M.A., for nine years General Manager of the Chester factory, was appointed Assistant Sales Manager and will act as Sales Manager whenever Mr. Lloyd is absent.

Mr. P. F. L. Hall, D.F.C. and Bar, B.E.N.Z., A.F.R.Ae.S., previously of the Aerodynamics Department, becomes Technical Sales Manager.

Mr. P. P. Hearle, as Assistant to the Sales Manager (General Duties), is responsible for Dove, Heron, Chipmunk, Beaver and Otter sales matters. Mr. H. Shaw is Assistant to the Sales Manager (Airline Liaison).

Mr. P. G. Lucas, G.M., F.R.Ae.S., was appointed Assistant to the Managing Director. He will specialise in forward outlook on the military side and liaison with Government departments.

AIRCRAFT COMPANY CHESTER

Resulting from the transfer of Mr. J. C. Corby to Hatfield, the administration of the Chester

factory will be under the joint control of **Mr. C. H. Rowsell** and **Mr. A. W. Turner**. Both will retain their present positions of Commercial Manager and Production Manager respectively.

AIRCRAFT COMPANY CHRISTCHURCH

In a recent merging of the Experimental Department with the Production Department under the control of Mr. G. Davies, General Production Manager, **Mr. G. A. Briggs** is appointed Works Manager and will be directly responsible to the General Production Manager. **Mr. J. T. Davies** is appointed Assistant Works Manager.

PROPELLER COMPANY

Mr. J. D. Crane, A.C.A., was appointed Company Secretary of the Propeller Company on October 13, 1958.

Mr. Crane was educated at Aldenham School, and served articles with Messrs. Clemons Midgely & Company, qualifying in 1939.

After the War, in which he served with the R.A.S.C., being demobilised with the rank of Major, he spent two years with the John Lewis Partnership.

In 1948 he joined de Havilland as Assistant to the Company Secretary of the Aircraft Company, and was appointed Commercial Manager at Christchurch in 1951. He transferred to the Propeller Company in 1956 as Commercial Manager and was appointed as Assistant Company Secretary in December, 1957.

Mr. Crane takes over the duties of Secretary from Mr. A. S. Wheate, who continues as Financial Director of the Company.

On September 1, 1958, **Mr. R. G. Dancey, B.A.**, joined the Personnel Department of the Propeller Company as Education Officer for the Company's southern group of factories. The post of Education Officer is a new appointment made because of the increasing need for the further education and training which can help in making full and effective use of the Company's staff. Mr. Dancey's work will cover all aspects of further education in technical, commercial management and supervisory fields. He will also work closely with the Apprentice Supervisors at each factory on matters arising at the finish of apprenticeship and transfer to permanent employment.

Mr. Dancey joins de Havilland after six years spent on similar work at the Bristol Aeroplane Company.

Mr. T. R. Lant, M.A., has been appointed Chief Plastics Engineer of the Propeller Company.

Mr. Lant, after education at Merchant Taylors School and taking a physics degree at Oxford University, joined the Propeller Company in 1953 as an early member of the Company's Plastics department. This department was set up in January of that year to study the applications of plastics and develop plastics processes for all departments within the Company. He was made Deputy Chief Plastics Engineer in 1957.

Mr. Lant replaces Mr. R. Oakes, B.Sc., who had been Chief Plastics Engineer since the inception of the department: Mr. Oakes has now taken an appointment with another Company.

On November 1, 1958, **Mr. R. A. Rubinstein**,

B.Sc., A.C.G.I., A.M.I.Mech.E., joined the Propeller Company as Sales Research Engineer. In this capacity he will be responsible for market survey work and for the co-ordination and development of the Company's sales activities outside the aircraft industry.

Mr. Rubinstein served in the Army during the War and was demobilised with the rank of Major in 1946. In 1948 he graduated from the City and Guilds College with first-class honours in Mechanical Engineering: following this he was for four years Engineering Workshops Manager of the General Chemical Division of Imperial Chemical Industries Limited. For the last five years he has held the position of Export Sales Manager for a group of British engineering companies.

Taking a Share in Things

A CHEERFUL young relative of mine who had been a steady worker and a thrifty one asked me to advise her in investing a little money that she had saved. So we arranged to meet for lunch, in "the City." She told me she already had some money in the safety-first standbys — Savings Certificates and Defence Bonds. Now she wanted to venture further afield, to consider having shares in companies making some of the things she used or which she saw were selling well in the shops — vacuum cleaners, refrigerators, branded foods and clothing, television sets, gramophone records, cigarettes, cars and so on — and in some of the shops themselves.

Before Hilda (that was her name) invested her savings she wanted me to help her understand certain puzzling questions. If businesses were doing so well, why should "outsiders" be able to buy shares in them? One reason, of course, is that any business that is going along successfully may be needing additional capital for extensions to factories, and generally for expansion. Also, smaller businesses are often turned into publicly-owned companies and some of their shares are sold. Whatever the reason, they issue stocks or shares giving a participation in the ownership and the right to part of the profits.

This was her next question: "Why are there different quantities and sizes of shares?" A company's capital largely depends on its size. It can be any amount and divided into any number of shares. Suppose it is £1,000,000. Whether this is divided into one million £1



A 'jobber' marking up his prices on the Floor of the Stock Exchange.

shares, four million 5s. shares or any other units, each gives an equal interest.

Why do some companies have different classes of shares? The answer depends on various factors such as financial policy, conditions at the time new capital is raised, the type of business and what it owns. Many companies, like the one already quoted, have only one class of capital, usually called ordinary shares. After meeting the costs of running the business and giving the tax collector his share — which can be as much as one-half or more — all the profits belong to the ordinary shareholders, comprising thousands and thousands of people, also investors on their behalf such as building societies and insurance companies.

If profits are substantial, they may get good dividends; if not, there will be little or no dividend. Whatever the amount, it is rarely, however, that all the profits are handed out in dividends. Prudent boards of directors put part of them to reserves, to be used in expanding the business, strengthening resources and keeping something in hand for a rainy day. This policy increases the scope for future business — it increases the wealth of the nation — or at least husbands it.

Just as ordinary shareholders enjoy the benefits when their company does well, so they share the losses if trade hits a bad patch. Theirs is a "risk" capital. Its degree varies. In a soundly established, well-managed manufacturing or trading company the risk may be no more than the normal economic changes which can affect industry or our livelihoods. But if a company is exploring for oil, gold or copper, or is operating in country liable to violent political upheavals, the risk can be great.

However, a large number of companies have other kinds of capital as well. The most important is a "preference" share which, as its name implies, comes before the ordinary shares for a priority slice of the company's profits and

assets. As the risk is reduced preference shareholders usually get a fixed dividend; though, only if there are sufficient profits to pay it. With most preference shares there is, however, a useful safeguard. They are what is called "cumulative," which means that if there is not sufficient profit to pay the dividend one year, it accumulates until there is enough, i.e., the "preference" is carried forward. In brief, "preference" is a system of taking less risk and therefore enjoying less profit.

Many companies also raise some of their capital by issuing even safer securities called "debentures." Unlike shares, these are loans getting a fixed rate of interest which has to be paid whether there are sufficient profits or not. Like a mortgage, the money is secured on the company's assets — bricks and mortar, plant and machinery and other realisable assets which can be sold if the interest is not paid when due or the loan repaid when promised. While in practice it is not often that debenture holders have to "sell up" the assets, such powers add to security if one invests in this way. It is virtually a loan.

In fact, debentures are somewhat akin to a very important group of securities outside the company range which account for no less than two-thirds of the nominal value of the £30,000 million of stocks and shares dealt in on the London Stock Exchange. These are the loans of our own and Commonwealth governments, local councils and nationalised industries which, because of their high-grading, are called "gilt-edged" stocks. With their interest fixed at a known rate, most of these securities are repayable at a definite date or dates, which may be anything from one to 20, 30 or more, years ahead. Thus, one knows exactly how much interest one will get each year and (although one can sell at any time at the current price on the Stock Exchange) exactly or approximately when they will be repaid.

Hilda seemed satisfied with the answers that I had given, but I was not surprised by her next two questions. "Are my savings too small to invest in several companies?" Not a bit of it. Although, because of the brokerage and other expenses of buying, it usually pays to stick to a minimum investment of £50 or so in one security, there is no limit either way on the Stock Exchange. A few pounds or tens of thousands, the market is open to all.

"Right," she said, "but isn't it a complicated business and how do I set about it?" It is less confusing than the jargon of the experts would suggest. Even the city page of the newspaper becomes easy to understand, and very interesting, too. However, as seeing is believing, I invited Hilda to see for herself, and in another article I hope to tell what she saw when the Visitor's Gallery of the London Stock Exchange.



A 'waiter' calling a Member to the telephone, on the Floor of the House.



Notable de Havilland Aircraft No. 11

The D.H. 6

THE D.H.6 could somehow never be taken quite seriously. It was a very good aeroplane for the job it had to do but its appearance made it the butt of light-hearted banter throughout the Royal Flying Corps. It was designed as a trainer and it was perhaps the safest aeroplane ever built: the wings were heavily cambered with plenty of lift (and lots of drag) and it was difficult to stall. It had the reputation, which may well have been almost true, of never having killed anybody. Although it never had an official name it inevitably collected nicknames: it was variously known as the Crab, the Clockwork Mouse, the Flying Coffin (because of its shape, not because of any lethal quality), the Sky Hook and the Clutching Hand, and because of its square-cut appearance it was thought by many that the wings were made by the mile and cut to length as required.

The D.H.6, a product of The Aircraft Manufacturing Company, flew in 1916 and it was the first of a long line of de Havilland trainers, but it would perhaps be too much to suggest that the Moth, the Tiger Moth, the Chipmunk and the Vampire Trainer owe much of their development to their amusing ancestor.

The object was to design an aircraft that would be safe to fly and easy to produce, and on both counts the D.H.6 showed great ingenuity. By reason of its unusual wing section the aircraft could fly level quite happily at less than 30 m.p.h. but it also possessed a measure of instability for the benefit of the pupil's education. Of streamlining there was none: on the contrary there was plenty of built-in resistance to make it impossible for a fledgling pilot to reach dangerous speeds by diving. The engine was usually either the V-8 air-cooled 80 h.p. Renault or the rather similar 90 h.p. R.A.F. 1A but the American Curtiss OX5 was sometimes fitted: whatever the engine the all-out top speed remained at about 75 m.p.h.

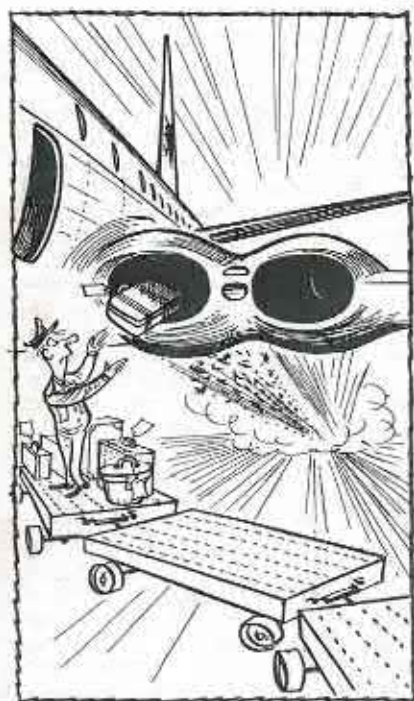
Structurally the aircraft was designed strictly with a view to easy production and maintenance and no concessions were made to appearance. The simple box fuselage, the uncowed engine and the square-cut wings and tail surface were all fashioned with this object in view and the mainplanes were interchangeable top and bottom. Empty, the D.H.6 weighed 1,370 lb. and its all-up weight was 2,050 lb.

The D.H.6 was ordered in large numbers, some 1,700 being built altogether. Most of these went to training squadrons of the Royal Flying Corps at home and in the Middle East but some were operated by the Royal Naval Air Service and the U.S. Naval Air Service for anti-submarine patrols off the coasts of the British Isles. For this work they were flown as single-seaters and carried small bombs, thus foreshadowing the use of the Tiger Moth trainer in the same role some 22 years later during the invasion crisis of 1940. There is no record of a D.H.6 ever having sunk an enemy submarine but the bravest of U-boat commanders might well have been daunted by the awe-inspiring sight of a D.H.6 poised apparently motionless in space.

After the war a number of D.H.6s found their way into civil aviation, principally for joy-riding. One, first registered as K-100 and later G-EAAB, was attached to the de Havilland Hire Service at Stag Lane and was raced at Hendon in 1920 by Sir Geoffrey, then Captain, de Havilland. Subsequently this aircraft, operated by Marconi, was used in early experiments with airline radio at Croydon Aerodrome. For many years after the war D.H.6s were giving joy-rides from Southport sands and one of these remained in service until 1933.

For all its ungainliness the D.H.6 proved first-class at its job and it set a tradition in the field of flying training which has been worthily upheld by its successors from Stag Lane, Toronto and Hatfield.

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