BERGER HOUSE · BERKELEY SQUARE · LONDON W.1.

TELEPHONE: MAYFAIR 9171 (10 LINES) TELEGRAMS: BERWEST·WESDO·LONDON

29th December, 1961.

Dr. J. C. Weaver,
Sherwin Williams Co.
101, Prospect Avenue,
Cleveland.
Ohio.
U.S.A.

Dear John,

As promised in my letter of the 21st instant I now enclose a further copy of Chapter V of my History for your Mr. Kent.

With kind regards,

Yours sincerely,

F. Armitage.

Mr A. J. Kent,
to add this to the first 4 chapters given you in '60, of the Berger history for the SW historical collection

FA/DM.
enc:

N15894

Chapter V

The Last Half Century

H.A. Sherwin and W.H. Cottingham of the Sherwin Williams Company of Cleveland, Ohio. had first visited Europe in 1896 and Cottingham's report of his visits to the most important British Paint Factories was characterised by an almost total lack of enthusiasm. Compared with the American Paint Industry, production methods, and finished products, were said to be much inferior, factory workers in key positions were thought to be too old; and advertising methods were particularly condemned as being old fashioned and inefficient. Bergers were not exempt from these criticisms. Nevertheless, Cottingham was to become the chief shareholder in the Company, and in 1905 was elected Chairman of the Board of Directors. In the Sherwin-Williams museum is the original illuminated address of welcome, dated 1906, to Sherwin and Cottingham, and signed by the general foremen of Bergers. - Baird, Buck, Boughen, Fletcher, Gray, Jones, Morgan, Riddelsdell, Shacklady, Stone and Wheelwright.

It was clear that Cottingham could see very good prospects for Berger in the British and European markets if they were given the advantages of American technical know-how, and American business methods; and consequently he revitalised the Company by introducing into the organisation, several experts from the Sherwin Williams Company, who remained until just before the First World War. The names of these men appear in Appendix 5. Walter Cottingham was to remain Chairman until 1930, with James Garson, Managing Director and eventually Vice-Chairman until his death in 1925. Garson was succeeded as Managing Director, by Sherwin Cottingham, son of Walter, who held the position until 1929.

W.H. Cottingham was succeeded as Chairman by Sir Herbert Hambling, who however died shortly after his appointment in 1932. From this time until 1948 Lord Greenwood was Chairman supported by Sherwin Cottingham (Vice-Chairman until 1935) and Percy Murray (died 1934) and Frederick Allen (retired 1939) as Joint Managing Director. W.H.F. Starkey (Works

Manager, 40 years with the Company) and P.V.C. Grigsby (Publicity Manager, 27 years service) became directors in 1935. Mrs. Vera Cottingham and M.G. Deacon (a Director of Berger, South Africa) were also elected to the Board. On Frederick Allen's retirement, Starkey and Grigsby acted as Joint Managing Directors for a few years before the advent of W.J. Darby in 1942.

Meantime W.S. Cottingham had died in 1936, and, after Mrs. Vera Cottingham had remarried, her new husband, Thomas Lilley, then Chairman of Lilley and Skinner, was elected to the Berger Board in 1940. Tom Lilley was elected Chairman of Berger after the death of Lord Greenwood in 1948. W.J. Darby's tenure of office terminated in 1955, when he was succeeded as Group Managing Director, by W.J. Vines, an Australian, who for 6 years had been Managing Director of the Victorian Company and since 1952 an executive director of the Australian Group Company.

Pigments

Colour manufacture continued to be an important part of Homerton production until the late thirties when 2,700,000 lbs were produced in 1939, - mainly chrome greens and yellows; the so-called Consul colours phospho-molybdo-tungstic lakes for printing inks; Helio Red, Permanent Red R, and maroons; which had replaced the carmines and vermilion during the 20's and early 30's; Hansa Yellow and some Chinese and Prussian Blues. These colours were to be made until almost the closing of the Homerton Factory, when the now old fashioned plant available was no longer able to produce economically, and arrangements were made for the Berger pigments to be produced in the future by the Cornbrook Chemical Company. Production of Paris Green and Ivory Black had both ceased by 1930. The Paris Green Department was destroyed by fire in 1916, although that in itself did not stop production of this material. Thus 1948 saw the home company no longer making pigments after continuously producing Prussian Blue and a wide variety of other colours for nearly 190 years.

In the move to Chadwell Heath the manufacture of tins, kegs and drums was also abandoned for economic reasons, but the Printing Department was modernised and enlarged and remains a thriving efficient unit employing some 40 workers today.

From the available figures of dry colour sales between 1913 and 1944, it is clear that maximum production was from 1916 to 1920 when sales for these five years reached 3, 3½, 6½, 4 and 3 million pounds weight. From 1920 sales fell steadily to 1 million pounds in 1943, then recovered somewhat until by 1939, 2½ millions were recorded, thereafter falling again to 1½ millions shortly before the shutdown. It may be noted that the 1939 figure was artificially increased by the inclusion of pigments (earth colours and Berger produced Pigment Green) for use in a sodium silicate solution for the camouflaging of aircraft hangars.

Varnishes

Since the installation of their varnish kitchens Berger had made natural gum varnishes at Homerton, and had acquired considerable know how in the esterification of rosin or colophony, and in the far more critical process of "running" Congo copal and the subsequent esterification and oiling out process, for the production of good varnishes or paint vehicles. Before the introduction of accurate temperature control, it was a matter of fine judgment on the part of the varnish maker, to decide when the Congo gum was properly "run", so that subsequent treatment would result in star bright, good drying varnishes. Consequently the art of varnish making was one passed on from father to son, and Berger were successful in keeping in their employ a succession of experts in this field.

Varnish pots were movable open topped cylindrical kettles of 100 - 120 gallons capacity, heated over coke or gas fires. A loose cover was often fitted, with means to conduct away the products of combustion, to absorption chambers, - precautions rendered obligatory by the early factory acts, and the need to avoid complaints by local health authorities. Small fires were quite frequent in the varnish kitchen, particularly from the inflammable volatile decomposition

products of run Congo gum. Lithe varnishes were deliberately allowed to burn on the surface for a few moments - such treatment being considered necessary to give certain desirable properties.

Towards the end of the 1920's American chemists of the General Electric Company developed the oil-modified alkyd resins for use in paint, and these were also made by the Sherwin-Williams Company, with whom Berger had maintained a close technical liaison since the time of W.H. Cottingham's first association with the Company. L.E. Wakeford, then manager of the Cellulose Department, made his first visit to the States in 1932 and brought back from Sherwin Williams, a range of alkyd resin formulations, and it fell to the lot of H. A. Newnham, then a young Berger chemist, to develop and adapt these formulations for works production as suitable media for Berger enamels. This work resulted in Air-Drying and Stoving Kemitone Coach Finishes (1935) and Pompeian Super Synthetic Decorating Enamel (1938). For many years alkyd resins were made in 100 gallon pots, with manual hand stirring, and it was not until 1949 that the first 2 ton properly equipped modern alkyd kettle was acquired and installed at Homerton. A 1,000 gallon gum-running kettle had also been installed in 1944, which contributed much to more efficient and economical processing of natural resins.

The major inventions arising out of the Group Research Laboratory which was inaugurated at Homerton in 1942, were undoubtedly those leading to the use of styrene modified oils and styrenated alkyd resins as paint vehicles. Bulk production was to start in the factory in 1946 in a 1,000 gallon unit, later to be supplemented by a 2,000 gallon vessel. This work was to form the basis of Styrene Copolymers Limited who started operations in 1950, and who were producing 1,700 tons of solid copolymers by 1956, for the paint industry of Great Britain and Europe. In this same year Styrene Copolymers also produced as much straight alkyd resin, and their production of all resins has continued to grow at a healthy rate since that time. The first Bergermaster Gloss Paint sold by Berger for some years after the war was based on a styrenated oil varnish, which proved a useful medium, in view of the shortage of linseed oil and phthalic

anhydride in those days. Later the product was upgraded by replacing the styrenated oil, by a styrenated alkyd. The latter was representative of a class of materials also useful as media for industrial paints sold as Polyken 111 (machinery paints) and Polyken 333 (motor car finishing enamels). These new paint vehicles were to become of considerable technical importance in both Europe and America, and many other resin and paint companies are now manufacturing such materials for themselves. Berger filed many patent specifications in Great Britain and overseas, which in the course of time were licensed to other paint and varnish manufacturers.

A reminder of the only serious damage suffered by the Homerton Factory - on September 8th, 1940, will not be out of place. As the result of a direct hit on the Varnish Department and the consequent fire, some 100,000 gallons of varnish was lost, and the working of the department, and to a lesser extent operations in the Dry Colour and Keg and Drum Departments were more or less seriously affected.

Paints

The famous Berger "Pompeian" gloss paint was first introduced in 1920, and such finely ground paints were to replace the older method of achieving maximum gloss by applying a final coat of varnish. Fine grinding was carried out, up till the middle of the 30's by a battery of cone mills, where production from each mill was only 1½ - 2½ gallons per hour. Overheating of a mill in the effort to obtain the maximum degree of grind, would occasionally cause the inflammable solvent vapours to take fire, - a hazard no longer to be met, after the introduction of the Keenock Mills, the Torrance Super Grinder and, in the late 30's, of the Ball Mill.

Prior to Pompeian, B.P. Decorators Oil Paint had been popular since 1905, and Matone, registered in 1908, was one of the first "wet-edge" flat oil enamels for interior use supplied in heavy liquid form. Matroil oil bound water paints were introduced in 1920, and its production on edge-runners increased to considerable volumes up to the late 30's.

By 1938 no less than seven different ranges of gloss paint were produced, - Pompeian, Vernol, Rock Gloss, Hard Gloss, B.P., White Lead

Paint and Pompeian Super Synthetic. Pompeian itself based principally on linseed stand oil and zinc oxide, included white, black and 55 colours on the shade card, whilst Pompeian Super Synthetic, which dried more quickly and had superior durability outside, was based on the newly developed oil modified alkyd resin, and titanium dioxide. The other gloss paints mentioned, varied in price and/or performance by virtue of the presence of a hard natural copal, or because of variation in pigment content, ranging from pure white lead to pure zinc oxide, and different mixtures of the two. In former times it was also unusual to formulate ready mixed oil paints with considerable proportions of extenders such as barytes, whiting or china clay, - partly because of the fact that such paints were sold by weight.

Paint production figures from 1913 to 1943 for the Great Britain Factory show steadily increasing figures from 146,000 gallons plus 500,000 lbs. to 1,900,000 gallons plus 900,000 lbs., approximately equivalent to a rise from a half million gallons to 2½ million gallons. All paste paints and water paints are included. The steady rise was interrupted at two points, - by the First World War and by the depression of the early thirties. The very high production figures for 1943 and for the Second World War generally, resulted from the large quantities of camouflage paints produced, based on bituminous emulsion or later on wool grease emulsion. Factory buildings, aircraft, ships, and army vehicles used enormous quantities, and a so called hedge paint, was used to disguise the appearance of air fields when viewed from the air. A 30,000 gallon order for anti-gas paint for army vehicles was delivered in 1940, and a considerable proportion of it left on the beaches of Dunkirk. A large order in 1945 was for the painting of ground sheets, for use as identification marks to assist aircraft operations.

Cellulose

L.E. Wakeford, who started with the Company in was much concerned with the development and production of cellulose finishes during the 20's. W.H.F. Starkey visited Sherwin Williams in 192 , and returned with formulations for the then-called Pyroxcellin, motor

car finishing lacquer. W.J. Smith was also closely associated with the technical developments of cellulose from 1926. The first brushing cellulose (Luc) for use in the home, was launched shortly before 1927 when this lacquer was advertised in a two page spread of the Daily Mail of September 23rd at 2s. 6d. per ½-pint, and 1s. 4½d per ¼-pint; - half-an-hour dry, and the names of 1,000 stockists in Great Britain, the Irish Free State, and the Channel Isles, from where it could be purchased. The compulsive urgency of modern advertising was anticipated with the rhetorical, "Why shouldn't it be this afternoon? You could get your tin today!". From very small beginnings, cellulose production has risen to 300,000 gallons by 1936 after ten years of operating the department.

Growth

In 1911 the valuation of fixed assets (buildings, plant machinery, furniture, vehicles, etc.) of the Great Britain factory and offices was £125,000, from which it rose to £154,000 by 1929. A new evaluation in 1935, after the extension to the warehouse (1928) and the building of the new office and laboratory block in 1934 (Location 100) and other alterations to the Homerton site raised the figure to £251,000. This also included the cost of the cellulose unit at Chadwell Heath which was erected after a serious fire in the cellulose department at Homerton in 1935, and was built on part of the 12 acre site divided by Freshwater Road, acquired for future factory extensions. An average expenditure of some £10,000 per year raised the valuation to £360,000 in 1946. A new valuation in 1947, produced a figure of £685,000 probably due almost entirely to the change in money values, rather than to the purchase of new buildings or plant. This year saw the start of the erection of the two million gallons per year production unit at Chadwell Heath, which was completed in 1949, in which year the fixed assets of the Great Britain Company were £973,000.

The extension of overseas companies is well illustrated by the fact that the Group Company including Great Britain and all its overseas associated companies, show an increase in fixed assets from £2,419,000

in 1949 to £4,435 in 1959, with a total figure of net assets for 1959 of £7,200,000. 1949 saw the completion of the ½-million gallon unit at Brisbane, a plant for production of metallic lead at Rickmansworth and the merger with African Explosives and Chemical Industries Ltd. in South Africa.

By 1950 the Styrene Copolymers plant at Sale, Cheshire, arising from the development work of the Homerton Research Laboratory during the preceding eight years, was built and in operation; - this was a joint venture of Berger and Petrochemicals Limited. The foundation stone of Berger House, 38 Berkeley Square was also laid in this year. In 1953 a new plant was opened in Adelaide, Australia, and the following year the erection of plants in Victoria and Western Australia was begun. Two years later Berger acquired a majority interest in New World Paints, Jamaica; and in 1956 a new synthetic resin plant was built at Chadwell Heath; the Melbourne plant was extended, and additional manufacturing units were erected in Launceston, Tasmania, Townsville, North Queensland, and Auckland, New Zealand. By 1958, the further development of the Chadwell Heath site was nearing completion, with a mechanised warehouse capable of storing 350,000 gallons of paint, a three storey office, and laboratory block 210 feet in length; a modern canteen and welfare building, and a new power house. In December, 1958, the removal from Homerton was complete, Shadwell to Chadwell in 185 years with Well Street, Water Lane and Well Court in between, and we are still in Freshwater Lane!

Staff

It has already been recorded that 400 people were engaged at the Homerton works in 1910. In the following year there occurred a workmen's strike which so far as is known was the only serious industrial dispute in the Company's history. It seems that the rates of pay in 1911 were from 4d. to 7d. per hour depending on the type of work done. Following the strike, those earning from 4d. to 5½d. were to receive 6d. per hour in the future, and those on the 6d. to 6½d rate were to receive 7d. per hour. Carmen were to receive 1s. per week increase, bringing them up to Union Rate - since all were Union members. Females were to

receive a ½d per hour rise bringing them up to 2½d. Overtime was to be paid at time and a quarter. For the general worker the management were "not prepared to recognise the Trade Union".

By 1939 the factory workers alone numbered some 350, which had increased in 1944 to 424, subsequently falling to 410 at the present time, when the new Chadwell Heath unit allows for more efficient paint production. The closing down of Dry Colour, and Tin Can, Keg and Drum Departments has naturally also cut down the labour requirements, even though paint production may be greater. Basic wages in 1944 varied from £4. 5. 0. to £4. 10. 0. per week.

The ratio of factory workers to non-productive workers has naturally changed over the past fifty years, the pattern of production type of paint made, and type of equipment used have gradually reduced this ratio so that at present there are rather fewer workers engaged on actual production than on other services.

F. Armitage - 1961