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THE REV. SYDNEY TURNER, A REDHILL SOCIAL WORKER

D.H. Thomas

Until the early part of the reign of Queen Victoria, the punishment meted out to children over the age of seven was effectively the same as for adults, and the harshness of treatment was great, due largely to the fear that earlier events in France might be duplicated in England. The idea of reforming young people instead of punishing them is well described by Dr. Margaret May in an article and in her doctoral thesis, which deal with developments up to 1880.[1] Barbara Weinberger draws attention with the growth of the realisation that education could combat crime, and the reluctance of the educational establishment to deal with juvenile delinquents.[2]

As in these and other accounts of this change in public attitude mention is made of Mary Carpenter and Sydney Turner as two of the most influential people concerned. Amongst other people involved were the Earl of Shaftesbury, the Marquis of Westminster, Monckton Milnes (Lord Houghton), C. B. Adderley (Lord Norton), Dr. Guthrie, Sheriff Watson and many other magistrates, recorders and prison officials from all parts of Britain. Mary Carpenter (1807-70) and Turner (1814-79) were near contemporaries; Mary Carpenter's life and works have been the subject of several books and there is a plaque with a cameo portrait to her memory in Bristol Cathedral.[3] This is not surprising as few women at this time were able to overcome the prejudice against their participating in public life, apart of course, from Queen Victoria.

The life and activities of Sydney Turner are not so well known, despite his pioneering work: he is mentioned in his father's entry in the Dictionary of National Biography, and his physical monument is a brass plate on the north wall of the parish church in Hempstead, Gloucester, where he was Rector after retiring from his post as Inspector of Reformatory and Industrial Schools. Yet his career is of interest and shows the influence which a dedicated and determined individual was able to exert at this period of history, largely behind the scenes.

He was born on 2nd. April 1814, the youngest son of Sharon Turner, (1768-1847) who was an attorney, historian and scholar, and author of a number of books, listed on three-quarters of a page in the British Library catalogue. Sydney prepared the 8th. edition of his deceased father's book *Sacred History of the World* for publication in 1848.

He went to Trinity College, Cambridge and graduated as 18th. wrangler in 1836. He was ordained deacon by the Bishop of Winchester in 1838, and took up a curacy at Christ Church, Southwark. On June 6th. of the next year he married Mary Ann Rippon at Tooting Graveney, and also was ordained as a priest and proceeded to his M.A. An exact contemporary of his at the same Cambridge college was William Alexander Osborne who married Sydney's sister and officiated at Sydney's funeral, being then vicar of Dodington, Somerset. Not

From a Photograph by SAMUEL A. WALKER, 64, Margaret Street, W.

Sydney Turner

Fig. 1. The Rev. Sydney Turner.

far from the Southwark Church where Sydney ministered was the school of the Philanthropic Society, an organisation founded in 1788, and which was referred to in an Act of Parliament in 1806 as 'having been of considerable advantage to the public' and likely to be even more so if it was approved by Parliament. It was initially in Bermondsey, with a branch at Hackney and had had a somewhat chequered history: [4] and later it was centered in Southwark. The activities were divided between the 'reform' and the 'manufactory'. The Southwark institution was opposite the Bethlehem Hospital, the premises of which are now used by the

Imperial War Museum and it was a charity for the protection of the offspring of convicted criminals and for the reformation of children who themselves had been engaged in criminal practices. The 'reform' aimed at breaking bad habits and providing education whilst the 'manufactory' catered for practical training, in the hope that this would enable children to find employment when they left. The Philanthropic Act mentioned above laid down guidelines for the appointment of a Chaplain Superintendent, and Turner was so appointed and took up duties on 1st. July 1841.

His approached his task in a very tactful manner. He praised some existing methods and had a good relationship with both boys and staff, but slowly introduced improvements. In his first report, for 1841, for instance, he praised the work done by the schoolmaster, Mr. Robinson. This report was a comprehensive document, giving details of the philosophy, activities and practices of the school, and it expounds his own interpretation of them. Turner clearly had made a study of the law concerning juvenile criminals and its practical application, and his aims as Superintendent coincided with those of the Society, which were to arrest crime by prevention not punishment, by moral and spiritual improvement and by education and vocational training. In 1845 a special committee of the institution decided not to admit girls, and to admit only boys who had been convicted of a criminal offence under the Act of 1838 which empowered magistrates to send them to the Philanthropic Society in lieu of an adult prison. Contrary to the view of some writers, Turner adopted one of the aims of the Society, which was to avoid the use of corporal punishment, but he did use it for the first time in 1842 and with reluctance.[5] It is a sad fact that over the years many people concerned with juvenile delinquency had the ideal of complete avoidance of corporal punishment but had eventually to admit that correction of this nature in some few cases was unavoidable. Turner used a system of rewards as an alternative. His approach to non-vocational education, set out in his Journal and his Report of 1841 on the Philanthropic School, was that it should include arithmetic, spelling and reading, general information, and use of maps. He wanted to avoid rote learning, and advocated reading a variety of books.

Turner probably realised that the Society was at rather a low ebb, and that more had to be done to create a public image than by an Anniversary Sermon in aid of its funds, such as that given in 1840 by Archdeacon Wilberforce (son of the celebrated statesman).[6] A public dinner for the Friends of the Society held at the London Tavern in 1842 raised £ 2000 from the 150 guests, with the Chancellor of the Exchequer in the chair.[7] Many toasts and speeches were given, and those present "did not leave until a late hour". Although Turner is not mentioned, he probably was the initiator of the revival of a public festival of the Society after a 12-year gap, and he certainly kept the press informed, some dozen articles appearing in *The Times* between 1840 and 1854.[8-17] The Bishop of Winchester preached the Anniversary Sermon in 1844 [8] with civic dignitaries present and gave a sermon which "gave a deep impression" and brought in a collection of £ 82, after which Turner conducted a two-hour public examination of the children.[8] In December 1845 a Mrs. Ann Warring donated £ 2000 and extensions to the buildings were being carried out - there were 70 boys in the 'reform'. Like others interested in the field, Turner knew of the pioneer work of Demetz, who founded a Reformatory in 1839 at Mettray, some four miles NNW of Tours in West Central France. In 1846 he made a visit with Thomas

Paynter to this institution from July 20th. to August 3rd.; Paynter, a magistrate, was a member of the Committee of the Society, and a frequent visitor to the establishment. This journey made a deep impression on Turner, widened his horizons and was of decisive effect on the reformatory movement.

The report of this visit to France, written largely one suspects by Turner, although published in their joint names, chronicles the detailed running of Demetz's school and compared it with the activities at Southwark.[21] Turner saw many good points in France, but did not approve of some things, such as the use of hammocks, and stressed that the French system could not be transferred *en bloc* to Great Britain. He disliked the Army titles used in the hierarchy of the boys. In particular, he praised the rural situation of the French school, and advocated its adoption by the Philanthropic Society. His report was ready by August 27th. and Turner made strenuous efforts to bring it to the notice of as many people as he could and found that its publication had a good reception. He sent copies to members of the government, and to influential people interested in juvenile delinquency such as the Bishop of London and Kay-Shuttleworth, who was very encouraging. On December 10th. the Archbishop of Canterbury asked for a copy. Turner was not alone in advocating the Farm System for Reformatory institutions.[22]

On 7th. December 1847 Turner visited Parkhurst prison which was the first one set aside for dealing with young offenders, and which in 1838 had replaced a prison hulk: he disliked the stern military style there. He continued his drive, preaching sermons on the matter and explaining his ideas at Dinners which were widely advertised and which raised funds. His efforts continued despite an illness in January 1848. At a public meeting at the London Tavern on 14th. June 1848, chaired by the Duke of Richmond, a resolution urged by Sir G. Grey was passed which was that Parliament be asked to approve the setting up of a Reformatory on the Farm System. The managers, the treasurer William Gladstone (a cousin of the liberal statesman) and Turner embarked on organising money-raising activities, including banquets, and used all the media publicity available. Several sites were considered for the institution, including one which led to a donation of £ 1000 by a neighbouring land owner on condition that it was *not used* for the school. This is an early expression of the ambivalence of public opinion, which applauds the treatment of delinquents and other divergent individuals - so long as it based on premises away from their own vicinity. The site finally chosen was at Redhill (sometimes written Red Hill or Redstone Hill), Surrey, about one mile from Reigate, and 20 miles from London. The buildings were designed by Wm. Moffatt, partner to Sir George Gilbert Scott, and the scheme received Royal approval when Prince Albert laid the foundation stone on 30th. April 1849 in an impressive ceremony described in one and a half columns of *The Times* and which involved a choir from St. Paul's Cathedral and a regimental band.[13] The Queen and the Prince became the patrons and by 5th. June 1849 the institution housed 45 boys. On 23rd. October 1849 a ceremony in Southwark marked the closure of the old school, the chapel being handed over for parochial use.[14]

As at Mettray, the new school was comprised of houses of three storeys, the number of them increased over the years, some of the constructional work being done by the boys. In each house the training workshop was on the ground floor, the first floor served both as class room and dining hall by day and at night as dormitory for some boys; the rest of the children slept on the top floor. There

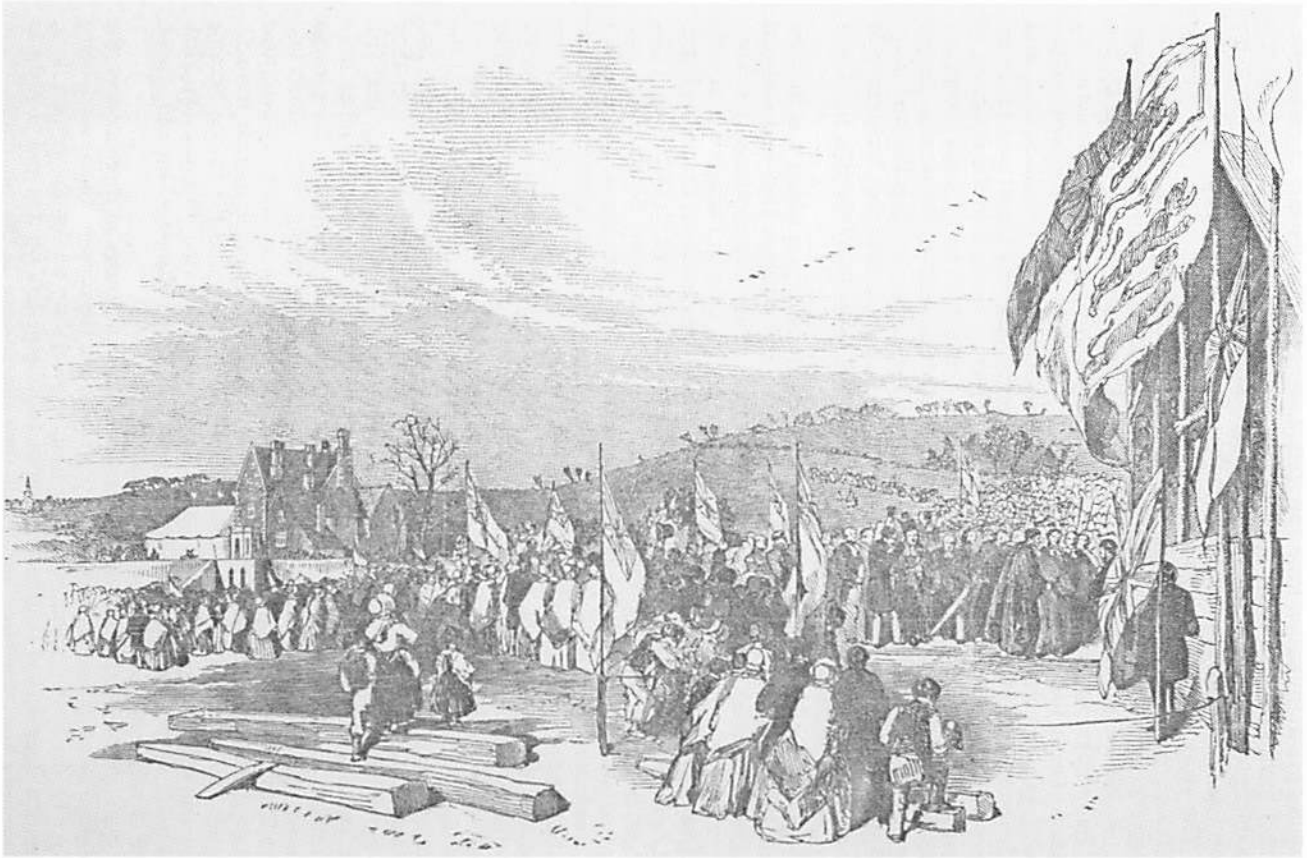

Fig. 2. The Philanthropic Society's School at Redhill - The Ceremony of Laying the Foundation Stone.

was a chaplain's house which in 1851 housed Turner's wife and five children, together with a housemaid, a nurse maid, an under nursemaid, a cook and a footboy.[23] Turner later made another short visit to Mettray, with Gladstone, who was fluent in French. No printed report of this has been located. Demetz visited Redhill on more than one occasion.

During the 1850s pressure on the Government continued with a deputation of 50 chaplains of prisons who implored the Home Secretary to implement the House of Lords Report of 1847.[24] On December 10th. 1851 there was a one-day conference at Birmingham "in support of the measures now being adopted for establishing preventative and reformatory schools as the only means of checking the progress of juvenile crime" in the words of the notice in the local paper.[25] This resulted from the exertions of Mary Carpenter, Matthew Davenport Hill Q.C. (Recorder of Birmingham) who took the chair and Mr. Morgan, Town Clerk of the City. Miss Carpenter's book *The Perishing and Dangerous Classes* had been published earlier in the year. The conference, in a later review, was said to have "combined and brought together many ... who had hitherto laboured alone in separate and isolated fields of operation".[26] Turner was present, although he had been ill earlier in 1851, and probably had little to do with the preparation; but he described the work of the Philanthropic Society and he had a hand in preparing the report.[27] (During this illness, which lasted for several months the affairs at Red Hill fell into disarray, but Turner restored order when he returned to duty).

Sir G. Grey's reaction to a deputation appointed at the Conference was, in effect, that public opinion on the matter was not sufficiently awakened and that the time was not ripe for legislation. But the members of the deputation encouraged Mr. Adderley to set up a committee, chaired by Mr. Matthew Talbot Baines to enquire into Criminal and Destitute Children and to produce a report.[28] Adderley's efforts to present a bill to establish Reformatory Schools did not survive the Second Reading - an earlier effort in this direction by Sir J. Packington had been thwarted by changes in the Cabinet. Likewise, an effort by Lord Shaftesbury to introduce legislation to enable government support to institutions to reduce juvenile vagrancy and begging came to naught because there was a lack of such institutions - apparently a chicken-and-egg situation. Efforts to involve the Committee of the Council for Education likewise were fruitless. In contrast to the lack of official action, several institutions were set up to relieve juvenile misfortune by purely voluntary action, headed by such people as Barwick Lloyd Baker, at Hardwicke, in Derbyshire; Miss Carpenter at Kingswood, in Bath; and others at Warwick, Liverpool, Ipswich, Durham, Birmingham, Glasgow and Aberdeen.

In November 1853 invitations went out to all those likely to be interested to attend a second conference in the following month, again in Birmingham. This was an "important and influential meeting" [29] which certainly fulfilled the hopes of the organisers that its results would be "felt and recognised for many years in the early adoption of a sounder and juster system for Juvenile Offenders". Turner was received with applause when he rose to speak, not surprisingly as the success of the Philanthropic School had been widely attested. For example, Monkton Milnes informed the 1852 Select Committee that when he became interested in the subject of juvenile crime and ascertained what existed he had "discovered the Philanthropic Society was in a state of great inactivity" but had "risen to some proportion of public utility under the care of Sydney Turner"

and Milnes had become a member of its committee. Captain Willians, an Inspector of Prisons testified to the same Select Committee on the efficiency of Red Hill and said that it could be a useful place for the training of masters for institutions of like kind and added "I would have very little trust in the efficiency of that institution and its officers by themselves were it not for the superintendency and influence of Mr. Turner". In other evidence to the Committee, George Bunsen, son of the Prussian Ambassador, commented on the "great and excellent results" after a visit to Red Hill, but he hinted at too small a staff, leading to a type of monitorial system.[30] Both Turner and Paynter appeared as witness to this Select Committee, on 11th. and 18th. March 1852, respectively.

The Birmingham conferences agreed that three types of institution were needed for the deprived children and juvenile offenders. These were Ragged Schools, the number of which had increased rapidly in the 1840s, Industrial Schools and Reformatory Schools. Ragged schools were to educate those unable to pay, Reformatory schools were to reform convicted juvenile criminals, and the Industrial Schools were for children in danger of becoming criminals, or destitute or homeless.

A delegation of 'noblemen and gentlemen' appointed at the 1853 conference, for which Turner and Morgan were secretaries, met Viscount Palmerston, the Home Secretary on 1st. February 1894.[31] This resulted in a series of Acts passed in 1854, 1855 and 1856, which made possible state financial support. There was a half-hearted financial support by the Committee of the Council for Education which was withdrawn in 1857 as far as Reformatories were concerned although help continued to Industrial schools. In 1857 there were Acts passed clarifying the position, but more germane to the subject of this article was the appointment of Sydney Turner as Inspector of Reformatory Schools. The post was in the Prison Service of the Home Office. Turner replaced Capt. Williams, mentioned above. The Industrial Schools remained under the Committee of the Council for Education. In his last report Turner said he was appointed as "capable of testing the results of the school instruction, both as to secular and, for the Protestant schools religious teaching, and at the same time to direct and carry out the important provisions for enforcing the responsibility of parents hitherto enforced under the direction of William Morgan of Birmingham".[32] He of course took a much wider view than this; an article after his retirement states that he "acted in the two-fold capacity of Adviser and Referee to the Home Office in questions connected with Reformatory and Industrial Schools, and as Director and Confidential Adviser of the Managers of these Schools". Due to him it is said the connection between State and the Schools was very harmonious and free from unnecessary formality or uncalled for interference.[33] It is more than likely that the transfer of the Industrial Schools from the Committee of Council to the Home Office in 1860 was due to Turner's representations, for the Industrial Schools Act (for England and Wales) of 1857 was a failure and this brought about the legislation of 1860 and 1861 which set up the system of Reformatory and Industrial Schools which continued (with various amendments) until 1933. The two Bills are very complete in their aims, and bear the mark of Turner's experience.[34]

Turner, from 1861 Inspector of both Reformatory and Industrial Schools, devoted his energy to inspecting, advising and encouraging those who ran the schools, including attending the triennial Conferences of the Reformatory and

Refuge Union, and in preparing his annual reports to the Home Secretary. The size of these Blue Books, with a wealth of statistical detail grew from a 45-page Number One, for 1857, to 307 for Turner's last, Number 19. The first one to include both schools, for 1866, had 128 pages. The growth of the number of institutions caused him in 1868 to put forward a plea for more inspectors. "It is almost impossible for one inspector to adequately supervise or test the educational progress of the children ... [and to] supervise the business of the central office with an almost incessant correspondence and to do justice to the 130 schools and some 11,000 children scattered throughout Great Britain from Inverness to Exeter".[35] His plea was answered by the upgrading of his administrative assistant Henry Rogers to Assistant Inspector. Rogers was born in 1829 and had a Cambridge B.A. from Sydney's old college and he had previously been on the staff at Red Hill. Turner's attitude to his duties was that of a 'liberal churchman' and his standing as a member of the C of E. enabled him to be accepted by and to collaborate with various dissenters including Mary Carpenter and John Wright. He took particular care in dealing with Roman Catholics in the Schools, and avoided the troubles with which Dr. Barnardo, for instance, was beset in this matter.[36] The fact that the Reformatory and Industrial Schools avoided the 'Religious Difficulty' which retarded the development of a national educational system was a matter of satisfaction mentioned from time to time.[37]

There were two aspects of the system which were not found in the Mettray pattern. One was the application of preliminary imprisonment for those sent to Reformatories, not fully abolished until 1893, which Turner defended as a deterrent, in that it avoided putting a "premium on Crime" even though it could include flogging [38] - perhaps as a civil servant he could not condemn a practice which was not unlawful. The other was the enforcement of parental duty to contribute towards the maintenance of young offenders. This in fact only accounted for 2·7% of total costs in the year 1866 and was achieved with difficulty and probably wasted administrative effort. (Subscriptions and donations in the same year accounted for 7·32% of the costs of Reformatory Schools - Industrial Schools gained greater public sympathy and support).

On 31st. March 1876 Turner resigned his post. "Failure of health and strength rendered his retirement absolute necessary" according to one announcement.[39] At a ceremony chaired by Lord Houghton acting for the Duke of Westminster he was presented with a 'splendid piece of plate' bought with part of the sum of £ 1000 collected from some 250 subscribers. Cardinal Manning spoke of his 30 years of collaboration with Turner, and the latter, who was accompanied by his son Sharon, mentioned the recent decrease in the amount of juvenile delinquency.[40] He had been nominated Dean of Ripon by the Prime Minister, but apart from attending one Chapter Meeting, did not take office.[41] He became Rector of Hempstead (now part of Gloucester) in 1876, but was ill and finally bedridden whilst his curate, J.A. Johnson, bore the burden of Church work. Turner continued to correspond with those in the schools, and was pleased to know of the impending introduction of Day Industrial Schools, which both he and Mary Carpenter had advocated.[42] He died on June 27th. 1879 and was buried at Reigate.[43] His wife, who was four years his senior, died later in the same year.

A portrait of Turner is of a long bearded face with a stern and rather agonised expression. As said above, he had several long illnesses, one obituary

commented that "he exhausted a constitution which was never very robust".[44] He had seven children. His first child, Sharon, was born in February 1841, but died before the second one arrived: he was also christened Sharon. He was survived by three sons (another son died young) and two daughters.

One can well ask what was the contribution of Sydney Turner to the system of Home Office schools. By taking over the Philanthropic School he created a prototype institution for the treatment and rehabilitation of juvenile offenders which, as the Inspector's Report for 1856 shows, had five buildings each housing 50 boys, with a farmhouse, chapel, gas works and staff houses. There was a staff of 21. The success of Redhill encouraged others to plan similar schools and as inspector he encouraged them. He did not seem to be dogmatic in detail as he felt he was not "called on to interfere with diversities of operation . . . or to reduce them [the schools] to one uniform sameness of plan," and was sure that experience in the schools would "remove what seemed [to him] mistakes and defects".[45] He had but limited powers as the institutions were built and supported to a considerable extent by private donations, but did in an early report give the balance sheet of the Philanthropic school as a model. Matthew Davonport Hill called him a 'gifted philanthropist'.

There did emerge one drawback in that his outlook continued to be taken as model for a little too long. His successor, Col. Inglis wrote of his declared intention to continue in the pattern set by Turner, no doubt guided by Henry Rogers, who retired in 1896 just after the energetic J.C. Legge took over.[46] By this time some of the Superintendents had been in office for as long as 40 years, and were resistant to change, and stressed unduly the value of experience 'on the job' as the essential entry to the profession: there were no training schemes of any kind. Legge was very active and visited all the schools in his first year of office, but left to become Director of Education in Liverpool in 1906. From then until 1917 there were two inspectors and two acting or temporary ones (the title was upgraded meanwhile to Chief Inspector). The rigid and Victorian character of the Reformatory and Industrial Schools was revealed by two Government enquiries in 1884 and 1896 which led, however, to comparatively little change. Even after the 'Childrens Charter' of 1908 the schools were very old-fashioned in most aspects but they, from 1917, experienced a remarkable updating, master-minded by the dynamic Chief Inspector, Dr. Arthur Norris, into the system of Approved Schools - a system in the 20th. Century which developed a different and scientific attitude to child care.

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THE STRANGE STORY OF THE SAMUELSON MAUSOLEUM AT HATCHFORD PARK

Joy Grant

. . . who knows the fate of his bones,
or how often he is to be buried ?
Who hath the Oracle of his Ashes . . . ?
Sir Thomes Browne (1605-82)

In a remote stretch of wooded common near Hatchford, a mile south-west of Cobham, stands a handsome stone structure in the classical style, clearly in its time an object dear to someone's heart, now sadly neglected. Wind and weather have worked their will on the masonry - a limb of a beech tree has crashed down, knocking off ornaments and chipping the roof - while man has left his distasteful mark in the form of graffiti, and done darker deeds than that, as we shall see. But the four-arched core of the building, with its surround of Doric columns, is intact, the dome survives, and the crypt, though doorless and open to the elements, looks to be sound and dry. A closer scrutiny at eye level reveals memorial inscriptions to some people called Samuelson: but the name means nothing in Surrey today, and the wanderer in the woods continues on his way none the wiser.

For the answer to the riddle, one must go back ninety years, to the afternoon of Wednesday, 10th. May 1905, when the Right Honourable Sir Bernhard Samuelson, Bart., ironmaster and agricultural machinery manufacturer, pioneer of technical education (for services to which he owed his title), Privy Councillor, Fellow of the Royal Society, one-time Liberal Member of Parliament for Banbury and later for North Oxfordshire, died of pneumonia at his London house, 56 Prince's Gate, South Kensington. He was in his eighty-fifth year, and had been ill for a week.[1]

As his final resting place Sir Bernhard had chosen Torquay. It held memories for him from the days when he had rented a house nearby at Churston, mooring his steamyacht *Brilliant* (one of the largest private yachts then afloat) in Torquay harbour. But there were more solemn reasons for his choice: his wife and daughter were buried in Torquay cemetery, and his wish was to lie peacefully with them there - a wish piously echoed in some lines of verse composed, probably, by his eldest daughter:

And now he comes, who dearly loved them both,
Wearied with years and honours, nobly borne;
He comes to lie beside them, nothing loth
To rest and sleep beneath the smiling morn.[2]

Sir Bernhard's mortal remains came on Saturday 13th. May in a coffin of polished oak with brass mountings. The crowd of mourners doubtless felt inward relief as the coffin was lowered into the moss-lined grave. Most of them had travelled with it on the midnight train from Paddington, then waited for several hours in Torquay until the cortege of mourning carriages moved off to the cemetery.[3] Among them was the eldest son, Henry, the new baronet, who was sixty. Sir Bernhard had given all his sons the privileged education he himself had missed. After Rugby school and Oxford, Henry had entered parliament, whence he had retired at forty owing to poor health.[4] From then on he seems to have led a life of leisure, forming habits and tastes that his inheritance of £ 75,000 (a million or more today) when at last it came his way, gave him the opportunity to indulge.

Sir Henry was by all accounts an amiable man, and he certainly showed a becoming regard for the parent to whom he owed his ample share of the good things of life. Anxious to do his father honour even *post mortem*, and knowing a thing or two about art, he commisssioned the sculptor George Frampton, R.A.[5], a leading figure in the Arts and Crafts movement, then at the height of his career, to design a chest-tomb to stand over the great man's grave. Cast in bronze, it weighed a ton and - after the earth had settled - was installed on 21st. December 1906.[6] Emblazoned upon the top surface were the Samuelson coat of arms,[7] and the family motto, *Post Tenebras Lux* - colloquially, 'It's always darkest before the dawn'. Inscribed elsewhere on the tomb were the enigmatic words: 'By my own works before the night, great Overseer, I make my prayer'. Those in the know will recognise the masonic connection: Mark Master-masons address the supreme being as Overseer.[9]

In the same year as Sir Henry Samuelson offered this melancholy tribute to his father's memory, he treated himself to a sizeable estate in Surrey, buying Hatchford Park. In due course he would set up a racing stable there, and his wife - the couple had no children - would breed prize-winning Pekinese. The mansion at Hatchford Park dated from earlier times, but in 1890 had been given a fashionable half-timbered and multi-gabled look by Rowland Plumbe (1838-1919), an architect who, in addition to designing hospitals, churches and polytechnics, was adept at turning harmless old residential properties into the Tudor fantasies beloved of the *nouveaux riches*. He had just performed such a feat for Mr. F.C. Bryant, son of the match manufacturer (at Woodlands Park, Stoke d'Abernon). Sir Henry, one feels, should have known better: he had a feeling for the past and its legacy of beautiful artifacts, cramming his home with antiques,[10] and could well have afforded a house of genuine antiquity in which to put them. As it was, he and Lady Samuelson decided that the best thing to do with mock-Tudor was to go along with it. They set about introducing features that would enhance the 'period' look - a formal Renaissance garden, and an elaborate stone forecourt (contrasting unhappily with the mansion's red brick) closely modelled on that at Montacute, the great Elizabethan house in Somerset, which Sir Henry remembered from the long-ago days of boyhood, when his father had rented it.[11] But however correct and delightful the etceteras might be, there was really no hope of disguising the bogusness of the looming great house.

Nevertheless, Sir Henry soldiered on. He was in his mid-seventies, and getting perhaps a trifle woolly-minded, when in 1919 or thereabouts a new idea for improvement struck him. Nearly a century had passed since his parents' births.[12] How better to honour the anniversary than to build for them - as a final resting

place for their mortal remains - a mausoleum in the grounds of Hatchford Park ? The mausoleum would be at once a monument to filial affection, a mark of the family's status as landed gentry, and the ultimate in garden ornaments. Sir Henry chose a site a few minutes' walk uphill from the house, and there one day he gathered his servants together for a charmingly feudal little ceremony - they were allowed to lay the foundation stone.[13]

The building that arose owed everything to Montacute, and (with the forecourt and other additions) is likely to be the work of of Rowland Plumbe, the re-creator of Hatchford House thirty years earlier. Still, at eighty, an active partner in his London practice, he was the obvious man to approach, and the fact that he had 'an untiring interest in freemasonry' [14] and, more particularly, had served as Past Grand Superintendent of Works in the Craft and Mark degrees would have recommended the connection to both parties. But if Plumbe designed the mausoleum, he was not to see it completed, dying as he did of heart failure in April 1919. Within the limits of the brief, which was to use design elements drawn from Montacute - in other words to produce a pastiche - Rowland Plumbe, if he it was, did well. Even in its present state of dilapidation the mausoleum is pleasing to the eye, but in its pristine condition, complete with jaunty miniature obelisks at the angles of the entablature, and a spirited motif of intersecting circles atop the dome, it must have been spectacular. Credit is due to the person of taste and discrimination (Sir Henry Samuelson himself ?) who chose the mottoes in English, Greek and Latin carved on the architrave.[15]

Fig. 1. The Hatchford Mausoleum in 1960, before it was vandalised. *(Courtesy of Surrey Archaeological Society)*

The crypt (or burial chamber) was the *raison d'etre* of the edifice, but the finishing touches could not be put to it until its grisly occupants were installed. Accordingly, by order of the Home Office,[16] on 14th. April 1920 the remains of Bernhard, Caroline and Florence Samuelson - for the young daughter was coming too - were exhumed from their graves in Torquay cemetery, in readiness for transferral to Surrey. The bronze chest-tomb would travel as well: it was destined to stand conspicuously on a plinth beneath the dome, while the coffins (possibly replacements of decayed originals) would be bricked away in recesses in the side walls of the crypt. The crypt, eight by fifteen feet, down a flight of steps, was entered through a double-leaved door. Fresh from the decorator's hand the crypt must have been extremely attractive. It was fitted out like a chapel, with a miniature altar, a cross in black stone on the floor, a stone-mullioned Gothic window, and a ceiling painted with gold stars on a ground of midnight blue; wood-panelling, probably with inscriptions attached, was fixed to the walls after the coffins had been deposited. Today all that remains are the cross on the floor, a broken window, and traces of the paint. The panelling has disappeared, together with any indication of where the various bodies lay. However, clues are to be found in the outer walls of the monument: three sets of tiny holes, two sets on one side, one on the other. They mark the ends of narrow channels, the diameter of a straw, that ran from the coffins to the outside air, with the dual purpose ot providing ventilation and hastening the process of decomposition. The set of holes on its own presents no problem - it must lead to Florence's coffin - and as for the other two, one strongly suspects that Sir Bernhard got pride of place near the altar.

The Samuelsons, of Jewish descent, had abandoned the practice of Judaism more than a century earlier. Sir Henry worshipped at the Anglican church of St. Matthew's, Hatchford [17] and it was his wish to see the mausoleum consecrated according to the rites and ceremonies of the Church of England. However,

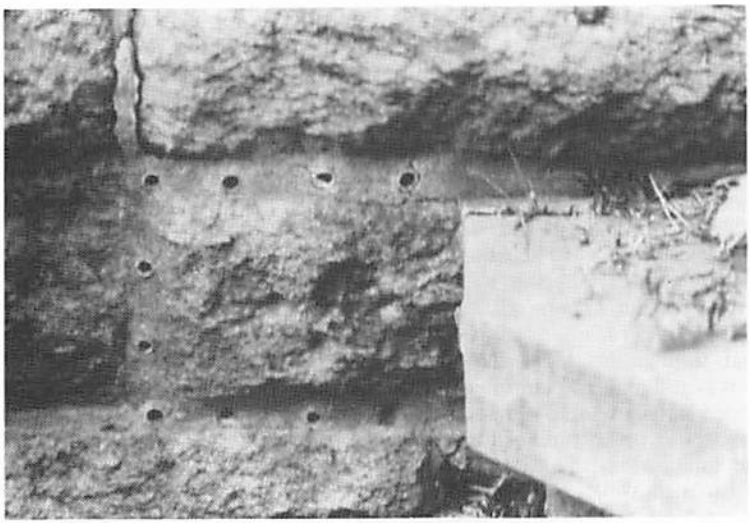

Fig. 2. Hatchford Park Mausoleum ventilation holes.

owing to the fact that bishops and their aides, like anyone else, took summer holidays, there was a tiresome delay before the ceremony could take place. Anxious letters from Sir Henry's solicitor, Mr. Fladgate of Pall Mall, to Mr. Moore, the Surrey Registrar at Doctors' Commons, rose to a crescendo of concern on 15th. September: "I have again had a piteous letter from my friend and client Sir Henry Samuelson . . . who is of very considerable years and a great invalid," he writes, "[He] is worrying himself really to death over the delay. Incidentally he blames me, but that is immaterial".[18] So upset was Fladgate that he volunteered to interrupt his fortnight's holiday to attend the ceremony, if necessary. Sir Henry's proposal that his friend and diocesan in the south of France, the Right Reverend Henry Joseph Corbett Knight, Bishop of Gibraltar, who was on holiday in England, should take the service proved helpful. Both elderly gentlemen were eager to escape to warmer climes before the approach of autumn, the bishop's need being perhaps greater than the baronet's, for he was dead before the autumn was out. Even so, it was 8th. October before the consecration took place. On the mausoleum steps, Bishop Knight read the appropriate service, and repeated the official Sentence of Consecration, which declared the building set apart "from all common and profane uses as a place for the interment of the dead for ever". Who was present? A contingent of Samuelsons, one assumes. Certainly Mr. Fladgate and Mr. Moore, who - their tranquility restored - had travelled down together on the 11. 07 from Waterloo to Effingham Junction. The ceremony over, one imagines Sir Henry descending the young avenue of specially planted conifers that led to the house, modestly confident that the spirits of his parents were gazing down on him with approval.

Yet the whole scheme seems strangely ill-advised. The Samuelsons' roots were - if anywhere - in Poland, the U.S.A, London, the north of England, certainly not in Surrey.[19] And if Sir Henry was dreaming of a future in which Samuelsons yet unborn would make their way to Hatchford to venerate the tomb of their great ancestor, he was, to put it kindly, allowing the romantic side of his nature to run away with his common sense. In the event, the Samuelson presence at Hatchford continued for a short space of time only: Sir Henry's health declined, and in 1924 he and Lady Samuelson moved permanently to Beaulieu-sur-mer in the Alpes Maritimes, where for years they had been going in the winter. Hatchford Park was sold to the steel magnate William Firth, but excluded from the sale were the mausoleum and the parcel of land on which it stood, which before the consecration Sir Henry had conveyed to the vicar of Hatchford and his successors in perpetuity.

No doubt the mausoleum was well looked after during Sir Henry's lifetime, and when he died in 1937 [20] he desired "that the members of my family . . . and particularly my residuary legatee will see that the Mausoleum in Hatchford Park is kept in good order and repair". Certainly the mausoleum appears to have been in good shape in 1960, as can be seen from a photograph. It was in the next decade that unpleasant things happened. In the winter of 1960-61, a local resident [21] was crossing the common on his way to work when he espied some men equipped with a winch, planks and a lorry: they were deep in the business of removing the bronze tomb. He telephoned the police, but by the time they arrived the thieves and their loot had vanished. They got their comeuppance soon afterwards, however, for as luck would have it, a tail-light on their lorry was faulty, and in Chertsey they were halted by police who, not caring for their look, took a peep under the tarpaulin. The tomb was duly replaced, only to

Fig. 3. The Inscriptions.

Fig. 4. The Samuelson Coat of Arms.

Fig. 5. The Hatchford Park Mausoleum as it is today.

disappear again soon afterwards, its fate, no doubt, to be sold for its weight in bronze. Next to go were the crypt doors and panelling. Smoke-marks on the stone show where fires were kindled; there was rumour of witches. Meantime, the fabric was threatened not only by the action of the weather, but by encroaching yews, rampant undergrowth, and a ring of fallen timber. This was the state of affairs when in 1989 Sir Michael Samuelson, the fifth baronet, was informed - to his great surprise - by Surrey County Council of the mausoleum's existence. The Council assumed responsibility for the site in 1992. Trees have been cut back and scattered masonry collected, and the intention is to to bar entry to the crypt by means of gates or a grille. A welcome addition will be a notice board offering the passer-by information about the origin and history of the monument.

One cannot help wondering what Sir Bernhard and Lady Samuelson and their daughter Florence would make of it all. For over half a century they have dwelt on their lonely islet of consecrated land, unrecognised and disregarded, while the tide of history has flowed round them. After the retreat from Dunkirk in 1940, Sir William Firth offered the use of Hatchford House to the War Office as a convalescent hospital. In 1952 - acquired by London County Council - it became a boarding-school for physically handicapped boys, mostly victims of the post-war polio epidemic, and more recently it was used by the Borough of Greenwich as a home for severely disabled children. At the time of writing it is up for sale, though its desirability as a rural property is not enhanced by the London orbital motorway, the M25, which runs past its boundary. Sir Henry meant well by his loved ones. But had he and they known what the future held, it is quite likely that, in preference to years of neglect and vandalisation followed by resuscitation as a focal point for Sunday afternoon ramblers, they might well have opted for the decent ordinariness of Torquay cemetery.

In Victorian times, mausolea enjoyed something of a vogue in Britain, the royal family having set the example at Frogmore House, Windsor, where imposing mausolea were erected in the grounds for the Duchess of Kent and for the Queen and Prince Albert. Attitudes to death change, and funeral customs with them. To quote a recent study: "The big statement, the public memorial and the grandeur and awesomeness of death have passed out of fashion. Death is a bad joke, and is best avoided: the dead are got rid of as soon as possible" - via the crematorium. As a result of this, and of the rigours of taxation, the present century has seen the virtual demise of the mausoleum in this country. Probably fewer than a dozen examples exist, most of them (like the two designed by Sir Edwin Lutyens) located not on private estates but in cemeteries or churchyards. Thus the Samuelson Mausoleum at Hatchford turns out to be more than just an attractive building with a curious history: it is a rarity from the point of view of the architectural historian, another good reason to be thankful that at last its future seems secure.

Notes and References

1. *Banbury Guardian*, 11th. May 1905.
2. Anon, *Banbury Guardian*, 18th. May 1905.
3. *Banbury Guardian*, 18th. May 1905.
4. Sir Henry Samuelson was Liberal member for Cheltenham (1868-74) and for Frome (1876-85).
5. Sir George Frampton (1860-1928) is perhaps best remembered to-day for the Peter Pan statue in Kensington Gardens, and the (less successful) Edith Cavell monument at the foot of St. Martin's Lane.
6. Information from the Torquay borough engineer.
7. Samuelson arms: Sable, three piles wavy, two issuant from the chief and one from the base, or, each charged with a phoenix in flames, gules. Crest: a phoenix in flames, holding a torch in its beak.
8. R.R. Langham-Carter, 'Note on Hatchford Mausoleum', in *Surrey Archaeological Collections*, Vol. 59, (1962), p.92,and plate VII (with two exterior photographs) - the only published source of information about the building, apart from a brief note in Pevsner's *Surrey*.
9. The librarian at Freemasons' Hall in London finds no reference to Sir Bernhard Samuelson in the records of the lodges with which he is most likely to have had a connection. However, the inscription is strong evidence of his having been a member of the Society. Sir Henry was certainly a freemason: he was initiated whilst at Oxford into Apollo Lodge, going on to be Worshipful Master of Cherwell Lodge, based in Banbury, and Provincial Senior Grand Warden for Oxfordshire.
10. Sale catalogue of Phillips Son and Neale, March 1924. (copy in Victoria and Albert Museum Library).
11. Information given by Sir Michael Samuelson.
12. Sir Bernhard was born on 22nd. November 1820, his wife Caroline (née Blundell) on 10th. March 1821.
13. See letter in *Follies, the International Magazine for Follies, Grottoes and Garden Buildings*, Vol. 6, no. 1, (Spring 1993).
14. Obituary Notice, *Journal of the Royal Institute of British Architects*, Vol. 00, (1919).
15. The inscriptions read as follows: "A Temple of Sleep"; "Το παιδιον ουκ απεθανεν αλλα καθευδει" - "the child is not dead but sleeps" (Matthew ix, 24); "ο θανατου ουκ εσται ετι ουτε πενθος ουτε κραυγη ουτε πονος" - "there shall be no more death, nor weeping, neither shall there be any more pain" (Revelation xxi, 4); "lautus cui in diem licet dixisse vixisse" - "happy the man who can say each day 'I have lived life to the full'" (adapted from Horace, Odes III, 29),
16. Licence dated 10th. February 1920.
17. St. Matthew's, Hatchford, was then in the diocese of Winchester, becoming part of the new diocese of Guildford in 1927. It was demolished in 1968 on the ground of underuse.
18. Archdeaconry of Surrey Papers, Greater London Record Office.
19. See Margaret S. Brown, *Chapters towards a Biography of Sir Bernhard Samuelson*, unpublished thesis, submitted for the Diploma in Adult Education of Liverpool University, (1974), copy in Banbury Public Library.
20. Sir Henry died in the south of France; his body was embalmed and buried beside his wife's at Sherborne, Dorset.
21. Mr John Johnson of Cobham, who at that time lived in the nearby Chatley Heath semaphore tower, a relic of the Napoleonic Wars now restored and open to the public. I am indebted to him for this story, and to his son Graham for the description of the crypt, where in the 1960s he and his young friends used to play, gaining entrance by way of the broken window.
22. J.S. Curl, *A Celebration of Death*, (1980).

THE START OF THE SALVATION ARMY IN CROYDON: WILLIAM BOOTH AND THE CHRISTIAN MISSION

Rev. Dr. J.N. Morris

The Salvation Army was one of the most distinctive religious organisations to emerge from that ferment of religious innovation and controversy, the Victorian age: its blend of orthodox evangelicalism and open-air missionary activity with a quasi-military structure at once set it apart from most other churches and denominations and provided it with a pattern of organisation and tradition which have helped it to survive relatively unscathed in the late twentieth century. Its interest from an early stage in welfare work and its growth to an international movement are widely known; less well-known, however, are the early vicissitudes of the movement before it became properly established as the 'Salvation Army' in the late 1870s, and in particular the importance Croydon played in the efforts to establish the 'Christian Mission', as it was then called, outside London. William Booth's missionary activity in the 1860s was largely concentrated in the East End; Croydon was the first mission station he established on something like permanent lines outside Central London. Its appearance in the late 1860s and survival through the 1870s thus provide an interesting commentary on what could be described as the 'pre-history' of the Salvation Army.

In the official biographies and histories of the Army the importance of the East London Christian Mission was very much played down, the authors naturally being inclined to concentrate instead on the subsequent success of Booth's organisation from the early 1880s on. Booth-Tucker's early *Life of Catherine Booth* (1893) contained no more than a handful of references to the Booths' work in Croydon. Harold Begbie's *Life of William Booth* (1926), the first full biography, devoted little space to the Christian Mission in East London and made no reference to Croydon at all. St. John Ervine, in *God's Soldier* (1934), paid a little attention to the establishment of Christian Missions outside London, but his perspective was summed up in his assertion that "the history of the East London Mission can be told only in a sketchy form. . . . It can be called a failure, but only in the sense in which Faraday's first experiments were failures".[1] The first volume of Robert Sandall's official history, which appeared in 1947, partially redressed the balance by concentrating entirely on the Christian Mission years; even so, the references to the Croydon Station were slight.[2]

This neglect is a little puzzling, because the early years of the Christian Mission in Croydon are well documented, at least in comparison with the available material for many other Victorian churches and chapels. Aside from

the works to which I have already referred, there are four principal types of surviving source material. First, and most importantly, minutes of the early Elders' Meetings have survived intact at the Salvation Army archive in Judd Street, London, covering October 1869 to November 1871, the crucial years of the station's foundation and early growth. These minutes present a detailed picture of the mission's organisation, leadership and activities in this period. Second, also at Judd Street, is a copy of the original prospectus and subscription list of the appeal for the permanent mission hall, the station built in Tamworth Road in 1872-73; this is a valuable document, as it contains a brief history of the station and, of course, the names of those who donated money towards the construction of the hall. Third, there are frequent reports on the work of the station in Booth's *Christian Mission Magazine*, published monthly from October 1868 and bound into annual volumes from December 1869. These concentrate on conversion stories and general summaries, and do not add much significant detail to the sources already mentioned; however they do convey something of the atmosphere of the mission meetings and give an insight into the theology of Booth and his followers. Finally, and much less reliably, these sources can be supplemented on occasions by reports in the local newspapers, principally the *Croydon Chronicle* and the *Croydon Advertiser*, both of which were in production before the Booths carried out their first missionary activity in the town in the late spring of 1869.

Most of these sources either come to an end or cease to be useful after the years 1872-73, though we know from street directories and other sources that the Mission Hall in Tamworth Road continued to be used as such by the Christian Mission until around 1879, when it was renamed as the Salvation Army Barracks.[3] The completeness of the early documentary material means that it is possible to construct a fairly detailed account of how the mission station came to be formed and how it was run in those early years. It also means that it is possible to throw some light on the Booths' evangelistic methods, on the problems the missionaries faced and on the solutions they adopted in an effort to overcome these difficulties. One further, interesting, consequence is that it is also possible to examine to some extent popular reactions to the Christian Missionaries, and to attempt to gauge the reasons why Booth's organisation failed to make much headway in the 1860s and 1870s.

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The Booths' connections with Croydon began in the spring of 1869 when Mrs. Booth conducted a three-months-long campaign of services and meetings at the Public Halls in George Street, culminating in a public tea meeting presided over by William Booth himself on 29th. June.[4] How many people attended these meetings is hard to say; they were not reported in the local press, and contemporary Christian Mission sources give no indication of numbers.[5] The impetus for them presumably came from the residence in Croydon of a number of followers of Booth, two of whom (Ivo Cobet and Henry Holme) subsequently became instrumental in the establishment of the mission station. These Croydon friends of Booth "had long felt concerned for the spiritual destitution of the poor and working classes of Croydon . . .", and asked him to take in hand in Croydon work similar to that which he had already begun in the East End.[6] He agreed to do so on condition that any expenses for hire of rooms were covered by the Croydon followers themselves.

Booth's Croydon supporters first engaged the Workman's Hall in Church Road for Sunday services, and this remained their base for the next three years. Evening meetings during the week were held at a Mission Room in Old Town which "some kind friends" let for use free of charge.[7] The Mission certainly had modest beginnings: the Christian Mission Magazine refers to some six to seven hundred people being approached in the first week after Mrs. Booth's services had finished, of whom only eight decided to join.[8] Yet the immediacy of the impact these services had upon some people is attested in the same issue's quotation of an account by Sister Coates of her preaching at Croydon on 11th. and 12th. July 1869:

> "After the benediction had been pronounced in the morning, and while the congregation were slowly retiring, a man broke out in prayer and praise, and in the fulness [sic] of his heart cried out, 'Now I know my sins are forgiven'. He had been coming to the meetings, and had obtained a blessed sense of sins forgiven during the sermon".[9]

The following edition of the magazine gives some idea of the rapid, early growth of the mission, for by September of the same year it was undertaking open-air preaching and holding meetings for up to five hundred people at a time in the Workman's Hall.[10] According to Robert Sandall, at first all the preachers were supplied from East London, until in January 1870 Alexander Ritchie was appointed as the station's first residential superintendent.[11] The first Elders' meeting was held on 26th. September 1869, with William Booth in the chair and seven other brethren present.[12] Around that time it is likely that Brother Brewin was appointed Treasurer and Brother Ivo Cobet Secretary by Booth himself, as there appear to have been no elections for these posts.[13] Something of the purpose of the Mission, and an idea of the social classes at whom it was aimed, can be gleaned from the prospectus for the new Gospel Hall in Tamworth Road:

> "This Mission is entirely unsectarian, it seeks to reach a class not yet influenced by any existing Christian efforts ... This is essentially a poor man's Mission".[14]

Three simple rules adopted at one of the early Elders' meetings indicate the evangelicalism of the mission, and the way in which it was careful not to undermine the work of other evangelical churches in the area: first, no one could become a full class member unless they could give adequate evidence of being 'really born again'; second, no one could become a full class member without first being on probation for three months; and finally, anyone coming from another church would have to give satisfactory reasons for leaving that church before they could be admitted as a class member.[15] The week-by-week management was in the hands of the meetings of the Elders; how the Elders were appointed at first is unclear, though it is likely that William Booth himself nominated many of them.[16] There were never more than about a dozen of them, most of whom had specific offices in the station, and all of them were 'Leaders of Believers Meetings'.[17] Nominally in control was the Superintendent, directly appointed by Booth: he was a paid, full-time preacher, and much of the burden of daily organisation fell upon him. In the early years superintendents did not stay long at Croydon before being moved elsewhere by Booth: Brother Ritchie, the first, stayed only for eight months before being replaced by Brother Tidman; Tidman himself stayed only until April 1871, and then was temporarily replaced by Brother Lamb.[18] Lamb appears to have disappeared from the scene within two months, there being no references in the Minutes to him after 24th. June

1871.[19] In July 1871 John Allen was appointed, remaining there until some time in 1873.[20]

How important these superintendents really were is difficult to determine, given the tight control William Booth himself exercised over the Croydon mission throughout its history. Although the station was intended to be self-financing, it was self-governing only in the more trivial details of its management: in all major matters affecting it Booth's voice was paramount. We have already seen how he retained control of key appointments, including in all likelihood at least the first group of Elders of the station. He chaired particularly important meetings of the Elders - in October 1870, for example, to discuss the formation of a Building Committee and to announce that the Christian Mission would in future be organised into circuits, with each station drawing up its own schedule (or 'plan') of preachers, and again in September 1871 to discuss financial arrangements in connection with the procurement of a new site in Tamworth Road.[21] His approval was deemed to be necessary for major financial decisions taken by the station, including an increase in the superintendent's pay and the launching of an appeal to raise funds for the station.[22] He directed the external affairs of the station, and advised the Elders on whether or not legal action should be pursued against people disrupting the station's services and meetings.[23] His authority was neatly illustrated in August 1871 when the Elders felt they did not have the power to determine whether or not they could proceed with the purchase of a site for a new hall, and "agreed to lay the matter immediately before Mr. Booth".[24]

One of the major preoccupations in these early years was the search for suitable accommodation. The Workman's Hall had a number of disadvantages: it was rented and not owned by the Mission, and so they had only limited control over it; it could not be secured on a permanent basis; and it was relatively expensive, at least compared with the slender financial resources of Booth's followers. The Hall initially could be engaged only for six months at a time, at a rental of fifteen shillings per Sunday in the winter of 1869.[25] Already in December of the same year there were ominous signs in the reluctance of the landlord to grant a longer term.[26] A further six months' tenure was secured in April 1870.[27] Some increased security was obtained in September when a twelve-month lease was negotiated: possibly the landlord may have realised how dependent the Mission was upon his premises, for he now refused to let them for a shorter period.[28] Impatience with this arrangement had already prompted the Mission to look at the possibility of acquiring an iron chapel in Cross Road (subsequently used by the Primitive Methodists) and another one in Wellesley Road, both of which initiatives came to nothing.[29]

The search for accommodation intensified towards the end of 1870, without much success. In October the Elders admitted, in a general discussion, 'the expediency of having a place for our own'.[30] Subsequently however they rejected as unsuitable a site offered to them in Church Road.[31] No firm prospect of a suitable site had materialised six months later.[32] Then events began to move rather more quickly: a Mr. Richardson offered a location in Tamworth Road, and after seven weeks of negotiation the Elders secured what they considered to be favourable terms: a ground rent of £ 60 per annum, and a lump sum of £ 50 (paid in three instalments) to buy out the sitting tenant.[33] Booth's sanction in principle had already been obtained; he was appointed as General Superintendent of the Building Fund established, with a managing committee, at a

meeting he chaired in August.[34] Thereafter fund-raising, and not the search for a site, seems to have become the brake on the building programme: to cover the acquisition of the land and the cost of construction a total of around £ 725 was required, a sum which strained the resources of the Mission to the full.[35] The Prospectus asserted that the 'poor man's Mission' had done its best 'at considerable sacrifice', and as the attached subscription list, which itemised receipts and promises totalling £ 604, indicated that fifteen donors alone of ten pounds or more contributed £ 304 (at least £ 80 of which came from wealthy Croydon residents who were not themselves members), the average donation from the remaining 211 donors was no more than about £ 1 10s. each.[36] According to the local press, the fund was assisted by a series of special services at the Public Halls, led by Mrs. Booth.[37] In fact it seems these raised only £ 3 9s. 3d.[38] Without a number of wealthy individual subscribers, then, the new hall probably could never have been built, yet the large number of small, individual donors illustrates both the poverty of most of the Mission's supporters and the strength of their attachment to the station. Work began in October 1872, over a year after the decision to acquire the site.[39] The ceremony of laying the foundation stone took place on 8th. October.[40] It took a further year to wipe out the remaining debt on the building fund.[41] Gospel Hall was a modest, brick-built chapel in classical Nonconformist tabernacle style, a rectangular building with a triangular portico above the entrance.

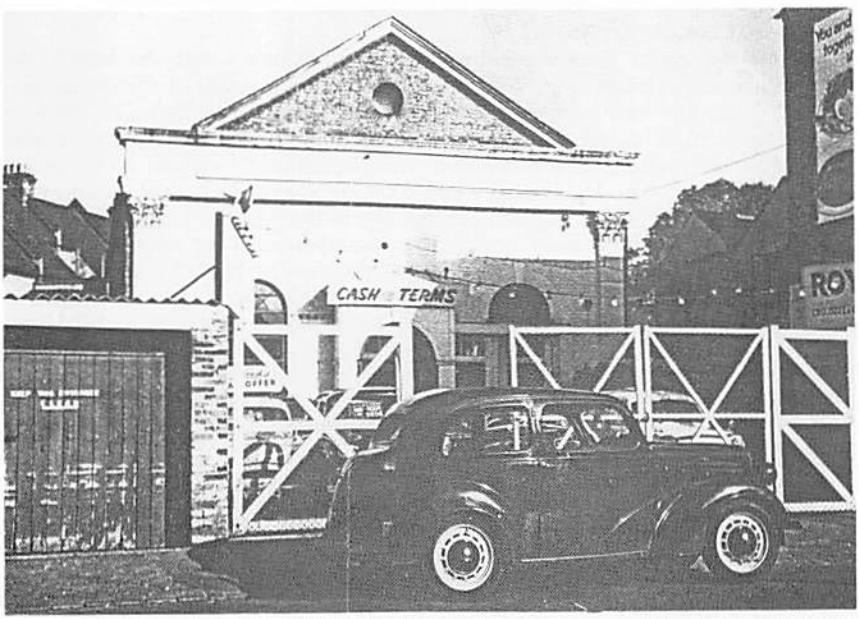


Fig. 1. The Gospel Hall in 1959, when it was a car showroom. *(Courtesy of Croydon Local Studies Library).*

If the Minutes of the Elders' meetings and other records chart the construction of Gospel Hall particularly clearly, nevertheless they also serve to

illustrate the rapid development of the Mission's other activities. Worship was not restricted to indoor premises, for open-air preaching was a vital part of William Booth's overall approach to evangelism: this was an 'aggressive' one, deliberately aimed at seizing the attention of the poor in lower-class areas in and around the centre of Croydon by singing hymns in groups, marching, and addressing the crowds which invariably assembled around the missionaries. Open-air work seems to have been undertaken in two areas in the main: the decaying, central market area, including streets such as Surrey Street, Crown Hill and Church Street, and Duppas Hill, a large recreation ground south-west of the town's centre.[42] A variety of different meetings and services were provided at the Workman's Hall and subsequently at Gospel Hall. Prayer meetings and 'experience meetings' (where missionaries could describe their own conversion experiences, and where conversions frequently took place) were held from the very beginning.[43] Temperance meetings were being held by September 1870.[44] Early the following year a children's class was organised.[45] Other special services and meetings were also organised from time to time: in August 1870, for example, a tea meeting was held to raise funds for the station;[46] and from May of that year Wednesday evening services were held to attract shopworkers released from work by early closing.[47] In this way Croydon station developed the full range of evangelistic meetings, matching the provision made at other chapels and churches in the area. Croydon also served as a base for further expansion of Booth's organisation, though at this stage with limited success: meetings were begun successively at South Croydon, Carshalton and Bromley and worked from Croydon, but all these proved to be short-lived ventures.[48]

* * * * *

Despite all that has been described so far, the early history of the Christian Mission in Croydon was not a catalogue of unqualified success. Three sets of problems in particular seem to have dogged its work: recurring financial shortages, internal divisions, and a fairly continuous level of popular hostility to it. A number of cases of individual deprivation crop up in the minutes, seeming to bear out the frequent assertion that the mission was for the 'poor man'. In February 1871, for example, it was reported that Brother Johnson was 'suffering from great want', and a collection was taken for him.[49] It is impossible, however, to be sure how typical such cases were of the membership as a whole. The financial problems of the station were, in general, collective rather than individual; they were caused by the relatively high outgoings of the rent of the Workman's Hall, and by the difficulties of raising adequate income. On at least thirteen occasions from October 1869 to November 1871 the Treasurer reported anxieties over the low state of the finances. In June 1870 this problem was "laid before the Lord in prayer", and it was disclosed that the station could not yet raise almost half of the quarterly rental for the hall.[50] The extra money was eventually found, but by September the station was seeking to reduce its expenditure by discharging extra mission workers engaged from London.[51] In October they were again short of rent, and examining ways of raising further money by means of special services and the wider distribution of collecting boxes.[52] These difficulties continued throughout 1871, apparently without resolution; they provided a firm incentive for the station to obtain premises of its own, and were probably responsible in part for the relatively short stay of superintendents: Brother Tidman, for example, was moved by Booth to

Limehouse Christian Mission in April 1871 because the Croydon station was unable to afford his salary.[53]

The financial problems of the station were surely not improved by the extraordinary rancour amongst members which seemed to beset it in these years. As the *Christian Mission Magazine* itself put it in August 1871:

> "Here [in Croydon], for some time now, there has existed a division of feeling and opinion which has greatly retarded the work; indeed, for several months, the congregation, society, and contributions have all gone back together. How sad this has been!" [54]

The minutes record frequent complaints of arguments and disunity in 1870 and 1871, but are circumspect about the real causes of these divisions. Brother Ritchie, the first superintendent, seems to have been objected to by a number of the brethren, especially one Brother Franklin, an Elder, and this was cited as a possible cause of his leaving the station.[55] Franklin's behaviour was discussed at a long meeting in September 1870 and resulted in his voluntary withdrawal from missionary work for three months.[56] In November a dispute between two of the Elders led one, Brother Hart, to withdraw from his preaching engagements as he felt "he could not count upon the sympathy of Brother Mitchell"; the meeting expressed regret "at the frequency of such differences among members of the Mission".[57] Another source of complaint appears to have been the excessive noise and indiscipline of some of the Mission's members during meetings: this was reported on several occasions, and led to a rebuke of Brother Franklin and Sister Asher for 'scoffing and ridiculing' during a prayer meeting.[58] Brother Franklin was shortly thereafter expelled from the station.[59] However by August the same complaints about noisy meetings were being aired once again.[60]

Continuing financial shortages and internal quarrels undoubtedly undermined the work, but it is difficult to assess the real impact of popular hostility to the Christian Mission. It may have isolated the missionaries and discouraged some people from joining, but there is no evidence to support this contention, and it is possible that popular persecution only served to reinforce the resolution of the missionaries, both by enhancing their own sense of the rightness of their actions and by convincing them of the depth of the spiritual and moral needs of the population around them. One report of a mobbing of an open-air service concluded " . . . the mob say they will rout us; but we are determined to go forward by God's help".[61] Disruption of open-air meetings, and even of some indoor meetings, was frequent and of a piece with the treatment the Primitive Methodists received for their open-air work and with the experience of the Salvation Army in the 1880s and the Total Abstinence Vigilantes in the 1890s.[62] The strength of this hostility prompted the mission to consider legal action against selected individuals on a number of occasions.[63] The form it took usually involved shouting speakers down, jostling them and their followers, breaking up assemblies of missionaries, and sometimes pelting them with vegetables. In February 1870 the *Croydon Chronicle* reported a typical instance in which a crowd assembled at the corner of Surrey Street and Church Street to ridicule a group of Christian Missionaries who were singing hymns; the crowd sang snatches of popular songs to drown them out, and then shouted 'Mockery', 'Lock him up' and such like when the preacher, one Hugh Martin, refused to be moved on by the police and retorted: "I shall not - the Lamb of God has sent me into the highways to preach and I shall do so"; some of the crowd even threw stones.[64] Mobbings like this actually received some support from the law; in this

instance it was Martin himself who was fined for obstructing the thoroughfare, not the members of the crowd, and the presiding magistrate made it plain that he did not welcome open-air services in Croydon if they led to this kind of disturbance.[65]

Fig. 2. William Booth in 1862. *(Courtesy of the International Heritage of the Salvation Army).*

William Booth's efforts to extend the work of the East London Christian Mission to Croydon and surrounding areas of Surrey were repeated elsewhere in the south-east, including Brighton and Hastings, and his and his wife's active involvement in the establishment of the mission stations was facilitated by the cheap, fast transport provided by the railways. The Brighton station seceded in 1870, but Croydon's survival served to give Booth's followers a stable base in South London from which to expand the operations of what came to be known as the Salvation Army in the late 1870s and early 1880s.[66] It thus had a pivotal role in the growth of the Salvation Army outside Central London.

It needs to be emphasized, though, that Croydon remained a very small outpost of Booth's work throughout the 1870s. Some possible reasons for this have already been discussed: undoubtedly the Mission was not an affluent one and its recurrent financial problems certainly restricted its scope. It is an interesting reflection that the mission was in effect driven into building a chapel of its own by its difficulties in meeting the rent on the Workman's Hall: at £ 725, the cost of building Gospel Hall represented about seven years' rent, so the

exceptional effort required to raise funds for it was worthwhile. This puts into context the assertion of some historians that the Victorians invested too readily in building churches and chapels, in other words permanent 'plant'; in practice for groups like the Christian Missionaries it often made sound economic sense. Internal divisions weakened Croydon mission further. Popular hostility to it may provide a clue to the station's early stasis, but it is equally possible that a more fundamental reason was simply that, in towns such as Croydon, Booth's organisation at this period simply was not sufficiently distinguished from other Protestant evangelistic agencies to attract a large number of followers. The London City Mission were, after all, very active in Croydon in the 1860s, as were the Primitive Methodists, and they both employed very similar techniques to those of Booth, aimed at attracting the same social classes, and had a similar theological perspective. It was the adoption of a unique organisation, uniform, culture and image, modelled on military lines, which gave the Salvation Army the distinctiveness which proved, in time, to be so attractive to so many.

Gospel Hall still survives today, marooned by modern road development. In 1887 the Salvation Army moved from there to a new Citadel built on a site in Elis David Road; the old building, sold off, had a chequered history as a cinema and car repair shop, amongst other uses. Hopes that it could be restored as a museum for the Army have foundered on the high estimated cost, and its future remains uncertain.

NOTES

I would like to record my gratitude to Mr. Gordon Taylor and Major Jenty Fairbank of the International Heritage Centre of the Salvation Army for making available to me records at the Judd Street archive, and to the late Mr. Albert Ashmore for the loan of his copies of Croydon sources for the Salvation Army; needless to say, the views expressed in this article are entirely those of the author.

1. St. John Ervine, *God's Soldier: General William Booth*, London, (1904), p. 323.
2. R. Sandall, *The History of the Salvation Army. Vol. 1. 1865-1878*, London, (1947); Croydon material is chiefly on pages 131-132.
3. I have found no references to the Christian Mission in the *Croydon Chronicle* and *Croydon Advertiser* between 9th. August 1873 and 5th. April 1879; Sandall refers to the continuing use of the Tamworth Road Mission Hall throughout the 1870s in *op. cit.*, p. 132.
4. Prospectus and Subscription List of the Croydon Branch of the Christian Mission (hereafter, Prospectus), p. 1; Sandall, *op. cit.*, p. 131.
5. Booth-Tucker did go so far as to say "The visible results of the Croydon meetings, in the number of penitents seeking mercy, were not such as to satisfy Mrs. Booth"; F. de L. Booth-Tucker, *The Life of Catherine Booth* (c. 1893), vol. 2, p. 1.
6. Prospectus, p. 2.
7. *Ibid.*
8. *The Christian Mission Magazine*, Vol. 1 (August 1869), p. 172.
9. *Ibid.*
10. *The Christian Mission Magazine*, (September 1869), p. 190.
11. Sandall, p. 132.
12. Minutes of the Elders' Meetings (hereafter, Minutes), 26th. September 1869.
13. Minutes, *passim*; Brewin was subsequently replaced as Treasurer by N.J. Powell.
14. Prospectus, pp. 2-3.

15. Minutes, 23rd. October 1869.
16. At least one, however, was elected at an Elders' meeting: Minutes, 15th. January 1870.
17. See especially Minutes, 4th. February 1871.
18. Minutes, *passim.*
19. Minutes, *passim.*
20. Sandall, *op. cit.*, p. 132.
21. Minutes, 22nd. October 1870 and 23rd. September 1871.
22. Minutes, 21st. January 1870.
23. Minutes, 30th. July 1870.
24. Minutes, 5th. August 1871,
25. Minutes, 13th. October 1869.
26. Minutes, 5th. December 1869.
27. Minutes, 9th. April 1870; this was at an annual rental of £ 52 10s.
28. Minutes, 24th. September 1870.
29. Minutes, references for 16th. and 19th. November 1869, 5th. December 1869 and 9th. April 1870.
30. Minutes, 22nd. October 1870.
31. Minutes, 29th. October 1870.
32. Minutes, 27th. May 1871.
33. Minutes, references for 22nd. July, 5th. and 12th. August, and 15th. September 1871.
34. Minutes, 12th. August 1871.
35. Prospectus, pp. 4-8; a total of £ 604 had been raised already and around £ 120 more was needed to enable Gospel Hall to be free of debt.
36. *Ibid.*
37. *Croydon Chronicle*, 6th. July 1872.
38. Prospectus, p. 6.
39. *Croydon Chronicle*, 5th. October 1872.
40. *Croydon Advertiser*, 12th. October 1872.
41. *Croydon Chronicle*, 9th. August 1873.
42. *Croydon Chronicle*, 26th. February 1870; Minutes, 30th. July 1870.
43. See, for example, a vivid description of one such meeting in the *Christian Mission Magazine*, Vol. 1. (September 1869), p. 190.
44. Minutes, 24th. September 1870.
45. Minutes, 13th. May 1871.
46. Minutes, 2nd. and 9th. July 1870.
47. Minutes, 21st. May 1870.
48. Minutes, references throughout 1870 and 1871, but particularly 10th. September and 29th. October 1870, and 4th. March and 27th. May 1871.
49. Minutes, 18th. February 1871.
50. Minutes, 4th. and 18th. June 1870.
51. Minutes, 10th. September 1870.
52. Minutes, 22nd. October 1870.
53. Minutes, 1st. April 1871.
54. *The Christian Mission Magazine*, Vol. 3. (August 1871), p. 122.
55. Minutes, 13th. August 1870.
56. Minutes, 10th. September 1870.
57. Minutes, 26th. November 1870.
58. Minutes, 18th. February 1871.
59. Minutes, 4th. March 1871.
60. Minutes, 25th. August 1871.
61. *The Christian Mission Magazine*, Vol. 4. (March 1872), p. 46.
62. J.N. Morris, 'A Disappearing Crowd? Collective Action in Late Nineteenth Century Croydon', *Southern History*, vol. 11,(1989), p. 90.
63. Minutes, see especially 13th. August and 10th. September 1870.
64. *Croydon Chronicle*, 26th. February 1870.
65. *Ibid.*
66. Sandall, *op. cit.*, p. 132.

A VERTICALLY SLIDING PARTITION

John Day
Dorking Local History Group

When the eminent Quaker Preacher Joseph John Gurney visited Dorking in 1825, so great was the desire to hear him preach that additional accommodation was provided in the domestic quarters of the 1709 Meeting House. Unfortunately, the floor was not up to the loading and some sixty people suddenly found themselves in the domestic cellar. Happily there was no serious injury, but the event may have had some bearing on the Monthly Meeting Record of May 1845 that reads: "in consequence of the want of accommodation in the Meeting House at Dorking" it was decided to appoint a committee to look into the matter. The following month it was agreed to build a new Meeting House on a "more eligible site", at Rose Hill, which was for sale and to dispose of the old Meeting House. Subsequently, the plans were agreed and a contract signed for £ 842 - 15s. - 0d.

The new Meeting House was opened for Worship on August 16th. 1846. The total expenditure was then £ 985 and £ 826 was in hand. The old Meeting House was let as a schoolroom for £ 10 a year. Plans for a cottage to cost £ 168 were also agreed. In 1851, the old Meeting House was sold for £ 420, the land on which the new Meeting House stood was paid for and the total cost of the enterprise was given as £ 1541 which included £ 300 for the land. The building has a vertically sliding partition which divides the Meeting space in into two rooms, one being approximately twice the size of the other. This division comprises two wooden panels, each 24ft. wide (the width of the room), the lower (1)* being 6ft. 8in. and the upper (2) 7ft. 6in. high, both being 5in. thick. The panels are guided in wooden channels (3) in the walls by 1in.-wide rollers (4) recessed into their faces. Communication between the two rooms, when the partition is shut, is by back-to-back doors (5) in the centre of the lower partition, the doors being such that both need to be opened from their own side for access. The partitions can be separated vertically by a system of chains (6) that simultaneously lift the upper section and allow the lower section to disappear into a brick-lined pit (7) 3ft. 2in. wide. The 7in. gap in the floor is then covered with three planks laid longitudinally. To allow the lower section to be raised, it has a vertical post (8) under it's centre, going down into a hole (9) in the floor of the pit, to which one end of a chain is fixed. The chain passes round pulleys (10) to one of a pair of geared drums (11) in a cupboard outside the hall. The drums are rotated by a hand crank to raise or lower the two sections that are interconnected by another chain system (12). This system, together with lead weights on the top of the upper section, allows the two to counter balance each other, such that the whole works very smoothly with very little effort.

* Numbers in brackets refer to the diagram of Fig. 1.

It is reputed that there is only one other vertically sliding partition system in the country, somewhere in the north. The interesting question is how was this system built ? Was the building put round after it was in place, or were the panels lowered in from the top before the roof was put on, remembering that the partitions slide in 'U'-section channels in the walls ? Any information on similar systems wouild be appreciated.

Sources

William C. Stewart, *Notes on the History of Dorking Meeting*, (1946).
Personal measurement during restoration.

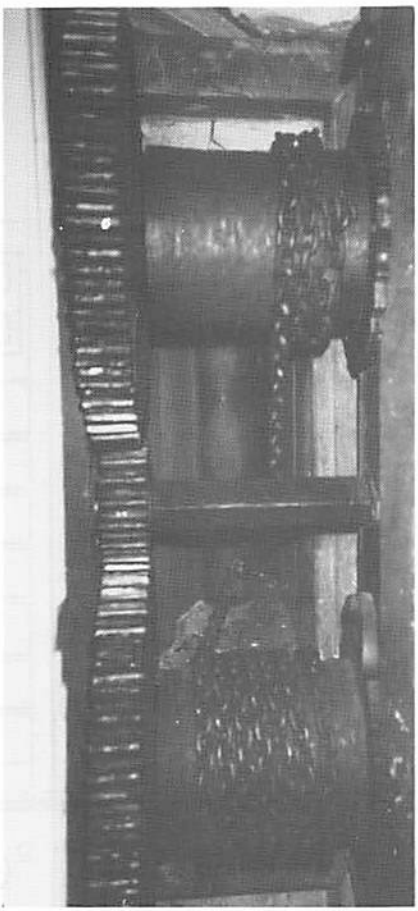


Fig. 2. The Winding Mechanism.

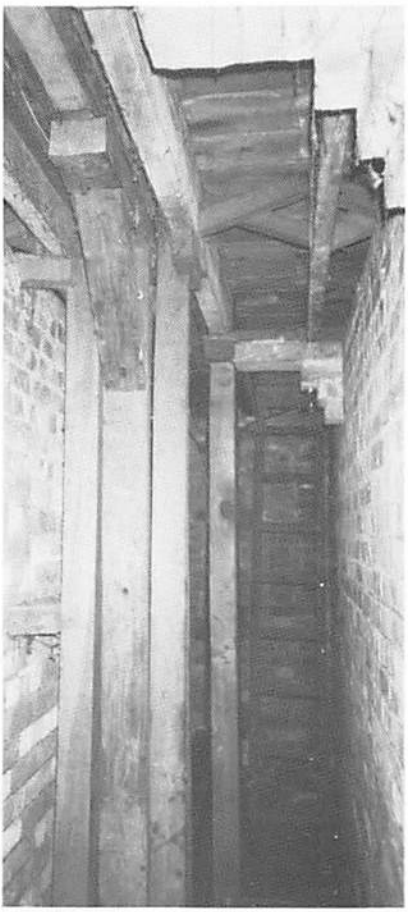
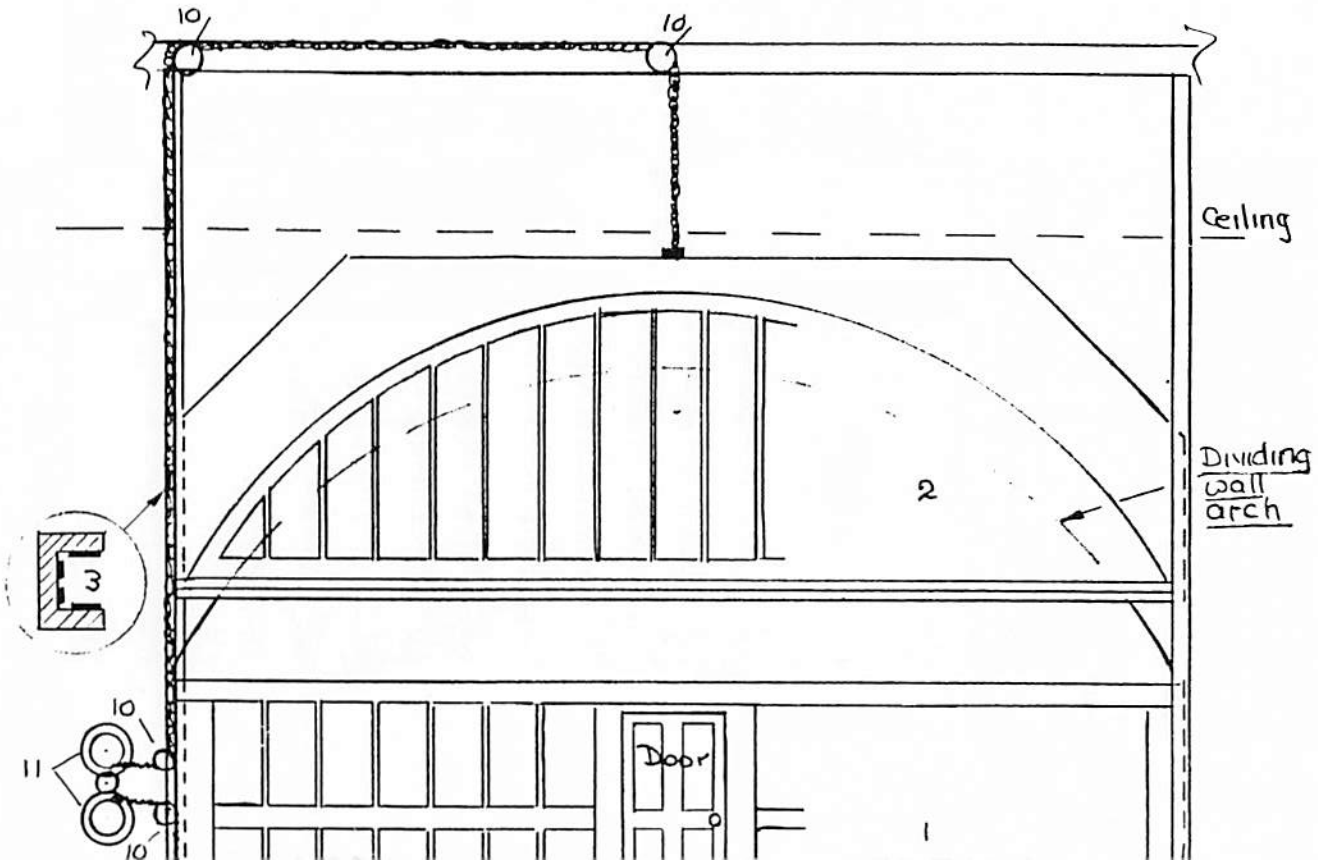


Fig. 3. The Pit showing the access ladder, the supports for the floor and the centre post under the lower partition.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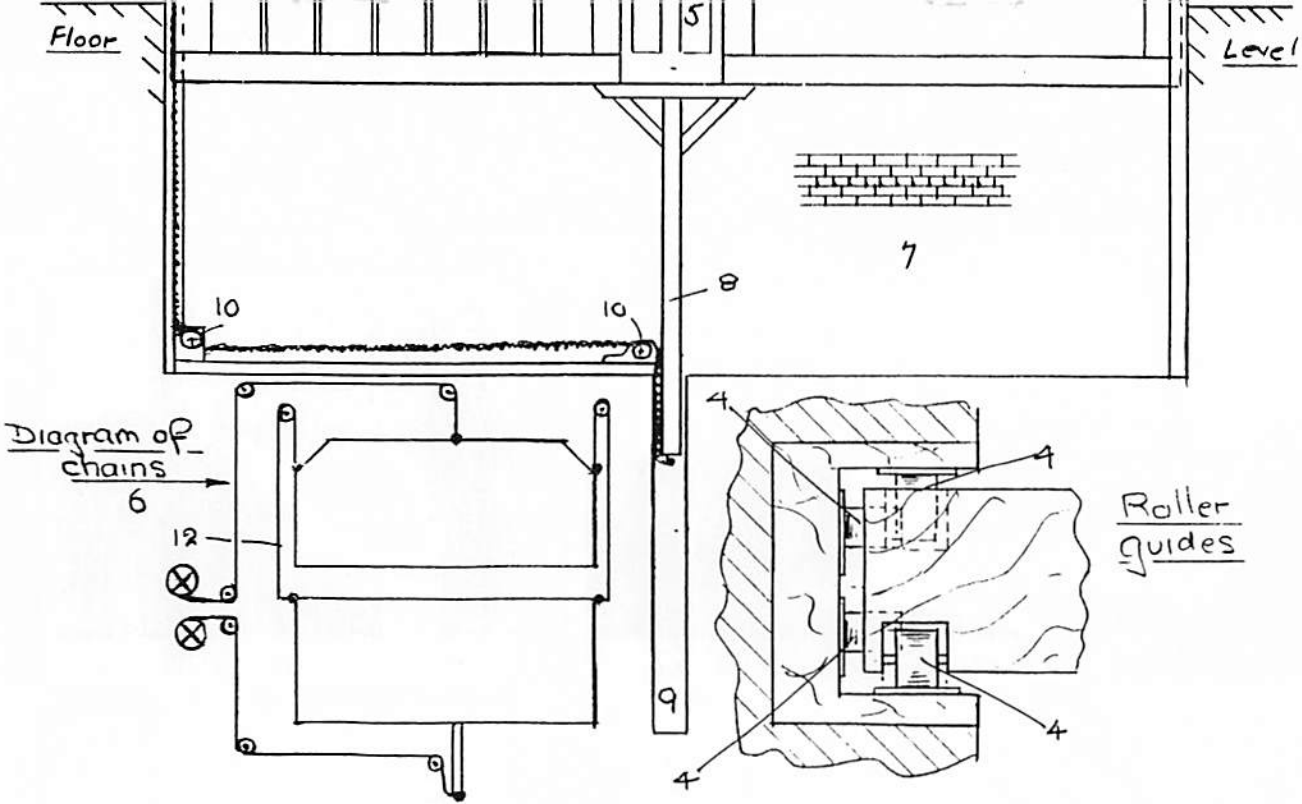


Fig. 1. The Quaker Meeting House at Dorking - Diagram of Operating Mechanism for the Vertically Sliding Partition. See the text of p. 94 for a key to the numbers.

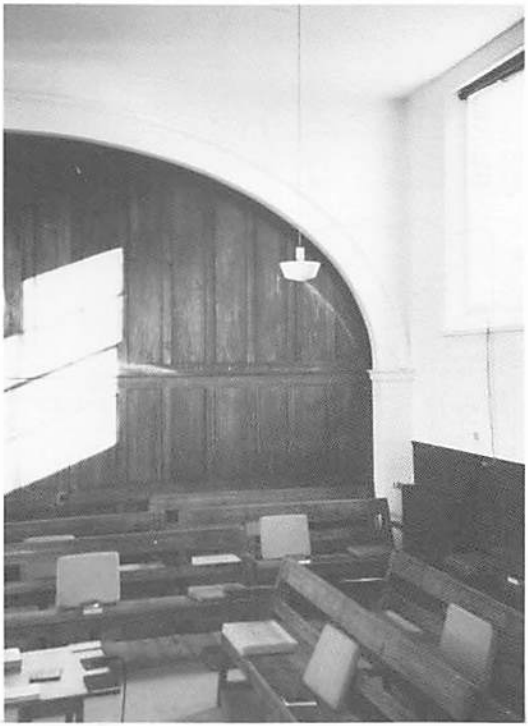


Fig. 4. Dorking Quaker Meeting House, interior of larger meeting room.

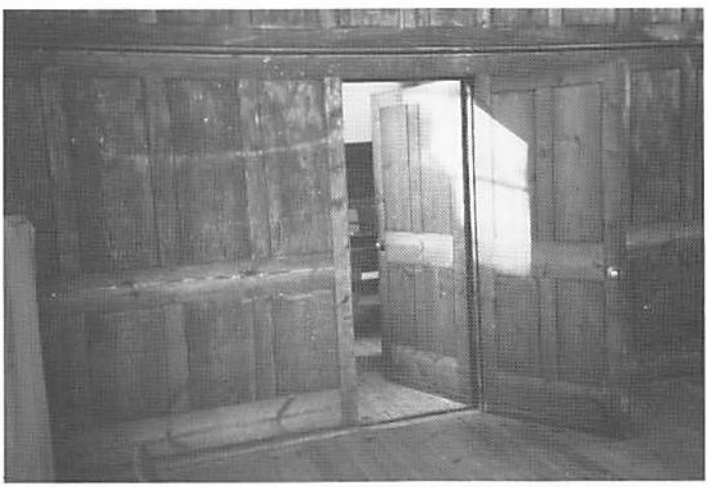


Fig. 5. Dorking Quaker Meeting House. Double doors through the lower partition.

SHALFORD AND THE SPITFIRE - THE STORY OF THE FIBRE JETTISON FUEL TANK

D.F. Brown

Introduction

Alfred Filmer Jacobs was born on the 14th. February 1895, the youngest son in a family of seven. His father, George James Jacobs was a well known merchant in Guildford, Surrey, whose coach-building firm, May and Jacobs Ltd., with premises in the High Street, made carriages for many titled families including Ernest, Duke of Sax-Coburg-Gotha, brother of Prince Albert, for whom they were 'appointed carriage-makers'. Filmer, as he was invariably called by family and friends, was educated at Bradfield College, Berkshire. He was then articled to P.C. Cleasby, an engineer of distinction, at the Works of the Guildford Gas, Light and Coke Co., where, he always claimed, he developed his talent for practical engineering because the Gas Works employed 'all the trades'. He also attended evening classes at the London Polytechnic leading to his Membership of the Institute of Chemical Engineers.

During the First World War he served with The Yorkshire Regiment in France and took part in the Battle of Loos (1915). Having transferred, after sick leave, to the Royal Engineers, he was appointed Workshop Engineer at University College, London, where the R. E. Anti-Gas Establishment was studying the effects of poison gases with the object of improving the design and efficiency of equipment used in the field. It was here that he first became aquainted with vulcanised fibre observing that his identity disc made from this material remained virtually unaffected by the gases. This discovery led to the production of a new type of respirator in which vulcanised fibre was incorporated. Vulcanised fibre was made from specially prepared cotton rag paper which, chemically treated, virtually destroyed the laminae thus forming (layer by layer), sheets of a homogeneous mass of converted cellulose that would not split or separate. The material was one of the most versatile of its day combining mechanical strength with high di-electric insulation properties. It was invented by an Englishman, Thomas Taylor of Middlesex who in 1859 was granted a British Patent, but much of the subsequent development took place in the U.S.A.

In February 1919, Filmer was released from the Army and went to work for the paper makers, James Spicer & Sons, who employed him to start up a small machine shop for them in Tabernacle Street, London E.C. 2, where a variety of component parts were produced from vulcanised fibre sheets supplied by the Diamond Fibre Co., Maidstone, Kent. Following a merger of interests between Spicers and the Diamond State Fibre Co., Bridgeport, U.S.A., and a spell at

Fig. 1. 2nd. Lt. A.F. Jacobs, the Yorkshire Regiment, 1917.

their factory at Stamford Mill, Tottenham, London, Filmer was moved to their Maidstone Mill, where he soon became Works Manager. This was in 1922 when output was only a ton or two a week of vulcanised fibre but by 1926 this had risen to some 20 tons a week and Filmer had become thoroughly versed in the manufacture and sale of the product and had gained wide knowledge of the fibre industry itself. This was about the time that Filmer's thoughts turned to setting up on his own as a manufacturer of vulcanised fibre and, through a chance meeting in 1925 with a Glasgow friend, an interview was arranged with Sir David Russell at that time head of the paper makers Tullis Russell & Co. Ltd., of Markinch, Fife. At this important encounter, Filmer was promised that if he could find a site, instal the machinery and start making fibre - a formidable task - Tullis Russell would supply the required special quality paper (the essential raw material) and some financial backing.

On leave from France in the Autumn of 1915, Filmer had noticed the remains of an old burnt-out brewery on the banks of the river Wey about two miles upstream from Guildford. Located between the river and Shalford Common, in the hamlet of Broadford, beer had formerly been brewed there for a hundred years. This seemed an excellent place at which to begin his enterprise and, with his war gratuity and some help from relatives, Filmer purchased the ruins for £ 3,250. Using material from the necessary demolition and employing only a handful of men, the new Mill, Phoenix-like, rose from the ashes. Great improvisation was needed because funds were so short. Old wine casks served as washing tanks, a second-hand gas engine and dynamo provided light and power; a vertical boiler was found and water, pumped from a well discovered under the main yard, was fed to the boiler and processing plant. Finances would not allow for the purchase of radiators for the drying room, so an old belt-driven fan, found among the debris, was restored for temporary use although, when power from the gas engine was required to drive it, lighting for other work had to be provided by hurricane lamps. At last, the making machine and calender arrived from Bertrams Ltd., Engineers, Millwrights and Ironfounders of Edinburgh and, from a trial reel of paper supplied by Tullis Russell, the first sheet of vulcanised fibre was made. The date was 27th. October

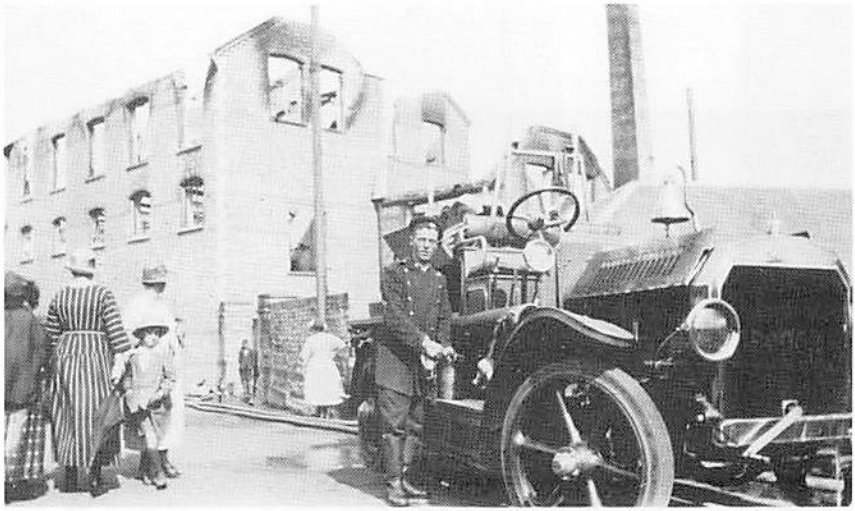


Fig. 2. Broadford Mills, Shalford, after the disastrous fire in 1915.

1927. By the end of that year the company had registered its trade mark and 'Castle' Vulcanised Fibre was on sale. The arrangements with Tullis Russell were to last for the next sixty-five years.

By 1932 the company, having paid off all development expenses, was reported as 'standing on its own feet'. A tube mill had been started to manufacture vulcanised-fibre tubes and already a machine shop was in operation supplying an infinite range of vulcanised-fibre components. The Container Department (the 'Box Shop') started in 1936 and it was this enterprise that was later on to play such an important part in the development of the 'Jettison Tank'. The main mill was now converting Tullis Russell's specially prepared paper into vulcanised fibre at the rate of 500 tons per annum. For the technically minded, standard size sheets for electrical and mechanical purposes were approximately 48 in. wide by 72 in. long. The weight of a sheet $^{1}/_{32}$ in. thick was approximately 5lbs. and for a sheet ½ in. thick it was approximately 80 lbs., according to an early catalogue. The tensile strength is given as 12,000 lbs. per square in. (hereafter lb.p.s.i.), longitudinal, and 8,100 lb.p.s.i, transverse; compressive strength 25,120 lb.p.s.i., perpendicular to the laminations and 9,240 lb.p.s.i., parallel to the laminations; shearing strength, 11,000 lb.p.s.i.

The declaration of war with Germany was announced on 3rd. September 1939 and Filmer at once began the task of re-organising Bradford Mills on a wartime footing with his customary energy. Trenches were dug as a precaution against air raids, a platoon was formed as part of the Surrey Home Guard and, in addition to the Mill Fire Brigade and A.R.P. Wardens, Aircraft Spotters were positioned in an observation post above the works. It was not long before the Air Ministry were making enquiries about the possible use of vulcanised fibre in container form to carry high-octane fuel. Filmer seized the opportunity with both hands; he could provide work for his employees and, at the same time, serve his country once again.

Fig. 3. Aerial View of Broadford Mills, Shalford, in 1932, after the erection of the New Mill, seen in the centre foreground.

The Jettison Tank

The Supermarine Spitfire was originally designed as a short-range home interceptor but, after the British withdrawal from France in 1940, and the loss of R.A.F. bases there, the aircraft was required to fly greater distances and adopt a more offensive role. German pilots had the advantage over British pilots whose Spitfires were stretched to maximum combat range. The Mark V Spitfire was to be increasingly used over France and Belgium for fighter sweeps and bomber escort missions and the need for an additional fuel tank was becoming imperative. Before long negotiations were under way between the Air Ministry and the Company about the production of supplementary fuel tanks for the Spitfire. They were to become known as 'Jettison' or 'Overload' tanks and were to be fitted under the belly of the aircraft in such a way that they could be rejected or jettisoned when empty. Experimental work with a 90-gallon, laminated-wood tank had been carried out at Farnborough which, although unsatisfactory, paved the way for more trials. The investigation had started as early as 1939 and several firms were involved including Boulton Paul (welded steel) and Vickers Armstrong (tinned steel) but the great advantage of vulcanised fibre was its lightness, strength and durability. The material was also impervious to oils and greases and unaffected by ordinary organic solvents.

By July 1940, work had started at Broadford Mills on the vulcanised-fibre tank project and before long a prototype was prepared ready for testing under flying conditions at Boscombe Down. Inevitably problems arose with the early models including a tendency for the tank, when released, to continue travelling ahead in the aircraft's slipstream instead of falling to the ground. Modifications followed but finally an acceptable design was approved. All this involved long hours of development work, many working drawings and the provision of jigs, tools and gauges ready for full production. The first contract for jettison tanks was received from Vickers Armstrong and from then on the closest collaboration was maintained between the two firms.

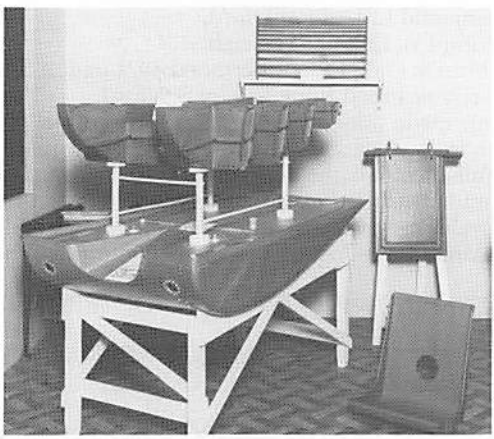


Fig. 4. The Jettison Tank, (and baffle) as featured on the Company's stand at the 1966 Farnborough Air Show, from their war-time production.

In order to minimise drag, the profile of these tanks had to be shaped as an aerofoil to fit neatly under the belly of the aircraft, the forward end being trimmed to the shape of the air-intake nacelle. This represented an unusual challenge for a material as unstable as vulcanised fibre whereas a design in metal would have been far more rigid by its very nature. With technical assistance provided by Vickers Supermarine, Hursley Park, the tank, which held 30 gallons and was approximately 70 inches in length and 30 inches wide, was designed to have three principal components: the Shell, constructed from 2mm-thick fibre sheet; the Chassis or Baffle, made in box-section from over 50 separate pieces of 1·5 mm. fibre, assembled with rivets and glue; and the Top Panel, stiffened with three wooden battens. With so many component parts, great care and accuracy had to be taken to avoid the possibility of any twisting and distortion. To protect the outer surface of the tank from moisture, it was painted with red aircraft dope to be followed by a covering of madapollam, a light cotton material which was stippled on with more dope. At the next stage, the metal hooks of the three-point suspension was fitted. The accuracy with which these were positioned was vital if the tank was to disengage when released and the tolerance allowed in the relationship of these three fittings was only a few thousandths of an inch. The finished fuel tank, having been air-pressure tested, was finally sprayed with cellulose. A high standard of checking and testing was maintained through all stages of production.

With the arrival of the first contract for 600 tanks and growing pressure from the Ministry of Aircraft Production to start, Filmer Jacobs decided to take over the Cranleigh Motor Co. Ltd., where his elder brother Charles[1] was Managing Director and to whom some assembly work was delegated. Realising that much greater manfacturing capacity would be needed than that available at Broadford Mills alone, this move was followed, early in 1942, by a bolder measure - the formation of the Group of Vulcanised Fibre Tank Manufacturers. Most of the twelve firms involved were either known by or were customers of Jacob's firm and included the following from Surrey:

Auchterlonie & Reeves of Cranleigh,
Higlett & Hammond Ltd. of Guildford,
Cranleigh Motor Co. Ltd. of Cranleigh,
Barrow Hepburn & Gale Ltd. of Bermondsey, London S.E. 1.
and, of course, Vulcanised Fibre Ltd. of Shalford.

Two of the firms made miners' safety helmets and three made suitcases and general travelware from vulcanised fibre. All were well known to Filmer Jacobs who must take full credit in the formation of the Group, with all that this entailed, which undoubtedly led to the success of the venture itself.

Meanwhile, morale was given an extra boost by the arrival of a telegram from the Minister for Aircraft Production which was promptly posted on all works' notice boards.

'TO VULCANISED FIBRE LIMITED, BROADFORD MILLS, SHALFORD.
PLEASE DISPLAY THE FOLLOWING MESSAGE PROMINENTLY STOP FROM WASHINGTON JANUARY 1ST 1942 STOP FOR ALL THE LABOUR AND DEVOTION OF 1941 I SEND YOU GRATEFUL THANKS STOP THROUGH YOUR EXERTIONS THE FACTORIES OF BRITAIN HAVE BEEN THE SCENE OF MIGHTY EFFORTS AND FINE ACHIEVEMENTS BUT THE EMERGENCY OF WAR CALLS

FOR IMMENSE ADDITIONAL ENDEAVOURS IN THE NEW YEAR STOP EACH OF YOU HAS A TASK TO PERFORM A PART TO PLAY A RECORD TO SURPASS STOP I AM CONFIDENT THAT IN THE NEW CRISES YOU WILL RESPOND WITH RENEWED DETERMINATION AND UNFALTERING ENERGY REMEMBERING ALWAYS THAT EMERGENCIES MAKE NO APPOINTMENTS WITH LEISURE

BEAVERBROOK.'

The Group Gets Down to Work

The first Group meeting was held at Broadford Mills on 31st. March 1942 and most of the members sent their representatives. The Ministry of Aircraft Production and Vickers Armstrong Ltd. were represented.

At Broadford Mills the Container Department or 'Box Shop' was being rapidly expanded for the assembly of fuel tanks and in order to sustain and, if possible, increase the throughput of vulcanised fibre, two additional Lancashire boilers were purchased for the newly erected Boiler House which, with its new chimney shaft, was to be put into operation with all speed. The steam-raising plant was an essential part of the manufacturing process. During all this activity, on 16th. December 1942, a low-altitude attack was made on the works by a single enemy aircraft but only minor damage was sustained and fortunately there were no casualties.

At that first Group meeting, Filmer Jacobs took the chair and outlined their objective which was, once final approval of prototypes was received, to expand as quickly as possible the output of Jettison Tanks by the combined effort of those firms who were in a position to undertake the work. Vulcanised Fibre Ltd., should be able to produce a minimum of 40 complete tanks each week. Some firms could manufacture complete tanks, others only component parts - this was a matter for discussion. The tank would be made entirely from vulcanised fibre except for the three metal fittings at the attachment points and Vulcanised Fibre Ltd. would be responsible for producing the correct supplies of all the necessary fibre sheets and tubes. There seemed to be no necessity for expensive equipment other than timber jigs. Most members were familiar with cutting, hot bending and rivetting fibre as part of their own trade. Those attending the meeting then visited the works to see an exhibit displaying the method of construction and every stage of production, including a finished tank. On their return, members then discussed the best allocation of output, sub-contracts, costs, plant, drawings, initial deliveries, jigs, tools and gauges. It is remarkable that these various firms were prepared to pool their knowledge and expertise in a way not imaginable in the competitive days of peace-time.

In his book *From a Standing Start* Filmer Jacobs reminisces[1] about this period in the firm's history:-

"In the Mills and Factories at Shalford, Cranleigh and Guildford upwards of 600 persons were employed. The Company was responsible for obtaining, stocking and distributing to each member of the Group, adequate supplies of every part required in the manufacture of their full number of tanks. This was a big task often increased when shortages were hard to overcome. Ultimately some 1300 people were engaged in this war effort and, as no member firm

had previous experience of this kind of work, we had to train a nucleus of personnel for each contractor. This included written instructions for the correct carrying out of every operation. Similar instructions had to be given for the repairing of tanks recovered after use, some of which had fallen into the sea and were in poor shape. Modifications to the aircraft itself gave us some difficulties, because it involved numerous drawings as the tank shape and design were thereby altered, causing technical problems and much re-tooling. In addition, revised instructions had to be passed to each member firm of the Group. To meet this contingency, the drawing office at Shalford was enlarged".

The Group members met again on the 14th. April 1942 at Broadford Mills and the local A.I.D. (Aircraft Inspection) Office was represented. Filmer Jacobs's position as Chairman was confirmed and Mr. Higlett[2] was elected Vice-Chairman. Some time was spent on discussing procedural matters, the issue of materials, conditions and duration of contracts. There was also the question of jigs and Filmer Jacobs hoped that one set of these would be available to each member in seven days; a further 100 sets would be needed by member firms and these were to be provided by Higlett & Hammond Ltd.

Pressure mounted as the Ministry urged deliveries of tanks to commence, but inevitably because this was a new product, delays continued. The following month however brought better news and on 5th. May the Group meeting heard the results of full-scale tests carried out on three tanks by Vickers Armstrong. Modifications to the fittings attaching the tanks to the planes would be necessary and, most importantly, it was decreed that the tanks should be capable of withstanding a minimum pressure of 5lb per square in. The matter was urgent and discussion centred on the possibility of seepage at the points of riveting, which required special care during manufacture, but it was also felt that the decision to coat the tank with fabric would meet the case.

The long awaited approval of the product at last came and on 1st. June 1942 members were told that on the previous day, agreement had been reached with Vickers Armstrong that there were no outstanding design problems. Modifications and improvements would arise periodically but the Group was urged to make concentrated efforts to begin production. The means by which this could be achieved were discussed in detail and as a temporary measure members arranged to deliver partly fabricated tanks to Vulcanised Fibre Ltd., for final assembly until they were ready to produce complete tanks for themselves. The closest co-ordination was needed with situation reports to be made each Monday and a 'tank history card' was introduced so that the progress of every tank could be recorded through each stage of production.

It was several weeks later before the first delivery of tanks took place. Meanwhile technical details were finalised. A further meeting on 22nd. June 1942 centred on the main dimensional tolerances to be adopted throughout group production. Members agreed to work to an overall plus variation of $^1/_8$ in., quite close limits when working in vulcanised fibre, which is a hygroscopic[3] material. The problem of rendering the tanks pressure-tight persisted. More suitable dope or jointing compound was needed and the question had to be addressed urgently. Nevertheless, Filmer Jacobs was able to report that eight tanks were now ready for dispatch, twelve more would be available later in the week and a build-up of twenty per week was now in sight. The Ministry were calling for 80 tanks to be delivered in July, 100 in August and 150 in September.

A contract for a further 4000 had been received making a total of 8000 on order.

Although production was now under way at Broadford Mills, Shalford, remaining members of the Group continued to encounter difficulties. For example, whilst adequate supplies of 2mm. vulcanised fibre were available, there was a shortage of fibre tubing for vent pipes and an alternative acetate product had to be found which could be substituted if necessary. Delays large and small are not uncommon in any enterprise of this kind but it was important not to lose impetus. At a further meeting of the Group on 20th. July 1942, members continued to show reluctance to commit themselves to full production yet as 'teething troubles' with the new product persisted. However it was not all bad news and further steps had been taken to overcome the problem of making tanks technically pressure tight. 'Catacol' [4] had been tried out successfully as an external seal for pin holes.

The Ministry although no doubt pleased with the steady trickle of tanks being received and put into active service, were all the same pressing really hard for bulk supplies. It was, after all, a matter of vital importance. At a Group meeting on 24th. August it was revealed that the Ministry had threatened to invoke the 'break clause' in the contract through lack of deliveries. To their relief, this had been narrowly avoided by Vulcanised Fibre Ltd. submitting for strength and flight trials tanks which had been fully successful. Test tanks subjected to ten-hour flight trials, humidity and various weather conditions had withstood these satisfactorily. A formal letter from the Ministry, approving the tank and stating that tests in flight and under pressure were satisfactory, was tabled. This provided extra impetus to the Group to re-double their efforts. At this stage in order to minimise the main contractors' administrative work, the remaining members were authorised to purchase certain essential materials direct from suppliers. This must have brought some relief to the hard-pressed staff of Vulcanised Fibre Ltd., upon whom responsibility for the entire contract with Vickers Armstrong rested. A nucleus of personnel trained by the Company at each location had to be maintained and detailed instructions and amendments distributed to all sub-contractors.

The Group of tank manufacturers were employing about 1300 people to meet the Ministry's demands and in all this activity Filmer Jacobs continued to play a crucial role . In addition to overcoming technical and organisational problems of the tank emterprise, the strains of life under war-time conditions were being felt: food and petrol rationing, the 'black-out' and long hours of work combined to lower morale. Yet Filmer Jacobs continued to lead the way forward and to set an example of determination which others could follow. With the army training he had received in the previous war clearly in mind, he had established the Company Platoon of the Surrey Home Guard early on in the new conflict and those members of the staff and employees at Broadford Mills who had been recruited into this formation found themselves with added duties to perform. Of this aspect of the Company's effort and with typical under statement, Filmer Jacobs [5] later wrote: "The Works Canteen became the headquarters of our own platoon where, night after night, training was undertaken. Sentry duty continued throughout the night; at 5 am. or half an hour after dawn, whichever came later, the guard would be dismissed but all were expected to be back at work in the Mill by 8 am. Later, the Home Guard and Civil Defence were merged and the establishment was never unguarded".

Fig. 5. Staff at Broadford Mills, 1942. The sixth, seventh and eighth figures from the left in the second row are respectively, S.G. Higlett, Filmer Jacobs and K.W. Mason. The author has deposited a full list of those in the photograph at the Guildford Muniment Room.

Regular meetings of the Group were held at which manufacturing and delivery problems were discussed and resolved. As examples: it was disclosed on 28th. September 1942 that a modification to the tank's trailing edge, which could have involved immense trouble, had been avoided by Vickers Armstrong modifying the aircraft's jettison hooks instead; the method of transporting tanks developed at Broadford Mills to minimise damage in transit was demonstrated and adopted; a shortage of labour, reported by several members, was referred to the Ministry of Labour, Millbank, London for action. Many of the pre-War employees at Broadford Mills had left to join the forces and their places were filled mostly by women, a large number of whom were engaged in the production of components for the jettison tanks and ultimately their assembly. The Company was already producing other items for use in aircraft including First-Aid boxes from their Container Department, which had also supplied fibre trays for distributing food to Londoners sheltering in Underground Stations during enemy air raids, so that the transition to tank production had gone relatively smoothly. The Works became a 'Protected Establishment' and, at the request of H.M. Factory Inspector, the First Aid Room was converted into a clinic with a full-time Nursing Sister in charge.

Shalford was not without air raids and, early in 1942, enemy aircraft dropped parachute flares presumably to identify targets and carried out a bombing raid the following night. Fortunately the bombs fell on the local sewage works, three quarters of a mile from Broadford, without causing casualties. A potentially more serious air attack occurred on Wednesday 16th. December 1942 when several bombs exploded nearby and the Works' siren sounded. It was lunch hour and the canteens were filled to capacity. The spotter for that day reported in the log-book: "Standing up in my post I saw an enemy plane approaching from the S.S.E flyimg very low. At that moment I heard an explosion at an estimated quarter mile distance accompanied by machine-gun and cannon fire. The plane turned towards the Works flying almost directly towards my post. At about 250 yards away and at an altitude estimated at 200 feet, fire was opened from the aircraft apparently directed at a coal barge lying alongside the wharf. The barge was not hit but a fountain of water was thrown up along the middle of the river. Cannon fire was aimed at the new Power House but only slight damage was caused to the roof and tracer bullets passed between me and the chimney shaft. The enemy aircraft proceeded on a northerly course towards St. Catherines; another short burst of machine gun followed but I then lost sight of the plane owing to bad visibility." This provides a graphic description of the incident and again, miraculously, there were no casualties. Whether Broadford Mills was on a German hit-list is not known. The new Power House had been recently built to accommodate two Lancashire Boilers for steam-raising purposes and a tall brick-built chimney shaft erected. Coal for these and the original boilers was purchased 'ex-ship' in the Pool of London, loaded into barges which travelled up the River Wey to Broadford Mills and discharged alongside at Stonebridge Wharf. This procedure had been followed since 1937 when arrangements were first made with the River Wey Navigation Company. A haul of about 30 miles was involved *via* Teddington including 18 locks.

Towards the end of 1942 closer attention was given by the Group to the question of costs and prices and, at a meeting on 9th. November the Chairman indicated that a figure of £ 30 maximum per tank should be aimed at to cover early production, exclusive of free-issue materials. The services of Mr. Walters of

West, Wake, Price & Co. became available to members on financial or accountancy matters. This London firm of accountants had been auditors to Vulcanised Fibre Ltd., since the Company started. The most economical use of vulcanised fibre sheets also came under discussion following complaints from some members that they had not received their full quota and needed still more to fulfil their contracts. Mr. Mason,[6] a senior member of staff at Broadford Mills provided members with details of the cutting sizes best suited for tank construction in order to minimise waste and it is evident that these were adopted henceforth.

Some eight months had elapsed since the Group had first met and although the vulcanised fibre tank project was by now well off the ground and regular deliveries were being made, they were regarded by the Ministry as insufficient to meet the demand. An important meeting of the Group took place on 26th. November 1942 at the Lion Hotel,[7] Guildford. It was attended by Mr. Wilkinson (Assistant Production Manager) and Mr. Guard (Chief Estimator), both from Vickers Armstrong. The former took the chair. The main thrust of the meeting concerned the stepping-up of tank production. Members were told that the present rate of deliveries was inadequate and it was vital to discover how soon their commitments would be honoured. Only 27 tanks a week were being received compared with 400 required. Filmer Jacobs admitted that early optimism, based on the urgent need, had not been fulfilled and initial production difficulties had been greater than anticipated. Resulting from personal contact with each member however, a new schedule had been drawn up which he felt could be achieved and he was able to forecast a steady increase in deliveries to 250-300 tanks per week. It was clear to all that the Ministry of Aircraft Production would again threaten to invoke the break clause in the contract unless this was accomplished. It is evident that this meeting was a critical one and only after the new delivery schedule had been discussed, with each contractor commenting on their proposed commitments, was the Chairman (Mr. Wilkinson) able to give the approval of Vickers Armstrong to the programme.

The question of production costs and accounting was considered at both this meeting and the one that followed on 14th. December. The view taken by Vickers Armstrong expressed by Mr. Wilkinson was that further orders would be available for vulcanised fibre tanks rather than steel or wood, providing they could be produced competitively. Mr. Guard believed that, as output of fibre tanks increased, a reduction in costs would follow. The metal tank was priced at about £ 22 whilst the timber tank was only £ 12 and in his opinion the fibre tank should be under £ 25. Payment for completed work was also discussed. Sub-contractors were now being paid by Vickers Armstrong against invoice; those supplying partly fabricated components needed certification from Vulcanised Fibre Ltd., whereas those supplying complete tanks could invoice direct. Filmer Jacobs had his hands full. He had worked hard to assemble a combined operation of manufacturers and workforce to build fuel tanks for Spitfires; the design of the original sample tank was largely his conception and, against the odds, he had insisted that vulcanised fibre, the idiosyncrasies of which no one knew better, could and would be used to fabricate tanks successfully. Now, at the end of 1942, having overcome so many early frustrations, the Group effort to increase deliveries appeared to falter judging by the critical meeting in November. The momentum seemed to waver and the

prospects, to anyone with less resolve, might have appeared daunting. However Filmer Jacobs was not prepared to contemplate failure and he determined characteristically that 1943 must be a year of expansion.

Success and Termination

The New Year found the Group working flat out to reach set targets. "As the weeks and months went by," wrote Filmer Jacobs,[8] "work continued day and night with the single exception of Christmas Day when a limited staff remained on duty to handle any emergency and to keep the boilers, pumps and essential plant working". As an example of essential plant, the two 90 h.p. slow-speed Ruston Hornsby diesel engines which supplied electricity, ran continuously during the War, stopping only for a few hours every other week-end for normal maintenance. These had been bought by Filmer Jacobs in 1932 for £ 100, when they were already thirty years old, and were removed in 1975 for restoration and a permanent home.

On the lighter side, concert parties were held in the main canteen at Broadford and members of C.E.M.A. (Council for the Encouragement of Music and the Arts) came during lunch breaks to provide additional entertainment. A broadcasting system allowed records to be played to all parts of the works and this also relayed the B.B.C.'s 'Music While You Work' programme.[9] Also a bomber pilot, visiting the factory during convalescence, recounted some of his experiences when flying over enemy targets.

By April 1943 the output of tanks by the Group had reached 250 per week; still short of target, but an immense improvement. Had the warning signs been heeded ? Had production lines settled down and newly acquired skills become routine ? Had Filmer Jacobs been able to infuse more energy and efficiency into the system ? The fact remains that, although the target of 300 tanks per week remained elusive, on the 6th. July 1943 when the following meeting of the Group took place, Mr. Wilkinson for Vickers Armstrong expressed satisfaction at the results. He announced that the current contract for 5000 was to be followed by one for 4000 to cater for a 20-week period at maximum production but achievements would be closely monitored and any shortfall was likely to be covered by a contract with another manufacturer. Spurred on by this carrot-and-stick method, Group output continued to improve and, at a meeting held at the Lion Hotel, Guildford on 8th. December 1943, an average weekly output of 322 was recorded, a total of 11,704 tanks having been despatched to date. The limitation was now related to the amount of fibre that could be processed at Broadford with existing plant, currently 10½ tons a week maximum. The possibility of producing more could not be entertained. Not only would this involve extra plant, and more space and time than was available to build added capacity for making and processing fibre, but there were the financial constraints in finding the large capital outlay.

It was at this stage that some uncertainty about the future demand for the vulcanised fibre tank began to emerge. There were after all fuel tanks being made in other materials and perhaps at lower cost, and the firm's accountant reported that, if new tenders were invited for fibre tanks, prices in excess of £ 18 would not be successful. The Ministry's future policy was unpredictable and with much improving delivery rate perhaps saturation point was about to be

reached. From a strictly commercial angle other customers had to be fostered if, on return to peace time, at least some of the home market would still be there and could be built up while contacts overseas could also be re-established.

Towards the end of 1943, as often happens, just as production of the 30-gallon tank was going well, a new challenge arose. Urgent development work was to be undertaken on a new tank of similar design and construction but with a capacity of 45 gallons. This involved considerable work at Broadford but, to everyone's credit, early the following year a sample of the new tank was submitted to Vickers Armstrong and received their preliminary approval. While this was going on, work had started on a contract received from the Civilian Repair Organisation of the R.A.F. for the renovation of tanks dropped from aircraft, some 20% of which were being recovered (many from the sea). Remarkably these repairs, which must have been quite costly in time and materials, were carried out in addition to the normal production of the 30-gallon tank, output from the Group having reached the satisfactory level of 378 per week. But the flurry of activity surrounding the new model could not disguise the fact that the whole enterprise could possibly wind down in a matter of months. Everything depended on decisions being made by Vickers Armstrong.

At the next Group meeting held at the Lion Hotel on 2nd. February 1944, chaired by Filmer Jacobs, it became evident that changes were on the way. A sample of the larger tank was exhibited to members who went on to discuss in detail plans to switch from the fabrication of the 30- to the 45-gallon tank. A great deal more work followed. Drawings were supplied from Broadford, with revised manufacturing details, to all members who were asked to submit quickly their quotations for producing the 45-gallon tank on the same lines as before together with the estimated build-up compared with the decline in the demand for the 30-gallon tank. The changeover was completed speedily and the first new tank was delivered by Barrow, Hepburn & Gale Ltd., early in April.

In the end, Vickers Armstrong announced that the balance of their contract for 30-gallon tanks, amounting to 976, were to be supplied in the new model (presumably subject to work in hand) and that their total revised requirement was to be 1,521 tanks. It is a commercial principle that 'the customer is always right' and although, most likely, Filmer Jacobs was holding urgent talks with Vickers Armstrong on the matter, their's would have been the last word. For him, the prospect of the contract ending may have come as something of a relief having held the responsibility of steering the Group through difficult times since its inception, an exhausting experience even for the strongest character.

Careful discussions followed and, at a meeting on the 12th. July 1944 at the Lion Hotel agreement on the production of the quantity of tanks now called for by Vickers Armstrong was reached and was allocated to a by now somewhat depleted Group. As it turned out, this was to be the penultimate meeting of the Group and although final instructions were still awaited, the talks which Filmer Jacobs had recently had with Vickers Armstrong and the Ministry of Aircraft Production led him to believe that there would be no further contract, invocation of the two-month break clause would follow shortly and, that in all probability a 'torpedo type' tank was to supercede the present design and be made in another material.

Production of the remaining tanks continued in spite of the start of German flying bomb attacks on London, although it was understood from Vickers Armstrong, referring to the balance outstanding on the contract, that the supply

position was such that 'there was no urgency for further quantities'. Final confirmation that the project would have to close was conveyed to members at the last recorded Group meeting at the Lion Hotel on the 9th. August 1944, by Filmer Jacobs, after full discussions with both Vickers Armstrong and the Ministry. Other points raised included the disposal of surplus fittings, re-deployment of surplus labour and the disposal of tools and special equipment. During the run-down period, members had to report on their production and stocks, everything in fact that would be needed to negotiate a final settlement with Vickers Armstrong. The Chairman promised to contact members with final instructions once these had been fairly agreed. A vote of thanks to the chairman was recorded.

Thus came to an end a remarkable project which had contributed significantly to the country's final victory. The War ended the following year with German capitulation but the slogan which had been posted up at Broadford Mills bearing the words 'They shall not pass' remained in place. Everyone who had participated in the enterprise could feel satisfied that, when called upon to make such a sustained effort, they accepted the challenge and could claim on completion that this indeed was a job well done. The final agreement was made in August 1944 to terminate in December of the same year. Later on, Filmer Jacobs wrote,[11] "Then came the return of all surplus stores after the conclusion of hostilities. This operation took several months and, when completed, finally brought our war effort to an end. The Group had delivered for service nearly 20,000 fibre jettison tanks".

Envoi

After the War, Filmer Jacobs' firm, Vulcanised Fibre Ltd. became a subsidiary of Tullis Russell & Co. Ltd., whose specially prepared paper had been used at Broadford Mills, Shalford, from the very beginning. Then in 1967 Tullis Russell & Co. Ltd. and the American Firm, Spaulding Fibre Co. Inc., who had started making vulcanised fibre in that country in 1906, jointly formed a new company, called Spaulding Russell Ltd., incorporating both their U.K. fibre-making activities. Alfred Filmer Jacobs, who retired in December of that year, died suddenly in 1972 aged seventy-seven. The new Company continued in business for another eleven years. In 1980, Tullis Russell bought the Spaulding share-holding and the firm was re-named Vulcanised Fibre (T.R.) Ltd. But the world-wide demand for vulcanised fibre declined with the arrival on the market of so many alternative and often cheaper materials and, having pursued a policy of severe retrenchment, including shutting down the Company's other two works at Hadfield, Cheshire and Eynsford, Kent, Broadford Mills itself closed in January 1983. All trading then ceased and the Company dissolved.

A complete vulcanised fibre jettison tank made at Broadford Mills is on permanent loan to the R.A.F. Museum at Hendon and, before the Company finally closed, two remaining tanks were presented to the Guildford Museum. A set of Minutes of the Group of Vulcanised Fibre Tank Manufacturers from 31st. March 1942 to 9th. August 1944, together with other relevant papers, is lodged with the Guildford Muniment Room.

NOTES

The author joined Vulcanised Fibre Ltd, immediately after release from wartime army service, spending the rest of his working life with the Company and becoming a director in 1956. Filmer Jacobs was his father-in-law. He has also written a history of the firm, *Broadford Diary*, privately circulated in 1983. He has lodged a copy of this, together with Filmer Jacobs' book, *From a Standing Start*, with the company papers in the Guildford Muniment Room. All of the illustrations in this paper have been provided by the author, who has also deposited a copy of Fig. 5, annotated with the names of the staff involved.

1. Charles Lissant Jacobs was an able engineer who had served his apprenticeship with the Lanchester Motor Co. He lived and worked for some years in New Zealand and is accredited with the responsibility for laying the first under-sea telephone cable between North and South Islands.
2. Filmer Jacobs, *From a Standing Start*, was published for Private Circulation in 1974 by Tullis Russell and Co. Ltd. A copy has been lodged with the Guildford Muniment Room, by the present author.
3. Stanley George (John) Higlett, had joined Vulcanised Fibre Ltd. in 1929 and was Filmer Jacobs's brother-in-law. He was at that time Works Manager in overall charge of production and was later appointed a Director of the Company. He retired in 1969 and died in 1980. It was his father who founded the Guildford-based building contractor, Higlett and Hammond Ltd., who were, for war-time purposes, incorporated into the Group.
4. A hygroscopic material is one that tends to absorb water.
5. A product of Catalin Ltd. of Waltham Abbey.
6. *From a Standing Start*.
7. K.W. Mason joined the Company as a chemist in 1935. He lost his sight in an accident at the Works in 1940 but continued his career with the Company and went on to become an acknowledged expert in every aspect of vulcanised fibre production. Later he was appointed Technical Director and given a seat on the Board. In 1977 he was awarded the Queen's Silver Jubilee Medal when the Company celebrated its fiftieth anniversary.
8. The Lion Hotel was demolished in 1957 when the site in the High Street was re-developed.
9. *From a Standing Start*.
10. This consisted of thirty minutes, both morning and afternoon, of non-stop, non-vocal band or orchestral music, all played at an appropriate fast speed.
11. *From a Standing Start*.

NEW MATERIAL FOR SURREY HISTORIANS

Accessions of Records in Surrey Record Office, 1994

David Robinson
County Archivist

Surrey History Service

Despite the title of this article, pride of place must be given to three developments which will increasingly affect the availability of materials for Surrey historians. In April 1994 Surrey Record Office and Surrey Local Studies Library came together as a single organisation within Surrey County Council Libraries and Leisure Department. Since the transfer of Surrey Record Office into that department three years earlier, these two units had begun to work more closely together and the merger will facilitate this process. We foresee benefits in developing more coherent and comprehensive collecting policies in the 'grey' areas of ephemera and visual materials such as photographs; in developing our understanding of each other's holdings so that we can give better assistance to enquirers; and in providing guidance leaflets and other information covering both library and archive resources. While the joint service remains located at three public access points - County Hall, Guildford Muniment Room and Surrey Local Studies Library - there will be some limits to the scope for development but already benefits are becoming apparent.

Local History Forums

Secondly, the first Local History Forum was established in Elmbridge Library, intended as a precursor of others to be set up throughout the county. The first principle behind the Forums is that unique material can be preserved and made available in only one location but modern technology, from photocopy and microfilm to Internet and CD-ROM, enables copies to be made more widely available. The second principle is that interested local historians should be given the opportunity to state what material they would find most useful. After a launch meeting in Weybridge Library Lecture Hall a steering committee was set up and, with the aid of Surrey Record Office, Surrey Local Studies Library and local library and museum staff, they identified their priorities for local materials. A small budget was set aside in the County Libraries and Leisure Department budget to fund the initial purchases. We have also taken the opportunity of reviewing the holdings of local studies material in libraries within the area. Following reports of the establishment of this first Forum, local historians in Horley expressed interest and Horley Local Studies Forum was launched in February of this year.

A new Surrey History Centre

The third major development of the year has been the decision to build a new Surrey History Centre at Woking. We, together with local historians in Surrey, have been pressing for a new Surrey Record Office for many years to replace the inadequate accommodation at County Hall, Guildford Muniment Room and Ewell Grove Processing Centre. We had investigated a number of possible sites, mainly ones in Guildford, Dorking and Leatherhead but also in less accessible locations. For financial reasons a County-Council-owned site was needed, and finally we were offered the site of the former Goldsworth First and Middle School in Woking, the school itself having already been relocated. By this time, the merger having taken place, the proposal was to build a Surrey History Centre, with a search room in which the resources of Surrey Record Office and Surrey Local Studies Library could be used together, and which would meet our needs for preserving and making available Surrey's written heritage in a single location. The proposal to include the £ 3·65 million cost of building the Centre in the County Council's Capital programme passed through the County Council Budget meeting last February.

By the end of 1994 the potential availability of lottery funding was coming to the fore. We decided that the County-Council-funded Centre should be seen as a 'core' scheme, which would provide high quality repositories for keeping the archives, a search room sufficient to meet current and future needs, and working space for staff but that application should be made to the Heritage Lottery Fund for about £ 2 million to fund an 'enhanced' or 'full' scheme based on the core scheme but expanding it to include lecture and exhibition facilities and a foyer with space for displays, sales and computer terminals for instant access to information. The search room would be expanded to provide access to the Sites and Monuments Record, Surrey Biological Record and historic buildings information. The County Archaeological Unit would be relocated in the new Centre. Our aim would be to promote the various aspects of 'Surrey's heritage - archival and published, archaeological, built and 'natural' - and to provide a gateway to materials and sites elsewhere.

The initial application to the National Heritage Lottery Fund was made in January and further information was supplied in March. In May the eligibility of our scheme was confirmed and our full application was made in August. The design of the Centre is by Hugh Edgar of W.S. Atkins. Hugh has worked on museum projects in France and the near East, and Ian Milford, the engineer for the project, has most recently been engineer for the Mappa Mundi Centre, Hereford.

Hassell watercolours

Turning to our acquisitions and holdings of archive and related material, we have been engaged, as I reported last year, in obtaining funding to acquire a large collection of watercolours and prints of Surrey. The collection consisted of over 500 watercolours by John Hassell in the 1820s, together with fourteen sepia wash drawings by Henry de Cort and about two hundred eighteenth-century and early-nineteenth century prints. The Hassells are additional to those listed in James Batley and Gerry Moss' catalogue, although many of them

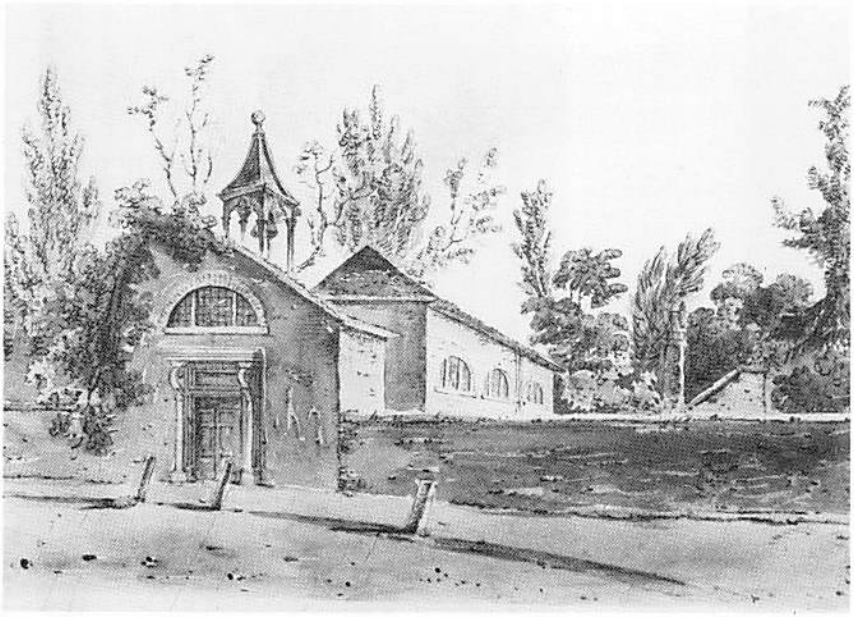


Fig. 1. Hassell Drawing of Roehampton Church in 1822, showing the chapel built in 1777.

appear to duplicate views already known. The collection was made, and the watercolours were commissioned, by a member of the Barclay family of Bury Hill near Dorking to illustrate a set of Manning and Bray's *History and Antiquities of the County of Surrey*. Although our fund-raising moved slowly at first, we succeeded early this year in raising the £ 70,500 needed, with the aid of grants from the MGC/V and A Purchase Grant Fund, National Heritage Memorial Fund, J. Paul Getty Jr. Charitable Trust and the Pilgrim Trust. They are now being catalogued on a computerised data base to provide access by place, subject and artist.

We have also purchased a major collection of Frith photographs of Surrey. The saga of the nationwide photographic record made by Friths of Reigate is a long and not entirely happy one. Local historians recall a story of loss, destruction and salvage when the firm closed. However, a major archive survived and Surrey Local Studies Library acquired a significant number of Surrey prints. Our current purchase takes our holdings to about 16,000, which, with the Surrey Photographic Survey photographs relating to the present county which were transferred to Surrey Local Studies Library some years ago, and with the Hassell collection, provides Surrey History Service with a major visual record of the county. The Friths will also be indexed by computer.

Fig. 2. North Holmwood Church, by J.B. Watson, Architect.

Fig. 3. Brockham Green Church, lithograph by Day and Hughes.

Conservation of Broadwood day books

The records of Broadwoods, the family of Lyne near Capel and the firm of piano manufacturers, are one of our major collections; the firm's records in particular are of national and international importance. Unfortunately the porters' day books, which extend in almost unbroken series throughout the nineteenth and early twentieth centuries, suffered badly from dampness before we received them. The books are important as a record of the first purchasers, and often the later history, of individual pianos and read as a Who's Who from the Royal Family and the aristocracy downwards, and of performers (including Chopin), composers (including Elgar) and music teachers and amateurs. We applied to the National Manuscripts Conservation Trust for funding to match our own contribution and donations, and received £ 7,500 to begin the work with the possibility of a further grant to follow.

Records of Epsom

This year's accessions comprise the usual mixture of materials from the fourteenth century to the twentieth. Among the modern records, the greatest bulk derives from the closing of the mental hospitals in the Epsom complex. Already last year some records of Long Grove and West Park had been transferred from the hospitals under the Public Records Acts, and in 1995 further very large accessions have been received. Records relating to individual named patients are closed for 100 years, so that many of these records are being rescued for the benefit of future generations of historians. They are, however, an important aspect of Surrey life: I have observed to archivists elsewhere that Surrey has mental hospitals as other counties have stately homes! We have received a further deposit of records relating to the Durdens estate, including elevations by George Devey, *c.* 1880, shortly after the 5th. Earl of Rosebery acquired the house.

Paine and Brettell of Chertsey

One of our major deposits, which has come in over a period, is the archive of Paine and Brettell, solicitors, of Chertsey, to which I referred last year. These include records of the firm itself, including cash books from 1818; records of Chertsey, Walton, Weybridge and Woking Building Society from 1880, and of West Surrey Permanent Benefit Building Society, 1872-75; Land tax assessments for Godley hundred, 1816-91 (incomplete series); records of Chertsey Poor Law Union and Chertsey Rural Sanitary Authority; Chertsey Constitutional Hall Company; Chertsey market; and Weybridge parish lighting and watching committee (signed minute book, 1889-94). They include cartoons satirising a Valuation Scheme (presumably of about the 1840s) and sewerage agitation of 1850. There is also a parody of a metrical psalm attacking the proposed enclosure of Staines Moor.

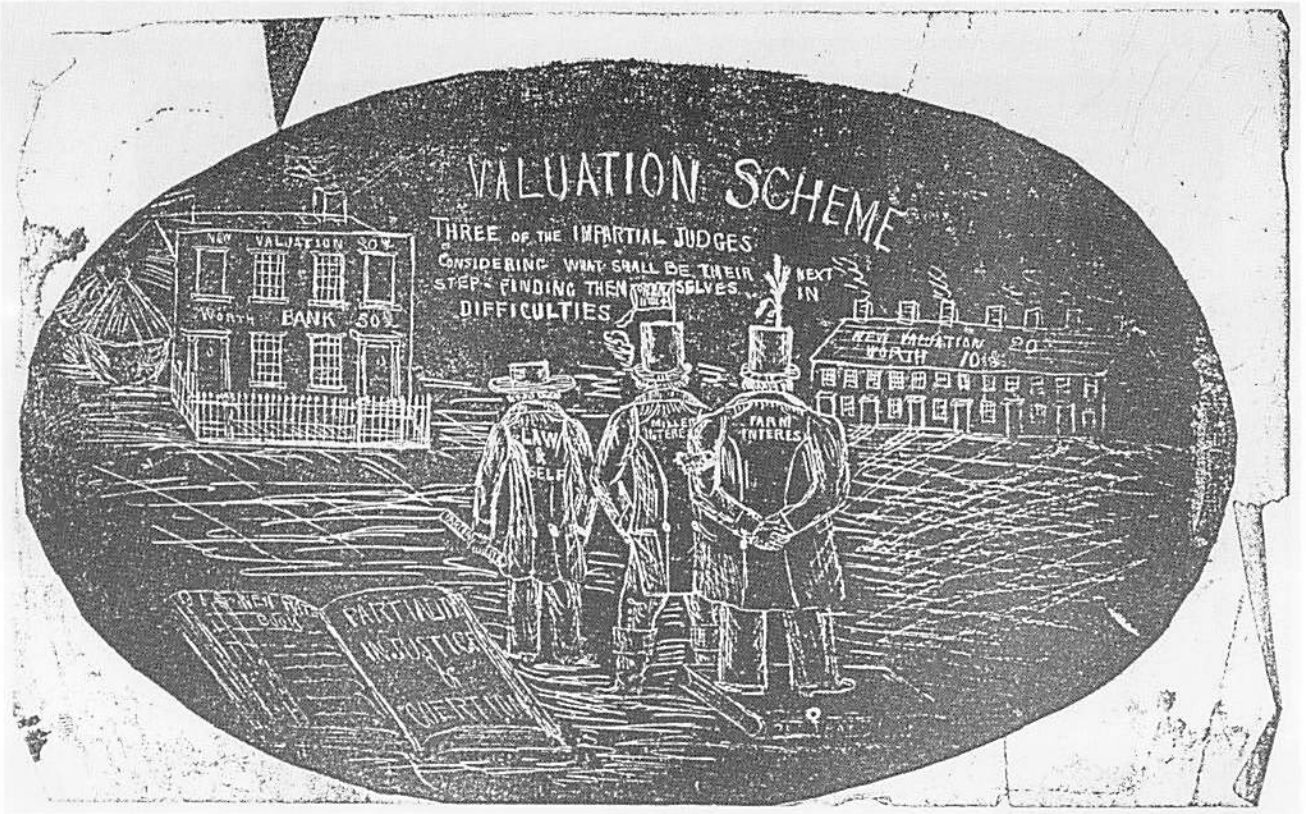


Fig. 4. Drawings from the Payne and Brettell Collection, a cartoon satirising the Valuation Scheme.

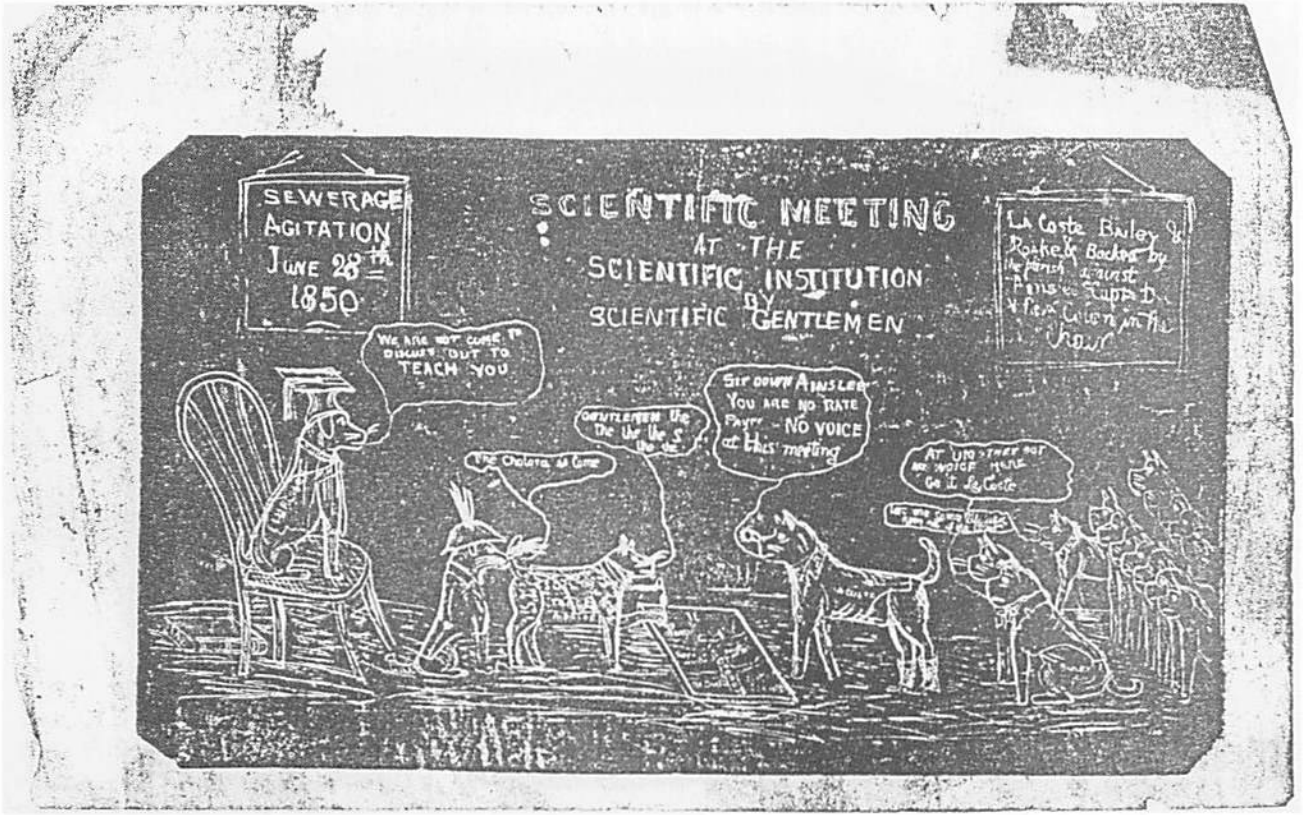


Fig. 5 **A cartoon** satirising the sewerage agitation of 1850.

St. Ann's Society

The Royal Asylum of St. Ann's Society have deposited the Society's archive. The Society originated in the parish of St. Ann and St. Agnes in the city of London to clothe and educate boys from families in need. It received considerable support from the Society for Promoting Christian Knowledge. By the late eighteenth century the Town School was joined by a 'county asylum', originally in Lavenham (Suffolk) and therafter in Peckham (1794-1820), Streatham (1829-84) and Redhill (1884-1919). The school closed and its assets have since been used to award grants for education. The surviving court minutes begin in 1760 and committee minutes in 1715. The Secretary's Lists from 1830 give details of all the pupils: some details for earlier pupils can be found in the committee minute books.

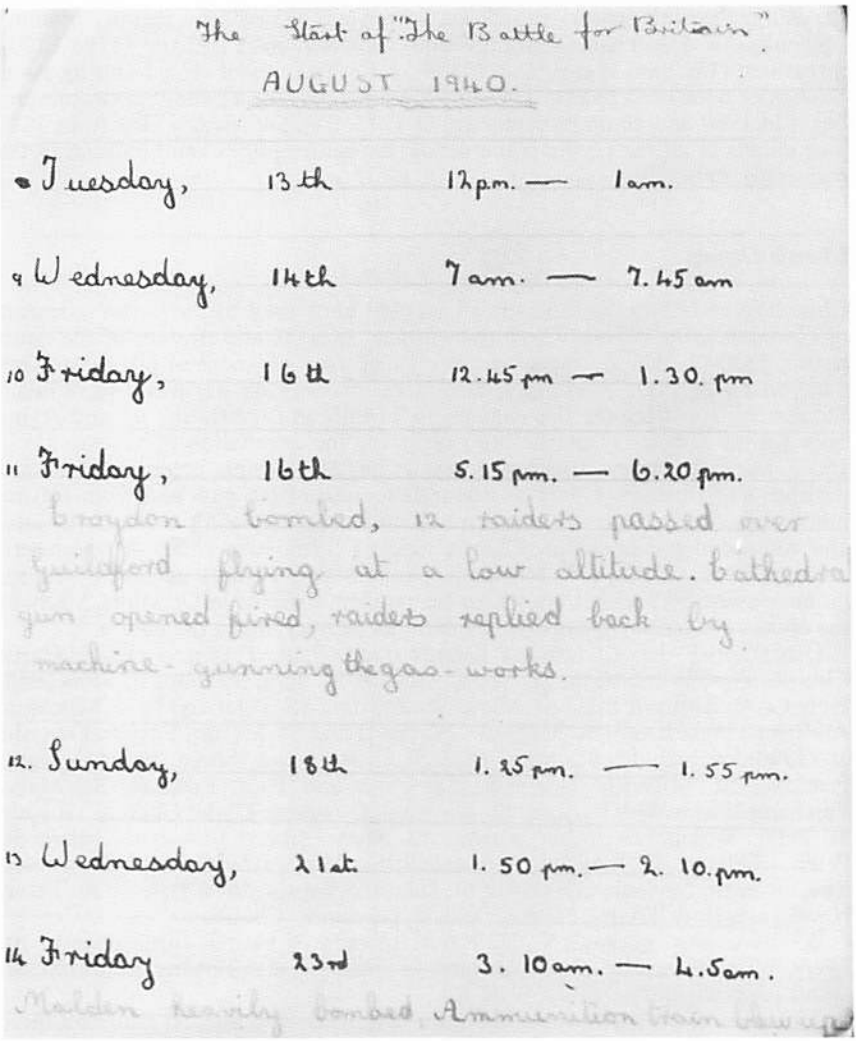
Church records

Church records deposited include an account book used by the parish overseers of Croydon from 1791-1792, churchwardens 1821-22 and trustees of the court house, 1820-21. The overseers' accounts include a payment of 6d. to 'a black man on travill'. The churchwardens' accounts include payments to William Streeter for repairing the fire engines, to T. Pilbean for 'sticking up and crying bills against fireworks' and to the ringers for the coronation of George IV in 1821. The court house trustees' accounts include receipts of rents from local parishes and from the Court of Requests for use of the gaol and from private individuals for the hire of the town hall and court house for exhibitions, sales and entertainments, including Chinese jugglers (19th. June 1820). An overseers' account book, 1797-1807, for 'alien paupers and bastard accounts' records moneys owed by parishes elsewhere for paupers resident in Croydon. Many of the entries are for payments to dependants of men serving in the militia.

Other parish deposits are (at Kingston): St. Paul, Thornton Heath; Christ Church, West Wimbledon; St. Mary, Merton; St. John the Baptist, Stoneleigh; Holy Cross, Motspur Park; St. Mark, Wimbledon; SS. Peter and Paul, Mitcham; All Saints, West Ewell; St. Matthew, Surbiton; and St. Martin, Epsom. Deposits at Guildford include: St. John, Busbridge; St. James, Shere, and St. Mark, Peaslake; St. Michael, Aldershot; SS. Peter and Paul, Ewhurst; St. Mary, Fetcham; Wisley with Pyrford; St. Nicholas, Compton; Christ Church, Woking; St. Peter, Woking; St. John, Woking; St. Mary, Ripley; Loxwood chapel; St. Peter, Chertsey; St. Stephen, Shottermill; St. Mary, Chiddingfold; St. James, Rowledge; St. Saviour, Guildford; St. John the Baptist, West Byfleet; St. Peter, Newdigate; Holy Trinity, Hawley; and St. Lawrence, Chobham.

We have also received N.A.D.F.A.S. records of church furnishings in St. Mary, Wimbledon; St. John, Crowhurst; St. Mary and All Saints, Dunsfold; St. Giles, Ashtead; and St. Mary, Shalford.

A number of Nonconformist churches have made deposits. At Kingston these were from Thames Ditton U.R.C.; Purley Methodist Circuit; Kingston Methodist Circuit; Stoneleigh Methodist Church; and Leatherhead Methodist Church (including Leaders' meetings, 1895-1969). At Guildford they were from Godalming Unitarian Chapel; Society of Friends, Godalming; Merrow Methodist Church; and Society of Friends, Farnham.



The Start of "The Battle for Britain"

AUGUST 1940.

8	Tuesday,	13th	12 p.m. — 1 am.
9	Wednesday,	14th	7 am. — 7.45 am
10	Friday,	16th	12.45 pm — 1.30. pm
11	Friday,	16th	5.15 pm. — 6.20 pm.

Croydon bombed, 12 raiders passed over Guildford flying at a low altitude. Cathedral gun opened fired, raiders replied back by machine-gunning the gas-works.

12.	Sunday,	18th	1. 25 pm. — 1. 55 pm.
13	Wednesday,	21st	1. 50 pm. — 2. 10. pm.
14	Friday	23rd	3. 10 am. — 4.5 am.

Malden heavily bombed Ammunition train blew up

Fig. 6. Among the war-time documents at the Guildford Muniment Room is the notebook kept by a Guildford schoolboy from 1939 to 1948 (ref. 5251).

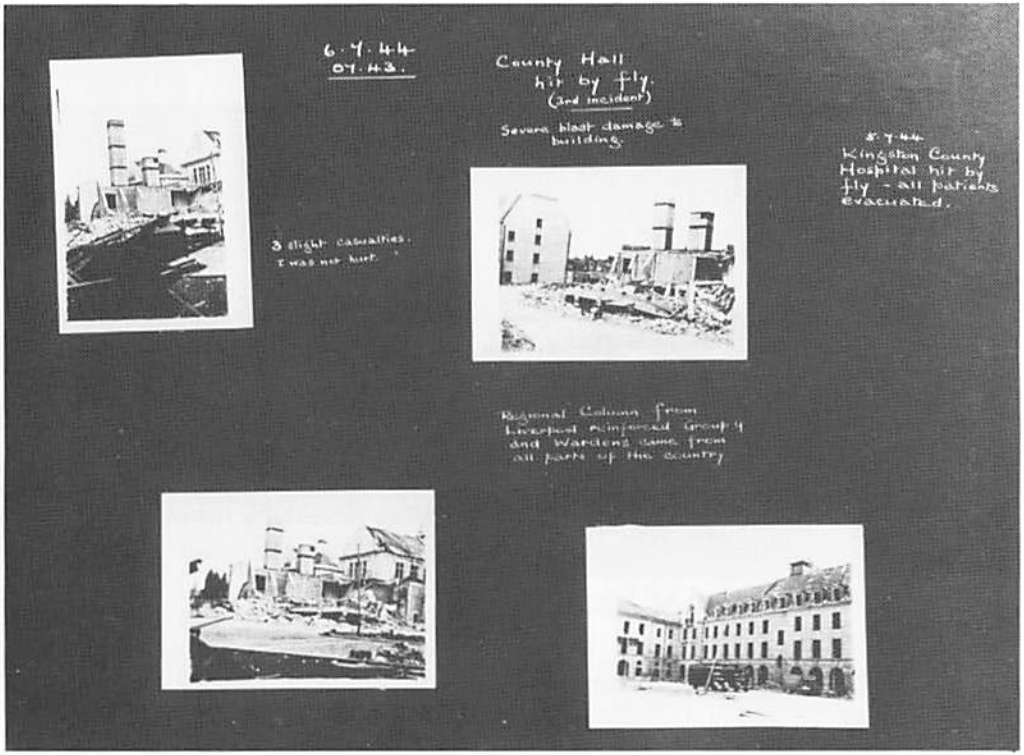


Fig. 7. A Page from the Private Album of Miss W. Hutchings, who worked at County Hall and was in the A.R.P. unit based there. It shows the damage when one wing of County Hall was destroyed. After the War this was rebuilt as the Ashcombe Suite and included the first Surrey Record Office.

I hope that by the time I write 'New Materials for Surrey Historians, 1995' the foundations at least of Surrey History Centre will be laid. Meanwhile I thank the Surrey Local History Council, the members of its member-societies and local historians throughout Surrey for the support you have given for so long to the construction of a new Record Office for Surrey.

Fig. 8. Also from Miss Hutchings's Album is this photograph of her friend Kathleen in her full anti-gas protective clothing.

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Pastors, Parishes and People in Surrey
by *David Robinson*
1989 £ 2.95

Views of Surrey Churches
by *C. T. Cracklow*
(reprint of 1826 views)
1979 £ 7.50 (hardback)

Kingston's Past Rediscovered
by *Joan Wakeford*
1990 £ 6.95
(published jointly with Kingston upon Thames Archaeological Society)

Old Surrey Receipts and Food for Thought
compiled by *Daphne Grimm*
1991 £ 3.95

The Sheriffs of Surrey
by *David Burns*
1992 £ 4.95
(Published jointly with the Under Sheriff of Surrey)

Two Hundred Years of Aeronautics & Aviation in Surrey 1785-1985
by *Sir Peter Masefield*
1993 £ 3-95

These books are published for the Surrey Local History Council by Phillimore & Co., Ltd., of Chichester. They are available from many bookshops in the County. Members are invited to obtain their copies from the Hon. Secretary, c/o The Guildford Institute of the University of Surrey, Ward Street, Guildford, Surrey. GU1 4LH.

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