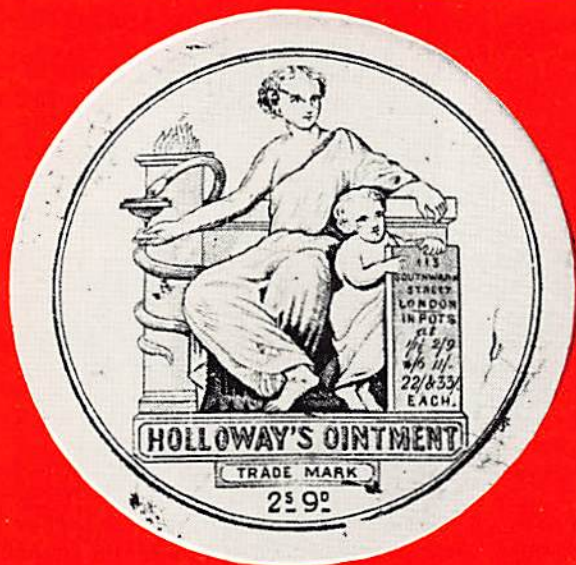


SURREY HISTORY



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SURREY LOCAL HISTORY COUNCIL

Chairman: Kenneth Gravett, M.Sc. (Eng.), F.S.A.

The Surrey Local History Council exists to foster an interest in the history of Surrey by encouraging local history societies within the county, by the organisation of meetings including a one-day Symposium on Local History and an Annual General Meeting, which includes a visit to a place of historical interest, and also by co-operating with other bodies in order to discover the past and to maintain the heritage of Surrey in history, in architecture and in landscape.

Annual Subscription to the Council for local history societies is £7.50. Membership on the part of local history societies will help the Council to express with authority the importance of local history in the county.

Individuals, especially those who live where there is no local history society, may subscribe for £3.75. For this they will receive one copy of *Surrey History* and three newsletters each year, and all other benefits of membership, except that they will not be able to vote at the A.G.M. Enquiries should be addressed to the Hon. Secretary, Mr. P. S. Inskip, Jenner House, 2 Jenner Road, Guildford GU1 3PN.

Current and back issues of *Surrey History* can be obtained from the Hon. Secretary, address as above. Articles intended for publication in *Surrey History* should be typed with double spacing and sent, enclosing a stamped addressed envelope, to the Hon. Editor, c/o the Hon. Secretary. A copy of 'Notes for contributors' is available on request from the same address. Please enclose a stamped addressed envelope.

SURREY HISTORY

Vol. 3

No. 2

Advisory Committee

Kenneth Gravett, M.Sc. (Eng.), F.S.A.

D. B. Robinson, M.A., Ph.D.

T. E. C. Walker, F.S.A.

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*Cover illustration: A pot-lid for Holloway's Ointment (pre 1870)
(Courtesy of Egham Museum Trust)*

Acting Editor: K. Gravett

Editorial Assistant: Sheila Burrough



PHILLIMORE

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A Nineteenth-Century Surveyor

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PHILLIMORE

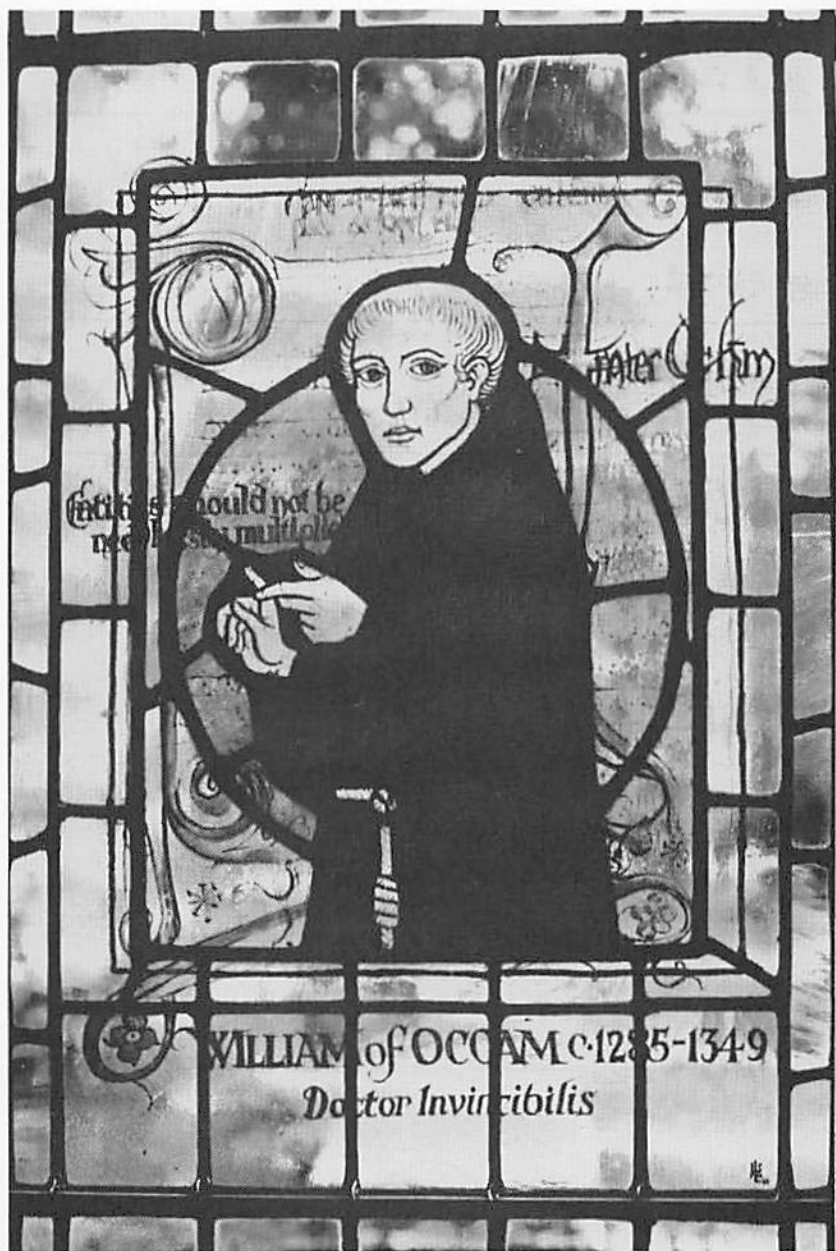


Fig. 1. William of Occam from the new stained-glass window in Ockham parish church.

WILLIAM OF OCKHAM – c.1285-1347

J. M. Kisch

Ockham Centenary Commemoration Committee

On Saturday morning on 20 April this year (1985), in the little 13th-century church of Ockham (population 600, 2 miles from Cobham) an unusual ceremony took place. A small party of Americans, some in monastic habits, some in academic dress, advanced down the aisle heralded by a fanfare of trumpets and placed 13 large red volumes on the altar. They were keenly observed by a number of resplendently attired bishops, a representative of the Minister Provincial of the Friars Minor, senior ministers of the dissenting churches and the villagers of Ockham: greetings were delivered from the chancel steps in the name of many Christian denominations; there were messages from the Archbishop of Canterbury, the Vice Chancellor of Oxford University, the Mayor of Munich and others. Lord Coggan gave an address. The villagers were celebrating the 700th anniversary of the birth of William of Ockham (c.1285-1347), generally known as Occam, a man of whom few British, let alone Americans, have heard, but who was in his day one of Europe's intellectual leaders, a friend of the Holy Roman Emperor and King Edward III and well known to, and feared and disliked by, a number of distinguished Popes: a stained-glass window was being dedicated to him in the church of his youth and the Americans were professors of the Franciscan Institute of Bonaventure University, New York, presenting to the village the first complete critical edition of Occam's surviving theological and philosophical writings, just published after 25 years of devoted labour.

Who was William of Ockham and why was he once so famous? We have no record of his family or even the date of his birth. In his early years a distinguished cleric and scholar, Ralph of Malling (c.1255-1315), later Canon of St. Paul's, Archdeacon of Middlesex, Auditor of Causes and legal adviser to the Archbishop of Canterbury was Rector of Ockham. It has been suggested that he gave Occam his early schooling. William joined the Franciscans (Friars Minor) as a boy: they were then the intellectual leaders in England, indeed in Europe, with their excellent friary schools and large Franciscan house at Oxford. We do not know where Occam spent the 10 years c.1297 to 1307 as novice, friar and scholar. According to a recent authority the Greyfriars in the City of London became his home friary. In any case he was selected for advanced study at Oxford. As was normal, before proceeding there, he took minor orders, being ordained a subdeacon at St. Saviour's, Southwark, in 1306.

When he arrived at the Oxford Franciscan house the following year, he was the equivalent of a modern postgraduate in his knowledge of theology and philosophy, which in those days included natural sciences, mathematics and logic, particularly the logic of Aristotle. The works of Aristotle 'The Philosopher' as he was called, had now become generally available to western scholars, originally through Arabic but latterly through European translations and commentaries. They were eagerly lapped up: Chaucer said of the Clerk of Oxenford a generation later in the Canterbury Tales:-

'For him was liever have at his beddes head
Twenty bokes, clad in black or red,
Of Aristotle and his philosophye,
Than robes riche, or fiddle or gay psaltry,
But al be that he was a philosophre,
Yet hadde he but litel gold in his cofre.'

The monastic type buildings of the Franciscan house at Oxford were very extensive, following the advice of Albert of Pisa, second Minister Provincial in Britain (1236-1239), that it was better to build too large than too small. Royal gifts of stone, timber and money were received at frequent if irregular intervals, for the King recruited from Oxford many of his top civil servants. They had a fine library: there were some 84 Friars Minor at the Oxford Franciscan house in 1317,¹ quite a number of them from abroad, so high was the reputation of the city of dreaming spires.

Theology at Oxford was at this time very much under the influence of Duns Scotus (1268-1308), who was a student and lecturer in divinity there from about 1288 to the early years of the 14th century. He also was a Franciscan Brother. To locate Duns Scotus and Occam in the history of western thought, something has to be said about medieval scholasticism of which they were both leading figures. All the 'scholastics' were influenced by St. Augustine (354-430), one of the four Doctors of the Church, but scholasticism as a mode of medieval thought may be taken to begin with the revival of learning in the 11th century. The scholastics descend from Plato and Aristotle via St. Augustine and the special flavour of scholastic philosophy arises from its subservience to Christian theology. Therein lay a problem. Aristotle was a great man: his dialectic, that is to say his method of logical reasoning, from what was known to what was probable, was universally admired and copied, but could his theories and his conclusions be squared with Holy Writ, with the Christian truth of the creation, the fall, redemption and judgment? This question provided a main theme of scholastic argument, especially in the 12th and 13th centuries. There were many who said then, as they say today, that the rules of science, which they called philosophy, cannot be applied to the divine revelation; that science must yield to faith.

The climax to this great debate was reached in Paris, the centre of theological study, when the doctrines of Aristotle as expounded by Averroes (the Moorish scholar, Ibn Rushd(1120-1206)) were condemned in 1270 and 1271 by Stephen Tempier, Bishop of Paris. Averroes went all the way with Aristotle, e.g. in asserting that the world was eternal and not created and that the human soul did not survive as an individual. But more influential in the long run than the denunciations of Stephen Tempier were the great works of Thomas Aquinas (1125-1274), 'The Angelic Teacher' as they called him in the Middle Ages, especially the *Summa Contra Gentiles* and the *Summa Theologica*, which was never completed. Aquinas achieved a synthesis or reconciliation between Aristotle, whom he greatly admired, and the Gospel: he demonstrated that properly understood true reason supported and never contradicted the truths revealed by the Bible and confirmed by faith.

Duns Scotus, 'The Subtle Teacher', born in Roxburgh and educated at the Franciscan convent in Dumfries, had some things in common with Aquinas; both

belonged to the Realist School which held that somewhere beyond space and time, perhaps in the mind of God, the absolute moral and physical qualities exist of which shadowy and changing approximations can be discerned in our world below. But Scotus thought that Aquinas had constrained the omnipotence of God and the absolute freedom of His will by the shackles of Aristotelian logic. Occam, 'The Invincible Teacher', was much influenced by Scotus even though he frequently purports to differ from him; he joins with him in faulting the Thomist synthesis of faith and reason. But to Occam there were many important matters which belonged to the realm of revelation and faith and to which philosophy was irrelevant. With Occam, logic and science begin to drift away from theology as separate provinces of human thought. He was the great leader of the 'New Way' (*Via Moderna*), the Nominalist school of logic: universal classes and categories were terms of convenience but had no ultimate reality: we could only assert as real the qualities of an individual thing of which we had immediate and intuitive knowledge through our minds via the senses. Occam developed a very rigorous logic which included the famous 'Occam's Razor', 'Frustra fit per plura quod potest fieri per pauciora'. - 'It is useless to do by more what can be done by fewer', meaning in particular 'Do not stipulate divine realities behind material things if you do not have to'. Occam became a very popular lecturer on divinity, on Aristotle's natural history, and on nominalist logic, and he published his views in a number of tracts and books, in particular his *Commentary* on Peter Lombard, *The Sacrament of the Altar* and the *Sum of Logic*. He plied the razor of the 'modern way' with gusto, but he upset a lot of Thomists, Scotists and Augustinians in the process: these were followers of the Old Way (*Via Antiqua*).

In 1324 the blow fell. Occam was summoned to the Papal Court at Avignon to answer to some fifty charges of heresy. This was the work of John Lutterell (Chancellor of Oxford University 1317-1322) who had drawn up a long list of so called heretical statements taken from Occam's published works and had personally invoked Papal action. The Pope, John XXII, took a serious view; he greatly admired Thomas Aquinas and had canonised him the previous year (1323). He had no use for nominalism and he also had grave doubt about the soundness of doctrine and the loyalty of a large number of the Friars Minor.

From 1325 to 1327 Occam's trial, for that was what it really was, dragged on: he defended himself vigorously and not without some success but the atmosphere in Avignon was becoming more and more hostile as the Pope launched his persecution of the 'Spiritual' Franciscans. These were that section of the Order which sought to follow the principle and practice of evangelic or apostolic poverty as espoused and preached by St. Francis: by thus identifying themselves with the life of Jesus and his disciples they saw the true path to God. This view of holiness was not acceptable to the Papal Court: the lifestyle of many of the Cardinals illustrated a very different creed, as did the Papal vineyards and the great palace that was soon to rise above the ancient bridge of the Rhone. The Chapter General of the Franciscans at Assisi asked Occam for his views; he strongly supported the Brothers' rights to their belief and practice and he soon became a very close friend of Michael of Cesena, Vicar General of the 'Spirituals'; Michael had been summoned to Avignon to answer to Pope John for the errors of his ways and even more for his disobedience and disloyalty to the Holy See.

The prospects for William and Michael, as also for Michael's distinguished colleagues, Francis of Ascoli and Bonagrata of Bergamo, were very bad and in their danger they looked to the only and obvious protector, Ludwig or Louis IV of Bavaria, the elected leader of the German princes, bearing the ancient title of Holy Roman Emperor. Louis's quarrel with the Pope was just as serious as William's for the Pope would not acknowledge his title nor would he permit his exercise of the hereditary imperial powers in northern Italy. The battle of words soon led to excommunication and in 1327 Louis invaded Italy. After a secret exchange of letters he sent a warship to Aigues Mortes at the mouth of the Rhone and thither Occam, Michael of Cesena and their fellow friars fled by night in May 1328. They joined the Emperor in Pisa. William is reputed to have said 'If you will defend me with your sword, I will defend you with my pen'. They were safe, they were welcome and they were excommunicated. The Pope issued vain and frantic letters to the bishops of Germany ordering their arrest.

At Louis's court, Occam met Marsiglio of Padua, previously Rector of the University of Paris, who had just published his *Defensor Pacis* which showed that the Pope so far from defending peace had fomented war in Italy and Germany. Shortly before William's arrival, Marsiglio had assisted at Louis's coronation in Rome by the Antipope Nicolas V, previously the Franciscan Brother Peter of Corbara. Occam did not altogether agree with Marsiglio; they exchanged tracts correcting each other, but Occam's interest in politics was now fully aroused and in particular he subjected to close scrutiny the papal claims to 'plenitude of power'; that, of the two swords, temporal and spiritual, the latter must ultimately control the former and the kings of this world must bow to the descendent of St. Peter: this doctrine made the Pope the source of all Imperial and royal power.

These political studies and the books and tracts to which they gave rise were, with the defence of the Spiritual Franciscans, the main concern of the last 20 years of Occam's life at the Emperor's court in Munich. But his theological interests were not forgotten and he also acted as political adviser and public relations officer at the Bavarian court. Many a tract ('*Against John*', '*Against Benedict*', '*Eight Questions on Papal Power*', '*The Work of 90 Days*', '*The Dialogue on Imperial and Papal Power*') set forth the errors of papal politics, with illustrations from history and holy writ. Like Marsiglio and like Dante, Occam pondered on the powers of the ancient Roman emperors, powers which existed before the coming of Christ, which He had recognised and which it seemed were conferred directly by God on the Princes of this world, to be exercised for the benefit of those whom they ruled. Occam considered too the problem of the sinful or heretical Pope and came to the conclusion that there were times when, in the interests of the whole Christian community, the emperor could and should depose an erring Pontiff. He envisaged as ultimate arbiter of Christendom a democratically elected council of clerics and laymen: these ideas were influential in the development of the Conciliar movement which flourished, and ultimately failed, in the 15th century.

In 1328 Edward III of England claimed the throne of France as the surviving nephew through his mother of King Charles IV and in 1337 the Hundred Years War began. In the following year, Edward commissioned Occam to advise him whether, in time of war, a prince had the right to tax the clergy even if the Pope objected. Needless to say, Occam produced the answer required: in 1339 Edward visited the

Rhineland to conclude an alliance with Louis and since Occam was one of the Emperor's principal advisers it can be assumed that the two Englishmen met.

But Louis's fortunes were declining: in 1347 the German rulers, tired perhaps of the long dispute with three successive Popes, decided to depose him and elected Charles of Bohemia ('The priests' king') in his place. Louis did not accept this verdict but the next year he died suddenly during a boar hunt and soon afterwards Occam followed him to the grave. He was buried in the Franciscan church at Munich. A tablet was later put up in his memory and the Occamstrasse still recalls his name.

In some ways, Occam was more influential in death than he had been in life. The Nominalist logic, the '*Via Moderna*', became very popular in British and continental universities and so continued for at least 100 years. His theological and political views were influential with John Huss, the great Bohemian reformer, who died at the stake in 1416, with John Wyclif (1325-84) reformer, anti-papist and translator of the Bible and Martin Luther, who called him 'My beloved Master'. Occam was, to be sure, a courageous and independent thinker. He certainly deserves to be better known in the country of his birth. Like Wyclif, his deep studies of theology and Holy Writ led him to politics: Wyclif has been called the morning star of the Reformation: Occam makes it a double star.

NOTES AND REFERENCES

1. Sheehan, *History of the University of Oxford* vol.11,p.20

WATERMARKS IN SURREY HAND-MADE PAPER: An Apology

The Editor wishes to apologise for the error in numbering of the figures in this paper in the last issue. This must have occurred when the cover illustration was chosen. Basically, the reference on page 22 to Fig. 1 should read Cover Illustration and all other references to figure numbers should be reduced by one. Miss Burrough is particularly annoyed as these errors crept in after she had correctly read the page proofs.

NEW MATERIAL FOR SURREY HISTORIANS, 1984

D. B. Robinson, County Archivist

Accessions of Records at the Surrey Record Office

A Farming Family

A Surrey farm through four centuries: it is rare for records to survive which provide evidence for the building and its contents and the activities of its owners over such a long period. Papers of the Clement family of Kentwyns at Nutfield provide such a record. Robert Clement, whose family was already settled in Nutfield, purchased Kentwyns in 1573, and built up a substantial estate there. The records, although they include title deeds from the 14th and 15th centuries, date mostly from the 16th century onwards. The increasing sophistication of the house can be seen in a series of inventories from 1560 to 1791. An inventory of 1637 lists the kitchen equipment:



Fig. 1. Kentwyns, Nutfield—the Victorian phase.

'fower spitts, three cobirons (supports for the spits), two paire of pothookes, two dripping pannes, two iron potts, one iron kettle, one brasse pott, two brasse kettles, three skilletts, two brasse panns, one warming pann, one joyned table and frame, one cupbord and other lumber' – all worth £3 10s 0d. By 1785, although there were still spits in the kitchen, it also contained tobacco tongs and sugar nippers. In the 17th century the household utensils were mostly of pewter; by 1785 the pewter had been largely replaced with china and glass – coffee cups and a 44-piece tea set – and there was a japanned tea urn. By this time, the cellar was full, not only with grape wine (a half-hogshead cask) but also with 14 gallons of quince wine and currant wine, elder wine, strong beer, small beer, ale and cider. The farm also contained a bacon room and a cheese room with 17 home-made cheeses and had its own lime kiln with faggots of bush and furze.

The papers also reveal the extent to which local government depended on the local farmer: in the 1740s and 1750s John Clement served at various times as a parish assessor for the window tax and land tax and, as high constable for the hundred of Reigate, levied the county rate (one halfpenny in the pound), arranged for the assessment of the land tax and assisted in the appointment of overseers of the poor. The 1748 window tax assessment list shows John Clement, with 37 windows, second to Revd. E.H. Vaughan, the rector, with 42 windows. In 1759 John Clement was appointed lieutenant in the county militia. The Lord Lieutenant, Lord Onslow, issued his commission on 8 March. 'Your inferior Officers and Privvate (sic) Men You are to Train, Discipline and Exercise, according to the Trust in you reposed; and all such Rules, Orders, and Directiones, as you shall, from time to time, receive from me, or your superior Officers ... you shall diligently Observe and obey; And in all Respects perform your Duty as Lieutenant of that Company to which, you shall, so as aforesaid, be posted.' On 30 July of the same year, John Clement settled a bill of £15 7s 6d from William Haydon, presumably for his uniform. It included three yards of best superfine scarlet broadcloth, 1-1/4 yards of white broadcloth and six yards of white shalloon, three dozen gilt buttons, twenty-two yards of 'Rich Gold Lace', a 'Rich Gold finger work'd Shoulder Knot', and, for £2 7s, a sword and sword belt. Accounts for the education of John Clement's children also survive: one of 1768 for teaching his sons 'Arithmetic etc' £3 4s; 'for a small Geography' 1s 8d; for two spelling books, 'one for Miss', 2s. The account for boarding and teaching his daughter Elizabeth in 1776 came to £12, no doubt mostly covering the cost of board, and additional individual items included three small handkerchieves 2s 6d; a half-ounce of pins for 1-1/4d; a sampler and silk 1s 4-1/2d, a pair of cotton stockings 3s 6d, a pair of leather pumps 2s 10d, a pair of stuff pumps 3s 9d, and a 'Commonprayer Book' 2s 3d.

An Expensive Election

Nineteenth-century elections were more extrovert affairs than elections nowadays. Behind the formal statement of expenditure in the election expenses account book of Edmund Antrobus, successful Conservative candidate for East Surrey at a by-election in 1841, we can glimpse the reality of the drinking, the bands and the bells. At Kingston, where the headquarters were at The Griffin, the cost of 2s 6d and 5s tickets

for the beershop keepers came to £55 16s 2d, and £6 was paid to bring a clergyman from Weymouth to cast his vote and 15s for cleaning the town hall.

At Croydon, Antrobus had to pay £25 4s 10d for the erection of the hustings and £1 11s 6d for 'firing' for the poll booths: the election took place in February. The bellringers cost £8 and William Wood was paid £46 4s 0d for the band. At Reigate, where the committee room was in the White Hart, expenditure came to £653 11s 5d, Thomas Hart, the solicitor who acted as agent, received a fee of £57 15s 0d, 'refreshments', mostly no doubt the treating of voters, cost about £300, post horses, probably for taking the voters to the polls, cost £120, favours £26 1s 3d and placard-men £8 10s 0d. William Caffin was paid £24 for a 'band of music' and two guineas were paid for ringing the church bells. The candidates shared the cost of holding the election: £156 3s 3d to the Under-Sheriff for the 'expenses of polling booths'; two guineas to the Superintendent, Inspector and Chief Clerk at the polling booth and £1 to the Police Constable. The total cost to Antrobus was £7,454 14s 3d, and he won 2,635 votes out of 4,071 cast.

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We have purchased at auction at Sotheby's the account and working notebook of William Constable, surveyor, of Horley and Reigate. The notebook covers the period 1815 to 1837. It is feintly ruled as a cash book and the entries consist of notes of work done and the charge made, probably in the form in which the account was submitted to the client, together with additional notes in some cases. The entries are crossed through, presumably when payment was made, or perhaps when the account was sent. Much of the work was done for Ambrose Glover, attorney, Clerk to the Turnpike Trust and steward of Reigate Manor, and much for the Trustees of Reigate Turnpike, but Constable's clients include a wide range of local landowners. Entries relating to further afield include an estimate for improving the roads from Brighton to Shoreham, dated 8 June 1821, and a survey of the Bridport Turnpike between Beaminster and Whitley Cross, August to October 1829. Two of the major works carried out during Constable's period as Surveyor to the Turnpike Trust were the cutting of a tunnel road through the grounds of Reigate Castle, 1823, and the construction of a suspension bridge over the cutting at the top of Reigate Hill, 1825. Several of Constable's accounts relate to the tunnel road and they include an account of 17 October 1823 for a second set of plans and elevations of a toll house 'agreeably to precise instructions from Mr. Glover for an antique style in the external appearance'. Several accounts for the proposed improvement of the road over Reigate Hill are included, although no specific reference to the suspension bridge has been noticed. The turnpike's great competitor also makes its appearance. In 1836 Constable was employed in surveying part of the South Eastern Railway Company's proposed Brighton line (presumably the one which would have run through Oxted) and in August 1837 he was engaged in 'laying down in pencil, the course of the proposed London and Brighton Railway line, on the Manorial Plan of the Manor of Reigate, shewing the various Demesne and Copyhold lands, and making schedule thereof, that will be intersected or touched by the said line'. Glover paid him one and a half guineas for this.

Much of William Constable's work consisted of surveying farms and estates and drawing plans, and determining boundaries on the ground: 'Thursday, 28 February 1828. Journey to Betchworth and setting out the boundary line in a meadow between the property of the Duke of Norfolk and the Rt.Hon. Henry Goulburn as shown by a drawn plan, said to be by the Drivers. Note. The Plan is very incorrect and I could only take a mean course between its errors. £1 1s.' He also produced a lithograph of Buckland Court in 1829, for which he records the production cost in detail. The notebook complements records of Reigate Turnpike Trust and plans by William Constable already in the Surrey Record Office.

What this valuable but sober record of a local surveyor's professional work does not reveal is the wide range of Constable's interests and activities in earlier and later life. It appears that he was born at Horley in the late 18th century, son of the village miller. He was apprenticed at the age of 14 to a firm at Lewes, Sussex, and commenced a drapery business with his brother at Brighton, Sussex, in 1802. In 1806 the brothers sold out and went to America, where, after travelling on the Ohio and Mississippi Rivers, William Constable laid out a town named Brighton. 'On the rumoured outbreak of war' (?1812) the brothers returned to Horley, where they rebuilt the family mill. After the conclusion of William's tenure of office as Surveyor to the Reigate Turnpike, he made another journey to America, and finally settled at Brighton, Sussex, where he was for years the sole practitioner of the Daguerreotype process of photography. He was buried at Horley in 1861. A history of Brighton also recounts that he was ardently devoted to scientific novelties and one day publicly announced by the Town Crier that he would fly from the top of the Assembly Room to the extreme end of the Pleasure Gardens. Constable appeared attired in 'light-fleshings' with Zephyr-like wings and glided gracefully down on a sloping wire hanging from a pulley, waving a flag in each hand. A great many people who had paid to see the performance felt that it had fallen short of what was advertised and closed in threateningly upon the performer, but he was quickly unfastened from the machinery and took his flight through the Maze. Constable's apparatus was eventually developed into a device for rescuing people from burning buildings and wrecked vessels. These aspects of William Constable's life await further research and verification. The volume was purchased with the aid of a 50% grant from the Purchase Grant Fund administered by the Victoria and Albert Museum.

Letters: Personal and Business

We have purchased eight bundles of correspondence of the Corkran and Campbell families of Long Ditton and Hampton Court. The letters are mainly addressed to Caroline, sister of Charles Corkran, who was born in Long Ditton in 1816 and married there in 1838 to James Campbell of Hampton Court. The earliest letters are of the later 1820s and early 1830s and make frequent mention of 'Aunt Langley' (the widow of Thomas Langley, for whom Nash built Southborough Lodge, Surbiton). Many of the letters are from Caroline's brother Charles, 15 years her senior, who later became one of the first Improvement Commissioners for Surbiton. The family spent some time in India but returned to live in Long Ditton. The correspondence mainly relates to family affairs and gives a good impression of the life of a middle class family

in northern Surrey in the early and mid- 19th century. The records also include a diary of Mary Keynett, who was staying with Mr. and Mrs. James Campbell in 1856. She refers to a visit to a church service at Kingston parish church which was interrupted by the alarm bell ringing for a fire in a farmhouse two miles away.

We have also purchased three letters of Thomas Foot of Clandon. Foot was Lord Mayor of London in 1649-50, was created a Baronet in 1660 and was granted in 1674 a specific remainder of the Baronetcy to his son-in-law, Sir Arthur Onslow. His letters are to John Morris, the partner of Sir Richard Clayton, the great London financier who purchased the Marden Estate in East Surrey. Foot's letters are concerned with loans which he had made through Clayton and Morris and he expresses his concern at the possibility of some of the borrowers not repaying the loans. Clayton and Foot were early members of the City banking fraternity to use their profits to purchase estates in Surrey on which they later settled and established long-lasting landed families.

Church and Chapel

We have received deposits of parish records from Buckland, Effingham and Little Bookham and additional deposits from Ashted, Camberley, Chiddingfold, Esher, Fetcham, Ripley, Seale, Send, Stoke D'Abernon, Tatsfield, Womersley, Worplesdon, West Horsley and Westborough. The Effingham registers start in 1565, and the records include papers of the parish officers, among them a number of Poor Law records dating from 1704, and Churchwardens' and Overseers' vouchers and papers of the 18th and early 19th centuries. They also include printed appeals for a relief fund for British prisoners of war in France in 1808 and 1811. The parish of Effingham sent £4 16s 0d, contributed by the vicar and ten others, in 1808 and £7 18s 0d in 1811.

Records have been deposited by the Kingston and Guildford Methodist circuits. The Kingston records include a Wesleyan Circuit Quarterly Minute Book beginning in 1863, when the circuit included Kingston, Surbiton, Walton-upon-Thames, Cobham, Ockham and Esher. The minute book throws light on the early years of the churches when the circuit was still a 'Home Mission Area' and contains references to efforts to secure sites for chapels, including Surbiton, New Malden, Kingston, Ockham, Norbiton, Claygate and Esher: in 1872, for example, the Earl of Lovelace gave a site for a Wesleyan Chapel at Ockham. An example of the tactful handling of a difficult situation is included: 'The difficulty which many of the members of the (Kingston) congregation experienced in hearing the Reverend S. Lucas was brought before the meeting and was discussed with very great kindness of feeling on the part of all present, who, fully appreciating the ministrations of Mr. Lucas, feared he might be grieved if such information came to him by a side wind. Resolved that the Reverend G. Gibson inform him of the difficulty and arrange for his labours to partake of a more pastoral character.'

We have received additional deposits of records of Godalming United Reformed Church and Mead Road Unitarian Church, Godalming.

The archivist to the Church Missionary Society has presented the minute book of the Church Educational Union for Kingston and its neighbourhood. The Union was established in 1877, following preliminary meetings in 1876. Its objects were 'to

consult and act together on all questions that may arise between the Schools, as representing the interests of religious education, and the Education Department', to 'endeavour to adjust the relation of the Schools towards each other in respect to School fees, the Admission of Children, the general discipline as to regularity and punctuality of attendance, the relation of the Schools towards Parents, and other matters of a like nature', and to 'endeavour to promote united action in all public matters affecting the interests of religious education, whenever it may be necessary'.

The Committee consisted of two representatives from every school, of whom one at least was to be a layman, elected by the managers. The members discussed the provision of prizes and treats (New Malden children with good attendance records were rewarded with a day at Hampton Court), corporal punishment, the payment of pupil teachers (£12 10s 0d for the first year, increasing by £2 10s 0d in each subsequent year) and their training, the teaching of cookery and the employment of female teachers in boys' schools to save expense. The perennial object of greatest concern was to provide more schools and more places in schools to avoid a School Board being set up, a fight in which the church schools were successful.

Nineteenth-Century Land and Houses

We, and the many searchers who use the records, are grateful as always to those who deposit records in our care. We are particularly grateful to those member-societies of Surrey Local History Council who have passed records over to us. Leatherhead and District Local History Society has kindly presented a plan of property of the Dackombe family in the common fields of Ashtead, 1814. It covers about 80 acres and includes a terrier giving the names and areas of individual strips and plots. The plan also shows roads and ways and gives the names of holders of neighbouring properties. Esher Local History Society have deposited deeds of 'Newlands' at Weston Green, Thames Ditton, 1799-1895. 'Newlands' was formerly Weston Green House and owned in the 18th century by Edward Williams, retired from Antigua, and plans attached to two of the deeds show the house and its grounds, including ponds and a Dutch garden. A schedule attached to a lease of 1851 gives details of the fittings room by room, down to a pair of ivory sunk bell pulls in the drawing room, the key to the butler's pantry door and a mahogany seat in the water closet.

Into the Twentieth Century

Surrey County Cricket Club has deposited a considerable body of records additional to their two previous desposits. These include two Sub-Committee minute books, membership registers, 1867-1919; reports on potential county players, 1919-32; a ledger, 1908-21; and match receipt books, 1888-1935. There are also score books, 1938-39, 1947-48 and 1959-70, one of which includes the Fifth Test of 1948, D. G. Bradman's last Test Match. The other records include a copy-letter book of C. W. Alcock as secretary of the Club, 1896-1906, which illustrates among other matters the difficulty of selecting teams at a time when amateurs, who were not always available, formed an important part of the team and a potential captain could go

abroad at a fortnight's notice. The club also deposited a small group of letters written by J. B. Hobbs to Rev. F. S. P. L. Girdlestone. These are mainly of a social nature but include occasional references to crick: (5 June 1931) 'I'm afraid my vast scoring and the brilliant days are over, but I feel thankful that I am able to carry on and score runs at my age. Days in the field completely tire me out and I think I ought to give up at the end of this season. I feel I ought to get out while the going is good'.

In the later letters, Hobbs makes occasional references to changes in the game as he observed them after his retirement. In 1959 he wrote 'As to cricket we must allow that a great change has come over the game since my day. The method of playing it I mean. Bowlers then were willing to take a 50-50 chance with the batsmen but today they shut up the game by bowling in-swingers and leg theory as soon as the bat looks like getting on top'. In 1962 he expressed regret at the ending of amateur status: 'however, it seems to me that the majority of amateurs want to *cash in* in some way'.

A descendant of William Harvey, Mayor of Guildford, 1931-33, has deposited three scrapbooks relating to his mayoralty. One of them relates specifically to the Mayor's Work Fund launched in 1932 to help Guildford's unemployed men. The Borough Council voted £3000 towards the Mayor's Work Fund and all citizens were invited to contribute 'as a gesture of their sympathy and their thankfulness for employment' and all businessmen and employers in the Borough were urged not to delay putting work in hand, since 'there is no economy like wise spending'. The slogan was 'every shilling means an hour's work for someone not now in work'. The men were to be paid at trade union rates. The scheme at once attracted national attention and many other authorities asked for details. Funds started to come in immediately, and within ten days 40 men were working in the Borough parks, gardens, cemeteries and highways. At 26 November over 100 men were in work, and within a month 200 men. The largest single project, begun just before Christmas 1932, was the construction of the open air swimming bath and lido at Stoke Park, which provided work for an additional 180 men. When the fund ended on 31 March 1933, £7,720 had been subscribed and the total number of hours worked was 150,490. To follow on the fund, Guildford Corporation embarked on a building programme which included the completion of the swimming bath and a new school at Westborough, 154 new houses at Stoke and several new sewers. The Guildford Work Fund was widely emulated in Great Britain, and aroused interest as far afield as Java.

A small but interesting accession relating to World War II has been placed in our care. Mr. Francis Haveron has deposited papers of his father-in-law, Mr. H. C. F. Moritz, who was Lieutenant in the 39th London (MWB) Battalion, 'C' Company, No. 12 Platoon (Surbiton) of the Home Guard. They include the platoon's monthly training programme, lists of strategic locations in the area and key men in the platoon. There are also test questions for members of the platoon: 'Army vehicle 7ft 6 in wide and 18ft 6 in overall height proceeding from London to Southampton and pulls up at junction of Brighton Road and Portsmouth Road to enquire the route. Which route would you direct the driver to take?' 'A platoon of regular troops is proceeding from Leatherhead to Twickenham. The two road bridges over Thames at Kingston and Hampton Court are blown up. You are asked to direct them. By what bridge would they cross the river?'

Survival of trades union records is somewhat patchy and we were very pleased to receive the minute books of the Redhill Branch of the Typographical Association, 1897-1952. These provide an insight into the activities of the Branch, including negotiations with employers over wages and over closed shops, links between the Branch, the local Trades Council and the Labour Party, and attempts to obtain more frequent visits to works by the Factory Act Inspectors. In 1900 there was a dispute with a local firm over the employment of women and the association assistant secretary wrote 'the Typographical Association have no objection to the employment of women as such; it is the payment for such labour at a rate less than the standard of the Branch that creates the difficulty'. At the time of the 1926 General Strike the secretary recorded in the minutes: 'Strike Committee and General Meetings. So many meetings were held and matters of a very contentious nature discussed so freely that, on account of space and time, I propose to give the briefest of details'. The Committee in fact met at least once and often twice each day during the strike. The discussions included strike pay and children's allowances (the latter being 1s per week), a request by the Chief Constable for all members of the British Legion to be sworn as special constables for the duration of the strike, which was rejected because several members of the Legion were themselves on strike, and the issue of victimisation after the strike. There was a continued dispute over the taking back of workers after the strike ended and members were levied on behalf of those thrown out of employment. One local firm ceased to be a closed shop and became an open shop following the strike.

We have received minute books, registers, letter books and financial records of Cuddington Hospital. A Joint Hospital Board was set up in 1893 to build and administer an isolation hospital for the areas of Epsom Rural Sanitary Authority and Sutton and Carshalton Local Boards. Despite objections from local residents – Mr. E. J. Maitland of Banstead requested 'those members of it (the Board) who live at some distance from the proposed site to consider what their own feelings would be if a fever hospital were brought at such close quarters to them' – they acquired a site near Banstead Station and the early minute books reveal the processes of land acquisition, the planning and building of the hospital and the appointment of staff. Thereafter they document in great detail the running of the hospital until the cessation of the joint board in 1948 under the National Health Act.

Finally, we are very pleased that County Sound, the Guildford-based local radio station, kindly agreed to place in our care a selection of tapes illustrating their first year's broadcasting. These include pre-transmission tests, the first day's transmission, five special programmes of a documentary nature, and a series of their weekly review programme, 'Here it Comes Again'. Local radio is clearly an important aspect of the life of Surrey in the late 20th century and it is important that examples of the output of our local station should be preserved for future historical researchers. We do not have facilities for the tapes to be played back for study and research but this facility and related ones are increasingly going to be required of record offices as traditional records in paper and parchment form are supplemented by records in the form of film, audio and video tape and records in machine-readable form.

George Jackman & Son

The paper by Diana Grenfell on 'The Jackmans and their Plants' in last year's copy of *Surrey History* (Vol.3, p.29) has aroused considerable interest. These illustrations are from the papers deposited by the firm with the County Archivist and are in Guildford Muniment Room.



Fig. 2. Photograph of Jackman's workmen, c.1880-90. The principal foreman holds a measuring rod as staff of office. (GMR 1216/14/2)

		seed packages	when sown	seedling	Results of Hybrids
Hybridized July 1858	Franses of plants hybridized Clematis lanuginosa + 84 - with Hendersonii & atrovirens 17 + 10 + 12	Novr 1858	Novr 1858	abt 300.	Result of Hybrids very robust growers, abundant in flower quick deep purple & warm.
July and August 1862	Clematis lanuginosa + 84 seedling No 1 sent to. int census 17 + 24 + 30	Novr 1862	Decr 2 nd 1862	7	robust growth, good flowering of large size, grapes lavender. fine
	Hybrid seedlings out of stock No 1. (Clematis) out of hybrid	Decr 1862	Decr 1862	abt 200.	Novr degenerated lot, many seedling like the original, which are atrovirens from former census have had 5 plants they are only as atrovirens not hybridized.
July and August 1865	C. Sophia fl. plus + 84 Hybrid seedling No 1 & 2. (Clematis) 25 + 30	Novr 1865	Decr 1865	15.	Two fine double, one like in house child.
	C. Lady Bovill + 84 Hybrid seedling No 1 & 2. (Clematis) 42 + 30	Novr 1865	Decr 1865		
	C. Rubella + 84 fl. plus + 84 C. viridella atrovirens 38 + 37 + 12	Novr	Decr 1865	abt 250.	
July and August 1866	C. Lady Bovill + 84 rubra violacea C. Rubella + 84 fl. plus 42 + 31, 33 + 38	Novr	Decr 1865	abt 350.	see next page for particulars
	agavea grandiflora + 84 C. magnifera 1 + 39	Novr good Novr -	Novr 1865	119	

Fig. 4. Page from the memorandum book of George Jackman junior. As normal in plant nurseries, each variety is given a number for easy reference. Thus in the entry for July 1858, 17 + 10 + 12 is shorthand for the three Clematis named immediately before. This cross seems to be the one that produced Clematis Jackmanii. Although not named until August 1865, the number 30, by which it was designated in the nursery, occurs in August 1862 to describe seedling no. 1, presumably the best of the 300 produced by the previous crossing. (GMR 1216/3/1)

THOMAS HOLLOWAY – Entrepreneur and Philanthropist

Ron Davis

Egham-by-Runnymede Historical Society

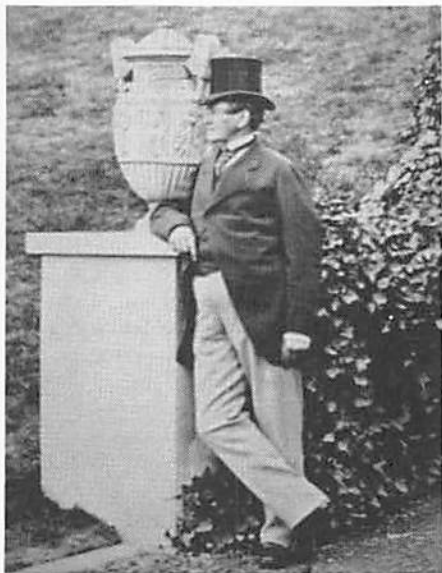


Fig. 1. Thomas Holloway in contemplative mood.

If you visit Egham and Virginia Water today, you cannot fail to be aware of the works of Thomas Holloway. You cannot miss the towers and minarets of Royal Holloway College on Egham Hill or the single tower of Holloway Sanatorium at Virginia Water. 'The College' and 'The Sanny' have been the names given by local inhabitants to the buildings which have given employment to them or their families for three generations.

Thomas Holloway died at Tittenhurst, his house near Sunninghill in Berkshire only a few miles from his two great buildings, on Boxing Day 1883. While one would hail Holloway as a great Victorian, one of the first great business men or entrepreneurs perhaps, one might hesitate to class him, a purveyor of pills and patent medicines, with Brunel, Stephenson, Dickens or Trollope.

The Holloways were a West Country family. Thomas Holloway senior is said to have been in the Royal Navy and to have been at the battle of Ushant, 'the glorious first of June 1794', in HMS *Defence* or HMS *Ganges* but the sources disagree as to which ship it was and his name cannot be found in the musters of either vessel. He married Mary Chellev from Ludgvan village near Lelant in Cornwall at Falmouth on 6th November 1797. They had six children, sons Thomas and Henry and daughters Jane, Mary, Caroline and Matilda. In 1816 the family moved from Devonport, where Thomas junior had been born in 1800, to Penzance where they set up a grocery business in Market Street. Later the elder Holloway took the Turk's Head Inn (still standing) in Chapel Street.

Sometime later, the son, Thomas, took himself off to France where he lived for some years at Roubaix, a textile town, some six miles from Lille and not far from the Belgian border. During this time he acquired a good working knowledge of French. This must have been of great help in his subsequent business transactions. His

contacts in France survived many years and an old Frenchman was still visiting him at Tittenhurst in the 1870s.

When Thomas Holloway returned from France in 1836, he set himself up at 13 Broad Street Buildings in London as a foreign and commercial agent. During the course of his work he met an Italian, Felix Albinolo, who besides selling leeches sold St. Cosmas and St. Damian's Ointment. Whether Holloway came to any commercial arrangement with Albinolo is not known but advertisements for Holloway's Ointment appeared in *Town*, *The Weekly Despatch* and *The Sunday Times* in October 1837. This incensed Albinolo who challenged Holloway's testimonial in 1838. Albinolo, however, died in 1839 so here the controversy ended. The same year a reference to Thomas Holloway's patent medicine warehouse at 244 The Strand appeared in a London directory.

The following year Thomas Holloway married Jane Driver, the daughter of John Driver, a Bermondsey shipwright. The new Mrs. Holloway involved herself enthusiastically in the business, working with her husband from 4:00am to 10:00pm.

Holloway was one of the earliest businessmen to realise the power of advertising. After the initial advertisements, he took space in other papers, over-extended his credit and found himself for a few weeks in Whitecross Street Debtors' Prison. He was released when he promised to pay his debts, which he did adding an extra ten percent. His mother died in 1843 and it is suggested that an item in her will, '£600.0.0 is forgiven Thomas', may indicate that she came to his rescue. This incident had a salutary effect on his later dealings. He would never owe anyone anything; the workmen building Royal Holloway College were paid every evening.

Professor Holloway, as he styled himself at this time, had incredible energy. He travelled widely in search of business and his extant diaries show that it was not uncommon for him to be out of England for a year at a time. His 1853 diary reads like one of Mr. Thomas Cook's tours:

July: Rome, Naples, Palermo, Messina.

August: Trieste, Vienna, Dresden, Berlin, Stettin.

On 23 August he arrived at St. Petersburg where he stayed in Miss Benson's boarding house at three roubles a day; then on to Moscow and back to Copenhagen by the end of September. Payments he made and comments on the various parts of Europe through which he travelled were recorded carefully. The spa town of Baden-Baden did not impress him: 'the water which is brought there in a pipe it is not much drunk as in my opinion it has an artificial look. I had a glass of it like unto a glass of warm whey, it is good for the nerves they say'. On another occasion he found time to visit the little house of Lola Montez¹.

His clerk, Smith, appears occasionally in the diaries, arriving one day and departing the next having presumably collected the instructions and orders from the boss, such as:

October 12: Rolfsen and Hoffman, Hamberg, Neueberg No.17

'These people are paper merchants and in a very large way doing business in South America. Send them a sample case of about £40's worth half Spanish, one quarter Danish and one quarter German. Charging the 10/- prices directing him to add 10% for wholesale on our prices to them'.

The advertising budget reached astronomical levels, rising from £5000 in 1842 to £50,000 in 1883. There were advertisements at the Pyramids and at Niagara Falls and an apocryphal story² says that he offered Dickens £1000 to mention Holloway's Pills in *Dombey & Son* but Dickens refused. As well as not owing anyone anything, Holloway would not pay in advance. Advertising copy had to appear in his office before he would pay the bills. Advertisements appeared in fifteen languages including Chinese, Armenian and Sanskrit and testimonials and ballad sheets and illustrated general knowledge cards appeared as part of the advertising campaign. There was also a *Holloway's Almanack*. What was this vast campaign promoting?

The pills (according to *The Chemist and Druggist* for 1880) consisted mainly of aloes, rhubarb root and ginger with smaller quantities of cinnamon, cardemoms, saffron, glauber's salt (sodium sulphate) and potassium sulphate, all held together by 'confection of roses'.

The ointment in 1880 was basically lanolin and olive oil with white and yellow beeswax and resin. By 1937, although the yellow beeswax remained in the recipe, the essential constituents were Theobroma oil and Venice turpentine. Although the company jealously guarded the recipe in the early days, by 1937 they stated on their 3d tins and 1/3, 3/- and 5/- jars that 'No proprietary rights are claimed in the preparation of the ointment. The manufacturers do, however, claim the exclusive right to the name Holloway's in connection thereof.' A modern general practitioner comments that the ointment was purely lubricative and that even today lanolin is rubbed into dry skin and old scars and is beneficial.

The claims for the pills on the other hand seem rather excessive. *More Secret Remedies* published by the British Medical Association in 1912 says:

'The Hollowayan System of Medicine might be summoned (*sic*) up in the words: Take Holloway's Pills; apply Holloway's Ointment. Among the complaints for which this 'system' is prescribed are gout, rheumatism, sciatica, paralysis, liver complaints, asthma, inflammation of the kidneys, bronchitis, quinsy, bad legs, bad breasts, ulcers, wounds, sores, tumours, piles and fistulas, the turn of life, floodings and the whites, obstruction of the menses, dropsies, jaundice, youthful indiscretion, impotency, palpitation of the heart, debility, indigestion, constipation, gravel, stone, venereal diseases, influenza, erysipelas, lepra blotches, scald heads and ringworms, scrofula, ague, diarrhoea, etc. The dose recommended in different cases varies from two pills a day to seven pills night and morning.

Holloway was naturally not fond of doctors, his opinion of them being similar to his views on solicitors. One cannot help having sympathy for Holloway's own solicitor, Bowen-May. On one occasion he was given a glass of sherry by Holloway; Bowen-May unwisely said 'This is such a good wine, I wouldn't mind receiving it in fees'. Whether Holloway took this seriously or decided to have a little joke, one can only guess but when Bowen-May submitted his next bill of £159.16s, Holloway deducted £19.16s as exorbitant and sent 35 dozen of his splendid wine for the balance of £140.

The premises at 244 The Strand eventually became too small and in any case were wanted for extensions to the Law Courts so the Holloways moved to 553 (later 78) New Oxford Street where they eventually had 100 employees, as well as people on the

road. In 1851 in the Strand, they had only five clerks, 12 men, nine boys and three women. The forewoman, Sarah White, was part of the Holloway household which also included his sister-in-law, Harriett Driver and his own sister, Matilda.

For some years the family lived 'over the shop' until the early 1860s when Holloway bought Tittenhurst near Sunninghill, a house now occupied by Ringo Starr. Harriett Driver had married Anthony Scarisbrick in 1852 so she did not move to the new house. Matilda Holloway, however, moved with her brother. Into the household also came Mary Ann Driver, Mrs. Holloway's unmarried sister, 'Polly' to the family; her married sister, Sarah Martin, known as 'Sally', and Sally's husband, George. For such a large household the staff was minimal: a cook, a housemaid, a parlourmaid, and a coachman.

In 1869 Holloway bought Broomfield Park near Sunningdale from Captain³ Dingwall. He met Dingwall in a train on the way to London. He made him an offer for his house and all its contents, which was accepted. The sale included Dingwall's collection of pictures which Holloway kept intact and placed in his billiard room at Tittenhurst. The pictures included Bellini's 'St. Francis in Ecstasy', now in the Frick collection in New York, and works by Van Dyck, Rubens, David and Terborch. Holloway pulled down Broomfield Park and built a new house which he later sold for £20,000. This in its time has now gone although the entrance lodge remains as an estate agent's office and the view of the first floor over some shops in Chobham Road, Sunningdale, reveals Victorian minarets which are 'pure Holloway'.

In the 1860s, the public was concerned about alleged mismanagement of asylums and there was a view that insanity was increasing. On 19 April 1861, Holloway attended a meeting on the subject with Lord Shaftesbury in the chair. In 1864, Bowen-May wrote to Lord Shaftesbury:

'A gentleman who is possessed of nearly a quarter of a million is about to make a settlement of it for charitable uses.'

Holloway acquired land in the Virginia Water area presumably on a speculative basis, after he moved into Tittenhurst. In 1871, he contemplated the building of a Sanatorium for the 'mentally ill of the middle class'. The poor, he concluded, were adequately catered for in public asylums, the rich in private accommodation.

In July 1873, through Mr. Roger Ekyn M.P., Holloway was invited to meet Mr. & Mrs. Gladstone whom he found 'very pleasant'. Later there was a communication from Gladstone 'of a private nature'. What this was about one can only surmise. Was it something connected with the Sanatorium or did Gladstone seek Holloway's financial support for political reasons?

Holloway decided that the sanatorium building must be visible from a railway and the site at Virginia Water was admirably suited. The site at the north end of the old manor of Trotsworth had its own water supply from an artesian well, possibly the same supply mentioned by Aubrey⁴.

Holloway took advice from every authority; he even had a visit from Dr. Orange of Broadmoor. He enquired into the prices of bricks, investigated heating by gas (gas saves 15% on the cost of mutton and 15% on the cost of beef⁵), German and Norwegian stoves and sewage processes. On 25 September 1877, he invited his two

sisters-in-law, Polly and Sally, for an afternoon drive in the 'sociable'. They went to 'an enclosure of about 19 acres near the priory of Old Windsor which receives all the sewage of the castle, Frogmore and all the houses round about. It is not deodourized but runs on the ground from a tank'. Holloway ends his diary entry with: 'It has been a beautiful day, wind north west'. The comments of Polly and Sally are not recorded! The system, attributed to Riply of Bracknell, did not receive the Holloway seal of approval. His next day's entry reads: 'I went this afternoon to see Riply & Stevens system of drainage, which I consider a perfect failure.'

Towards the end of his life Holloway was not able to spend time watching his sanatorium being built. The lot of being, in effect, 'clerk of works' fell to his brother-in-law, George Martin. George was despatched by Holloway to look at particular items or operations: 'George went to the Sanatorium by the usual train' is a frequent entry in the Holloway diaries. After Holloway's death, Martin assumed the name of Martin-Holloway apparently at Holloway's request. Henry Driver, Holloway's other brother-in-law, similarly styled himself Driver-Holloway. For his work in the college and the Sanatorium, Queen Victoria knighted George Martin-Holloway at an investiture at Osborne.

The central buildings of the Sanatorium (architect W.H.Crossland) are modelled on the Cloth Hall at Ypres in Belgium which Holloway probably visited during his sojourn at Roubaix. The outstanding features are the somewhat grotesque entrance (once used in a Dracula film) and the superb dining hall. The recreational hall above has a hammer-beam roof. Both rooms are decorated with oil paintings put directly onto the walls, some said to have been done by students from the Kensington School of Art.

Jane Holloway died in 1875 and, as a memorial to her, Thomas Holloway decided to endow a college for women. It was, however, to be 'for the education of young women of the upper middle class and not as a training place for governesses. Every young lady is to have two rooms, a bedroom looking onto the quadrangle and a study looking out. Special attention is to be paid to music and the arts.' The college is sited on the 93 acres of the Mount Lee Estate on Egham Hill, which Holloway had acquired. It was formerly the property of the Elwell family. The college consists of a double quadrangle, 550 feet by 376 feet, with two lofty parallel blocks. The design is French Renaissance and is modelled on the Chateau de Chambord in France. W.H.Crossland was the architect; he and his assistants spent many months in France and Belgium taking measurements and working out designs. £250,000 was spent on building the Sanatorium and £750,000 on the College.

It is only a fluke that Egham failed to acquire another railway station. Holloway tried to purchase the land between the College and the railway line from Lord Justice Field and Holloway intended to build a station to serve the College at roughly the site of the Rusham level crossing; but Field would not sell.

Holloway decided that the College should have a collection of pictures and in May 1881 started buying them at auctions using the pseudonym of 'Thomas'. For a time the pictures were hung in the Sanatorium until the College was ready. The pictures include Frith's 'Railway Station' and works by Landseer, Gainsborough and Constable and may be viewed by appointment⁶.

The building of the Royal Holloway College and Holloway Sanatorium had a profound effect on Englefield Green and Virginia Water. In the former, workmen's

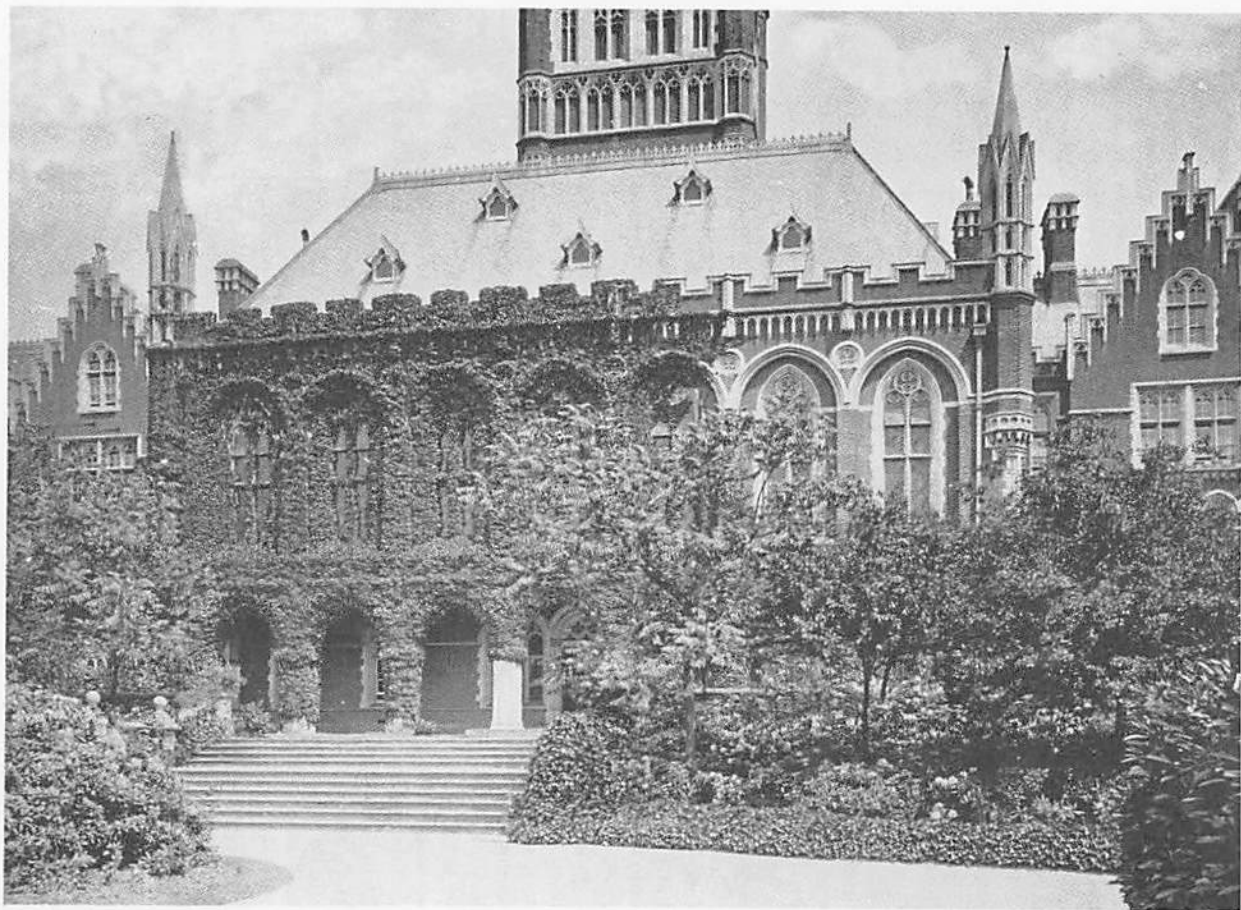


Fig. 2. The Sanatorium, showing the front entrance, c. 1900.



Fig. 3. The Sanatorium, showing the recreation hall, c.1900.

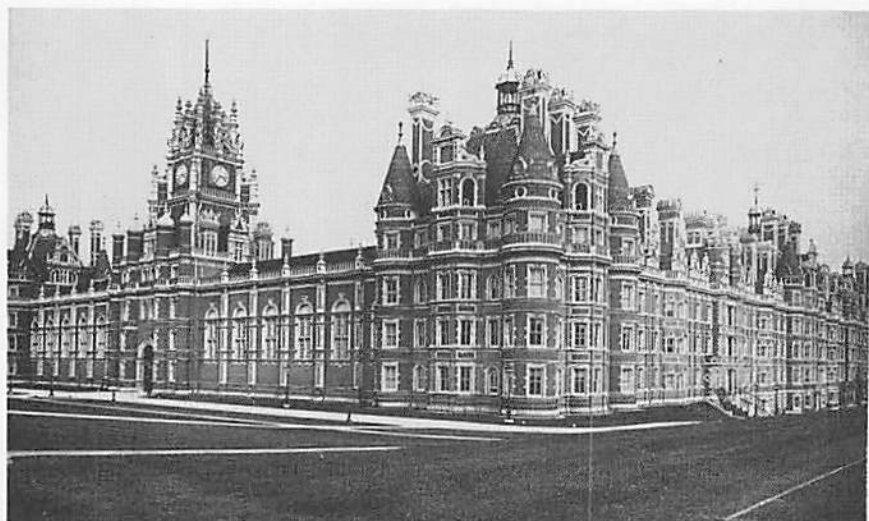


Fig. 4. Royal Holloway College, the exterior from the south-west shortly after completion. All of the figures are reproduced by kind permission of the Egham Museum Trust.

houses were built in the old sand pits and a suburb called 'New Egham'⁷ appeared. At the latter, a board school was built in 1896 to take the increased number of pupils that could not be accommodated at Christchurch National School.

Unfortunately, Holloway was not able to see the opening of either of his great buildings. He died on Boxing Day 1883. The Sanatorium was opened on 15 June 1885 by the Prince and Princess of Wales. Queen Victoria herself opened the College on 30 June 1886. Banners appeared for the occasion at Englefield Green 'Ever Welcome to Egham', 'Egham's Devotion and Loyalty follow in your Train'. 'She has wrought her people lasting government.' On both occasions, the London & South Western Railway ran special trains and for the opening of the Sanatorium 718 free railway tickets were issued. Spiers and Pond did the catering which cost £1500, the floral decorations costing £500.

What kind of man was Holloway himself? He undoubtedly had the tremendous energy of the self-made man, a man who would like to have been an academic, a man who could undoubtedly tell a good story and a successful salesman. He was also vain. In every census return he gave the enumerator an age several years younger than his real one. Apart from his sister Matilda who died at Tittenhurst in 1867, Holloway would appear to have neglected his own family in favour of his wife's, the Drivers. About his brother Henry little is known. He apparently sold Thomas's products at a shop at 210 The Strand in the 1850s which resulted in Thomas taking out an injunction against him. One of his sisters, Mrs. Caroline Young, disputed his will, proved 16 January 1884, under which he left everything at Tittenhurst, money at the

bank and the household premises at 78 New Oxford Street to his sister-in-law, Miss Mary Ann Driver. The case was heard on 27 May 1887 but the jury found against Mrs. Young. Her son William Henry tried unsuccessfully again in 1894. Mary Ann Driver died at Tittenhurst in 1900.

Holloway, whose motto was 'Nil Desperandum', lies with his wife Jane, his sister Matilda and his sister-in-law, Mary Ann Driver, in Sunninghill churchyard, not far from Tittenhurst. Sadly the Sanatorium closed in 1981, the Area Health Authority, who had taken it over, moving the patients to a new wing at St. Peter's Hospital Chertsey. The building, although listed, is deteriorating and it is hoped that soon some new use will be found for it.

The College prospers. It became part of London University in 1900, through a special Act of Parliament⁸. Starting with 28 students, it now has, with the incorporation of Bedford College from London, some three to four thousand.

The number of Holloway stories are legion. Many have undoubtedly been fabricated or added to over the years. Every attempt was made in writing the article to check the authenticity of those included. The work is continuing. The author would like to thank Mrs. Caroline Bingham, and also Mrs. Pat New, Assistant Secretary, Royal Holloway College. He has consulted various Holloway papers in the Surrey Record Office, Egham Museum and Royal Holloway College.

NOTES AND REFERENCES

- ¹. Born Eliza Gilbert in Ireland, she became a dancer and caused a political sensation by becoming the mistress of King Ludwig I of Bavaria in 1846.
- ². The Dickens House Museum have heard the story but cannot confirm it.
- ³. What Dingwall was a Captain of remains to be discovered. His name has not been found in any Army or Navy lists of appropriate date.
- ⁴. 'In the west of this parish by the side of a hill near Trotsworth is a medicinal spring less than a quart whereof purges well' (Vol.3,p.166)
- ⁵. Presumably on the cost of cooking compared with coal.
- ⁶. They are fully catalogued in Jeannie Chapel, *Victorian Taste*, Zwemmer (1982).
- ⁷. The name is no longer used. The whole area is now called 'Englefield Green'.
- ⁸. No attempt has been made to give a detailed history of the College. This is currently being written by Caroline Bingham and will be published at the end of 1986.

MATHEMATICAL TILES IN SURREY—A Supplementary Note

Maurice Exwood and Ian J. West

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Since the author's paper in *Surrey History* (Vol. II, No. 5, 1983, p. 199) listing 42 buildings where mathematical tiles were used in Surrey, only four further locations have been reported. The details are below, using the same abbreviations as in the original paper:

Address	G.R.	Colour	Bond	Remarks
ABINGER HAMMER <i>Abinger Arms</i> (found by Victoria Houghton)	TQ 095476	R	F	Lower first floor, west side of building at rear of present public house
EWELL Hollycroft, Epsom Road	TQ 217618	O(P)	F	On parapet above first-floor windows on main facade
GODALMING <i>King's Arms Hotel</i> , High Street (found by Charles Smith)	SU 972438	R	F	First floor, lower flank of most northerly part of hotel
LEATHERHEAD The Cottage 53 Church Street	TQ 167562	O	F	Small area on R.H. First floor, flank wall

The original schedule was based on the County of Surrey as it became in 1974, when large areas were absorbed by the G.L.C. If we go back to the larger county, extending up to London Bridge, prior to the setting-up of the L.C.C. in 1878, a few more locations can be included. Those known to the authors are:

Address	G.R.	Colour	Bond	Remarks
CHEAM The Rectory, 15 Malden Road	TQ 242639	R	F	On older timber-framed west part to match later brick east front. Recently retiled
COULSDON Coulston Court (now called Byrons)	TQ 309592	R	F	On first floor, right-hand side of west facade

Address	G.R.	Colour	Bond	Remarks
<i>CROYDON</i>				
13 Crown Hill	TQ 323655	R	F	On jettied upper storey at rear, facing Bell Hill
33-5 Surrey Street	TQ 323654	R	F	Upper storey, front
D Railway Arms North End (south corner of Church Path)	TQ 321659	—	F	Quoted by Clifton-Taylor as being retiled in 1950
D 28-30 Park Lane	TQ 325657	—	—	Demolished c. 1959 Demolished in 1960s to make way for St George's House

Neil Burton and Frank Kelsall refer to J. Ollis Pelton, *Relics of Old Croydon*, (1891), as showing many buildings with mathematical tile facings (see ref. 8 of original paper).

From time to time, the authors' attention has been drawn to bits of mathematical tile found with other builders debris. One such case is reported in the *S.A.S. Bulletin* (Dec. 1984, p. 2). These finds have not been included in the schedules, because no one can be sure from where they come. No doubt more locations will be found and the authors would welcome further information.

MINING AND QUARRYING IN SURREY: Accidents and Regulations before 1900

Paul W. Sowan

Croydon Natural History and Scientific Society and Subterranea Britannica

Extractive Industry in the South-East

The least curious of travellers through the south-east is soon aware that opencast mineral working has been, and in places still is, an important industry. Even now, there are extensive openworks for chalk, clay, fullers earth, sand and gravel – either still active or recently so. Closer inspection reveals hundreds of other, smaller and usually older pits and quarries now variously fallen-in, flooded, overgrown, filled-up, built in or built over. Many of these were worked casually as needs dictated by individual landowners or tenants in the days before canals and railways. Far less obvious are the also surprisingly numerous underground workings. These include underground stone quarries^{1,2}; small underground quarries for hard chalk for use as ashlar or freestone³; mines for chalk for agricultural use or lime for mortar⁴; flint mines⁵; sand mines⁶; fullers earth mines⁷; and bell-pits for clay iron ore for the Wealden iron industry⁸. All of these smaller and older underground workings (except one early 19th century stone quarry at Merstham) lacked any artificial means of drainage, and so were all of strictly shallow depth dictated by thicknesses, outcrops, inclinations and porosities of the beds relative to the local water-table. Only two sets of truly deep mines have been made in the south-east, calling for efficient and powerful pumping and winding machinery – the Sussex gypsum mines, and those in the deep Kent coal-field. Whereas the coal-mines, established from about 1895, are outside the scope of this paper, the making of those for gypsum around Brightling and Mountfield from the mid-1870s had an important bearing on mine regulation in Surrey and Kent during the remainder of the century.

Quarrying and mining are obviously dangerous occupations. However, when we recall that even the exceptionally hazardous business of winning coal underground (with the constant risk of bad air, fire, and explosion) was not subject to effective safety legislation until well into the 19th century, we may be less than surprised to learn that the operation of mines and underground quarries in the south-east was not subjected to statutorily backed official inspection until as late as 1886, although the Metalliferous Mines Regulation Act, 1872⁹ applied to them; and that openworks over 20ft deep were not subject to statutory inspection and regulation until the coming into force of the Quarries Act, 1894¹⁰.

Early specifically mining legislation, of about the 1830s, applied only to coal and ironstone workings, of which by then we had none at work (the Ashburnham furnace was reputedly the last of the Wealden iron furnaces to be extinguished, in 1811). A Mining Records Office was established about 1840, and shortly afterwards was operated as a part of the Geological Survey by Robert Hunt, initially, Hunt concentrated on the collection and publication of a Mineral Statistics series. He appears to have had little assistance and little or no statutory power to demand information from mine operators. In the circumstances, it is agreeably surprising to find some brief notes on silver-sand mines at Reigate, and underground quarries at Gatton, in the 1850s¹¹. The Metalliferous Mines Regulation Bill as first drafted was as its name implies primarily concerned with the main metalliferous mining districts of Britain. There were also however in some of those districts some very large and hazardous underground workings for limestone and slate. It seems, as rather an afterthought, the Act as passed, and despite its title, applied to all underground mineral workings other than those for coal and ironstone already covered. H. M. Inspectors of Mines had initially been assigned to the main coal and ironstone districts and, subsequently, to the metalliferous mining areas as well. Bureaucratic tidiness however led to every county in Britain being assigned to one or another of the established inspection districts. Kent, Surrey, Sussex and Middlesex were initially made a part of the Manchester & Ireland district, under Joseph Dickinson. Dickinson, who had been appointed under the earlier legislation and was getting on in years by 1872, took little or no interest in these late additions to his extensive territory. Indeed, in the early days of mining regulation, emphasis was quite properly placed on the exceptionally hazardous coal and metal mines. There has rarely or never been any serious risk of fire, explosion or bad air in the older south-eastern mines; explosives, powered machinery, and deep shafts were unknown until the opening of the Sub-Wealden Gypsum Mine; and we have never had anything to compare with the hideously dangerous, and deep, precipitous worked-out slopes with their 'deads' stacked on rotting wooden stemples and stags, so characteristic of metal mines. However, geological knowledge had advanced by leaps and bounds since 1800. The Geological Society had been founded in 1807; William Smith's pioneer geological maps had been published (that for Surrey in 1821); and the Geological Survey had been operating since 1837. It was realised by the 1870s that there was a real possibility of coal being found at depth below the younger rocks of south-east England. The logical place for an exploratory borehole, on the small inlet of the Weald's oldest (Furbeckian) beds near Mountfield was selected, and the Sub-Wealden Borehole project commenced¹². By 1876 at 1905 the presence of massive beds of gypsum had been proved; and the Sub-Wealden Gypsum Company Limited had commenced operations¹³. This was the south-east's first really deep mine, with a shaft of about 130 feet, extending well below the water-table and requiring continuous pumping; it could not be ignored!

Dickinson's reports thus came to incorporate data relating to the Sussex mine, but it was not until 1886 that his annual report recognised the existence of the firestone quarries and hearthstone mines in Surrey, although he admitted these had existed since long before any of the mining laws¹⁴. Reorganisation of the mining inspection districts led to the south-eastern counties being re-allocated, about 1890, to the North Wales & Isle of Man & District, under Clement Le Neve Foster, then an ambitious and conscientious young man at the start of what was to prove a brilliant career as a mining engineer. For the remainder of the 19th century, his published lists of mines, reports, and statistics were increasingly models of completeness and accuracy. They contain, as required by the Act, information on the names and locations (approximate) of mines; names and addresses of owners and agents; nature, output and value of minerals raised; and details of reported accidents, and of prosecutions and convictions and penalties, for contravening the Act. On the coming into force of the Quarries Act, similar information was published for openworks exceeding 20 feet in depth. A further provision in the 1872 Act was that mine operators should deposit plans of mines, on their abandonment, in the Mining Records Office. Unfortunately this applied only to concerns employing 12 or more men underground – which the south-eastern mines rarely if ever did, especially in the years of running-down to closure! In fact, the MRO, now operated within the Department of Energy, contains only one such deposited plan for south-east England, that for the Marden (otherwise Winders Hill) mine at Godstone¹⁵. After the opening up of the Kent coal-field, the inspection districts were again revised – but that is another story.

Falls of Ground : Early Warnings

The hazards of tunnelling into Surrey's Folkestone Sand were demonstrated at least as early as the 17th century, when a hypogeum being constructed for Charles Howard as an ornamental or curious feature of his Deepdene estate at Dorking fell in. The work was to have been:

'a passage through the Hill, which was intended to let in the prospect of the Vale of Sussex from the South; but, the earth having fallen in one morning while his labourers were absent at breakfast, the design, which was hereby obstructed for the present, was thenceforth set aside'¹⁶

This was one of the earlier of a number of lucky escapes from falls of the Folkestone Sand. There are places, too, in the underground firestone quarries in the Upper Greensand at Chaldon and Merstham where it is clear that roof falls have occurred, and been cleared, in main drifts during the quarries' active productive lives – these would therefore have happened at various dates up to about 1800. Nothing of these falls, however, is documented.

Underground Firestone and Chalk Quarries

The word quarry, in this paper, is used in its original sense of a working, whether opencast or underground, for freestone or dimension-stone for building. Surrey's quarries, in this restricted sense, were all underground – in the Chalk at Guildford, Shalford and Mickleham; and in the Upper Greensand principally, and anciently, at Chaldon, Merstham and Reigate (later at Gatton, Godstone and other parishes also). What few documentary records there are for these quarries, however, fail to mention accidents, and the various parish records are equally silent, although accidents there must have been. Even the foolhardy driving of a drainage adit upwards through the Gault Clay at Merstham in 1807-09¹⁷ to let water from a flooded stone quarry appears to have been completed without mishap. The same sources tell of the adit falling in within a few years, and subsequently being 'cleared' (though whether by design or by a sudden outrush of water under pressure is not clear). It subsequently fell in again and is still blocked. Sudden cloudbursts can dramatically affect our local mines, and that of Derby Day 1911 reopened a number of the Chaldon and Merstham workings. It is still possible the Merstham adit may suddenly yield to pressure and disgorge water, mud, rocks and masonry onto the M25! Floodwater, which certainly affected the firestone quarries/hearthstone mines of Brockham, Betchworth, Reigate (Colley Hill), Merstham (Quarry Dean), Chaldon (Ockley Wood – Bedlams Bank) and

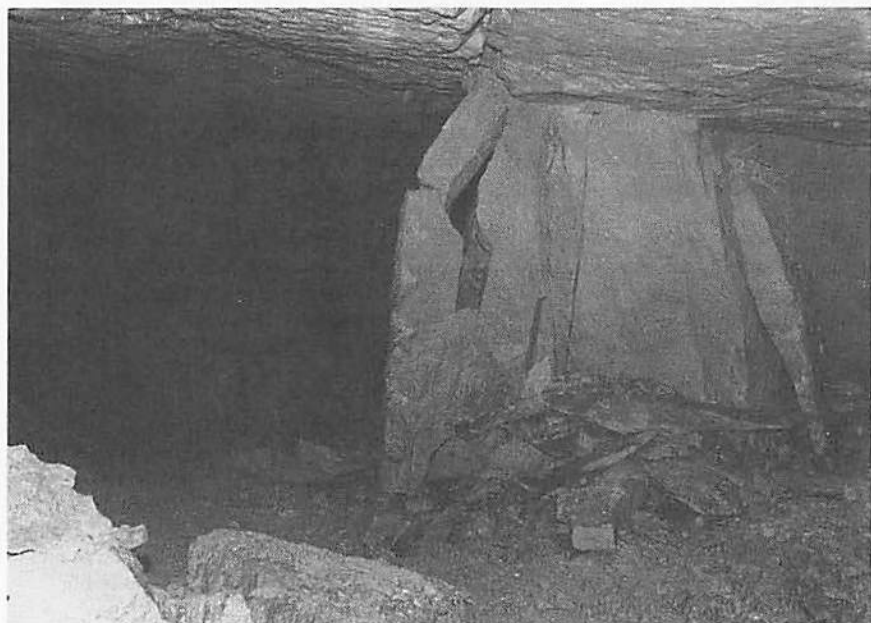


Fig. 1. Pressure flaking of an unworked stone pillar in the Ockley Wood/Bedlams Bank mine at Chaldon.

Godstone Hill is not a direct hazard – one can unsuspectingly walk down a drift into very still and virtually invisible water, but would suffer nothing worse than wet socks. But it does weaken and hasten the collapse of the stone pillars left to support the quarry ceiling. Major roof-falls tend to follow the withdrawal of floodwater, as has happened extensively under Godstone Hill where often as much as two-thirds of the quarry has been filled with water and where, now, the accessible parts are severely limited.

Sand Mines

The Folkestone Sand has been excavated for cellars, and systematically mined (for, variously, horticultural uses, sanding floors, glass-making, mortar, etc) at numerous places around the Weald – especially at Pulborough (Sussex); Puttenham, Dorking, Reigate and Godstone (Surrey); and Hollingbourne (Kent). Probably there are cellars, tunnels and small workings at many of the intervening villages around the outcrop as well – the rule in England appears to have been that wherever tunnels could easily be dug, they have been! A similar state of affairs applied along the Thanet Sand outcrop from Guildford towards Croydon, the best-known tunnel system being that at Beddington¹⁸. Some of the mines worked at London Road in Reigate, on an irregular three-dimensional plan, have yielded clay pipes and pottery from at least as early as the 16th century. As these mines, and others worked under the Castle mound from the rear of premises in the High Street, inevitably extended below buildings in the town centre, several mishaps are recorded. One mine under the *Red Cross Inn* was extended until:

'in 1859, the front wall of a row of adjoining cottages fell out, about seven o'clock one morning, much to the astonishment of the occupants who found themselves exposed to public view at that inconvenient hour'¹⁹

An apparently alternative rendering with an illustration of the same incident has the year as 1860, and refers to the collapse of a 'cave' behind the *Red Cross Inn* causing the partial collapse of five cottages, 'although all the occupants escaped with their lives'²⁰. That the focus of Reigate's silver-sand mining had by the 1860s shifted eastwards in and beyond the Castle mound is witnessed by a further account of these same workings:

'In the London-road, Reigate town, under certain cottages recently built by Councillor A.B. Apted, there are some highly interesting specimens of the old caves. They were originally discovered about thirty years ago by a man who, without premeditation and against his will, found his way into them. He was a workman, and when engaged in cutting a trench for a new drain, sent his pick through the crown of an unsuspected cave. He must have been toiling in a most energetic and praiseworthy manner, for with a single blow he made a hole big enough for himself to follow the pick...'²¹

The tunnel under the Castle mound at Reigate made (without reported mishap) through the Folkestone Sand in 1823-24 appears to have claim to be England's

earliest road tunnel. Within it there are sealed entrances to further sand-mines on both east and west sides – presumably post-dating the tunnel. The eastern series appear to have had an uneventful history; not so those on the west:

'As the sand is hollowed out, pillars are left to bear up the soil above. The supports of a cave that branches off from the Tunnel were too much encroached upon, and during the summer of 1858, a subsidence took place, which caused the circular pit in the field next to the Castle Court. An opportune shower drove away a party of young cricketers from the spot, when the earth sank suddenly with such a rending sound as is given out by the tearing down of a large bough'²²

When much of the centre of Reigate was placed on the market in 1921, the Sale Catalogue represented the numerous sand workings as an advantageous feature of many of the properties, speaking of 'the famous Reigate caves ... providing vast storage accommodation', although on a subsequent page and in smaller type we find that:

'There are a number of sand caves which had old entrances from the gardens of the properties on the north side of the High Street, but the majority of these entrances were blocked up during the [1914-18] War by order of the Military Authorities. The caves are believed to extend under the Castle grounds, but no accurate plan appears to exist by which their extent or position may be definitely fixed, and as with the drainage system, all properties will be sold subject to such easements as may exist, and the vendor shall not be required to define any such rights, easements, etc.'

A typical entry relating to numbers 8 and 10 High Street, reads:

'There is a Sand Cave under these premises, a portion of which, below the garden, fell in some years ago. This cave is believed to extend under a portion of numbers 12, 14, and 16 High Street'²³

The author has contributed a detailed review of what is known of these and other sand mines in Reigate elsewhere²⁴.

Chalk Mines

Whereas, as already mentioned, Surrey has some underground chalk quarries, it is to Kent that we have to turn to find chalk mines, made for chalk for agricultural use, lime burning and brick-making. In addition to the well-preserved and well-known Chislehurst 'caves' (largely 18th - 19th century chalk mines) there were numerous chalk mines developed below brickyards scattered through north Kent from Woolwich to Strood near Rochester. These mines, made and operated so recently as 1896-1920, were a convenient source of the chalk required for making London 'stock' bricks, taken from below the overlying Tertiary brickearths and clays. Whereas in Surrey the numerous underground workings have caused few major problems, these

Kentish chalk mines, largely as a result of landowners', operators' and local authorities' unwillingness to accept responsibility for proper surveying, sealing, periodic inspection and occasional remedial support work as required, have resulted in extensive damage to property built (presumably unknowingly) over them. Thus extensive damage to properties at Plumstead resulted in the 1940s and 1950s²⁵ from mines operated as recently as 1920! An illustration and further account has been provided by Down²⁶. At Strood, in 1967, a Mrs. J. Thompson was lost without trace when a shaft opened up by her home in West Street; despite extensive investigation²⁷, it never was established whether the shaft was connected with the Frindsbury Mine known from entries in H.M. Inspectors' Lists of Mines to have operated 1896-1905, and again in 1909, or had some other explanation. At least the mines already mentioned do appear in the official lists; many more did not, as for example one (just as recently worked) rediscovered at Dartford in 1980²⁸. As these late sub-brickyard chalk mines are numerous, widely distributed (examples are known from Norfolk, Suffolk, Berkshire and Middlesex, at least), often had deep shafts (two in Middlesex are about 60 and 100 ft), and were often worked unbeknown to the Inspectorate of Mines, it is not impossible that some may be found in Surrey – town-edge brickfields of the late 19th century worked on relatively thin brickearths overlying chalk should be examined closely!

The Sub-Wealden Gypsum Mine

Willett²⁹ has placed on record the history of the Sub-Wealden boreholes of 1872 and subsequent years, in the course of which a depth of 1,905 ft was reached. A far thicker succession of Jurassic strata than had been expected was proved, and no coal found. The Sub-Wealden Gypsum Company Limited commenced operations in or about 1875, and by 1885 employed about 30 men extracting and processing gypsum from a main shaft 125 ft deep, with an extension to a lower bed at 145 ft not then in use. As, technically, a true deep mine, this working falls outside the scope of this paper. Its importance, as already indicated, lay in its drawing attention to the numerous shallow mines already existing in south-east England. Its history has been described by Kemp and Lewis³⁰.

Sussex Limestone Mines

On 29 September 1821, the famous amateur geologist and discoverer of the *Iguanodon*, Gideon Algernon Mantell, of Lewes, visited the Ashburton estate limeworks³¹, and reported, inter alia, that 'the limestone was extracted by means of shafts sunk to a depth of 90 feet: consequently we could not obtain a sight of the stratification'. It may have been these or similar excavations which Dickinson described in his report for 1885:

'In addition to the gypsum there are limestones and calciferous sandstones being worked by shallow pits, which, as they are worked only in summer and not by artificial light, can scarcely be called mines. Ironstone for smelting was formerly worked in the neighbourhood, partly by open work and partly by shallow pits, but that ceased some years ago...'³²

Little is on record concerning these earlier Sussex mines, and on that score alone they are worth mentioning in the hope that some research may be stimulated.

Fullers Earth Mines

Older descriptions of the fullers earth workings at Nutfield and immediately adjacent parts of the old Reigate parish (Copyhold, Chartfield and Shambles, all to the east of modern Redhill) give the impression that they were, like the Sussex limestone workings, 'near-mines' usually workable by daylight, rather than out and out underground drifts. In the 1860s the beds at Nutfield were also being worked for quoinstone, the characteristic but crumbly blue or yellow building-stone seen in and around the village, and it is recorded³³ that true mining was being carried on. The fullers earth has been worked, opencast or underground, continuously ever since. It is in connection with these mines and openworks (the Sussex gypsum mines excepted) that we first find any really detailed official accounts of accidents, thanks to Clement Le Neve Foster's diligence as an Inspector of Mines on taking over responsibility for the south-east. Thus in 1896 the Chartfield and Shambles openworks operators were successfully prosecuted for neglecting to send in returns under the 1894 Quarries Act, and for failing to post up an abstract of the Act at the pits. The following year, proceedings were taken against the owner of Capenor mine 'in order to call attention in that county to the requirement of the Act concerning notification of accidents. The lesson was not taken to heart by all concerned, for the owner of Capenor sand [sic] mine failed to report a fatal accident at his workings.' Ernest F. Akehurst, 18, a labourer, was buried and suffocated by a quantity of loose sand, which slipped down the sloping side of a sand-pit and 'as it was connected with underground workings for sand, it was therefore legally a mine.' James Hudson, as owner, was prosecuted under the 1872 Act, his penalty being ten shillings, with 17s 6d costs, for failure to notify the accident to the Inspector³⁴.

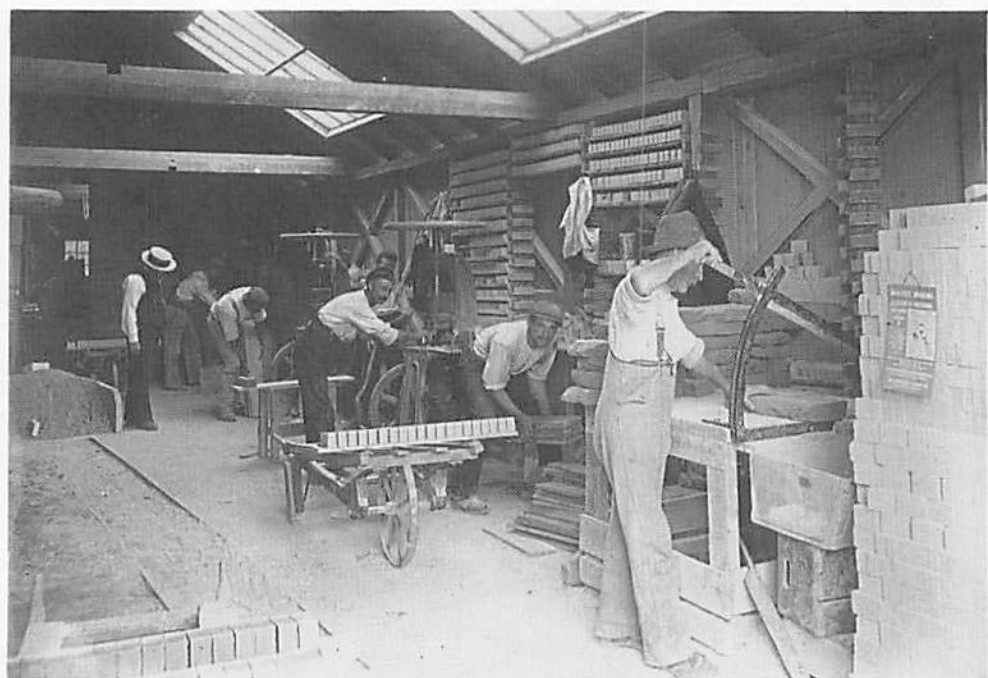
Hearthstone Mines

By the 19th century, Surrey's underground building-stone quarries were in serious decline. Brave (and expensive) attempts to revitalise the Merstham mines were doomed to failure; attempts to supply Gatton stone for the re-building of the Houses of Parliament were (fortunately) unsuccessful; but nevertheless quarries at Gatton, Godstone and Reigate, at least, soldiered on, to supply mainly local requirements for building stone. The quarries, however, found a new lease of life as hearthstone mines – older workings were extended, and entirely new ones were made at Brockham, Betchworth, Reigate, probably at Merstham [though even Foster failed to catch up with Peters' mining operations here], and at Godstone. As already noted, these hearthstone mines (worked in the same beds of Upper Greensand as had formerly yielded the soft, crumbly firestone or Reigate stone for building) first came to official attention in 1886, when Dickinson (op.cit., 14) reported that:

'The roof is generally strong, but at a few places where it is not sound wooden props and couplings are set underneath. The hard roof-stone is about 15 inches



Figs. 2 and 3. The Colley Hill hearthstone mine's surface works at Reigate, date unknown.



in thickness, and over it is a green bed four to five feet in thickness ... The mines are moist with scarcely any dust. The frequent cuttings through, called eyes, together with the crevices in the rock, afford generally good air, and the men look healthy. Plans or maps do not appear to be kept of the workings, and as the number of persons employed does not exceed the specified 12, plans are not imperative under the Metalliferous Mines Act...'

David Pitt & Sons' hearthstone mine at Colley Hill, Reigate, (later worked by the Taylor family and Reigate Mines Ltd.), featured in Foster's report for 1896:

'John Burchell, 26, labourer ... was excavating gravel, by undermining it, in an open quarry adjoining the mine, when some of the working face, only 9 feet high, fell upon him and killed him on the spot ... This accident illustrates the danger of the undermining method, though it is true that the amount of undercutting did not, as a rule, exceed a foot ...

The owners ... were summoned for not reporting a fatal accident. So much neglect has occurred at quarries in the south-eastern counties with regard to the notification of accidents, that I thought it desirable to call special attention to the Acts of Parliament by a prosecution. It is true that in this case the accident took place at what it legally a 'mine', but as it lies in the midst of a quarry district, it served my purpose. I did not press the case against the owners, for I believe they sinned mainly from ignorance. Still I cannot relieve them from the reproach of carelessness, as one of my assistants had visited the mine some months before the accident, and had explained to the foreman the requirements of the law.'

David Pitt & Sons were fined 5s 0d, with 16s 6d costs³⁵.

It will be noticed that although several accidents in connection with mines have been mentioned, such deaths and injuries as there were have been in associated openworks. Presumably men are naturally more cautious underground and in the dark, but tend to become happy-go-lucky in open pits. Further details of hearthstone mining accidents, after 1900, reveal a similar pattern – such genuinely underground accidents as are on record are of a relatively minor degree. Thus Albert Henry Butcher, a hearthstone miner at Brockham, suffered a bruised leg when a stone fell from the mine roof; Arnold Harvey, likewise, was pinched between a derailed wagon and the mine wall; and Arthur Clarke, a carter at Brockham, was kicked by a horse³⁶. Even in the hearthstone and firestone mines and quarries, the Upper Greensand being technically a calcareous sandstone, respiratory diseases associated with siliceous materials were not a problem – probably as a result of the mines' generally damp conditions as noted by Dickinson; one of the last men to work underground in Surrey, Ernest Walter Joy, was believed to have contracted silicosis or a similar complaint in the Reigate hearthstone mines, but was found, after his death, to have died from natural causes³⁷.

Openworks

Not surprisingly, in view of the foregoing, Surrey's extractive industrial accidents have more often been above than below ground. For accidents before 1886, we have to rely on such casual accounts as may come to light as those quoted from Reigate, or hope for gleanings from such sources as parish registers. Thus the Merstham registers³⁸ record a number of interesting occurrences at the stone quarries, where George Grundell, 21, labourer at the limeworks, was killed in 1811 as a result of an accident with a steam engine – this would have been a stationary winding-engine for raising stone, probably up an inclined plane from the quarry mouth. The previous year, Thomas Pearce, 24, labourer, was found dead in the well at the limeworks. James Usher, a stranger working in the chalk pits, died aged 28 of inflammation on the lungs in 1808 – presumably this hardly qualifies as an industrial accident! George Weller, quarryman, died at the respectable age of 71 in 1801, but we may wonder about Francis Botten, a quarryman from Godstone (perhaps assisting William Jolliffe develop the quarries on the estate he had purchased in 1788?), who died aged 39 in 1799. Exciting things were happening at Merstham during the first fifteen years of the 19th century, including the building of the Croydon, Merstham and Godstone Railway in 1805; the making of the ill-fated drainage adit in 1807-9 (a remarkable feat, the driving of a half-mile tunnel upwards through Gault Clay under a flooded underground quarry, without recorded mishap); and the commencement of Jolliffe and Banks' civil engineering contracting firm in 1807, and their lease and working of the stone quarries and lime works from 1813. Many years later, the Merstham chalk pits were to be used, on 14 July 1867, for a demonstration of the safe use of dynamite, despite which England refused to allow this explosive to be used until some years later³⁹.

No doubt there were numerous accidents between those recorded so diligently by the Rector at Merstham and those noted towards the end of the century by Foster, but much detective work will be necessary to discover details of them. But the incidents recorded by Foster probably do give a fair sample of the kinds of mishap which occurred, both at the smaller, casually worked pits, and at the larger more ambitious ones where workmen were learning to live with factory conditions, power machinery, and the like. An example of the former class is provided by the deaths of John Mellon, 36, and George Corbett, 58, carters, on 25 January 1896:

“Two labourers met with their death in a trumpery chalk pit near Epsom, which is a little more than 20 feet deep in one part, and therefore comes under the Quarries Act. However, as it was not worked regularly, its existence was unknown to me until I received a telegram from the coroner giving me notice of the inquest on the bodies of two men who had been found buried under a quantity of chalk, which had fallen from the face of the quarry. Though no-one actually witnessed the accident, it was evident to the most careless observer that the fall of chalk had occurred through the working face being undermined. On the morning of the accident, the employer of the two unfortunate men, who lived 7 miles away from the quarry, told them each to take a horse and cart and dig a load of chalk. He gave them 9d apiece to pay to the landowner's agent, a

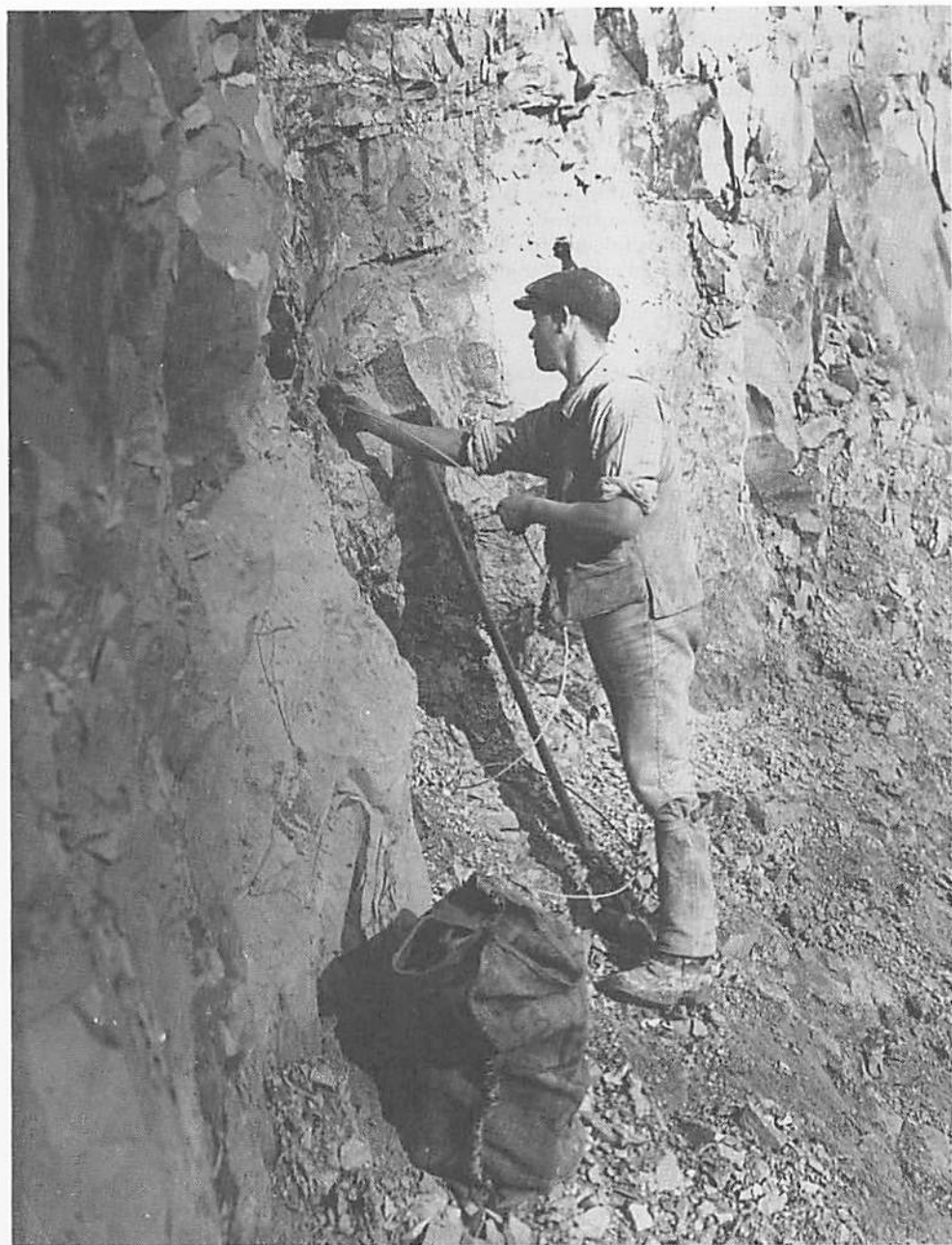


Fig. 4. Worker at the face of the Dorking Greystone Lime Company's chalk pits at Betchworth, c.1918.

woman living on the spot, for anyone was allowed to go and dig a load of chalk on payment of that sum; 2d was then returned to each carter as 'beer money'. I was told that sometimes eight or nine loads would be fetched in a day by different people. On arriving at the pit, the two carters, who were in no way quarrymen, had evidently endeavoured to complete their task with the least amount of trouble, and had hacked out the chalk where it seemed easiest, quite heedless of the risk they were running by dangerous undermining. I found that the face had been undercut considerably ... and quite enough to account for the accident. I must confess I do not like this happy-go-lucky style of quarrying, when inexperienced men are sent to dangerous work without any supervision whatever.'

The pit was the property of the executors of the late E. Catchpole⁴⁰.

Five days earlier, George William Marlow had been injured at the Fairfield gravel pit at Croydon:

'... George William Marlow, 55 years of age, was injured on the 20th January 1896, at the Fairfield Gravel Pit, close to East Croydon station. The casualty came to my knowledge accidentally, and I at once visited the quarry. However, on measuring it carefully, I could not find that it is anywhere more than 19 feet deep; consequently it does not come under the Quarries Act. I was told that Marlow was excavating gravel with a pick-axe at a working face 10 feet high, when some fell on his head and cut it. He went to the hospital, erysipelas supervened, and he died on the 26th of February'⁴¹.

Foster continued with the comment that:

'... any person living in the parish of Limpsfield in Surrey, is allowed by a landowner to dig sand from his sand pit without any payment at all. Other instances might be cited. There will be an advantage in cases of this kind if the landowner can be made responsible for the safe conduct of the quarry, instead of the temporary tenant, because he will probably take means to prevent the employment of inexperienced men...'

1895 was not a good year for the Brockham Brick Company Limited, which company operated, from time to time, brick fields and kilns, hearthstone mines, and chalk pits and lime kilns. On 23 April, Henry Laker, 44, a labourer was standing on the brake of a full-sized railway waggon, allowing it to descend a railway siding with a slight gradient; he fell off and received fatal injuries from being struck by another waggon of the same short train, and died the same day. On 29 October, Eliza Gyle, widow, aged 75, was killed while crossing a private railway belonging to the Company, and was knocked over by an empty railway truck which was being 'braked'

down by workmen; the line lay between the old woman's garden and the cottage in which she lived. Even worse, that same day:

'William Fisher, 37, labourer. Shot by a fellow workman, who pointed a gun at him in a joke, and pulled the trigger, thinking it unloaded ... Some persons may think that a death from a gun accident should not be included in my list, but the Section of the Factory and Workshop Act under which it had to be reported leaves me no choice in the matter. Besides, in this particular case, the gun was an appliance for factory purposes, as it was fired from time to time into the brick kilns, in order to clear the flues when they had become choked. After firing into one of the kilns, the foreman loaded his gun again, and left it standing in the factory, and some days afterwards one of the workmen happened to see it, lifted it to his shoulder, pointed it at his mate in fun, and pulled the trigger, never dreaming that it was loaded ... For my own part, I do not see the necessity of putting a charge of shot into a gun used for the purpose of ridding a flue from an accumulation of soot; the foreman, however, asserted most positively that shot were desirable in addition to powder'⁴².

In view of these incidents, Foster's 'blitz' on the south-eastern mine and quarry operators the following and succeeding years, as for example at Nutfield and Reigate as already mentioned, is hardly surprising! The following year he made a particular point of inspecting Brockham, and secured convictions on three counts – employing young persons under 18 years of age at night (four prosecutions and convictions, £1 penalty, £4 10s 0d costs); not keeping a register of the young persons employed (5s 0d penalty, £1 1s 0d costs); and employing young persons who had not been medically examined for a certificate of fitness (two convictions, 10s 0d penalty, £1 18s 0d costs). He commented:

'It is surprising to find so much apathy and ignorance displayed by managers concerning the laws with which they should be thoroughly familiar. They post up an abstract of the Act and apparently never trouble their heads to read its provisions. The manager of the Brockham works expressed astonishment when he was told that it was illegal to employ boys in a factory at night, and that the statute prohibits their employment unless they have been duly examined by the certifying surgeon. If a manufacturing company chooses to employ a manager who will not take the trouble to make himself acquainted with the laws of the land, the shareholders must expect to suffer occasionally'⁴³.

In 1900, it was the turn of Bullock's chalk pit, the large openwork still visible in 1981 to the east of Purley railway station:

'The owner of this chalk pit was warned by a notice in 1899, that he was breaking the law in many ways. When I paid a visit to the quarry and works in January 1900, I discovered that he was persisting in his neglect. Fines and costs amounting to £12 18s 6d, to say nothing of his legal expenses, at once brought

about an astonishing alacrity to do everything to my satisfaction. A conviction before magistrates is a safe cure for the 'absent-mindedness' from which so many quarry owners suffer.'

On 3 January that year, indeed, we find that at Alfred Bullock's chalk pit:

'Ernest Dulake, 22, labourer ... While he was at work on the face of the quarry, crowbar in hand, some chalk fell from just above him and knocked him over, causing injuries from which he died on the 15th.'

Bullock was successfully prosecuted on the following counts: neglecting to report death of person injured; neglecting to keep record of examinations of boiler; neglecting to have daily reports made of the condition of the plant &c; not posting up abstract of Act at the quarry; not posting up special rules; not fencing a fly-wheel; not fencing mill-gearing; not fencing dangerous parts of the machinery; employing a child who had not been medically examined for a certificate of fitness; and not posting up an abstract of the Factory and Workshop Act. On each of these counts a penalty of £1 and costs of 5s 6d was levied, except the penultimate one where the costs were instead 9s 0d⁴⁴.

Children are still taught, in school chemistry lessons, how tramps huddling around lime kilns for warmth on winter nights used to be found dead the next day – from carbon dioxide suffocation, or carbon monoxide poisoning. Albert Richards suffered such a fate – although not a tramp, but a 27-year old labourer, at Cliffe Quarry, Kent:

'Albert Richards ... employed at the cement works connected with Cliffe Chalk Quarry, was found dead in a kiln, at which he worked, under circumstances which led the jury to return a verdict of 'suicide during temporary insanity'. The man was poisoned by carbon monoxide given off by the fire in the kiln'⁴⁵.

Three years later:

'A man named Edward Barber, while intoxicated, went to sleep close to a lime-kiln at Dane John Chalk Pit, near Canterbury, and was found dead. He had repeatedly been turned out of the pit by the owner and by his foreman. Though this is the only accident of the kind which has come to my knowledge since quarries have been under my inspection, it is probable that deaths from inhaling the poisonous fumes of lime-kilns are not rare, for I am told that at Clayton, in Sussex, no less than three persons were killed in this manner during the four years which preceded the passing of the Quarries Act. A notice board has now been put up at Clayton to warn persons of the danger of going near the kilns. I fear, however, that the genial warmth of lime-kilns will always be liable to tempt wet and weary tramps to choose their vicinity as a resting-place, in spite of the risk of asphyxiation'⁴⁶.

Besides numerous further examples of accidents from falls of ground, there were of course many others involving persons (some of them drunk!) falling into chalk-pits,

attempting to climb in chalk-pits, being run over by locomotives, being drawn into working machinery, and so forth.

Railway Works and Tunnels

Whether Samuel Richardson, a labourer on the Croydon, Merstham and Godstone Railway, who died at the age of 36 due to 'decline' can be counted an industrial accident is doubtful⁴⁷, but there seems to be no uncertainty about Henry Hoof, whose tombstone in Merstham churchyard records that it is:

'Sacred to the Memory of Mr. Henry Hoof (brother to Tho. & William Hoof Contractors on the London & Brighton Railway Who died 19th of March 1840 aged 50 years Whilst in the execution of the Merstham Tunnel.'

Gray purports to provide further information concerning this accident, though on what authority is not clear, which has interesting implications, if true, for the study of the underground quarries:

'The hillside through which the Merstham tunnel was being dug was riddled with disused mining galleries. On 19 March 1840 one of these was struck by workmen, releasing a flood of water which swept away wooden supports, and caused part of the works to collapse, so that Henry Hoof, a member of the contracting firm, died'⁴⁸.

However, it appears that rather too much may have been read into the gravestone inscription. Hoof's death certificate records that he died of consumption in the sub-district of Horley, attended by one Elizabeth Fox of Nutfield, 'present at the death'!

The construction of the Blechingley tunnel, on the line from Redhill to Tonbridge, in 1840-42, has been described in a previous issue of *Surrey History*⁴⁹, where much is recorded concerning the construction of the tunnel and the geological and groundwater difficulties which had to be overcome, although no comparable record was kept by Simms, who built it, of accidents to the workmen. Two other Surrey railway tunnels suffered from falls of ground, although in both cases apparently without injury to life or limb. The Park Hill tunnel at Croydon on the railway line from Woodside to Selsdon was made in 1881-82 through exceptionally mobile Woolwich and Reading Clays, and much difficulty was experienced in making it, collapses being frequent⁵⁰. And a part of the Beichworth tunnel, through the Folkestone sand on the Dorking to Horsham line, collapsed and interrupted services on 27 July 1887⁵¹. And part of the St. Katherine tunnel south of Guildford collapsed soon after midnight on 23 March 1895. An empty train running from Petersfield was halfway through and ran into the fall at the north end. The leading carriages were damaged, and soon afterwards a second fall buried the engine. Above ground subsidence had occurred some 20 feet from a large private house and the coach-house and stable collapsed into a hole 16 feet deep, killing two horses and destroying four carriages. The second fall toppled a summerhouse into the hole, where a thousand tons of sand had fallen into the tunnel⁵².

The accident was found on subsequent inquiry to be due to:

‘... the action of water which had percolated through from the drains of a house situated on the hill, above the point where the tunnel gave way. It appeared that the water had caused a cavity above the crown of the tunnel, and had, moreover, entirely rotted some timbers which had been improperly built in, instead of being removed when the tunnel was made ... The tunnel was an old one ... built about 1849 ...’⁵³

Recent events and safety considerations for the future

With so many abandoned underground workings, few of them adequately located or surveyed, Surrey’s main safety concern is with sudden collapses of ground. The numerous occurrences of sudden falls of Folkestone Sand give particular point to the survey of the sand mines currently being undertaken on behalf of the authorities at Reigate. Extensive, and expensive, site investigations and remedial measures were put in hand at Merstham when it was discovered that the M23 was planned to cross the most undermined part of the county (the quarry galleries here have an estimated total length of 17 kilometres!). Although small collapses have occurred in and around fields in Gatton, Merstham, and Godstone, these have all occurred in fields and the only damage has been to farm machinery. A mysterious shaft, over 70 feet deep, was discovered at Pebblecombe, near Betchworth, in the 1950s by a person nearly falling down it. It appeared to have been blocked ‘for safety’ by the traditional British method of wedging hawthorn bushes in the top and earthing it over in the hope, presumably, that if ignored and forgotten it would go away! Other short-sighted methods of sealing old mine shafts and drifts often seen in Surrey employ old wooden doors, and rusty corrugated iron. It is self-evidently irresponsible to block mines in such ways, especially if no survey is made and accurate record kept of what land they underlie. Ideally, all such workings should be thoroughly surveyed and recorded, and provision made for properly regulated access by responsible and experienced persons for inspection and research purposes. Under new legislation, too, any subterranean structures used for hibernation by bats must not be blocked up. Surrey’s underground workings have considerable archaeological value and potential, too. Fortunately the medieval quarries at Merstham-Chaldon have survived in a far safer and more stable state than most of the Victorian hearthstone mines – an interesting comment, perhaps, on declining British workmanship?

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