

A HISTORY OF PAPER MAKING IN AND NEAR WINCHCOMBE, GLOUCESTERSHIRE, ENGLAND

by

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Chapter 1.

THE EARLY YEARS AND THE DURHAM FAMILY.

Although some years ago a book was published (ref. 1) on the history of Postlip Mill, and also an article on paper mills in Gloucestershire (2), it is now clear that a great deal of information is available which has not previously been presented in a connected form and also that the history of Postlip Mill, or Mills cannot be treated independently of several other paper mills.

Within a radius of 25 km of Tewkesbury (about 15 miles) there are fifteen paper mills which deserve mention, (see Fig. 1) as well as several others which do not need to concern us. A group of these mills, those at Guns Mills, were dealt with in a recent article (3) and some of the illustrations are repeated here.

The earliest paper mill in the area appears to have been at Stanway, National Grid Reference SP 072323. According to a rent roll of 1635 (4) there was a paper mill there at that date, and later references suggest that it worked as such for most of the 17th and 18th centuries. An 1816 rent roll refers to Paper Mill Farm which is still on the same site. The names of the paper-makers are unknown, but this may have been one of, if not the earliest of the paper mills in Gloucestershire.

It is interesting to note that a little earlier, in 1608, there are recorded (5) two stationers and a cardboard maker in the city of Gloucester, a cardboard maker in English Bicknor, two papermen in Alkington as well as a stationer and three papermen in Tewkesbury. Were these five papermen actual papermakers?

There is a fairly continuous history of mills of one kind or another in Winchcombe from the Domesday Survey onwards. Giles Broadway and others sold to Lord Coventry (6) two water mills called the Tuck Mills or Fulling Mills ... two other water mills called Potteslipp Mills, (2 April 3 Chas.). The Rev. William Lloyd, son of Bishop Lloyd, conveyed land and two mills to

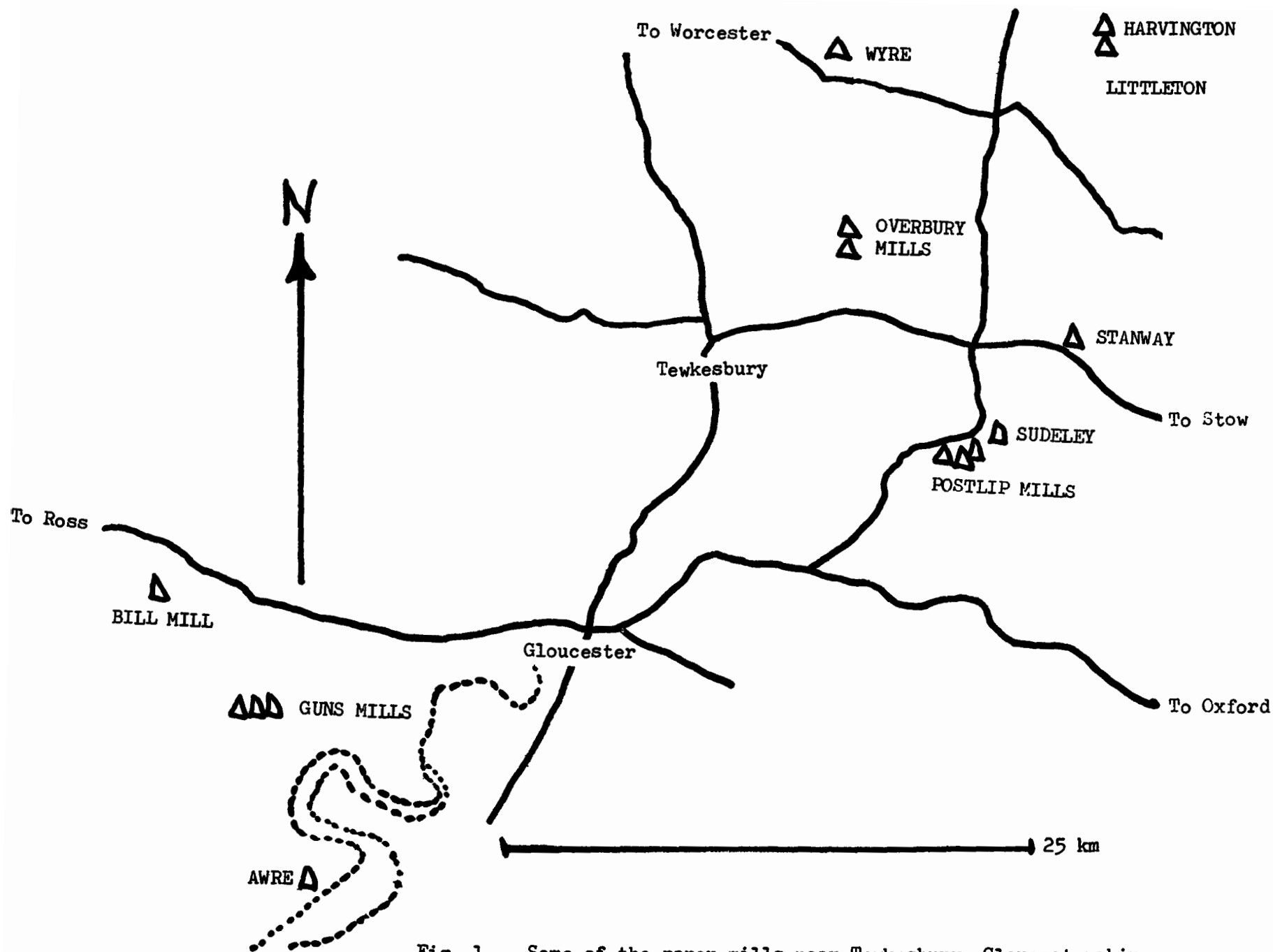
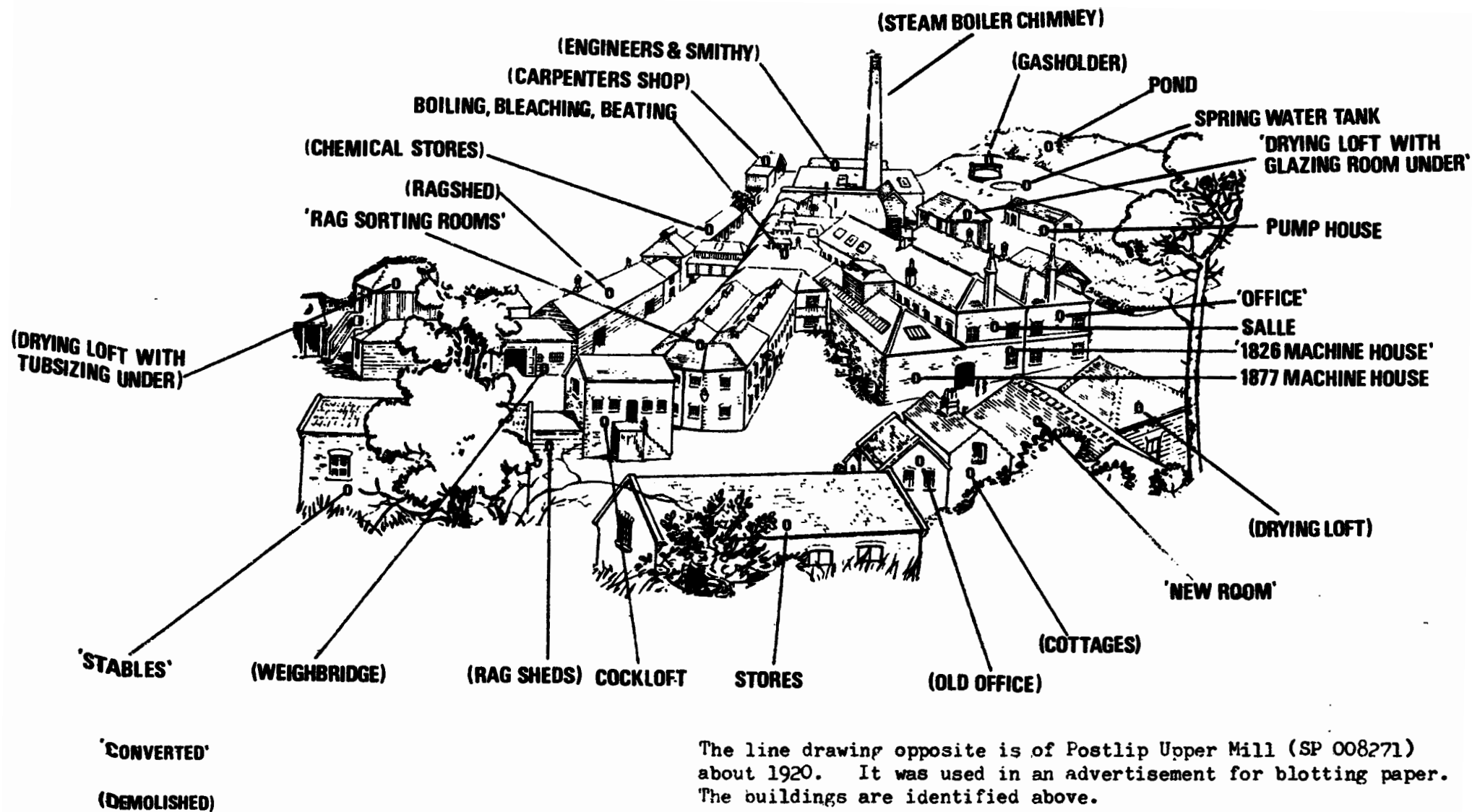
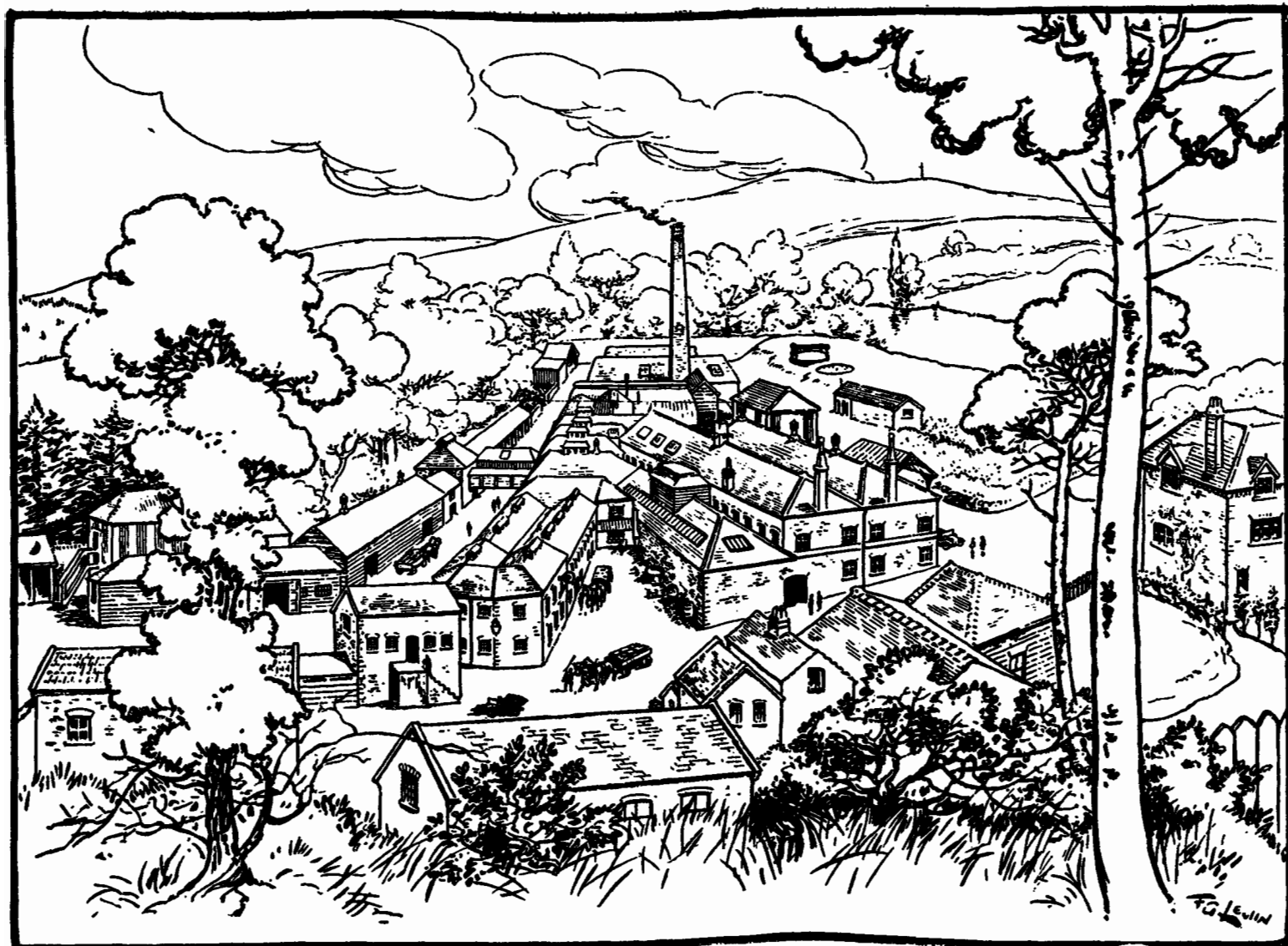


Fig. 1 Some of the paper mills near Tewkesbury, Gloucestershire





William Worth in 1703.

William Mustoe of Postlip Mill, in his will (7) made 8 April 1698, described himself as a miller. Neither his inventory (8) or that of a later William Musto (miller) of Postlip (9) give any indication of paper making, however as late as 1722 a Mr. Musto was at Postlip (10); in 1726 Mr. Durham was paying rates at Coates, possibly for a house, and in 1728 for Upper Mill as well. (11) The Winchcombe parish registers show that William, son of John and Lidia Durham of Coates was buried 20 October 1725. In 1752 (12) John Durham gave expert evidence that he was 'acquainted with the manner and methods ... of manufacture and ... hath been for upwards of 33 years ... and before that was apprentice'. This suggests that John Durham became a papermaker in 1719 after an apprenticeship. Where he was prior to 1719 or between then and 1725 is unknown.

In 1733 it was reported 'the Annual Feast will be kept at Winchcombe ... by Mr. John Durham and Comp. of Postlip Hall, for entertaining all the Servants belonging to the Paper-Works, erected by the said Mr. Durham etc... according to the Yearly usual Custom ...' (13). By 1734 Mr. Durham was paying rates on Upper (SP 008271) and Lower Mills (SP 018277), as well as on the property at Coates (11) and in 1745 on Middle Mill (SP 013272) in addition. At this point it is worth pointing out that Middle Mill and Lower Mill were actually in the hamlet of Coates rather than Postlip and this hamlet extended along the River Isbourne up to Castle Street, so that as late as 1872 Coates Mill was in Castle Street, very near to the Sudeley Mill.

In 1746 accounts of the overseers (11) includes the signature of John Durham. In the 1752 court previously referred to (12) evidence was given by both John Durham and also John Burnham, papermaker of Postlip. References to John Burnham occur at various dates between 1760 and 1780 (14). In his will he described himself as a stationer and left much of his property to his friend William Durham. (15)

Examination of parish registers, wills and other records enable us to build up a family tree for the Durhams (Fig.2) but where the first John Durham came from is not certain, though it may have been from Willersey. He died in 1760 and was followed by his son William Durham. William seems to have had his brother-in-law Thomas Merryman as a partner for a period and in 1763 they jointly insured (16) various buildings etc. describing themselves as 'paper-makers, millers and maltsters'. William appears alone in a later policy (17) and later still he is replaced by a William junior (18) papermaker, although William senior was still alive (19). These fire insurance policies are of particular interest since they detail the buildings involved.

A William Durham of Postlip, papermaker, maltster and farmer, took as partner James Stevens, of the same place, papermaker, by an indenture made 14 February 1783 (20) and there is a later reference (21) to 'one of the most considerable paper manufactories ... Messrs. Durham and Stevens' as well as 'Fine writing paper is made at Postlip, Quenington and Abbenhall'. Perhaps this James Stevens is the J. Stevens who was interested in a paper mill at Rodmore (SO 581027).

In 1796, John Durham of Coates, papermaker, made his will giving 'unto my father William Durham the Elder, late of Postlip ... now of Newnham ... all my personals'. This John died in 1799 and apparently William senior resumed control of the mills since he wrote a letter from Postlip, 17 March 1799 regarding laying mills still to keep down the price of rags.

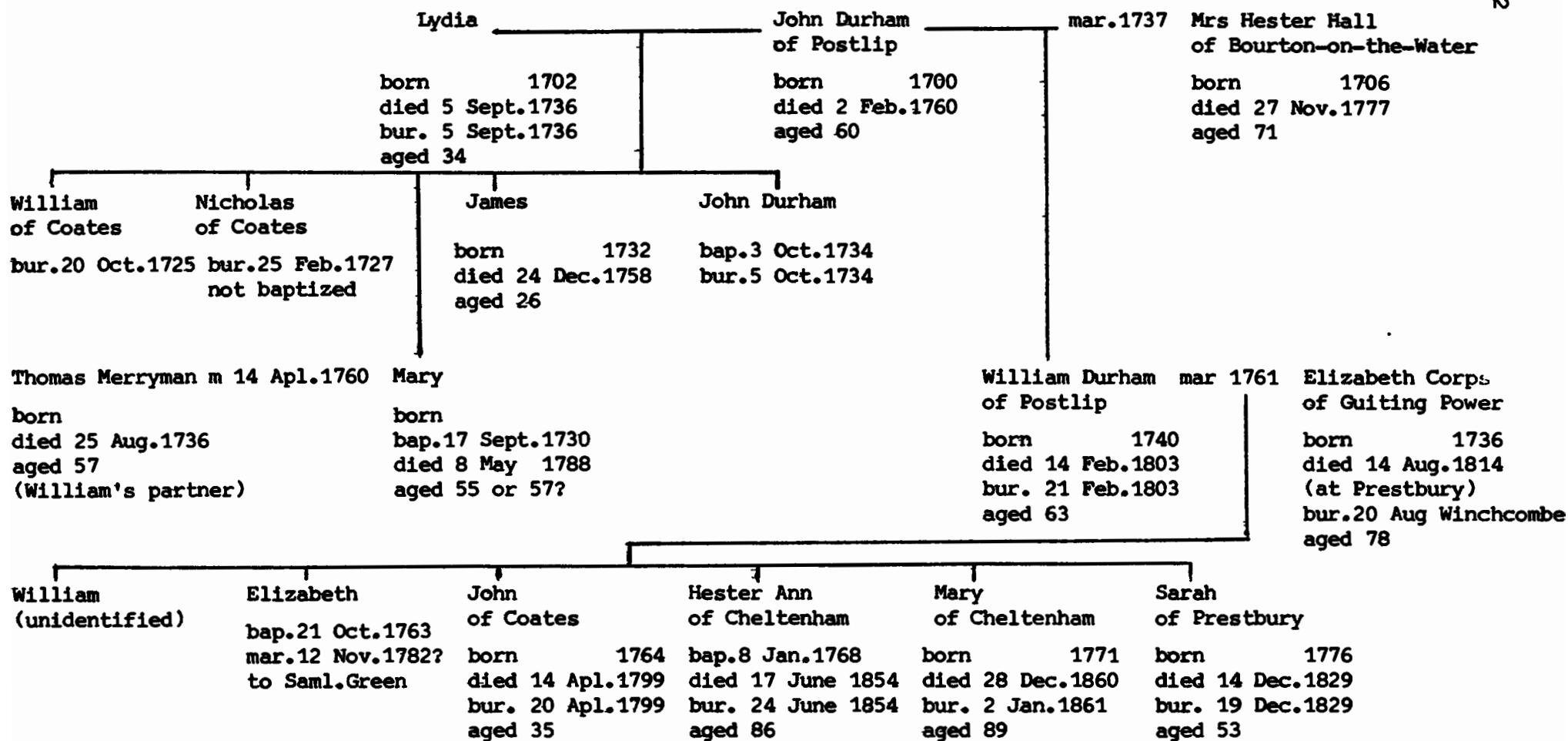


Fig. 2

The Durham family tree 1700 - 1861

Letters of administration (22) granted in 1755 make reference to George Soul, Winchcombe, papermaker, presumably an assistant as was a later Samuel Timbrell in 1791.

In addition to the Upper, Middle and Lower Mills, there was also the Winchcombe Town Mill, and Coates Mill in Castle Street. These appear to have always been corn mills, but not so Sudeley Mill (SP 027281). A reference (23) would appear to suggest that this mill was a paper mill prior to 1705, but this seems to be incorrect. William Heavens, of Sudeley Tenements was described as a miller in 1755 (24) and in 1759 Mrs. Heavens was the tenant of Sudeley Mill then owned by George Pitt (11). At the same time Lord Coventry owned the Upper, Middle and Lower Mills. In 1769 (10) Mr. Durham was the tenant of Sudeley Mill. Isaac Taylor's map shows three paper and two other mills in Winchcombe, but not exactly as suggested above. Two years later Rudder (25) described William Durham as one of the most considerable papermakers in the kingdom. When Sudeley Mill became a paper mill is not certain. The 1795 insurance policy (19) refers only to Upper and Middle Mills, but William senior signed a lease in 1801 for Sudeley Paper Mill, heretofore a cornmill (26).

William Durham died suddenly in February 1803 whilst in conversation with a friend in his counting house, and the mills passed into the occupation of the Lloyd family.

All the paper made by the Durham family was of course hand-made. There were about 200 mills in the British Isles in 1712 rising to 455 by 1799, when the average production was about 35 tonne per mill per year. The paper mills in Winchcombe must have been relatively isolated until the construction of the turnpikes towards the end of the 18th century.

The 1763 and 1771 fire insurance policies (16, 17) detail very nearly the same property, except that reference is made in the earlier one to Postlip House in the tenure of William Durham and to a house in Gloucester Street owned by Thomas Merryman. These are omitted from the later policy, although the Red House (with its brewhouse and stable) in Gloucester Street, owned by William Durham appears in both.

The policies itemizes:- The Upper paper mill, corn mill and house adjoining each other, timber, tiled and slated; a house and warehouse; four rag warehouses including one described as 'old, timber, thatched'; three drying warehouses, also the garden, paper building and upper engine warehouses, as well as a malthouse, barn and stable.

The Middle paper mill, dwelling house and warehouse adjoining, brick, stone slated and tiled, were accompanied by a rag warehouse and two drying paper warehouses.

The Lower paper mill and house adjoining, brick, stone, tiled and slated, were associated with a rag warehouse, two drying warehouses and a new warehouse.

With their contents the buildings which appear on both policies were valued at £3,000 - £3,500.

William Durham junior insured:- (18) The Upper paper mill and warehouses adjoining; three rag warehouses, and four drying warehouses; house and warehouse as well as two bleaching houses of stone, and a finishing room. This 1795 policy also included an item for fixed machinery in addition to the references to moveable utensils and stock.

The Middle paper mill had a dwellinghouse, warehouse, and drying house all adjoining as well as a separate drying house.

William Durham senior himself insured (19) a house in Gloucester Street with a brewhouse and workshop adjoining. This was presumably the Red House, and the tenant was a wheelwright.

The sequence of Durham paper makers appears to have been - 1730 approx to 1760 John Durham ; 1760 to about 1790 William Durham (later called senior) ; about 1790 to about 1796 William junior, although William senior was still alive and living in Newnham and finally after John's death 1799 to 1803 William senior again. Who operated Lower paper mill or Sudeley Mill at various dates is not clear.

There are a long series of watermarks associated with the paper made by the Durnams of Winchcombe, and the earliest appears to have been that shown in Fig.3. It has previously been published in Shorter's book (27) as his Fig. 45, and apparently was used in paper made about 1733-4.

The next watermark, shown in Fig.4, occurs about 1757-9. It is followed by a group shown as Figs. 5, 6 and 7. Fig.5 is similar to Shorter's Fig.43 (27) and Fig. 6 is like his Fig. 46. It will be seen that Figs.5 and 6 differ principally in the presence of the circle in Fig. 6. The design appears to be that referred to by Dr. Shorter as a design of crown, rose and thistle. He implied that an example of paper with this watermark existed with a date of about 1710 - 1720. The earliest examples which the writer has seen all date from 1763 or later. Fig. 7 also contains the crown, rose and thistle and dates from 1763. Perhaps the change is related to the death of the original John Durham in 1760 and the marriage of William Durham in 1761.

W.A. Churchill in his book (28) on watermarks, refers to a watermark, his Fig. 396, in the Worcester Cathedral Library. Unfortunately the reference he quotes refers to a bundle of documents and there is an error in the watermark he illustrates. The upper half of his illustration occurs in two documents in the bundle referred to, both of which can be dated about 1662, and this portion has no connection with the Durhams. The lower half of his illustration occurs also in two documents in the same bundle. In one case it is in a letter dated 1764 and the other is in a copy of earlier documents which could have been made about the same date as the letter.

Churchill's incorrect illustration has been copied by Shorter (27) in his Fig. 47 and by Miss Adlard (1). The correct version of the watermark is shown in Fig.8. The writer knows of no other examples other than those at Worcester.

Fig. 9 illustrates a type of watermark which is probably William Durham's and dates from 1776 - 80.



Fig.3 The left hand half of the sheet contained the countermark of a crown with letters GR underneath.

Examples occur in the Gloucestershire D.R. in wills:

1735/56 Rev, Widowe, Nympsfield, made 18th Feb. 1734

1735/91 Humphrey Watson, Gloucester made 29th April 1734

1735/59 Thomas Ludlow, Gloucester, made 20th Oct. 1734

Also Salop R.O. D2118/213 dated 1733



Fig.4

The right hand half of the sheet contains the Britannia watermark.

Examples occur in the wills 1765/67 of Mary Smith, Upton made 27th August 1759 and 1772/121 Eleanor Fletcher made 31st March 1757.



Fig.5 Britannia on right hand half of sheet

Examples: wills 1765/45 Mary Boucher, Cirencester
made 9th May 1764

Salop R.O. 2029/34 dated 14th Feb. 1769



Fig. 6 Britannia on right hand half of sheet

Examples: wills 1765/4, William Robins, Tewkesbury
made 14th Feb. 1764 and 1775/11, William
Cole, made 2nd Oct. 1766.

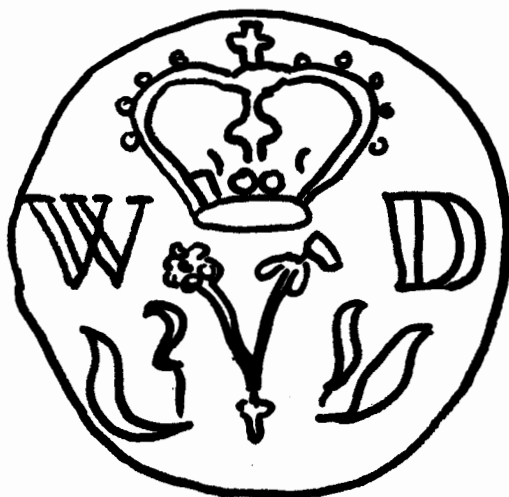


Fig.7 Britannia on right hand half of sheet in an oval surrounded by the words Libertate, Pro Patria, Ejusque

Examples: wills 1765/55, Richard Harvey, 21st Dec. 1763
1766/36, William Neale, made 8th Feb. 1766

DURHAM WINCHCOMBE
G LOUCESTER SHIRE

Fig. 8 The only examples known to the writer occur in the Worcester Cathedral Library D763, and are dated about 1764

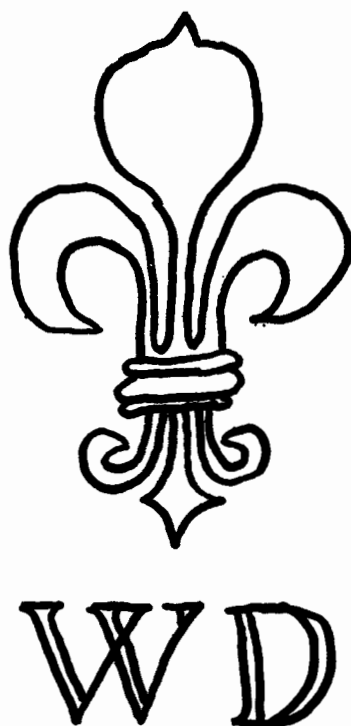


Fig.9 A number of documents occur in the Salop R.O. with this type of watermark and dates of 1776 to 1780

Fig.10 with the combination of Durham and LVG dates from about the same period. It is interesting to wonder whether this was paper made on the continent for Durham to merchant, or whether he incorporated the LVG to imitate Dutch made paper. In the 1780 'Poor Rate assessment book' for Tewkesbury, appears a number of clear watermarks as Fig. 11. Obviously the hand moulds on which the paper was made were damaged from time to time and Fig. 12 may be from a repaired mould similar to that which is illustrated in Fig. 11.

The next group of watermarks all include 'Durham and Co', and may therefore relate to the time when Durham and Stevens were in partnership. Fig. 13 of a Britannia with the Durham and Co. countermark is taken from the will of Rose Burnham, widow of John Burnham referred to much earlier. It is of interest to note that one of the witnesses to her will was a William Woolvin, a surname which occurs several times later amongst the workers at the Postlip paper mills.

An almost identical Durham and Co. countermark also appears with a LVG watermark as in Fig. 14. Again the question arises as to whether this was marked so as to imitate imported paper or was it in fact imported for merchanting by Durham & Co. ?

The same countermark also appears combined with a coat of arms, as in Fig.15

Continuing with Durham & Co. we not only find a slightly different version shown in Fig.16, combined with a normal Britannia and Pro Patria as in Fig.11, but we also find it combined with a watermark Fig.17 where Britannia has been replaced by a male in a tricorne hat. For the third time we must wonder whether this was imported or made in imitation of imported paper.

The next two marks illustrated, both incorporate the date 1794. One includes Durham & Co. Fig. 18, whilst the other is Durham & Son Fig. 19. Perhaps this represents the end of the partnership with J. Stevens.

Fig.20 is taken from a book still at Postlip. You will notice the small letter D under Britannia. The son of the watermark is presumably William Durham junior who insured the Upper Paper Mill in 1795 (18). Meanwhile Fig. 21 refers to Durham & Sons, presumably William junior and John who died in 1799. This watermark occurs in a document dated 1795 and the double reference to a patent is interesting. There is also at Shrewsbury a document dated 14th April 1795, watermarked 'J.Stevens, Patent'. One can only suppose that the patent referred to, must have been one of those relating to the bleaching operation (29).

Fig. 22 shows a watermark which presumably was being used by John Durham, but with no date in the watermark, the paper may have been made prior to 1794.

The next watermark illustrated, Fig. 23 is again Durham & Co. and dates from about 1790. The mark is near the edge of the sheet and is distinctive in that the laid lines in the sheet are close together, but do not extend over the area of the watermark. This characteristic appears later in paper known to have been made at Sudeley Paper Mill, so perhaps this example was also made there.

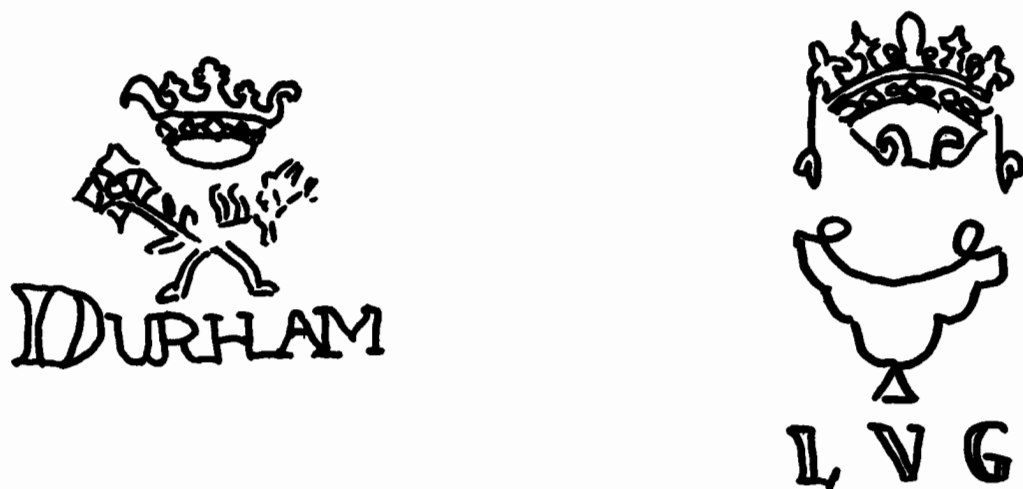


Fig.10 Durham on the left hand half of the sheet, and LVG on the right hand half. From the will 1776/132 of Richard Aldridge, made 7th May 1772

Fig.11 On the next page. Durham on the left hand and Britannia with Pro Patria on the right hand half of the sheet.

Examples occur in the will 1775/9 of Richard Rouse, made 1774; the 1780 Poor Rate Assessment Book for Tewkesbury, Glos., Glos. R.O. TCR/A6/1 and also Salop R.O. 2029/35 and /36 dated about 1774

DURHAM

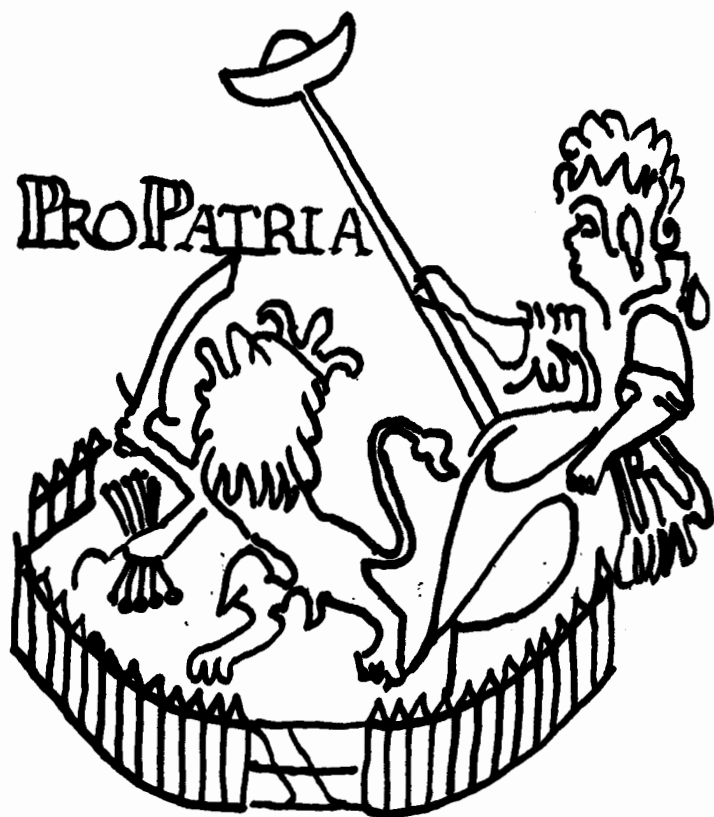


Fig. 11 See previous page

DURHAM

Fig.12 Possibly a repair to the word Durham, otherwise as Fig.11, from Bigland's MSS, G.C.L. Glos. Colln. 27086

DURHAM & Co



Fig.13 Durham & Co. occupies the left hand half of the sheet. Britannia is on the right. Examples occur in the wills 1788/42 of Rose Burnham, made 30th October 1786 and 1790/47 of Ed Ruck, made 20th March 1790

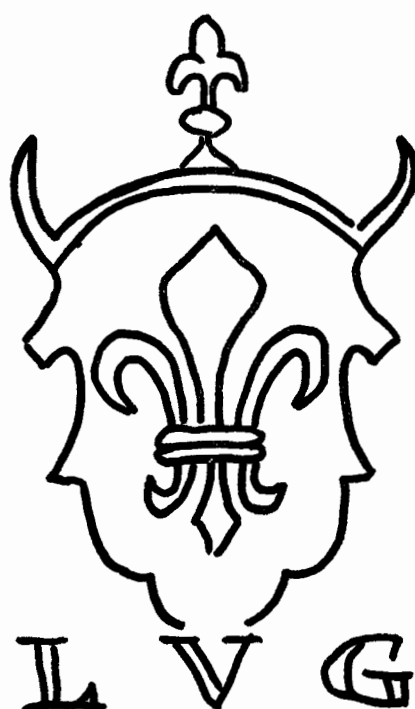


Fig.14 Examples with LVG on the right occur in the wills
 1790/19 Elizabeth Hopkins, made 12th February 1788
 1790/47 Mary Bayliss, made 15th December 1789

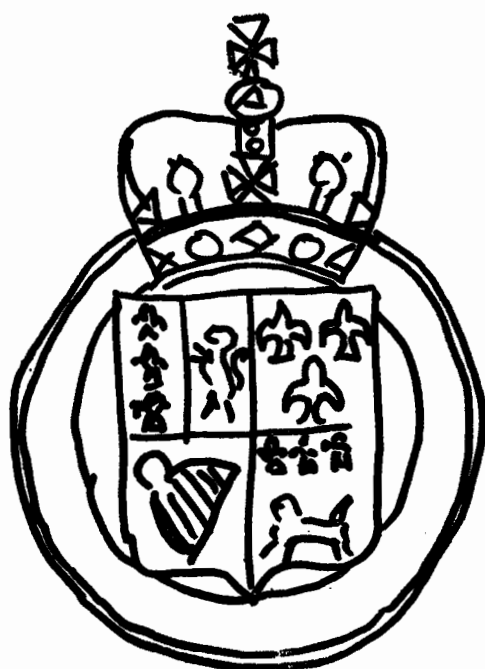


Fig.15 In this, Durham & Co is the countermark to a royal coat
 of arms. Will 1790/104 John Holthan, 24th Jan. 1789

DURHAM & Co

Fig.16 Durham & Co on the left hand half, with Britannia and Pro Patria on the right. Example from Bigland's MSS G.C.L., Glos. Colln. 27085, about 1790



Fig. 17 Male figure with lion, and Durham & Co. on left of the sheet. Examples: wills 1790/116, William Hudlas, made 1st January 1790 and 1790/20, Thos. Browning, 26th Jan. 1790

DURHAM & C^o
1794

Fig. 18 Example GRO D1949/A7 dated about 1797

DURHAM & SON
1794

Fig.19 Example Bigland's MSS, G.C.L., Glos.Colln. 27085

DURHAM & SON

1795



Fig.20 From a book still in the possession of Evans, Adlard & Co.Ltd., and in use about 1798

DURHAM & SONS PATENT

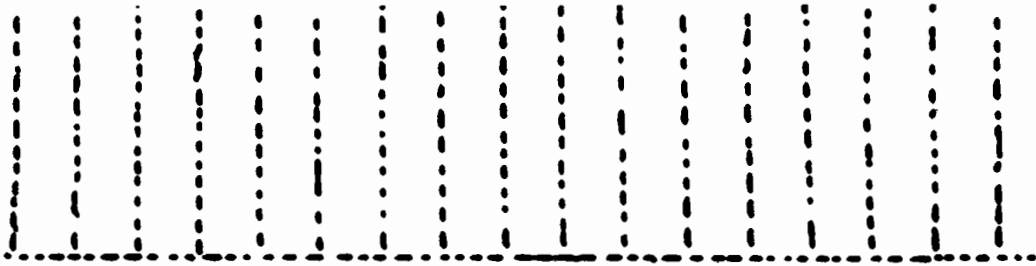


PATENT

Fig.2] This illustration, which refers to 'Sons' is taken from Salop R.O. 2118/225, dated 22nd September 1795

J DURHAM

Fig.22 From GRO D1949/A7, dated about 1797



DURHAM & Co

Fig. 23 Watermark on the edge of the sheet and very little distance between the laid lines in the sheet.
Example from the will 1797/30, Sam White, made 28th May 1790



Fig.24 Watermark illustrated by Shorter

After the death of John, when William senior appears to have resumed control of the paper mills, the watermark W. Durham occurs with dates as late as 1801.

Before leaving the Durham watermarks, it should be mentioned that Shorter (27) shows as his Fig. 48, that which is shown here as Fig. 24. The writer has not seen an example of this particular mark, but if it is in fact related to Durham & Co. then presumably it dates from 1883 - 94. It should also be mentioned that the first watermark shown by Miss Adlard (1) as a Durham mark, includes the letters JW and is in fact probably the mark of James Whatman.

It may be felt that a lot of time has been spent illustrating and referring to watermarks, but no two moulds were exactly identical and as they wore and were repaired they changed slightly. By carefully examining documents of known dates a chronology could be built up. Even though sheets of paper may remain unused for several years, nevertheless the watermark could be used to give some information about undated documents. To take a very simple example; it is obvious that since some of the sheets in the Bigland MSS contain marks like those in Figs. 18 and 19, then some of those manuscripts must have been written in or after 1794 and not before 1788.

As a final reference to the Durham family, it is worth noting that letters of administration (30) for the estate of John Arnold, apothecary of Cheltenham had as administrators, James Durham of London, chemist, John Creston of Gloucester, pharmacist and John Joynes of Postlip, gent. This is presumably the James Durham of London who married Anne Durham at Willersey on 1st September 1720 and whose son James was buried there on 2nd August 1721.

Chapter 2

THE LLOYD FAMILY.

Our first reference to the Lloyd family occurs in the Inquisitions post mortem where in 1638 (31) Walter Lloyd was concerned with land etc at Weston-under-Penyard and Bill Mill in Herefordshire, and an inventory dated 1717 (32) refers to a lease granted from 1 May 1693 of "those mills and forge in Flaxley, now possessed by Philip Hampton and Mrs. Lloyd". The mills appear to have been corn mills, but in 1743 Joseph Lloyd (33) was advertising for labour for his paper mill at Gunns Mill, Flaxley.

After the death of William Durham senior in 1803, Joseph Lloyd & Co. became tenants of the Winchcombe mills and an insurance policy dated 17 July 1804 exists (34). This policy is similar to the previous ones, except as follows: At Upper Mill the 'fixed machinery' appears as 'water wheel and going gears therein'. There is an addition of a carpenter's shop (thatched) and an office with granary over. The policy covers also the Middle and Lower paper mills as well as Sudeley Mill. It no longer includes the Red House, but does include an item 'stock and utensils in their warehouse at Tewkesbury'. The value insured was £4,000.

Although the lease of Sudeley Mill had originally been transferred to Joseph Lloyd (26), a partnership of Nathaniel, Edward and Thomas Lloyd, all younger brothers of Joseph was soon running it and an 1807 list shows that they were occupying Postlip Upper Mill, Coates Middle and Lower Mills, as well as Sudeley Mill (35). The Postlip and Coates Mills belonged to Lord Coventry and the Sudeley Mill to Lord Rivers. In 1812 the opportunity to purchase the Sudeley Mill and adjoining land arose and Thomas Lloyd bought the lot at auction for £2,520.

In 1814 the three brothers were apparently living at Postlip. At some time Middle Mill became disused.

Paper was subject to an Excise and an 1816 Excise list of paper makers exists (36) as do a number of later lists. The 1816 list shows Joseph Lloyd at three mills near Flaxley - Gunns (SO 675159) Middle (SO 673159) and Upper (SO 672158), as well as Hall Mill at Awre (SO 697076) and Bill Mill (SO 625216). Each of the mills had an Excise number, and against number 103 appears 'Postlip, Nathaniel Lloyd & Co.'.

Drastic changes in the paper industry were about to occur. Up to this time all the paper had been hand-made, sheet by sheet. The raw materials were mainly linen or cotton rags. After sorting and cutting into small pieces,

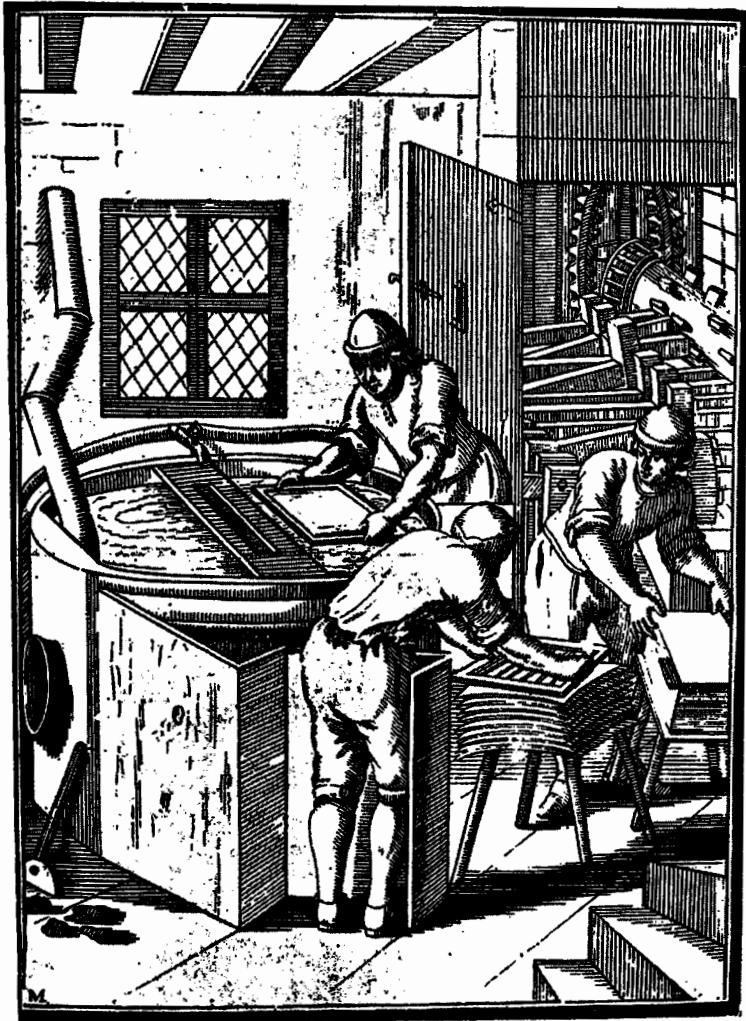


Fig.25 Paper-making in Europe in the seventeenth century. The vatman, coucher, and layman are performing their respective duties. The 'pistolet', or heating device, may be seen at the extreme left of the illustration.

they had to be broken down to pulp. The rags were beaten by heavy wooden mallets, iron shod, on a platen of iron. This process took hours maybe all day. Then the paper was made from the pulp as illustrated in Fig. 25, and as still happens today at one mill - the Richard-de-Bas Mill at Ambert in France, and the process was dependent on the water-wheel for power.

In 1782 Boulton & Watt had erected the first rotative steam engine and various patents had been granted (37), for a paper making machine. This machine financed by Henry and Sealy Fourdrinier and developed by Bryan Donkin was offered to the trade in 1806. A drawing is reproduced, as Fig. 26 showing the original paper machine as manufactured by Bryan Donkin. In 1820 licenses to use this machine were given to E.J. Flint and P. Tregent of Littleton Mill, near Evesham (SP 067478) and to J.C. Radway of Quenington, near Fairford (SP 148038). By the end of 1822, 42 licences had been granted and machines were already producing as much paper as was being hand-made.

By this time the 'ordinary beating engine' or 'Hollander' had been invented. It replaced the stamps and would work on a fairly large volume of rags in quite a small area. It was another vital step in the rapid increase in the output of paper.

In July and August 1821 'that excellent estate' Postlip Hall and 521 acres (211 ha)' was advertised in the Gloucester Journal as to let "and all that ... Paper manufactory and three several Paper Mills called Postlip Mills". All stock in trade, implements etc. were to be disposed of therewith. The premises were described as being in the occupation of Messrs. Lloyd "who only retired therefrom on account of ill-health". Further details were available from Messrs. Lloyd or Messrs. Tovey and James, attornies of Newnham. There was a sale of livestock owned by the Lloyds at Postlip in 1822.

Apparently the Lloyds were still there when Lord Coventry sold Postlip Hall and Mills to W.S. Evans in 1824 and they then left. They did however retain the Sudeley Paper Mill, which they of course owned. The brothers dissolved their co-partnership in 1829, describing themselves as paper manufacturers within Winchcombe, where Nathaniel and Edward lived and Millers at Wyre Mills, Fladbury (SO 956468), then occupied by Thomas Lloyd. Nathaniel Lloyd was the owner of the house known as Winchcombe Abbey and became the owner of Sudeley paper mill (26).

Edward Lloyd James, a nephew of Nathaniel Lloyd had been at a mill at Overbury for some time before 1841 when it closed. There had been two mills at Overbury at (SO 962380) and (SO 958378). He then seems to have moved to Sudeley Mill until it closed in 1842, moving this time to Gunns Mill. The Sudeley Mill re-opened in 1844 but Nathaniel Lloyd died in 1845 leaving his interests to his brother Thomas who was then living near Ross. There is a memorial to Nathaniel in Winchcombe parish church, but he is buried at Abenhall near Gunns Mill. The mill was offered to let (38) as was Nathaniel's house. Allegedly the mill was sold to the owners of Sudeley Castle in November 1848. Nevertheless the 1850 Overseers list shows Thomas Lloyd as the owner of Sudeley Mill (occupier Dent) amongst other property and the corresponding 1857 list (11) still shows him as the owner, though the mill was then unoccupied. A map showing the buildings of the paper

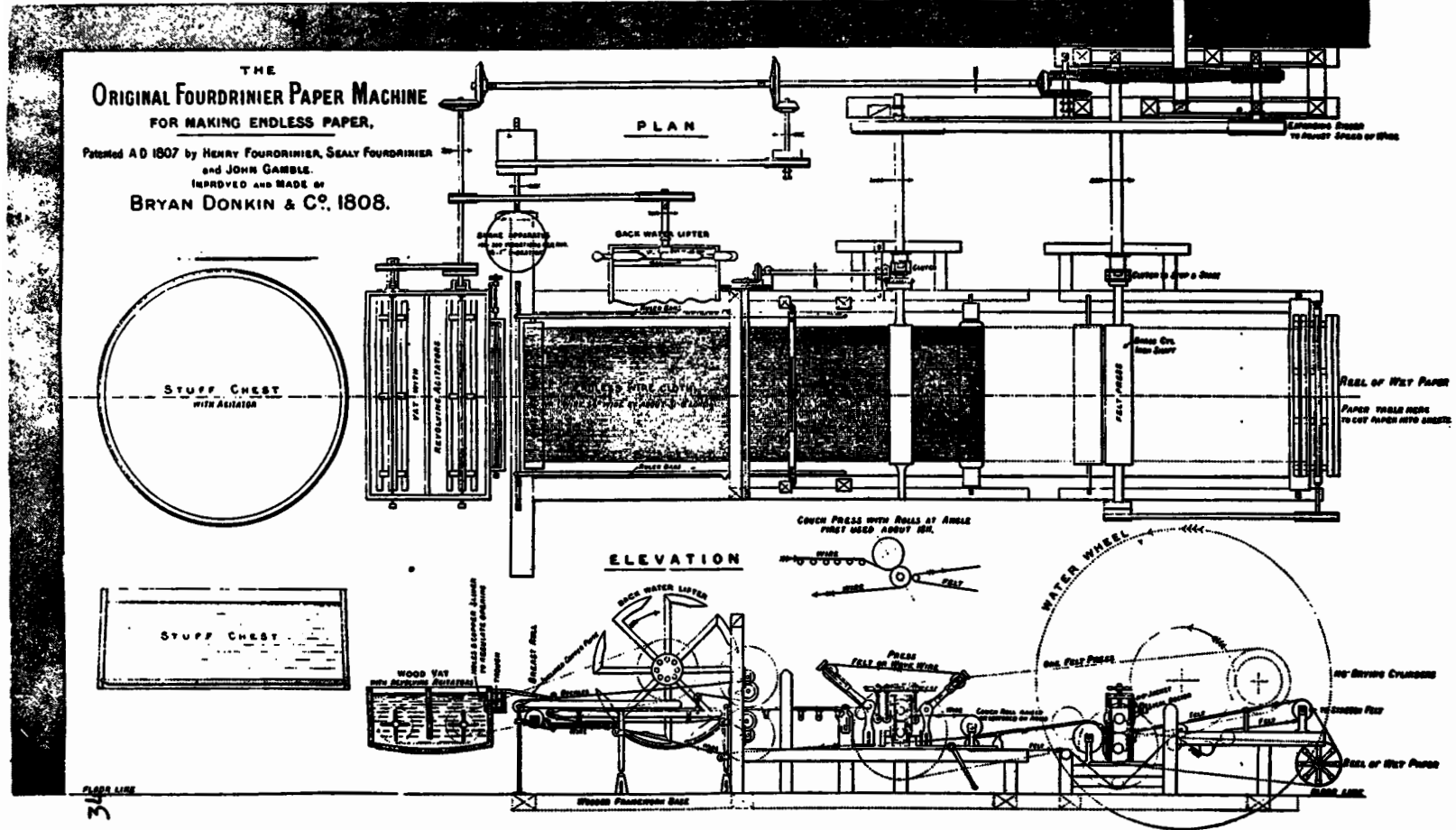


Fig. 26

mill in 1850 exists (26) and there appears to have been some activity up to about 1860, and even today the buildings with a drying loft still stands close to the River Isbourne. Since this was always a hand-made paper mill, it is not surprising that its output was apparently only about 20 tonne a year.

It is possible to construct the Lloyd family tree Fig. 27 (3), a number of whom were connected with the paper industry. The wills of many of the family are available and make fascinating reading.

The relationship of their watermarks to their individual mills is, however, not at all clear. Watermarks such as Fig. 28 and 29 were in use before they were operating in Winchcombe and similar ones continued for years afterwards. These have been illustrated before (3) and were probably used at the Guns Mills. Although Fig. 28 occurs with Britannia, it does also occur at least in one instance (39) together with a coat of arms almost identical to that in Fig. 15. Fig. 30 however, illustrates a watermark which occurs in conjunction with 'Lloyd & Co. 1805'. The two L's of Lloyd are joined as in Fig. 33 later. This watermark which presumably relates to Winchcombe, is illustrated by Churchill (28) as his Fig. 235, but he has reversed the mark from right to left.

The sign of two joined L's by themselves occurs with dates from 1806 through 1818 in a number of documents.

Some of the Sudeley watermarks are easy to identify. Starting with the spelling 'Sudley' it becomes 'Sudeley' Fig. 31, which continues under Edward Lloyd James, Fig. 32, until it reverts later to 'Sudley', Fig. 33.

The Lloyds made both white and coloured paper in Winchcombe, but only white paper has so far been seen with their watermarks.

One record we have of Lloyd & Co. is the bill illustrated as Fig. 34.

Although the Lloyd family left Winchcombe, Joseph Skipp Lloyd, son of Joseph Lloyd VII was the owner of Gunns Mill just prior to its closure about 1879 (40).

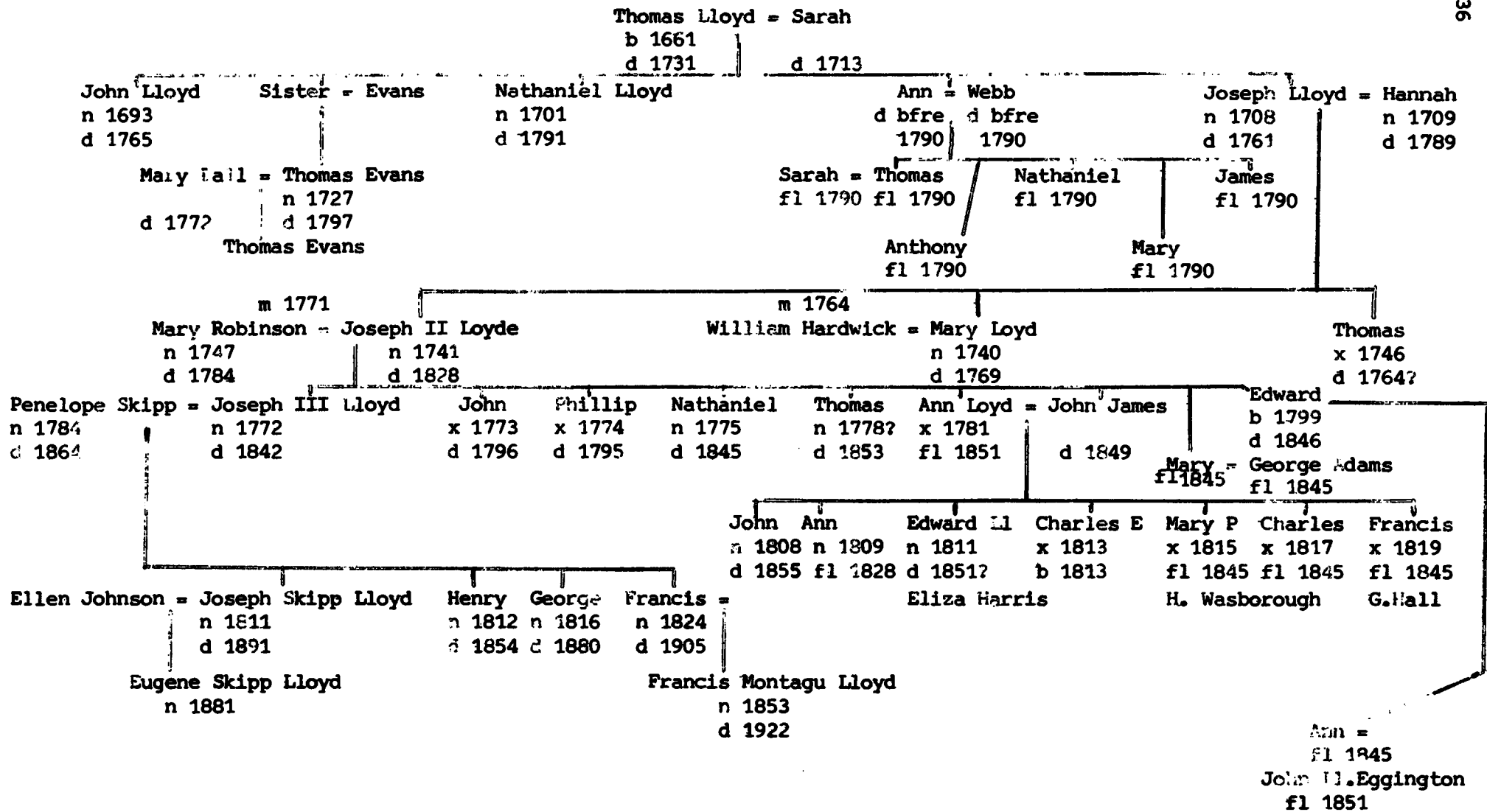


fig.27 Lloyd family tree



LLOYD

Fig.28 From Bigland's MSS, G.C.L., Glos, Colln. 27085 and 27086

J LLOYD

1794

Fig.29 Example from GRO D1949/A7



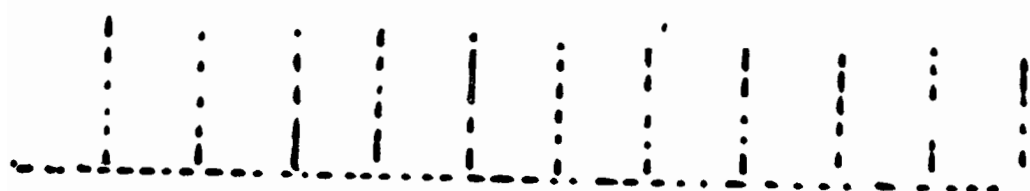
Fig.30 Lloyd & Co. 1805 from Worcester Cathedral Library D767

SUDLEY
1838

Fig.31 From Salop RO 314/87

LLOYD JAMES
 SUDELEY MILL
 1841

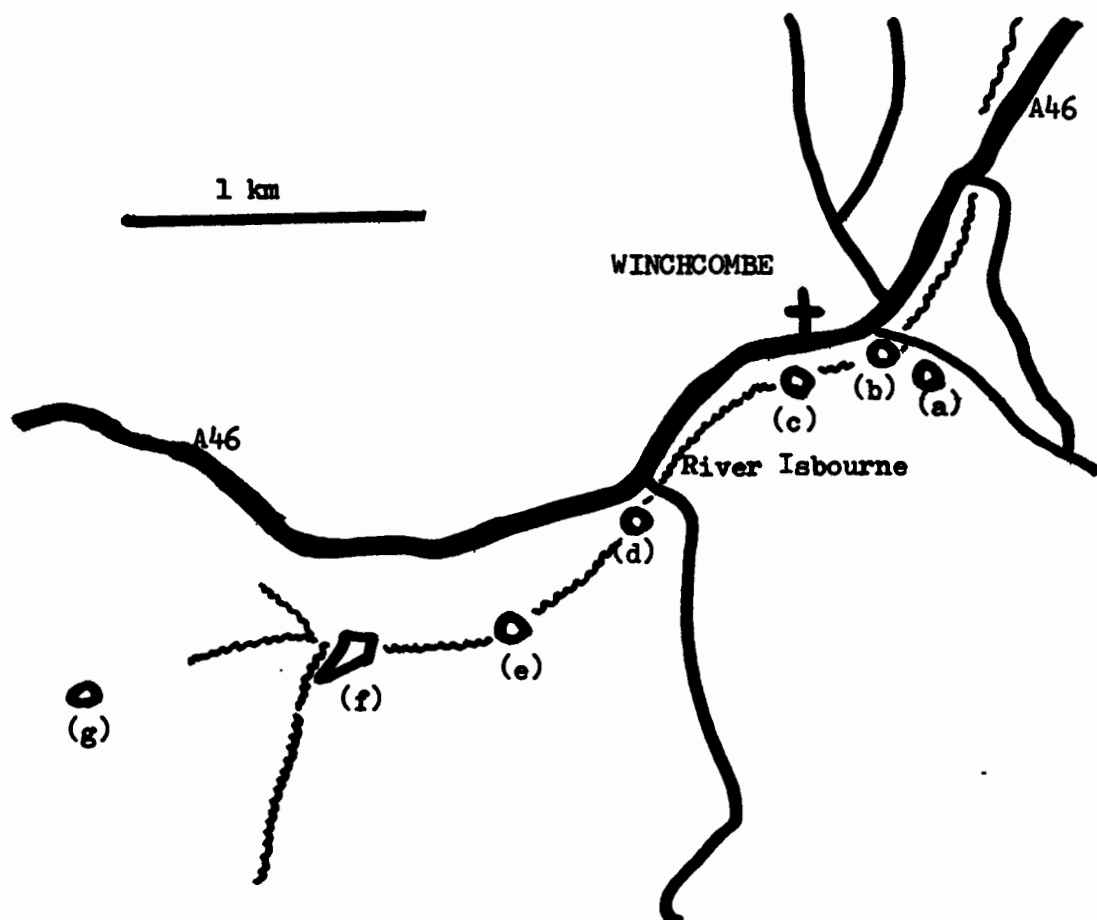
Fig.32 Sudeley 1841, example from Salop RO 314/56



SUDELEY
 1844

Fig.33 An example occurs in the papers of Evans, Adlard & Co.Ltd. now GRO D1005/6. With the date 1834 instead of 1844 an almost identical water mark occurs in Salop-RO 314/37.

Fig.35 The relative locations of the Sudeley, Coates and Postlip Mills at Winchcombe, and their approximate dates of operation.



- (a) Sudeley Mill. SP 027281. Corn from before 1755 to about 1769 then probably paper and/or corn to 1801. Paper 1801 to about 1860. See cover for drawing.
- (b) Coates Mill, Castle Street. SP 026282. Corn up to at least 1872
- (c) Town Mill. SP 023281. Corn from before 1660 to about 1950. Completely demolished.
- (d) Coates Lower Mill. SP 018277. Probably Tuck Mills from before 1663, then paper from about 1734 to 1836 and corn till about 1876. Now a private dwelling.
- (e) Coates (or Postlip) Middle Mill. SP 013272. Paper from about 1745 to 1954. Since demolished.
- (f) Postlip Upper Mill. SP 008271. Probably corn mill from before 1663 to at least 1722, paper and corn from 1728 to about 1795, paper from then up to date.
- (g) Postlip House, later called Postlip Hall.

Chapter 3

W.S. and O.L. EVANS.

The sale in 1824 by Lord Coventry transferred ownership of the Postlip Mills to William Seale Evans of Bushley. He was a surgeon in Tewkesbury for many years and in 1807 married Charlotte Lloyd a daughter of Omwell Lloyd a mercer and draper of that town. His son Omwell Lloyd Evans had been born in 1817.

The Lloyds had been working two paper making vats at the Upper Mill, one at Middle Mill (until it was disused) and one at Lower Mill (Fig.35). With the change in ownership there came other changes. A paper machine, probably about 53 inches (1346 mm) wide was installed in 1826 and it started work in 1827. The Excise list (36) for 1828 shows not only mill number 103, now given as 'Winchcombe', but also number 633 'Postlip'. The occupier of the latter is shown as 'Tregent'. This was Patrick Tregent who had been at the Littleton and Harvington Mills, SP 066480, and who was now probably a tenant of W.S. Evans.

There is no evidence as to the manufacture of the paper machine, but it was probably Bryan Donkin who had been in contact with the Lloyds earlier regarding the installation of a machine at Wyre Mill and also he had been at Littleton Mill (41).

Middle Mill, which had been disused for some years, was rebuilt in 1834, and a stone bearing the inscription 'GN 1834' was inserted in the wall. An open boiler to boil rags was installed as well as two washers. They were driven by a waterwheel. At Upper Mill there were two beaters and one washer which was converted into a beater, all three being driven by one waterwheel. A second wheel provided the power for the paper machine.

About 1836 Lower Mill was converted into a corn mill which it remained for about forty years until it became a dwellinghouse.

After Tregent had apparently become bankrupt, W.S. Evans took over the mills himself in 1837 until his death in 1846, when he was followed by his son O.L. Evans, who had a manager William Gilling. William Gilling was born in Somerset and lived at Postlip House or Hall as it was later called. He was presumably related to the Gillings who for many years were papermakers at Cheddar.

A wages book for the men (42) shows that in 1840 there were about twelve male employees at any one time and that the highest paid - Robert Crawford received £4.80 per month. Joseph Crawford meanwhile was working about 24 days and 2 or 4 Sundays a month for about £3.50.

During the last three months of the life of W.S. Evans (January through March 1846) the mills made 22.2 tonne of paper. During the years 1847-9 up to 9.4 tonne was made in a month and 210.2 tonne in the three years despite being still for four weeks in each of these years. Nevertheless O.L. Evans is said to have made a profit of £602 against an expenditure on machinery in these years of £1,100.

An inventory of Upper and Middle Mills dated 29th December 1849 shows that the paper machine was then equipped with four drying cylinders, each $3\frac{1}{2}$ ft (1066 mm) in diameter and that the larger water wheel was 40 ft (12.2 m) in diameter. A press then at Middle Mill had been replaced before the following October by one from Sudeley Mill. The valuation of the machinery totalled £2,560, and that of the whole concern £5,975.

In October 1850 James Robert Evans and his partner William Gates Adlard and William Gilling became tenants of O.L. Evans, using the name Evans & Co., apparently with an agreement of 'no profit, no rent'.

The watermarks used under W.S. and O.L. Evans are not known.

In passing it is interesting to note that Robson's Directory of 1839 refers to two paper mills in Winchcombe but shows only one papermaker Edward Lloyd James, with W.S. Evans shown as a miller.

Chapter 4

THE MIDDLE YEARS - EVANS & CO.

J.R. Evans, the senior partner in the new occupants, Evans & Co. was apparently not related to O.L. Evans. He had earlier been a stationer in Birmingham, as incidentally had Patrick Tregent.

A programme of improvements and alterations commenced. The Middle Mill pond was dug out to about twenty times its previous size to provide extra water storage.

It is possible to reconstruct the 1851 employee's roll as follows: The manager and a partner, William Gilling, aged 35 was living unmarried at Postlip Hall with his two sisters aged 39 and 25. They had all been born in Somerset.

The foreman, Stephen Nicholls, aged 26 had been born at Cheddar, Somerset and was now living at Upper Mill with his wife and two children.

Also living at Upper Mill were George Senior, 27, millwright (journeyman) from Epsley, Yorkshire and James Stafford, 26, papermaker (journeyman) from Clatford, Hants.

At Middle Mill lived three papermaking journeymen - Charles Nicholls, 32 from Mitcheldean, James Squires, 26, Cheddar, Somerset, and Henry Austin 16, Little Barrington. There were also Charles' wife Caroline and her four children.

In Winchcombe itself lived other papermaking journeymen:

James Cunningham, 69, from Otland ; James Stevens, 57, Godalming, Surrey ; Joseph Turner, 60, Drandgoc, Monmouthshire ; Robert Warren, 50, Cornwall ; William Griffin, 36, Stretford, Lancs ; George Pittaway, 34, Harvington, Worcestershire and deaf ; John Andrews, 27, Wells, Somerset, as well as Thomas Mason, 69, another Thomas Mason, 60 and Thomas Woolvin 60, all three of whom had been born in Winchcombe.

Additionally there are three described as labourers or workers at the paper mill - Thomas Phillips, 17, William Turner, 36 and Robert Phillips 25, all born in Winchcombe.

Excluding William Gilling, a partner, the nineteen other men agree exactly with the men's wages book for 1851. Four were unmarried, one a widower and the remaining 15 were married. Their ages range from 16 to 69 with an average of just under 40 years.

Thirty two women employees can be identified. They include Caroline Nicholls mentioned above and Maria, George Pittaway's sister, as well as two other women born outside Winchcombe. The remaining 28 were born within the parish of Winchcombe. Their ages varied from 11 to 56 with an average of 29 years. The total labour force living in Winchcombe therefore, was 52, and a total of 71 tonnes of paper was made that year.

There was also an ancillary industry in Winchcombe, in that there were two journeymen paper mould makers, Alfred Hughes and George Tovey.

A list of paper mills at work in 1851 (43) shows that there were then 304 mills in England, but only one - Postlip, appears in the Gloucester Excise collection area. It is shown as having five beating engines, presumably the three at Upper Mill and the two washers at Middle Mill being counted together.

At this time the beaters and washers were of such a size that they would handle about 50 kg of rags or fibres at a time.

In 1852 a steam engine to drive the beaters in Upper Mill was being installed. This was completed in September 1853 and by the following year Upper Mill was equipped with two beaters each handling 80 kg of rags and four of the 50 kg size. Rags which had been boiled in an open pan at Middle Mill were now boiled under pressure by steam in Upper Mill, then taken to Middle Mill by horse and cart. At Middle Mill the two washers had been replaced by ones of the 80 kg size. The boiled rags were macerated in the washers to defibre them and wash away the dirt. Bleach was then added. After draining off the water the fibres were pressed into cakes and returned to Upper Mill. Here the cakes, or half-stuff, were 'gas bleached', that is to say, exposed to the effect of chlorine gas produced from manganese dioxide, common salt and sulphuric acid. The bleached half-stuff was transferred to the beaters where the surplus bleaching chemicals were washed out, dyes or pigments added and the fibres finally made ready to be made into paper. All the washings, bleach residues etc. were allowed to run into the river.

At this time the 1826 paper machine was running at about 9 m/min (30 ft/min) driven by a water wheel.

Soon two 80 kg washers were installed at Upper Mill and in 1866 the water wheel at Middle Mill was replaced by a water turbine and a poacher added in which the macerated rags could be more easily bleached.

By this time esparto grass was being boiled at the Upper Mill, producing a particularly polluting effluent at times. The next year a 10 to 15 hp steam engine was installed to drive the paper machine.

Throughout the whole of this time the firm exercised without question the right of fouling by casting into the brook, all such refuse, fluids and matters as they might think fit (44). In 1870 about a third of the output was blotting paper, and by 1872 the labour force was nearly 150.

Incidentally 'gas bleaching' had been much decreased but continued off and on until 1950 being used for the 'best white' blotting papers.

In 1854 James Robert Evans was living at Pershore Road, Birmingham, and William Gates Adlard at 112, Moseley Road, Birmingham. The latter gave evidence in 1873 that he was 'not a practical paper maker', and he 'took possession of these mills more as an investment and I did not interfere with the manufacture'. W.G. Adlard apparently lived at Birmingham at least until 1857 since he 'had no personal knowledge of what was going on before then' (44).

William Gilling died in 1857 and it seems likely that it was April 1857 when the name was changed from Evans and Co. to Evans, Adlard and Co. although various trade directories continued to refer to Evans and Co. up to 1870.

James Robert Evans died 5th January 1870 leaving William Gates Adlard and his son William Adlard as the surviving partners in the company. By June 1870 the company was being sued by Arthur Heavers Smith, the owner of a corn mill and malthouse further down the river Isbourne, for polluting the river and interfering with the natural flow of water. The case dragged on for some three years, eventually ending in the House of Lords and being decided in favour of the company.

Detailed figures giving the monthly production of paper are available from 1846 and these enable a graph to be drawn (Fig.36) showing the increase from about 70 tonne a year in 1840 to 350 tonne by 1870.

Accounts of Evans & Co. start at 1st October 1850. The company took over stock valued at £3,840 from O.L. Evans, on £2,000 of which they paid interest at 5% in addition to a rental for building and plant, initially £300 per year but later increasing to £500 by 1861. William Gilling had about £1,000 invested in the company, but it would seem that neither J.R.Evans or W.G. Adlard actually put any money into the organization. William Adlard was brought into the business as a partner in September 1863. On 1st July 1870 Edward Adlard, brother of William joined the company at a salary of £200 per year.

Unfortunately we can say little about the cost of machinery until 1855 when a cutting machine from Bertrams of Edinburgh, cost £176 and a rag cutter the following year, cost £60. That year coal was costing 25p per tonne.

In January 1859, 1860, 1861, 1863, 1864, 1865 there were tea parties for the work people, costing £4 to £6 a time. 24th December 1869 there was instead a supper for the men at a cost of £4.20.

As for raw materials, these were mainly rags, but in March 1864 is the first reference to the purchase of esparto.

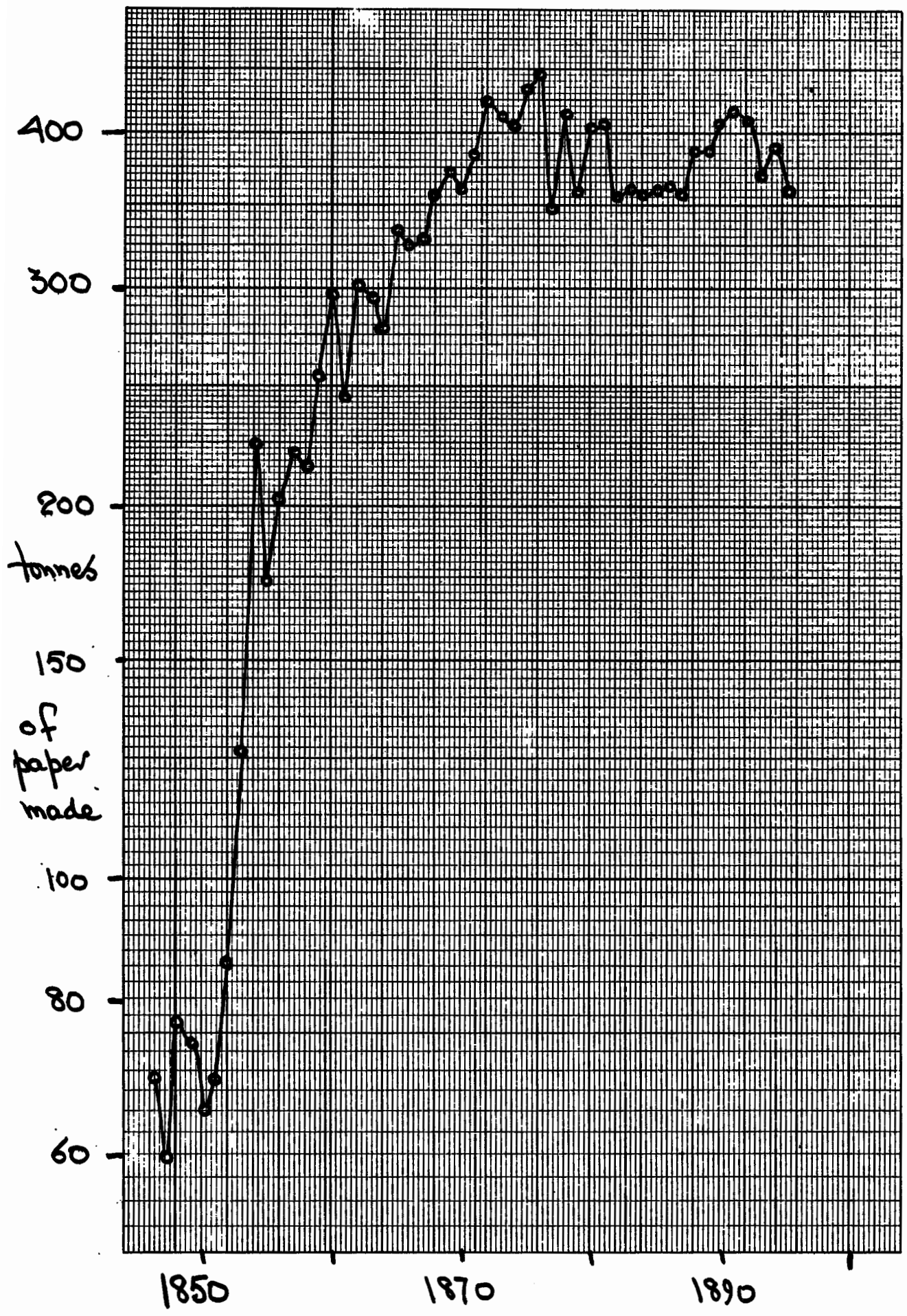


Fig.36 Recorded paper production at Postlip over a period of nearly fifty years

Edward Adlard became a partner during 1873 so that the company then consisted of William Gates Adlard and his two sons, William and Edward. In addition to the business of Evans, Adlard & Co. paper makers at Postlip, they were also carrying on a business Evans and Adlard at 36, Moor Street, Birmingham, as stationers and printers.

It is possible to reconstruct details of the sales, wages and profit details for the years 1850 to 1876 whilst the company was renting the mill from O.L. Evans. These details are given below in table 1. In just over 25 years, sales totalled £454,789, wages £60,650 and profits £34,906. For the ten years 1851 - 1860, where the details are available, the Excise duty was consistently more than the wages, for example, £2,692 in 1855/6 and £3,348 in 1858/9. This duty was repealed with effect from 30th September 1861. Some of the figures recorded in the company's records for this period are rather surprising. For example over the period 1866 - 1876 inclusive between 327 and 451 tonne of paper was made in a year, yet the purchases of rags during 1866 through 1872 are 2,374 to 2,818 tonne a year. Why the vast discrepancy is not clear; admittedly they only paid £0.25 to £0.29 per tonne. The coal purchases varied from 1764 to 2,330 tonne over the eleven year period. The weight of coal per tonne of paper falling gradually from 6.7 to 4.1 tonne. The price in 1866 averaged £0.37 per tonne rising to £0.97 and falling back by 1876 to £0.77 per tonne.

That then was the position in 1876 when on 26th October, Evans, Adlard & Co. purchased the mills from Omwell Lloyd Evans for £9,500.

O.L. Evans died at Postlip Hall October 1887.

Chapter 5

THE ADLARDS.

Having bought the paper mills the Adlards proceeded nearly to rebuild them. Men from Thos. Collins of Tewkesbury started rebuilding at the beginning of May 1877 as did men from G.W. Bertram, Edinburgh, who were supplying a new paper machine. The buildings cost £3,388 and the machine £4,075. There was a supper for Bertram's men on 7th November 1877 so the machine was perhaps finished by then. The old 1826 machine was sold as scrap in December 1877 for £200.

In addition to the new machine there were three beaters, a revolving rag boiler, a steam engine for the paper machine, a weigh bridge, a new 50 hp boiler and another from Galloway of unknown size.

There were also additions and alterations at Middle Mill.

Although the company was already making blotting paper and filter paper, it continued to make tub-sized papers, i.e. which were treated with gelatine after manufacture and redried. Consequently the rebuilding included new drying lofts one of which still exists today virtually unaltered.

From 1877 the three Adlards were sharing the profits equally from the paper making in Winchcombe. There were also substantial, but declining profits from the printing and stationery business in Birmingham.

William Gates Adlard retired on 30th June 1881, selling his interest in Moor Street, Birmingham to William Adlard for £2,891 and the brothers agreed to continue Evans, Adlard & Co. under Edward Adlard in Winchcombe and Evans and Adlard in Birmingham under William. The profits, or losses were to be shared equally.

Further alterations and additions occurred including in June 1884 'new drying cylinder to machine', the only reference to a drying cylinder in the accounts.

Francis Bird joined the company in 1882 and in 1887 made the first of a number of visits to the U.S.A. and Canada, at first every other year, but in the end yearly - his expenses came to £90 in 1887.

Details of the sales, wages and profits of Postlip Mills
for the period 1850 to 1876, whilst being rented from O.L. Evans

TABLE 1

First nine months profit £339

<u>Year</u>	<u>Wages</u>	<u>Profit (or loss)</u>	<u>Sales</u>
	£	£	£
1851/2	938	416	6,501
2/3	1,142	663	9,573
3/4	1,768	381	12,441
4/5	1,824	(976)	14,498
5/6	1,798	865	14,273
6/7	1,928	844	13,901
7/8	1,963	209	14,583
8/9	1,953	545	17,252
59/60	2,394	1,003	18,984
60/1	2,534	19	18,383
1/2	2,294	1,026	16,228
2/3	2,497	1,022	15,454
3/4	2,450	804	15,486
4/5	2,517	(99)	16,735
5/6	2,954	1,826	19,616
6/7	3,037	270	17,814
7/8	2,070	1,283	18,266
8/9	3,164	1,735	18,700
69/70	3,102	1,590	20,876
70/1	3,129	1,623	23,691
1/2	3,386	2,489	26,454
2/3	3,861	2,764	24,931
3/4	3,926	4,103	25,441
4/5	4,010	4,655	27,416
5/6	4,131	5,837	27,292
	<u>60,650</u>	<u>34,906</u>	<u>454,789</u>

Fig. 37 shows an Evans, Adlard & Co. advertisement dated 15th January 1888 and it is clear that blotting papers were still the major product. It is further interesting to note 'Goods packed for export in plain or zinc lined cases'.

In 1891 William and Edward dissolved their partnership in Evans and Adlard, Birmingham which was then carried on by W.E. and W.J. Adlard, the sons of William Adlard. However, William and Edward continued as partners in Evans, Adlard & Co. Winchcombe until 1896 when Francis Bird became a partner with Edward, and William withdrew. A note in the company's books records that between 1879 and 1896 William had drawn out of the paper mills £57,483. F.W. Adlard son of Edward had become an employee in September 1894. Details of the sales, wages and profits for the period 1877 - 1900 are given in table 2.

Following the indenture of 30th March 1896, Edward Adlard remained in partnership with Francis Bird but by 1900 it became obvious to both of them that for several reasons the business would in future best be conducted as a private limited company.

On 2nd April 1900, the vendor who was effectively Edward Adlard, sold the paper mills at Postlip to a new organization, Evans, Adlard & Co.Ltd. He valued the assets at £18,050. Edward however, reserved for himself and his heirs, the sole and exclusive right of fishing in the ponds and streams on or over the mill land.

So started a new chapter in the history of papermaking in Winchcombe.

Fig. 37

704

The Paper Record.

JANUARY 15, 1888.

EVANS, ADLARD & CO.,

POSTLIP MILLS,

near Cheltenham. WINCHCOMBE.

MANUFACTURERS OF

Plain and Watermarked

White, Coloured,
AND
Turkey Red

MILL 633.

BLOTTINGS

— SUPERFINE —

HIGHLY-GLAZED PURPLE

Needle Papers.

Filterings, Fly Papers,
Coloured Printings.

TUB-SIZED, LOFT-DRIED

BLUE AND BUFF SAMPLINGS.

Telegraphic Address—"Adlard," Cheltenham.

Goods Packed for
Export,

In Plain or Zinc-
Lined Cases.

TABLE 2

Details of the sales, wages and profits of Postlip Mills for the period 1877 to 1900 whilst operating as Evans, Adlard & Company

<u>Year</u>	<u>Wages</u>	<u>Profit</u>	<u>Sales</u>
1877	£ 4,050	£ 5,808	£ 24,511
8	4,074	3,669	23,397
9	3,372	2,449	22,438
80	3,437	5,153	24,175
1	3,561	3,863	23,655
2	2,722	3,183	17,218 (9 mths)
3	3,313	4,210	21,998
4	3,239	4,176	22,294
5	3,187	3,862	20,567
6	3,132	3,882	20,724
7	2,963	4,618	19,358
8	2,829	3,986	20,338
9	2,933	4,675	21,062
90	2,894	3,920	20,301
1	2,870	4,257	21,392
2	2,986	3,912	20,695
3	3,023	4,059	21,066
4	2,932	2,154	18,995
5	2,891	3,033	18,107
6	2,806	3,108	18,777
7	2,830	5,265	18,470
8	2,942	4,544	18,506
9	3,087	4,989	19,277
1900	3,064	3,758	19,169
	£ 75,137	£ 96,533	£ 496,490

Chapter 6

EVANS, ADLARD & Co. Ltd..

An agreement was drawn up dated 1st August 1900 between Edward Adlard as the Vendor and Evans, Adlard & Co. Ltd., as the purchaser of the business of Evans, Adlard & Company. The nominal capital was £50,000 divided into 1,000 shares of £50 each. The agreement covered the goodwill (£19,000) and the exclusive right to use the name "Evans, Adlard & Co." as part of the new name, together with all freehold hereditaments, plant, machinery, etc. The basis of the deal as far as Edward Adlard was concerned was £400 in cash by subscribers, and a holding of £49,600 by the allotment to him of 992 fully paid up shares in the new company.

The eight shares subscribed for by this agreement were held, one apiece, by the following: Edward Adlard, Francis Bird, Charles Townsend Henney, three paper manufacturers; George Bird, Clerk in Holy Orders; Trenly Birch, gent; Margaret Caroline Adlard and Eleanor Marion Mabel Adlard, spinsters, (Edward's daughters), and George Edwin Hewett, company solicitor.

The directors were: Edward Adlard, Francis Bird, and C.T. Henney, the latter being also the company secretary. It will be noted that Edward Adlard was firmly in control with 993 shares. Later in August 1900 he agreed to sell 140 of his shares to Francis Bird. The partnership assets in their proportions were also carried forward to the new company and Francis Bird acquired a further equity interest from this.

The formation of the limited company appeared to make little difference to the day-to-day operations. Coal from the Forest of Dean continued to be used to raise steam to power the small engine which drove the paper machine and also a 200 hp Hick Hargreaves engine which provided all the other power in the Mill, whilst rags were still the main raw material. The paper was made at Upper Mill and Middle Mill carried on the intermediate stage of bleaching and washing. Although the drying loft at Middle Mill had been retained in the 1834 rebuilding, there is no evidence that any papermaking took place there after that date. The rags were in a number of grades selected for quality according to the requirements of the papers. Superfine Whites, Nos. 1, 2 and 3 Whites, Old Light Prints, Outshots, Fustians and Cords (Corduroys) were some of the names by which the rags were known. The last named, being miners trousers usually, were very dirty but always brought a good volunteer force for sorting because of the chance of picking up sovereigns or half sovereigns which fell out of the pockets during the sorting and cleaning.

Very little wood pulp was used. The rags were cut into pieces and treated first of all in two 'dusters' to get rid of loose dust. These were revolving wire cylinders of cone shape and the rags passed along throwing out the dust as they went. This dust was sold for use on the land as a fertiliser. Some of the rags required for the best quality papers were bleached either by gas or in solution. Deep blue tub sized paper was required for sugar sampling as the white grains stood out well against the blue background. Seidlitz blue papers were made for the powders put in by such customers as Wright Layman & Umney and E.W. Sleath of Manchester. 'Turkey Reds' were special rag cuttings to give deep pink blotting papers without the addition of dye. White and pink blottings were the bulk of the manufacture and most carried the watermark 'POSTLIP 633 MILL'. Some of the larger customers had their own dandy with their own watermark. A tub sized Yellow Buff paper was also made for sampling fruits, the sizing being made by melting 'pickers' (bobbins from the textile industry) into a jelly. This process was not very popular because of the bad smell involved.

It is interesting to note some of the detail from the trading accounts and balance sheet for the year ending 31st March 1901. The total cost of rags bought was £4,017 and of other purchases £4,850. Wages accounted for £2,998 and salaries £700. Fuel and light were £1,338; the cost of coal being the equivalent of about 80p per tonne including delivery and for each tonne of paper made the cost in coal was slightly less than £2. Utensils and renewals £188; repairs and maintenance of buildings £225; carriage, shipping and packing charges £940. An interesting item, no longer seen in today's accounts was 'To Stable Expenses £327' a measure of the reliance then placed on horses for work about the Mill and for the movement of raw materials and finished paper to and from the local towns. Travelling expenses at £108 reflected not so much the amount of effort put in as the low charges for travelling by rail - there were no cars for sales promotion then! Rates, taxes, insurance and telephone were all combined in a total of £364, less than half the amount entered for discounts and allowances at £811! 3% was the standard depreciation on land buildings and plant. An item of £500 was included as amortisation of most of the preliminary expenses of forming the limited company. The profit made was £5,018 and the bulk of this was paid out in a 10% dividend on the £50,000 capital. Sales were £18,590 and creditors £478. Agents commission accounted for £170. An item under the heading 'Subscriptions and gifts' reflected the family nature of the business in so far as most of the amount £64 was for wedding presents, Christmas presents etc. for Mill personnel.

Incidentally there were no office staff as we know them today. All ledgers, day books etc. were written by hand, and in general by one person. This continued as the pattern very much the same until the outbreak of the first World War in 1914. Sales in that year were £19,631 and profits £4,768. Travelling during this period had been distributed between Edward Adlard, Francis William Adlard (a director since 1905) and Francis Bird who visited London regularly and once a year continued to go to Canada, where the Company had no agent, but did a fair amount of business. This was mainly in blottings, particularly for qualities with bright colours and even a black blotting, which had also a home market appeal, as it was designed specifically for banks to nullify any copying of signature impressions left on other types of blotting. The manufacture of this colour, however, was not popular on the Mill production side because of the mess it made of the machine and the machine house generally.

Whilst some filter papers had been made for many years, the range was extended until by the end of the war they formed a significant part of the sales. By 31st March 1919 sales had risen to £44,200 and to £50,854 by 1922, before beginning to decline. The emphasis was now on filter paper rather than blotting paper.

At this stage it is perhaps of interest to note the wages for one week of the same man as an example:- 1903 £2.28 ; 1907 £2.33 ; 1913 £2.30 and 1921 £6.10. This man was an average, a few got 50% more and many more received less.

Francis Bird resigned in June 1919, and also in that year H.Lee Bostock became involved in visiting customers. By this time he had 13 years service with the Company, having started in 1907 as a boy of 13 years at 12¹/₂p per week!

In 1920 C.T. Henney was Mill manager as well as a director and in this year there were 50 rag sorters - all women - but with a rag foreman named Ballinger (father-in-law of Daisy Ballinger who is now a pensioner having retired in March 1972). No shifts were in operation in any part of the Mill. In the Salle there were female sorters and male packers and finishers. Plate glazing on Blue and tub sized Yellow Buff was in operation and carried out by females. The male working hours were 6 a.m. to 6 p.m. and female 8 a.m. to 5 p.m. Lighting was still by gas and the Mill had its own fire engine manually operated including hauling. The total work force was about 120. About 1930 use of electricity in the mill started, in the form of two DC motors driving equipment intended to remove rubber and other dirt from the paper pulp.

Sales in the accounts for year ending 31st March 1932 were only £19,065. Conditions in the Mill were grim with three days working and the rest of the week on the dole. Wage rates had also fallen from the 1920 - 1921 period.

The brunt of the travelling in the late twenties and early thirties was borne by F.W. Adlard and Lee Bostock.

In January 1931 the next generation of the Adlard family joined the Company at a salary of £4 per month. He was Edward Hogarth Milvain son of Margaret Caroline Milvain (nee Adlard) and grandson of Edward Adlard. Edward Adlard's health during 1932 began to fail him and this ultimately resulted in his death on 10th October 1933. At the time of his death his son F.W. Adlard was away in London travelling, having left knowing his father was very ill. H.Lee Bostock received a message from Mrs. F.W. Adlard that he had died and left hastily for town where he found 'Mr. Frank' at a bus stop waiting to go on a visit to a customer in Woking!

Edward Adlard must have been greatly missed. His influence has been of major importance and spanned sixty years. His own personal benefit had been immense by the standards of these years and yet his generosity to his own family was of equal proportions. He left good solid foundations which were built upon by his successors in a manner worthy of his own effort.

In January 1934 Robert Edward Adlard, son of F.W. Adlard and the fourth generation in direct line, joined the Company.

The pattern of business in the late 1930s following the depression years was a slow recovery in Sales turnover, with before tax profits holding slightly above or below £6,500 per annum. Wages had dropped back below the high levels of the immediate post-war era of the twenties and indeed were for seven years within the £4,000 - £5,000 per annum bracket. Stable costs were now down to very small levels. A Foden steam wagon had been introduced in the early 1920s followed later by a Ford lorry.

So Evans, Adlard & Co. Ltd., came to the next period of significance, namely, the World War II years. Business, as before in World War I, was stimulated by increased sales, mainly on the filter paper side.

The 1877 paper machine was still in use and the equipment and methods in 1939 were probably very similar, if not identical with those in use fifty years before, including the steam engine which drove the paper machine. Call up of personnel from the Mill increased as the war went on. Some sugar papers were also made during this period. Rags continued as the main source of raw material, quantities being controlled, as well as the amount of paper sold, by the Paper Controller. During this period the beaters and washers were tiled. In 1941 a new cutting machine was purchased. Wages began to increase and in the return for 31st March 1945 were given as £6,243 - 50% up on the same figure for 31st March 1939. After taking a decided tumble in the early War II years, profits were recovering by 31st March 1945. 1942 showed in fact the lowest after-tax profit at £1,755, since the company had been formed in 1900 and was the nadir to which it fortunately never returned.

At the outbreak of the War, the order books for blotting were full, but, unknown at the time a very significant invention, which was to have a profound effect, in due course, on our blotting paper manufacture, was marketed, albeit, at £5 each. This was, of course, the Biro 'pen'. From £5 each, as we all know, the price dropped to 5p each for throw away units. Fortunately for the Company post-war associations led to new markets, which cushioned the blow caused by the Biro. Blotting paper was last made at Postlip in September 1969.

During the war years Middle Mill continued its function of preparation of the rag stock for the machine, but its use was to be restricted to a relatively short future, for in 1954 it ceased to operate and today the buildings have even disappeared. Working hours were 7 a.m. to 5.30 p.m. and this had been the rule since the recovery from the 3 day week of the depression. Owing to short staffing, Mr. Lee Bostock was at the Mill by 7 a.m. and then stayed late to prepare invoices etc. It was not surprising that by March 1946 a new director had been appointed, namely, H. Lee Bostock. Thus the office boy of 1907 had reached the top at 54 years of age after 39 years of loyal, devoted and competent service.

In 1949 the Company celebrated what it then thought was its bicentenary.

Two events were now to occur in the early 1950s which led to very significant effects on the fortunes of the Company. In 1950 a meeting took place between R.E. Adlard and J.W. Thorpe of H. Reeve Angel & Co. Ltd. Reeve Angel were at that time developing very successfully an industrial use of filter papers based on the growing application in the U.K. of an invention originating in the U.S.A. for the use of paper based filter elements in automotive vehicles. Their purpose was to continuously clean up the lubricating oil to promote increased engine life. Although the Lockheed Company in the U.S.A. and their subsidiary here, had the application patented, it was challenged successfully by others in a position to make such elements and the result was a surge in demand for the rather special type of filter paper required. By 1952 Evans, Adlard were well into the market, through Reeve Angel, with this type of paper and also a special beer filter paper. In 1953 Technical Paper Sales Ltd., was formed as a subsidiary of H. Reeve Angel & Co.Ltd., to market exclusively all the papers manufactured at Postlip Mills.

Coupled with this association was another between Evans, Adlard & Co.Ltd., and the Hollingsworth & Vose Company of East Walpole, Massachusetts, U.S.A. by which the Company had become the licencees in the U.K. for Hollingsworth & Vose's papers marketed for use in the automotive field generally. This type of paper was to find application not only for oil filters in cars, but for diesel fuel filters for heavy goods vehicles, aeroplane fuel filters and air filters. Filters were required for large vehicles such as tanks, construction industry earthmovers etc. and this meant larger and larger paper elements. So from 1st April 1953 all the Sales efforts for Postlip papers resided in Technical Paper Sales Ltd. 1951 had been a boom year for all industries whilst 1952 was a slump year. This was reflected in the Evans, Adlard & Co.Ltd. accounts for 31st March 1952, and 1953 when sales were £142,200 and £106,706. The former figure was then the highest in the Company's history and naturally the profit after tax was high. Dividends, however, were kept down and reserves built up. By now, too, rags were beginning to drop off in use as the major raw material requirement, to be substituted by cotton linters and highly purified wood pulp. The synthetic fibres being used more and more in making clothes were not easily separated from the cotton fibres and they were detrimental on the paper machine.

Motor transport was now used almost entirely as only one horse was left and she was soon to go. The change in emphasis from blotting papers to these special types of filter papers also required major improvements on the machine such as drying hoods, extended dry end, alterations in the wet end etc. Originally these papers were supplied to customers who had the necessary facilities to impregnate them with phenolic resin, but in due course, it became necessary for the Company to be in a position to supply the paper already impregnated and a small impregnation plant was installed at the Mill. This very soon became inadequate in size to cope with the increasing demand and it became necessary to have paper impregnated by a contracting firm. This, however, brought problems and in February 1961 the Company installed its own large scale equipment for impregnating, a move which, in the event, has proved to have been a major factor in sustaining and enhancing the Company's growth.

From 1954 the progress of the Company became a continuous improvement saleswise and profitwise. The accounts for the year ending 1955 were notable as the goodwill of £19,000 originally incorporated in the Deed of Formation of the Limited Company in 1900 was written off against reserves.

On 3rd February 1958 F.W. Adlard died. Thus ended a long period of service to the Company particularly on the active Sales side, when travelling by train and bus was the only way to get about and when the Company's finances were such as not to permit excessive expenses.

About 1959 the Company made the first sale of a paper based entirely on a synthetic fibre, namely, glass fibre.

During the 1960s the sustained growth of the Company continued. By this time some 70% of the whole output of the Mill was destined for the 'motor industry' and of this approximately 20% went for export, practically all of which was already impregnated.

In October 1964, another generation of the Adlard family, Edward Francis Adlard son of R.E. Adlard joined the Company.

One or two points of interest from the Company's accounts of this period are worth mentioning. In the Director's report for 1964/1965 the fact that Miss Eleanor Adlard was retiring as a Director was referred to and information given that she had thus completed 33 years service. She was, of course the author of the first history of the Mill (1). 1967 was notable for the formation by the Company of its own Pension Fund.

During the Company's financial year 1966/67, F.J.T. Harris, at the time non-executive Technical Director and E.F. Adlard were appointed to the Board which now consisted of R.E. Adlard, Chairman and Managing Director, E.H. Milvain as Production Director, H. Lee Bostock, F.J.T. Harris as Technical Director, E.F. Adlard, G.R. Leschellas (representing W. & R. Balston) and J.H. Shave (representing H. Reeve Angel & Co.Ltd.). The death of Miss E. Adlard at the age of 85 was reported in these accounts.

The 1968 accounts showed the best results in the Company's history. Gross turnover was £704,970 of which 13.7% was direct exports, wages cost £104,192 raw materials £214,229, fuel, light and power £52,692, profit was £183,602, and dividends £15,000. There were 145 employees.

Thus our history as a family-run private limited company, was drawing to its close, on the crest of the biggest trading wave ever experienced since its inception in 1900, for a decision was now taken to sell the company to the Imperial Group in which it was to become part of the Paper Division under the parentage of Robert Fletcher & Sons Ltd. By the time all the formalities were completed one more trading account of 19 months (from 1st April 1968 to 31st October 1969) was to be registered. It maintained the impetus of 1968 and after all the ramifications of such a change had been completed, the descendants of William Gates Adlard must have been well satisfied with the decision he took in 1876 to take an interest in Postlip Mills.

Chapter 7

TODAYS REMAINS.

Today very little remains in the form of bricks and stones of most of our fifteen paper mills.

There are a few walls still standing at Awre, and there is a soft drink bottling plant at Bill Mill. The farmhouse, cottage and other buildings at Guns (or Gunns) Mills have been recently described in some detail (45). There is a country club at Wyre, a corn mill building and caravan park at Harvington, cottages at Overbury and a farmhouse at Stanway. Nothing remains of the Littleton mill.

Of the other four mills, namely those at Postlip, Coates and Sudeley, there are more remains. At Sudeley the drying loft and other old sheds are still visible and a sketch of the loft appears on the front cover of this journal. The water wheel here was apparently cut into pieces and is visible as an 'arch' over two or three doorways.

In Winchcombe itself the 'Abbey' which was owned by Nathaniel Lloyd still remains as a private dwelling, but his later home 'Beach Cottage' was pulled down many years ago when a school was built next to the Church. Nos. 75 and 77 Gloucester Street are believed to be the Red House of William Durham Senior, but this has not been proven.

At Coates the main buildings which formed Coates (or Postlip) Lower Mill still remain. Fig.38 shows, at approximately the same scale, the buildings on the site about 1870 and again about 1920. It will be seen that at the later date the mill pond had been filled in and additional houses built. In 1870 of course, the Lower Mill had for over 30 years been a corn mill instead of a paper mill and a few years later (about 1876) it became a row of dwelling houses which still remain. The reader will have noted that the Coates Lower and Middle Mills were also at times called Postlip Lower and Middle Mills.

Fig.38 also shows a comparison of Coates Middle Mill for 1870 and 1920. The buildings remained much the same, with the addition of a large covered water tank. These buildings have now been completely demolished but the mill pond can still be seen.

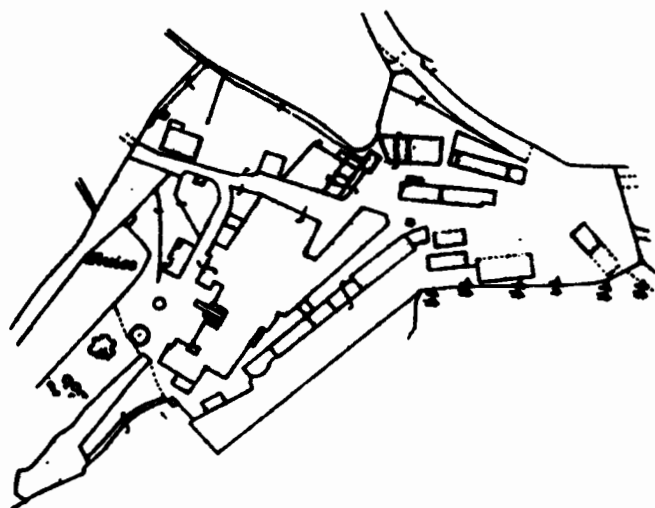
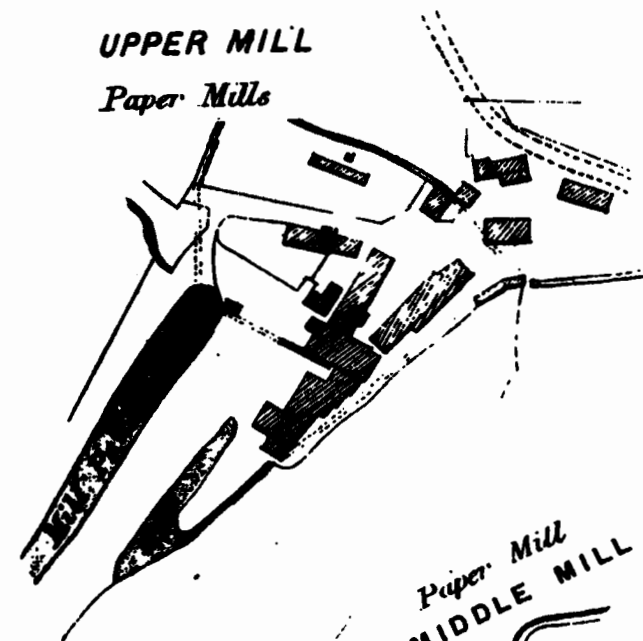
Fig.38 A comparison of the buildings at Postlip Upper Mill and Coates (or Postlip) Middle and Lower Mills for about 1870 and about 1920.

1870

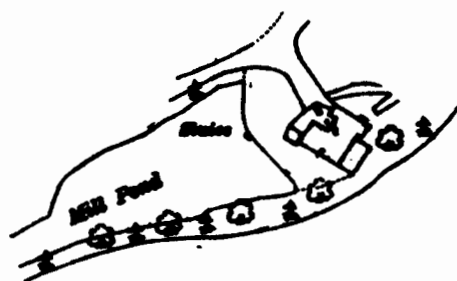
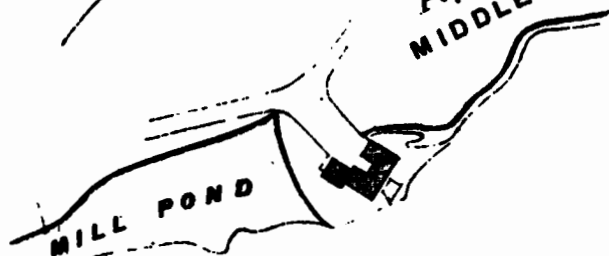
1920

UPPER MILL

Paper Mills



Paper Mill
MIDDLE MILL

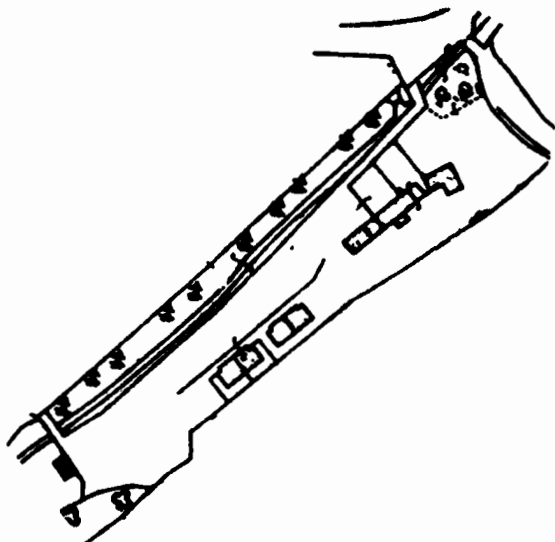
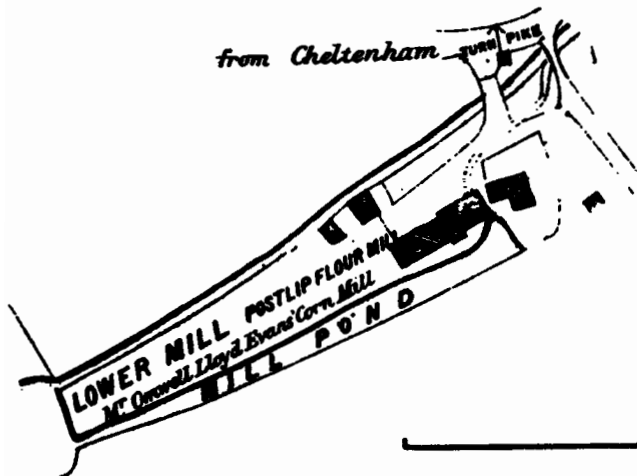


MILL POND

MILL POND

from Cheltenham

TURN PIRE



LOWER MILL POSTLIP FLOUR MILL
McConnell, Lloyd & Evans' Corn Mill
MILL POND

The comparison for Postlip Upper Mill, the only one of the paper mills still working is striking. The 1877 machine house was built alongside the 1826 machine house and on the other side of a passage-way the 'New Room' was built. There were also a number of additional wooden buildings built by 1920. The frontispiece shows the buildings of the Upper Mill about 1920.

In May 1968 the GSIA visited Postlip Upper Mill and later recorded the buildings and plant which were seen (46). Although there are a few small mistakes in that record, it has become very much out-of-date. Due to further extensions of the buildings, most of the older stone walls are lost amongst the more recent ones. However, the Old Machine House (1826) the New Machine House (1877) and part of the pit in which the water-wheel turned can be seen. One of the old drying lofts still exists, externally much as it used to be.

Since this chapter was first written, the original drawings for the 1877 paper machine have come to light. These drawings are reproduced here as Fig. 39. It will be noted that the machine was well equipped and it continued in use with little change for at least sixty years. It was powered by a new steam engine which is also shown in the drawings. The manufacturers have also been able to provide copies of their original manufacturing notes. These are very clear and provide a wealth of detail. Comparing their notes with walls etc which still exist, it has been possible to make several interesting deductions.

Of the old machinery, virtually nothing now remains of that installed before 1950. It is now obvious that the one and only small beater still in existence and in fact still in use, was made by G.W. Bertram in 1877. The two machine chests are made of cast iron plates bolted together, but they do not appear to show any founders name. Study of the Bertrams notes mentioned above, strongly suggests that these two chests were probably installed for the 1826 machine.

There are a few cast iron columns by J.M. Butt & Co. Gloucester and the makers name plate from an 1898 beater is preserved in one of the laboratories.

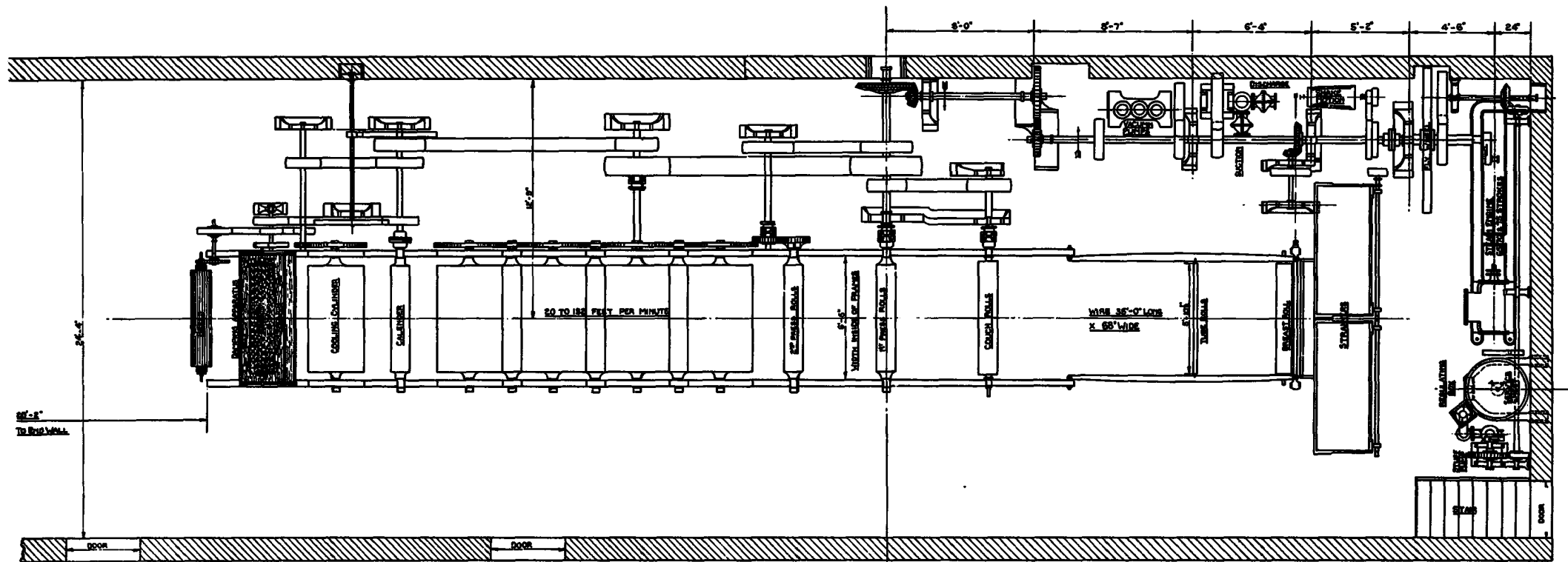
The writers make no apology for illustrating so many watermarks, since they believe this to be a very much neglected area. Though little remains of some of the paper mills, their record remains in the paper they made. A chronology of their watermarks can date not only documents, but also changes of ownership, of materials, of processes and of equipment.

And so we come to the end of this story of papermaking in and near Winchcombe. Starting with the unknown makers at Stanway in 1635, via John and Lidia Durham of Coates in 1725, to Evans, Adlard & Co.Ltd. who still continue in 1975.

Fittingly therefore Fig. 40 shows the watermark used by them for very many years.

Fig. 39 on the opposite page.

A copy of the original drawings of the paper machine installed at Postlip Upper Mill in 1877.



PLAN AND ELEVATION OF PAPERMAKING MACHINE (N°62)

WITH ITS STEAM ENGINE AND GEARING FOR

MESSRS EVANS ADLARD & COY

POSTLIP MILLS

NEAR CHELTENHAM

SCALE 1/4" TO 1 FOOT

JUNE 1877

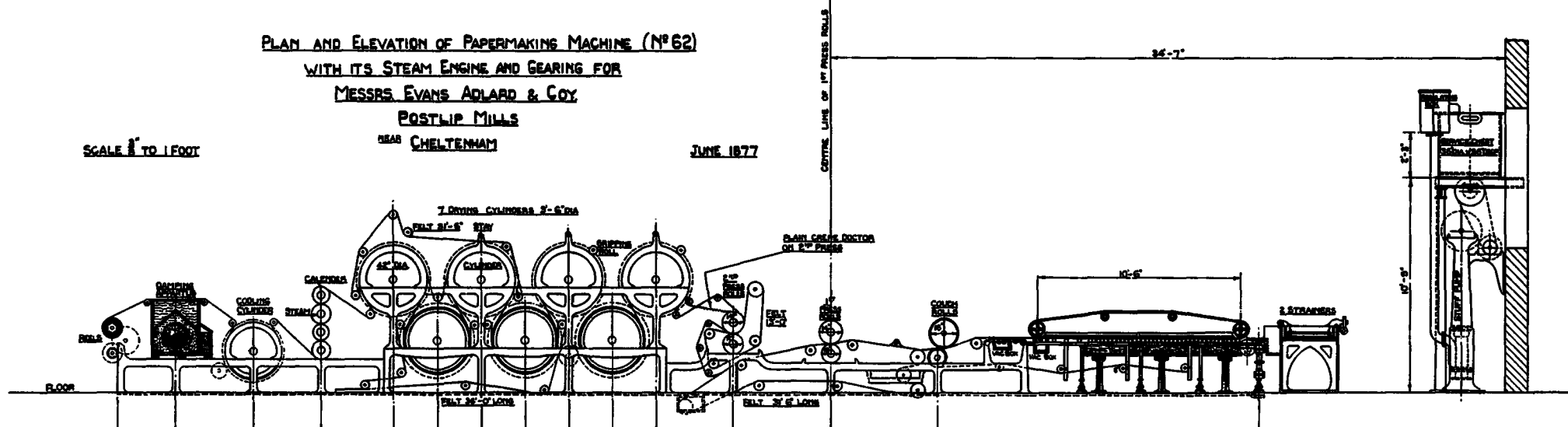




Fig.40 Evans, Adlard & Co.Ltd. watermark.
Last used in blotting paper September 1969.

Unless otherwise identified a reference to a document 'will 1790/20' is a reference to a will with that number which was in the Gloucester Diocesan Archives and is now in the custody of the Gloucestershire County Archivist. References such as (SO 625216) are map references.

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Shire Hall, Gloucester
- G.D.R. - Gloucester Diocesan Records,
Brunswick Road, Gloucester
- Salop R.O. - Salop Records Office, Shrewsbury, Salop

For permission to reproduce the various illustrations, we are grateful to the Bishop and Chapter of Worcester, the Gloucestershire and Salop Record Offices, the Central Probate Registry, the Gloucester Central Library, The Bryan Donkin Co.Ltd., Bertrams Ltd., and 'World's Paper Trade Review' (now 'Paper') and of course Evans, Adlard & Co.Ltd., without whose co-operation this article could not have been compiled.

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