THE PRINTED TEXTILES INDUSTRY IN ENGLAND 1830-1870

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ABSTRACT

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Printed textiles produced for the mass-market in the 19th century have had little historical or critical attention. This has been because these products, especially from the period 1830-1870, have lacked interest for the art historian and suffered retrospectively from the reaction against mass-production which was part of the rationale of the Arts and Crafts Movement later in the century.

In this thesis the structure and distribution of the industry in these years is analysed, with relevant background material. This analysis is based on a wide reading of published material, official publications, and manuscript sources, some of which has been transcribed for the first time during this research.

Attention is paid to the growth of the industry, its geographical location, and the relationship between production in the north and south of England. Use is made of figures from the Census Reports, (which are tabulated), to indicate the spread of textile printing across the country. Main trends are given in investment, expansion or failure of firms, legislation regarding taxation and copyright, and attitudes of manufacturers and commentators. Salient changes in technology are described.

Surviving collections of prints have been examined, notably the vast collection of designs registered from 1842, held at the Public Record Office. Details of this archive are given with an analysis of numbers of firms involved and designs registered up to 1870, the first time this has been done.

Use is made of this material to challenge a number of entrenched ideas about the effects of mechanisation of the industry, on skills and craftsmanship, on standards of design and public taste, and to re-assess the quality of mass-produced printed textiles both at home and in relation to the French industry.

A survey of other research relating to this subject is contained in the Preface to the Bibliography.

"The great object for which the Anglo-Saxon race appears to have been created is the making of calico".

Sidney Smith
Works iii 1845 p476

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INTRODUCTION

The purpose of this study is to describe industrially produced printed textiles in 19th Century England concentrating mainly on the forty years between 1830-1870. The beginning of this period was signalled by the repeal of various Acts which had seriously inhibited the growth of the industry. At the end of this time William Morris began producing printed fabrics in reaction to mass-production and his activity, and the changes in attitudes to design it initiated, have attracted a great deal of scholarly attention. This has led many commentators to adopt a dismissive attitude towards the products of the printing industry in the middle decades of the century.

That the industry grew tremendously throughout this period, that its importance to the economy was immense, that millions of people bought and used its products, is not disputed. The critical neglect is the result of the view that the quality of designs being produced was poor and thus of little interest.

In addition, the products of northern industry, largely serving the mass market, have been neglected in favour of those produced by firms serving the most expensive markets.

The reasons for these attitudes will be analysed in order to rectify this critical and historical imbalance.

The accepted view of the advent of mechanized printing in the 18th century is, or has been until very recently, that it had certain effects on the industry which can be summarized thus:-

1) That its rapid development in the northwest caused an equally swift decline in the southern industry and, concomitant with this, a drastic reduction in handprinting.

2) That after 1830, or thereabouts, standards of design declined drastically.

3) That block printers resisted the deployment of machine printing.

4) That endlessly expanding overseas markets absorbed as much cloth as the industry could produce, (as did the home market), and that this was only seriously challenged at the end of the century by growing foreign competition.

It will be shown that:-

1) Handprinting, by itself, never had the ability to satisfy an extremely large mass-market, but that its eventual decline occurred much later than is often suggested.

2) The demand for cheap prints was mainly created by and satisfied by machine production and the area of competitive overlap between traditional block-printers and machine printers was, after 1830, quite small.

3) Handprinting remained an important component of the trade throughout this period.

4) The demand for high quality fabrics, a relatively limited part of the market, continued to be satisfied throughout this period by printers in and around London, Carlisle and Preston, with only limited competition from Manchester.

The study is divided into two main parts. In Part I the state of the industry between 1830-1870 is described and an outline given of salient changes. Recent research has removed the necessity for detailed description of certain aspects of this subject. For example, sources of design ideas, the role of the designer, developments in chemistry

and dyeing, and the state of the London industry in the 19th century, have all been thoroughly covered elsewhere. A more detailed account of the current state of research in this field is included as a preface to the Bibliography.

Part 1 begins with the establishment of the industry in the northwest and with a consideration of the national picture. This is followed by an examination of some of the leaders of the industry, investment, patterns of success and failure, effects of taxation and repeal of legislation, and some of the main technological innovations.

Part II deals with the product itself, and to this end a number of surviving collections of prints have been examined, in particular the designs registered from 1842 onwards and now held at the Public Record Office to which, hitherto, little attention has been paid. This forms the main case-study in this thesis.

The concentration is specifically on the English industry for, although the Scottish industry was very large and deeply intermixed with its southern neighbour, an adequate examination would have been impossible in the space available. Therefore, the Scottish industry is only mentioned in passing.

A considerable amount of numerical material is included, especially with reference to the Censuses and the PRO records, both in the text and the Appendices. The distillation of these figures has involved several distinct process of cross-checking and re-calculation and every attempt has been made to ensure accuracy.

I must here gratefully acknowledge the receipt of financial aid from the Pasold Research Fund and the Guild of St George which made research for this thesis possible.

(I) THE INDUSTRY - DISTRIBUTION AND STRUCTURE

Establishment of the Industry in the North

By 1830 the major part of textile printing in England was concentrated within a thirty mile radius of Manchester and printers over a wide area utilised it as the main centre for wholesaling and dealing.(1) The rise in importance of the town as a distribution centre monopolizing the market functions of the trade is well known.(2) The emergence of the warehousing system in Manchester has been called "one of the most startling changes in the organisation of the cotton industry ..."(3) It had become the pivot of an enormous industry which had grown up in the space of some 60-70 years and which had eventually supplanted London and its environs as the most important producing and distributing area of printed goods in Britain.(4)

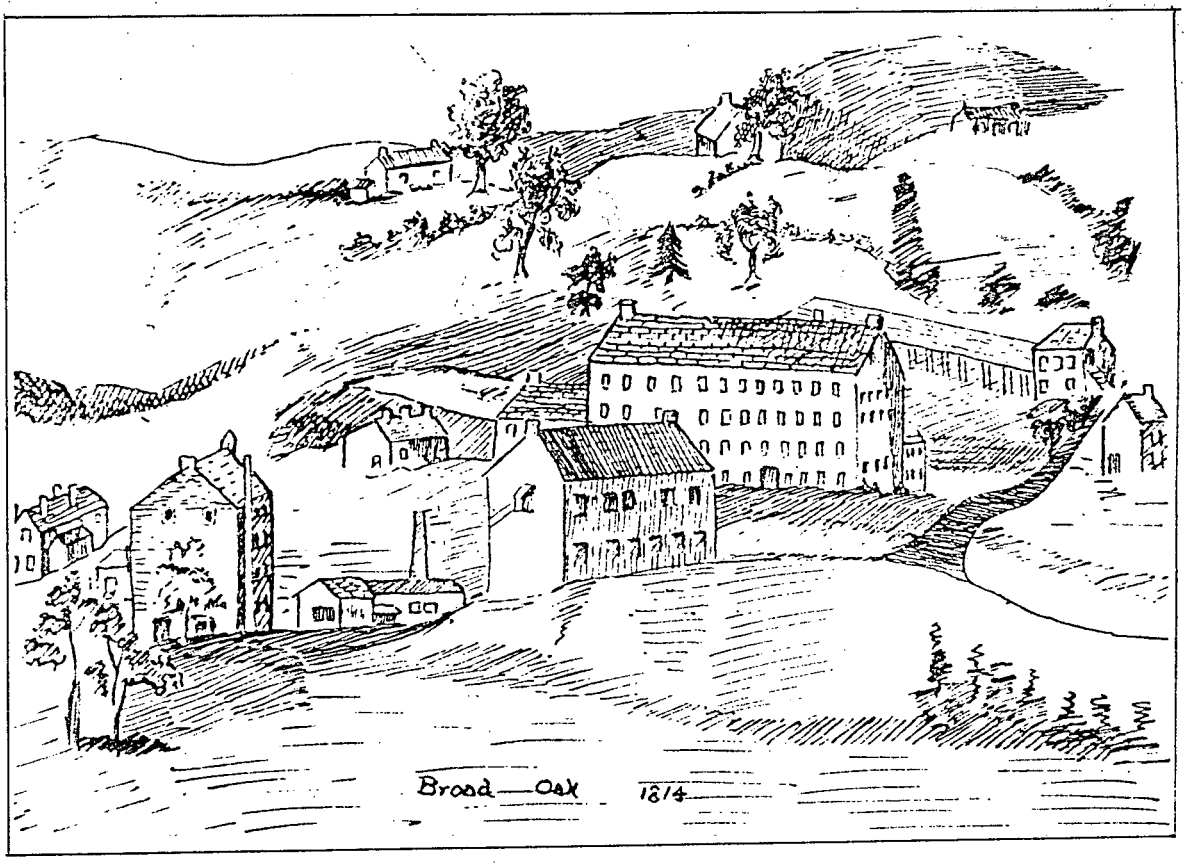
The long process of the relocation of the industry in the northwest of England has often been described as a species of migration. Although it is true that both labour and capital were attracted to the north, for a variety of reasons, it is important to establish that the printing industry which grew up there was, with one or two exceptions, different from that which prevailed in the south in a number of important ways - technologically, in terms of its market and, if it can be posited, culturally.

The growth of the industry was, in the first instance, encouraged by the availability of abundant, clean running water, necessary for many processes, and a ready supply of existing buildings suitable for conversion to new uses. In the early years, (i.e. from the 1760's), country houses, corn mills and old farm buildings were favoured.(5) John Graham records printing tables being set up in a hay loft in Cheetham Fold.(6) In fact, this technique followed a pattern already established in the south.(7) One of its main attractions was that modest fixed capital could be obtained by thus converting old properties and leaving any profits in the business.(8) But once mechanisation became a major factor in the late 18th century, this kind of improvisation was increasingly impracticable and through the 1820's and 1830's many instances are recorded of new buildings, purpose-built for printing.(9)

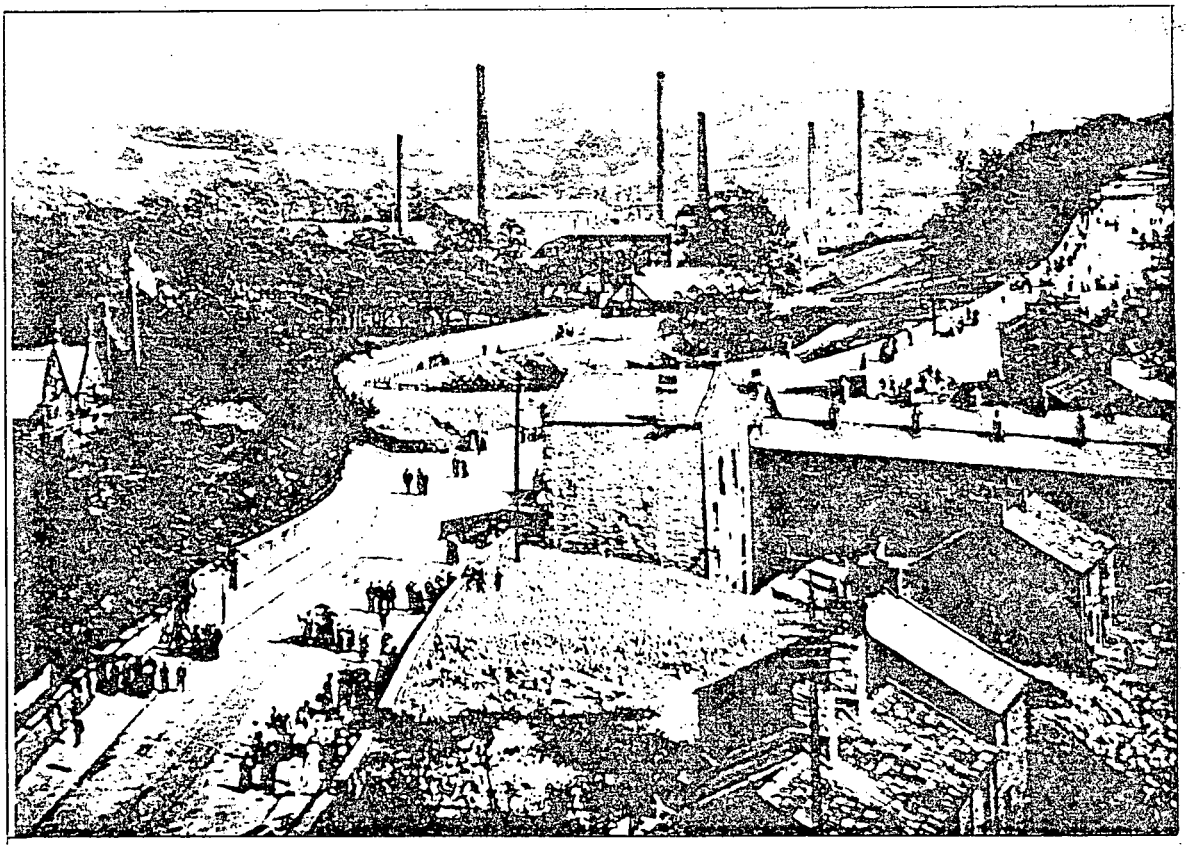
Other reasons frequently cited for the move northward were the attraction of local cloth supplies, (the main suppliers to London printers of plain cloth were based in Blackburn), the cheapness of land, availability of coal, lower levels of wages, freedom from the constraints of London based guilds and, it was implied, easier replacement of block printing craftsmen by unskilled machine minders.(10) This last reason needs considerable qualification in view of the actual continuity of block

printing in the northern industry as seen, for example, in the setting up in the 1840's of many small workshops around Bacup for the printing of carpets and felts. (For further discussion see page 88). Nevertheless, it is true that the introduction of new technology, such as roller printing from 1783, which was not adopted in the south, encouraged growth.(11)

Another major factor, of course, was the increasingly efficient network of communications between centres. Liverpool had already superseded London as a port by the end of the 18th century and the spread of the railway system in the 1830's served to enhance these developments.



Broad Oak Printworks, Lancashire, 1814, above. Even in the later photograph, 1900, below, isolated setting still apparent.



Location of Printworks

Many of the earliest printworks were established in extremely isolated rural settings. Difficulties obtaining regular supplies of suitable cloth had led many printers, even sometimes at the risk of a shortage of good water, to establish themselves within the reach of Blackburn to be near the main source of cloth, and for many years Blackburn remained the focus of the industry. Eventually, cloth production spread over a wider area, especially after the introduction of the power loom at the turn of the century and after Richard Roberts' improved version of 1820, and printworks tended to follow.

This innovation was resisted at Blackburn but more readily adopted in North Derbyshire and Manchester. Discussing the defunct printworks at Mill Hill, near Blackburn, Graham noted (in 1847) "In this small district there were at one time 500 block printers, and now all are gone".(12)

Hamilton suggested a pattern of several mills serving each printworks and seemed to base this on the assumption that printers only used locally produced cloth.(13) This may have been true initially but was less so as communications improved. On the other hand, such was the rate of machine production by mid 19th century that many mills were needed to supply relatively few printworks.(14) Certainly after

1850 the overall number of printworks declined and growth in the industry took the form of extensions to existing works and greater capital investment. Improvements in machinery, consolidation of methods and chemical and technical innovations all ensured rising production without increasing the need for manpower or new premises.(15) In addition, the easy credit of the 1830 s was replaced by more difficult trading conditions in the 1840's and encouraged entrenchment rather than new ventures and a system of high turnover and low profits was established as the prevailing practice.(16)

It is difficult to establish an accurate picture of the industry across the country, or even within specific areas, for not only is there a singular lack of official figures but there are discrepancies between the figures offered in the various contemporary sources on which we must rely. Leonard Horner, Government Factory Inspector, writing of the new Printworks Act which had recently come into operation in January 1846, said, "the duty of seeing to the execution of it had been laid upon us ... we were much occupied in preparing to communicate with the owners of printworks".(17) (In his district around Manchester there were, he said, 114). One of his colleagues, R J Saunders, in May 1846, notified that he visited five printworks in Essex, six in Kent, eleven in Middlesex, two in Norfolk, eighteen in Surrey, one in Lancashire and five

in Yorkshire. "Twenty of the establishments reporting as printworks are wholly confined to the painting and printing of floorcloth and are situated in the immediate neighbourhood of London".(18)

For the whole of the Manchester district in 1840, which included North Derbyshire and Cheshire, Graham listed 96 printworks (including 8 not working) and for 1846, 129.(19)

Kennedy gave 95 in the Lancashire area in 1843.(20) Confusingly Pigot's Directory for the same year list 165 calico printers in Manchester, although it is clear that many of those listed were no such thing but offices or agents for merchants and out of town printers, including Scottish and foreign firms.(21)

These reports and lists hardly mention small printworks which the Census figures indicate existing in almost every county (Tables A2-11). For example, the 1851 Census indicates 2,512 calico printers in Wales. Obviously, the activity in many areas may have been too slight to have had much significance. Nevertheless, taken altogether as shown in Table A9 these added up to a large body, especially if added to the numbers for silk printers shown in Table A10. Local trade directories, which might be

anticipated to help here, are less than specific. Where a region had a large number of printers, such as Lancashire or Cheshire, these were listed. Elsewhere, even when the presence of printing can be inferred, there is seldom corroborative evidence. Most probably they are subsumed under some other trade title such as "Dyer". Thus quite important centres can easily be overlooked. Though Bolton is usually included in the Census figures, it has been neglected by historians as a centre for printing, and the emphasis is always placed on its growth as a focus for the bleaching industry. A review of trade directories indicates that some increase of printing activity occurred in the 1830's, was maintained for some time, and involved as many workers as more recognized centres such as Burnley or Clitheroe.(22)

By the end of the period under consideration, i.e. by the late 1860's, the number of printworks in England and Scotland was given as "about 170" though it was admitted that this did not include "all in the Kingdom".(23) Printworks in the Lancashire district numbered about 80, in Scotland 30. (These figures include works of all kinds - warp, skein, wool, floorcloth, felt and cotton printers). Even so, this leaves 60 to be accounted for elsewhere.

These figures can be summarized thus:-

DATE	SOURCE	AREA	NUMBER
1839	Report 1869	Lancashire	87
1840	Graham	Lancashire	96
1841	Kennedy	Lancashire	95
1846	Horner	Lancashire	114
	Graham	Lancashire	129
	Saunders	London/Leeds/Norfolk	48
1869	Report 1869	England	140

London and the South

Despite Lancashire's ascendancy (noted as early as 1795 by Dr. Aikin), the London centred industry continued to be of considerable importance for longer than is often allowed.(24) Dates for its eventual demise have been variously allocated. Augustus Applegath said that the printing of calico had ceased entirely in London by 1840.(25). This may have been true for central London but not so for the larger area. Charles Swaisland started his printworks at Crayford in Kent in 1824 block printing oriental styles for saris and imitation cashmere shawls but later extended his range to include mass-market dress prints. By the 1850's he was employing 500 workers.(26) Across the whole period Swaisland was one of the most

consistent producers of dress fabrics, in direct competition with the best Lancashire could offer.(27) Potter was still able to say in 1852, "I believe the London print trade to be decreasing ... I think it will continue to do so", implying, at least, that it still existed.(28) More positively Turnbull thought that "from 1850 ... London printers had been able to stem the tide (of decline). They established their reputation as producers of high class printed silks ..."(29) Its importance in the production of luxury goods, of specialist items like waistcoats, and good quality furnishings, allied to a greater sense of fashion than was available in most provincial centres, ensured continuity and even a degree of prosperity for some firms. "Silk handkerchief printing has here its chief and almost entire seat for the supply of the whole world ..."(30)

The Census figures indicate residual and widely spread calico printing in both London Metropolitan and extra-Metropolitan counties and, although towards the end of the period they show a decline, so do figures for other parts of the country (see Table A9). It should be noted that despite the relative importance of silk printing compared to cotton printing as far as London was concerned, the number of cotton printers were still higher than silk printers.

Although not reliable with regards to accuracy, the Censuses are more useful than the trade directories. They cite numbers involved in printing as an occupation and are therefore sure indicators of activity (though not amounts of activity). The directories list only the presence of businesses and many of those quoted are no more than the London offices of northern or foreign firms. For example, in the list of "Calico Printers" in a London Directory for 1864, of the 25 names given, at least 19 came into this category. On the other hand the presence, under the heading of "Calico Roller Makers" of Stephenson's Metal Tube and Copper Roller Co. of Fenchurch Street might indicate some printing in the area - machine printing at that. The same Directory list 10 "furniture printers" and 14 "silk printers"(31)

It would be misleading to over-emphasize this. The role of supplying the larger public, home and abroad, with a wide range of printed fabrics was, by the 1830's, Lancashire's. Although textile printing of various kinds continued in London, it operated, with a few exceptions, in areas other than those which concerned the northern producers.

Success and Failure

Paradoxically, once the commercial dominance of Lancashire was established, London trade seemed rather more stable than previously. The traditional vulnerability of the industry exemplified by the constant bankruptcies of the 18th century in London diminished there but became endemic in Lancashire, especially during the period after 1815.(32). Many of these disasters are recorded in the pages of the Manchester Mercury and by Graham. His laconic references to failure after failure of firms occupying a particular site, often with the same people responsible more than once, reflects this syndrome. However, the sequences of failures often span 60-80 years and so are not quite as apocalyptic as they might seem. Wallwork calculated that, of the 200 or so different printworks that had been in existence from the 1780's to the 1840's in the Lancashire district, about one third had failed but, alternatively, on this basis, two thirds had succeeded.(33)

It must be emphasized that, compared to some other industries such as cotton spinning where the rate of failure was extraordinarily high, it has been shown that a respectable percentage of printing firms (more than 80% up to late 1800) lasted for more than a decade.(34) At least ten of the firms near Manchester in existence in 1830 had been in existence, in one form or another, for more than 40 years.(35)

It is possible that one reason for the precarious hold on existence shown by some concerns lay in their failure to provide up-to-the-minute designs on which success depended. But many northern firms operated in the export market (where the styles of design were not conditioned by home-based notions of fashion), or on the basis of stolen designs where any inability to provide the latest can only be seen as a lapse of piratical judgement. It should also be added that aesthetic considerations, in the ordinary sense of quality of design, were frequently second to a desire for novelty for substantial part of the market. Success at providing the designs required was often due, as Edmund Potter attributed it to Robert Peel, more to foresight and prudence than to the exercise of taste.(37) The key to success was good management and neither size nor capital were security against failure. For example, Thomas Ratcliffe and Brothers began printing with a capital of £12,000 at Enwood Bridge, near Haslingden, in 1815, but after four years were bankrupt.(38)

Sizes of Businesses

It seems that many of the earlier printers were artisans, singly or in small partnerships, often with little capital and sometimes little technical knowledge.(39) Many of the examples given by Graham seem to confirm this and,

further, to suggest that it remained true well into the 19th century. It has been suggested that the recruitment of small men into the industry was encouraged by cheap credit and market diversification but this view has been challenged by the observation that it was not until the 1830's that credit was at all abundant in the north. The financial system operating before the development of proper banking facilities was quite inadequate to cope with the growth of industry and foreign markets.(40). Furthermore the difficulties associated with diversification either in terms of product where alternative materials, technology and skills were often required or in terms of markets, were considerably beyond the reach of small firms with limited capital. Nevertheless, it is clear that numerous small firms existed and many prospered for years.(41)

On the other hand it has been pointed out that despite the presence of these small concerns, calico printing was an industry distinguished from its inception by some very large manufacturing units. Large works were in existence in Lancashire where "the leviathan of the industry, Livesey, Hargreaves & Co ... employed between 700 and 1,000 printers shortly before ... 1788".(42) By the early 1800's Peel was employing 15,000 people in all branches of spinning, weaving, bleaching and printing.(43) These examples were rather exceptional for the early years in the north, but by the middle decades many printworks were

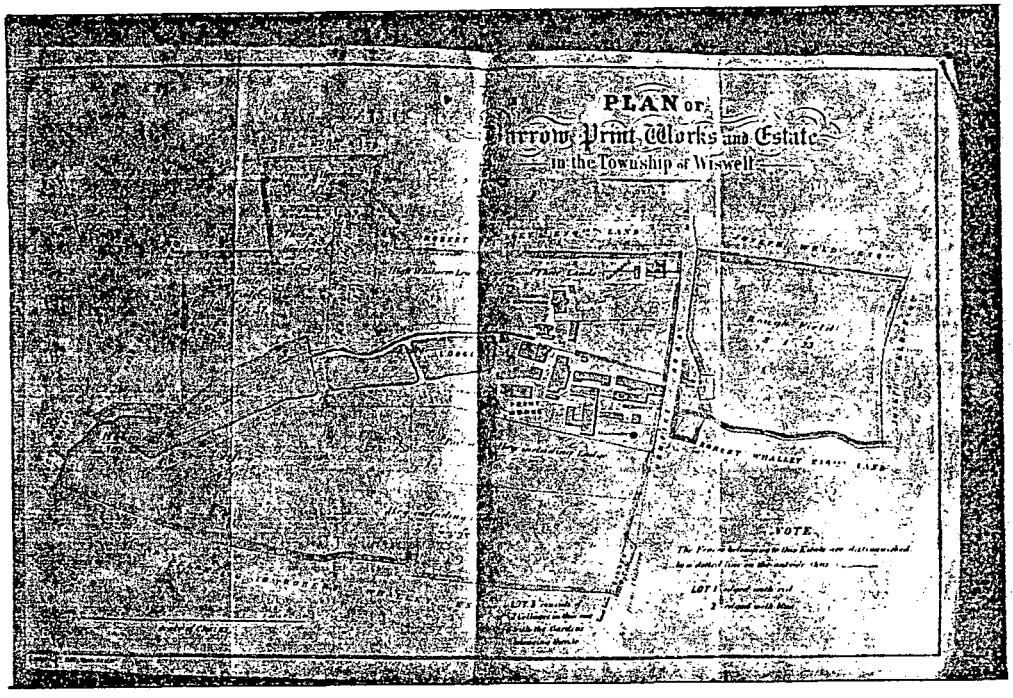
employing very large numbers of workers in extensive premises.(44)

By the 1830's the frontier spirit and the rough and ready conditions of trade which had existed before had been replaced by greater organization of marketing centralised on Manchester and optimum sizes for firms had emerged (depending on the kind of printing involved) and this trend continued throughout the period.(45)

The tendency for successful works to expand can be exampled by the case of Broad Oak taken over by Hargreaves and Dugdale in 1812,

> "At that period the manufactory consisted of not more than half a dozen buildings and covered perhaps one acre of ground, but being situated in an open valley, supplied with three rivulets of pure water near a village containing three or four thousand inhabitants, with a plentiful and cheap supply of coal and the advantages of good roads and canal communications, there was everything favourable to a successful prosecution of the business. The subsequent enlargements and alterations of the premises have extended over a large space of thirty or forty years. It may be said of the print trade that those who embark in it never know when they have finished building ... The premises at Broad Oak have extended to seven or eight times their former size, and may be said at present to cover little less than eight acres of ground".(46)

Established printworks, comprising separate buildings for all the necessary processes, large lodges of water with, in some cases, their own gas works, were often extensive and dominated the surrounding town or country. By the 1860's Broad Oak (W Grafton & Co) had extended to over 20 acres. In some cases, notably with Barrow which had its own farm, there was a degree of self-sufficiency.(47)



Plan of Barrow Print Works from documents in Archives Department, Manchester Central Reference Library, M75

Capital and Investment

Physical expansion of the industry reached a peak by the 1840's and after 1850 few new enterprises of any consequence were started. At the same time it was a period of increased output.(48) Improved methods of production and distribution favoured well-located, well-capitalised organisations and the industry adopted, more or less, the profile it was to maintain until the end of the century.

It has been suggested that the rapidity with which raw cloth could be converted to a marketable commodity encouraged investment.(49) Against this should be set the high degree of risk. Some of the early capital for Lancashire came from London merchants but this was eventually supplemented by support from Manchester.(50) Cobden was able to start printing in 1830 wholly on the basis of extensive credit provided by the Manchester firm of Fort Bros and Co.(51) Once printing got beyond the more primitive technology, and mechanical printing and more sophisticated dyeing were established, the amount of capital required to start and, once started, tied up in materials and stock, was considerable. By the middle of the century, if not before, rising costs ensured that it was inordinately difficult to break into the intensely competitive domestic market, or the risky overseas market.

Despite improving international conditions after the war with France the difficulties of the export market were considerable. It was expensive, reliable contacts were essential and returns were slow. Also foreign markets did not always absorb overproduction to the extent that was hoped.

A few firms, expecially those with good London connections, could grow and attract capital.(52) But even bankers were not immune to failure. John Brooks, a banker from Blackburn, joined Henry Butterworth to form Butterworth and Brooks with printworks at Sunnyside, Haslingden. Brooks' personal fortune in 1834 was £300,000 including £214,000 invested in the works. He retired from business in 1846 with only half his original capital.(53)

Gisbourne & Wilson of Adelphi in Salford went bankrupt in 1841 with debts of £90,000 despite a turnover of £300,000 per annum and the Manchester agent of the Bank of England commented,

> "Gisbourne and Wilson's business, like that of many others who started under similar circumstances (with little capital and the liberality of their bankers to depend on) has been conducted on the principle that the more goods you can produce, whether there is adequate demand or not and however small the profit (the better)".(54)

The prosperity of even large firms clearly depended on a number of factors, not least of which was the character of

James Thomson (1779-1850) of Primrose Printworks, Clitheroe, the most celebrated textile printer of the first half of the 19th century.

the owner. Once James Thomson, for many years one of the leading figures in the industry, died in 1850 and the business was taken on by his sons, it failed almost immediately.(55)

> "The failure of Messrs Thompson (sic) Brothers & Co, calico printers, occurred in this month. Their liabilities were reported to be about £120,000. This affair, along with uneasy apprehensions respecting the war in the East made buyers extremely cautious".(56)

A figure of equal eminence, Edmund Potter of Dinting Vale in Derbyshire, failed in 1831 with debts of £24,000. In this case the coincidence of the upsurge in trade due to the repeal of taxation (see pp55-9) and the prosperity of cotton manufacturers in Glossop, helped Potter clear his debt and re-establish himself.(57)

A great deal of fixed capital was tied up in buildings and stock. In the 1830's an insurance inventory showed Church Printworks with a valuation of £25,000.(58) In the same period the works at Foxhill Bank at Oswaldtwistle were insured for £36,100.(59) But sheer size was no indicator of valuation. Barrow Printworks, which was extremely large, had a valuation in 1855 of only £8,192.(60) Richard Cobden estimated the capital in his printworks at Sabden at £80,000 with a turnover of £150,000. In 1836 the firm showed a profit in excess of £23,000 but fluctuating trade meant that the profit for the first half of the following year was only £4,000.(61)

Many works were rented or on leases, the latter often from local landowners such as Lever Bank from the Earl of Wilton, Prestolee from the Earl of Derby and Sawley from Lord Grantham. Bradshaw, Rhodes & Hammond rented Levenshulme from Thomas Coats & Co from £800 per annum, and Shepley Hall was rented by John Lowe & Co for the same amount.(62) Salis Schwabe had a lease for 21 years for the print and bleachworks at Rhodes, Middleton, for a rental of £1,390 per annum.(63) One firm, Tipping & Fleming, improvidently exhausted their capital making preparations to start printing at Holden in Yorkshire and so never actually began.(64)

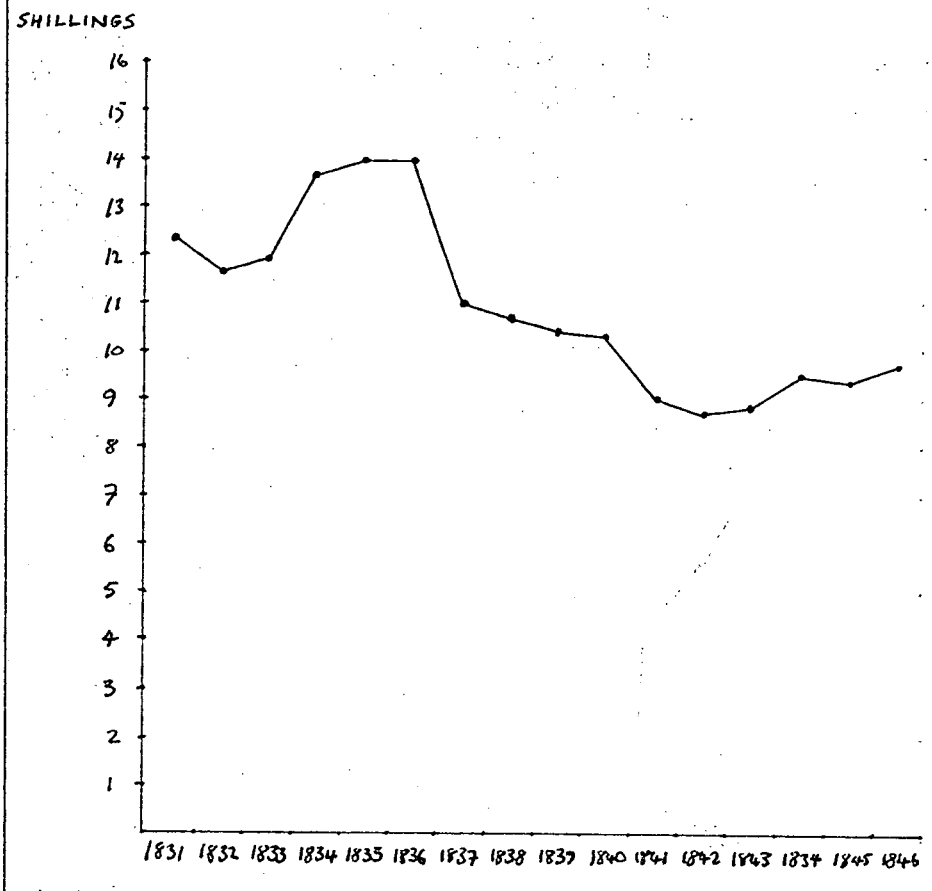
Clearly the most important factor in solvency was to have sufficient working capital to meet running costs and debts to suppliers. Without this, however substantial the fixed capital or however large the turnover, changes in fashion, difficulties with raw materials, importunate creditors, or any one of a number of other eventualities, could ruin a firm remarkably quickly.

Productivity and Prices

The growth of the production and consumption of cotton products has been frequently described and the value of the export trade is usually emphasized as well as the ubiquity of the product. As early as 1823 Butterworth claimed "well-authenticated accounts have been published of their (that is, Manchester prints) having been found as articles of dress amongst the distant tribes of Tartars".(65)

In the early years itinerant tally-men took samples of cheap fabrics into every part of the country (66) but, by the 1830's, a massive distribution network was coming into being, necessary to match the increasing productive capacity of the industry as well as increasing demand for cloth and clothing, "for which there was a larger working-class demand than for any other manufactured commodity".(67) It was easier to sell via agents and travellers and despatch goods from the warehouse by carriers.

The received view is that "the home and export markets demanded more and more yardage" as suggested above.(68) In fact Lancashire production "... outpaced the capacity of domestic and overseas markets to absorb them, especially in the second quarter of the century"(69) and



AVERAGE PRICE OF PRINTED CALICOES
(based on pieces of 28 yards @ 41bs 4ozs.)

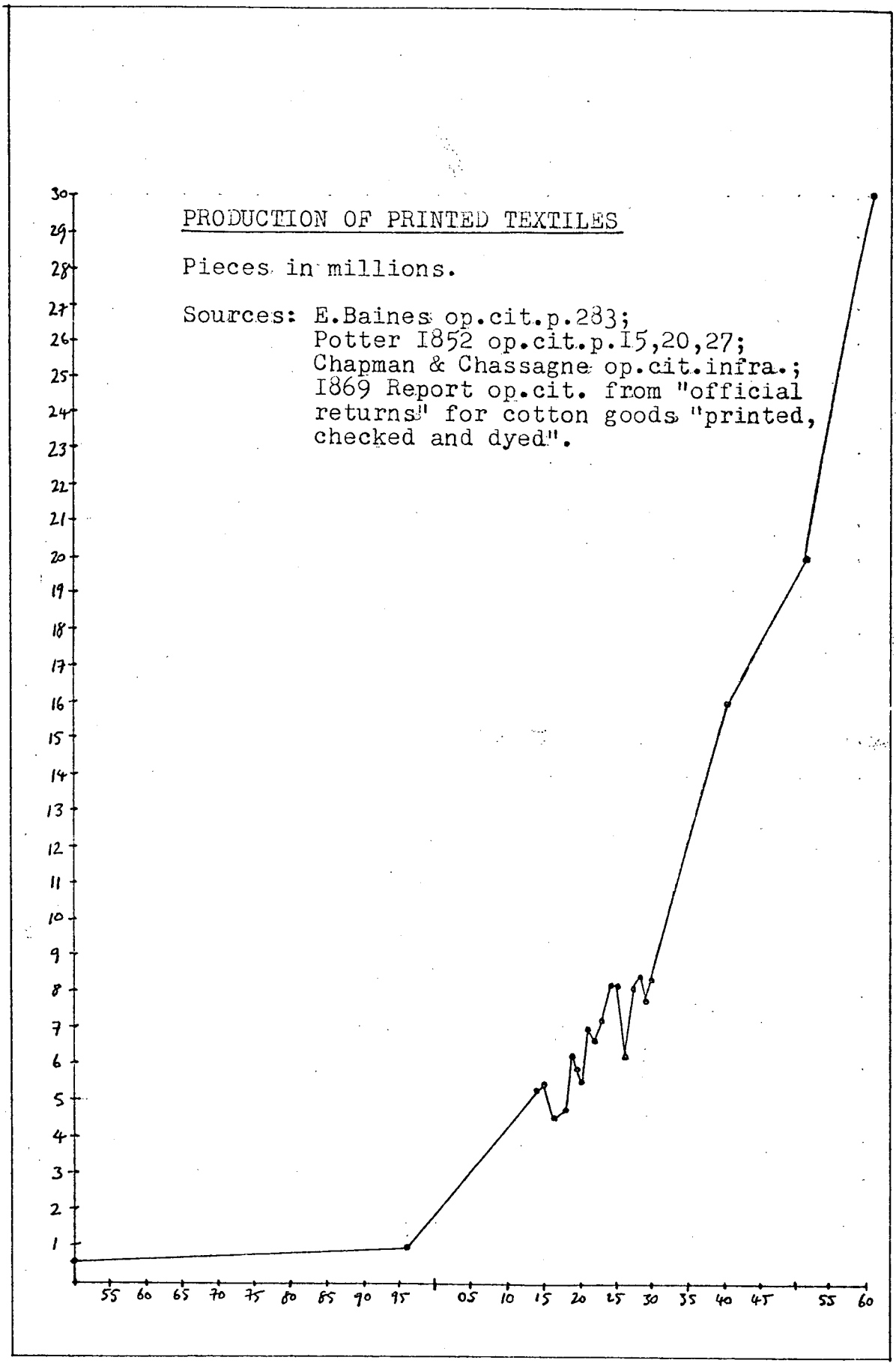
Source: R.Burn(ed) Statistics of the Cotton Trade 1847

it was only the continuing fall in price that kept the market steady, at least until the 1850's and again, even more dramatically, at the time of the Cotton Famine in the 1860's.

Table p28 shows a rather slow reduction through the 1840's but by the end of the decade the fall in price of, for example, printed muslins over the previous 20 years was more startling (9/- against 2/-) and there seems little doubt that reduction of this order would have encouraged demand.(70)

The increase in production over a century with dramatic growth after 1830 can be seen in Table p29. In addition Thomsom provided interesting figures for individual firms, (Table p33a), and to these can be added some production rates quoted by Graham, (ibid).

As early as 1808 the different rates of production possible by the traditional methods and the new machine printing had been noted.(71) A block printer could produce 8 pieces (224 yards) per day, a copper plate printer 12 pieces (336 yards) per day and a machine printer 200 pieces (5,600 yards) per day and, clearly, this differential became greater as the century progressed. Even allowing for some increase in speed (for example by the use of larger blocks) the rate of hand printing could not have increased appreciably. Given the


PRODUCTION OF PRINTED TEXTILES
Pieces in millions.
Sources: E.Baines op.cit.p.283;
Potter 1852 op.cit.p.15,20,27;
Chapman & Chassagne op.cit.infra.;
1869 Report op.cit. from "official returns" for cotton goods "printed, checked and dyed".
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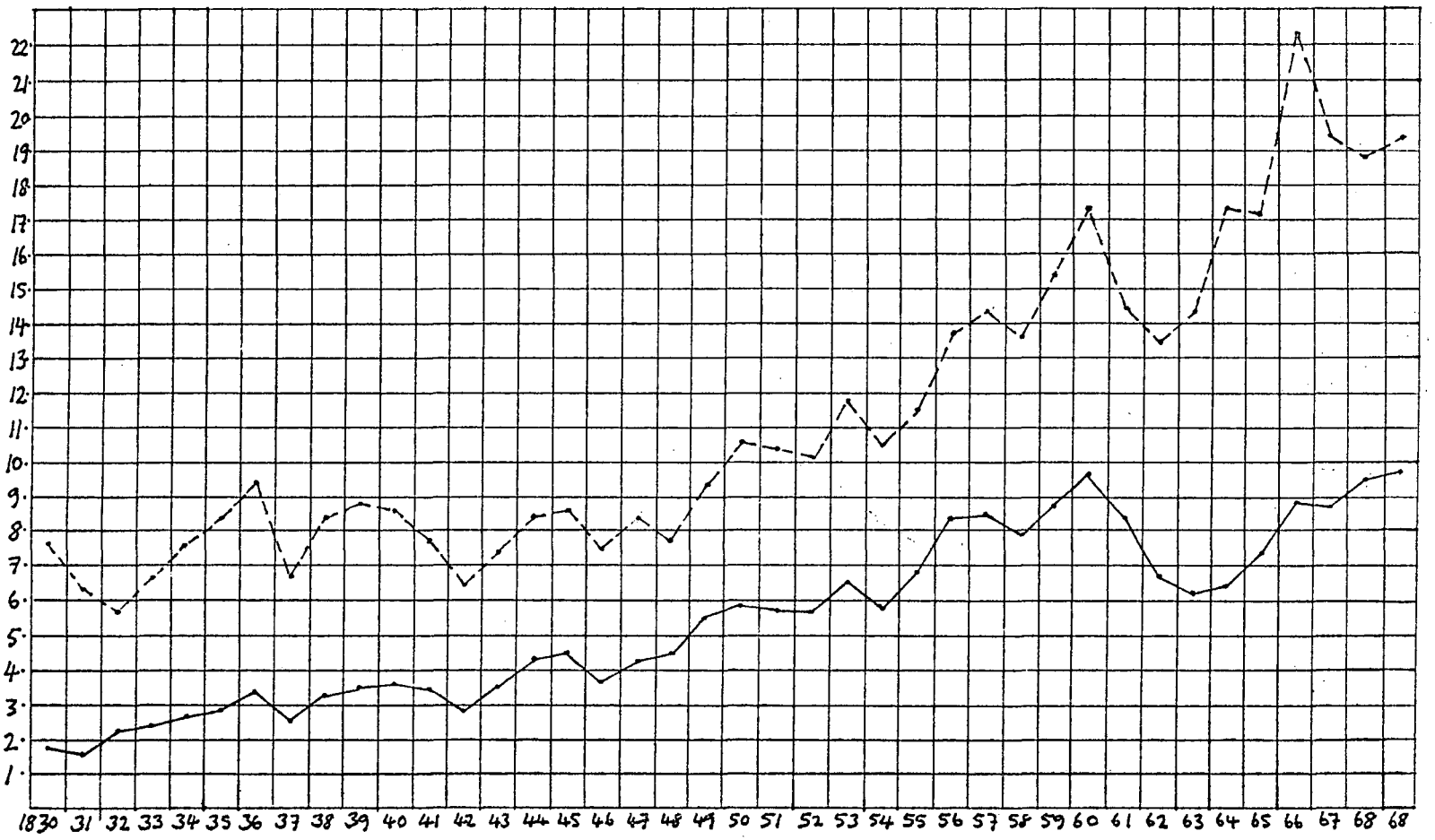
craft-based nature of handprinting it would not have been able to meet increasing demand, though its productive capacity, theoretically anyway, was quite high. In any case, it could not compete with machine printing in terms of cost. The printing machine to some extent created its own market by steadily falling prices, a wide range of frequently changing designs, and availability geared to growing consumer demand.

The importance of the export market, not only to the economy as a whole but as a means of absorbing some of this increasing productivity, is clear.(72) Of the entire export of manufactured cotton goods, exclusive of yarns, in 1852 "about one-fourth in value, or nearly £6,000,000 was from the print trade and formed in quantity rather more than three-fourths of the entire production of printed goods in this country".(73) Despite the problems of exporting (as noted p23) the 19th century view was that "the more a printing establishment is dependent on the home trade, the more irregular it will be", whereas in the export field at least, "intervals in trade" in one area could be filled by turning to different markets.(74)

The effects of the cotton famine (1861-1865) caused by the American Civil War can be seen reflected in the graph on p 32 . One of the main consequences of this was that French products which had previously been at a distinct disadvantage in world markets on price became extremely

FIGURES TAKEN FROM THE COTTON TRADE, GEORGE MCHENRY, 1863. (TABLES REPRODUCED IN TURNBULL OP.CIT. pp.431-2)
1830-1860 QUANTITY AND DECLARED VALUE OF PRINTED AND DYED COTTONS EXPORTED FROM THE U.K. (i.e. INCL. SCOTLAND)
AFTER 1863 INCLUDING PRINTED, DYED AND COLOURED PIECE GOODS MADE FROM PRINTED YARNS.



competitive. The price of English goods rose very high. English 72 reed goods were selling at 11/6 per piece, or $5\frac{1}{4}^{d}$ per yard in 1861. French percales were $11\frac{1}{2}^{d}$ per metre. By 1865 English 72 reed cloth was at 19/6 or 9^{d} per yard with French percales at $12\frac{1}{2}^{d}$ per metre.(75) The results of this included an increased presence of French firms in London and Manchester (see the lists of registered designs pp[illegible]) and an extraordinary increase in purchase of French prints by wholesale houses. According to one source, few wholesale houses previously bought French products, but by the end of the decade many habitually sent buyers to Mulhouse.(96) French prints were also, it was noted, increasingly available in the provinces. In addition, English buyers were inclined to buy in smaller quantities - where before they might buy 50 pieces they now bought 5 - but they bought small quantities of many different patterns.

Declining prices for the consumer were not always the result of the combination of increased productivity and demand. During the 1850's a depression in the industry "hitherto unparalleled" was reported in the press.(77) The price war which resulted with jobbing printers cutting their prices by 50 or even 75%, despite the high prices of materials, was described as "ruinous competition to print

NUMBER OF PIECES PRINTED AND HANDS EMPLOYED ON CERTAIN PRINT GROUNDS OF ENGLAND

NAMES	Pieces printed 1839	Hands employed	Pieces per head
Ainsworth & Co	430,000	400	1075
Schwabe & Co	310,000	700	443
Thos. Hoyle & Sons	269,229	693	388
Fort Bros. & Co.	224,971	750	300
Hargreaves & Dugdale	306,629	1040	295
Edmund Potter & Co.	83,000	380	218
Thomson Bros. & Co.	168,181	930	181
John Lowe & Co.	52,000	300	173
Swaisland & Co	40,000	260	154

Source: J Thomson, A Letter to the Right Honourable Sir Robert Peel Bart. on Copyright in Original Designs and Patterns for Printing, 1840, p.33.

PRODUCTION RATES AT VARIOUS PRINT WORKS

Bannister Hall, Preston	"used to do 800 pieces per annum, now do 100."	(c.1847)
Bradshaw, Rhodes & Hammond, Levenshulme	"do 20,000 pieces per annum for the German trade."	(c.1847)
Deeply Vale, Ramsbottom	About 600 pieces per week but "not very busy."	(c.1847)
Hyde	106,000 pieces per annum	1834-35
	80-90,000 " " "	1843-48
Loveclough, Rawtenstall	40-50,000 " " "	1832-38
Primrose, Clitheroe	180,000 " " "	1845-46
Strangeways, Manchester	15-16,000 " " "	1825-26
New Pin Mill, Ardwick	"pretended to do 300,000 pieces per annum" by not putting sequential numbers on the work.	

Source: Graham Ms. op.cit. infra.

at any price ... making it a matter of no small difficulty to recover a paying price".(78) Another commentator said that the depression was caused by the absence of demand at home and abroad. At the same time "the means of production since 1850 has greatly increased". This writer lays the blame mostly on the rise in prices of raw materials, cloth and dyes.(79)

Labour

Various attempts have been made to estimate the size of the work force in the 19th century industry. Turnbull attempted a calculation based on the number of tables in printworks in 1840 in the Lancashire area.(80) He arrived at a figure of 8,465 printers with the same number of tearers though these figures are of doubtful value as there were so many variables in working practice.(81) Also this figure takes no account of machine printers or the large numbers of women involved. Roller printing machines were usually attended by 2 or 3 people, a man with one or two children as "back tenters and plaiters".(82) The number of machines in Lancashire in 1840 (and therefore, in effect, for the whole country) was 435.(83) However, it was as rare for all machinery in any one works to be in operation at one time as it was for all tables, and extrapolations from these figures must be unreliable.(84)

NUMBERS EMPLOYED AT VARIOUS PRINTWORKS IN I869

Firm	Total employed	Block-printers	Tearers	Women & children
Strines, New Mills, Derbyshire	500			
Wood & Wright, Bank Bridge &Clayton Vale	600	I60	44	
J. Bennett, Brick Vale	650-800	300		60f
Hayfield Print Co.Hayfield	200			
Saxby Calico Printers, Furness Vale	I30			
S Matley & Sons, Hodge	200-300			30f
S.Knowles & Co.,Tottington Mill, nr. Bury	c.400			50c
R Walker, Quarlton Vale		75	I5	
Rumney, Stubbins, nr.Bury	200	I0	3	
W S Grafton, Broad Oak, Accrington	I000	200		I50c
Foxhill Bank Printing Co. Church		80	30	
J Andrew & Co.,Harpurhey	I000 (1)			
J .Marsden, Newton Heath, Manchester	I20-30 (2)			30c

Notes: I. Yarn printer. I000 "when in full employ"
2. Floorcloth printer.

RETURNS FROM 70 TEXTILE PRINTWORKS I869

	8-I3	I3-I8	Over I8	Totals
Male	I663	27I8	9926	I4305
Female	920	I23I	I844	3995
M & F	2583	3949	II768	I8300

Source for both Tables: I869 Report to Select Committee op.cit.infra.

For the end of the period, information regarding employment can be culled from the 1869 Report (see page 35). It can be seen that six of these firms employed between them 825 block printers and 92 tearers. The same source quotes the Secretary of the Block Printers Union in Lancashire as saying there were 1,700 block printers including 130 women and 1,400 boys and girls as tearers. Returns from 70 textile printworks were collated and it seems likely that these figures do include machine printers.

A broader, if still inconclusive, picture can be deduced from the offical Census with which these figures should be compared. It must be said at once that they provide a limited amount of information. This is due to the inconsistent nature of the reports, especially with regard to categorization and nomenclature, which was recognized by the Census Officers themselves.(85)

From the data available a number of factors are apparent:-

1) There was an increase in the total of calico printers in the 10 years up to 1851 and a decline thereafter. This was matched, proportionally, by the extra-Metropolitan counties but not by the main printing counties of the Lancashire district, Cumberland and Yorkshire, although there is, in Lancashire and Yorkshire, a reduction by 1871.

2) There is a slight but continuing increase in the small number of printers in London during the period.

3) Although the numbers are insignificant in industrial terms, the spread of printers throughout the country apart from the areas mentioned in points 1 and 2 is remarkably even, so that most counties are represented.

The nature of the work of calico printers in small provincial centres such as, for example, Weymouth or Hull, or for that matter in larger centres like Birmingham is not clear. Were these printers fulfilling particular local needs, or involved in specialized work such as the silk dyers and printers in Coventry, or the floorcloth printers at Bristol, or still supplying the main centres of London and Manchester with their finished products?

Technological changes required a nucleus of workers who were more than just machine-minders. "Their occupations entailing upon many of them a knowledge of chemistry, and of art to some extent, and in the constant exercise and appreciation of correct execution, enables them to rank amongst the highest class of manufacturing workmen".(86)

Nevertheless, the early printers were a heterogeneous body ranging from O'Neill's "hinds and boors",(87) "migratory and disreputable characters"(88) through to "aristocratic" journeymen .(89) Certainly skilled printers were required in any establishment with pretensions to success but some firms seemed to persevere with a minimum of these expensive craftsmen and made do mostly with cheap labour. Graham referred to Reddish Mills where "a low style of furnitures" were produced on "machines worked by lads".(90)

The "hierarchy of skills", in Burnet's useful phrase, was fairly clearly established by the beginning of the 19th century and the advent of mechanization did little to alter this in the short term, though there was a gradual change of emphasis.(91) The great range of processes necessary to produce the simplest piece of cloth meant a very great sub-division of labour as well as a high degree of specialization.(92). For example, in block printing a distinction was often made between a "blocker" who did the first printing, requiring the greatest care, and the "printer" who followed and put on subsequent colours - often an apprentice.(95) Work in printworks can conveniently be divided into four stages, i.e. Preparation, Printing, Treatment after Printing and Finishing. Detailed descriptions of these stages can be found in many published sources and need not be repeated here.

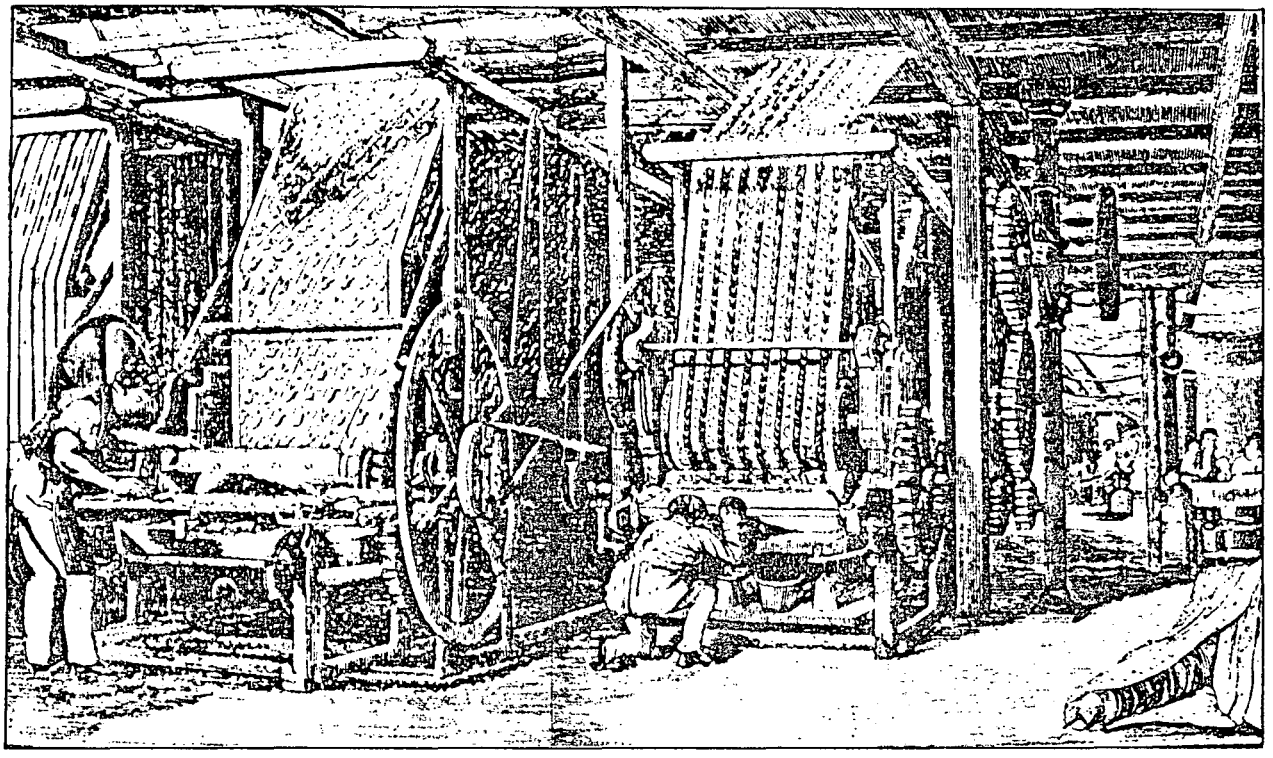
Technology

It can be said that the move towards full machine production which, as has been shown, was a gradual process, actually helped to create a demand for block printing.(94) In 1813 John Bury, writing to his father said,

> "Good block work is usually so much in demand and so scarce that a print house who has the means of doing it in quantity and the reputation of doing it well, may almost engage with what commission house he pleases, upon advantageous terms".(95)

The continued existence of tables in many firms even after the trend set by Potter in the 1830's (see p 55) to phase out block work is everywhere apparent and the notion that block and machine printing were in direct competition is incorrect, except perhaps when machine printers first began to produce reasonable quality furnishings in the 1820's.(96) The decline in the number of skilled hand printers was spread over several decades but this idea that "all attempts to keep pace with the rapid development of cylinder printing from engraved rollers were in vain, and gradually block printing declined until about 1870, it had fallen into almost complete disuse"(97) has been shown as quite incorrect.

"In the trade generally there has been more block printing the last 3 years than there has been for 15 years or so", it was said in 1869, (98) though the same source says scarcely any work



Interior of an early printworks showing wooden-framed machines working in conjunction with blocking tables. This illustration from G S White's Memoirs of Samuel Slater, Philadelphia, I836 is a woodcut copy of Allom's engraving for E Baine's History of the Cotton Manufacture in Great Britain, I835. Judging by the clothing of the operatives Allom's illustration could be of about I820. The later version here has contemporary clothing.

was now wholly block printed and recent attempts at machine printing for felts and druggets by J & T Bancroft of New Church had been quite successful.(99)

This symbiotic relationship helps explain the lack of friction in the mid 19th century between hand and machine printers. Natural wastage and a reduction of apprenticeships resulted in a relatively painless transition. There are no recorded examples of antagonism between hand printers and machine printers in the 19th century. Indeed they were sometimes one and the same person. Anti-machine feeling, where it existed, was directed against the masters but there are no records of the equivalent of plug-drawing riots or machine-breaking.(100)

Both block and machine printers had had unions for a long time which had been able to demand fair wages for their members and, though affected by periodic trade recessions like everyone else, up until the 1860's the record of employment in the industry was good. It is misleading to say, as Turnbull does, that "the block printer did not take kindly to the changeover from table to machine and in 1815 there was a great strike of journeymen printers in Lancashire against the new innovations".(101)

First, by 1815, Lancashire had had machine printing for 30 years so it was hardly "a new innovation". Secondly, the disputes of 1815 were wholly over wages and, though machinery might have been an issue, it was not the direct cause.

So at first, though there was some displacement by mechanisation, the increase in production and demand more than compensated and labour was reabsorbed into machine printing and allied trades. The emphasis in accounts of the industry up to 1825 tended to be on the increase in production made possible: after 1850 the emphasise shifted to highlight innovations as being labour saving. "The economy of labour introduced by these machines is truly marvellous ..."(102) Ure thought one machine could do as much as 200 printers and 200 tearers. Crookes more modestly offered 100 of each as the saving.

In any case, up to 1831, the full effects of mechanisation were muffled by the Excise Taxes which restrained expansion. After Repeal Ure said,

> "The manufacturer has now become a free agent, a master of his time, his workmen and his apparatus: and can print at whatever hour he may receive an order ..."(104)

The Quarterly Review complained again and again that,

> "The introduction of machinery has created a surplus of male and adult population for whose labour there is no profitable demand. The extension of our trade during the war absorbed the quantum of human labour which otherwise would have been displaced by machinery, and the effect of the latter was not felt. But now continental countries are taking to machinery and there is consequently less demand for our goods".(105)

Later in the same journal it was suggested that,

> "The cause of pauperism is a redundancy of labour in every branch of labour. This unemployment is due to the increased use of machinery".(106)

This may have been true of many industries but less clearly so of textile printing. Unemployment was more often caused by the frequent failure of businesses run inefficiently, under-capitalised, or too dependent on larger concerns as already described.

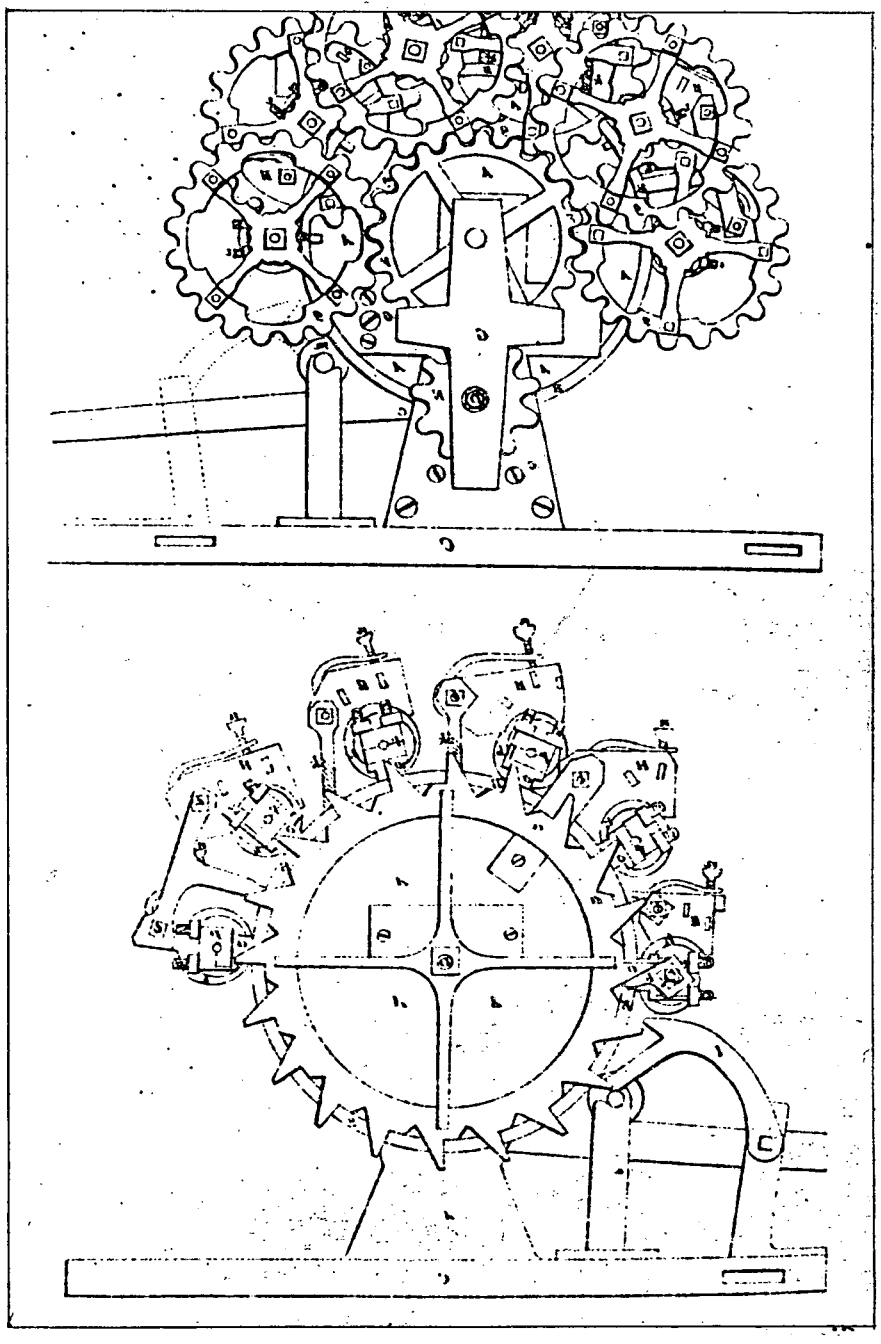
Among the particular requirements for early printworks some, such as space for open air bleaching, were no longer necessary by the 1830's but water in abundance remained essential for many processes.(107) Water-wheels provided most of the motive power for the industry until well into the 1820's. It could be said of the year 1812 "Steam engines were then scarce and expensive".(108) A reference to an early use of steam power for printing is found in the Journal of Design and Manufacture (1849) where it was stated that "steam power, though first applied to calico printing about the end of the last century ... was not in use at Broad Oak (i.e. one of the most important works) until the year 1816, previous to which the machinery was driven by water".(109) In fact, water power was adequate for most purposes and there was little incentive to change a factory once it had been established with a water-wheel. The imput tended to be smoother than from a steam engine; water was free, coal was not; and a good stream could produce considerably more power than the early engines.(110) This perhaps helps to explain the slow

dissemination of steam power in the printing industry. It was used more frequently and earlier in ancillary processes for its ability to heat rather than drive, in drying printed cloth and heating print works and warehouses.(111)

The consolidation of the industry after 1850 was based on increasing technological control of processes as much as on economic factors and the thrust of development in chemical and mechanical areas is reflected in patents registered. For the first 182 years of recorded patents (1617-1779) there were 137 patents related to textile printing.(112) In the next 50 years (1800-1850) there were 331. Whether this considerable increase can be said to reflect directly the amount of real innovation may be open to debate but beyond dispute is the attention being given to technological matters. In the 5 years after the Great Exhibition, 440 textile printing related patents were registered, almost as many as in the previous 233 year. In addition some of the most influential advances were not specifically related to textiles but because of their useful applications became vitally important. An example of this is the invention of the slide lathe in the second decade which made possible turning rollers to the required degree of accuracy.

Descriptions of technological advances have emphasized that many attempts were made to mechanise the traditional hand printing methods in order to compete with roller printing. Some of these were ingenious such as Kirkwood's flat-bed printer of 1803.(113) Attempts were made to combine different techniques. One reference notes that copper plate printing was tried in conjunction with roller plate printing. "The striping of calicoes by rollers and printing them with copper plates in the rolling press has, however, succeeded"(114) But despite these attempts copper plate printing, in Floud's words "can be counted one of the earliest casualties of the industrial revolution, driven out of existence by the demands of faster and cheaper production"(115) (though this observations is not entirely borne out by the Census figures (see Table AII).(116)

Block printing has a much longer history than plate printing, predating it and continuing after it had gone. There were many attempts to mechanise it and the most successful was the French Perrotine of 1834 (with an English version in the 1840's). Despite considerable success in France it was never very popular in England and the reason for this has not been satisfactorily explained. It seems probable that, while hand printers were happy enough to work with roller machines which, as has been suggested, provided them with work, they saw the Perrotine



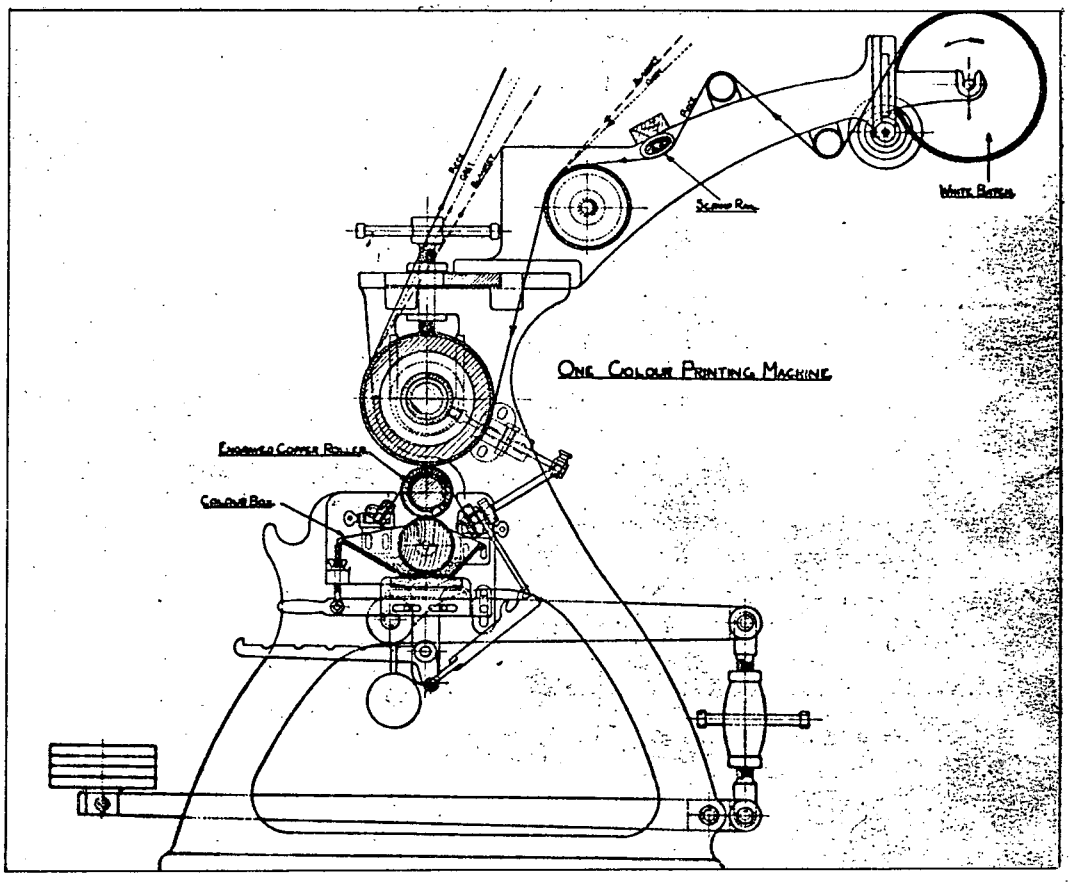
Thomas Bell's roller-printing machine, from the Patent Specification of 1783

as a direct threat to their livelihood and resisted it. In France with a much lower level of mechanisation this was not a problem.

The highly skilled trades of block making and printing continued. Despite their base in traditional craft skills they were able to change enough to meet the demands of fashion and various permutations of carved wood, felted, coppered, (from the late 18th century), and cast blocks (from the 1840's), made it quite a flexible and efficient medium and for certain kinds of printing it remained pre-eminent well into the next century.(117)

For many years the imperfections of roller printing impeded progress. The problem of accurate registration was particularly vexing. O'Connor has suggested that registration remained a problem until after 1850 and this is borne out by John Dalton's remarks to the Society of Arts in 1852 that he felt confident of being able "to show that the difficulties hitherto attending the printing of ten or more colours simultaneously, with an accurate register, may be successfully and simply overcome".(118)

Block printing lent itself to broad effects and plate printing to patterns of detached objects or scenes, but the first rollers, being small in circumference only allowed small down repeats of perhaps 9-12" which



A metal-framed single-colour machine. Date unknown

designers, used to flat printing, took time to understand, and in practice rollers were limited to small dress designs. Attempts were made to adapt block designs by compressing the repeats, but for larger designs traditional methods continued to predominate. It was not until after 1815 that the problems were overcome sufficiently to allow furnishings to be roller printed. It might be added that roller printing was seldom used for silk because of the greater cost involved in spoiled goods; with block printing a mistake might be confined to one impression and could pass unnoticed.(119) Similarly, delaines and wool could never have been printed successfully by machine but for the application of chlorine, discovered by John Mercer whilst a chemist at Oakenshaw about 1842.

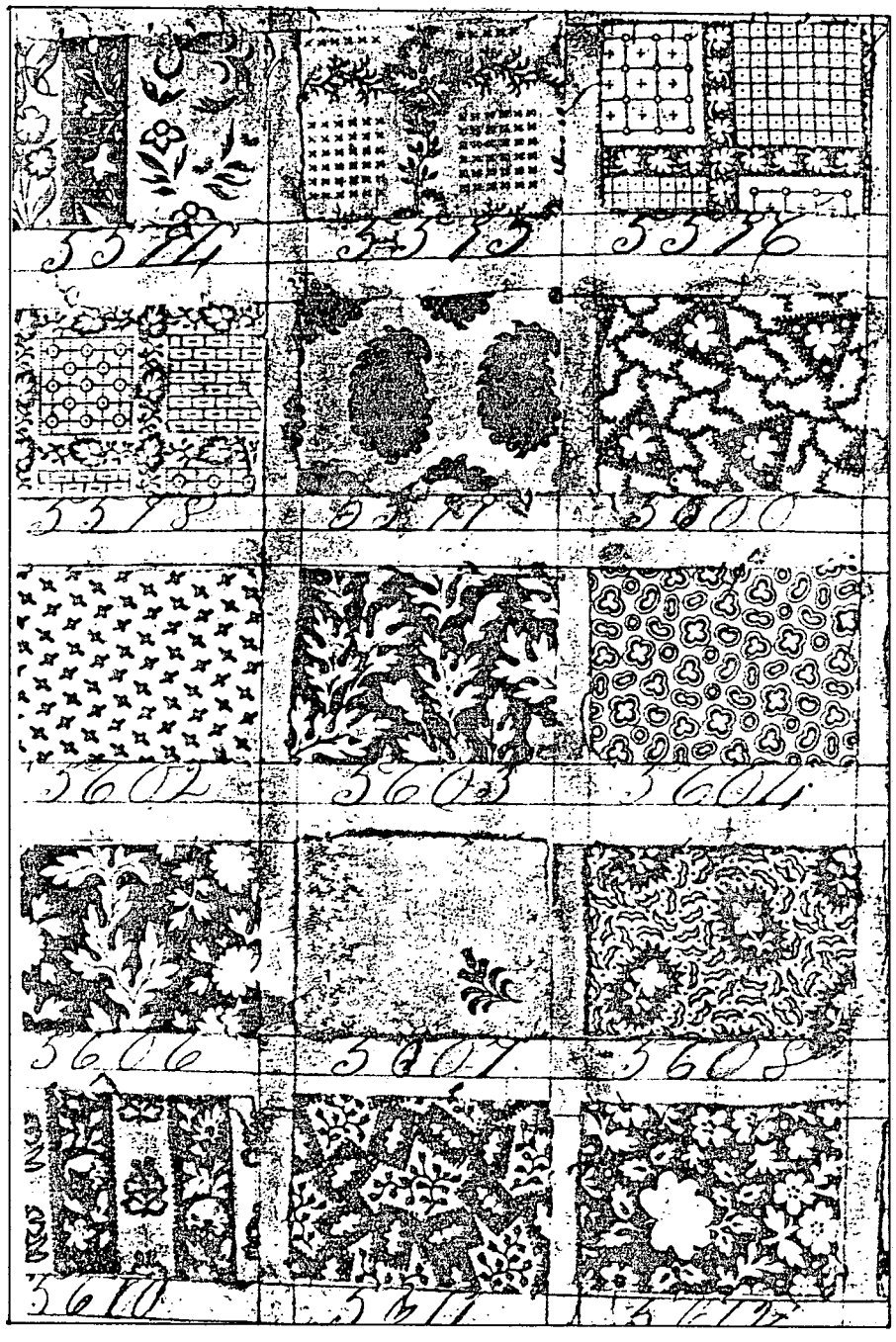
Thus the greatest concentration of effort was on the rollers themselves, their manufacture and the means of getting designs onto them, for one major factor delaying the spread of roller printing was the time it took to get the rollers engraved. This could involve months of labour and considerable cost. The engraving of copper rollers become almost a separate industry, for smaller firms did not necessarily have skilled engravers and putting-out insured them against spoiled work. Not until the 1850's and the development of the diamond tipped pentagraph developed by Cripps of Manchester was this process much facilitated.(120)

Increasingly, machine printing dominated the dress fabrics and the use of blocks decreased in the 1840's. Nevertheless, the introduction of stereotyping in 1844 following Burch's patent for his burn-out technique and other innovations helped maintain the effectiveness of hand printing.(121)

The development of roller printing radically affected the production of patterned textiles but it was a development which spread slowly, certainly for the first 30 years or so of its existence from 1873, though some commentators perceived its likely long-term effects. O'Brien in his early book of 1790, writing from London, was gloomy about the prospects ahead. "... calico printing has to fear a decline" he said.(122) He was not enthusiastic about the new developments which would, he thought, flood the market and cause unemployment. According to Ure, a cylinder machine was not used in London until 1812.(123)

Roller printing was really only profitable for long runs because the basic costs were so high. It was expensive to install machines and caution was understandable. This remained true throughout the period under consideration. In the 1860's the cost of an average 6 colour machine with all drying chests and accessories would be about £500.

By the end of the 1840's machines were capable of printing designs with 10 or more colours, though they seldom did, and were soon able to print up to 15.(124) Costs rose by



Single-colour roller-printed samples from Rossendale, Lancashire, 1809. Platt Hall, Manchester

about £50 per roller for installation and running costs rose proportionally. Printing was on one side of the fabric and a successful duplex machine was not introduced until the 1860s.(125) Lomas of Lomas & Bradley of Strangeways invented a method of "printing on both sides alike" which, though useful, is not the same as simultaneously. John Dalton exhibited a 2 colour machine at the Crystal Palace which could print on both sides at once though it is not clear how successful it was.(126)

One of the most important features of mechanised printing was the use of so-called machine grounds, that is of tiny repetitive reticulations, or geometrical patterns, and so called "eccentrics" which were derived from the use of an asymmetrical chuck on a lathe to engrave the "die".

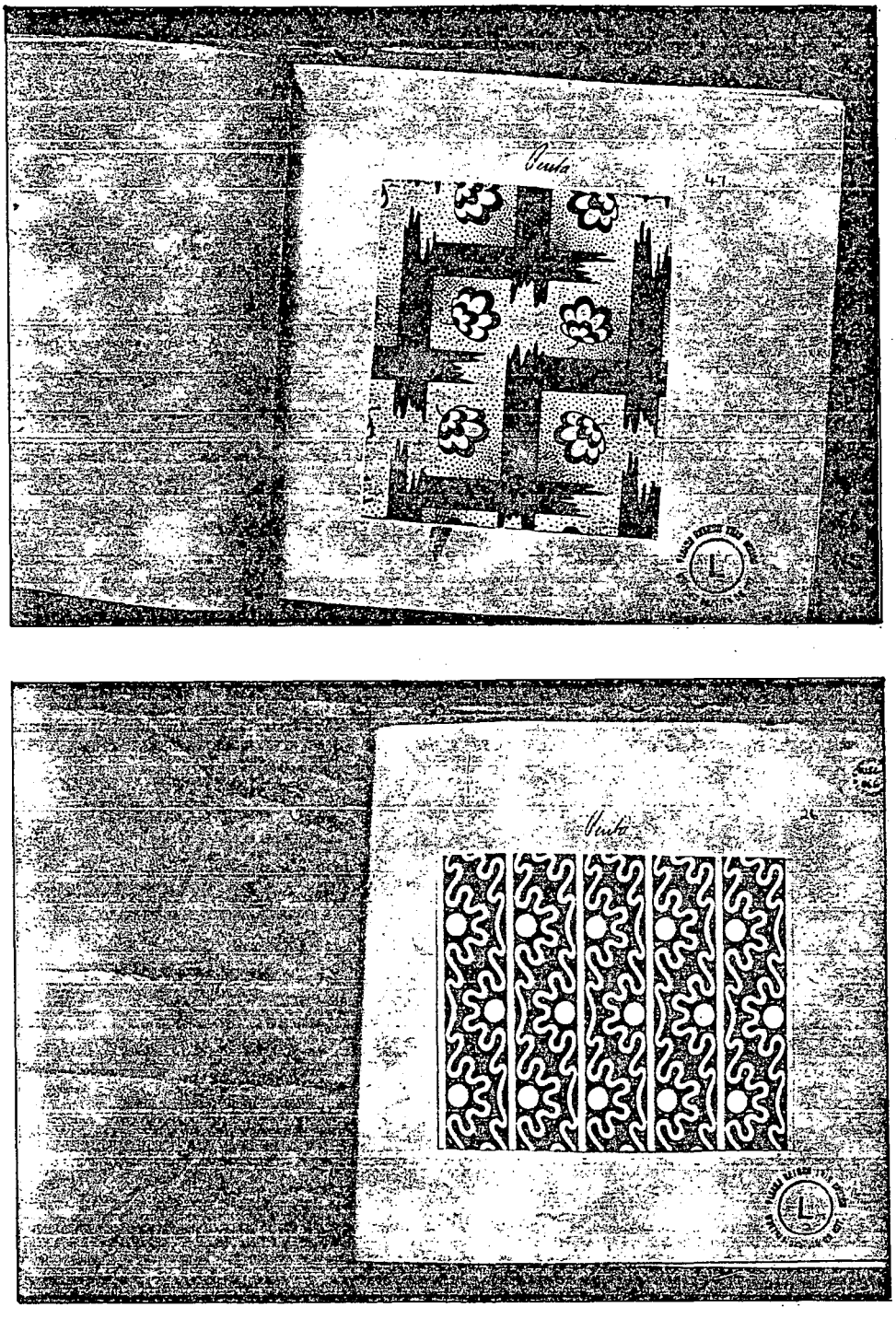
In 1808 Joseph Lockett of Machester had adapted Perkin's "die and mill" technique, first used for printing forgery-proof banknotes. A hardened roller, the "mill", with the design raised on it where it had previously been embossed all over by a small unit called the "die", was in turn impressed onto a copper cylinder, which was then hardened ready for printing. The dies varied in size but were usually quite small - between $\frac{1}{2}$" and 6" in length. This

technical necessity effectively conditioned the types of design produced over quite a long period.

There are early references to plated rollers, such as that of Atwood in 1823, but most of them are to solid cylinders. Lockett registered the first patent for electro-depositing copper onto an iron shell, which reduced costs and allowed for a larger circumference.(127) Early cylinders varied in diameter from 5-12" - later ones were up to 36" and more. Dr Crace Calvert, addressing the Society of Arts in 1802, referred to "rollers of 43" in circumference and 44" long" which had been introduced "enabling the calico printer to produce cheaply large furniture patterns".(128)

Details of costs are hard to come by but in the 1850's a mill and die pattern could be imparted to a cylinder for about £7 while, if engraved by hand, it would cost 8 times as much. The cost of the cylinder itself before engraving was between £5 and £7 although Ure quotes figures for 1860 which are less.

Considerable refinements of design took place. Lockett improved the printing of blotch and cover rollers, with tiny vermiculate or "cracked ice" patterns which would conceal misregistration, and John Potts about 1822, as chief designer and engraver at Broak Oak, (later of New Mills, Derbyshire), developed the stipple style of



Pattern book from Messrs. Lockett & Crosland & Co. for engraved designs for copper rollers. Manchester Central Reference Library, Misc.466.

engraving. Unfortunately the rollers they produced have been lost. Although blocks have survived in fair numbers, cylinders, which could often be turned down and re-used and have scrap metal value, have not.

Despite these advances, it was some time before the machines were fully exploited and it was men such as Potter of Dinting Vale who first capitalised on their potential. In 1830 he,

> "... got rid of block printing, he hoped old block printers would excuse him when he said it was the greatest mercy; and from that moment their prosperity dated, for scientific application came and they could beat the competition of the world ..."(129)

Taxation and Repeal

The industry entered a new phase of growth with the Repeal in 1831 of the Acts imposing Excise Duty which had been in existence in one form or another since 1712 and which had always proved a barrier to full exploitation of the market.(130) The duty on printed silks had already been repealed from April 1826 and now the whole industry was relieved.(131) It was the culmination, which Ure called one of the most judicious acts of modern legislation of persistent attempts over the years to get this burden removed.(132)

The Duty was particularly objectional since it increased the cost of fabric, in some cases by up to 80%, and yet

produced negligible return in revenue. "Twice a year the Exciseman visited printworks in his area to impress Excise numbers upon the tab ends of printed cloths ..."(133) Graham records more than a dozen cases of printers attempting to avoid the tax by "defrauding the Excise". Usually the consequence was closure of the firm in question and one favourite solution for the offending party was hasty emigration to America.

After a public meeting of the "Master Calico Printers of Manchester and its vicinity" in 1823, a petition had been submitted to Lord Stanley appealing against "... the inference of the Excise in restricting, shackling, limiting and impeding production and most injuriously enhancing the price of calicoes to the consumer ..."(134) At this meeting, in response to this and other new regulations, the export of huge quantities of goods "was absolutely suspended" and the Manchester Chamber despatched a strongly worded Memorial to the Secretary of the Board of Trade. The ploy by manufacturers of withholding commodities from the market had been tried before in 1786 when, at a meeting with Robert Peel in the Chair, the following resolution was passed:

> "That for the Preservation of the valuable branch of Trade, none of the above goods (i.e. cotton printed goods) chargeable with additional Duty shall be printed during one month from the date hereof ..."(135)

Even before that, in 1784, a Memorial had been sent to the Treasury, signed by Haworth, Peel, Yates and Tipping which led to an enquiry in the Commons. This took Peel to London. The Duties were so serious a burden that he threatened to transfer his works to Ireland - and, in fact, these additional impositions were repealed in 1785.(136)

Despite these successes it remained for a Whig government finally to remove all duties and it is a matter for some speculation whether Peel's own Tory administration of 1834, when Peel was Chancellor as well as Prime Minister, would have acted as swiftly.

To broaden the picture it should be realised that not only printed calicoes suffered in this way.

> "It is interesting to note that at one time in its history floorcloth was a product upon which Excise Duty was levied. The manufacturer had to pay a yearly tax of £10 for the privilege of producing his product ..."(137)

It is also necessary to stress the difference in taxation accorded to woven fabrics (even when patterned) and printed. Thus Potter's observation that warp printing had been exempt from tax even before 1831. He quotes the interesting example of <u>printed</u> ginghams where a design the size of a pinhead was subject to $3\frac{1}{2}^{d}$ per yard whereas a gingham of any number of colours or variety of patterns

printed "on the loom" was quite free from tax.(138) Furthermore, the same technique was being used for printing silk (called chené) by Dickens & Co of Middleton.

By a nice irony, years later in 1840, James Thomson, pursuing legislation on copyright, wrote to Sir Robert Peel and asked for support with a closing remark to the effect that, "the print trade is indebted to Mr William Peel for that short, emphatic and memorable report of the committee on the print duty, on which was founded its subsequent repeal".(139)

Lord Althorp's determination to reduce taxation was vigorously supported by Potter in his long and persuasive letter of 1830.(140) He expressed surprise that this should have remained so long on the statute books expecially as it had already been condemed so long ago as 1818 as "partial and oppressive" and pointed out that a gross tax of £2,019,737 produced a net revenue of only £599,669.(141) But the main reason for repeal was that the tax was manifestly unjust. The duty was $3\frac{1}{2}^{d}$ per yard. Thus, a piece which sold at 6^{d} contributed equally with a piece at 5/- per yard. In other words the proportion of tax levied was proportionally much greater on the cheaper than on the finer fabrics. It was equally unfair he thought, that not all printed goods were liable. Silks

and woollens had been exempted. "Printed silks have become a flourishing trade and silk handkerchiefs have comparitively anihilated cotton ones for the home consumption.(142)

Writing more than 20 years later, Potter said that before repeal there was "... a positive decrease ..." but that immediately afterwards "... great vitality was once shown by the trade ..."(143)

NOTES

The Industry - Distribution and Structure

1) For a description of this rise see R Smith, "Manchester as a Centre for the Manufacture and Merchanting of Cotton Goods 1820-30" University of Birmingham Historical Journal, vol. iv no. 1 1953-54 pp 47-65.

In Manchester local merchants advertised for "commissions to finish goods, either in the home or foreign markets" as they had "opportunities of disposing of goods so finished" Manchester Mercury, 25 July 1920; the increase in number of business firms or individuals engaged in merchanting or finishing processes, given in R Smith op cit p 62

MANCHESTER	1815	1820	1824	1830	1841
No. of Merchants	131	150	184	183	288
No. of Calico Printers	129	168	159	137	165
No. of Agents/Commission Dealers	53	87	103	157	245
No. of Packers	12	16	21	157	245

Source: Pigot & Co Manchester Commercial Directories 1815-41

2) "About the year 1835, for example, the Manchester merchant class was receiving and dispensing with cotton goods to the annual value of over £36 millions". J A Mann, The Cotton Trade of Great Britain, 1860, p 34;

Even firms like Swaisland's of Bannister Hall, Preston had a Manchester office from about 1835, though their warehouse was in London. See John Lewis Partnership Archives, Bannister Hall Ledger

3) R Smith op.cit p 63;

"In 1820 126 officially termed warehouses were listed in the Township Rate Books and only nine years later the number had increased to nearly one thousand". From Official Payment Rate Books from the Township of Manchester 1820-29, Mss.MCRL

4) Also at the expense of embryonic industries elsewhere. The West Midlands cotton industry which included some calico printing at Sutton Coldfield introduced there in 1780 was killed off by the rise of Lancashire. G C Allen, The Industrial Development of Birmingham and the Black Country 1860-1927, 1966.

5) G Turnbull, A History of the Calico Printing Industry of Great Britain, 1951. Lists 6 converted corn mills and 5 converted woollen mills, pp 99-100; the process could also be reversed. "A third type of weaving shop comprised old barns or buildings that had been used for other purposes; for example the locally well-known establishment in Ratcliffe Fold, Haslingden, was converted from a calico-pencilling place to a loomshop weaving calicoes of a coarse description". G H Tupling Economic History of Rossendale, p 207.

6) J Graham A History of Printworks in the Manchester District from 1760-1846, 1847-8, unpublished ms. p 365 MCRL.

7) S D Chapman "David Evans & Co; The Last of the Old London Textile Printers" Textile History vol 14 1983 p 30; this is not to say that buildings were never specifically erected before this time - they were, see Manchester Mercury 1 July 1788.

8) See S D Chapman "Financial Restraints on the Growth of Firms in the Cotton Industry 1790-1850" Economic History Review XXXII No. 1 1979 p 50.

9) Such as those at Belfield Hall, Gale, near Rochester; London Place, Pendlebury; and Lower House and Spring Vale at Pendleton; though Lower House was extensively extended in a haphazard fashion "without form or order" according to Graham op cit p 403; a detailed description of a progressively extended printworks can be found in A Bettess, Barrow. The Development of an Industrial Village, unpublished ms. 1976 p 10-17; and in W H Elliott, The Story of the "Cheeryble" Grants. From the Spey to the Irwell 1906, p 130.

10) Reiterated by G H K Spate, "Geographical Aspects of the Evolution of London Till 1850" Geographical Journal 92 1938 p 431.

11) Roller printing machine Patent Specifications No. 1378 (1783) and No. 1443 (1785).

12) "The steam looms are chiefly employed in the production of printing cloths and shirtings ..." Edward Baines History Directory and Gazeteer of the County Palatine of Lancaster ... 1824-5 p 118; Graham op cit p 406; Pigot's Directory 1828-9 gives 16 printers in the Blackburn area, cf. to 6 in North Derbyshire.

13) S Hamilton, Historical Geography of South Rossendale 1780-1900 1974 p 45; Barnoldswick specialized in producing printers cloth, D T Jenkins "The Cotton Industry of Yorkshire 1780-1900" Textile History vol 10 1979, p 87.

14) The supply was also more consistent if only because bleaching of the cotton cloth which used to take several months, depending on the weather, in the 18th century, had been reduced to a matter of days by 1830. By the late 1860's it was reduced to a few hours. See Report on the Printworks Act and on the Bleaching and Dyeing Acts, Parl. Papers vol XIV pp 777-895, 1869.

15) By 1835 three quarters of all textiles printed in Britain came from roller machines, Edward Baines, History of the Cotton Manufacturers of Great Britain, 1835 p 266.

16) S D Chapman, D Evans ... op cit p 31.

17) 8 & 9 Vict. c 29 Act to Regulate the Labour of Children, Young Persons and Women in Printworks - commonly called the "Printworks Act", and 9 Vict. c 18 (amending clerical errors); L Horner Report on the Employment of Children in Factories and Other Works, with Appendix devoted to Printworks, 1840; in his Report Parl. Papers Session 2 XXV11 p 365, 1859 Horner said there had been "many systematic violations of the Act" regarding the employment of women and children.

18) Internal evidence suggests that the factories he visited included, in Essex - Waltham; Kent - Bexley, Crayford, Dartford; Norfolk - Norwich; Surrey - Bermondsey, Elstead, Merton, Mitcham, Wimbledon; Lancashire - Rochdale; Yorkshire - Todmorden, Leeds.

19) Graham op cit infra

20) J Kennedy, Report of Commissioners on the Employment of Children 1843

21) The term calico-printer in this context can be taken to include miscellaneous printers on quilting, sateens, silk, stuff and mousseline-de-laines; Pigot's Royal, National & Commercial Directory ... with classified Directory of Manchester and Salford 1841.

22) Calico Printers in Bolton

1814-15	James Grierson, Outwood
1816-17	James Grierson, Outwood Samuel Peake, Chorley Street - Clough, Astley Bridge

1824	Howarth & Whitehead, Lever Bank John Whitehead & Sons, Tootal Bridge Samuel & Joseph Pope, Horwich Vale Stiffs & Hammond, Lever Bank James & Thomas Whitehead, Breighment Thomas Williams, Ainsworth Printworks
1834	John Hall & Co, Edgeworth Mill George Millington, Quarlton Vale John Roberts, Prestolee William Spencer & Co, Breighmet Thomas Williams, Ainsworth Printworks James Hardcastle & Co, Bradshaw Works
1851	James Hardcastle & Co, Bradshaw Works George Millington, Quarlton & Russia Printworks, Edgeworth John & Josiah Roberts, Prestolee
1870-71	James Hardcastle & Co, Bradshaw Works Robert Walker, Quarlton, nr. Chapletown

23) Report on Printworks Act 1869 vol XIV op.cit sec 75

24) J Aikin, A Description of the Country from 30-40 Miles Arount Manchester 1795

25) Report of the Select Committee on the Copyright of Designs, Parl. Papers 1840, Note 9 QQ 3024

26) Bagshaw's Directory of Kent 1847. From the same source David Evans is given as employing 350 though only about 50 of these were directly involved in the printworks.

27) See Appendix (p A12) List of Dress Fabric Designs Registered from 1842)

28) Edmund Potter, Calico Printing as an Art Manufacture. A Lecture on Calico Printing Read Before the Society of Arts 22 April 1852

29) Turnbull, op.cit p 116

30) Potter 1852, op.cit p 25:

These portions of the trade were not overmuch affected by the activities of many of the Manchester based firms. The real removal of work from the capital resulted from so many London retailers having their goods printed by northern firms of high reputation using, it should be noted, traditional methods such as Charles Swainson's Bannister Hall Printworks, near

Preston, and Stead and McAlpin at Carlisle. They, with David Evans in Kent, had the bulk of the trade producing the best class of prints, chiefly furnishings, mostly for the home market; others did produce similar goods but often for export, e.g. John Bennett of Brick Vale, "chiefly rich and expensive chintzes" for the Eastern market, Report 1869 para 28 Appendix.

31) London Directory 1864.

32) S D Chapman & S Chassange, European Textile Printers in the Eighteenth Century. A Study of Peel & Oberkampf, 1981 p 81. Potter refers to the period 1830-50 as "the period of its most marked increase ..." Lecture 1852 op cit Intro.

33) K Wallwork "The Calico Printing Industry of Lancashire in the 1840's" Transactions Institute of British Geographers vol 45 pp 143-156, 1968.

34) S D Chapman "Quantity versus Quality in the British Industrial Revolution", Northern History, 1985

35) Graham op.cit.infra

37) David Evans success also "owed as much to the enterprise of City merchants as it did to the ingenuity of printers". Chapman D Evans op cit p 31.

38) Graham op cit p 376

39) C O'Brien, A Treatise on Calico Printing 1792 wherein he blamed lack of knowledge for many failures; a reading of the Manchester Mercury 1800-1830 indicates that "the great number of northern printers were still remarkably small through this period". Chapman D Evans op cit p 44

40) V A C Gatrell, "Labour, Power and Size of Firms in Lancashire Cotton 1825-50" Economic History Review 1977 p 104; and in reply to this Chapman Financial Restraints op cit.p.50

41) D Hogg A History of Church and Oswaldtwistle 1760-1960, 1971 p 29; Wills Lancashire Record Office; Blackburn Standard 22 September 1841.

42) S D Chapman, The Cotton Industry in the Industrial Revolution 1972 p 24.

43) F Merttens "The Hours and Cost of Labour in the Cotton Industry at Home and Abroad" in Trans. Manchester Statistical Society April 1984 p 125-90.

44) John Dugdale, for example, employed 1600 people at Lower House in the 1840's; for sizes of early works in London see D King "Textile Printing in London and the Home Counties" in Journal of Society of Dyers & Colourists LXXI July 1955 p 377

45) In the 30 years between 1839-1869, 20 of the printworks of the Lancashire district had been pulled down, many extended or rebuilt, but only 3 or 4 new ones built. Report 1869 op cit p 86 Appendix; woollen printworks were small, averaging 60 people each, floorcloth works averaged about 30.

46) B Hargreaves "A History of Messrs Hargreaves Calico Printworks at Broad Oak, Accrington ..." in Journal of Design and Manufacturers vol 3 1850 p 6.

47) See Bettess op cit p 12; "... the earliest manufacture appeared to be intimately bound up with a smallholder pastoral economy". Tupling op cit Preface.

48) Though J G Hurst Edmund Potter of Dinting Vale 1949, a reliable authority, said that in the years 1815-1825 "The print trade remained stationary because of severe taxation ..." p 6

49) Gatrell op cit p 104

50) Chapman op cit infra

51) C Moorhouse, The Birth of a Lancashire Village nd p. 34.

52) Chapman & Chassange, op.cit pp 28,70; an example of London in use at the end of the 18th century was that of Phillips & Nash, City merchants funding J J Bury, Manchester Ref Library L4.1-6; J Britton, Topographical Delineations of Lancashire, Leicestershire and Lincolnshire, vol IX p 122 "Perhaps there is no business which requires so much capital, ingenuity and attention as the printing of calicoes".

53) Chapman, "Financial Restraints" op cit p 63.

54) Bank of England Letter Books II p 10 1841 cited ibid p 64; very large debts were frequently with drysalters and coppersmiths; Gisbourne & Wilson had 72 printing tables and 10 machines, see Turnbull op cit p 423.

55) Thomson had brought Primrose Printworks at Clitheroe for £28,000 in 1811.

56) Manchester Annual & Merchantile Director 1855 p 63-64.

57) J G Hurst unpublished typescript Derbyshire Record Office, 1944.

58) Hogg op cit p 15, stock included 800 copper rollers, 5000 blocks, 2 print shops, one machine print shop, a callender house, improving shop, 2 dyehouses, 1 bowk house, 2 store houses, 3 warehouses and 2 block shops.

59) ibid. p 16; Peel's concern at Church Bank nr.Accrington valued at £10,797 in 1837 (Lancs Rec. Office MssDDPl Case 1839) or D Evans & Co at Crayford, 1843 at £13,200, Chapman, D Evans op cit p 42

60) Bettess op cit p 16

61) Moorhouse op cit p 39

62) Graham op cit infra.

63) Indenture between John Burton and Salis Schwabe "of Manchester Merchant". Detailed description of the property with plan of premises, 16 June 1835, The Burton Deeds Manchester Central Ref. Library, Archives Dept. M57.

64) Graham op cit p 389

65) J Butterworth, A Complete History of the Cotton Trade, 1823 p 57.

66) Details of this trade, selling by pattern, can be found in J R McCulloch "The Tally Trade" in Directory of Commerce ii p 1110 and letters from "Leeds Draper" and "Diss Draper" in The Draper and Clothier 1859 p 10-11 and 42-43; "The tally trade had its defenders. Some it was argued never dealt in lucklow checks, ribbons, expensive accessories and steam prints but limited their stocks to useful prints, dresses, stuffs, calicoes, linens, flannels, blankets, carpets and ready-made clothing". T Foster "The Tally System v The Drapery System" in The Draper and Clothier i 1850 pp 42-3.

67) D Alexander, Retailing in England During the Industrial Revolution 1970 pp 81-2; Alexander notes that "by 1850 shops dominated the retail trade in these goods" pp 44.

68) J Storey, Textile Printing 1974 p 170.

69) Chapman, "Financial Restraints" op cit p 55; it was estimated that total world demand (1840) was 1,200 million yards per annum so overproduction was considerable - at least 50%, Turnbull op cit p 114.

70) J of Des & Mfr ... op cit June 1849; Ure A Directory of Arts, Manufacture & Mines 1867 p 531 "Printed goods which in 1795 were sold for 2/3 the yard may be bought at present for 6d". i.e. 1846.

71) J Thomson in Rees's Cyclopaedia 1808 "Copper Plate Work on Calico Printing".

72) Comprehensive figures for exports of printed cloth 1820-1888 are given in Turnbull op cit p 431-2.

73) Report 1869 op cit para 225.

74) ibid; the figure of £6,000,000 does not correspond with those given in the graph on p where for 1852 McHenry's declared value for "printed and dyed cottons " was £10,052,078 and was nearer one half rather than one fourth of total cotton goods exported. However, McHenry's figure no doubt included printed yarns. Tabulated in Turnbull op cit p 431-2.

75) Report 1869 op cit sec 20

76) ibid

77) Manchester Guardian 12 Aug 1855.

78) ibid. "particularly those which have their basis in flour and other farinaceous substances, which are consumed in large quantities by the calico printer (and) have been advanced in a ratio proportional to the rise in breadstuffs".

79) Manchester Guardian 19 August 1855; "in 1851 the best Smyrna madder was to be had at 48s per cwt; since then it has gradually gone up to 63s.

80) Turnbull op cit p 203.

81) A printers assistant whose job was to charge the printing block with colour - from the French tireur; the Report 1869 retrospectively concurs giving 8,492 tearers for the Lancashire district in 1842.

82) Report 1869 op cit sec 74

83) Turnbull op cit p 246

84) "Machines stand idle more than they run" - because of the time taken to set them up, Report 1869 op. cit; by the end of the 1860's most firms had 5 or 6 machines and a few had as many as 20.

85) In the introduction to the 1861 Census is the comment that although improvements had been made over the 1851 Census "the confusion and imperfections ... were only partially overcome". Hamilton op cit noted that there was not enough information in the 1841 and 1851 Censuses and that the 1861 Census, though more comprehensive, was still incomplete "with insufficient evidence to draw any conclusions about the finishing industry".

86) Potter 1852 op cit p 31.

87) C O'Neill, Dictionary of Calico Printing and Dyeing 1862.

88) A G B Jones, Robert Peel and his Mill at Radcliffe in Notes and Queries Jan 1858 p 34.

89) Graham op cit p 345

90) ibid

91) J Burnett, Useful Toil 1976

92) "The separation of the various steps in the process of making cloth was remarked upon by an American manufacturer, Zachariah Allen, as early as 1825, in his unpublished Diary of a European Trip" Binney/Fitzgerald/Langenbach/Powell, Satanic Mills, RIBA 1979, p 10.

93) J D Greenhalgh, Memoranda of the Greenhalgh Family, 1869 p 56. Turnbull op cit p 193; by the end of the 1860's block printers were getting 25/- per week working "by the day" with some preferring piece work. This was considered a decrease from earlier times. "Machine printers get good wages" Report 1869 para 216.

94) "One machine would be sufficient to provide for a great many tables" Turner op cit p 103-4; Horner drew attention to his 1852 Report (qv) and said that the substition of the machine had cheapened production and "extended the demand for printed calicoes to an enormous extent" in Report 1869 op cit para 57.

95) Mrs N M Eastwood, John & James Bury, Calico Printers of Pendle Hill, unpublished manuscript Archives MCRL.

96) W H Elliott; At Grant & Co, The Square, Ramsbottom "machine printing became supreme, although it never entirely supplanted (block printing)", p 130.

97) E Knecht & J Fothergill The Principles and Practice of Textile Printing, 1912, p 41.

98) Report 1869 op cit Appendix p 29.

99) ibid; block printing which persisted in Scotland much longer than in England as a major force there declined because a radical shift in fashion brought about a severe drop in the sales of printed Paisley shawls.

100) Even Ellis Piggott the "fearful enemy of machinery", once Secretary of the Block Printers' Union and manager of a very early workers' co-operative at Birkacre, is recorded at Broomley Street printing with 2 machines and no tables. See Graham op cit p 357.

101) Turnbull op cit p 85 ; there were many difficulties trying to work the Printworks Act of 1846 because of the different legislation for workers in printing, bleaching and dyeing, see Report 1869 op cit Intro ; hence the mob in 1842 at Reddish & Bickham's Brookside Mill and at Simpson & Rostron's Foxhill Bank Works, see M W Thomas Early Factory Legislation 1948 p 279.

102) Ure op cit p 547.

103) Crookes op cit p 391

104) Ure op. cit p. 331.

105) Quarterly Review 1829 v.41 p 522.

106) ibid vol 43 p 242.

107) At Bannister Hall as late as 1846 bleaching was still carried out by the old method, see Graham op cit p 347

108) J G Hurst op cit p 4.

109) J of Des. op cit Vol I 1849 p 7; early instances of the use of steam at Clough End, Haslingden (see H Stephenson, Old Haslingden Borough Year Book 1903) and at Balladen near Rawtenstall c. 1790 (see Bury Times 7 August 1909).

110) S D Chapman, The Cotton Industry ... op cit p 19 . The Committee of the Manchester Statistical Society listed "Steam Power used in Manufacturers in Manchester and Salford" in 1837-38. For "bleaching, dyeing, printing" they give 756 hp in Manchester and 521 hp in Salford. "Engraving for printing calicoes used another 81 hp.

111) "Steam was soon afterwards (i.e. pre-1807) applied to warm buildings appropriated to the purpose of calico printing. Mr Richard Gillespie, in his calico works at Anderton, was induced very early to use it in his warehouses for finished goods, and has since been gradually extending it through other parts of his works". Buchanan An Essay on Warming of Mills and Other Buildings by Steam, p 8; Chapman, D Evans op cit p 30 mentions the early use of steam power in London for grinding dyes and driving calenders.

112) Patent Office Abstracts of Specifications.

113) Patent Office Specification No. 2683.

114) Butterworth op cit p 69.

115) P Floud "The English Contribution to the Development of Copper Plate Printing" The Society of Dyers and Colourists LXXVI July 1960 pp 433.

116) Report 1869 op cit "flat press engraved plate work still used to some extent in Scotland"; "Wanted two apprentices to the Engraving and Copper Plate Printing Business. Apply to John Grange, 3 Red Lion Street, St Ann's Square, Manchester" - an advertisement in the Manchester Courier 15 March 1828.

117) J Storey, The Art of the Textile Block Maker, 1984; J Burch "On the Printing of Fabrics ..." in The Society of Arts vol 4 no 180 1856; C M Vialls "The Casting of Surfaces for Textile Handblock Printing" Trans of Newcomen Society XLI 1868-69.

118) D O'Connor op. cit p56; perfection in printing by machinery was lost in consequence of the colours following each other so rapidly when wet ...". J Dalton 1852 op cit p 405.

119) "Although it (machine printing) has been in use in the calico printing industry for the last 60 years it is only just beginning to be used for silk printing" George Hurst Silk Dyeing, Printing & Finishing 1892; Cheney Brothers of Hartford, Connecticut were the world's pioneers in roller printing on silk according to A Heusse (ed) History of the Silk Dyeing Industries in the US, 1912 p 139.

120) Burch op cit p 405.

121) ibid. Joseph Burch worked at Crag Printworks at isolated Wildboarclough. He made machines for Cobden, Brooks, Thomson et al. For details of his work on blocks see Vialls & Storey op cit. infra

122) O'Brien The British Manufacturer's Companion ... 1795 unpag.

123) Ure op cit p 534.

124) Potter 1852 op cit p 21.

125) Slugg op cit p 32.

126) J Dalton "Improvements in Machinery for printing calicoes ..." in Journal of Society of Arts 8, 1853 pp 405-9.

127) Patent Office Specification no. 4798; Patent Office Specification no. 8610.

128) Dr F Crace Calvert, "On Improvements & Progress in Dyeing & Calico Printing since 1851", Journal of Society of Arts. Feb 1862 p 175.

129) J G Hurst op cit p 12.

130) Act 10 Anne c19 1712; Act 12 Anne Sec 2 C9 1714; Act 7 Geo I c7 1720.

131) In the full year ended Jan 1826 969,000 yards of printed silk had been charged duty. Source: Mitchell & Deane, Abstract of British Historical Studies, 1962, Textiles Table 5 p 184 taken from the Excise Revenue Account in the Customs Excise Library.

132) Ure op cit p 531

133) Potter Letter to Lord Althorp ... op cit p 21.

134) R Smith op cit from Records of Public Meetings held within the Township of Manchester 1820-38, mss.

135) Manchester Mercury 1786 14 Nov

136) A G B Jones op cit p 34

137) See Burch op cit pp 401-8.

138) Potter op cit p 19 notes a pamphlet Remarks on Injurious Effects of the Duty on Printed Cottons, 1829.

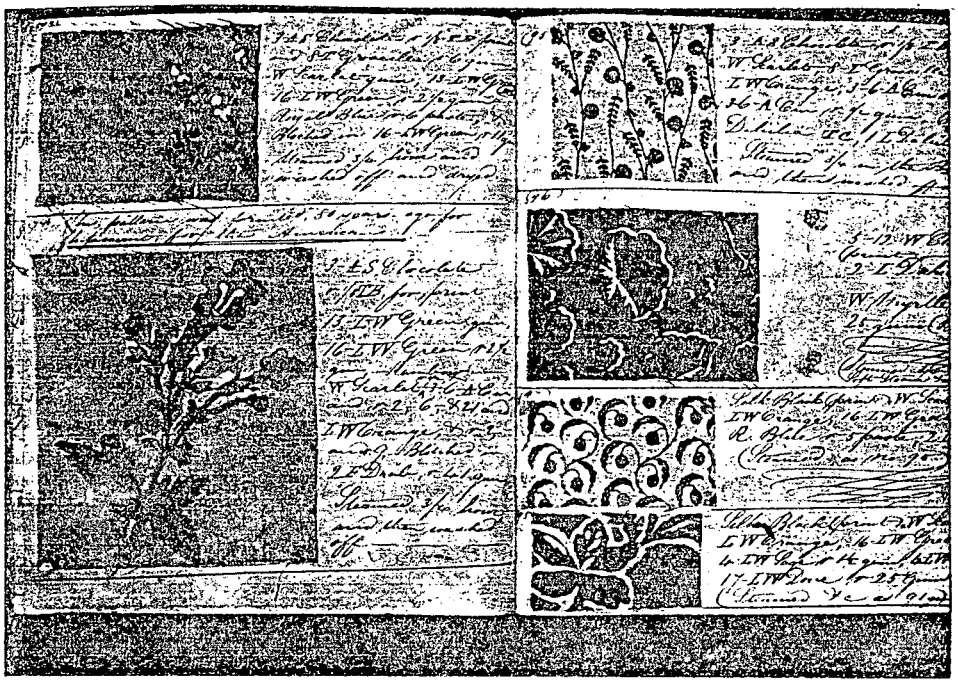
139) Thomson op cit p 48.

140) C Poulett Thomson at the Board of Trade was also active in support for this measure as is indicated by Baines' dedication of his History of the Cotton Manufacturers of Great Britian, 1836.

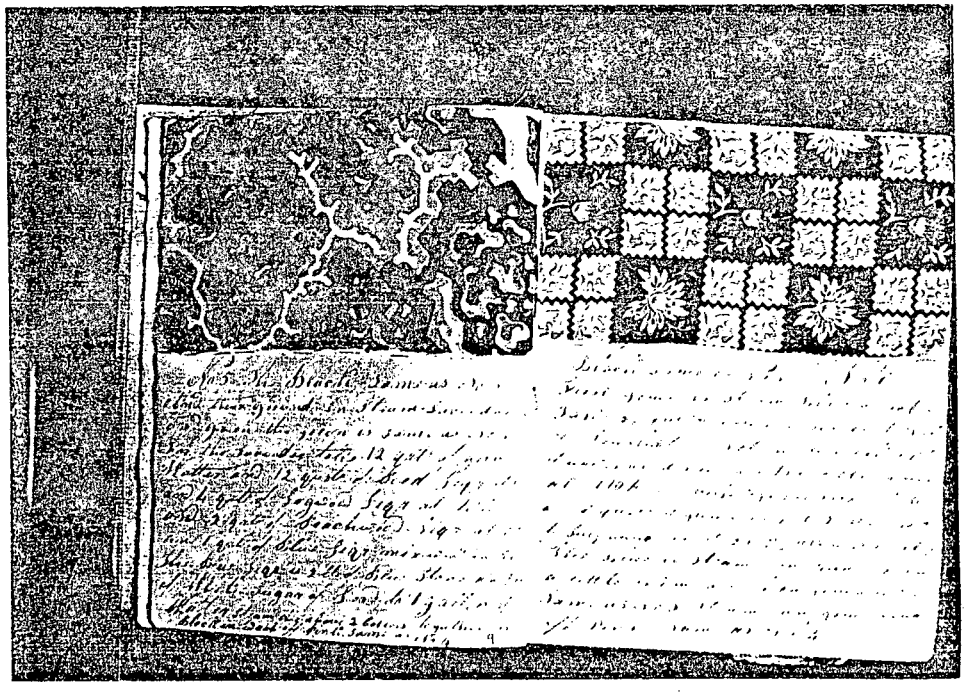
141) Potter Letter to Lord Althorp op cit; Report from the Select Committee appointed to consider the duties payable on printed cotton goods, 1818 (279) III - Repeal of the Act was recommended.

142) Potter op cit p 22; an indication perhaps of some temporary reprieve of the London Trade although repeal, when it came, would have little real effect on their business.

143) Potter op cit p 19



Samples in an exercise book with memoranda, recipes and trials belonging to John Lightfoot, 1851. Manchester Ref.Lib. M75/7



Sample book c.1830 Roller and block printed.
Manchester Central Reference Library, M75

(II) THE PRODUCT - DESIGN AND MANUFACTURE

Introduction

The foregoing outline of the structure and distribution of the industry and its means of production gives the context in which the end product itself, the printed cloth, was designed and manufactured. Despite the vast and largely indiscriminate destruction of irreplaceable collections of pattern books, blocks and rollers that has taken place in the textile printing industry, it is still possible to find many examples of surviving designs. For the purpose of this study the quality products of the top firms have been ignored in favour of mass-market fabrics which made up the bulk of the trade. The largest single collection of these is that held at the Public Record Office.(1) It provides an extensive (if necessarily qualified) picture of the industry, details of designs and subsidiary information about changes in firms' titles and personnel as well as contemporary tastes.

The PRO collection is the result of registration of designs which began in 1842 to protect the copyright of the owner of the design.(2) In citing his sources of information for his research into printed textiles in the late 1950's Floud was able to describe the extraordinary collection of records and pattern books which he had examined as "hitherto unused".(3) Certainly it seems as

if little further use had been made of the Design Register since Henry Cole claimed, in 1849, to have been the only person to have seen every design registered up to that time.(4).

Copyright Protection Legislation

From the early days of the printed textiles industry in this country manufacturers and designers had been struggling with the problem of piracy.(5) A petition from southern firms in 1787 complained of losses caused by "base and mean copies" of their new patterns and requested some sort of protection.(6) The situation, put simply, was that reputable firms would produce new designs which were then quickly copied by parasite firms who would put out cheaper imitiations, usually of inferior quality, thus undercutting the market. As demand for printed textiles rose so the problem became one of increasing importance. By 1840 Edward Brooks, a calico printer from Manchester, could explain that the printing trade had doubled in the previous 20 years and that copying had increased proportionally.(7)

It is worth emphasizing that this was not a surreptitious activity. It was openly admitted that it was "general practice to imitate patterns as soon as they came out"(8) Furthermore, almost no one was innocent. Even some of

those most vehemently opposed to piracy and in favour of extended protection admitted that under certain circumstances they had done a little copying. Nevertheless, as the industry grew, those firms which invested heavily in original designs became increasingly vocal in their condemnation of a practice which gradually moved from being quite normal to being considered not only illegal but highly unethical.

Opposition to legislation came mainly from the North, from Carlisle, Aberdeen and Lancashire. It was stressed that immediate copying of London patterns was essential to the northern trade as they lacked designers of their own or access to fashionable trends but, despite this, an Act was passed in may 1787 offering copyright to "the Designers, Printers and Proprietors" for two months.(9) However, the northern firms managed to survive, indeed to thrive, and copying continued unabated. Nevertheless, it was later stated that protection had been beneficial but that it would be even better if it could be extended to three months and the Act made perpetual.(10) This was done in 1794.(11) These Acts excluded Ireland, and covered only linen, cotton, calico and muslins - in other words only cloth made from vegetable fibre. The Board of Trade notes which are included in the Public Record Office lists state plangently that "No registers or records have survived from the registrations made under these acts".

Consequently it is difficult to draw conclusions about the position in these earlier years but it was authoritatively stated that 10 of the leading firms between them produced "not less" that 30,000 designs in the years 1831-1841.(12).

The struggle for and against copyright continued and, as the industry grew and the sums of money involved increased, became more intense. Bills for extension of protection were proposed again in 1820 and in 1837-1838 but failed. The first of these got through the House of Commons but was rejected by the Lords.

The two Design Copyright Acts of 1839 were more successful and extended protection to other woven and mixed fabrics, including silk and wool, "to which the process had not then been applied as a branch of the trade in this country and which, notwithstanding their having subsequently grown into a manufacture of great importance, had no protection whatsoever till ... 1839", and including Ireland.(13) At the same time protection for woven fabrics was extended to 12 months.

Design Protection

The Acts of 1839 were still far from perfect as far as the manufacturers were concerned. The President of the Board

of Trade at that time, C Poulett Thomson, had been, it was generally recognized, hampered by the fact that he was the MP for Manchester, and represented many of those with a vested interest in piracy.(14)

With so many designs now being produced, the period of protection was quite inadequate and it was seen to be essential to work towards a thorough overhaul of the legislation. Leading figures in the trade began to mobilize support and to agitate for appropriate improvements. The most active was James Thomson. He had unrivalled knowledge of the history of the industry, had made it his business to collect and collate statistics and he was an indefatigable pamphleteer. His main supporter was J Emerson Tennent, MP for Belfast, who introduced a new Bill to Parliament early in the Session of 1840 with its main aim being to extend copyright for printed designs to 12 months. H Labouchere, successor at the Board of Trade to Poulett Thomson, agreed there was a case for change but suggested 6 months. Tennent insisted that they wanted 12 months as "being a rational medium between a monopoly injurious to the public on the one hand, and a mere nominal protection only delusive to the inventor on the other.(15) Sir Robert Peel, whose own family had built its immense wealth on printed textiles but whose main interest now lay in politics, suggested the whole matter be referred to a Select Committee, "to examine

persons practically experienced in the trade of calico printing as to the deficiences of the existing law, and the most effectual means for its amendment".(16) The Select Committee was duly appointed and sat from 20 February to 6 July 1840. The length of the sitting was caused, it was suggested, by the "vast details of the subject itself" and by "there being two parties concerned, with opposing views ..."(17)

The two opposing parties were described by Tennent thus. The first, which he supported, were:

> ... few in number, but high in reputation, and the foremost in the race of competition ... who design or employ designers for themselves, aim at once at originality and excellence, and contribute, by their talents and their enterprize to elevate the character of British art and British manufacture.
>
> The second, more numerous and less scrupulous, abstain from retaining designers of their own, but carry on their business by copying and pirating the designs of others, feeding the demands of their trade by fastening on every successful invention of the others so soon as it appears on the market, regardless of the property of its proprietors, or the injury they inflict upon him.(18)

Clearly, the former were in favour of extension, the latter against. It is also clear that, although the opponents of copyright were allowed full expression of their views, from the outset the Select Committee had more or less made up its mind what the outcome would be. Despite Tennent's plaintive remark that those in support were "few in number" the majority of manufacturers across

the country were for it, the others merely netural.(19) In Ireland all were in favour, as they were in London and all others centres of trade.(20) It was only in Manchester, where most of the pirates had their bases, that strenuous objections were raised, but as these included some of the largest producers they could not be dismissed easily.

All the printers who were against the Bill described themselves, without exception, as "printers of first class goods". There was a second category against extension who, Tennent suggested acidly, were misguided, not understanding the practical issues but fearing injury "from foreign competition, in the event of any prompt preventive being applied to the prevalence of copying in England".(21) But as foreign trade was "by far the most important branch" of printed textiles, taking nearly two-thirds of the whole production, this fear could not be ignored.(22) Though not openly stated, the above comment was aimed, in part, at the one Committee member who persistently opposed the Bill - Mark Phillips.
The two prongs of the opposition attack were thus the effect on the home trade and fear of foreign competition. A full discussion of the evidence given before the Select Committee and the whole issue of piracy has been discussed elsewhere.(23)

To summarize, the main arguments were as follows. Those against the Bill denied they copied; they did not mind others copying them; they said not much copying went on; and anyway copying did no harm. They said extension would raise prices by creating a monopoly which would ensure fewer designs on the market. This would throw designers out of work.(24) It was only wanted by a few high-class manufacturers so they could increase their profits. Copying of English designs, which was already extensive by foreigners, would be further encouraged. Our export markets would be affected. Foreign industries were growing rapidly, often using British workers who were paid better abroad.(25) The Act would encourage excessive litigation. It was impossible to determine originality in designs - indeed, there was no such thing. It would deter capital investment because the industry, from lack of free competition, would decline.

Those in favour of the Bill replied that there was a great deal of copying at home which was very harmful, both to the individual firm and to British export trade in general. Foreigners on the whole did not bother to copy British designs.(26) Prices would reduce because at present all prices were put high to insure against certain later losses caused by piracy. Protected sales would enable prices to come down. Demand, which would not lessen, would have to be satisfied by original designs,

and this would mean more work for designers. Large sums, at present paid to French designers by English manufacturers, would in future go to home designers. Standards would inevitably rise. If standards on goods rose there would be increased consumption and the English would compete on equal terms with the French in taste, and beat them in price. There had been almost no litigation since the principle of copyright had been established nor any reason to think there would be any change. If the Bill was effective it would deter litigation. In practice there was never any difficulty determining the originality of the design. Increased security of property would encourage investment.

The greater weight of evidence produced by the supporters of the Bill, and their unanimity in the fact of much twisting and turning by the opposition, ensured their success: "Mr Kershaw was examined for four days, nearly one half ... occupied in retracting opinions given in the first two days". Ross, Lee, Thomas Lockett and others were dismissed equally scornfully and, it was noted, "Mr Schenk was ignorant of the whole matter ... Mr Brookes' evidence was fallacious ... and he admitted a pretty good many infringements upon copyright".(27) In the end the opposition were reduced to petulance. Lee suggested that many of those who were for the Bill were of "foreign extraction".(28) Ainsworth threatened to move his whole

business to Ghent if the Bill was passed.(29) Rather rashly, but scenting victory, Thomson promised that, only pass the Bill:

> ... and we will attend your schools of design, we will raise the character of our artists by a more careful and liberal education, and a higher recompense, and we will seek wherever it is to be found, in the schools, in academies, and among artists of the highest grace both at home and abroad, for those materials and that character of art, which infused into out designs will by degree, free us from that reproach which is but too well deserved, of NATIONAL INFERIORITY OF TASTE AND FANCY".(30)

As a final gesture Mark Phillips spoke in Parliament and wrote to various newspapers calling for a new Select Committee to be set up and expressing himself fearful of the consequences if the Bill was passed.(31) His arguments were demolished, with barely concealed exasperation, by Potter in an open letter.(32)

The 1842 Design Act

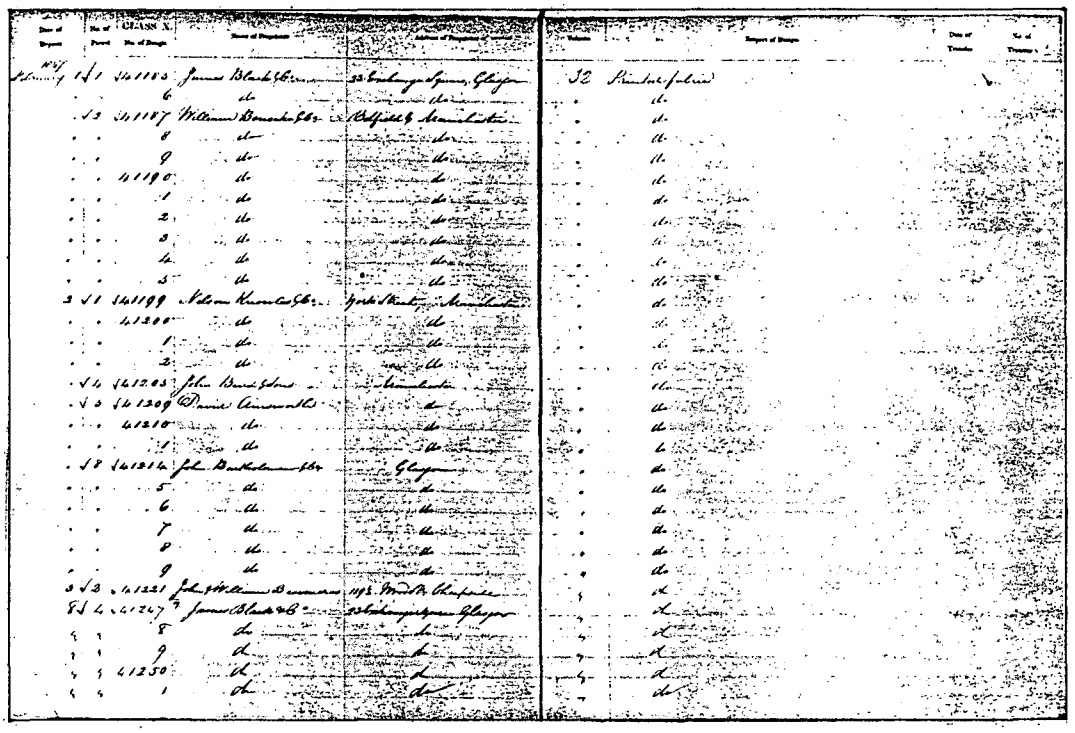
At the end of six months' examination, the Select Committee advised Parliament that "it is the opinion of the Committee that it is expedient to extend the copyright of designs" and in due course the Bill, known as the 1842 Design Act, was passed through both Houses and became law.(33) Most of the objections to the 1839 Act were rectified. Instead of a name stamp the goods were to be marked with a cypher understood by the Registrar and

manufacturer alone. The samples, only one of each design, would be sent for registration in sealed packets and would be available for inspection only in cases of dispute. The fee would be reduced to one shilling for dress and 5 shillings for furnishings. The copyright that was to be extended was varied. The Act created 13 classes of ornamental designs attempting to cover all manufactured goods. The classes of interest here were: [6] carpets, given 3 years' protection; [7] printed shawls, 9 months; [9] printed yarns, 9 months; [10] printed fabrics, 9 months; [11] furnitures, 12 months. The last two were, somewhat arbitrarily, designated as, respectively, "small patterns" and "designs with a repeat of more than 12" x 8". In general, though not without some exceptions, this demarcation seems to have worked well in that most of those in Class 10 were clearly dress and most in Class 11 clearly furnishings.

The Design Acts of 1843 extended the protection of 1842 to floorcloths and oilcloths, including them in the carpet category and the 3 year protection.(34)

Public Registers and Representations

The volumes kept at the Public Record Office are of two sorts. One kind called Registers, which contain entries, spread across two pages, of date of registration, number



A typical double-page spread, from one of the Registers of 1847, PRO BT 44 18 Class 10.

of parcel, registered number of each design, name and address of manufacturer or other consigner and, in theory at least, a description of the item registered, though in practice the usual entry is "ditto".(35)

The second sort of volumes are called Representations, and into these were stuck the actual samples or in some cases paper designs. The Registration number was stamped onto the sample, usually in black but sometimes, where this would not show up, in red or orange.(36)

All these volumes are very large - about 22 x 14 x 6-8 inches, bound in thick brown leather. The Representation volumes for furnishings are even larger - about 24 x 24 x 10 inches thick. Embossed on the covers in gold are the words "Office of the Register of Designs". Many of these volumes are damaged.

The following totals of volumes have been examined: in the Registers all 18 volumes covering the classes mentioned; in the Representations a sample of 49 as below.

	Representations - Nos. of volumes/ nos. seen		Registers - nos./nos. seen	
Class 6 - Printed carpets	46	1	2	2
7 - Printed shawls	10	2	2	2
9 - Printed yarns	1	1	1	1
10 - Dress fabrics	123	35	10	10
11 - Furnishings	13	10	3	3
	193	49	18	18

In addition, 4 out of the 13 volumes resulting from the 1839 Act were examined, plus 3 out of the 6 of the Indexes of Proprietor's Names - although these last were found to be incomplete and the lists compiled during analysis of Registers were preferred for reference purposes.(37)

The question it was hoped to answer relating to each of the various classes were: who submitted and, perhaps more interestingly, who did not? (In theory at least all post-1842 designs found in collections elsewhere might be expected to be represented at the PRO). Who registered most designs? What was the frequency of registration? What totals were registered per week/month/year? Were there any fluctuations, seasonal or otherwise, and what was the regional representation? In addition, it was hoped to make some observations about the fabrics used, the dyestuffs, the techniques of printing, the colourways, the nature of designs and the stylistic changes.

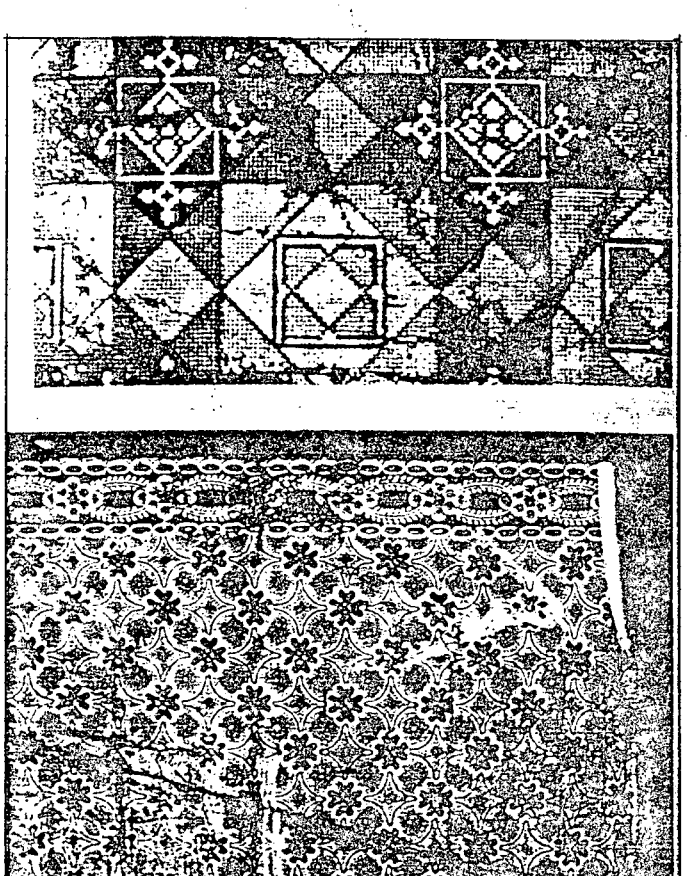
ANALYSIS OF DESIGNS REGISTERED

Carpet, Yarns and Miscellaneous Designs

The volumes relating to carpets, printed shawls and printed yarns were examined cursorily for the period up to 1850. A few comments are included here for the sake of completeness.

In the volume of Representations examined there were no printed carpets, which seems strange considering the importance of this industry, particularly for areas such as Rossendale in Lancashire, specialising in printed felt floor covering. Carpet printing firms recorded by Graham were mostly centred around Bacup, although one, (Turton Mill) was at Clitheroe. These printed a variety of carpets, cotton or wool, mostly block printed in steam colours, though Turton also used a machine. It is true that this trade did not reach its peak until the 1860's but the tapestry technique, invented in the 1830's for producing cheap versions of Brussels carpets, where the weaving process was simplified by printing the pattern on yarn before weaving began, became increasingly important during the 1840s.(38)

> Printed druggets have been an article of commerce for some years; large quantities have been exported to the United States and the home consumption is considerable ...



19th century floorcloth (above) and printed burlap (below). Philadelphia Historical Society.

> Felted cloths have also been printed ... and to some extent have superseded the druggets, on account of their lower price. Many of them have been printed in the Borough-road London by the Felt Company; the remaining portion in Yorkshire.(39)

Most of the designs were submitted on paper, some on point-paper, some with designs squared-up ready for transfer. Occasionally actual carpet pieces were sent, including a few full-sized hearth rugs, no doubt at great inconvenience to the Registrar. A lot of printed oilcloth and floorcloth samples, and table covers, were registered by firms from Birmingham, London and, one of the most important in this field, John Hare & Co of Bristol. As Bartlett has pointed out, quoting Rowntree's investigations of working-class housing, for most lower-income households at the end of the century linoleum was the commonest floor covering, and it seems likely that the same was true for its precursor, printed floorcloth.(40)

> Painted cloths, to be employed in domestic affairs, are not of very ancient invention, though now deemed indispensable to British summer comfort, as a covering for floors of rooms and passages, also stairs, tables and some descriptions of seats for places of much rude resort.(41)

Formerly these had been produced in narrow strips but, since 1790, had come as broadcloth, usually hempen, and oil colour was applied with stencils. Unfortunately, many of these, and <u>all</u> the examples of what was called Japanned Baize, have been folded over and, not having been opened for over 130 years, are irreparably stuck together.

There are 9 volumes of Carpet Representations up to 1850.(42) The registered numbers total 73,062 but a check indicates actual designs at less than half this. The average annual count seems to be somewhere between 3-4,000, except for 1850-51 the year before the Great Exhibition, when the numbers of submissions were doubled.

The designs for printed yarns were very dull indeed.(43) Curiously, most of the samples were of straightforward pieces of cloth which had been printed in the normal way. However, there were a number of hanks and one or two uninspired examples of ikat. The main industrial importance of printed yarn lay in the tapestry carpet trade, as described above.

> Blackford Bridge near Bury on the River Roach 6 miles from Manchester ... Printing of yarns was established here under B Woodcroft's Patent and superintendance. James Bevan then Manager of Bleaching, Dyeing and Printing ... while Mr B Woodcroft was making his experiments and he thought them so impracticable that he said "I wish yo' and yore Yarm were at 'ell." Nevertheless this invention was successfully carried out & became a large Manufacturer. (44)

At Middleton and at Clegg's Court, Salford, Woodcroft was printing silk yarns in 1840-41 but then went on to handkerchiefs "when warp printing went down". In yarn-printing the many processes increased the risk of spoiling the work. This was obviated by the yarn-printing machine of Barraclough & Co which could do six colours at once. (45)

The impression is given that certain types of printing were unclassifiable - such as printed cloth with odd bits

of embroidery added, or printed tassles - and that the Registrar tended to hide these oddities in the less important volumes. One item of particular interest is a diagonal design on paper, quite unexceptional in itself but mounted, (which is very unusual) and bearing on the mount the inscription:

> Design for a Printed Fabric Class 9 Registered for J S Grafton & Co Trustees of Wood & Wright of Manchester. Alexr Prince Office for Patents of Inventions & Registration of Design, 14 Lincolns Inn Fields, London. (46)

This is the only inscription of this sort in all the volumes examined and indicates the existence of this kind of intermediary.

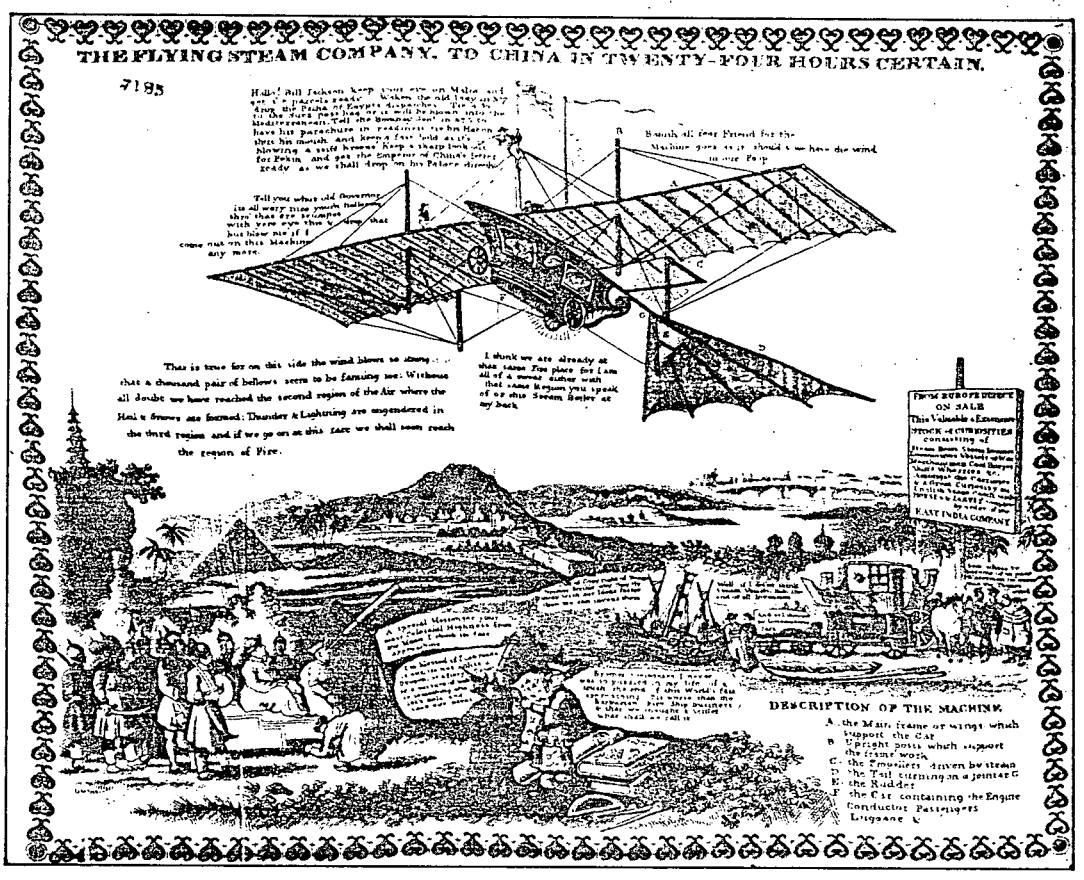
Again, the designs for printed shawls were disappointing, given the importance of this industry. (47) Most of the designs were rather dull and nearly all seeming to imitate weaving and mostly using diluted cashmere-style motifs, although Irwin has stated that 'It was less usual for the printed shawl to set out deliberately to compete as a cheaper version of the woven article'.(48) Most here were on paper, some were on cloth, and many were in uncoloured outline. The firms registering included Swaisland of Crayford; Towler, Campin, Schickle & Matthews of Norwich; Clabburn & Plummer, also of Norwich; David Evans of Crayford; a few Manchester firms such as Fort Bros and Hardman & Price; and many from what was known as North Britain (i.e. Scotland), especially, of course, Paisley.

In addition, there were many from obscure designers based around London. There is little to indicate much excellence in the trade and this perhaps supports the view, which Irwin questions, that printed imitations 'cheapened the product' and caused the eventual collapse of the industry around 1870. (49)

Dress Fabric Designs

The two most important groups of designs are Class 10 'Printed Fabrics' (i.e. dress) and Class II 'Furnitures' (i.e. furnishings), and the first of these is by far the largest. From the beginning there was a varied range of submissions for dress including designs on cotton, muslins, figured fabrics, silk, wool, designs printed on paper, some hand-coloured work, waistcoat patterns, handkerchiefs, and heavily glazed cloth. (It should be remembered that it was the design that was being registered not the actual piece of fabric and so, in a sense, the support for the design is incidental, and indeed, the vast majority of these samples are on unremarkable cotton cloth).

From time to time there were commemorative designs, including a splendid one entitled 'A View of Nankin from the River Chin-Keong-Foo. Representing the British Fleet and the Chinese High Commission going on board HMS



Design for a pocket handkerchief. A half-serious, half-comic representation of a steam plane. There is a reference to "Copyright of designs" below centre. Copper plate print. PRO BT 43 191 Class 10 (Dress); Design no. 7185, May 1843; registered by Geo.Faulkner, Parker St, Manchester; based on "Aerial steam carriage 'Ariel' ", a lithograph by W.L. Weston, English.

Cornwallis to Treat for Peace, Aug. 20th 1842'.(50) Floud has observed that the decline of the once-mighty copper plate was under way by the turn of the century and by the 1840s they were almost only used for these prints for the cheaper end of the market.(51)

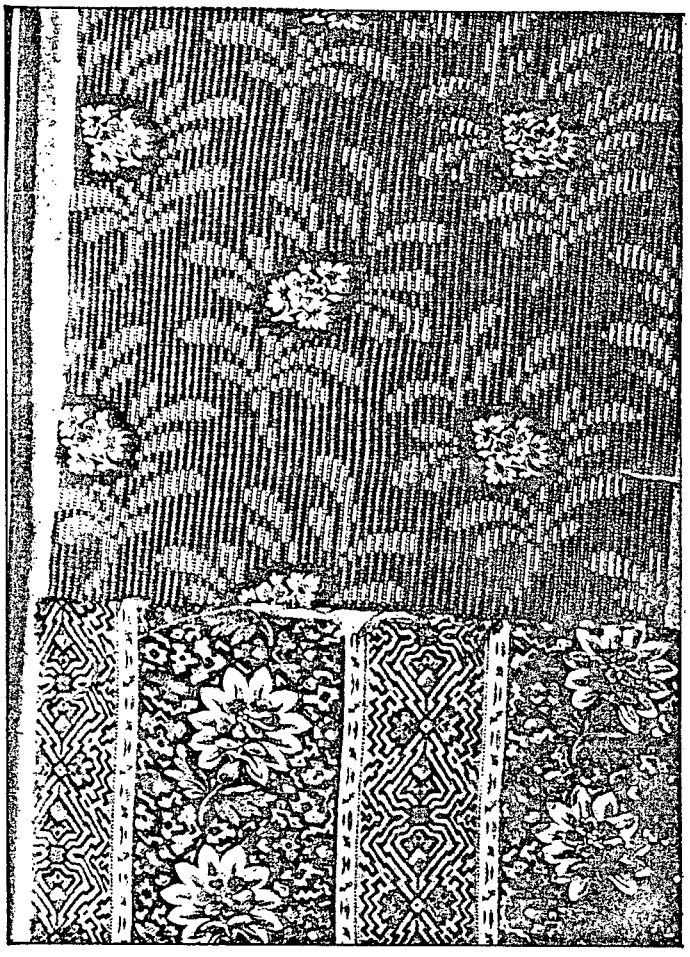
An interesting phenomenon was the very great number of designs for collars.(52) Usually these were from Scottish firms though most manufacturers seemed to produce some occasionally. Stylistic differences between these often very elaborate designs were slight. They were never coloured - always in line only - and probably meant to be printed for later embroidery or machine sewing. At the beginning of the 1840s they were uniformly wide at 4-6 inches. By the end of the decade they had narrowed to 1-2 inches. The cost of preparing them had been drastically cut by the introduction of lithography which replaced block-printing. The old system was tedious and expensive, collar blocks costing from 20s. to £10 each. Pirates had been deterred by the expense but lithography was a boon to the copyist hence the rage for registration.

The number of dress designs submitted was enormous. From September 1842 to December 1870 the Register numbers run from 1426 to 252,464 but there are many gaps in the sequence of numbers and the actual total registered in this period (excluding designs from Scottish firms), was

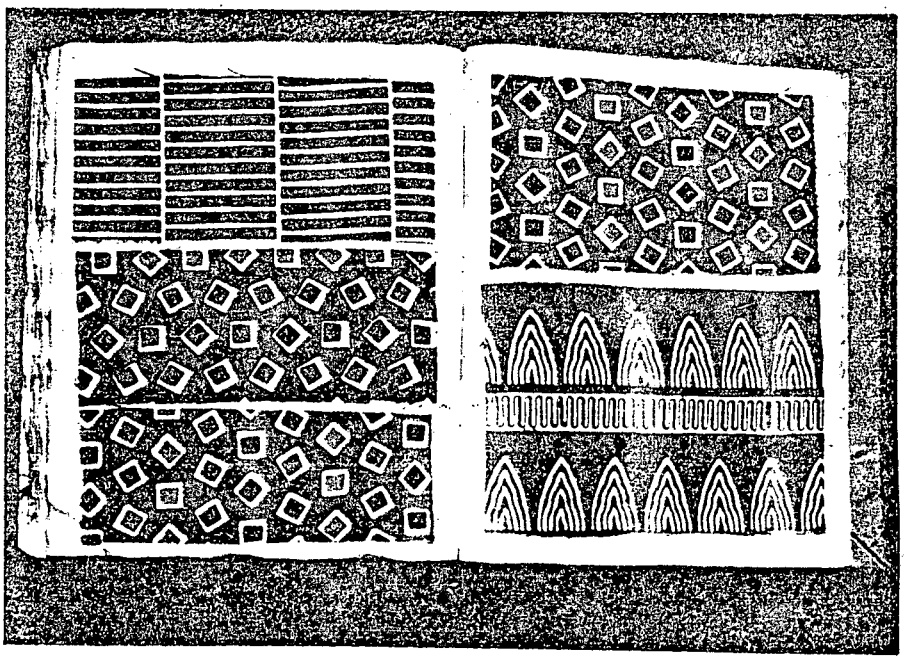
124,292 (see Tables A12-15) averaging nearly 4500 per annum. On the basis of the figures given to the Select Committee of designs produced being between one-fifth and one-tenth of the total created this could mean an annual production of up to 45,000 designs.

Designs arrived by every post, sometimes in ones or twos, sometimes in batches of hundreds. Certain firms, like Thomson's, waited until they had a collection of 30 or 40 ready or, often, 200-300 or more.(53) Again, certain firms, those which habitually sent in large quantities, tended to do so at certain times of the year, and this weighting appears to distort the seasonal figures (see Table p124). Hoyle, Thomson and Hargreaves usually sent in either side of Christmas which was thus the busiest time for Registration. The slackest time appears to have been April, May and June but perhaps for the same reason.

Other firms had a policy of mailing their designs as soon as they came off the drawing-board and there are many instances of designs arriving in ones and twos over several consecutive days. Most firms, however, submitted more sedately in medium-sized batches of a dozen or so once or twice a month. From among those who had opposed legislation Kershaw, Leese & Sidebottom were the most consistent users sending new designs for registration



Sample book 1841, Messrs. Hargreaves, Dugdale & Co., Broad Oak. Manchester Central Reference Library, M75/38. (above). Rainbow block prints c. 1830. Manchester Ref. Lib. M75/49. (below).



every week. On the other hand Schwabe and Potter, ardent supporters of reform, submitted relatively few.

The pattern of submission for other firms, though long-lived, indicates substantial changes of policy or circumstances, In 1846 Graham had described Low Mill Printworks near Chorley (Aitkin Bros.) as 'a very unfortunate place'.(54) Their designs were submitted at a rate of a handful each year until 1860 but thereafter substantial batches were registered almost month by month for the next ten years. (see Tables A12)

It is not entirely clear why firms adopted different practices but one possibility, ironic in view of their positions vis-à-vis legislation, is that those situated in isolated places such as Thomson at Clitheroe had slightly less to fear from industrial espionage than firms located in the more densely populated areas of South-east Lancashire, such as Kershaw, Leese & Sidebottom. Schwabe had spoken of the very stringent secrecy necessary until sales commenced (55) and Kershaw, Leese & Sidebottom were obviously very keen to get their designs registered as soon as possible. Indeed there seems to be some correlation between the frequency of submission and the degree of urbanization of a firm's location.

It is more difficult to determine which companies did not avail themselves of Registration and there are several reasons for this. The names under which designs were registered were not always those of the originator, either firm or designer, because designs were often registered by intermediaries, solicitors or agents of one sort or another, and often under the name of a Manchester or London office, typically in either Mosley Street or Cheapside.(56) Many of the names entered are those of retailers such as John Watson of London who had cloth printed at Bannister Hall, or leading Manchester merchants like George Faulkner. In addition, many Glasgow firms registered via London or Manchester offices, and firms changed their titles frequently as a result of partnership changes or mergers. Consequently, even such a thorough list as that for 1840, for northern printers, given in The Textile Colourist in 1876, was quickly out of date.(57)

Because so little information is included in the Registration entries it is difficult to determine the relationships between firms or between the sources of designs and the name registered, unless outside information is available. Sometimes, where the printworks address is given, rather than an office, it is possible to locate certain firms on one site. An example of this is Richard and Milton Smith who were at Baxenden Printworks

up to 1847. From 1852 designs from that address are registered by John Losh & Co.

Benecke & Co submitted dress and furnishing designs consistently up to 1860 from Belfield Printworks. Thereafter entries ceased under their name but designs were submitted from Bellfield (sic) and without any extra information it is not certain, (though it is likely), that this is the same source.

Where there is a long gap in the sequence of submissions and where the name is a fairly common one it cannot be assumed that it is the same firm unless there is evidence to the contrary. Fortunately, as in the cases of Matley, Dollfus, Mieg & Co., and Buchan Welch, who all have long gaps with no designs submitted, they are clearly the same firm continuing, though we can only speculate what caused the break in continuity. The most mysterious pattern is that of Thomas Hoyle where large quantities of designs were submitted <u>every</u> year from 1842-1870 <u>except</u> for 1852. (See Table A12)

Although Scottish and Irish firms have been excluded from this survey, occasionally additional information sometimes indicates that a firm registered in London or Manchester was actually based outside England, as with the firms of Mackintosh Sprint from Scotland or Booth, registered from

Hatton Garden but based in Cork. Several European firms have also been included because their impact was dramatic and their interest in the English market very noticeable after 1860.(58) A great many of the designs submitted are from individuals, some with distinguished names such as Richard Redgrave or Joseph Burch. In the case of Mary Ann Littler from Merton in Surrey, designs were submitted in small batches over a long period. Sometimes designs were registered by merchants such as Zolas or retailers like Clarkson or Hindley. It is noticeable, conspicuous by its absence, that the firm of Ainsworth & Co, cited by Thomson as the largest producer in the country, never sent in any designs for registration (unless they were disguised by one of the above devices which, given the quantities involved, seems unlikely). By a curious coincidence their main factory was at Barrow, just over the hill from Thomson's, and also in rather an isolated, hence protected, position. That Ainsworth's did employ designers of their own is known from the pamphlet by Thomas Bull, a printer and designer with them, who spoke bitterly of the frustrations of the English designer confronted with indifference to his ideas and of being obliged to produce on 'coarse cloth (at) a limited expense (and for) a particular market'.(59)

The truth seems to be that those firms inclined to copy produced many fewer designs (whether copied or not), but

they produced them in vastly greater quantities. If this was true before 1842 as Thomson's tables imply, then the reputable firms perhaps had less to fear from piracy than they thought. Though Ainsworth's did not avail themselves of Registration many of the others most opposed to copyright did so regularly.(60)

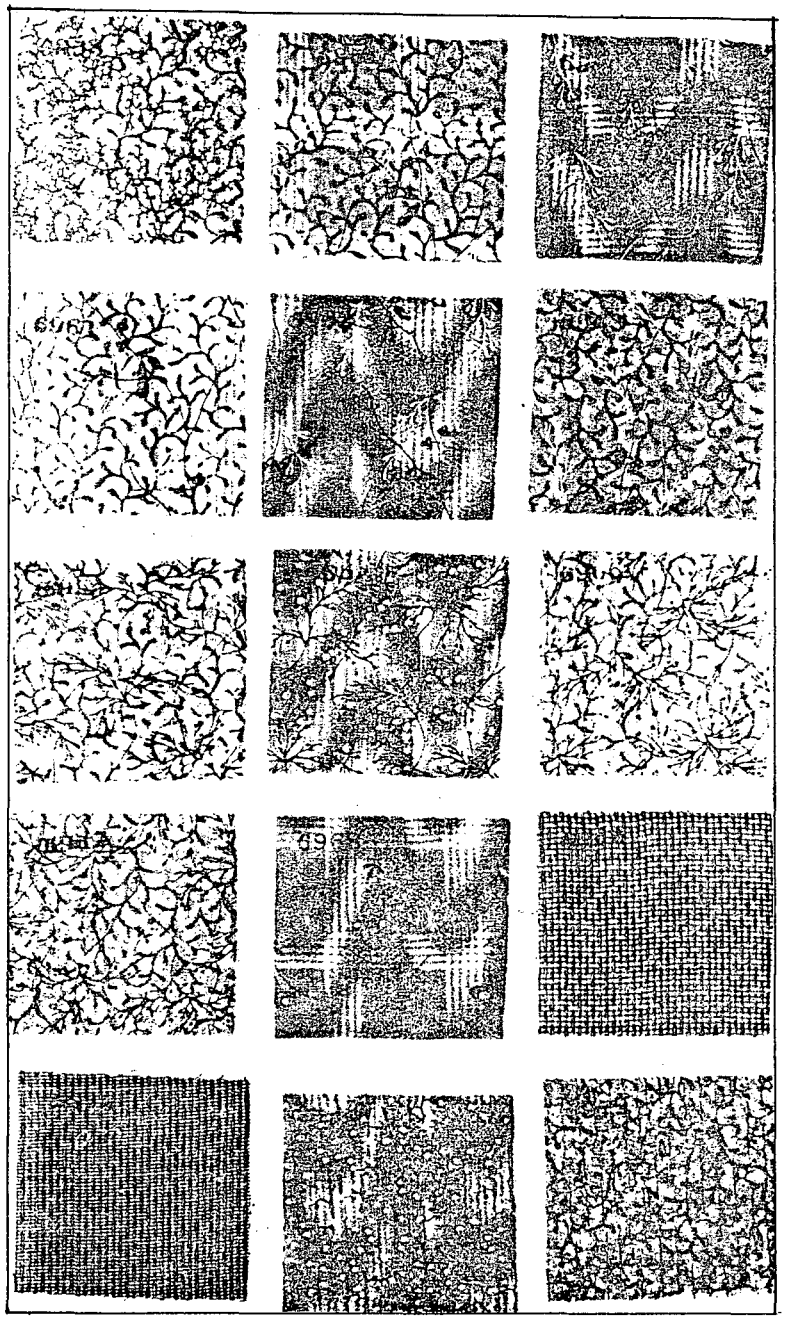
The blanket condemnation of mid-century textile design standards, both by contemporary and later commentators, has become a commonplace. It has largely been ignored that the various influential statements by Peter Floud refer to furnishing fabrics, for example:

> It is not until about 1835 that there is much sign of a general deterioration in standards of taste such as one would look for at this period. However, thereafter the degeneration is extremely rapid ...(61)

The point here is that printed fabrics, <u>especially</u> furnishings, had, in the late 18th century, attained a degree of excellence which, though undeniable, is of the sort which entrances the connoisseur, of the sort where designs are named, rather like racehorses, and designers are lauded as stars. Nearly all such designs are figurative, following the tradition of <u>indiennes</u> and <u>toiles-de-Jouy</u> types. In other words the artefacts approximated to the state of being a decorative art on a par with netsuké or embroidery. But for the industry which was established in the north these criteria are inappropriate. 'The trade may therefore be said to have

changed from an artistic employment to a staple manufacture, using taste as one of its elements'.(62) The home market for dress fabrics was predominantly lower-middle and working-class. Levitt describes a new kind of consumer: 'wage-earning town-dwellers, who for the first time, had incomes enabling them to buy more than the bare necessities ... no longer satisfied with ... ill-fitting second-hand clothes ...'.(63) The nature of these designs was, from the start, predominantly non-figurative (accepting florals as such), and fell outside the interest of connoisseurs and collectors.(64) There were some exceptions of course. Perversely Kershaw, Leese & Sidebottoms's range was artistically comparable with that of any other firm. The vast majority of the Representations in the Public Record Office fall into the basic catagories of stripes, spots, checks, florals and geometrics, and permutations of these. Mostly the repeats are small; dark designs were in a minority; many designs used brilliant colours and strong patterns; the standards of printing were rarely poor, often excellent and the fabrics used were usually of good quality.

Some firms, like Thomas Hoyle, based their whole output on endless variations of machine grounds. (The use of proper designers by these firms would have been minimal). Hoyle's were the inventors, or developers, of a madder colour called Hoyle's Purple which, judging by the number of



Designs registered by Thomas Hoyle & Son. Variations on machine grounds. Design numbers 6958-6972, May 1843. (Each sample approximately 3½x3. inches). PRO BT 43 191 Class 10.

designs they produced for it, was continually successful over the whole period. Introduced in 1831 it was '...superior in brilliancy, fastness, and utility for domestic wear .. a colour which may be said to have superseded the old navy blue print, in English wear'.(65) It must have been profitable too because they only ever, except on rare occasions when they put out multicoloured ranges, needed to stock one dyestuff.

Few firms showed such continuity and consistency as Hoyles in their designs over nearly three decades (see p...) Others include the London firm of John Baker & Co, from 1846 trading as Baker Tuckers & Co. Theirs were always corner designs or borders which were, presumably, for shawls and handkerchieves (so it is not clear why they appear here in Class 10 rather than in the Class 7 volumes), usually on paper in black line with large areas coloured in vivid red. (The harshness of this colourway, which is very distinctive, is seen to be softened when, as sometime happened, cloth samples were registered instead of paper). The drawing and detailing in these is always of the highest standard, often with beautifully drawn flowers. Of the other southern firms only Charles Swaisland produced comparable amounts and their designs are, again, of a very high standard, on the whole lighter, less robust but perhaps more inventive than the majority of Lancashire printers.

In 1884, an observer in The Times of 26 September wrote: "It is the design that sells the cloth" but he should have added that if it is design that sells the cloth it is colour that sells the design.

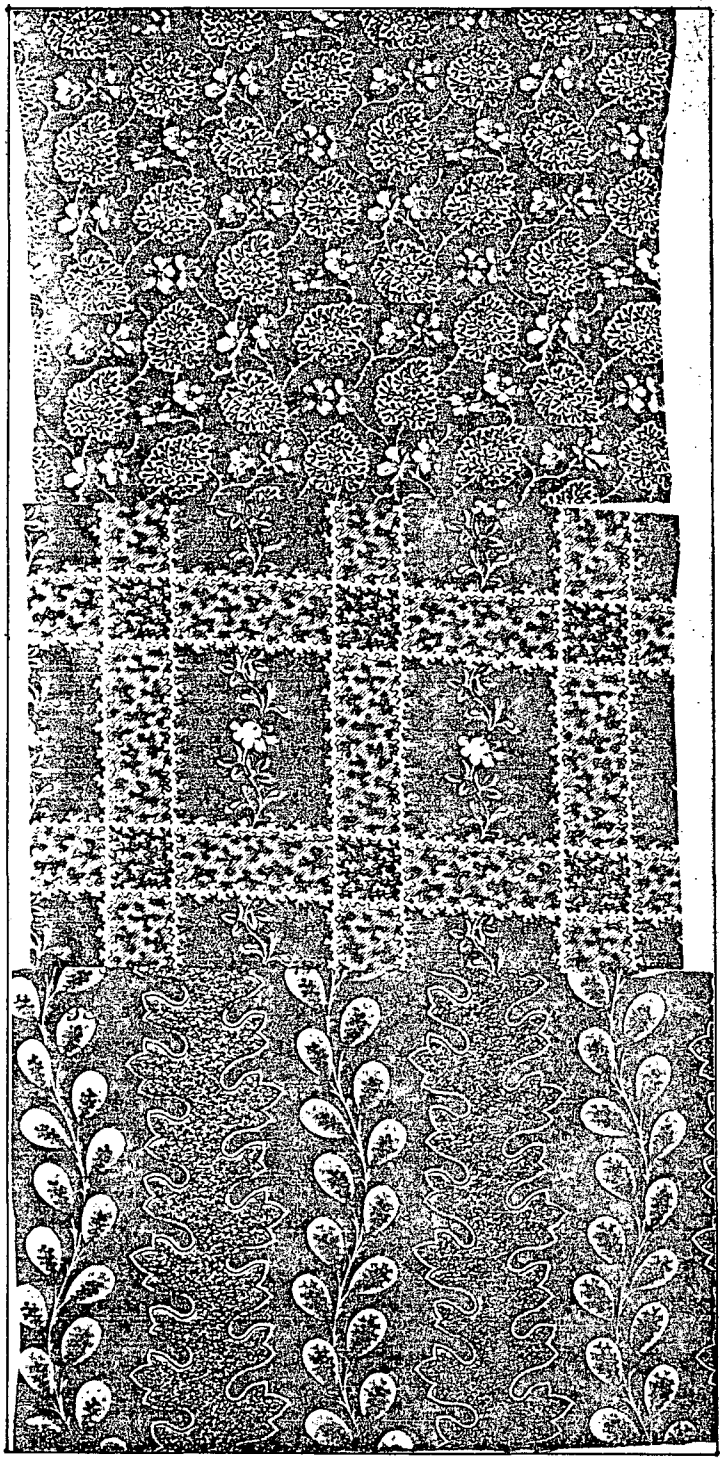
Henry Cole wrote:

> we feel that colour is more frequently misapplied than forms, indeed its application generally seems the work of chance rather than design ...(66)

In the early years of the industry there were few bona fide chemists and often the master undertook, by trial and error, to evolve his own recipes.

> Adelphi Salford Samuel Brierly Silk Dyer made preparations for printing in 1818 with 20 tables and had a good trade, became rich and acquired considerable cottage property ... S T Ashton are carrying on business at present ... print strong goods ... the machine printer makes his own colour and works it.(67)

Of all printers Thomson's had the greatest variety or widest range of product, from densely coloured, often quite garish patterns, through to pale and quiet designs, from vibrating rainbows through to simple sprigs and stripes, "... all block work putting 8 colours to printing producing 16 or 17 different shades for Robes and costly dresses ..."(68) They were particularly renowned for their discharge prints. Resist printing, with the discovery of resist mordants around 1800 and of chemical bleaching agents, led to the various new techniques of discharge printing. Thomson was one of the first to perfect a printed indigo discharge in 1826, with patents



A page of large samples of roller-printed dress fabrics, (page size 21½x13½ inches), all printed with a brown blotch. Design numbers 5989I-59893; registered by James Thomson & Sons, May 1849, part of a batch of 52. PRO BT 43 236 Class 10.

in 1813 and 1815 for discharging Turkey Red.(69) Whether direct copying was totally abated is difficult to say but many of the lesser firms produced batches of designs which echoed certain 'looks' from the Thomson range, such as Bradshaw & Rhodes from Levenshulme, or Beneckes from Belfield.

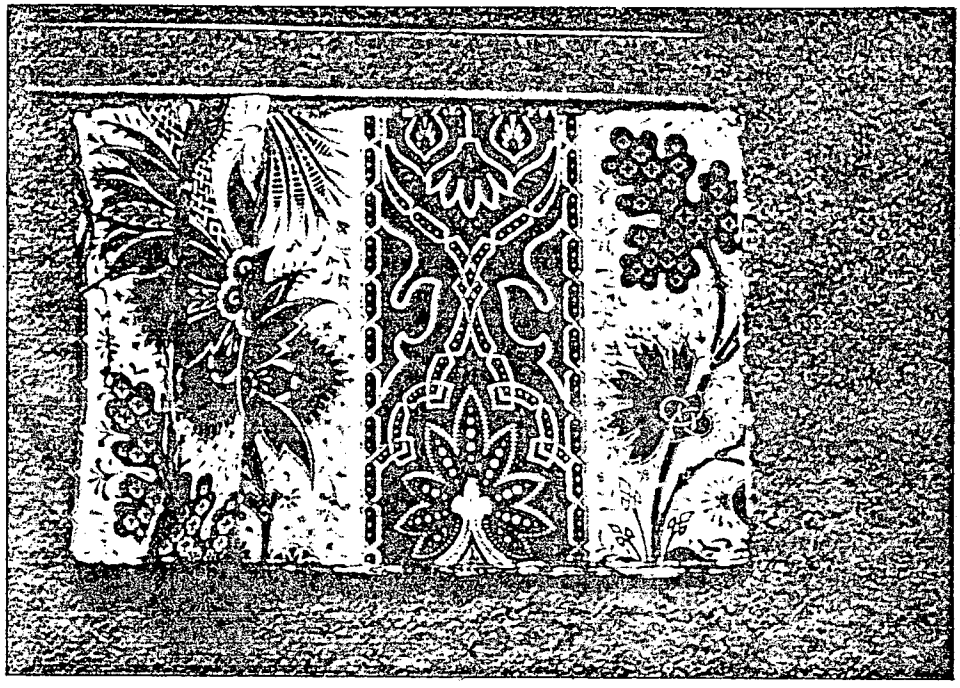
In the early 1840s a rather striking combination, probably for winter wear, of solid green, often graduated, combined with madder colours, was very popular, especially in checks. Also popular were deep chocolates combined with shades of pink, or orangey-red, indigoes, greys, or ochre. Of the colours available, (Kennedy mentions "upwards of 100" in use in the trade in 1841), yellow is perhaps the least apparent in the Representations.(70) Yellows tended to be fugitive and overall to be the colour that has survived least well in extant prints, particularly where made-up and used. On the other hand, as O'Connor has pointed out, by this time there was an easily fixed chrome yellow which was widely used.(71) The colours available included the traditional ones of madder, weld, indigo and logwood, as well as more expensive or recently developed types such as cochineal or quercitron. The innovations in dye chemistry which occurred in these years, particularly with regard to mineral dyes were as important as the better known consequences of Perkin's discovery of aniline dyes in 1856.

Fothergill summarises the dyes available even as late as 1884 as

> ... about a score of vegetable dyes, a fair range of pigments fixed with albumen, a few mineral colours developed on the fibre, Alizarin and several related dyes, Aniline Black, and a fair range of basic dyes, together with one or two mordant colours of the Gallocyanine class.(70)

In other words, for the period under review, the advent of synthetic dyes in the 1850s made relatively little difference. (In any case the effect of aniline dyes has been overestimated. It was not until the synthesis of alizarin by Graebe and Liebermann in 1868 that modern dye chemistry proper began). In the 1840s madder colours were still standard though their conventionality was diminshed by using them in combination with other colours such as cobalt blue. Deeply Vale Printworks and Reddish Bickham were two firms particularly fond of this colourway.

The range of colours, and hence the 'look' of a particular range of products, was obviously dependent to a great extent on the skill and knowledge of the dye manager. One of the reasons for the excellence of Thomson & Sons was the breadth of James Thomson's own experience as a dyer and his employment, for a time, of the young Lyon Playfair as his principal chemist.(73) Another notable, though more narrowly specialized, range was that produced by Coates McNaughton of Manchester in limited colouring of black, grey or bistre and similar sombre colours with



Design from W S Grafton & Sons. Roller printed c.1858
Manchester Central Reference Library M75/53.
A note by Thomas Lightfoot (1922) in M75/50 referring to work of this kind says "I know of no style of work which possesses greater all-round excellence than this work. They were fast to light and soap...unfortunately the process can never be revived as we have no Madder or Garancine."

delicate stipple discharges, beautifully printed and often achieving striking halftone effects.(74) There is no sign among the Registered samples of the manganese bronze colour introduced by John Mercer in 1823 and popular, according to Mellor and Cardwell up to 1880.(75) Baines said it was both fast and cheap and extensively used in calico printing - which makes its absence here the more curious.(76)

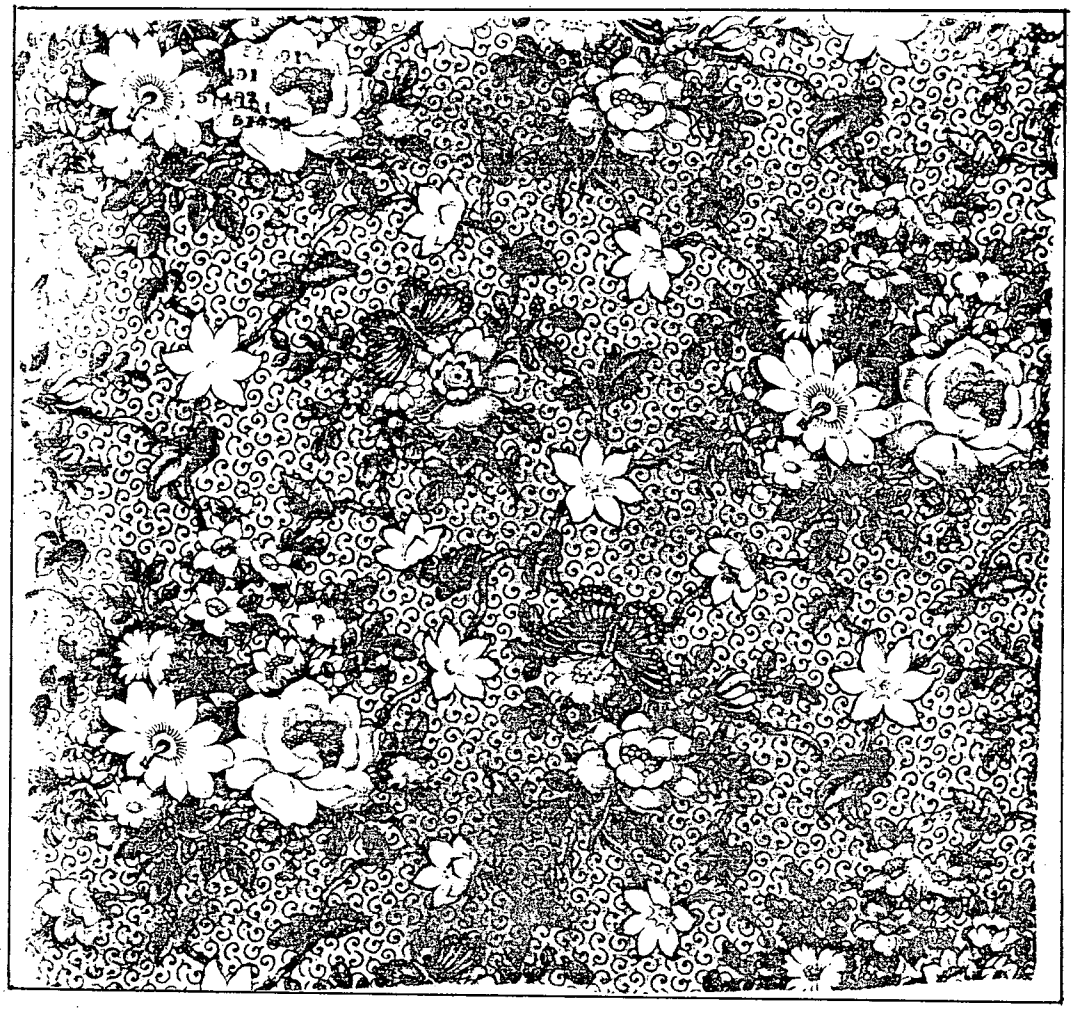
It is difficult to judge the quality of dyes used. Protected from light, use or washing, most of these samples have retained their original brightness. Traditional madder and indigo colours were fast but steam colours were not.(77) Sometimes madder and steam colours were combined (although this involved two separate processes and added to the cost). Most of the designs with bright colourings were steam colours and thus fugitive. Floud noted that Kershaw, Leese & Sidebottom usually printed in these.(78) It might be added here that the fashion of the 1830s and early 1840s for wool and silk printed with the recently developed steam colours helped the continued survival of block printing.

The Representations show little evidence of experimentation. Presumably this would have been carried out in the privacy of the printworks. The designs registered were the ones it was hoped would sell. There

is the odd adventure with, for example, printing on a wet ground, but most of the techniques displayed here are tried and tested ones. Many of the designs feature outlines, which traditionally were used to disguise mistakes of registration and avoid bleeding, though technically this should no longer have been necessary by the 1840s.

Then, as now, there were frequent revivals. Wallis noted, in 1849, revivals of designs and colourways from 1801, and also that 'the patterns of 1808 are precisely the same as those being now printed by the French'. There was a brief recurrence of the use of flat plates for madder styles in one colour. Rainbow colours were again very popular in 1844-1845, especially in stripes. Horizontal or diagonal rainbows were expensive as they could be produced only by blocks. Striped rainbows could be produced more cheaply by padded rollers.(79)

The different seasons influenced the general appearance of samples so that in those volumes anticipating winter wear the colours tended to be darker and the fabrics heavier, as might be expected. Towards the end of the 50s the impression is that machine grounds, especially the eccentrics, were far less popular and that designs in general were lighter and more open, with increasing numbers of florals. Most noticeable of all was the



Design number 51491, registered by William Benecke & Co., April 1848, (sample size 22x26 inches). Note use of outline to disguise poor registration. PRO BT 43 356 Class II.

increasing use of gauzes, often figured with a woven stripe. O'Connor suggests thicker warp threads in the stripes were added to the weave to minimise stretching and make it possible to print these by roller without risk of distortion.(80)

Furnishing Fabric Designs

In the Furnishing Registers many of the same names apparent in the Dress Registers recur. Those which repeat most consistently are William Benecke, John Burd & Sons, Clarkson & Co, Daniel Lee & Co, and Thomas McAlpin from Carlisle, but many totally obscure names appear once only, or perhaps twice, and then disappear. For example, W Cleversley Jr. of 5 Shads Terrace, Peckham, or Charles Walker Norwood, De Beauvoir Manufactory, St John's Hackney.(81) Sometimes more distinguished names appear briefly such as that of Frederick Crace & Sons, in 1849.(82) It remains to be determined why these should suddenly register one, or a small batch of designs, when they did not habitually do so.

The Registration numbers in the Furnishing Registers run from 1655 to 258,677 December 1870. These are immensely misleading and earlier estimates are wildly innacurate.(83) The actual number of Furnishings registered in this period was 3615 which is an average of a mere 128 per annum for the whole of England. (This

number is reduced even further when it is realised that a few of these designs are for one-off oddities such as communion cloths or needle cases. The average size of batches submitted was very small though the bulk of the trade was carried by those firms included in Table p.33a who normally submitted larger quantities. Even with these significant firms the pattern of submission can be puzzling. McAlpin's in the 10 years up to 1852 sent in 26 Furnishing designs. Then in the next two they submitted 72 and continued more or less at this high level for many years.

It is here that Floud's strictures are perhaps more germane. He suggested that it was the removal of technical limitations

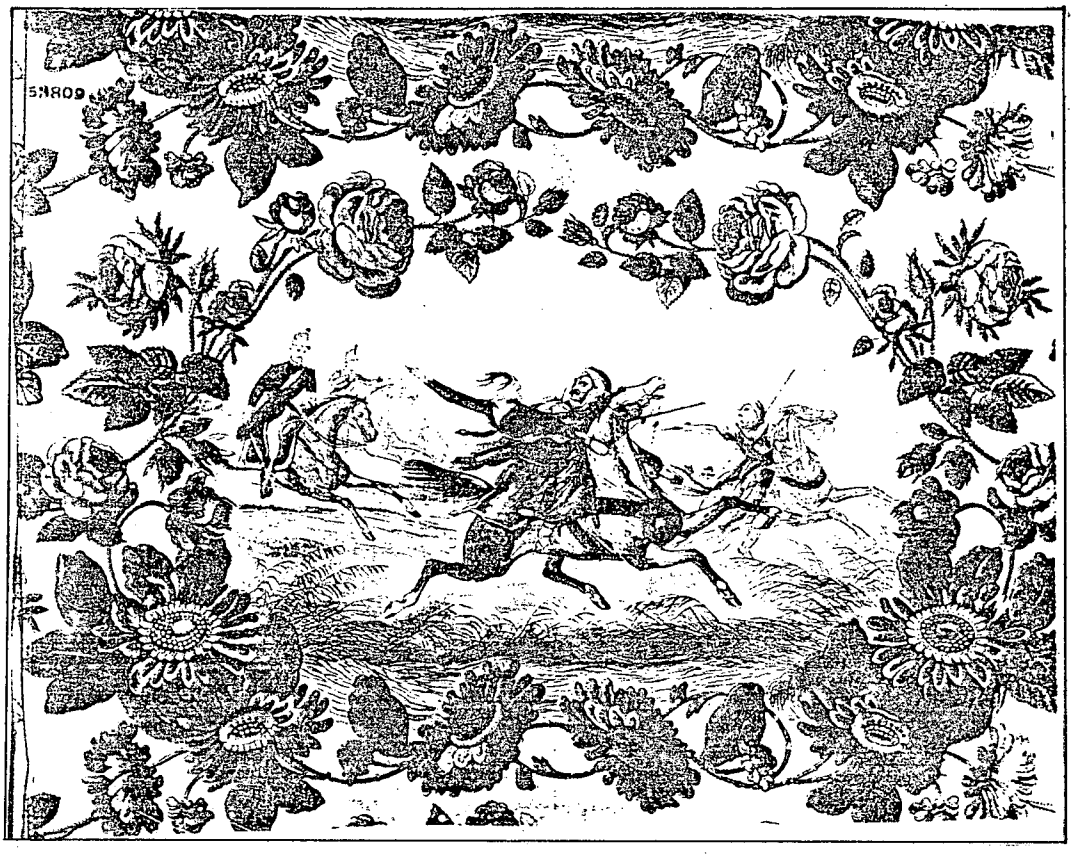
> ... which had hitherto stifled the anonymous chintz-designers' natural strivings to treat their leaves and blossoms as real "artists" or "painters" and to allow full scope for all those tricks of overprinted washes and graduated shading which ultimately became the hallmark of the "good old Victorian chintz".(84)

This may be true in general but is not overwhelmingly borne out by the PRO evidence. Certainly, compared to the many superb designs of the past preserved in museum collections, most of these are rather ordinary but it is quite clear that the Furnishings Register, unlike the Dress Register, cannot be taken as representative of more than a particular section of the trade, not perhaps the very lowest but towards the lower end of the market. Potter referred to 'Large quantities of machine-printed cheap furnitures ... produced for export ...'(85) and it seems to be this category of design that makes up the bulk of the registrations. Graham lists many firms producing what he calls 'a low style of furnitures ...'(86)

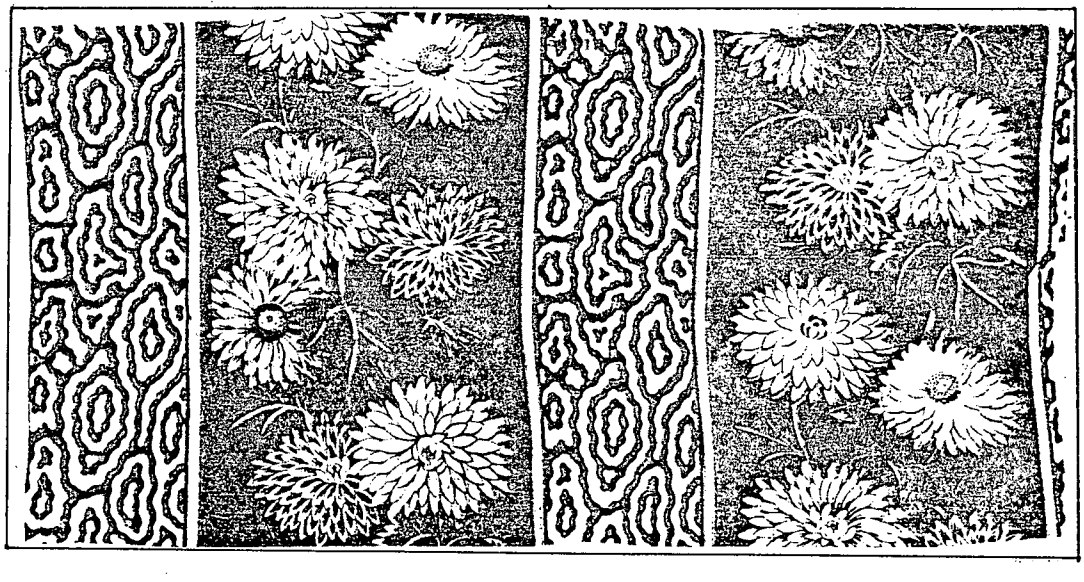
Floud was concerned mainly with block-printing, which had remained the most common method of producing large furnishings until the 1840s. Although firms like Samuel Matley of Hodge in Cheshire had earlier used roller-printing with excellent results, in most cases rollers were employed only to lay in the basic designs with

subsequent colours being added by blocks or wooden surface rollers. Many of the designs at the PRO, by contrast, appear to have been predominantly roller produced, indeed some of them would seem to have escaped from the Dress Registers. This leads to the observation that many of these designs could have been dress fabrics - whereas some of the specialist furnishing firms hardly bothered with Registration at all.

At the beginning of the 1840s there were many highly glazed chintzes on white grounds registered by Lowe & Co. who were at this point the main Lancashire producers of furnishings. There were many designs with machine grounds, many three-dimensional effects, and figurative designs which ranged from views of snow-covered mountains to scenes from Pickwick Papers. There were horse races - for example, the Derby framed by Corinthian columns and flowers on a bright pink ground - a boy on an ostrich, Gothic castles and mournful hounds. There were many echoes of Audubon's Birds and designs based on Baxter prints and Landseer and Delacroix paintings. Many of these, one is bound to say, are of poor quality and it must be conceded that on this evidence Floud's fastidious denunciations were justified. There were an increasing number of overcrowded designs with incongruous conjunctions of motifs - though to say, as most commentators on this subject feel free to do, that, for



Design number 53809, registered by Kershaw, Leese & Sidebottom, August 1848, (sample size 22x26 inches). PRO BT 43, 356 ClassII.



Design number 51719, registered by Kershaw, Leese & Sidebottom, August 1848, (sample size 11x26 inches). PRO BT 43, 356 Class II.

example, a Chinese motif on a tartan ground is, in absolute terms bad, would be out of place here. However, the designs of some outstanding firms,like David Evans, hardly figure at all. Apparently they chose not to associate themselves with copyright and trusted that the sheer quality and complexity of their designs as well as the discrimination of their customers protected them more adequately than the mundane Designs Act. But Thomas Clarkson of Clarkson & Turner, Coventry Street, a "very superior" chintz seller, (the London outlet of Swainson of Bannister Hall, who after 1858 registered their own Furnishings and a few Dress), estimated in his evidence to the Select Committee of 1840 that one in six of successful patterns were copied.(87) Potter had said that a furnishing pattern could be copied in a week and on the market in six.(88) Ross on the other hand thought that furnishings of the highest class were not often copied because they were too difficult.(89) No doubt this was special pleading on both sides. Nevertheless, reputable firms such as Stead McAlpin, or for that matter Steinbach Koechlin, once they had entered the field, certainly did avail themselves of Registration.

General Observations

The designs of the 1850s increasingly show a fondness for naturalism in block as well as roller prints. Indeed, the ability of block-printers to produce tonal gradations led

Block-printed chintz furnishing c. 1850

to an unrestrained opulence of effect whereas some of the roller-prints, for example those imitating Berlin wool work, achieved a robust but not unpleasing simplicity. Designs produced by Swainson's of Bannister Hall commonly utilised 50 or 60 blocks, occasionally many more, and these were sometimes registered by the retailers for whom they were produced such as Hindley's of Oxford Street, and John Watson, leading London merchants.

Though registrations by Scottish firms declined in the 1850s the reviewer of the Journal of the Society of Arts thought they were ahead of Manchester in excellence of designs to be shown at the forthcoming 1862 International Exhibition.

> The class of cottons will receive its strongest contribution from Glasgow, Manchester, as in 1851, having scarcely made any effort worth naming ...Perhaps the present condition of trade may have something to do with this. It is however, pretty certain, that if ever we are to have a really national exposition of this department of industry, we must not rely upon its being got up by the manufacturers themselves.(90)

This comment was not wholly justified as a number of Lancashire firms submitted designs. It should be added that the French, in these very important international exhibitions, refrained from sending their cheap workaday prints - there was nothing from Rouen at the Crystal Palace.

To judge by the response by the manufacturers to the request from Henry Cole's Journal of Design & Manufacture

to send in designs for comment a substantial number of the much maligned printers had some interest in standards of design. The writer in the Journal for May 1849 complained of being swamped by the "vast numbers of prints from manufacturers, warehousemen, retailers and collectors of patterns(sic).(91) They received 516 print patterns this month and it is likely that the majority were registered.

On the evidence of the Representations furnishing designs changed little from 1850-1860 and the idea that they did, or were invariably overblown, may have been fostered by the many trade exhibitions of the time for which manufacturers produced special show pieces out of keeping with their normal range. It can be offered as an hypothesis that it is these designs, products of skill and tradition, which have gained the 19th century such a bad reputation, rather than those produced in vast quantities for the mass-market which were, (allowing for some horrors), on the evidence of the PRO records and pattern books elsewhere often of a good standard.

In dress fabrics the picture was different. Because the lower and middle end of the market was by far the largest sector, because turnover was so rapid and the demand for new designs so unrelenting, and because the piracy that occurred was internecine, protection was essential. Levitt has spoken of Registration as indicative of

progressive enterprise but in many ways it was no more than a palliative.(92) Those firms which Floud referred to as "the great mass-producers" in fact do not compare with Thomson or Hoyle in output of designs, though they beat them in yardage.

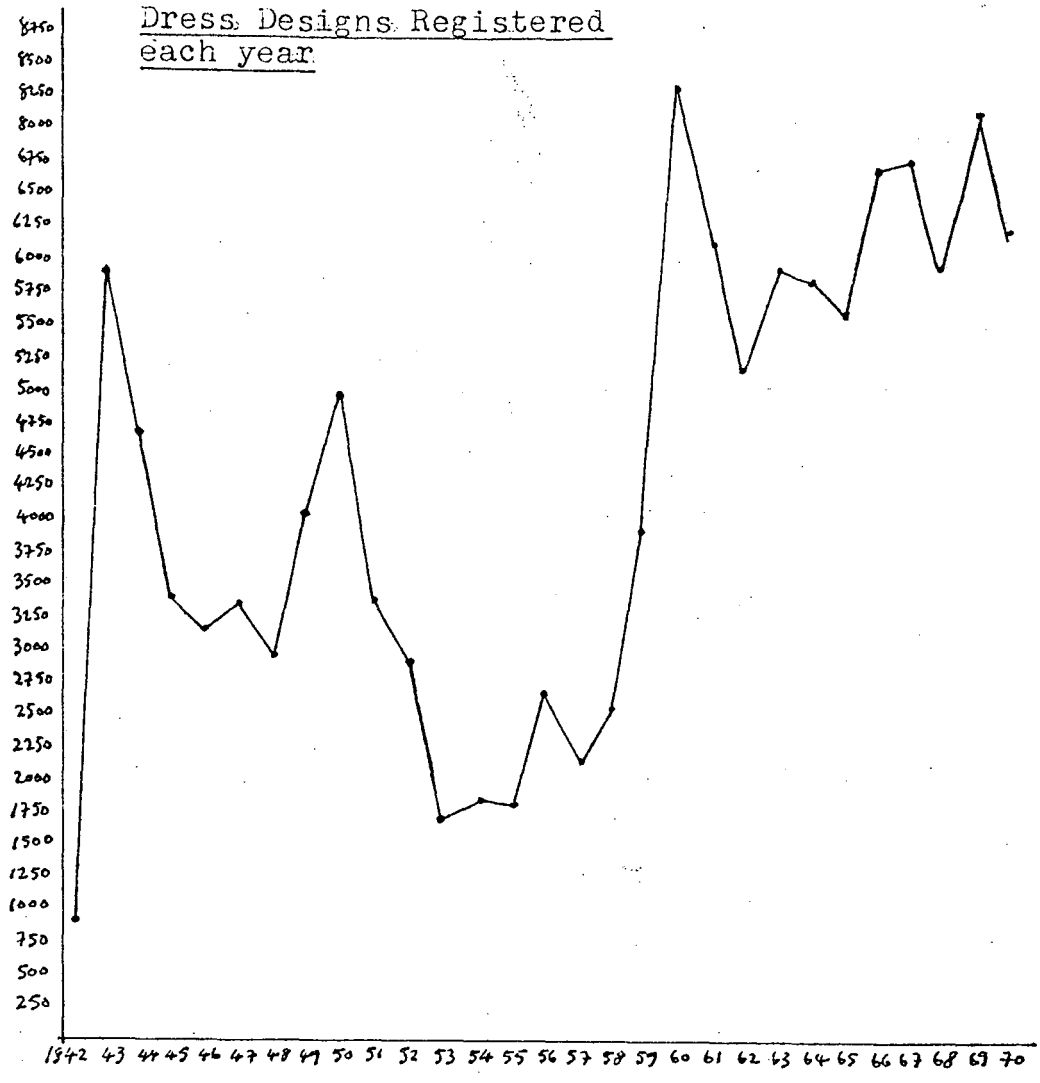
Floud has written that:

> By the 1850s the great mass-production Lancashire firms such as Butterworth & Brooks, Nelson Knowles, and William Benecke gave up any pretence of fine engraving and concentrated on overseas markets and the cheapest designs at home.(93)

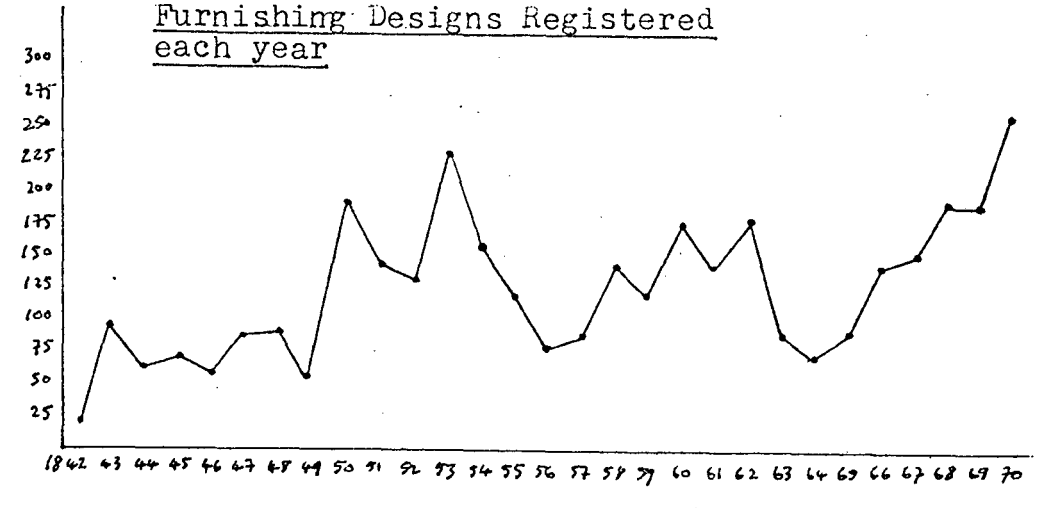
Many firms, however, continued to produce excellent designs as can be seen by surviving examples in museum and other collections, for instance in the swatches of printed designs by W.S. Grafton & Son held at the Lancashire Record Office, outstanding in their pristine condition and powerful design.(94) It was material of this kind that Lightfoot had in mind when he said, in 1926, that the work of the 19th centry "cannot be equalled today."(95)

It can be seen from the graphs (p 124) for dress and furnishing designs that despite the great disparity in numbers registered a remarkably similar pattern obtains. The peak just before the Great Exhibition of 1851 was followed by a marked decline which, in dress, lasted for eight years. Furnishings remained slightly more buoyant though there was some falling away in the mid 50s. Through the 60s, despite the ravages of the Cotton Famine

Dress Designs Registered each year



Furnishing Designs Registered each year



from 1861-65 numbers remained at a high level, boosted considerably by the inflow of foreign firms until at least the end of this period. Of course the Famine would not necessarily directly affect designing, and there was, in any case, a move towards use of alternative fabrics at this time.

As far as piracy was concerned the Act had the desired result - but it is more difficult to measure its effect on two of the main issues which had preoccupied the protagonists prior to 1842 - public taste and standards of design - although, in the opinion of the Jury reporting after the 1851 exhibition "the taste in almost every market has changed and improved with the reduction of price."(96) Potter described how "we find specimens of good taste on the lowest material, printed at the lowest possible price for export, showing a taste superior to that in use for our best work twenty years ago."(97)

Nevertheless, manufacturing practices continued to be based wholly on demand, and the consumer continued to exhibit patterns of selection and choice which require anthropological and behavioural analysis beyond the scope of this thesis.(98)

CONCLUSION

The conventional view of the British textile industry shifting relentlessly towards mechanised production because of fierce internal competition, at the expense of a corresponding decline in craftsmanship, though no doubt true in some respects, (particularly with regard to overproduction), cannot be sustained in its entirety any longer.(99) Furthermore, the idea that this decline in standards ran parallel to the decline of the London-based industry is also inaccurate. Though London did lose its pre-eminence as a producer it was not lost to the vast mass-producers of Manchester but to firms such as Swainson's near Preston, Stead McAlpin of Carlisle, and Thomson's at Clitheroe, firms that continued to use many of the traditional methods much as they had been practiced in London. It has been shown that it was not mechanisation that challenged London but competition <u>in kind</u> from these firms where high standards combined with lower overheads, more space for expansion and many of the purely topographical advantages outlined earlier (see p). A small number of London producers were able to continue with small-scale production - of waistcoats, handkerchieves and collars - where these factors were not so pressing, and remained successful in these areas.

The development of mechanised printing, (coinciding with an upsurge in population, rising wages and, hence a

growing body of consumers), made possible the production of enormous quantities of low-cost patterned fabrics. The popularity of some of these, for example the products of firms such as Thomas Hoyle & Sons, (see numbers of designs registered 1842-70, p413 ; illustration p 104 ; and Note p 138), was extraordinary, but it cannot be said that mechanisation, size of market, or popularity of designs, per se provides evidence of falling standards; the evidence of the registrations rather suggests the contrary.

In mid-century the artist Richard Redgrave looked back nostalgically to:

> the old times (when) the designer and artificer were frequently united in the same person...and the mind which originated worked in perfect accordance with the hand which produced; a few trade secrets being all that was needed beyond the technical skills of the workmen...Their effort was to produce one work, and to produce it perfectly, without reference to a series of repetitions...(100)

The warm romantic glow of this description, and others like it, helped engender the myth of the death of the

craftsman. The notion was given further impetus by admirers of the work of William Morris after 1870. But of course Morris was never involved in the mass-market for popular prints. He was at the top of the market in competition with Swainson's, Stead McAlpin and the other top producers. He was not in competition with machine printers but with other block printers.

The persistence of this myth is remarkable. It has been promoted on the one hand as part of the response to the excesses of the factory system and, on the other for a variety of ideological reasons, by certain influential commentators. Turnbull suggested that "increasing mechanisation bred an inferiority complex in designers, forever subordinate to the machine, no longer craftsmen ..."(101) The comments of Peter Floud have already been mentioned.(102) Writers as different as John Gloag and Fiona MacCarthy have contributed to this view.(103) More recently Toshio Kusamitsu has repeated the conventional analysis that the division of labour in increasingly mechanised industry led to "the degradation of the skilled working classes."(104) The truth or otherwise of this claim is not at issue here but the attempt to prove it by pointing to falling design standards and levels of skill is, and will not stand up to logical scrutiny, being based largely on uninformed or subjective judgements. Kusamitsu quotes with approval remarks such as that of Ralph Wornum

regarding the 1851 Exhibition that "... the taste of the producer generally is uneducated ...", even though the Exhibiton Jurors' reports speak highly of the quality of British production and their challenge to the French. (To be fair he also quotes William Felkin's comments on machines patented with a view "to produce higher quality designs ..." and Potter's defence of machine printing as a means of raising standards).(105)

The facts are that up to about 1850 the characteristics of the printing industry were the birth of numerous new concerns employing large numbers of skilled and semi-skilled workers, and the gradual introduction, from the late 18th century, of machinery typically of a fairly simple kind. It must be pointed out that machine-printing itself was not an unskilled trade and in certain areas, such as the production of engraved rollers, it might be argued that a higher degree of skill was required than for the production of blocks. Given that the cost of rollers remained high and roller printing was only profitable for long runs, the tendency up to mid-century was for machines to print relatively few colours and depend on hand-printing to supplement the process.(106)

The continued importance of tables can be seen below:-

	Tables	Machines
1840	8297	435
1845	6635	547
1869		650
1889	700	1100

Sources: Turnbull op cit p 114; Report 1869; Graham ms.

Indeed, some printers, notably James Thomson, increased their numbers of tables (284 in 1840 and 316 in 1846). Even Potter had 20 tables at this later date with only 12 machines. Hoyles in 1851 with the great number of 25 machines also had 50 tables.

Undoubtedly, a lot of poor designs were produced, but then that was always true. Very often the fault lay with the methods of production as much as the pattern and badly mixed dyes, colours not fixed or fast and designs badly registered were common faults. There is no reason to suppose that many of the public, however ill-educated in matters of taste, would prefer badly produced to well produced fabrics, given equal prices, but considering the vast quantities involved it is not surprising that some low quality products did emerge. Equally, poor designs were produced by block printers - it was not unknown for unskilled workers to be used at the tables by unscrupulous firms, with consequently dire results.(107)

Until recently English designs were traditionally compared to their disadvantage with French prints. This view was altered by the researches of Peter Floud but his revision stopped short of the 19th century. It must be admitted that the prevailingly high standards of French work was justifiably admired but nevertheless the feeling of inferiority displayed by so many manufacturers before the Select Committee of 1840 are hard to understand. The best English work of the 19th century certainly stands comparison with any from France and if the smaller French industry did not descend to the lower levels occasionally reached by the English neither did it have the range and variety of product or scale of production.(108) The overall excellence of the French product cannot be explained simply by the continuing dominance of hand-printing there, anymore than bad designing in England can be blamed on the growth of machine-printing. Kusamitsu illustrates French designs being used as models for English manufacturers but the examples given are in no way better than home-bred designs.(190) A comparative study, perhaps based on the 10,000 English samples held at Mulhouse, is long overdue. Certainly the designs registered by French firms in England in the 1860's are not at all superior.

On the evidence of the Public Record Office and in other collections it can no longer be argued that design

standards in the mass-market fell after 1830 (or some other notional date). Designs were certainly different from those of earlier periods but in terms of variety and invention and, I would suggest, quality, they stand comparison with designs before and after this period 1830-1870.

NOTES The Product - Design and Manufacture

1) These records were kept by the Board of Trade until 1875 when they were transferred to the Patent Office. In recent years they have been moved to the Public Record Office at Kew.

2) A useful definition is that given by S Levitt in "Registered Designs: New Source Material for the Study of the Mid-Nineteenth Century Fashion Industry", Costume, Autumn (1981),49. "While a patent protects a completely new idea for an object, a registered design protects a new appearance of an existing one. The function of both is to allow a person to enjoy the fruits of his or her invention and industry, free from commercial competition, and thus to stimulate trade. However, while a patent gives greater protection, it is harder to obtain and more expensive than a resistered design".

3) P Floud, English Chintz - Two Centuries of Changing Taste (1955); and English Chintz - English Printed Furnishing Fabrics from Their Origin Until the Present Day (1960). The 1960 exhibition was substantially bigger.

4) Select Committee on the Schools of Design, Parl. Papers 1849 subsequently cited as SC 1849; Turnbull op cit p 147, cites figures for designs registered which are quite inaccurate. They were probably based on the Registration Numbers rather than a count of actual designs.

5) 7 Geo Ic 7; 9 Geo II c4; 14 Geo III c72. Despite these restrictions about 50,000 pieces per annum were being produced, mostly in London. See E Potter, Calico Printing as an Art Manufacture. A Lecture Read Before the Society of Arts (1852) p 8: "The common import of the term Calico-Printer now, is a printer of all sorts of fabrics - calicoes, muslins, linens, silks or woollens, or the many mixed varieties, composed of different materials. "For an example of technological piracy see A and N Clow The Chemical Revolution. A Contribution to Social Technology (1952) p 224: where a Scottish printer is described whose skill was "annually acquired by stealth from the working printers of London ...".

6) A K Longfield "William Kilburn and the Earliest Copyright Acts for Cotton Printing Designs" Burlington Mag XCV 1953 p 230.

7) Report of Select Committee on the Copyright of Designs Parl. Papers 1840 VI Q2064-2073, subsequently cited as SC 1840.

8) ibid.

9) 27 Geo III c.38

10) Longfield op cit note 6 p 233 S D Chapman and S Chassange European Textile Printers in the Eighteenth Century 1981, note 2pp 196, 229 suggest Kilburn's campaign was "against the Peels" while "Peel ... (is) more easily recognisable as imitator and pirate than as scientist or originator of ideas".

11) 34 Geo III c.23

12) E Potter "A Letter of Mark Phillips Esq. MP in Reply to his Speech in the House of Commons, February 9th 1841 on the Design Copyright Bill" p 12.

13) 2 Vic c.13 & 17; J Emerson Tennent, A Treatise on the Copyright of Designs (1841) p 18.

14) SC 1840 op cit pp 487-492.

15) Tennent op cit note 16 p 2.

16) ibid. See Chapman and Chassange, op cit note 9 for a thorough discussion of the Peel family fortune.

17) Tennent, op cit note 16 p 3.

18) ibid J Thomson "A Letter of the Vice-President of the Board of Trade on Protection to Original Designs and Patterns Printed upon Woven Fabric" (Clitheroe, 1840) p 6. He describes them more thunderously as "... a numerous, motley, heterogeneous mass of dissimilar and discordant elements, linked by one common principle of preying on the invention of others, and associated by vulgar ignorance, discerning avarice and unscrupulous morality". The main spokesmen for the Bill apart from Thomson and Tennent were Edmund Potter of Dinting Vale; Salis Schwabe of Middleton, Augustus Applegath of Crayford in Kent; all printers, and Joseph Lockett of Manchester, designer and engraver. The main opponents of the Bill were led by James Kershaw of Leese, Kershaw and Callender, Manchester; John Brooks of Butterworth & Brooks, Sunnyside Printworks, Rawtenstall; William Ross from Darwen; Daniel Lee of Wright & Lee, described as "general dealers", (i.e. they had no printworks of their own but employing others to print for them, (SC 1840 op cit note 9 QQ 4359-4373) and Thomas Lockett, a commission agent (and Joseph Lockett's brother). Schwabe with Hoyle & Co

were described as "producers of the highest class of machine work". J Thomson "A Letter to the Rt Hon Sir Robert Peel, Bart., on Copyright in Original Designs and Patterns for Printing" 1840 p 37. James Kershaw was MP for Stockport and Mayor of Manchester in 1849. He also owned large spinning and weaving concerns.

19) SC 1840 op cit note 9 QQ 7585-7602, 7631-7632, 7674-7680.

20) There were three printworks in Ireland, all in the vicinity of Dublin.

21) Tennent op cit note 16 p 4.

22) Pieces produced per annum (a piece was about 28 yards):

	For the Home Trade	For Export
1820	1,728,340	3,727,820
1825	1,478,508	6,662,368
1830	2,281,512	6,315,440

Quoted in J L Kennedy Report of the Commission on the Employment of Children (1843) p B30.

23) Greysmith TH op cit pp 165-194.

24) Thomson to Peel 1840 op cit note 27 p 17, "During the period when the art of printing flourished most because best understood, in the neighbourhood of London, and piracy had not become either so wealthy or so mischievous as it is at the present day, pattern drawing flourished also".

25) Lee said English copper rollers were exported in large numbers (which was true), and accused Joseph Lockett of engraving them with copied English designs. Lockett replied, in an angry letter, that he exported only his own designs, of which he had 20,000, or designs supplied by the customer. Foreign customers were not much interested in English designs - out of 300 recent patterns he had prepared for export, only six were English: SC 1840 op cit note 9, QQ 4720-4727, 4732-4739, 4920-4929, 6971, 4937-4942, 4953-4960, 7044-7047.

26) Potter, Lockett and Schwabe all said there was very little copying of English designs abroad. Thomas Lockett said M Voortman in Belgium copied extensively. This was checked and then refuted vehemently in Tennent's book (op cit note 16) by Voortman's own testimony: SC 1840 op cit note 9, QQ 435-447, 5957,

8193-8194, et infra; Tennent op cit note 16 pp 196-209, 271.

27) E Potter "A letter to Mark Phillips Esq. MP in Reply to his Speech in the House of Commons, February 9th 1841 on the Design Copyright Bill" Note 15 pp 7-9. A splendid satirical squib was published anonymously in 1840, in London, consisting almost entirely of Kershaw's evidence verbatim, dedicated "to Logicians in general and Calico Printers in Particular".

28) SC 1840 op cit Note 9, QQ 5312-5400.

29) Tennent, op cit Note 16 p 203. Curiously, the passing of the Bill "gave such satisfaction to the merchants of Manchester that they presented (Tennent) with a service of plate valued at £300", Dictionary of National Biography entry for Tennent.

30) Thomson to Vice-President, op cit Note 24 p 21.

31) House of Commons, 9 February 1841; Morning Post 10 February 1841.

32) Potter to Phillips op cit Note 15, 20 February 1841.

33) 5 & 6 Vict c.100.

34) 6 & 7 Vict c.65.

35) PRO BT 44.

36) PRO BT 43.

37) PRT BT 42; PRO BT 44.

38) See J N Bartlett, Carpeting the Millions. The Growth of Britain's Carpet Industry (undated) p 19; F Bradbury, Carpet Manufacture (Belfast, 1904) p 160 et seq.

39) J Burch, "On the Printing of Fabrics, with Special Reference to Shawls and Carpets" in JSA no. 180 vol IV May 1856 p 406.

40) Bartlett, op cit Note 80 pp 62-63.

41) N Whittock, The Complete Book of Trades (1837) p 246.

42) BT 43 105-113.

43) BT 43 187 BT 44, 14

44) Graham op cit p 352a

45) Crookes op cit p 392

46) BT 43 187, No. 174111 See p 181.

47) BT 43 170-180, BT 44, 12-13.

48) F Irwin "The Printed Shawl in Scotland c.1785-1870" Costume, Autumn (1981), 24.

49) ibid

50) BT 43 188, No. 3763.

51) P Floud, English Printed Textiles 1720-1836 V & A (London 1960) p 5; CIBA Review, 1 (1961), 16.

52) For a useful discussion of garment designs at the PRO see Levitt, op cit Note 4.

53) The title "Thomson & Co" included designs from the Primrose Printworks at Clitheroe run by James Thomson, High Lodge, near Manchester run by his son Edward Peel Thomson, and Little Moor, near Clitheroe, run by his sons Henry and Charles Thomson.

54) Graham op cit p 402

55) SC 1840, op cit Note 9, QQ 165-167.

56) See inscription quoted in text, p

58) Reprinted in Turnbull, op cit p

58) J Scholes "A list of Foreign Merchants in Manchester 1784-1870" unpublished ms. MCRL.

59) Thomas Bull, A Voice for the Bench (1853).

60) A few designs were registered by a "David Ainsworth" but a connection with the firm has not been established.

61) Floud, op cit Note 89 p 8.

62) Potter, (1852) op cit Note 7 p 27; see also Chapman and Chassange, op cit Note 2 p 204: "Most writers on textile printing have failed to recognise the importance of the popular market because nearly all of them have been essentially historians of design, entranced by the "classic" copper prints ...".

63) Levitt, op cit Note 4 p 50.

64) Chapman and Chassange, op cit Note 2, contains interesting passing comments on this, p 204 et infra.

65) Potter 1852 op cit Note 8 p 23.

66) Journal of Design and Manufacture 1849 vol 1 p 75.

67) Graham op cit p340

68) ibid p415

69) Turkey Red Discharge Patent for 1813, no. 2654; for 1815 no. 3881.

70) Kennedy, op cit Note 29 p B45; C M Mellor and D S L Cardwell, "Dyes and Dyeing 1775-1860", British Journal for the History of Science, 1(3)(1963) pp 265-275: "By skilful use of mordants and by careful mixing of dyes, the dyer of pre-synthetic days seems to have been able to produce a wide range of fairly fast colours and shades". John Mercer suggested the use of antimony in 1817 to produce a printable yellow and orange and sold the process to Hargreaves and Dugdale of Broadoak, near Accrington. See CIBA Review, op cit Note 89, pp 8-14.

71) D O'Connor "Colour and the Calico Printer" Catalogue for exhibition, West Surrey College of Art 1982.

72) J B Fothergill "Progress in Calico Printing" J of Society of Dyers and Colourists p 116.

73) Lyon Playfair (1819-1898), Professor of Chemistry at Edinburgh 1858-1869, Liberal MP from 1868, elevated to the peerage in 1892. Edmund Potter developed a dyestuff called Tyrian Purple, see Mellor and Cardwell, op cit Note 106 p 275.

74) Designs from this firm were registered under the name of Seedley Printworks after 1846.

75) Mellor and Cardwell op cit Note 106 p 274.

76) E Baines, History of the Cotton Manufacture in Great Britain (1835) p 278.

77) "The common people and servant girls generally wore ... Navy-blue prints, with a small white or yellow spot on them, which invariably came to us quite wet, and were so unpleasant to handle, that they were usually kept beneath the counter, and pulled up on top of it when they were wanted ... These were generally sold as near cost price as possible ... This class of goods, I dare say, is now entirely out of the market,

their place being taken by the excellent lilac prints known as "Hoyles" and "Ashtons". The high and fancy coloured prints were mostly "loose colours", which were generally distrusted by purchasers, the preference being given to chocolate grounds, which were then being introduced into the trade, known to be fast ..." W H Ablett Reminiscences of an Old Draper, 1876 pp 102-3.

78) Floud (1960) op cit Note 1 p 58.

79) Wallis op cit Note 52 p 13; Floud (1960) op cit Note 1 p 49.

80) O'Connor op cit p 56

81) BT 43 214, No. 34359; BT 43 235, No. 58622.

82) BT 43 244, No. 69572.

83) Greysmith, Patterns, Piracy and Protection, TH 1983 p 186

84) Floud op cit Note 89 p 8.

85) Potter (1852) op cit Note 7 p 57.

86) Graham op cit infra

87) SC 1840 op cit Note 9, QQ 2248-2259; Charles Swainson of Bannister Hall, one of the leading printers also merchanted and registered designs under the name of his London office, Swainson & Dennys. See Floud (1960) op cit Note 1 p 58. However, the designs registered were not especially notable, which perhaps reinforces the view expressed here. Thomas McAlpin transferred to Cummersdale, Carlisle from nearby Wigtown, in 1835. Their title changed to J & H McAlpin Stead & Co in 1848 and to Stead McAlpin in 1860.

88) ibid QQ 606-611.

89) ibid QQ 5581-5583.

90) JSA 21 Feb 1862 p 203

91) J of Design and Manufacture op cit. p 7

92) Levitt op cit Note 4.

93) Floud op cit Note 89 p 20.

94) MCRL Archive Dept. Grafton Swatches M75.

95) T Lightfoot The History of Broad Oak typescript at Accringon Library.

96) "The British Textile Division. International Exhibition of 1862" in JSA 21 February 1962 pp 202-3.

97) Potter 1852 op cit Note 7 p 6 "taste has improved corresponding with our demand".

98) ibid. p 59 "We wait the demand: we cannot afford greatly to anticipate it ..."; p 52 "... our taste is ruled by demand".

99) See M Levy-Leboyer in Revue Historique CCXXXIX 1968 for a reiteration of this viewpoint.

100) R Redgrave On the methods employed for imparting education in Art to all classes, a pamphlet of 29 Nov 1852.

101) Turnbull op cit p 140.

102) Floud op cit pp 112, 116, 123 supra

103) J Gloag Industrial Art Explained, 1934; F MacCarthy All Things Bright and Beautiful. Design in Britain 1830 to Today, 1972 "The industrial revolution had destroyed the old craft traditions of honesty and quality; as factories replaced small individual workshops, products became shoddier and also more pretentions". p 12.

104) T Kusamitsu "British Industrialisation and Design before the Great Exhibition", in TH XII 1981 p. 77.

105) ibid p 79, 80.

106) O'Connor op cit p 56.

107) O'Brien op cit np

108) French production 1852 estimated 118 million yards, English production for the same year approxmately 560 million yards. Potter 1852 op cit p 32 and p 27.

109) Kusamitsu op cit Figs 2A, B & C.

APPENDICES

a)	Table 1	Totals of Cotton/Calico Printers in the offical Census Reports 1841-1871
b)	Table 2	Totals for main geographical/industrial divisions for calico printers
c)	Table 3	Silk printers in the Census Reports
d)	Table 4	Miscellaneous printers
e)	Table 5	Annual totals of submissions for registration of Dress Designs (by those registering at least 5 times) 1842-1870
f)	Table 6	Annual totals of s missions for registration of Furnishing Designs (excluding those with ly one entry) 1842-1870

TOTALS OF COTTON/CALICO PRINTERS IN CENSUS REPORTS ①

(Males left, females right)

	1841		1851		1861		1871	
GREAT BRITAIN	15303		26669 ②		12556		9860	
	10866	4437	13263	12098	10696	1860	8804	1056
LONDON	60	3	108	3	125	15	126	9
Kensington			3		6			
Chelsea			4		1	1		
St George Hanover Sq			1		2			
St Martins in the Fields			2		1			
St James			1		1			
Pancras			4		8			
Islington			8		2			
Hackney			6		2			
St Giles			3	1	2			
Strand			1		3			
Clerkenwell			1					
St Luke			1		2			
City			23		1			
Shoreditch			3		13			
Bethnal Green			5		9	2		
Whitechapel			3		3	4		
St George in the East			2		1	1		
Stepney			3					
Poplar			4		2			
St Saviours Southwark			1		1			
St George Southwark			6					
Newington			2		6			
Lambeth			6		2	1		
Wandsworth			10	1	16	2		
Camberwell			3		5			
Greenwich			1	1	1			
Lewisham			1		6			
Westminster					1			
Marylebone					1			
West London					1			
Mile End					1			
Hampstead					3			
East London					1			
SURREY (extra-Metropolitan)	128		193	2	112	18	23	2
Epsom			2		1			
Croydon			107		75	4		
Kingston			10	2	5			

KENT (extra-Metropolitan)	52	303	32	83	25	21	18
Dartford	260	239	18	71	16		
Gravesend		1					
Maidstone					1		
Medway		4					
SUSSEX		1		1		1	
Hastings		1					
Brighton				1			
HAMPSHIRE		4		2		1	
Portsmouth				1			
Portsea Island		1					
Alverstoke		1					
Andover				1			
BERKSHIRE			2 (3)				
Windsor			2				
MIDDLESEX(extra Metropolitan)	56	6		16		5	
Edmonton		6		4			
Brentford				1			
London	3						
Westminster	4			1			
Finsbury	15						
Holburn	4			1			
Kensington	3			5			
Tower	27						
East End	8						
Clerkenwell	3			3			
St Martins in the Fields				1			
OXFORDSHIRE	1		1				
Banbury			1				
Oxford	1						
NORTHAMPTONSHIRE				1			
Northampton				1			
CAMBRIDGESHIRE		1					
ESSEX	15	6	1	8		3	
West Ham		5	1	6			

Romford Billericay		I		I	
SUFFOLK		I	I		
Horne Plomersgate		I	I		
NORFOLK	2			I 2	2
Norwich	2			I I	
DORSET				I	
Weymouth				I	
DEVONSHIRE	I			I	I ④
SOMERSET	I	I		I	I
Bath Bedminster Cheltenham	I	I		I	
SHROPSHIRE				I	
Shifnal				I	
STAFFORDSHIRE	2I	4	I	5	2
Newcastle-under Lyne Wolstanton Leek Tamworth	I3	I I I	I	3 2	
WORCESTERSHIRE	I			I	
Dudley Upton-Upon-Severn	I			I	
WARWICKSHIRE	8	I	I	I	5
Birmingham Coventry	3 3	I	I	I	3 I
GLOUCESTERSHIRE	I	4	I0	5	390 ⑤ I
Bristol Clifton Gloucester Stroud Cirencester	I		5	I I I I	I9I I

LEICESTERSHIRE	I		2	I		3	2	
Leicester	I		2				I	
Ashby-de-la-Zouch				I		3		
LINCOLNSHIRE			I					
Horncastle			I					
NOTTINGHAMSHIRE	I		3	I	I8	3	I0	
Nottingham	I		I		3	I	I	
Basford			2		8			
Mansfield					2			
Radford					I			
Worksop						I		
DERBYSHIRE	423		752	II6	I222	278	I237	222
Belper					5			
Ashborne					2			
Chesterfield					I			
Hayfield			5I3	46	780	II3	842	I
Chapel-en-le-Frith			3	3	6	3		
Bakewell			2		I			
Derby			I					
CHESHIRE	587	I35	692	90	779	I05	682	82
Chester	I		5					I
Dukinfield	23							
Macclesfield	I		38	I0	69	II		
Stockport	78		396	3	430	45	395 74	386
Nantwich			I					
Great Boughton			6		2			
Altrincham			I6		34	2		
Northwich					I			
LANCASHIRE	7222		8634	866	80I9	982	645I	676
Blackburn			49	22	586	7	544 26	I7
Bolton			263		237	2I	7	
Lancaster					5		6	
Liverpool			4		4	2	3	
Manchester				26	788	55	463 877	35 61
Salford				48	402	34	319	I6
Oldham				8	337		I98 4	20 1
Preston				I	60		I5	
Ashton-under-Lyne				33	440	59	453	27
Chorley				43	344	25	256	40

Barton-in-Irwell				33			
Bury		865	28	732	38	459	8
Leigh		I		2			
Warrington		I	I	2			
Wigan		47		II			
Ormskirk		2		I			
West Derby		3		3			
Rochdale			I3	I57			
Haslingden			27	I003	35	935	4I
Burnley			22	288	29	28I	4
Clitheroe			3I	208	7		
Garstang				2			
Chorlton			I7	432	75	390	25
Prescot				2			
YORKSHIRE - WEST RIDING	60	76	I5	I5I	3I	94	38
Settle		I					
Saddleworth		38	I	49	2		
Bradford		I				8	
Pontefract		I					
Barnsley		I					
Sedbergh			I				
Todmorden			2	3	5		
Hunslet		I		I2			
Leeds		8		4		3	
Dewsbury		I		2			
Sheffield		2	2				
Rotherham		I					
Doncaster		I					
Skipton				I	I		
Knaresborough				I			
Keighley				I			
Huddersfield				I4		4	
Halifax	3			2I	7	5	2
Wakefield						I	
EAST RIDING	5	3	4	2			
Beverley		2					
Sculcoates		I	2				
Hull			2	I			
Kingston-upon-Hull	I						
NORTH RIDING	2	I		2			
Whitby	I						
Richmond		I					
Helmsley				I			
DURHAM	2	2		7		3	
Durham	2	I		I			

Houghton-le-Spring		I	I	I
Hartlepool			4	I
Gateshead				I
Middlesborough				I
Sunderland				
NORTHUMBERLAND	4	4	I I	I
Newcastle-upon-Tyne	2	4	I	
CUMBERLAND	164	119 2	133 5	131
Carlisle	82	78	87 2	
Longtown		I		
Whitehaven			I	
Cockermouth		I		
WESTMORELAND		5	4	I
Kendal		5	4	
WALES	2	2128 384	3	I
Monmouth		I		
Caernarvonshire	I		I	
Anglesey			2	
Flint	I			
Carmarthenshire		I		
Glamorganshire				I
ISLANDS			I	
Isle of Man			I ⑥	
SCOTLAND		8860 5602		

NOTES:

I. The figures given for individual towns are examples only and are not meant to add up to the county totals.
The figures in the Summary Tables in the Census Reports given as examples of the distribution of local occupations for I87I do not always agree with those figures given in the main tables.
In I86I these figures do coincide except that numbers of females are not given consistently for all towns.
Additional figures given in the Summaries are here incorporated and underlined.

2. The figure of I2098 (Total for Great Britain I85I) is made up of "youths and girls in large numbers" (I85I Census Vol.8, Summary). This does not concur with the breakdown of total numbers which is

Male over 20	I3263
Male under 20	6630
Female over 20	2743
Female under 20	4031

3. 2 females, I aet under I0, I aet under 85

4. Exeter

5. I98 of these under 20

6. Probably a silk printer.

TOTALS FOR MAIN GEOGRAPHICAL/INDUSTRIAL DIVISIONS FOR CALICO PRINTERS FROM TEXT OF CENSUSES.

	M	1841	F	M	1851	F	M	1861	F	M	1871	F
LONDON (Metropolitan)	60		3	108		3	125		15	126		9
	63			111			140			135		
HOME COUNTIES												
SURREY	128			193		2	112		18	23		2
KENT	52 (260)[1]			303		32	83		25	21		18
MIDDX.	56			6			16			5		
	236 (496)			536			254			69		
LONDON & HOME COUNTIES	299 (559)			647			394			204		
LANCASHIRE	7222			8634		866	8019		982	6451		676
CHESHIRE	587		135	692		90	779		105	682		82
DERBYSHIRE	423			752		116	1222		278	1237		222
	8367			11150			11385			9350		
YORKSHIRE												
WEST RIDING	60			76		15	151		31	94		38
EAST RIDING	5			3		4	2					
NORTH RIDING	2			1			2					
	67			99			186			132		
REST OF ENGLAND AND WALES	225			159 (2671)[2]		405	195		405	166		
				564			600					
TOTALS	8958 (9218)			12460 (14971)			12565			9852		
TOTALS IN CENSUSES FOR COMPARISON	10866		4437	13263		12098	10696		1860	8804		1056
	15303			26659			12556			9860		

Notes: 1. Totals in brackets include figure of 260
2. Totals in brackets include figure of 2512 printers in Wales.

SILK PRINTERS IN CENSUSES

(from I85I subsumed in general heading "Silk Dyers/Printers")

	I84I	I85I		I86I		I87I	
		M	F	M	F	M	F
		I834	94	2618	24	I624	2
TOTALS	I77	I928		2642		I626	

Further details

I84I Total includes Kent 56
Lancaster 37
Middlesex I8 (London I, Finsbury I,
Holborn 2, Kensington 3, Tower II)
Sussex I (Brighton)
London Metropolitan 20

I85I Breakdown of total

Male	(under 20)	337	(over 20) I497
Female	(under 20	I2	(over 20) 82

I86I Total includes

Bethnal Green	I08
West Ham	II8
Sudbury	I32
Coventry	278
Macclesfield	443
London	325

I87I Total includes

Leek	I25
Coventry	I94
Macclesfield	218
London	228

MISCELLANEOUS PRINTERS IN CENSUSES

	1831	1841	1851	1861
Wool	1 ①	940 ②	68	149
Lithography		4		
Waistcoats		23		
Tapes		1	After 1841 subsumed im 'Cotton/Calico Printing'	
Stuff		31		
Linen		3		
Copper Plt.	2302	494		

Notes:
1. London only
2. Probably includes dyers

ANNUAL TOTAL OF SUBMISSIONS FOR REGISTRATION OF DRESS FABRIC DESIGNS FOR COPYRIGHT PROTECTION (CLASS 10) BY THOSE REGISTERING AT LEAST FIVE TIMES. 1842-1870. *

* EXCLUDING IRISH & SCOTTISH FIRMS

NAMES IN REGISTERS & ADDRESSES GIVEN	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	TOTALS	
Acton Jnr., William Hulme PW M/c		9	10																											19	
Aitkin Bros., Low Mill PW nr. Chorley						3	7		9			2	5			1	2	9	52	71	75	119	123	96	289	177	171	186	212	1609	
Amos & Kelham		4	1	4	3	5																								17	
Andrews, George 42 Church St. M/c			18	1					2				4			14			3	29	24	65	12		20	14	62	2		270	
Appleby, John M/c																											12	122	16	150	
Ashton & Co., Frances William M/c																					11	233	329	489	454	623	604	580	518	3891	
Baker & Co., John 21 Lawrence Lane	63	304	308	312	399					405	454	352	448	305	475	612	294	155	393	332	299	253	189	68	121	85	40	40	58	6764	FROM 1846 AS BAKER TUCKER & CO., 30 GRESHAM ST., LONDON
Barlow Bros., Ancoats Vale Works	10	10																												20	
Barrat & Rickards, 20 George St. M/c		17	28	4																										49	
Barrat & Wilson, M/c						11	6		2		1				5				1											26	
Baxter, James, William & Frederick, 44 Church St., M/c							1	3	1	3														2						10	
Bayley & Craven		14	17					55	107	49	151	87	65	84	44	66			207	258	221	241	136			53				1855	AS WILLIAM BAYLEY UP TO 1844
Bedford, Henry, 9 Marble St. M/c																						8	32		7					47	
Bellfield Printing Co., Bellfield PW nr. Rochdale & 39 George St. M/c																			48	102	3				36	19	14	107	303	632	JAMES S. MELDRUM & ALBERT WYDLER
Benecke & Co., William		97	175	50	101	84	2	209	307	270	278	231	177	267	241	279	185	42	11											3036	
Bennett, John M/c																				29	10	15	72	73	84	67	57	86	63	556	
Bennett, Joseph, 7 Charlotte St., M/c & Garrison, Birch Vale, Derbys.			4							1				2					17	1										25	AFTER MAY 1860 JOHN ADAMSON & SAMUEL SIMONS, TRUSTEES FOR THE LATE JOSEPH BENNETT, 112 MOSELY ST., M/c
Besemeres, John & William, 120 Wood St. Cheapside						2	6		12	5																				25	
Bindloss & Fildes, 2 Bridgewater Place M/c		7	34	34	8																									83	
Blew, Jesse 48 High St. M/c		12	24																											36	
Boyd & Hamel, Thos. & Leopold M/c																		195	209	283	254	232	4							1177	AND GLASGOW
Bradshaw Hammond									3				10	6	1		1	18												39	
Bradshaw, Rhodes & Co., 21 Mosley St. M/c		18	25	41	35	35	52																							206	
Brier, John																	4						12		1		5			22	
Brocklehurst & Sons, J.T., 31 Milk St. Cheapside																								4	73	181			15	273	
Brown & Son Co., James M/c																1	6	4	3											14	
Buchan & Son, R, Furness PW, Stockport											35																			35	
Buchan Welch			5	1	1				14	6	23	6							10											70	AFTER AUG. 1844 "& PYNE"
Buckley, Edward & Joseph, M/c																								3	4	2	8	3		20	
Burd & Sons, Mount Zion PW, Radcliffe	68	108	275	25	1	7	3	492	467	532	644	176	15	9	4	4					3	2								3035	
Burford & Sons, John M/c										2							47	70	89											208	
Butterworth & Brooks								46	99	94	6	5	434	301	562		584	1036	1024	831	325	605	376	295	151		51			6825	
Callender & Bickham, 17a Mosley St. M/c	41	179	81	5																										306	SEE HARDCASTLE
Carlton, Walker & Lewis M/c		27		69	2																									98	JAMES CARLTON
Clarkson, Thos. 17 Coventry St. Haymarket																					2	3	4		1	10	11	1		32	
Clegg's Court Printing Co. Clegg's Court, Chapel St., Salford										2				9	11	15	10	10	23	21	29	7		19						156	J. WOODCROFT UNTIL AUG. 1855 B. WOODCROFT HERE & AT MIDDLETON, PRINTING YARNS IN 1840s
Coates & Mcnaughton, Spring Gdns, M/c	65	136	157	67																										425	
Cowsill, Peter 36 Mosley St., M/c		85	35																											120	
Crocker, Jonathan & Albert, 84 Watling St., EC																						13	5				29	12		59	FROM MARCH 1868, CROCKER SONS & TURNER, CREAPSIDE.
Deeply Vale			87			127																								214	
Dendy & Beard 36 York St. M/c																											27		4	31	
Dewhurst & Walker										21		4																		25	

NAMES IN REGISTERS & ADDRESSES GIVEN	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	TOTALS	
Dollfus, Mieg & Co., Mulhouse							15													543	664	398	700	811	698	696	536	607	300	5968	
Entwisle & Co., Thomas M/c																											28	10		38	
Evans, D		36	3							4		55	43		51	44		5	1		39	10	2	25		94	116		1	529	
Faulknen & Co., George, Parker St. M/c		48	21	1				3	2																					75	
Fielden, Thos., Bowker Bank, Crumpsall		20	12																											32	SEE WHYATT
Firth & Sons, Edwin, Heckmondwike, Leeds																			5	8	1	7	6				16	20	49	112	
Fletcher Grave, M/c																												9	7	16	
Fort Bros. &Co.	16	138	123	88	4	105	29																							503	
Gemmell & Harter M/c																												374		374	
Graham & Co., William M/c																											45	148	10	203	
Grave & Co. M/c																			90		62	67	52				3			274	MORRIS & GRAVE FROM JUNE 1862
Greenhalgh Bros.																							3	11						14	
Grimshaw, Gibson & Co., George St. M/c & Plantation Mills, Accrington																			4				6		5		12	19	16	62	
Gros Odier Roman & Co., Wesserling, Haut Rhin, France																				45	9			101	268	370	267	319		1379	GROS ROMAN & MARZEAU AFTER NOV. 1865
Grundy, J & E M/c								1			2	12	2	1	4	2	1	6	5		5	21	27	4						93	
Hardcastle & Co., Bradshaw Works, nr. Bolton-le-Moors																			3	9	6	14	31	54	106	25	76	34	71	449	CHANGED TO CALLENDER BICKHAM IN 1838
Hardman Price & Sons, Bury	5	42	105	46	80	85	110	55	12	12		3		22	236	149	9													971	
Hargreaves Bros.& Co., Broad Oak, Accrington, nr. Burnley			74	113	87	245	300	383	610	558	450	239	340																	3499	
Hayfield Printing Co., 14 Charlotte St.																								263	313	355	522	484	567	2504	
Henry A.S. Huddersfield		12	2	8		6	6	10																			3			47	M/c IN APRIL 1843
Hine & Co., R.E. M/c																					3	9	15	40	8					75	
Hopefield Dyeing & Printing Co. Broughton																	35	9												44	
Horrocks Dye Works, Hargreaves St., M/c			1						9				3		2	10	7	14	7		2									55	FROM MAY 1844 JOSEPH HORROCKS & CO., FROM FEB. 1858 HORROCKS CLEMSON & CO.
Horwick Vale			101										21	4				4	28	27										185	
Hoyle, Thomas, Mayfield	36	1415	368	833	1401	1059	1094	1462	870	116		58	6	128	65	160	491	502	603	542	507	405	558	793	850	762	767	263	388	16,984	WM. HOYLE, JOSEPH COMPTON, ALFRED BROWN, RICHARD SHILLINGFORD (AFTER JULY 1858 & JOHN BUTTERWORTH
Hudson & Co., James, Gale & M/c	7	101																												108	
Hutchinson & Co, Thomas Potter, 13 Back Mosley St. & Radcliffe	9	132	14						10							18														183	
Ionides A.C.					10	4																								14	
Jackson & Co., Jonathan M/c	10	9		1					1																					21	FROM MARCH 1843, JACKSON, WATSON & GREIG, 2 FAULKNER ST., M/c
Johnston Bros.& Townsend M/c														12	44															56	
Kay, Robert 5 Clarence St. M/c								14	8		2								46	61	25					3				159	
Kennedy & Co., J.L.											78	82			85	9			88										82	424	JOHN GRAHAM (LATE OF THOS. HOYLE & SONS) UP TO 1856
Kershaw, Keese & Sidebottom, Ardwick PW	124	297	303	236	159	188	210	262	314	229	119	47		1										17						2503	KERSHAW, SIDEBOTTOM & BERRY, PORTLAND ST., M/c
Know Mill Printing Co., George St., M/c																			35	13		16								64	NOV. 1865. LEESE, KERSHAW UP TO MARCH 1866
Koechlin (Frères)																									195	248	204	235	174	1056	
Lancaster, John, Spring Fields Ln., Salford				1						2							5		4	7				1						20	"DYER & PRINTER"
Lee & Co., Daniel												7	4	5	118	33		3	27	11	10	1	3				1			223	
Leves & Wagland, Garrett PW, nr. Tooting																					27	8	3							38	
Littler, Mary Ann, Merton Abbey, Surrey		14	17	3		2													24			8								68	'MESSRS. LITTLER' FEB '47.
Losh & Co., John, Baxenden PW											7	1	2				5	6	4											25	
Makepiece, Samuel, Mitcham, Surrey	31	21	4																											56	
Marsland & Hole M/c			3				7	8				5		42							13							1		79	
Matley & Son, Samuel 47 George St. M/c			11	1	1															23	6	23	23	13	26	70	40	1		238	
Mercer Bros.& Co.																					101	131								232	
Moses, H.E. & Maurice, 87 Tower Hill, London, and M/c												4										2	10	2						18	
McAlpin, Stead & Co., Cummersdale, Carlisle		11	5	1				1			1	14	6	6	4	6		9	5	9	1						11	54	40	184	

NAMES IN REGISTERS & ADDRESSES GIVEN	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	TOTALS	
McNaughton, Barton & Thom, Birkacre PW, nr.Chorley												1	14	161	117	115	104	165	387	135	196	164	113	185	131	155	117	243	440	2997	
McNaughton Potter, M/c				10			99	2	18	1																				140	BARTON DROPPED AUG/SEPT 1898
Nelson & Knowles, Tottington Mills, nr. Bury and York St. M/c	29	33	133	33	102	222	226	125	298	125	16	3				4	36	6	153	160	178	381	301	335	324	393	223	168	91	4098	SAMUEL KNOWLES & CO. APR MARCH 1852
Nevill, Charles, Harpurley & M/c	6	60	3					1																						70	
Newton Bank Printing Co.						1		3				3				69	66	250	344	214	169									1119	AS THOMAS ANTROBUS MARCH 1847 BUT FRANCES WM. TINKLER
Olivo & Spartati M/c																					15	2							1	18	JOHN WRIGHT & RICHARD UNSWORTH TRADING AS NEWTON
D'Orival & Lugenbühl, 20 St.Paul's Churchyard																									241	351	165	355		1112	BANK PRINTING CO. 51 MOSELEY ST M/c - ENTRY FOR MAR. 1859.
Ormerod, Wall & Co.													63	172	147	101	74	193	197	143	76	304	332	170	36	46	98	129	138	2419	
Peel, Robert & Thomas, Church Bank			20	51	51																									122	
Peel, Holmes & Co.		5	29	44	34	12																								124	
Potter, Edmund				42			15	13									89	156	300	64	78	3	2	21	5		38	9	67	902	
Radcliffe Printing Co. M/c																							251	90				23	11	375	
Ramsey & Co, Charles, Ancoats Vale, M/c		3	4				1		5					4	1	16	15	4	1	1										55	
Reddish Bickham		49	100	80					4																					233	
Rippon & Burton M/c																						238	91							329	
Sale, John Nicholas, George St. M/c							5							37	29	18	38													127	
Salmon, Thomas			9	22																										31	
Schwabe & Co., S	40	41		27					113										14											235	SCHWABE, CHAMBERLIN & CO. AYTOUN ST. M/C FROM OCT 60
Seedley PW				100	184	146	29	15	63		46	28	32		89	96	11	207	186	59	12	62	12	45	184	29	14	159	312	2121	RHODES PW LET TO SCHWABE BY DANIEL BURTON & SONS.
Shrigley & Cocksedge, 30a St.Paul's Churchyard																						3		141	270	200	105			719	FROM JULY '46 AS SEEDLEY PRINTING CO.
Simpson & Rostron	87	81	243	12				86	344	266	399	157	9			1	24	43	850	406	322	452	364	172	104	21		92	285	4820	IN FEB. 1845 AS SIMPSON, LANGDON & YOUNG, 13a MOSELEY ST.; THEN SIMPSON & YOUNG UNTIL 1858; THEN
Smith, Richard & Milton, Baxenden & 23 Faulkner St., M/c	51	133	90	33	4	20																								331	
Soper & Botcherby, Wood St. Cheapside																												4	5	9	NATHAN LLOYD & ASSOCIATES, N. LLOYD & T.B. WILSON, APRIL
Souvazoglu & Co., T. M/c																			6	11	1									18	1862. FROM MAY '62 REG'D AS
Steinbach, Koechlin & Co., Mulhouse																			420	566	443	398	381	381	403	398	370	306	453	4519	FOXHILL BANK.
Steiner, F., Church nr.Accrington																											6	22	16	44	
Strines PW			13				14	48	161	83	3	44	23	18	96	48	61	22	255	322	298	250	388	164	326	192	146	312	321	3608	
Sudren, Thomas Rothwell, Bolholt nr.Bury												2									8	4	7		1					22	
Swaisland, Charles, Crayford, Kent	150	363	373	209	123	247	96	184	122	91	53	75	66	147	128	117	137	178	141	86	103	224	276	347	340	296	372	391	263	5748	WITH CHARLES LEONARD STABLE JULY 1862. AFTER MARCH 1865 FREDK. STONEHAM, EXECUTER OF LATE CHARLES SWAISLAND
Syddall Bros.																			42	31	28									101	
Thomson Bros. Primrose, Clitheroe	101	738	967	612	288	429	456	476	449	354	21	31																		4922	
Tucker Kayess																					10	3								13	
Turner, Norris, Turner															64	89	65	320	251	115	313	282	231	241	275	303	363	377	419	3708	
Varty, John, 12 Friday St., London		7	2																											9	IN NOV. 1863 WITH JOHN HORSAN FROM PAISLEY.
Verkrüzen & Co., 96 Hatton Gdn. London																		75	117	148	26		8							374	
Walford Jnr., Richard, Milk St. Cheapside		7	4		4	8			3	11									4											41	FROM JUNE 1860 WALFORD, PRIMER & HARRISON, CITY
Wardley, John, Spring Vale, Over Darwen				36	6	2															10									54	AFTER MAY 1862 THOS. WARDLEY & BROS., M/C.
Waterson, John			7	21	24				5																					57	
Watson, Charles								33	21	7	6																			67	
Watson, Grave & Co., 18a George St., M/c		29	3		4																									36	
Welch, John														19	10				47	13										89	
Welch, Thomas, Merton, Surrey																			12	20	10	10	11	27	10	8	3	4	6	121	AS WELCH BROS. FROM MAY 1869
Welch & Margetson					32	2		1		2		1	4	2			17		3									1		65	
Wilson, John J & William, Kendal																				11	6	4								21	
Wilson K																						15	3		14					32	
Wilson, William & Nelson, 40 Kennedy St M/c																						90	17							107	
Wiseman, Dunlop & Co., 19 Cooper St., M/c																												29	2	31	

NAMES IN REGISTERS & ADDRESSES GIVEN	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	TOTALS	
Wood, Christopher, Church Bank									2							26	9	31		10						10	13	41		142	J.S. CRAPTON & CO. TRUSTEES FOR WOOD & WRIGHT FROM OCT. 1845
Wood & Wright				1		2	2	1		1			11	3	13		15	65	122	149	26	4	12	10		8	23	225	225	918	
Woodcroft & Co., John, Salford		18				7																								25	
Woodhouse & Co., John, 39 York St. M/c	35	64	89	45																6										239	
Wright & Lee									19	9																				28	
Watson & Stark, Rosebank & M/c																}	5	38	99		51	135	316	41		44	39	8	16	842	
Wilkinson, Stephenson & Co., M/c																															
TOTAL																														121,281	
TOTALS PER ANNUM OF THOSE REGISTERING FEWER THAN 5 TIMES BUT MORE THAN ONCE	5	303	122	18	32	126	17	62	98	12	63	9	7	7	8	49	47	30	195	27	23	15	20	15	93	117	100	218	91	1947	
TOTALS PER ANNUM OF THOSE REGISTERING ONCE ONLY	9	143	51	9	24	25	62	56	61	22	10	4	23	9	40	13	11	22	80	33	7	20	36	94	27	74	21	25	53	1064	
OVERALL TOTALS PER ANNUM OF DRESS FABRIC DESIGNS REGISTERED	995	5900	4713	3350	3204	3317	2970	4090	4845	3299	2872	1748	1837	1793	2704	2185	2510	3902	7297	6005	5150	5980	5955	5663	6494	6499	5954	6857	6214	124,292	

ANNUAL TOTAL OF SUBMISSIONS FOR REGISTRATION OF FURNISHING FABRIC DESIGNS FOR COPYRIGHT PROTECTION (CLASS II) EXCLUDING THOSE WITH ONLY ONE ENTRY. 1842-1870 *

* EXCLUDING IRISH & SCOTTISH FIRMS.

NAMES IN REGISTERS & ADDRESSES GIVEN	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	TOTALS	
Aitken Bros.,Low Mill PW, nr. Chorley & 34 Faulkner St., M/c								4				1					3	1						1				3		13	
Akroyd & Son, James, Halifax													6																	6	
Alexander & Co., Robert M/c												4		3																7	
Allen & Brother, John, Mosely St. M/c									3																					3	
Andrew, George																			1		2	1				6	6			20	
Ashton M. 49 Berners St., London														1												2				3	
Bellfield																				2					11	4	4	4	2	27	
Benecke & Co., William, Belfield & M/c	2	12	25	12	4	27	23	5	39	26	36	17	8	6	1	4	10		3						1	4	4	3	4	16	
Bennett, John																			3					1						4	
Bennett, Joseph, 7 Charlotte St., M/c								1											1											2	BOOTH & FOX FROM SEPT. 1865
Booth, John Peter, II Lavitt's Quay, Cork & 80 Hatton Gardens													8	2	5								3					3		10	
Brewer & Co., Henry M/c																1														3	
Brier, John M/c												1	2																	3	
Buchan & Son, Robert, Furness PW									10	2	7										4	1								19	
Buchan & Welch, 58 George St., M/c		6	16	24	5	16	1	1	5	29	11	17	14	14	1	3														168	
Burd & Sons, John, I7 Mosely St., M/c & Mount Zion, Radcliffe																															
Carati & Co.,Antonio, Southgate St.M/c		2	1																											3	
Clarkson & Co., I7 Coventry St.Haymarket											1						9	14	23	14	17	13	16	19	13	17	31	21	22	230	PRINTED BY SWANSON q.v.
Crace & Son, Frederick, I4 Wigmore St., Cavendish Sq. London								1	1																					2	
Crocker, Jonathan & Albert, Watling St.																						6	8		4		5	5		30	51 FRIDAY ST., AS CROCKER & SONS & TURNER FROM SEPT. 66
Dewar Son & Co., David, 5,6 & 7 King's Arms Buildings, Wood St., London					2	1	1																							4	
Dewhurst,G & R																										8				8	
Dewhurst, Walker & Co										3		4	2																	9	
French, Gilbert J., Bolton-le-Moors,Lancs	3																													3	CLOTHS FOR COMMUNION TABLES
Grant & Bros., William, I5 Cannon St.M/c									1	1																				2	
Hardman, Price & Sons, Bury & M/c					1		3		3	7	3																			17	
Hindley & Sons, Charles, I34 Oxford St.									17	15	12	1	4	6	3															58	
Holdsworth & Co., John, Halifax					5	2	1																							8	
Horwich Vale Printing Co.																			16	5										21	
Huguenin-Schwarz & Couilleau, 29 rue de Seutier, Paris																				1	48	17								66	
Kay, Robert M/c														1	2															3	
Kershaw, Leese & Sidebottom, Ardwick PW			3	25	14	21	16	5	57	10		6																		157	
Knowles & Co., Samuel, Tottington Mill																1	1		4		1		3		5	1		4	25	45	
Lee & Co., Daniel												13	17	7	19	21	29	26	14	30	33	16	20	21	19	23	16	23	60	407	
Littlewood & Wilson, Foxhill Bank, nr. Accrington																	15	23	28	18	7									91	SEE WILSON & LLOYD
Losh, J. Baxenden											21	75	34	33	12	24	26	32	41	34	5									375	FROM APRIL 1861 AS WATSON, LOSH. SEE R.H.M. SMITH
Lowe & Co, John, M/c	10	31	11	2																										54	SHEPLEY MILL, CLOSED 1866/68
Marsland & Hole						2				3	3	13							3	7	4									35	
Matley																			4							1	1	1		7	
McAlpin & Co.,Thomas, Cummersdale,Carlisle	3		2			3	1	4	2	11		33	39	17	21	15	35	21	24	21	5		3		1	2	18	22	18	321	
McNaughton, Barton & Thom												3		4			1							2						10	

NAMES IN REGISTERS & ADDRESSES GIVEN	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	TOTALS	
Millington, George, 9 Faulkner St.,M/c	4	1																												5	
Nelson & Knowles										2																				2	
Nevill, Charles, 30 Church St., M/c									3	6																				9	
Pickford & Co, Thomas E.,50 Mosely St.												3	3																	6	
Schilizzi & Co. & Vernudacchi C., 3 Circus Place, London Wall & 19 Kennedy St., M/c			2																											2	
Seedley															2			5	2							1				10	
Smith, Richard & Milton, 23 Faulkner St. M/c & Baxenden		1	2			6																								9	SEE LOSH
Steinbach Koechlin & Co., Mulhouse																				6	6	15		19	43	51	67	44	64	315	
Steiner, Frederick																											1		8	9	
Stocker & Co., E.M. 20 Deansgate, M/c																													4	4	
Strines Printing Co., M/c		1				3			11	3	1	2		3	1	4	9	2	2				1		18		1	12	9	83	
Swainson & Dennys, 87 Watling St.			1			32	32	15	2	6	2	13	6	5																114	DEC. 1849 AT 97 NEW BOND ST., SEE ALSO CLARKS
Swaisland, Charles, Crayford, Kent					1																	2	5			11	18		6	43	KNOWN AS SWAISLAND & STABLES FROM DEC. 1863
Syddall Bros.																				6	2									8	
Taylor, William Fowler, II Chapman St., Liverpool Rd., London		4	1	1	2																									8	FROM FEB 1846 AT 11 TRINITY ST., ISLINGTON.
Watson & Co., John, 56 Holburn Hill					9	2			2	2																				15	
Welch, Thomas, Merton											1										7	4		2	4	4	7	11	8	48	FROM AUG. 1869 AS WELCH BROTHERS
Wilson, T.B. & Lloyd N., Foxhill Bank, nr. Accrington																					4	9	8	13	8	9	2	7	12	72	
Wiseman & Co., W., M/c																										2	3	11		16	FROM MAY 1869 AS WISEMAN DUNLOP & CO.
Wood, John & Henry, Red Lion Court, Watling St., City	2	2	4	8	5	5	3	9	2	1	2	1																		44	
Wood & Wright									11	1	1	6	1	6	2	5	2		3		4		7	5	5	4		9	8	80	SEE WOOD J.H.
Woodhouse & Co., J.												10	3	4																17	
Wright & Lee, York St., M/c									3	16	17	8																		44	
Yates & Taylor, Gutter Lane, Cheapside										10																				10	
TOTALS PER ANNUM	20	66	66	74	50	82	86	59	187	141	133	220	154	113	74	78	140	124	172	144	149	84	74	83	132	150	187	180	253	3475	
TOTALS PER ANNUM OF THOSE REGISTERING ONCE ONLY		29			11	2	3	1	7	8		6	5	7	2	3	1		3		29	2		2	10			3	6	140	
OVERALL TOTALS PER ANNUM OF FURNISHING FABRIC DESIGNS REGISTERED	20	95	66	74	61	84	89	60	194	149	133	226	159	120	76	81	141	124	175	144	178	86	74	85	142	150	187	183	259	3615	

BIBLIOGRAPHY

ABBREVIATIONS

Arch Rev	Architectural Review
Bull Soc Ind Mulhouse	Bulletin de la Societe Industrielle Mulhouse
EHR	Economic History Review
J.Econ H	Journal of Economic History
Econ J	Economic Journal
J.Eur Econ H	Journal of European Economic History
LCAS	Lancashire & Cheshire Antiquarian Society
LRO	Lancashire Record Office, Preston
MCRL	Manchester Central Reference Library
MLPS	Manchester Literary & Philosophical Society
New Soc	Newcomen Society
JSA	Journal of Society of Arts
JSDC	Journal of Society of Dyers & Colourists
TH	Textile History
JTI	Journal of the Textile Institute
V&A	Victoria & Albert Museum

Published in London unless stated otherwise.

PREFACE TO BIBLIOGRAPHY

When the programme of research for this thesis commenced in 1979 it is safe to say that there was little significant published material relating to the very large industry of mass-produced printed textiles in the mid-19th century. Since that time some of the areas of concern originally adumbrated have been dealt with by other researchers and the most important of these are outlined below.

The main exceptions to this dearth were Turnbull's thorough but disorganised 1951 study of the industry; and Montgomery's excellent book of 1970 which, despite its American emphasis, contains a great deal of value to the student of English printing.

One reason possibly for this apparent lack of interest in what was clearly an important field lies in the absence of records. Even the Jury to the Great Exhibition of 1851 felt called upon to remark on this, and Edmund Potter in 1852 lamented that many of his friends and acquaintances "...who have been its (the industry's) chiefest ornaments..." left few records of their experiences.(1) Recent research has begun to piece together what remains but the ravages of time and careless management have ensured the loss and dissipation of much valuable material.

The reports of the Factory Inspectorate (which formed the basis of H B Rodger's analysis of the cotton industry in the 1840s) did not extend to the finishing trades. Horner's Census of Lancashire Textile Firms of 1841 giving data on 975 firms excluded bleaching, dyeing and printing firms because, and it is a curious anomaly, the printing industry was for a large part of its history free from the same legal restraints as other textile trades, because it had not been in existence when the Statute of Apprentices was passed.(2)

To make matters more difficult many of the available assessments only concern themselves with the Lancashire area. Even here, as Hamilton writes,

> There is, unfortunately, insufficient information available to permit a detailed analysis of the organisation of (the) industry. Official statistics collected at the beginning of the nineteenth century were both unreliable and incomplete with a bias towards large enterprises.(3)

Potter's own experience of trying to measure the industry from within confirms this.

> The present annual production of printed cloth of all kinds ... may be estimated at about 20 million pieces. I arrive at this estimate with considerable difficulty, owing to the absence of any very authentic statistics ... I made considerable enquiry into its (the industry's) statistics; we had correct lists of all the printers of Great Britain and Ireland, we obtained returns from a large proportion of them, we knew the producing power of the remainder, and were thus able to make a fairly accurate calculation of the entire production at that time ... I regret that since that period, no means that I am aware of exist, of coming to an accurate conclusion.(4)

Statistical evidence is still hard to find though economic and business historians have begun to fill the gaps using the records of banks and insurance companies.

The foundations of modern printed textiles studies were laid by the late Peter Floud and Barbara Morris at the Victoria & Albert Museum, in a long series of articles published between 1956 and 1961 in various journals, and in various exhibition catalogues. However, despite the enormous value of their pioneering work there are two points to make here. First, they operated on a basis of connoisseurship and tended to be dismissive of much mass-produced printing in a way that has perhaps inhibited later researchers. Secondly, they did not proceed much beyond the first quarter of the 19th century.

This is not to say that there is not a good deal of published material relevant to this subject but much of it is submerged in the numerous books and articles on cotton manufacturing and allied subjects, where details regarding the finishing trades can sometimes be found.

Many of the standard contemporary texts such as Ure, Tomlinson and Encyclopaedia Brittanica give basic histories and technical descriptions though they nearly always refer back to certain common authorities, notably

Edmund Potter and James Thomson. Even Baines, on whom most subsequent writers depend, in his turn obtained much information from these two.

The history of design in the industry has been largely ignored except by Floud and Morris. More recently Dr Clark has examined the role of the designer in 19th century printing.

The many technical books on printing and allied processes, culminating in Knecht and Fothergill's massive tome, often contain useful historical material though, again, it is usually derivative.

In addition there exists a great deal of unpublished material. For the purposes of this thesis the most important has been the Graham manuscript. This is an important source and its value was acknowledged from the first as is clear in the ambitious project, of which it was intended to be a founding part, for the establishment of a Museum of Calico Printing.

Burch mentions the manuscript in his paper of 1856 and James Melville of Roebank Printworks referred to the fact that "the Philosophical Society of Manchester will produce a complete history of Calico-printing" the work to be undertaken by "Dr Smith, Messrs Bennet Woodcroft,

E Schunk, John Graham and Joseph Lockett."(5)

The manuscript dates from 1847 (based on internal evidence) and Graham seems to have collected his material over the previous two years. He was a partner at Mayfield Printworks from 1839. Another of the partners there, Alfred Binyon, also helped him.

Though many commentators have referred to and drawn on Graham the difficulties of the manuscript have limited its application. It is written out in a "clerkly" hand which is at times extremely difficult to read. The copyist, trancribing Graham's rough notes, has included, and perhaps enhanced, spelling, grammatical and punctuation mistakes. Notable among those who have used Graham most extensively are Ure, Hinchley, and Wallwork, (who relies heavily on Graham for his geographical analysis). In this context, and perhaps to offset absence of official statistics, Wallwork takes Graham's lists, in conjunction with J L Kennedy's report on print works as "a remarkably complete early industrial census." Graham's first-hand knowledge of the industry cannot be doubted but he often depended on hearsay and must be used with care. Mrs Eastwood corrects many of his errors in her own unpublished work.

However, as part of the preparation for this thesis a full typed transcription has been prepared of the section on the History of Printworks, (some 123 pages), and it is thought that this is the first time this has been done.

More recently there has been a considerable increase of interest in and research into the textile printing industry. Dr Chapman has published a great deal of valuable material particularly in his recent study of the 18th century industry which summarises its history in both the London and Manchester regions. Other recent research in this field includes Zoe Munby's work on the pattern books of Lancashire firms; the exhibition and useful catalogue produced by Deryn O'Connor at West Surrey College of Art, (to which the present author made some slight contribution); and the fine catalogue for the exhibition From East to West. Textiles from G P & J Baker produced at the V&A in 1984.

Two interim essays have been published based on work in progress for this thesis. The first was a tentative and perhaps premature exploration of the technical background, with some polemical content.(6) This has only been used here to a very limited extent. The second more substantial and more recent essay provided the basis for the major part of this thesis though some of the

incorporated material has been modified as a result of subsequent research.(7)

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PATTERN BOOKS & OTHER SOURCES OF EXTANT SAMPLES OF NINETEENTH CENTURY PRINTED TEXTILES EXAMINED IN PREPARATION FOR THIS STUDY

BOLTON MUSEUM

Peel Pattern Book - A pattern book of the calico-print trade containing 36 leaves of notes, pattern samples and loosely inserted leaves. Belonged to Robert Peel, father of Sir Robert Peel, from printworks of Church and Bury. Circa 1807-1821 ACC.NO. D.I.1971

Sample book of printed and woven designs from James Hardcastle & Co, Bradshaw Works 1841-46 ACC.NO. D.3.1969

Sample book of printed designs from James Hardcastle & Co, Bradshaw Works 1836-44 ACC.NO. D2 1969

Nine coloured patterns on paper of various sizes illustrating basic patterns used in dyeing and printing cotton nd ACC.NO. A3 1967

Book recording prices and samples referring to dyeing and printing cotton. Samples of printed and dyed cloth stuck in, 1824-27 ACC.NO. A1 1967

Book recording instructions and reports on various dyeing processes for cotton. Samples of printed and dyed textiles stuck in. Inscribed "John Mellor Jnr 1809"
1809 ACC.NO. A2 1967

LONDON - PUBLIC RECORD OFFICE (see p of thesis text)

BT 43 (Representations) 1830-1870

Class 6 105

Class 7 170, 174

Class 9 187

Class 10 (35 separate vols)

Class 11 (10 separate vols)

LONDON - VICTORIA & ALBERT MUSEUM

43 chintz patterns, English 19th century, Miles & Edwards T 216-1925

45 chintz patterns, ditto T 217-1925

40 chintz patterns, ditto T 218-1925

40 chintz patterns, ditto T 219-1925

Various printed fabrics, English mid-19th century T 114-1933

45 printed cottons in scrap book, English 1850's-60's T 23-1947

Dye recipes with printed samples, English 1835 T 6-1978

Book of dye recipes, English 1860's, George Howarth, Ramsbottom T 7-1978

Dye recipies, Foxhill Bank c.1830's-40's T 8-1978

MANCHESTER - CENTRAL REFERENCE LIBRARY, ARCHIVE DEPT.

Bound volume of print samples, Thomson Chippendall & Co. In part a short ledger of Primrose Printworks Accounts. MS BRF 667 2 T4, 1853.

Part of a catalogue of patterns from Locket, Crosland & Co, Strangeways, nd Misc/466

John Bury, book of samples, early 19th century MC L4/3/1

Another, 1811 MC L4/2/4/1

Recipes, patterns and orders, Syddall Bros, Chadkirk Printworks, 1851-72

Scrapbook including recipes and paper patterns for printing in Madder style, late 19th century, MF 2834

Wages book from Bowker Bank Printworks with samples stuck in M75.102

A large collection of records deposited by the CPA in 1968. Mainly recipe books, notes and samples of the Lightfoot family and John Mercer, Broad Oak, Accrington. M 75 1-101

MANCHESTER - MUSEUM OF ENGLISH COSTUME, PLATT HALL

Pattern book from Rossendale 1808/9 ex-CPA

Pattern book from Rossendale nd ex-CPA

Pattern book from Thornliebank nd ex-CPA

Anonymous print book ex-CPA. Samples stuck over old ms (dated 1798) which pertains in part to Ireland. Includes lists "From our Printworks at Balls Bridge"

Pattern book 1827 ex-CPA

Pattern book nd ex-CPA

MANCHESTER - NORTHWEST MUSEUM OF SCIENCE AND INDUSTRY

Pattern book from Thornliebank 1814 ex-CPA 1968.1.2

Pattern book from Thornliebank 1830-40 ex-CPA

1969.1.3

Pattern book from Rossendale 1810 ex-CPA 1968.1.4

PRESTON - LANCASHIRE RECORD OFFICE

Bryce Smith documents and business records including pattern books, DDX2

Calico printer's pattern book of Alexander Hargreaves c.1830-40 DDX 389/1

Another inscribed "Alexander Hargreaves Adlington" 1835 DDX 389/2

MATLOCK - DERBYSHIRE RECORD OFFICE

Book of Samples nd

Another nd

PUBLISHED SOURCES

In addition to the above, a number of published books contain actual samples. These include:

The Journal of Design and Manufacture, 1849-51

G H Hurst Silk Dyeing, Printing and Finishing, 1892

J F Persoz Traite Theorique et Pratique de L'Impression des Tissus Paris 1846, 4 vols in 2 plus 1 vol plates.

Textile History, 14 (2), 165–194, 1983

Patterns, Piracy and Protection in the Textile Printing Industry 1787–1850

DAVID GREYSMITH

I. INTRODUCTION

In the catalogue which the later Peter Floud produced (with Barbara Morris) for the exhibition *English Chintz: Two Centuries of Changing Taste* held at the Cotton Board Colour, Design & Style Centre in Manchester in 1955, and repeated when it was put on at the Victoria & Albert Museum in 1960, he described English printed textiles as a subject which had received very little systematic attention up to that time.[1] He pointed out that there had been many exhibitions and books devoted to their French counterparts — and he might have added, a great deal of study given to other areas of the textile industry. Thanks to his thorough researches this lacuna was substantially filled and some major adjustments made to our thinking on the subject. Nevertheless, from that time over 20 years ago until very recently little new work has been done in this field, excepting Montgomery's excellent book of 1970, and Chapman and Chassagne's new work on Peel and Oberkampf.[2]

In citing his sources of information Floud was able to describe the extraordinary treasure house of records and pattern books which he had examined as 'hitherto unused' and in his list include the following:

6. The Patent Office Design Register (1842–1910). This unique record containing no less than 23000 documented cloth samples registered for copyright of design week by week from 1842–1910 is not normally open to inspection. It has, as an exception, been made available to the Victoria & Albert Museum for research purposes by permission of the Comptroller.[3]

These records are now held at the Public Record Office at Kew (that is, they have been separated from the Patent Office Records), and are nowadays freely available for inspection *without* special dispensation.[4] The purpose of this paper is to describe the collection, to outline its historical background and to summarize what can be learnt from it about design and the state of the industry up to 1850.

II. COPYRIGHT PROTECTION LEGISLATION

The first legislation to protect textile designs and invest the proprietor with some measure of legal ownership in England was enacted in 1787.[5] As Ada Longfield has pointed out, the petitions and inquiries connected with this and other early Acts contain much useful information.[6] From the early days of the printed textiles industry in this country, in the late 17th century, manufacturers and designers have been struggling with the problem of piracy.[7]

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A petition from southern firms in 1787 complained of losses caused by 'base and mean copies' of their new patterns and requested some sort of protection.[8] The situation, put simply, was that reputable firms would produce new designs which were then quickly copied — which might involve industrial espionage — by parasite firms who would put out cheaper imitations, usually of inferior quality, thus undercutting the market. As demand for printed textiles rose so the problem became one of increasing importance. By 1840 Edward Brooks, a calico printer from Manchester, could explain that the printing trade had doubled in the previous 20 years and that copying had increased proportionally.[9] Even in the 18th century it had been rampant. The eminent printer William Kilburn, from Wallington in Surrey, said that he lost £1000 a year through imitations of his products, an enormous amount for that time, though it is not clear whether this was hyperbole or based on fact.[10]

It is worth emphasizing that this was not a surreptitious activity. It was openly admitted that it was 'general practice to imitate patterns as soon as they come out'.[11] Furthermore, almost no one was innocent. Even some of those most vehemently opposed to piracy and in favour of extended protection admitted that under certain circumstances they had done a little copying. Kilburn himself first began to make his way, when an apprentice in Dublin, as a copier of other people's designs. Nevertheless, as the industry grew, those firms which invested heavily in original designs became increasingly vocal in their condemnation of a practice which gradually moved from being quite normal to being considered not only illegal but highly unethical as well.

Opposition to the 1787 Bill came mainly from the North, from Carlisle, Aberdeen and Lancashire. It was stressed that immediate copying of London patterns was essential to the northern trade as they lacked designers of their own or access to fashionable trends but, despite this, the Act was passed in May 1787 and offered copyright to 'the Designers, Printers and Proprietors' for two months. It was a temporary Act but was renewed in 1789.[12]

However, the northern firms managed to survive, indeed to thrive, and copying continued unabated. Longfield has suggested that after the passing of the Act pirates would wait until the two months' protection expired before producing their imitation. This is perhaps rather a sanguine view. Nevertheless, Kilburn and others later stated that protection *had* been beneficial but that it would be even better if it could be extended to three months and the Act made perpetual.[13] This was done in 1794.[14] These Acts excluded Ireland, and covered only linen, cotton, calico and muslins — in other words only cloth made from vegetable fibre. The Board of Trade notes which are included in the Public Record Office lists state plangently that 'No registers or records have survived from the registrations made under these acts'. Consequently it is difficult to draw conclusions about the position in these earlier years but it was authoritatively stated that 10 of the leading firms between them produced 'not less' than 30000 designs in the years 1831–1841.[15]

The struggle for and against copyright continued and, as the industry grew and the sums of money involved increased, became more intense. Bills for extension of protection were proposed again in 1820 and in 1837–1838 but failed. The first of these got through the House of Commons but was rejected by the Lords.

The two Design Copyright Acts of 1839 were more successful and extended protection to other woven and mixed fabrics, including silk and wool, 'to which the process had not then

been applied as a branch of the trade in this country and which, notwithstanding their having subsequently grown into a manufacture of great importance, had no protection whatsoever till . . . 1839', and including Ireland.[16] At the same time protection for woven fabrics was extended to 12 months. The unsuccessful opposition to this Act included a petition signed by 129 Manchester merchants.[17]

The Acts of 1839 were still far from perfect as far as the manufacturers were concerned. The President of the Board of Trade at that time, C. Poulett Thomson, had been, it was generally recognized, hampered by the fact that he was the MP for Manchester, and represented many of those with a vested interest in piracy. Edmund Potter, who had corresponded with him about the matter, formed the view that he was unwilling to interfere when the opinions of his constituents were so divided.[18]

The cost of registering each design was a guinea (£1.05) and a great burden fell on those firms producing large numbers of designs per annum — or would have done had anybody availed themselves of the facility.[19] Another disadvantage was that the Register was open to inspection on the payment of a 5*s*. fee, though this practice was later discouraged. F. B. Long, who was the Registrar of Designs, explained that three copies of a design had to be submitted, two of which were placed in books, while the third was returned with the certificate. The processing took a quarter of an hour. The receipts did not cover the costs of running the office — which is hardly surprising as so few designs were ever registered.[20]

More importantly, with so many designs now being produced, the period of protection was quite inadequate and it was seen to be essential to work towards a thorough overhaul of the legislation. Leading figures in the trade began to mobilize support and to agitate for appropriate improvements. The most active was James Thomson, a printer from Clitheroe, Lancashire. He had an unrivalled knowledge of the history of the industry, had made it his business to collect and collate statistics, and he was an indefatigable pamphleteer. His main supporter was J. Emerson Tennent, MP for Belfast, who introduced a new Bill to Parliament early in the Session of 1840 with its main aim being to extend copyright for printed designs to 12 months. H. Labouchere, successor at the Board of Trade to Poulett Thomson, agreed there was a case for change but suggested six months. Tennent insisted that they wanted 12 months as 'being a rational medium between a monopoly injurious to the public on the one hand, and a mere nominal protection only delusive to the inventor on the other'.[21] Sir Robert Peel, whose own family had built its immense wealth on printed textiles but whose main interest now lay in politics, suggested the whole matter be referred to a Select Committee, 'to examine persons practically experienced in the trade of calico printing as to the deficiences of the existing law, and the most effectual means for its amendment'.[22] The Select Committee was duly appointed and sat from 20 February to 6 July 1840. The length of the sitting was caused, it was suggested, by the 'vast details of the subject itself' and by 'there being two parties concerned, with opposing views . . .'[23]

It is in the Report of the Select Committee that we find the most exhaustive, though not necessarily the clearest, examination of the issues, the various solutions proposed, the objections raised, and the personalities involved, as well as much useful information about the industry. A parallel source is Tennent's own book published soon afterwards in which he discussed the Select Committee proceedings in great detail, added material and corrected inaccuracies, and this work, despite its bias, is a useful adjunct to the Parliamentary Papers.

The two opposing parties were described by Tennent thus. The first party, which he supported, were:

> . . . few in number, but high in reputation, and the foremost in the race of competition . . . who design or employ designers for themselves, aim at once at originality and excellence, and contribute, by their talents and their enterprize to elevate the character of British art and British manufacture.
>
> The second, more numerous and less scrupulous, abstain from retaining designers of their own, but carry on their business by copying and pirating the designs of others, feeding the demands of their trade by fastening on every successful invention of the others so soon as it appears on the market, regardless of the property of its proprietors, or the injury they inflict upon him.[24]

Clearly, the former were in favour of extension, the latter against. It is also clear that, although the opponents of copyright were allowed full expression of their views, from the outset the Select Committee had more or less made up its mind what the outcome would be. Despite Tennent's plaintive remark that those in support were 'few in number' the majority of manufacturers across the country were in favour of his Bill. From Scotland 64 out of 67 were for it, the others merely neutral.[25] In Ireland all were in favour, as they were in London and all other centres of the trade.[26] It was only in Manchester, where most of the pirates had their bases, that strenuous objections were raised, but as these included some of the largest producers they could not be dismissed easily.

The main spokesmen for the Bill, apart from Thomson and Tennent, were Edmund Potter of Dinting Vale, Salis Schwabe of Middleton, Augustus Applegath of Crayford in Kent, all printers, and Joseph Lockett of Manchester, designer and engraver. The main opponents of the Bill were led by James Kershaw of Leese, Kershaw and Callender, Manchester; John Brooks, of Butterworth & Brooks, Sunnyside Printworks, Rawtenstall; William Ross from Darwen; Daniel Lee of Wright & Lee, described as 'general dealers';[27] and Thomas Lockett, a commission agent (and Joseph Lockett's brother).

There were, of course, numerous other witnesses covering all shades of opinion, and many contradictory views were expressed. All the printers who were against the Bill described themselves, without exception, as 'printers of first class goods'. There was a second category against extension who, Tennent suggested acidly, were misguided, not understanding the practical issues but fearing injury 'from foreign competition, in the event of any prompt preventive being applied to the prevalence of copying in England'.[28] But as foreign trade was 'by far the most important branch' of printed textiles, taking nearly two-thirds of the whole production, this fear could not be ignored.[29] Though not openly stated the above comment was aimed, in part, at the one Committee member who persistently opposed the Bill — Mark Phillips. His ability to miss the point and make authoritative statements on subjects of which he was ignorant approached the sublime.

The two prongs of the opposition attack were thus the effect on the home trade and fear of foreign competition.

Design Protection

The first witness was George Brace, a solicitor, Secretary to the Drapers' and Silk Mercers' Institution.[30] He was asked to describe what recourse there was, for those who felt a copyright of theirs had been infringed, under the existing law. He replied that there were two courses possible. The first was to bring an action for damages. This was rarely done — in fact there had been only one case in the previous 50 years.[31] The alternative was to make

an application to the Court of Chancery for an injunction to restrain the copyist. It cost about £70 to take out an injunction, which could later involve heavy costs both for the injured party and also for an 'innocent party who may be vexatiously dragged into court by [the law's] instrumentality'. Many of the witnesses said they did not bother to take legal action because copyright was of such short duration that it was not worth the trouble to secure, at best, a few weeks' relief. (For the same reasons manufacturers often did not stamp their names on their lengths of cloth as the 1839 Acts required.)[32] In fact, there had been no cases of injured innocence and most cases of dispute were settled without going to court. Edmund Potter agreed and said that when he discovered designs of his had been copied he sent an attorney's letter and this usually ensured a private settlement.[33] Kershaw admitted that he had withdrawn designs 'of his own' which were 'said to have been copied' and paid money to avoid the expense of a dispute at law. His practice was, he said, to instruct his designers not to *copy* patterns but only to improve on the ideas in them.[34]

The general feeling seems to have been that the existing system, though much too expensive, was reasonably effective but that a longer period of protection would make it easier and more worthwhile enforcing the law. Ross differed from this view and thought that the law would become increasingly impossible to enforce. He said that litigation would increase 'fifty-fold'.[35] He also thought, somewhat contradictorily, that injunctions would be used as instruments of oppression against the small printer but Potter thought extension would mean greater protection for the smaller firm.[36] The main problem was the difficulty of establishing when and by whom a copy had been perpetrated, especially with regard to fabrics sold abroad.

A good deal of time was then spent by the Committee discussing the preparation of designs within the industry. Salis Schwabe said that for him the average cost of preparing a pattern was £11, which included £7–8 for engraving. He said that his design studio cost him about £800 per annum and produced between 2–3000 designs. He employed 2–3 men and 4–5 lads and never bought designs from freelancers.[37] Edmund Potter said that of the 2–3000 designs produced each year by his firm about 250 were eventually engraved on copper rollers and another 300 cut in woodblocks. Furnishing designs cost between £10–35. He himself printed only to order. There were, he said, in 1838, 88 firms operating in the Lancashire area with 410 machines and 8610 tables.[38] In a later estimation he gave the number of printworks for Lancashire in 1840 as 93.[39] Another list for the same year gave 96.[40]

Tennent estimated that there were as many as 500 designers, in-house and freelance, working in the Manchester area, though the latter were declining in numbers because printers were increasingly reluctant to purchase designs from them in case they had already sold the same or very similar elsewhere.[41] The cost of the design alone could vary from a few shillings to many pounds, but since it was necessary to produce or buy-in many designs from which to select the few which had promise of success, the cost of those rejected had to be subsumed in the final costing of those chosen. All the opposition said the cost of the design was a negligible factor and quoted very low figures of ¾*d*. per piece, or less.[42] Edward Brooke, a furnishing printer from Manchester, estimated that for him design costs on 50000 pieces were £800, that is, nearly 4*d*. per piece.[43] The proportion of those chosen and those set aside was from one-fifth to one-tenth of the entire number produced and of those only a small proportion were commercially successful. Of 500 patterns

produced in one year by one house, 100 were successful, 50 moderately so, and the rest failures.

Applegath paid £60 a week to designers and pattern-makers, though want of protection inclined him to produce few originals and to trust to variations on old themes rather than try for originality. He frequently copied French or old English designs. Extended copyright would certainly cause a greater outlay of capital but better patterns would surely create increased demand.[44]

The process of designing was also geared to the seasons and cycles of fashion. Schwabe said he prepared designs in a light style in June. In September they were engraved and printed and then shown to buyers. They were delivered ready for export in October. The same goods were offered on the home market in January and delivered in February or March through into July. Thus, he pointed out, his protection had expired before his deliveries at home had begun. (It might be noted here that Schwabe found similar goods suitable for North and South America, Belgium, Germany, Italy and the Levant, saying that 'the tastes of these several countries [are] yearly growing more assimilated'.)[45]

Designing for dress fabrics and furnishings, though *some* designs were suitable for both, especially in the foreign markets, was very different. Usually designs for furnishings were more elaborate and consequently took longer to produce — up to three months — and cost up to £70 or more. Blocks — and most furnishings were still produced by wooden blocks — wore out more quickly than either copper plates or rollers, and after printing as few as 300 pieces were unfit for further use unless substantially repaired. Furnishing designs also sold more slowly and over a longer period than dress. A total sale of 500 pieces would be considered extraordinarily good; 300 over three years was good; but it took a year to get a furnishing pattern known to the trade, even though it might then continue to sell for five or ten years. In other words, it became public property before the manufacturer could benefit. For those firms prepared to invest in design, the uncertainty of reaping the benefits of their commitment, even allowing for the vagaries of the market, was a major deterrent.

Piracy

What then was involved in piracy? 'A copy', said Mr Justice Bayley, 'is that which comes so near to the original as to give to every person seeing it the idea created by the original.'[46] Designs which, as we have seen, could take a long time to prepare could be copied very quickly at great saving. Opposing this Lee said that there was not all that much difference in costs and Kershaw said that, in fact, it was often more expensive to copy because the engraving had to be done so quickly — he had heard.[47] Wryly, Joseph Lockett pointed out that unless the copy was produced more cheaply there was little point in doing it in the first place.[48]

The copyist selected designs already with a footing in the market and so eliminated the risk of failure, nor did he have to add in the cost of those that had failed. He saved on the costs of engraving because he traced straight from the design and no scaling-up or fitting was necessary. 'Making-out', as it was called, i.e. altering the scale of arrangement prior to engraving or cutting so that it fell properly in the repetition of block or cylinder, was especially expensive as some patterns had to be redrawn five or six times. The copyist simply waited for the finished product. Nor had he any need to experiment with different

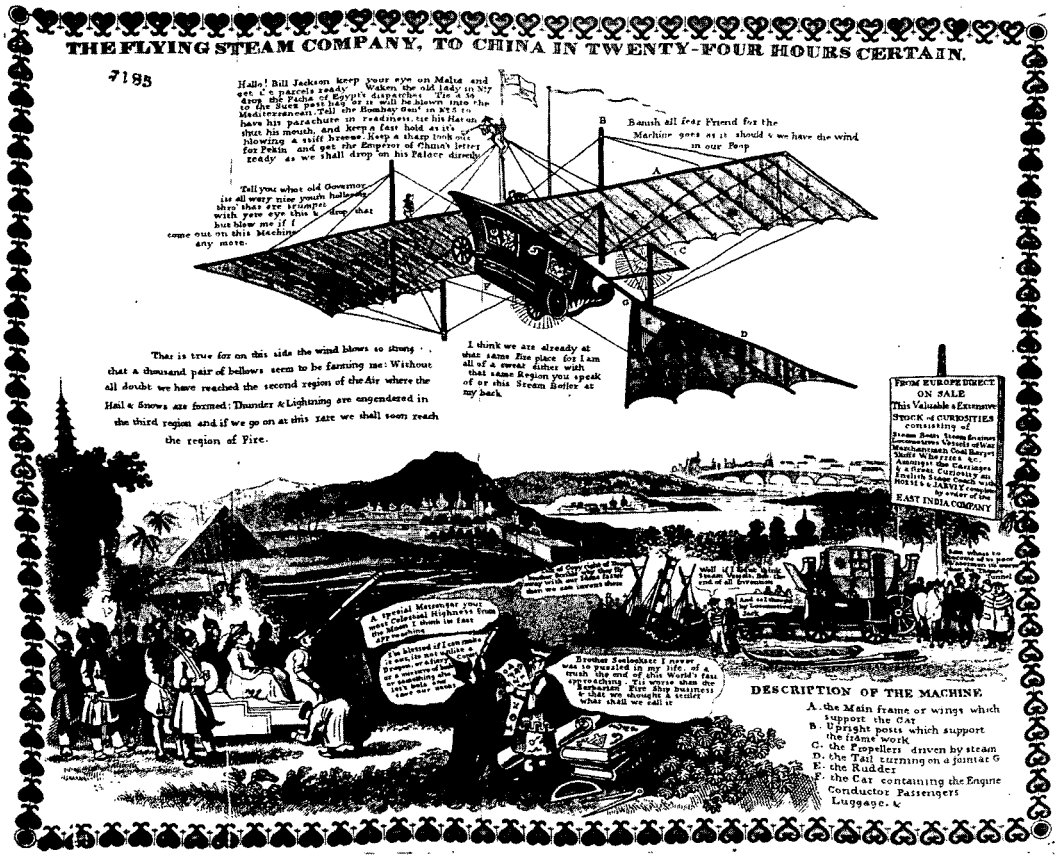

FIG. 1. Design for a pocket handkerchief: a half-serious, half-comic representation of a steam plane. There is a reference to 'copyright of designs' below centre. Plate print. Public Record Office BT 43 191 Class 10 (Dress); Design number 7185, May 1843; registered by Geo. Faulkner, Parker St, Manchester.

colourways, and by using inferior cloth and fugitive dyes he could save on materials. It was admitted this was often done with great skill so that, as Mr Wicking, a draper, declared in his evidence, most people would not be able to tell the difference.[49]

Often buyers, knowing pirated goods would soon be available, bought less of the original product than they might have otherwise. Equally they were cautious about orders and renewals placed after the three months' protection had expired. Mr Wicking gave an example where he had been advised not to purchase cloth from the firm of Ovington & Warwick as Morrison & Co. would have copies available in a few days. He purchased the copies, which were excellent, and furthermore did not place his repeat order with Ovington & Warwick. He was able to reduce his price drastically.[50] In circumstances like these the pirate came to market when the efforts of the original manufacturer had already created demand and therefore had the opportunity for immediate return.

Over the years there had been a considerable amount of regional rivalry involved in the piracy question. It was declared that, with the shift of the focus of the printed textiles industry to the North-West,

> . . . an avowed object of the new colony, which had sprung up in Lancashire, was *cheapness* of production, not beauty of design, [and] they at once commenced a system of indiscriminate piracy upon the new inventions of their London competitors . . . .[51]

However, by the time of the Select Committee in 1840 the battle between London and Lancashire was over (though there were still a few southern firms producing dress fabrics in competition with Lancashire, notably Charles Swaisland of Crayford in Kent), Lancashire was no longer a 'new colony' nor was the piracy 'indiscriminate' and overall the copying of London dress fabrics must have been limited. Applegath said that the printing of calicoes had ceased entirely in London.[52] Again, though copying of furnishing designs no doubt continued, the Lancashire trade was, on the whole, aimed at different markets and would have looked to London mainly for fashion leads. Thomson described the surviving London industry as 'One small remnant, and that the choicest, [which] still exists, sheltered only by superior taste and fancy'.[53] It had become so circumscribed and so specialized that its products were seldom relevant to northern producers. The most vociferous complaints *now* came from reputable northern manufacturers like Thomson and Potter, or like William Henry, who had a large printworks in Dublin and who was described as 'by far the most aggrieved sufferer from its [copyright's] present evils and imperfections . . .'.[54]

The prevalence of piracy was exacerbated by the insatiable demand for novelty by the consumer. This is not the place to discuss the semantic differences between 'novelty' and 'originality' but most of the witnesses accepted as read that a perpetual succession of new designs was essential.

Without going into the larger questions of consumer preferences, amongst the arguments the subject of public taste loomed large. Under a sound system of protection, it was suggested, it would not be an issue but, as it was, manufacturers who could not compete in excellence were competent to enter the contest of mere variety and undertake to startle and seduce,

> . . . whilst the eye of the public, uneducated by habitual association with the productions of genius, is easily fixed by the tinsel of fancy.[55]

In his letter to Peel, Thomson asked:

> But who then are the copyists? Why do they shrink from the avowal? They all maintain the necessity of copying, yet all deny they practice it . . . One small glimmering of sense of right and justice shines through this. Without firmness to resist doing a bad action they have feeling enough to be ashamed of it.[56]

This may have been wishful thinking — although Edmund Potter admitted that at the beginning of his career he himself had copied a few designs but 'was ashamed of it'.[57] (He did still, in common with many of his colleagues, copy *French* designs, though they nearly always needed much altering.)

The net result was that the demand for novelty forced on the designer, and the need to keep ahead of the copyist and fickle public taste, left no time for real care or the exercise of talent. It was described as 'this system of incessant and harassing aggression' by Thomson, who said he was deterred from employing, as he would like, 'real artists', and similarly, by

Potts, the engraver from New Mills in Derbyshire, who refrained from engraving particular kinds of furnishings because of the certainty of loss.[58]

The attempts of the pro-extension group to paint themselves in superior social, artistic and moral colours on top of their commercial arguments could easily, under more disciplined attack, have worked to their disadvantage. They could have rested their case on the principle of proprietorship of design which has been recognized by law since 1794, and the need for extension on practical grounds, perhaps compared to the French system.

It is in this last area that questions of taste and excellence of design seem more pertinent — in the discussion of the issue of foreign competition. Thomson had fully explained the French system to Peel.[59] It was 'the most comprehensive in the world'. Registration of patterns had been established in 1737 for silk. In 1793 it was extended to all products of industrial arts using the word 'designer' without distinction of any kind. In 1805 copyright had been fixed at one, three or five years, or even in perpetuity, at the will of the manufacturer. In 1825 legislation was completed, especially with regard to *depôts* for registration and the establishment of experts, or *conseil de prud'hommes*, to settle cases of dispute.

The result of this, it was suggested, was that the French had attained greater excellence in design by reason of their long copyright, and the superiority of French taste was therefore attributable, in part at least, to the protection they enjoyed.[60]

In France the number of designers was increasing as was their remuneration. A talented designer could earn 8–10000 francs per annum (£320–£400) which was twice that possible in England. There they were treated like gentlemen or -women, here as mere mechanics on weekly wages. Small as the printing trade in France was compared to England there were ten times the number of freelancers in Paris as in London or Manchester, and some of these French designers worked specifically for the English market.[61] The feelings of inferiority manifested by English manufacturers towards French products were apparent in every testimony. Only Applegath thought the English could produce better designs than the French but could not, he added, take the risk or incur the expense of executing them.[62]

Towards other countries the response was far less charged. Belgium had the same system as France, imposed by Napoleon in 1810. Prussia and Saxony had no legislation, nor had the USA; there 'all superior articles being copied from the French' and even for these, it was gratefully observed, they were obliged 'wherever art is required, to employ English, Irish or Scotch workmen'.[63] Though there were worried comments from Kershaw and his friends about the growth of industrial capacity in these and other countries they were brushed aside. The only aspect to fear from foreign competition lay in standards of taste and design, and it was the French who led the way there. One of the most telling remarks came from Leo Schuster, a German merchant based in Manchester. He said great reliance was placed on the quality of French prints abroad and in his opinion if British goods enjoyed the same kind of protection they would begin to be held in similar esteem and, indeed, be preferred because they would inevitably be cheaper.[64]

The 1842 Design Act

To summarize then, the main arguments were as follows. Those against the Bill denied they copied; did not mind others copying them; said not much copying went on; and anyway

copying did no harm. They said extension would raise prices by creating a monopoly which would ensure fewer designs on the market. This would throw designers out of work.[65] It was wanted only by a few high-class manufacturers so they could increase their profits. Copying of English designs, which was already extensive by foreigners, would be further encouraged. Our export markets would be affected. Foreign industries were growing rapidly, often using British workers who were paid better abroad.[66] The Act would encourage excessive litigation. It was impossible to determine originality in designs — indeed, there was no such thing. It would deter capital investment because the industry, from lack of free competition, would decline.

Those in favour of the Bill replied that there was a great deal of copying at home which was very harmful, both to the individual firm and to British export trade in general. Foreigners on the whole did not bother to copy British designs.[67] Prices would reduce because at present all prices were put high to insure against the certain later losses caused by piracy. Protected sales would enable prices to come down. Demand, which would not lessen, would have to be satisfied by original designs, and this would mean more work for designers. Large sums, at present paid to French designers by English manufacturers, would in future go to home designers. Standards would inevitably rise. If standards of goods rose there would be increased consumption and the English would compete on equal terms with the French in taste, and beat them in price. There had been almost no litigation since the principle of copyright had been established nor any reason to think there would be any change. If the Bill was effective it would *deter* litigation. In practice there was never any difficulty determining the originality of the design. Increased security of property would encourage investment.

The greater weight of evidence produced by the supporters of the Bill, and their unanimity in the face of much twisting and turning by the opposition, ensured their success: 'Mr Kershaw was examined for four days, nearly one half . . . occupied in retracting opinions given in the first two days'. Ross, Lee, Thomas Lockett and others were dismissed equally scornfully and, it was noted, 'Mr Schenk was ignorant of the whole matter . . . Mr Brookes' evidence was fallacious . . . and he admitted a pretty good many infringements upon copyright'.[68] In the end the opposition were reduced to petulance. Lee suggested that many of those who were for the Bill were of 'foreign extraction'.[69] Ainsworth threatened to move his whole business to Ghent if the Bill was passed.[70] Rather rashly, but scenting victory, Thomson promised that, only pass the Bill:

> . . . and we will attend your schools of design, we will raise the character of our artists by a more careful and liberal education, and a higher recompense, and we will seek wherever it is to be found, in schools, in academies, and among artists of the highest grace both at home and abroad, for those materials and that character of art, which infused into our designs will by degrees, free us from that reproach, which is but too well deserved, of NATIONAL INFERIORITY OF TASTE AND FANCY.[71]

As a final gesture Mark Phillips spoke in Parliament and wrote to various newspapers calling for a *new* Select Committee to be set up and expressing himself fearful of the consequences if the Bill was passed.[72] His arguments were demolished, with barely concealed exasperation, by Potter in an open letter.[73]

At the end of six months' examination, the Select Committee advised Parliament that 'it is the opinion of the Committee that it is expedient to extend the copyright of designs' and in

due course the Bill, known as the 1842 Design Act, was passed through both Houses and became law.[74] Most of the objections to the 1839 Act were rectified. Instead of a name stamp the goods were to be marked with a cypher understood by the Registrar and manufacturer alone. The samples, only one of each design, would be sent for registration in sealed packets and would be available for inspection only in cases of dispute. The fee would be reduced to one shilling for dress and five shillings for furnishings. The copyright that was to be extended was varied. The Act created 13 classes of ornamental designs attempting to cover all manufactured goods. The classes of interest here were: (6) carpets, given three years' protection; (7) printed shawls, nine months; (9) printed yarns, nine months; (10) printed fabrics, nine months; (11) furnitures, 12 months. The last two were, somewhat arbitrarily, designated as, respectively, 'small patterns' and 'designs with a repeat of more than 12" × 8"'. In general, though not without some exceptions, this demarcation seems to have worked well in that *most* of those in Class 10 were clearly dress and *most* in Class 11 clearly furnishings.

The Designs Act of 1843 extended the protection of 1842 to floor-cloths and oil-cloths, including them in the carpet category and the three-year protection.[75]

III. PUBLIC REGISTERS AND REPRESENTATIONS

The volumes kept at the Public Record Office are of two sorts. One kind are called Registers, which contain entries, spread across two pages, of date of registration, number of

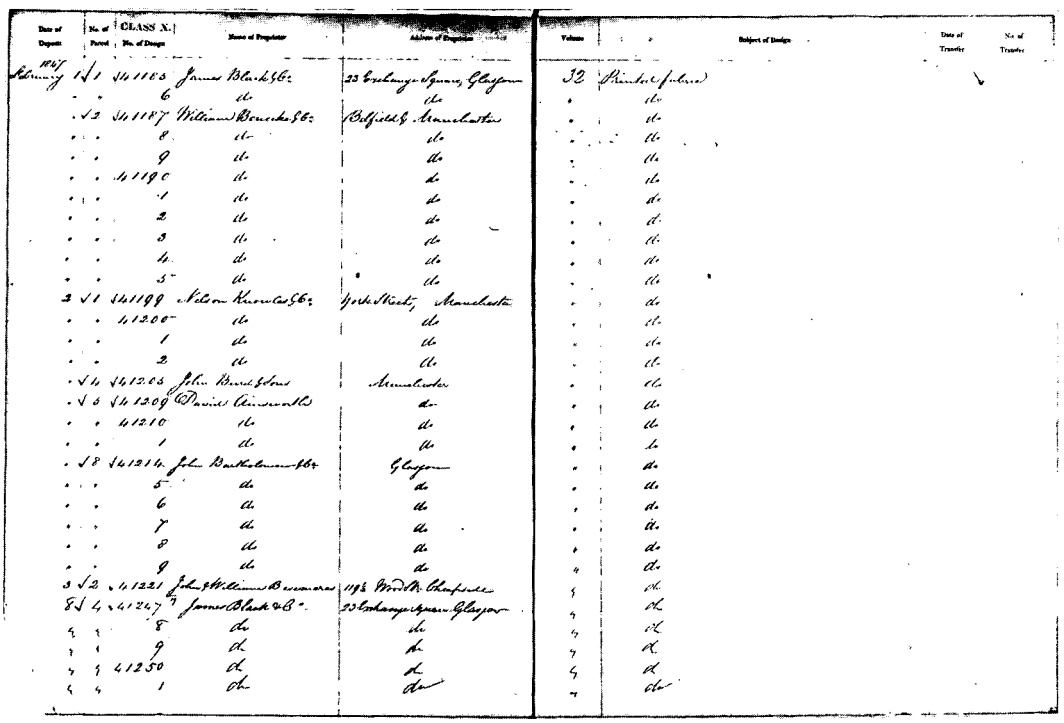

FIG. 2. A typical double-page spread, from one of the Registers of 1847. PRO BT 44 18 Class 10.

parcel, registered number of each design, name and address of manufacturer or other consigner and, in theory at least, a description of the item registered, though in practice the usual entry is 'ditto'.[76]

The second sort of volumes are called Representations, and into these were stuck the actual samples or in some cases paper designs. The Registration number was stamped on to the sample, usually in black but sometimes, where this would not show up, in red or orange.[77]

All these volumes are very large — about 22 × 14 × 6–8 inches, bound in thick brown leather. The Representation volumes for furnishings are even larger — about 24 × 24 × 10 inches thick. Embossed on the covers in gold are the words 'Office of the Register of Designs'. Many of these volumes are damaged.

The following totals of volumes have been examined, up to 1850: in the Registers all 16 volumes covering the classes mentioned; in the Representations a sample of 33 volumes out of the total of 78; and, in addition, 4 out of the 13 volumes resulting from the 1839 Act and 3 out of the 6 of the Indexes of Proprietors' Names.[78]

The questions it was hoped to answer relating to each of the various classes were: who submitted and, perhaps more interestingly, who did not? (In theory at least all post-1842 designs found in collections elsewhere might be expected to be represented at the PRO.) Who registered most designs? What was the frequency of registration? What totals were registered per week/per month/per year? Were there any fluctuations, seasonal or otherwise, and what was the regional representation? (see Table 1). In addition, it was hoped to make observations about the fabrics used, the dyestuffs, the techniques of printing, the colourways, the nature of the designs, stylistic changes, and so on.

Analysis of Designs Registered

The volumes relating to carpets, printed shawls and printed yarns were examined fairly cursorily and much more remains to be done in this area, but a few comments are included here for the sake of completeness.

TABLE 1. ACCOUNT OF THE NUMBER OF PIECES PRINTED, AND HANDS EMPLOYED ON CERTAIN PRINT GROUNDS OF ENGLAND

Names	Pieces printed in year 1839	Hands employed	Pieces per head
Ainsworth & Co.	430000	400	1075
Schwabe & Co.	310000	700	443
Thos. Hoyle & Sons	269229	693	388
Fort Bros & Co.	224971	750	300
Hargreaves & Dugdale	306629	1040	295
Edmund Potter & Co.	83000	380	218
Thomson Bros & Co.	168181	930	181
John Lowe & Co.	52000	300	173
Swaisland & Co.	40000	260	154

Source: Taken from J. Thomson, A Letter to the Right Honourable Sir Robert Peel, Bart., on Copyright in Original Designs and Patterns for Printing (1840), p. 33.

In the few volumes of Representations examined there were no printed carpets, which seems strange considering the importance of this industry, particularly for areas such as Rossendale in Lancashire, specializing in printed felt floor coverings. It is true that this trade did not reach its peak until the 1860s but the tapestry technique, invented in the 1830s for producing cheap versions of Brussels carpets, where the weaving process was simplified by printing the pattern on yarn before weaving began, became increasingly important during the 1840s.[79] Most of the designs were submitted on paper, some on point-paper, some with designs squared-up ready for transfer. Occasionally actual carpet pieces were sent, including a few full-sized hearthrugs, no doubt at great inconvenience to the Registrar. A lot of oil-cloth and floor-cloth samples, and table covers, were registered by firms from Birmingham, London and, probably most important in this field, by John Hare & Co. of Bristol. As Bartlett has pointed out, quoting Rowntree's investigations of working-class housing, for most lower-income households at the end of the century linoleum was the commonest floor covering, and it seems likely that the same was true for its forerunner, printed floor-cloth.[80]

Painted cloths, to be employed in domestic affairs, are not of very ancient invention, though now deemed indispensable to British summer comfort, as a covering for floors of rooms and passages, also stairs, tables and some descriptions of seats for places of much rude resort.[81]

Formerly these had been produced in narrow strips but, since 1790, had come as broadcloth, usually hempen, and oil colour was applied with stencils. Unfortunately, many of these, and *all* the examples of what was called Japanned Baize, have been folded over and, not having been opened for over 130 years, are irreparably stuck together.

There are nine volumes of Carpet Representations up to 1850.[82] The registered numbers total 73062 but a check indicates actual designs at less than half this number. The average annual number seems to be somewhere between 3–4000, except for 1850–1851, the year before the Great Exhibition, when the numbers of submissions were doubled. Many of the designs are of an ornate but tepid pseudo-Savonnerie style.

Similarly, the designs for printed yarns were very dull indeed.[83] Curiously, most of the samples were of straightforward pieces of cloth which had been printed in the normal way. However, there were a number of hanks and one or two uninspired examples of ikat. The main industrial importance of printed yarn lay in the tapestry carpet trade, as described above, but there is no evidence of this.

The impression is given that certain types of printing were unclassifiable — such as printed cloth with odd bits of embroidery added, or printed tassles — and that the Registrar tended to hide these oddities in the less important volumes. One item of particular interest is a diagonal design on paper, quite unexceptional in itself but mounted (which is unusual) and bearing on the mount the inscription

Design for a Printed Fabric Class 9 Registered for J. S. Grafton & Co.
Trustees of Wood & Wright of Manchester
Alex[r] Prince Office for Patents of Inventions & Registration of Designs
14 Lincolns Inn Fields, London[84]

This is the only inscription of this kind in all the volumes examined.

Again, the designs for printed shawls were disappointing, given the importance of this industry.[85] Most of the designs were rather dull, nearly all seeming to aim to imitate

weaving and mostly using diluted cashmere-style motifs, although Irwin has stated that 'It was less usual for the printed shawl to set out deliberately to compete as a cheaper version of the woven article'.[86] Most here were on paper, some were on cloth, and many were just in uncoloured outline. The firms registering included Swaisland of Crayford; Towler, Campin, Schickle & Matthews of Norwich; Clabburn & Plummer, also of Norwich; David Evans of Crayford; a few Manchester firms such as Fort Bros and Hardman & Price; and many from what was known as North Britain (i.e. Scotland), especially, of course, Paisley. In addition, there were many from obscure designers based around London. There is little to indicate much excellence in the trade and this perhaps supports the view, which Irwin questions, that printed imitations 'cheapened the product' and caused the eventual collapse of the industry around 1870.[87]

The two most important groups of designs are Class 10 'Printed Fabrics' (i.e. dress), and Class 11 'Furnitures' (which we call furnishings), and the first of these is by far the largest. From the beginning there was a varied range of submissions for dress including designs on cotton, muslins, figured fabrics, silk, wool, designs printed on paper, some hand-coloured work, waistcoat patterns, handkerchiefs, and heavily glazed cloth. From time to time there were commemorative designs, including a splendid one entitled 'A View of Nankin from the River Chin-Keong-Foo. Representing the British Fleet and the Chinese High Commission going on board HMS Cornwallis to Treat for Peace, Aug. 20th 1842'.[88] Floud has observed that the decline of the once-mighty copper plate was under way by the turn of the century and by the 1840s they were almost only used for these prints for the cheaper end of the market.[89]

An interesting phenomenon was the very great number of designs for collars.[90] Usually these were from Scottish firms though most manufacturers seemed to produce some occasionally. Stylistic differences between these often very elaborate designs were slight. They were never coloured — always in line only — and probably meant to be printed for later embroidery or machine sewing. At the beginning of the 1840s they were uniformly wide at 4–6 inches. By the end of the decade they had narrowed to 1–2 inches. The cost of preparing them had been drastically cut by the introduction of lithography which replaced block-printing. The old system was tedious and expensive, collar blocks costing from 20*s*. to £10 each. Pirates had been deterred by the expense but lithography was a boon to the copyist hence the rage for registration.

The number of dress fabric designs submitted was enormous. From September 1842 to the end of 1850 the Register numbers run from 1426 to 75800. Allowing for jumps in the sequence between each batch and between each volume, an informed estimate would be that in this 7 years 3 months period around 60000 designs were registered in this class, averaging somewhere between 7–8000 per annum. On the basis of the figures given to the Select Committee of designs produced being one-fifth to one-tenth of the total created this could mean an annual production of up to 80000 designs. (N.B. This total includes submissions by Scottish firms which make up perhaps half.)

Designs arrived by every post, sometimes in ones or twos, sometimes in batches of hundreds. Certain firms, like Thomson's, waited until they had a collection of 30 or 40 ready or, often, 200–300 or more.[91] Again, certain firms, those which habitually sent in large quantities, tended to do so at certain times of the year, and this weighting appears to distort the seasonal figures (see Table 2). Hoyle, Thomson and Hargreaves usually sent in

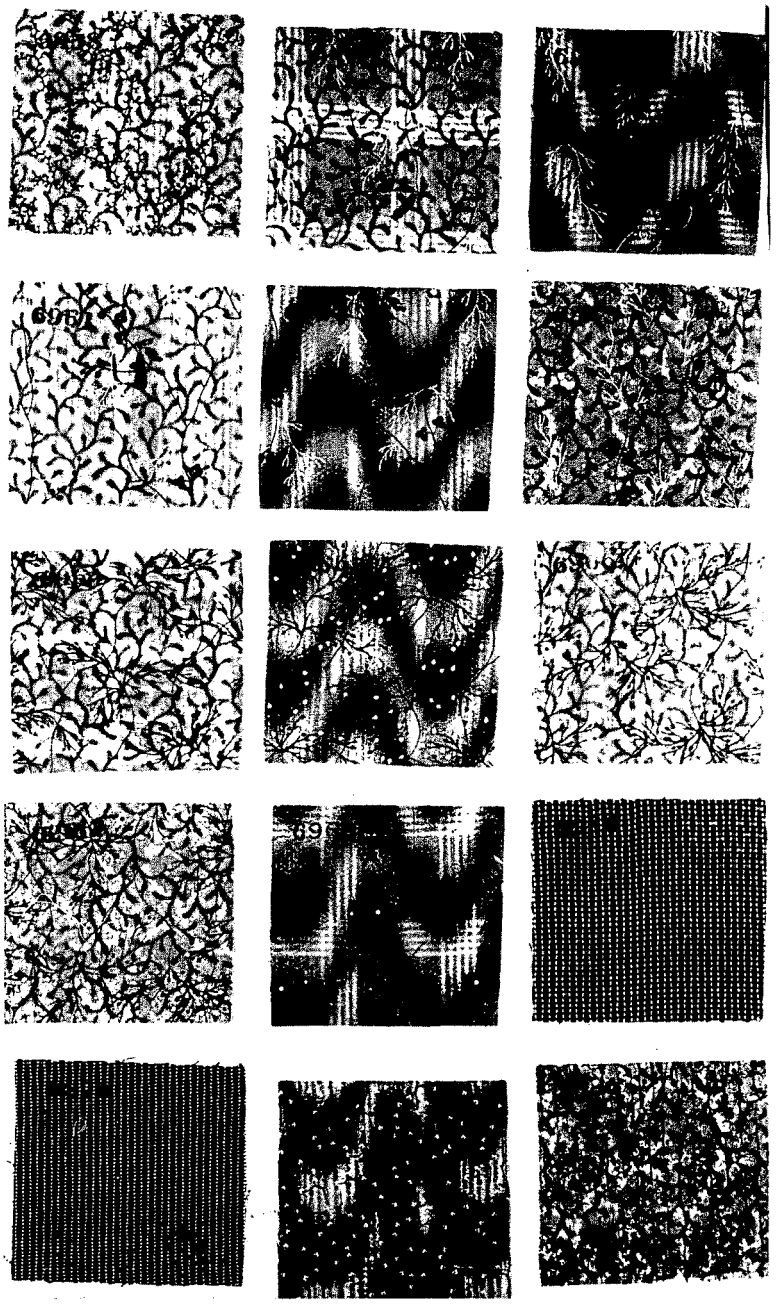

FIG. 3. Designs registered by Thomas Hoyle and Son: variations on machine grounds; Design numbers 6958–6972, May 1843 (each sample approximately 3½ × 3½ inches). PRO BT 43 191 Class 10.

either side of Christmas which was thus the busiest time for Registration. The slackest time appears to have been April, May and June but perhaps for the same reason.

Other firms had a policy of mailing their designs as soon as they came off the drawing-board and there are many instances of designs arriving in ones and twos over several

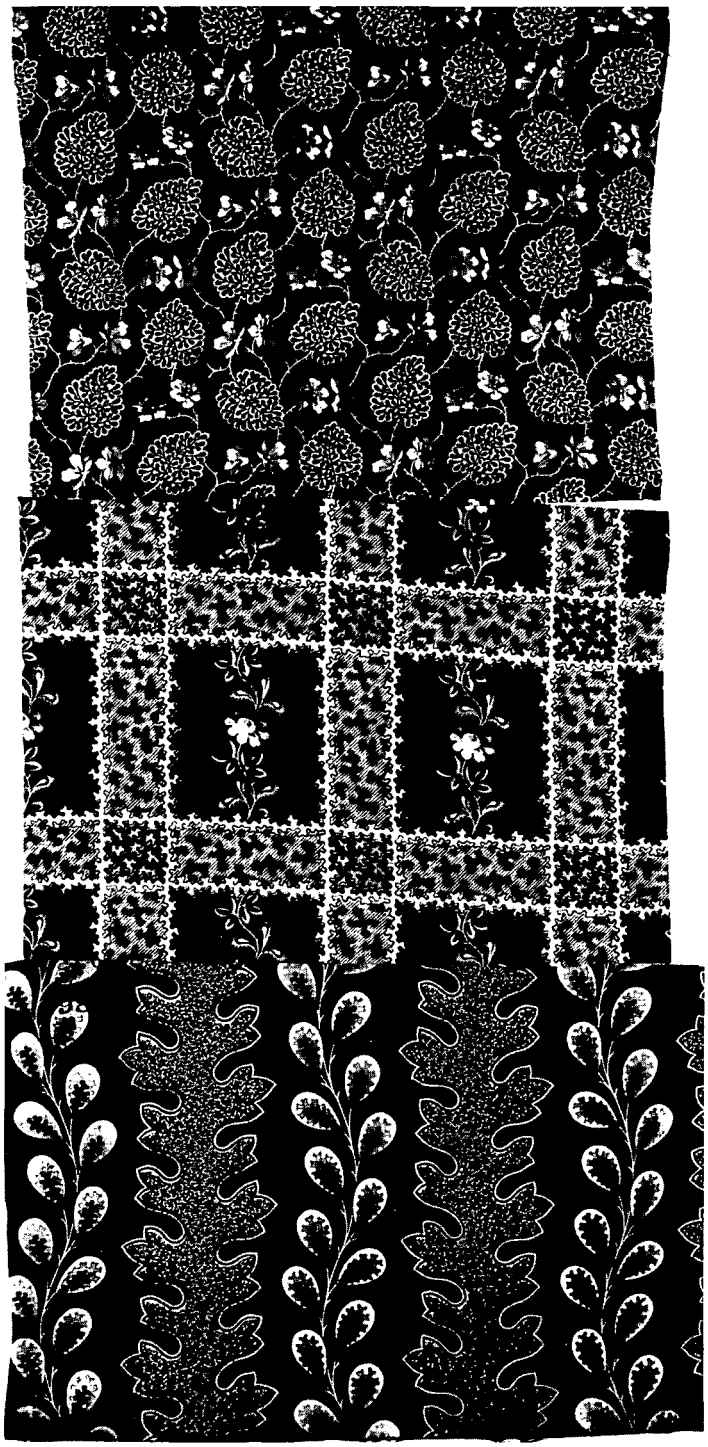

FIG. 4. A page of large samples of roller-printed dress fabrics (page size 21½ × 13½ inches), all printed with a brown blotch. Design numbers 59891–59893; registered by James Thomson & Sons, May 1849, part of a batch of 52. PRO BT 43 236 Class 10.

consecutive days. Most firms, however, submitted more sedately in medium-sized batches of a dozen or so once or twice a month. From among those who had opposed legislation Kershaw, Leese & Sidebottom were the most consistent users sending new designs for registration every week. On the other hand Schwabe and Potter, ardent supporters of reform, submitted relatively few.

It is not entirely clear why firms adopted different practices but one possibility, ironic in view of their positions *vis-à-vis* legislation, is that those situated in isolated places such as Thomson at Clitheroe had slightly less to fear from industrial espionage than firms located in the more densely populated areas of South-east Lancashire, such as Kershaw, Leese & Sidebottom. Schwabe had spoken of the very stringent secrecy necessary until sales commenced[92] and Kershaw, Leese & Sidebottom were obviously very keen to get their designs registered as soon as possible. Indeed there seems to be some correlation between the frequency of submission and the degree of urbanization of a firm's location.

It is more difficult to determine which companies did *not* avail themselves of Registration and there are several reasons for this. The names under which designs were registered were not always those of the originator, either firm or designer, because designs were often registered by intermediaries, solicitors or agents of one sort or another, and often under the name of a Manchester or London office, typically in either Mosley Street or Cheapside.[93] Many of the names entered are those of retailers such as John Watson of London who had cloth printed at Bannister Hall, or leading Manchester merchants like George Faulkner. In addition, many Glasgow firms registered via London or Manchester offices, and firms changed their titles frequently as a result of partnership changes or mergers. Consequently, even such a thorough list as that for 1840, for northern printers, given in *The Textile Colourist* in 1876, was quickly out of date.[94]

It is noticeable, conspicuous by its absence, that the firm of Ainsworth & Co., cited by Thomson as the largest producer in the country, never sent in any designs for registration (unless they were disguised by one of the above devices which, given the quantities involved, seems unlikely — see Table 2). By a curious coincidence their main factory was at Barrow, just over the hill from Thomson's, and also in rather an isolated, hence protected, position. Given Ainsworth's role as the main villain and his proximity to the virtuous Thomson it may be assumed that after 1842 he would have behaved with due probity acquiring designs by acceptable methods. That Ainsworth's *did* employ designers of their own is known from the pamphlet by Thomas Bull, a printer and designer with them, in which he spoke bitterly of the frustrations of the English designer confronted with indifference to his ideas and of being obliged to produce on 'coarse cloth [at] a limited expense [and for] a particular market'.[95] (We note in passing that Ainsworth's did not, as they had threatened, move to Ghent.)[96]

The truth seems to be that those firms inclined to copy produced many fewer designs (whether copied or not), but they produced them in vastly greater quantities. If this was true before 1842 as Thomson's tables imply, then the reputable firms perhaps had less to fear from piracy than they thought. Though Ainsworth's did not avail themselves of Registration many of the others most opposed to copyright did so regularly.[97]

The blanket condemnation of mid-century textile design standards, both by contemporary and later commentators, has become a commonplace. It has largely been ignored that the various influential statements by Peter Floud refer to furnishing fabrics, for example:

TABLE 2. DRESS FABRIC DESIGNS REGISTERED ANNUALLY 1842–1850[a]

	1842	1843	1844	1845	1846	1847	1848	1849	1850	Total
Wm Benecke & Co.		97	175	51	106	84	2	209	307	1031
Butterworth & Brooks								46	99	145
J. Burd & Sons	168	46	275	25	1	6		492	667	1680
Coates & McNaughton	63	137	157	67						424
Fort Bros	14	138	275	88	6	105	29			655
Hargreaves, Dugdale & Co.			74	113	134	345	300	383	610	1959
Hardman & Price	5	42	105	56	114	85	110	55		572
Thos. Hoyle & Sons	37	1712	928	1213	1401	1059	1094	1442	870	9756
Kershaw, Leese & Sidebottom	118	290	303	247	159	188	210	262	312	2089
Lowe & Co.	1	3	2							6
Margerisons & Glover		79	20							99
Nelson & Knowles	29	33	133	33	126	222	226	125	300	1227
Robert & Thomas Peel			20	56	49					125
Peel, Holmes & Co.		5	29	44	32	12				122
Reddish & Bickham		49	100	80					4	233
R. & M. Smith	48	133	90	37	4	20				332
S. Schwabe & Co.	40	21		27					113	201
Simpson & Rostron	86	81	243	12				86	344	852
Strines Printworks			13				14	48	293	368
Seedley Printworks				124	184	146	29		63	546
Thomson & Sons	100	864	977	612	737	429	456	463	449	5087
Wright & Lee									19	19
A. Applegath		1								1
Baker & Co.	63	313	308	312	359					1355
D. Evans & Co.		36	3							39
S. Swaisland	147	323	373	273	188	378	196	184	122	2184
Thos. McAlpin		11	5	1						17
Totals	919	4414	4608	3471	3600	3079	2666	3795	4572	31 124

[a]This table enumerates the numbers of designs submitted for registration from September 1842 to December 1850, for dress fabrics only, by a representative selection of 26 English firms, including those which registered most often. Of those shown 21 were from the Lancashire area, four from the London area and one from Carlisle. The names given are those by which the firms were generally registered. Coates & McNaughton registered as Seedley Printworks after 1846; Peel, Holmes & Co. and Robert & Thomas Peel & Co. registered designs separately.

It is not until about 1835 that there is much sign of a general deterioration in standards of taste such as one would look for at this period. However, thereafter the degeneration is extremely rapid . . . .[98]

The point here is that printed fabrics, *especially* furnishings, had, in the late 18th century, attained a degree of excellence which, though undeniable, is of the sort which entrances the connoisseur, of the sort where designs are named, rather like racehorses, and designers are lauded as stars. Nearly all such designs are figurative, following the tradition of *indiennes* and *toiles-de-Jouy* types. In other words the artefacts approximated to the state of being a minor decorative art on a par with netsuké or embroidery. But for the industry which was established in the north these criteria are inappropriate. 'The trade may therefore be said to have changed from an artistic employment to a staple manufacture, using taste as one of its elements.'[99] The home market for dress fabrics was predominantly lower-middle and

working-class. Levitt describes a new kind of consumer: 'wage-earning town-dwellers, who for the first time, had incomes enabling them to buy more than the bare necessities . . . no longer satisfied with . . . ill-fitting second-hand clothes . . .'.[100] The nature of these designs was, from the start, predominantly non-figurative (accepting florals as such), and fell outside the interest of connoisseurs and collectors. (This is still largely the case today.)[101] There were some exceptions of course. Perversely Kershaw, Leese & Sidebottom's range was artistically comparable with that of any other firm. The vast majority of the Representations for the years 1842–1850 in the Public Record Office fall into the basic categories of stripes, spots, checks, florals and geometrics, and permutations of these. Mostly the repeats are small. The conventional view of the designs of the period is scarcely recognizable — dark designs were in a minority; many designs used brilliant colours and strong patterns; the standards of printing were rarely poor, often excellent; the fabrics used were usually of good quality; and on the whole the effects were quite startlingly un-Victorian.

Machine printing dominated in dress fabrics and the use of blocks was increasingly rare in the 1840s, though the introduction of stereotyping in 1844 following Burch's patent for his burn-out technique went some way towards delaying their final demise.[102] Edmund Potter was one of the first to dispense with block printers altogether.[103] By the end of this period machines were capable of printing designs with 10 or more colours, though they seldom did. In fact, one of the most important features of mechanized printing was the use of machine grounds, that is of tiny repetitive reticulations, or crazing or geometrical patterns, and those called 'eccentrics' which were derived from the use of an asymmetrical chuck on a lathe to engrave the die (originally devised to print forgery-proof banknotes). Some firms, like Thomas Hoyle, based their whole output on endless variations of machine grounds. (The use of proper designers by these firms would have been minimal.) Hoyle's were the inventors, or developers, of a madder colour called Hoyle's Purple which,

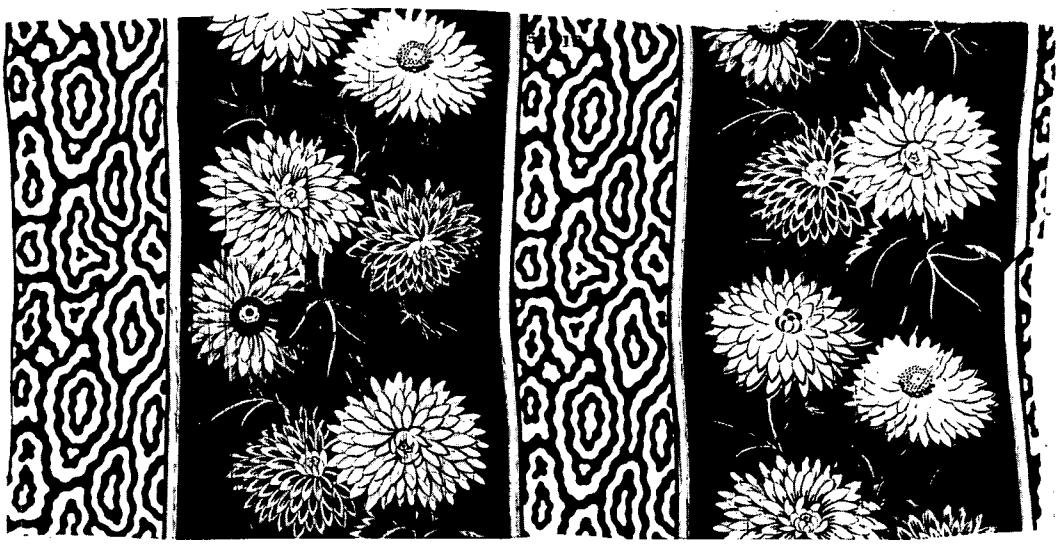

FIG. 5. Design number 51719, registered by Kershaw, Leese & Sidebottom, August 1848 (sample size 11½ × 26 inches). PRO BT 43 356 Class 11 (furnishing).

judging by the number of designs they produced for it, was continually successful over the whole period. Introduced in 1831 it was '. . . superior in brilliancy, fastness, and utility for domestic wear . . . a colour which may be said to have superseded the old navy blue print, in English wear'.[104] It must have been profitable too because they only ever, except on rare occasions when they put out multicoloured ranges, needed to stock one dyestuff. To see hundreds of these minute designs, page after page, is rather like looking at tray after tray of minor variations of a particular kind of moth in the Natural History Museum.

FIG. 6. Design number 53809, registered by Kershaw, Leese & Sidebottom, August 1848 (sample size 22 × 26 inches). PRO BT 43 356 Class 11.

Hoyle's are exceptional in the continuity of their designs over the decade. The only other firm to show such consistency was the London firm of John Baker & Co., though as different as possible in every other way. Theirs were always corner designs or borders (which were, presumably, for shawls or handkerchiefs so it is not clear why they appear here rather than in the Class 7 volumes), usually on paper in black line with large areas hand-coloured in vivid red. (The harshness of this colourway is seen to be softened when, as sometimes happened, cloth samples were registered instead.) The drawing and detailing in

these is always of the highest quality, often with beautifully drawn flowers. Of the other southern firms only Swaisland produced comparable amounts and their designs are, again, of a very high standard, on the whole lighter, less robust, but perhaps more inventive than the majority of Lancashire printers.

Of all the printers Thomson's had the greatest variety or widest range of product, from densely coloured, often quite garish, through to pale and quiet designs, from vibrating rainbows through to simple sprigs and stripes. They were renowned for their discharge prints following patents for Turkey Red discharging in 1813 and 1815, and for indigo discharging in 1826 (though the original development of these was continental).[105] Whether direct copying was totally abated is difficult to say but many of the lesser firms produced batches of designs which echoed certain 'looks' from the Thomson range, such as Bradshaw & Rhodes from Levenshulme, or Beneckes from Belfield.

In the early 1840s a rather striking combination, probably for winter wear, of solid green, often graduated, combined with madder colours, was very popular, especially in checks. Also popular were deep chocolates combined with shades of pink, or orangey-red, indigos, greys, or ochre. Of the colours available (Kennedy mentions 'upwards of 100' in use in the trade in 1841), yellow was perhaps the least used.[106] Madder colours were still standard, though their conventionality was diminished by using them in combination with other colours such as brilliant blue. Deeply Vale Printworks and Reddish Bickham were two firms particularly fond of this colourway.

The range of colours, and hence the 'look' of a particular range of products, was obviously dependent to a great extent on the skill and knowledge of the dye manager. One of the reasons for the excellence of Thomson & Sons was the breadth of James Thomson's own experience as a dyer and his employment, for a time, of the young Lyon Playfair as his principal chemist.[107] Another notable, though more narrowly specialized, range was that produced by Coates McNaughton of Manchester in limited colouring of black, grey or bistre and similar sombre colours with delicate stipple discharges, beautifully printed and often achieving striking halftone effects.[108] There is no sign among the Registered samples of the manganese bronze colour introduced by John Mercer in 1823 and popular, according to Mellor and Cardwell, up to 1880.[109] Baines said it was both fast and cheap and extensively used in calico printing — which makes its absence here the more curious.[110]

It is difficult to judge the quality of dyes used. Protected from light, use or washing, most of these samples have retained their original brightness. Traditional madder and indigo colours were fast but steam colours were not. Sometimes madder and steam colours were combined (although this involved two separate processes and added to the cost). Most of the designs with bright colourings were steam colours and thus fugitive. Floud noted that Kershaw, Leese & Sidebottom usually printed in fugitive colours.[111]

Many of these firms were capable of producing excellent designs which would not look out-of-place today, designs of this sort often transcending dating to some extent. There is little evidence of experimentation. Presumably, this would have been carried out in the privacy of the printworks. These designs are the ones it was hoped would sell. There is the odd adventure with, for example, printing on a wet ground, but most of the techniques displayed here are tried and tested ones. Many of the designs feature outlines, which traditionally were used to disguise mistakes of registration and avoid bleeding, though technically this was no longer really necessary.

Then, as now, there were frequent revivals. Wallis notes, in 1849, revivals of designs and colourways from 1801, and also that 'the patterns of 1808 are precisely the same as those being now printed by the French'. There was a brief recurrence of the use of flat plates for madder styles in one colour. Rainbow colours were again very popular in 1844–1845, especially in stripes. Horizontal or diagonal rainbows were expensive as they could be produced only by blocks. Striped rainbows could be produced more cheaply by padded rollers.[112]

The different seasons influenced the general appearance of samples so that in those volumes anticipating winter wear the colours tended to be darker and the fabrics heavier, as might be expected, but towards the end of the decade the impression is that machine grounds, especially the eccentrics, were far less popular and that designs in general were lighter and more open, with increasing numbers of florals. Most noticeable of all was the increasing use of gauzes, often figured with a woven stripe. Many of these were no doubt intended for the summer shawl trade.[113] As a nice finale, volume 247, the last examined, contains an actual shirt front on which has been printed, from small blocks, crude images of the Crystal Palace. Nearby were a pair of gloves with the same motif.

Manufacturers Represented in the Registers

In the Furnishings Registers many of the same names occur throughout. Those which repeat most consistently are: William Benecke; John Burd & Sons; John Watson & Co. of London; Kershaw, Leese & Sidebottom; and Swainson & Dennys; but many totally obscure names occur once, or perhaps twice, and then disappear. For example: W. Cleversley Jr of 5 Shads Terrace, Peckham; or Charles Walker Norwood, De Beauvoir Manufactory, St John's, Hackney.[114] Sometimes more distinguished names appear briefly, such as that of Frederick Crace & Sons, in 1849.[115] It remains to be determined why these, or firms of retailers like Charles Hindley & Sons of Oxford Street, should suddenly register one or a small batch of designs, when they did not habitually do so.

At this stage the estimate of the number of furnishing designs registered can only be approximate. The numbers in the Registers are far from consequential. There are large gaps in the sequences of numbers between each new batch and these need to be counted individually for complete accuracy. An estimate for the period in question would be that 30000 designs were registered.

It is here that Floud's strictures are more germane. He suggested that it was the removal of technical limitations

> . . . which had hitherto stifled the anonymous chintz-designers' natural strivings to treat their leaves and blossoms as real 'artists' or 'painters' and to allow full scope for all those tricks of overprinted washes and graduated shading which ultimately became the hallmark of the 'good old Victorian chintz'.[116]

This may be true in general but is not overwhelmingly borne out by the evidence. Certainly, compared to the many superb designs of the past preserved in museum collections, most of these are rather ordinary but it is quite clear that the Furnishings Register, unlike the Dress Register, cannot be taken as representative of more than a particular section of the trade, not perhaps the very lowest but towards the lower end of the market. Potter referred to 'Large quantities of machine-printed *cheap* furnitures . . . produced for export . . .'.[117]

FIG. 7. James Thomson (1779–1850) of Primrose Printworks, Clitheroe, the most celebrated textile printer of the first half of the 19th century. (*Photograph: Lancashire Library, Ribble Vale District*).

Floud was concerned mainly with block-printing, which had remained the most common method of producing large furnishings until the 1840s. (It is worth reiterating that it took 50 years from its introduction for roller-printing to become efficient enough to be widely used for printing furnishings.) Although firms like Samuel Matley of Hodge in Cheshire had earlier used roller-printing with excellent results, in most cases rollers were employed only to lay in the basic design with subsequent colours being added by blocks or wooden surface rollers. Many of the designs at the Public Record Office, by contrast, appear to have been predominantly roller produced, indeed some of them would seem to have escaped from the Dress Registers. This leads to the conclusion that many of these designs were produced by firms whose main lines *were* dress fabrics — whereas the specialist furnishing firms hardly bothered with Registration at all.

At the beginning of the decade there were highly glazed chintzes on white grounds from Lowe & Co who were the main Lancashire producers of furnishings. There were many designs with machine grounds, many three-dimensional effects, and figurative designs

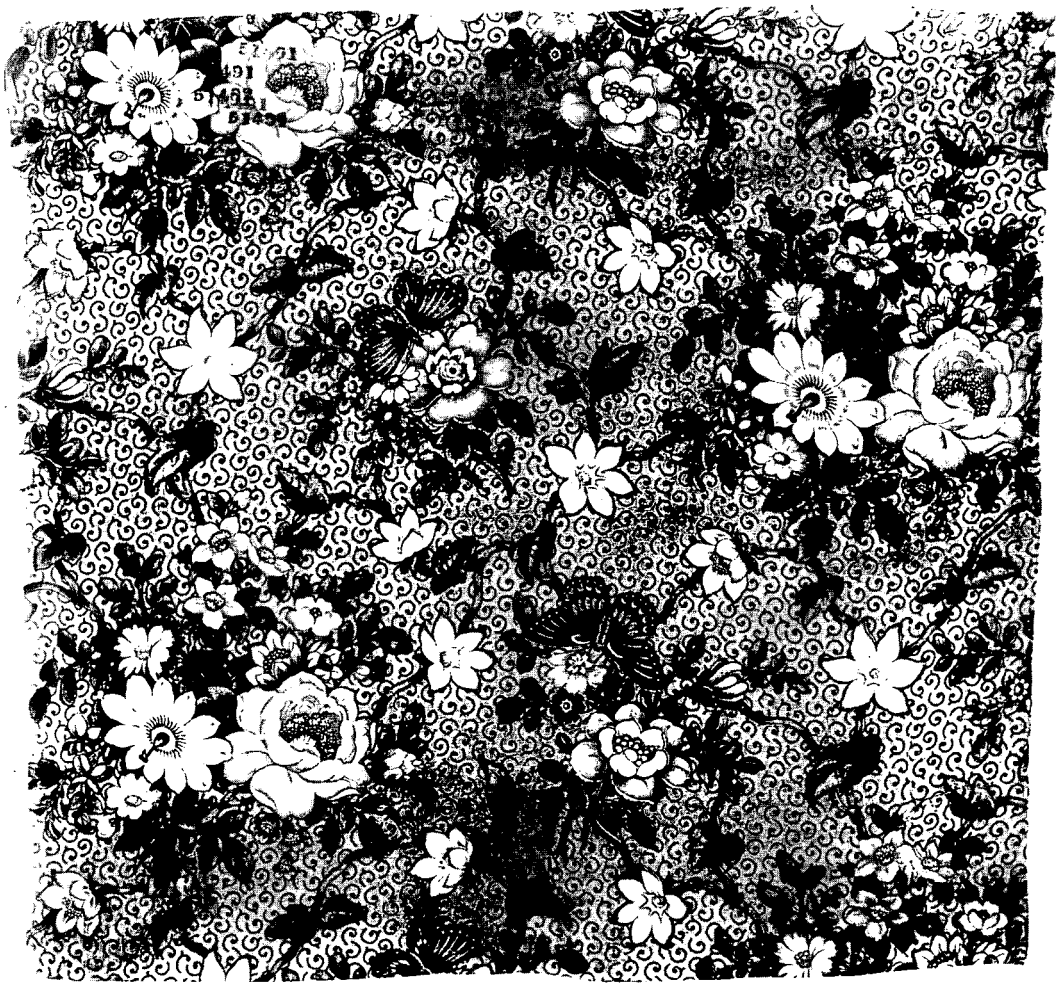

FIG. 8. Design number 51491, registered by William Benecke & Co., April 1848 (sample size 22 × 26 inches). Note use of outline to disguise poor registration. PRO BT 43 356 Class 11.

which ranged from views of snow-covered mountains to scenes from *Pickwick Papers*. There were horse races — for example: the Derby framed by Corinthian columns and flowers on a bright pink ground; a boy on an ostrich; Gothic castles and mournful hounds. There were many echoes of Audubon's 'Birds' and designs based on Baxter prints and Landseer and Delacroix paintings. Many of these are, one is bound to say, of poor quality and it must be conceded that on this evidence Floud's fastidious denunciations were justified. However, the designs of the outstanding firms like David Evans, G. P. & J. Baker, or Thomas McAlpin of Carlisle hardly figure here at all.[118] Apparently they chose not to associate themselves with copyright and trusted that the sheer quality and complexity of their designs, as well as the discrimination of their markets, protected them more

adequately than the mundane Design Acts. Thomas Clarkson of Clarkson & Turner, Coventry Street, a 'very superior' chintz seller, whose products were printed by Swainsons of Bannister Hall, estimated in his evidence to the Select Committee that one in six of successful patterns were copied.[119] Potter had said that a furnishing pattern could be copied in a week and on the market in six.[120] Ross, on the other hand, thought that furnishings of the highest class were not often copied because they were too difficult.[121]

IV. SUMMING UP

In furnishings, in printed carpets and allied fabrics, in printed yarns and shawls, it would seem that only a proportion of the industry availed themselves of copyright protection, and those were the least important sections. In none of these classes do we get as complete a picture as might have been expected. In these areas the arguments for excellence of design being fostered by adequate protection, if it could only be obtained, so that we might compete on an equal footing with the French, can be seen as irrelevant.

In dress fabrics the picture was different. Because the lower and middle end of the market was by far the largest sector, because turnover was so rapid and the demand for new designs so unrelenting, because the piracy that occurred was internecine, protection was essential and effective. Levitt has spoken of Registration as indicative of progressive enterprise but in many ways it was no more than a palliative.[122] Those firms which Floud referred to as 'the great mass-producers' do not compare with Thomson or Hoyle in output of designs. As the decade proceeded many English firms ceased registering altogether and increasingly the Registers were dominated by the products of Scottish printers.

As far as piracy was concerned the Act had the desired effect, but it seems that it had absolutely no direct effect on two of the main issues which had preoccupied the protagonists prior to 1842 — public taste and standards of design.[123] Manufacturing practices continued to be based wholly on demand,[124] and the consumer continued to exhibit patterns of selection and choice which require anthropological and behavioural analysis beyond the scope of this paper.

CODA

At a Select Committee formed to examine the Schools of Design in 1849, Joseph Lockett was again called to give evidence.[125] He employed, he said, eight designers and 150 engravers. He had paid for his apprentices to attend the School of Design in Manchester but the tuition and syllabus were so poor they had little to show for it. Since extension of copyright business had increased considerably but there had *not* been an increase in the production of English designs in recent years. On the contrary, manufacturers increasingly purchased French designs and English designers were still often employed in reconstructing and adapting them. Some houses spent £1000 per annum on French designs. Floud has written that:

> By the 1850s, the great mass-production Lancashire firms such as Butterworth & Brooks, Nelson Knowles, and William Benecke gave up any pretence of fine engraving and concentrated on overseas markets and the cheapest designs at home.[126]

Other firms, however, continued to produce excellent designs, as can be seen by surviving examples in museum and other collections. Output had increased. Potter estimated that annual production, which had stood at 8 300 000 pieces in 1830 (of which 2 281 512 were for home consumption), had risen to 16 million pieces in 1840, and 20 000 000 in 1851 (of which three-quarters was exported).[127]

As far as foreign competition went he was able to summarize all overseas rivals and dismiss them: 'I am inclined to think that the production of Great Britain exceeds that of all the rest of the world'.[128] He thought home-based talent was 'improving', and so too did John Keir Harvey, a freelance designer, who said manufacturers now often asked him for his opinion. He also thought public taste was improving.[129] Potter described how 'We find specimens of good taste on the lowest material, printed at the lowest possible price for export, shewing a taste superior to that in use for our best work twenty years ago'.[130]

Despite this, there is no evidence here that the brave claims made at the 1840 Select Committee were fulfilled, that those manufacturers who said they would employ 'real artists' did so, or that elaborate programmes of artistic expansion such as those wistfully outlined by Potts ever transpired.[131]

References and Notes

[1] P. Floud, *English Chintz — Two Centuries of Changing Taste* (1955); and *English Chintz — English Printed Furnishing Fabrics from Their Origins Until the Present Day* (1960). The 1960 exhibition was substantially bigger.

[2] F. M. Montgomery, *Printed Textiles. English and American Cottons and Linens 1700–1850* (1970); S. D. Chapman and S. Chassagne, *European Textile Printers in the Eighteenth Century* (1981).

[3] P. Floud (1960), op. cit. Note 1, p. 2.

[4] A useful definition is that given by S. Levitt in 'Registered Designs: New Source Material for the Study of the Mid-Nineteenth Century Fashion Industry', *Costume*, Autumn (1981), 49. 'While a patent protects a completely new idea for an object, a registered design protects a new appearance of an existing one. The function of both is to allow a person to enjoy the fruits of his or her invention and industry, free from commercial competition, and thus to stimulate trade. However, while a patent gives greater protection, it is harder to obtain and more expensive than a registered design.'

[5] 27 Geo. III *c.* 38.

[6] A. K. Longfield, 'William Kilburn and the Earliest Copyright Acts for Cotton Printing Designs', *Burlington Magazine*, XCV (1953), 230.

[7] 7 Geo. I *c.* 7; 9 Geo. II *c.* 4; 14 Geo. III *c.* 72. Despite these restrictions about 50 000 pieces per annum were being produced, mostly in London. See E. Potter, *Calico Printing as an Art Manufacture*. A Lecture Read Before the Society of Arts (1852), p. 8: 'The common import of the term Calico-Printer now, is a printer of all sorts of fabrics — calicoes, muslins, linens, silks or woollens, or the many mixed varieties, composed of different materials.' For an example of technological piracy see A. and N. Clow, *The Chemical Revolution. A Contribution to Social Technology* (1952), p. 224: where a Scottish printer is described whose skill was 'annually acquired by stealth from the working printers of London . . .'.

[8] Longfield, op. cit. Note 6, p. 230.

[9] Report of Select Committee on the Copyright of Designs, Parl. Papers, 1840, VI, QQ 2064–2073, subsequently cited as SC 1840.

[10] Longfield, op. cit. Note 6, p. 230.

[11] Ibid.

[12] 27 Geo. III *c.* 19.

[13] Longfield, op. cit. Note 6, p. 233. S. D. Chapman and S. Chassagne, op. cit. Note 2, pp. 196, 229: suggest Kilburn's campaign was 'against the Peels' while 'Peel . . . [is] more easily recognisable as imitator and pirate than as scientist or originator of ideas'.

[14] 34 Geo. III *c.* 23.

[15] E. Potter, 'A Letter to Mark Phillips Esq. M.P. in Reply to his Speech in the House of Commons, February 9th 1841 on the Design Copyright Bill', p. 12.

[16] 2 Vict. *c.* 13 & 17; J. Emerson Tennent, *A Treatise on the Copyright of Designs* (1841), p. 18.

[17] SC 1840, op. cit. Note 9, QQ 8000.

[18] Ibid., 487–492.

[19] It was also hard on individual designers. Thomas Barker Holdaway, a designer and teacher of design, complained about the cost of registration. SC 1840, op. cit. Note 9, QQ 2670–2677.

[20] SC 1840, op. cit. Note 9, QQ 7689–7690.

[21] Tennent, op. cit. Note 16, p. 2.

[22] Ibid. See Chapman and Chassagne, op. cit. Note 9, for a thorough discussion of the Peel family fortune.

[23] Tennent, op. cit. Note 16, p. 3.

[24] Ibid. J. Thomson, 'A Letter to the Vice-President of the Board of Trade on Protection to Original Designs and Patterns Printed upon Woven Fabrics' (Clitheroe, 1840) p. 6. He describes them more thunderously as '. . . a numerous, motley, heterogeneous mass of dissimilar and discordant elements, linked by one common principle of preying on the invention of others, and associated by vulgar ignorance, discerning avarice and unscrupulous morality'.

[25] SC 1840, op. cit. Note 9, QQ 7585–7602, 7631–7632, 7674–7680.

[26] There were three printworks in Ireland, all in the vicinity of Dublin.

[27] SC 1840, op. cit. Note 9, QQ 4359–4373; i.e. they had no printworks of their own but employed others to print for them. Schwabe with Hoyle & Co. were described as 'producers of the highest class of machine work'. J. Thomson, 'A Letter to the Rt. Hon. Sir Robert Peel, Bart., on Copyright in Original Designs and Patterns for Printing' (1840), p. 37. James Kershaw was MP for Stockport and Mayor of Manchester in 1849. He also owned large spinning and weaving concerns.

[28] Tennent, op. cit. Note 16, p. 4.

[29] Pieces produced per annum (a piece was about 28 yards):

	For the home trade	*For export*
1820	1728340	3727820
1825	1478508	6662368
1830	2281512	6315440

quoted in J. L. Kennedy, *Report of the Commission on the Employment of Children* (1843), p. B30.

[30] SC 1840, op. cit. Note 9, QQ 1–86.

[31] *MacMurdo* v. *Smith* 1798; SC 1840, op. cit. Note 9, QQ 7788–7794.

[32] Kershaw stated that he never published as the Act directed nor did the majority of Manchester printers. SC 1840, op. cit. Note 9, QQ 3649–3652.

[33] SC 1840, op. cit. Note 9, QQ 390–392.

[34] Ibid., QQ 3656–3658, 3707–3729.

[35] Ibid., QQ 737–742, 5618–5630.

[36] J. Brook agreed with Ross. SC 1840, op. cit. Note 9, QQ 721–723.

[37] SC 1840, op. cit. Note 9, QQ 88–123.

[38] SC 1840, op. cit. Note 9, QQ 371–375.

[39] Potter (1852), op. cit. Note 7, p. 30.

[40] 'List of English Calico Printers', in *The Textile Colourist* April (1876); reprinted by G. Turnbull, *A History of Calico Printing in Great Britain* (Altrincham, 1951), pp. 423–426.

[41] Tennent, op. cit. Note 16, p. 23.

[42] SC 1840, op. cit. Note 9, QQ 3615–3648, 3865–3868, 3930–3937.

[43] Ibid., QQ 1920–1922.

[44] Ibid., QQ 2846–2848, 2850–2851, 2883–2885, 2991–2994.

[45] Ibid., QQ 201–221.

[46] R. Godson, *A Practical Treatise on the Law of Patents for Inventions and of Copyright*, 2nd ed. (1840), p. 406.

[47] SC 1840, op. cit. Note 9, QQ 3704–3706, 4574–4595.

[48] Ibid., QQ 7064–7069. See also Potter to Phillips, op. cit. Note 15, p. 22.

[49] Ibid., QQ 3175–3181, 3187–3188.
[50] Ibid., QQ 3172–3194.
[51] Tennent, op. cit. Note 16, p. 16.
[52] SC 1840, op. cit. Note 9, QQ 3024. G. Wallis, 'The Past Progress and Present Artistic Condition of Calico Printing in Britain', unpublished MS of a lecture delivered at the Society of Arts, May 1849, collection of The Society of Dyers & Colourists, Bradford. 'The introduction [*c.* 1840] of de laines . . . fancy woven fabrics and the cheapening of silks, tended to displace the finer specimens of printed calicoes . . .'. 'London remained more than 20 hours away until the 1840s': A. Thackray, 'Natural Knowledge in Cultural Context', *American Historical Review*, LXXIX (1974), 679.
[53] Thomson to Vice-President, op. cit. Note 24, p. 5.
[54] Tennent, op. cit. Note 16, in 'Dedication'; see also p. 41 for details of extensive copying of Henry's products, especially by Kershaw. Kershaw discussed his copying: SC 1840, op. cit. Note 9, QQ 3307–3326, 4259–4300, 4301–4304.
[55] Tennent, op. cit. Note 16, p. 26.
[56] Thomson to Peel, op. cit. Note 27, p. 30.
[57] SC 1840, op. cit. Note 9, p. 8.
[58] Tennent, op. cit. Note 16, pp. 44–45; Ibid., p. 45 — a retrospective observation as Potts had died in 1836.
[59] Thomson to Peel, op. cit. Note 27, p. 9.
[60] N. Senior, *On Improvement of Design and Pattern and Extension of Copyright* (1841), p. 3. 'The evidence collected by the Committee of the House of Commons on the arts and manufactures in 1835 and 1836, and that collected by the Committee on Copyright of Designs in 1840, have established both the low rank which England holds in the application of the fine arts to manufacture, and the loss occasioned by this deficiency.' (Senior had read Thomson's 'Letter' to Peel, op. cit. Note 27.) See also Dyce's *Report on Foreign Schools of Design* (1838), which refers to the '. . . thankless drudgery [of] pattern draftsmen . . .', p. 13. Dyce deplores manufacturers and 'ignorant workmen' making design decisions.
[61] Thomson to Peel, op. cit. Note 27, p. 16.
[62] SC 1840, op. cit. Note 9, QQ 2880–2882.
[63] SC 1840, op. cit. Note 9, QQ 6506.
[64] SC 1840, op. cit. Note 9, QQ 1105–1115.
[65] Thomson to Peel, op. cit. Note 27, p. 17. 'During the period when the art of printing flourished most because best understood, in the neighbourhood of London, and piracy had not become either so wealthy or so mischievous as it is at the present day, pattern drawing flourished also.'
[66] Lee said English copper rollers were exported in large numbers (which was true), and accused Joseph Lockett of engraving them with copied English designs. Lockett replied, in an angry letter, that he exported only his own designs, of which he had 20000, or designs supplied by the customer. Foreign customers were not much interested in English designs — out of 300 recent patterns he had prepared for export, only six were English: SC 1840, op. cit. Note 9, QQ 4720–4727, 4732–4739, 4920–4929, 6971, 4937–4942, 4953–4960, 7044–7047.
[67] Potter, Lockett and Schwabe all said there was very little copying of English designs abroad. Thomas Lockett said M. Voortman in Belgium copied extensively. This was checked and then refuted vehemently in Tennent's book (op. cit. Note 16) by Voortman's own testimony: SC 1840, op. cit. Note 9, QQ 435–447, 5957, 8193–8194, *et infra*; Tennent, op. cit. Note 16, pp. 196–209, 271.
[68] Potter to Phillips, op. cit. Note 15, pp. 7–9.
[69] SC 1840, op. cit. Note 9, QQ 5312–5400.
[70] Tennent, op. cit. Note 16, p. 203. Curiously, the passing of the Bill 'gave such satisfaction to the merchants of Manchester that they presented [Tennent] with a service of plate valued at £300'. *Dictionary of National Biography* entry for Tennent.
[71] Thomson to Vice-President, op. cit. Note 24, p. 21.
[72] House of Commons, 9 February 1841; *Morning Post*, 10 February 1841.
[73] Potter to Phillips, op. cit. Note 15, 20 February 1841.
[74] 5 & 6 Vict. *c.* 100.
[75] 6 & 7 Vict. *c.* 65.
[76] PRO, BT 44.

[77] PRO, BT 43.
[78] PRO, BT 42; PRO, BT 44.
[79] See J. N. Bartlett, *Carpeting the Millions. The Growth of Britain's Carpet Industry* (undated), p. 19; F. Bradbury, *Carpet Manufacture* (Belfast, 1904), p. 160 *et seq.*
[80] Bartlett, op. cit. Note 80, pp. 62–63.
[81] N. Whittock, *The Complete Book of Trades* (1837), p. 246.
[82] BT 43 105–113.
[83] BT 43 187|BT 44, 14.
[84] BT 43 187, No. 17411. See p. 181.
[85] BT 43 170–180|BT 44, 12–13.
[86] F. Irwin 'The Printed Shawl in Scotland *c.* 1785–1870', *Costume*, Autumn (1981), 24.
[87] Ibid.
[88] BT 43 188, No. 3763.
[89] P. Floud, *English Printed Textiles 1720–1836*, V & A (London, 1960), p. 5; *CIBA Review*, 1 (1961), 16.
[90] For a useful discussion of garment designs at the PRO see Levitt, op. cit. Note 4.
[91] The title 'Thomson & Co' included designs from the Primrose Printworks at Clitheroe run by James Thomson, High Lodge, near Manchester run by his son Edward Peel Thomson, and Little Moor, near Clitheroe, run by his sons Henry and Charles Thomson.
[92] SC 1840, op. cit. Note 9, QQ 165–167.
[93] See inscription quoted in text, Note 85.
[93] Reprinted in Turnbull, op. cit. Note 40.
[95] Thomas Bull, *A Voice from the Bench* (1853).
[96] See p. 174.
[97] A few designs were registered by a 'David Ainsworth' but a connection with the firm has not been established.
[98] Floud, op. cit. Note 89, p. 8.
[99] Potter, (1852) op. cit. Note 7, p. 27; see also Chapman and Chassagne, op. cit. Note 2, p. 204: 'Most writers on textile printing have failed to recognise the importance of the popular market because nearly all of them have been essentially historians of design, entranced by the "classic" copper prints . . .'.
[100] Levitt, op. cit. Note 4, p. 50.
[101] Chapman and Chassagne, op. cit. Note 2, contains interesting passing comment on this, p. 204 *et infra*.
[102] C. M. Vialls, 'The Casting of Surfaces for Textile Handblock Printing', *Transactions of the Newcomen Society*, XLI (1968–69).
[103] See D. Greysmith, 'The Impact of Technology on Printed Textiles in the Early Nineteenth Century', *Design in Industry* (1980), 65.
[104] Potter (1852), op. cit. Note 8, p. 23.
[105] Turkey Red Discharge Patent for 1813, Number 3654; for 1815 Number 3881.
[106] Kennedy, op. cit. Note 29, p. B45; C. M. Mellor and D. S. L Cardwell, 'Dyes and Dyeing 1775–1860', *British Journal for the History of Science*, 1 (3) (1963), pp. 265–275: 'By skilful use of mordants and by careful mixing of dyes, the dyer of pre-synthetic days seems to have been able to produce a wide range of fairly fast colours and shades.' John Mercer suggested the use of antimony in 1817 to produce a printable yellow and orange and sold the process to Hargreaves and Dugdale of Broadoak, near Accrington. See *CIBA Review*, op. cit. Note 89, pp. 8–14.
[107] Lyon Playfair (1819–1898), Professor of Chemistry at Edinburgh 1858–1868, Liberal MP from 1868, elevated to the peerage in 1892. Edmund Potter developed a dyestuff called Tyrian Purple, see Mellor and Cardwell, op. cit. Note 106, p. 275.
[108] Designs from this firm were registered under the name of Seedley Printworks after 1846.
[109] Mellor and Cardwell, op. cit. Note 106, p. 274.
[110] E. Baines, *History of the Cotton Manufacture in Great Britain* (1835), p. 278.
[111] Floud (1960), op. cit. Note 1, p. 58.
[112] Wallis, op. cit. Note 52, p. 13; Floud (1960), op. cit. Note 1, p. 49.
[113] Irwin, op . cit. Note 86, p. 24. Muslins were also called Bareges or Balzerines: see Wallis, op. cit. Note 52, p. 17; and Chapman and Chassagne, op. cit. Note 2, p. 78.
[114] BT 43 214, No. 34359; BT 43 235, No. 58622.

[115] BT 43 244, No. 69572.
[116] Floud, op. cit. Note 89, p. 8.
[117] Potter (1852), op. cit. Note 7, p. 57.
[118] Charles Swainson of Bannister Hall, one of the leading printers, merchanted and registered designs under the name of his London office, Swainson & Dennys. See Floud (1960) op. cit. Note 1, p. 58. However, the designs registered were not especially notable, which perhaps reinforces the view expressed here. Thomas McAlpin transferred to Cummersdale, Carlisle from nearby Wigtown, in 1835. Their title changed to J. & H. McAlpin Stead & Co. in 1848 and to Stead McAlpin in 1860.
[119] SC 1840, op. cit. Note 9, QQ 2248–2259.
[120] Ibid. QQ 606–611.
[121] Ibid., QQ 5581–5583.
[122] Levitt, op. cit. Note 4.
[123] Potter (1852), op. cit. Note 7, p. 6: 'taste *has* improved corresponding with our demand'.
[124] Ibid., p. 59: 'We wait the demand: we cannot afford greatly to anticipate it . . .'; p. 52 'our taste is ruled by demand'.
[125] SC 1849, *Report from the Select Committee on the Schools of Design*. For details of the conflict between George Wallis, who was Principal at Manchester School of Design, and Edmund Potter and James Thomson, see Q. Bell, *The Schools of Design* (1963).
[126] Floud, op. cit. Note 89, p. 20. It is hoped to examine the truth or otherwise of this observation in future research.
[127] Potter (1852), op. cit. Note 7, p. 27, Cf. fn. 29.
[128] Ibid., p. 35.
[129] SC 1849, op. cit. Note 9, p. 769. His charges were: 5*s*. 0*d*. to 15*s*. 0*d*. for mousselines de laines; 3*s*. 6*d*. to 8*s*. 0*d*. for ribbons; and 30*s*. 0*d*. to £20 for carpets (including preparation for manufacture). He spent £12 per annum for samples of French designs, see p. 775.
[130] Potter (1852), op. cit. Note 7, p. 50.
[131] See p. 172.