3. The need for teazles

There is little reason to think that at the start of the eighteenth century, the West Riding, despite its importance as a cloth producer, accounting for about one fifth of the English output of woollens, was anything like as significant as a consumer of teazles. Much Yorkshire cloth consisted of cheaper cloths, especially narrow cloths such as the well-known kerseys, often raised with cards in the dry state. None of the known early representations of teazles or of handles belong to Yorkshire, and of the major woollen manufacturing districts at the start of the eighteenth century, the West Riding was the only one not to have its own nearby attendant teazle-growing trade.

Nevertheless, there was an older, local tradition of making good quality cloth, almost certainly dressed with teazles, going back to the twelfth and thirteenth centuries, not only at York and Beverley, but also at places in the West Riding itself, such as Wakefield, Ripon and Selby. As the industry migrated to its later centres against the Pennines this tradition did not disappear altogether, but was maintained in a small way, particularly at Leeds which in the fourteenth century had pits, fulling mills, dye vats and tenters, the apparatus of a broadcloth trade.

In the late 1550s, it was said that only broadcloth was made there,[1] and in 1626, the town was noted to be making good unstrained copies of Reading broadcloth. By 1647, the term 'Leeds cloth' was current in the cloth trade for the products of the town.[2] The 'handles, tassells' used in finishing them formed part of the typical items of equipment owned by Leeds clothiers of the sixteenth and seventeenth centuries.[3]

During the course of the eighteenth century, however, this broadcloth trade underwent an enormous expansion. In 1727, the first year for which there is a return of the number of broadcloths fulled at mills in the West Riding, the figure was 29,000, probably an under-representation, as up to 1765, the aulnagers' inspections were less stringent than they were later.[4] By 1737, when narrow cloths were also first reported, their number, 58,800, still exceeded that of the 43,100 broad pieces for the year; but given the extra width of the latter, it is evident that by then the actual amount of broadcloth being manufactured was greater.[5] In 1747 broadcloth output reached a recorded 62,500 pieces, but there was then a lull in the rise, especially during the Seven Years' War, when the annual production stagnated at around 50,000. With the ending of the war though, in 1763, output again rose very rapidly to over 90,000 pieces a year in the late 1760s, with a high point of 102,400 in 1767. From 1777, with the exception of one year, the recorded amount was always above 100,000, with a further peak in 1792 at 214,900 pieces. After 1795 the total always exceeded 200,000, rising by 1805 to 300,200. In most years after that up to 1820, when this series of records ended, output was over 300,000 pieces per year, with 369,000 reached in one year, 1813. Narrow cloth production also rose to a peak of 190,500 pieces in 1792, after which production fell, but without going lower than 150,000 pieces each year up to 1820. The results of this immense overall expansion was that by the end of the eighteenth century, the West Riding had become the leading centre of the woollen industry, accounting for around 60 per cent of the country's output, and later on in the 1850s it still produced half of the woollen cloth made in the United Kingdom.[6]

Between 1727 and 1820, the recorded broadcloth production in Yorkshire had, therefore, risen by eleven times or so, and it is reasonable to assume that teazle consumption also went up by at least that amount, apart from what extra was required by the increase in the production of narrow cloths, some of which, such as cassimeres, by the end of the eighteenth century, were as heavily raised with teazles as the finest broadcloths. In fact, in the broadcloth section alone, it is fairly certain that the increase in teazle consumption was far greater than eleven-fold, owing to the fact that throughout the

period rates of usage per piece were going up to varying degrees in different parts of the industry in Yorkshire.

There were a number of generally connected reasons for this. There was, in the first place, in the eighteenth century, a greater amount of attention given to standards of quality. Leeds broadcloths were still coarse examples of their kind, the chief deficiency often being the finishing. It was because of this, and so as to be able to compete more effectively with the West of England not only on price, but on a more acceptable level of quality, that already by the mid-1720s, some of the merchants who handled the Leeds cloth trade had set up their own private dressing shops, where the unfinished cloths bought in the markets could be finished under their direct control, and according to their particular instructions.[7]

This undoubtedly involved more work being put into the cloth with teazles, this being the chief determinant of the quality of the finishing, with a correspondingly greater consumption of teazles. Improvements were also made in the quality of the woven cloth, providing a better basis for more adequate standards of finishing. One district in the West Riding which turned to the weaving of better quality broadcloths was Saddleworth, where between 1740 and 1792, not only did the output each year rise from 8,620 pieces to 36,637, but the value of each piece, in the unfinished state, doubled. It was said that these were the finest broadcloths made in Yorkshire, and a good deal of the production, marketed unfinished through Huddersfield, ended up in the Leeds finishing trade.[8]

The need for adequate and more highly controlled standards of finishing, which largely depended on the use of teazles, was one of the reasons for the erection in Leeds of the Bean Ing factory in 1792 by Benjamin Gott. Bean Ing, an industrial building on a greater scale than any other previously seen in Leeds, was concerned to a large extent with the finishing of cloths either bought in the markets or woven for Gott's company. Routines were established for the finishing of the various classes and qualities of cloths, mostly broadcloths, that passed through the cropping shops, and these sometimes included very specific details about the number of times the cloth was to be raised with teazles, and about the kinds of teazles to be used.[9] The cloths which passed through Bean Ing included some of the more heavily raised cloths that appeared in the Leeds woollen trade in the later decades of the eighteenth century. Amongst these were the heavy cloths for outdoor wear, bearskins, duffles and fearnoughts, woven like a blanket, but more thickly milled and then raised to a deeper pile. Others were the fancy cloths, swansdowns and toilinets, soft thick fabrics popular for men's waistcoats for outdoor wear, toilinets in particular requiring a good deal of raising.[10]

Nevertheless, as the Bean Ing finishing routines show, even there around 1810, much of the middle and lower priced cloth, that constituted the greater part of the business, was raised only partly with teazles, and in some cases was hardly raised at all, and then only with cards. A much heavier consumption of teazles per piece though, was required in the finishing of certain high quality cloths of West of England type, the making of which Gott, in particular, introduced or undertook in order to challenge the dominance of the West of England manufacturers in the fine cloth trade. One less frequently referred to example was billiard cloth, previously made mainly in the West of England, but produced by Gott with considerable success.[11] However, the most significant of the more heavily raised cloths was the superfine broadcloth, the manufacturing of which was undertaken in Yorkshire before the end of the eighteenth century. This West of England cloth was the finest and most intensively raised cloth made anywhere in the woollen industry, with the highest consumption of teazles per piece. At Bean Ing around 1810, best superfine cloth was finished according to a complex and carefully sequenced routine, which involved twelve raisings by hand, thirteen in the case of stout cloth. Of these, ten raisings were carried out with teazles, mostly old ones, so as to build up the nap slowly and thoroughly. Cassimere, a very fine woollen cloth woven on a narrow loom, patented in 1766 by Francis Yerbury of Bradford-on-Avon, Wiltshire, and which was made in Huddersfield and in Leeds by 1800,

was finished at Bean Ing with teazles in the same way as best superfine cloth.[12]

The success of the intensively raised superfine broadcloth made at Bean Ing with Spanish wool helped to raise the reputation of the Leeds woollen trade, and this was given recognition in 1806 when, on his visit to Leeds, the Prince of Wales, whose interest in fashion was extensive, accepted specimens of Gott's finest cloths and declared he would wear them with pride.[13] However, the superfines and cassimere raised by hand at Bean Ing were in competition with the finest machine-dressed cloths made in Gloucestershire and Wiltshire, where despite prohibitions in earlier times, in Gloucestershire especially, the teazle gig was already in use in the eighteenth century.[14] The gig enabled the manufacturer or cloth finisher to raise the nap on the cloth a great number of times, with a corresponding improvement in quality, at what was still regarded as a trifling expense in labour. Whereas it could take four men five days to dress a single piece by hand,[15] in Gloucestershire at the start of the nineteenth century, a millman with a boy of sixteen and another of ten, working at a gig, could full and raise the nap on up to 84 yards of cloth every day. They worked, it was true, 'eighteen hours out of four and twenty; but they get through with the work, and no manufacturer would think of having more strength employed to perform it'.[16] So great were the savings in labour, that it was considered an impossibility to attempt to raise a fine cloth by hand to the same standard as cloth raised on a gig, handwork being 'so expensive that no English manufacturer will employ it, unless where, from the refractory disposition of the workmen they are not permitted to use the gig-mill'.[17] As a result, at the time when best superfine cloth was being raised by hand ten times with teazles at Bean Ing in Leeds around 1810, an equivalent West of England cloth was being given 120-140 'runnings-up' or raisings on the gig. There was a proportionately greater consumption of teazles, the raising of a piece 120-140 times consuming in the region of 1,200-1,400 teazles.[18]

The introduction of the gig into the West Riding finishing trade, at first into the fine cloth trade, where the rates of consumption were highest, and then more widely, was therefore, a further cause of the rise in the rate of teazle consumption in Yorkshire. Gigs had already been in use in the West Riding to some extent in the eighteenth century. They were employed for some purposes at Halifax in the 1750s,[19] but their subsequent adoption was slow, taking place mostly closer to the Pennines where there was water power to drive them and where the opposition of the workmen, referred to by Partridge, was less of an obstacle. In 1783 or 1784, gigs were in operation at Atkinsons of Bradley Mills, in Huddersfield. They were also brought into use by John Brooke & Sons of Honley, who by at least 1806, were producing gigged superfine broadcloth, possibly, it has been suggested, with a cloth manufactured with a softer weft, more suited to being raised on the gig.[20]

In the main Leeds trade though, despite, for instance, the published intention of the merchants in 1791 to put themselves in a position of equality with the manufacturers elsewhere in the country, the violent opposition of the croppers held up the introduction of the gig.[21] As a result, although it was a commonplace fact, in Leeds, that the deficiency of Yorkshire cloth compared with that of the West of England was the result of dependence on hand raising, by 1812, no more than a handful of gigs had made an appearance in Leeds itself.

The main agent responsible for bringing the gig into the Leeds fine cloth trade was William Hirst, Gott's one-time cropper and subsequent business rival. As a master cropper himself, unable to bring his cloth to West of England standards despite spending 'ten per cent for wages in the finishing department alone' to have the raising done by hand, in 1813, Hirst saw a gig in use at Oatlands Mill, Leeds, and realised that this was the answer to the problem of the Yorkshire fine goods trade.[22] In these years, after the main Yorkshire Luddite outbreak of 1812, Hirst, carrying pistols for protection and with his premises under armed guard, opened a new mill of his own in 1816, producing superfines designed with a softer weft for raising on the gig. In 1821, as a demonstration and challenge to the world

he made a number of pieces woven and finished to an exceptional standard, and sold at enormous prices, one piece being bought by George IV.

Hirst's own business career came to an abrupt end in a financial collapse in 1825, but by then, elsewhere in the Yorkshire superfine trade gigs, with their heavier rates of teazle consumption, were appearing. The first gigs were installed at Bean Ing in 1824, and more followed in 1829-30.[23] The gigging of superfines had also become established in Saddleworth, where the expanded production of high quality broadcloth in the latter decades of the eighteenth century had included the weaving of superfine broadcloths, many comparable, it was said in the 1790s, with those of the West of England.[24] By 1834, there were sixty gigs at work in mills on the numerous small streams of the district, gigging superfines in Saddleworth itself. Each of these gigs consumed half a Yorkshire pack of 13,500 teazles each week, making an annual quantity of 1,560 packs equal to 21,060,000 teazles, in addition to the considerable amounts used by hand.[25]

Although the need for the gig was greater in the fine cloth trade, where the highest rates of teazle consumption were generated, through the second quarter of the nineteenth century, the numbers of gigs in the West Riding expanded rapidly as the economies and the advantages of the gig were taken up in other sections of the industry. In particular, large numbers of gigs came into use in the mills around Batley and Dewsbury where the reclaimed wool fibres shoddy and mungo were used to produce an immense range of heavy woollens and overcoatings, in addition to other cloths such as blankets and cheaper broadcloths.

According to Samuel Jubb in his *History of the Shoddy Trade,* of 1860, teazle gigs had come into this business in the latter part of the 1830s, being very important for the excellence of those cloths that were gigged to produce their essential qualities of warmth and resistance to the weather. The gentler action of the teazle gig compared with that of the wire gigs of the time is also said to have been more appropriate for those cloths which were weaker in constitution, being made from fibres of a shorter length. [26] The teazle gig according to Jubb was also important because it was more economical, cutting the amount of hand-raising that still also had to be done as part of the work. So great was the increase in the numbers of gigs through the second quarter of the nineteenth century, that, whereas in the early 1830s, Saddleworth's sixty gigs had merited particular attention, a year or two later, a single mill in Huddersfield, that of Starkey & Buckley, is known to have had twenty gigs in operation, and fifteen brushing mills, and a mill referred to by Baines in 1858 was running twenty-four gigs.[27] By then, the Leeds and Huddersfield districts together contained over 1,000 gigs, though a certain, but unknown number of these would have been wire gigs.[28]

* * *

By around 1840, the overall rise in the demand for teazles in Yorkshire, as elsewhere, had probably reached its peak, as the fashion for the older plain cloths receded, and newer, more varied fabrics such as the trouserings made in the Huddersfield area, began to appear on the market.[29] The West of England woollen trade, more committed to the traditional cloths, was in decline from the mid-1820s. Although the demand for teazles in the West Riding had risen steadily since the early eighteenth century, there is, however, no contemporary assessment to say whether by the time of maximum demand, Yorkshire had already outstripped the West of England as a consuming market. The West of England still produced the finest and most heavily raised cloths, and by the early 1820s, in the face of competition from Yorkshire, the manufacturers there had increased the quality of their cloth with a greater number of raisings and an increased number of teazles. In 1832, the number of raisings or runnings-up on the gig for the manufacturing of the finest cloths had risen from the earlier figure of 120-140 to 150-200, this producing a consumption of 1,500-2,000 teazles per piece.[30] According to Bischoff, probably also referring to the West of England practice, the finishing of a 40 yard piece of cloth took up

3,000 teazles.[31] However, the West Riding also had its own successful plain cloth trade, plus an immense production of less heavily gigged cloths.

The changes in taste, however, meant that between the 1840s and the 1860s, two of the chief teazle-consuming sections of the Yorkshire woollen industry, the Leeds plain cloth trade and the Saddleworth superfine trade went into decline, the latter to such an extent that by 1870, Saddleworth was regarded as no longer being in the woollen district.[32] Increasingly, by the 1860s and 1870s, it was becoming evident that the main residual teazle market in the West Riding was the heavy woollen district in and around towns such as Dewsbury, Batley, Heckmondwike, Ravensthorpe, Earlsheaton and Morley, where vast amounts of an enormous range of cheaper gigged cloths were made. The trade in this area received a boost after 1869, with the construction of the first through rail link across Leeds, which gave the manufacturing towns direct access to the ports, particularly Hull, as well as other commercial advantages.[33]

Up to the mid-Victorian period, the mills in the West of England continued to consume considerable quantities of teazles.[34] However, by the 1860s, there was an immense and growing disparity in the number of gigs of all kinds between Yorkshire and the West of England counties of Gloucestershire, Wiltshire and Somerset.[35] The introduction of the Moser wire raising machine in the 1880s, undoubtedly made further inroads into teazle consumption in Yorkshire. However, with the collapse of large-scale demand in the West of England, by 1914, even in its reduced state, the West Riding consuming market, centred mainly on the heavy woollen towns, was clearly the dominant sector in the teazle business in the country. Apart from the surviving localised demand in the West of England, with some mills in Gloucestershire, mostly, making fine cloths, and others at or near Trowbridge, the only other significant regional market for teazles was that in the Scottish woollen industry, mainly lying across the Borders between Carlisle and Edinburgh, with Galashiels as the principal industrial and commercial centre.

During World War I, teazle consumption in the West Riding was inevitably affected by the conditions of wartime. Cloth production in Yorkshire was largely geared to the manufacturing in volume of cloths for uniforms for the British and Allied governments. Labour shortages conflicted with the use of teazle gigs, wet raising being a labour-intensive process compared with raising on wire gigs. In addition, both English and foreign teazles were in shorter supply.

After the end of the war, there was a steady revival in teazle consumption again up to 1924, when the post-war boom in the woollen trade came to an end. By that time, there was only a single firm in Yorkshire, Wormald & Walker's of Dewsbury, who made over 1,000,000 blankets a year for home, foreign and colonial markets, that still had as many as twenty-five gigs in operation.[36] After 1924, the demand was flattened again through most of the Depression years of the rest of the 1920s and 1930s, picking up once more by the later 1930s.[37]

The Second World War had similar effects on the use of teazles as World War I. In the post-1945 period, the West Riding still had a diminished, but still significant core market in the heavy woollen district for stem teazles used on the traditional gigs, though there was also a significant demand for the spindle teazle used on some more expensive fabrics, lighter cloths and knitwear. With the onset of the textile slumps of 1957 and 1958, though, this core market began to disappear, so that according to one estimate, by the early 1970s, some 80 per cent of the mills in the Batley and Dewsbury area that had used stem teazles, had either closed or changed their type of business, so that they no longer used gigs.[38] During the 1960s as a result, the West Riding itself ceased to be the main consuming market in the country, the business in spindle teazles, particularly in Scotland, providing the principle part of the remaining trade.

By the 1970s, too, the mills in the West Riding that still continued to use gigs were facing the retirement of the last generation of setters, the skilled workmen who set the stem teazles in the iron rods or frames in which they were attached to the gigs. In the

1970s, only a relatively small number of mills in Yorkshire continued to use a few teazle gigs, either for speciality cloth such as billiard table covering or high quality cloths such as llama and vicuna. Nevertheless, in 1974, one firm, Henry Wheatley & Sons of Mirfield, who still ran five elderly gigs, were said to be using as many as 3,000,000 teazles a year, with a setter working there for three days a week.