

Notes

Part 1: The background

1 The fullers' teazle and its uses

1. Also formerly known as *Carduus fullonum* and *Dipsacus sativus*, and variants.

2. J. P. Wild, *Textile Manufacture in the Northern Roman Provinces* (Cambridge, 1970), p. 83, n. 6.

3. John Smith, *Chronicon Rusticum-Commerciale; or Memoirs of Wool*, 2 vols (London, 1747), II, p. 477.

4. Eleanora Carus-Wilson, 'The Significance of the Secular Sculptures in the Lane Chapel, Cullompton', *Medieval Archaeology*, 1, (1957), p. 110.

5. Clooth that cometh fro the wevyng is noght comly to were
Til it is fulled under foot or in fullyng stokkes,
Wasshen wel with water and with taseles cracched,
Ytoked and yteynted and under taillours hande;

William Langland, *The Vision of Piers Plowman*, ed. A. V. C. Schmidt (London, 1995), p. 268, later fourteenth century.

6. Carus-Wilson, p. 112 and Plate XVI, C and D, church bench-ends at East Budleigh, Devon and Spaxton, Somerset; p. 113 and Plate XIV, B, misericord in Rouen cathedral; pp. 109, 110 and Plate XV, B, stonework in the Lane Chapel, 1526, Cullompton; pp. 105 and 110, and Plate XVI, B, stained glass attributed to the early sixteenth century, cathedral of Semur-en-Auxois, France; p. 112, memorial brass of John Jay, St. Mary Redcliffe, Bristol; the late fifteenth or early sixteenth century embroidered funeral pall of the Clothiers' Company of Worcester, in the Commandery, Worcester; the arms of the Clothworkers' Company, London, depicted also in stained glass at the church of Stoke by Clare, Suffolk, see letter in *Country Life*, 2 Oct 1958, and on the signboard of the Ram and Teazel, Queenshead Street, Islington, see [Jacob Larwood and John Camden Hotten], *The History of Signboards*, 8th edn (London, 1865), p. 149; Carus-Wilson, p. 113, the arms of the Weavers, Tuckers, and Shearmen of Exeter, incorporated 1479-80, and the civic arms of Kendal and of Ashburton. See also pp. 112 and 113 for the teazle as an emblem in a fresco in a medieval house at Loose, Kent, where cloth was once made. A handle is one of a group of associated objects carved at almshouses of 1659 at Kendal, see letter in *Country Life*, 14 Aug 1958.

7. e.g., Carus-Wilson, p. 112, which refers to a Leicester ordinance of 1343 forbidding the fullers to use any 'iron instrument that is to say bachandle, cardes or skrattes'; an Act of Parliament of 1463-4 decreeing that every fuller should use 'Taysels and no Cards'; and a decree of 1514 at Coventry that no cards, 'roughht' teazles or anything else that might hurt the cloth were to be used, only 'dobyms' or smooth teazles. Using teazles on dry cloth could have a similar damaging effect, see p. 110 which refers to an early technical regulation from Leicester in 1260, where fullers were made to swear that they would not use the 'bachandle', here said to refer to the teazle handle, on dry cloth.

8. N. Pilkington, 'Fundamentals and Developments in Cloth Raising', *Textile Mercury and Argus*, 139 (26 Dec 1958), gives about 1860 as the time of the appearance of the spindle teazle raising machine. This was the time when Tomlinsons of Rochdale made their first raising machine which was a machine of this kind, though there was no suggestion that they invented the machine, and there are indications that it may have been around earlier. In 1881, when patenting improvements in spindle raising, Ernst Gessner's patent agent said that rotary teazles had then been in use for some years, United Kingdom Patent No. 1791, 1881.

9. Mary Jane Jordan Gentry, 'The Teasel and the Textile Industry' (unpublished M. A. thesis, University of Tennessee, 1951), p. 49, which refers to a wire cylinder gig in a mill at Providence, R. I., in 1812, made with brass wire teeth.

10. Pilkington gives the mid-1870s as the time when Edward Moser's planetary card wire raising machine came out, and according to Tomlinsons, the year when the contact was made was 1875. However, 1884 seems to have been the year of the United Kingdom patent; see also *A History of Technology*, ed. C. Singer (Oxford, 1958), V, p. 587, which refers to 1884 as the significant date. The 'Climax' card wire raising machine based on the Moser pattern, by Tomlinsons, was used as

the example of the kind in the illustrations in the *Textile Mercury* 'Wool Year Books' before World War I.

11. *The Victoria History of the Counties of England, Yorkshire* (London, 1912, repr.1974), II, p. 335: 'In one of the large establishments for making machines for finishing cloth, a room was filled with derelict models of machines, each of which represented the forlorn hope of the inventor that his work would enable the woollen manufacturer to dispense with the teasel.'

12. United Kingdom Patent No. 1791, of 1881, on behalf of Ernst Gessner, also proposed an artificial substitute for the rotary or spindle teazle using a wooden body studded with short wires. A later version of this idea, using a rubber body set with wires was seen in one Yorkshire mill in the 1970s.

2 The trade in teazles

1. For medieval growing in England, and the internal trade in teazles in the thirteenth and fourteenth centuries, see Carus-Wilson, p. 111.

2. W. Cunningham, *The Growth of English Industry and Commerce during the Early Middle Ages*, 5th edn, (Cambridge, 1927), pp. 193, 305, 439, and 656, which provides the Latin text of the Ordinance of the Staple and the reference to *cardones qui Tasles vulgariter nuncupantur*, 'thistles which are commonly called Tasles'. The frequently-used pronunciation of the word, represented in the nineteenth and twentieth centuries as 'tazzles', for instance, clearly goes back a long way, see also Langland's *Vision of Piers Plowman*.

3. See Carus-Wilson, p.111, and n. 43, for the developing import trade, and the place of the Exeter consignment as an early example of this. Although the quantities in the teazle trade are sometimes impressive, it has to be remembered that the 18,000 teazles landed in Exeter was less than a single English West pack of 20,000.

4. See *The Universal British Directory*, 2nd edn (1793), I, p. 751, for the then import duty on 'Tazels' at the rate of 1s. 2d. per thousand. In 1840, the duty was still 1s. 0d. per thousand. This duty was by no means prohibitive, as it took only a relatively modest rise in the domestic price for it to become feasible to import teazles. Although this price could swing from £4 to £22 for a pack (of 20,000), the average cost was £5-£7, and it only needed a rise to £8 to make it worthwhile to buy them from abroad, see *The Penny Magazine*, 28 July 1832.

5. *Memoirs of Wool*, II, p. 477, for a brief reference to teazle growing in England. Smith says only that the teazle 'is propagated in several Parts of England more or less, but in the greatest Quantities, at Wrington in Somersetshire'.

6. *A History of the County of Gloucester [The Victoria History of the Counties of England]*, ed.. C. R. Elrington and N. M. Herbert (Oxford, 1972), X, pp. 149 and 94; also, [William] Marshall, *The Review and Abstract of the County Reports to the Board of Agriculture* (York, 1818, repr. New York, 1968), II (1809), p. 456.

7. *Memoirs of Wool*, (1747) does not mention growing in Essex. However, see Marshall, *Review and Abstract*, III (1811), p. 486, and *The Victoria History of the County of Essex*, ed. W. Page and J. H. Round (London, 1907), II, pp. 423-425.

8. *Memoirs of Wool*, II, pp. 477-478.

Part 2: Supply and demand in the West Riding of Yorkshire

3 The need for teazles

1. W. B. Crump and G. Ghorbal, *History of the Huddersfield Woollen Industry* (Huddersfield, 1935), pp. 32-33.

2. Eric Kerridge, *Textile Manufactures in early modern England* (Manchester, 1958), p. 28.

3. Crump and Ghorbal, p. 33. Also, *The Leeds Woollen Industry 1780-1820*, ed. W. B. Crump (Leeds, 1931), p. 15, referring to handles in the possession of the late John Harrison of Gipton, Leeds, 1553, and '8 course of handles that hold the teazels for raising the nap' listed in the inventory of John Pawson of Leeds, 1576. The 'Working Shop' of Richard Wright of Leeds in 1684 contained two stavs of 'Tassels', see John Addy, *The Textile Revolution* (London,1976), p. 74, where the transcription 'stone' is fairly certainly a misreading.

4. For the figures for cloth output see B. R. Mitchell, *British Historical Statistics* (Cambridge, 1988), p. 351, 'Broad and Narrow Cloth Milled in the West Riding of Yorkshire – 1726-1820'.

5. *Ibid.*, p. 351, n. 3, giving an average width of 54 in for broadcloth, and 27 in for narrow. Cloth lengths varied, but the width was the main relevant factor here.

6. *Yorkshire Past and Present* by Thomas Baines, including *An Account of the Woollen Trade of Yorkshire* by Edward Baines M. P., 2 vols of 2 books each (London, n.d., but consists of a paper of 1858 and a supplementary account to 1870 by Edward Baines), I (Book 2), p. 655.
7. E. Lipson, *The Economic History of England* (1931, 6th edn 1956, repr 1961), II, p. 54.
8. See J. Aikin, *A description of the Country from thirty to forty Miles round Manchester* (London 1795), pp. 558, 554-555, and Baines, I (Book 2), pp. 667-668.
9. *Leeds Woollen Industry*, p. 301, which reproduces the finishing routines in a notebook recording mill practices at Bean Ing, c. 1808-10. See also pp. 272-274 for the dating of the notebook.
10. *Ibid.* pp. 54-55.
11. *Ibid.*, p. 280.
12. D. T. Jenkins and K. G. Ponting, *The British Wool Textile Industry 1770-1914*, (Edington/London, 1982), p. 335, and *Leeds Woollen Industry*, pp. 54-55 and 301.
13. *Leeds Woollen Industry*, p. 52.
14. Jenkins and Ponting, p. 213, and E. Lipson, *The History of the Woollen and Worsted Industries* (London, 1965), pp.188-189, which refers to a comment of 1803 that in Gloucestershire and Wiltshire, the gig mill had been in use 'longer than anyone can remember'.
15. Lipson, *Economic History of England*, II, pp. 473, quoting Postlethwayt, 1757, one of several different contemporary assessments of the numbers needed to dress cloth by hand.
16. William Partridge, *A Practical Treatise on Dying of Woollen, Cotton, and Skein Silk, with the manufacture of broadcloth and cassimere* (New York, 1823, repr Edington, 1973, introd J. de L. Mann), p. 80.
17. *Ibid.*, p. 73.
18. *Ibid.*, p. 78 for the numbers of runnings-up, and *The Penny Magazine*.(1832), p. 162, which gives the rate of teazle consumption relative to the number of raisings. Partridge also says specifically in his introduction that more raisings resulted in a greater consumption of teazles, p.5.
19. *Leeds Woollen Industry*, p. 46, in the evidence to the Parliamentary Committee, 1806.
20. *Ibid.*, pp. 46 and 51.
21. *Ibid.*, pp. 317-319 for the petition, which lists the counties where gigs were in use. For attacks on mills in Leeds using gigs, in 1799, and in 1801 at Bean Ing, see pp. 46-47, and p. 327.
22. *Ibid.*, pp. 48-51 for the main outlines of Hirst's business career..
23. *Ibid.*, p. 57.
24. Aikin, p. 558.
25. Pigot and Co.'s *National Commercial Directory* (London and Manchester, 1834), p. 906 gives the earliest reference to this information, under heading for Saddleworth.
26. Jenkins and Ponting, p. 214.
27. Baines, I (Book 2), p. 653.
28. *Ibid.*, p. 655.
29. The earliest known reference to falling consumption, as reflected in a decline in cultivation occurs in *The Penny Cyclopaedia*, 24 (London, 1842). The cause given was the apparent success of wire which made teazles unsaleable. However, this was said to have been followed by a price rise again once it was found that the wire machines tore out the knots.
30. *The Penny Magazine* (1832), p. 162.
31. *The Victoria History of Somerset*, ed. W. Page (London, 1911), II, p. 357, referring to J. Bischoff, *Comprehensive History of Woollen and Worsted Manufacture*, 2 vols (1842).
32. Baines, I (Book 2), p. 669.
33. *The Oxford Companion to British Railway History*, ed. Jack Simmons and Gordon Biddle (Oxford/New York, 1997), p. 259.
34. *The Victoria History of Somerset*, II, p. 542.
35. By the start of the 1860s, the number of all gigs in Yorkshire was 1,519, and in Gloucestershire, Wiltshire and Somerset, 233, 192 and sixty-nine respectively. In the second half of the decade, the respective totals were 1,855 compared with 366, 152 and sixty-seven. Near mid-1870s, there were 2,417 gigs in the West Riding: *Returns of the Numbers of Factories*, 1861-2, 1867-68 and 1874-75.
36. Norman Dawson teazle setter, who started work at Wormald & Walker's as a teenager in 1923. He was told when he came into it that he was entering a declining trade.
37. See imports record in the *Annual Statement of the Trade of the United Kingdom* for years from 1918 to 1939 inclusive; also D. Rowe, 'The Cultivation and Uses of the Fullers Teazle', *Journal of the Bath and West and Southern Counties Society*, Sixth Series, 12 (1937-38) p. 35.

38. Cyril George of the Huddersfield teazle merchant Edmund Taylor (Teazle) Ltd., speaking of the change in his firm's business.

4 Sources of supply

1. A. T. Lucas, 'Cloth Finishing in Ireland', *Folk Life*, 6(1968), pp. 25-26, quoting William Tighe, 1800.
2. R. B. Dobson, *Selby Abbey & Town* (1969, rev. 1993), pp. 14 and 18-19.
3. *Ibid.*, p. 18.
4. *Leeds Woollen Industry*, pp. 35 and 37 for the role of Bewdley, and the route for fulling stocks sent from the West of England to Bean Ing in Leeds.
5. The earliest known reference to the cultivation of teazles in Yorkshire is in Arthur Young, *A Six Months Tour through the North of England* (first published 1770), 2nd edn (1770), I, p. 191.
6. See the entry for Biggin in the impression of Baines's 1822-23 directory reprinted in O. Ashmore (introd) *Baines's Yorkshire* (1969), p. 460: 'Teazles, so much used in dressing of woollen cloths, were first cultivated in this county at Biggin, brought by a gentleman from the West of England.'
7. George Walker, *The Costume of Yorkshire* (London, 1814), p. 65.
8. John Tuke, *General View of the Agriculture of the North Riding* (London, 1800), pp.116-117, classing teazles as one of the crops less commonly grown.
9. For the Yorkshire teazle cultivation see R. A. McMillan, 'The Yorkshire teazle-growing trade', *The Yorkshire Archaeological Journal*, 56 (1984), p. 155.
10. The earliest known references to the (Yorkshire) pack of 13,500, in both the growing trade and the West Riding woollen industry occur around the same time. See Marshall, *Review and Abstract*, I (1808), p. 480, and *Leeds Woollen Industry*, p. 302, quoting mill notebook from Bean Ing, Leeds, c. 1808-10.
11. William White, *History, Gazetteer and Directory of the West-Riding of Yorkshire*, 2 vols (Sheffield 1837-1838), I, p. 498.
12. See Charles Hadfield, *The Canals of Yorkshire and North East England*, 2 vols (Newton Abbott, 1872-73), I, p. 133.
13. John Billingsley, *Survey of Somersetshire*, 1795, quoted in A. W. Ashby, 'Teazles', *The Journal of the Royal Agricultural Society of England*, 74 (1913), p. 171.
14. *Victoria History of Somerset*, II, p. 543.
15. Billingsley, 1795.
16. Marshall, *Review and Abstract*, II, pp. 456, 457-458.
17. In 1830, three dealers from Worcestershire were doing business in Leeds, see William Parson and William White, *Directory of the Borough of Leeds* (Leeds, 1830), p. 174. Only one other reference to teazle growing in Worcestershire is known, also from a Yorkshire source of this same period, see White, *Directory of the West Riding of Yorkshire* (1837-38), II, p. 22.
18. *The Penny Magazine* (1832), p. 161.
19. Parson and White, *Directory of the Borough of Leeds* (1830), p. 174, 'Teasel and woad dealers'; *General and Commercial Directory of the Borough of Leeds* (Leeds, 1834), p. 335, 'Teasel dealers'; *A General and Commercial Directory of the Borough of Leeds* (Leeds, 1839), pp. 364-365, 'Teasel dealers'.
20. *The Textile Manufacturer*, 15 May 1881; and also William S. Murphy and others, *The Textile Industries A Practical Guide to Fibres, Yarns and Fabrics* (London, 1911), VIII, p. 110, which states that the Yorkshire teazle is the best.
21. In the 1860s, the Yorkshire dealer William Bean, of Church Fenton in the main Barkston Ash growing area in Yorkshire, turned increasingly to handling teazles from the West of England.
22. See the notes at the end of the 1885 edn. of *Costume of Yorkshire*.
23. F. A. Lees, *The Flora of Yorkshire* (1888), p. 275.
24. Information, 1973, from William Bortoft, relating the experience of his father George Bortoft.
25. For the Gloucestershire trade through the remainder of the nineteenth century, and into the twentieth, see *History of the County of Gloucester* (1968), VIII, p. 56 and illustration facing p. 183; also (1972), X, pp. 94, 121, 132 and 278. Also *Country Life*, 13 Dec 1958. In the twentieth century, the last Gloucestershire grower at Elmstone Hardwicke was a supplier to the Leeds teazle merchant firm of J. Sloman.
26. One of William Bean's suppliers of West teazles in the 1860s was at Bishop Sutton.
27. *Victoria History of Somerset* (1911), II, pp. 542-543.

28. Ashby, pp. 164-166.
29. *Ibid.*, p. 170.
30. *Victoria History of the County of Essex* (1907), II, pp.424-425.
31. *Ibid.*, pp. 424-425, for the Matravers. This states that the teazles were 'sold to buyers at Leeds, whither they are dispatched by rail', and according to Charles Shelley, Pattiswick Green, Coggeshall in a letter of 1974, teazles were sent from Kelvedon station.
32. Charles Shelley.
33. Mr. Bottin, nr. Nunty's Farm, 1973.
34. Ashby, p. 164.
35. Information about rates of duty in early 1840s kindly supplied by Miss J. B. Tanfield, House of Commons Library. For date of removal of duty and details of imports recorded 1853-70 inclusive, see *Annual Statement of Trade and Navigation of the United Kingdom* (HMSO), for the individual years.
36. See advertisement by John Briggs of Huddersfield and Milnsbridge, 'dealer in Foreign and English teazels', in William White, *Directory and Gazetteer of Leeds, Bradford* (Sheffield, 1853), p. 40 of advertisements. In the main Leeds trade, the earliest mention of foreign teazles occurs in William White, *Directory and Topography of the Borough of Leeds* (Sheffield, 1857-58, p. 55 of advertisements, 'Thos, B. Cornock English and Foreign teazle merchant'.
37. For the seventeenth and eighteenth century restrictions on the French export trade see *Memoirs of Wool*, II, pp. 477-478. However, when John Snook first grew teazles in the United States at Skaneateles, and harvested his first crop in 1835, prejudice meant that he had to sell them as French teazles, which would, therefore, appear to have been already sold there, see Gentry, p. 12. A representative or agent of growers in the south of France was taking a great interest in 1836 in what Snook was doing, see S. Parker Jones, *The Teasel Industry of Skaneateles, New York* [1961].
38. Gentry, p. 6, information from Gustav Naquet, French exporter.
39. *Memoirs of Wool*, II, p. 477.
40. Arthur Young, *Travels in France and Italy* (London, 1915, repr 1934), introd Thomas Okey, p. xx of Okey's introduction of 1915.
41. Ashby, pp. 164 and 170.
42. For Smith & Co., see *The Yorkshire Textile Directory and Engineers & Machine Makers Advertiser* (Oldham, 1911-12), p. 244.
43. Ashby, p. 170.
44. McLaughlin Brothers were selling teazles from Leeds by 1899, see 'Bought Day Book', p.182, of C. Hemingway & Co., Bradford Road, Batley, at Bagshaw Museum, Batley, their first directory entry appearing in [Kelly's] *Leeds Directory* [1901], p. 895.
45. For growing in America, particularly the Skaneateles trade, see Gentry and other information kindly supplied by the Skaneateles Historical Society, and the Town Historian, the heritage of Skaneateles being linked with its role as the chief American teazle-growing centre. See also Ashby, pp. 164, and 169-170 which includes details of the importation of Oregon teazles.
46. Ashby, p. 170.
47. Nevertheless, as will be seen, McLaughlin Brothers continued in business in Leeds through the war.
48. *Ibid.*, (1923-24), for Spanish teazles being sold by Sloman & Smith, the Leeds teazle merchants. In World War II, J. Sloman of Leeds bought stocks of Spanish teazles, information from Mrs. P. M. Smith of J. Sloman Ltd.
49. See *Annual Statement of the Trade of the United Kingdom* for years 1918-39 inclusive, and also Rowe, *JBWSCS*, p. 35.
50. *The Manchester Guardian*, 29 Aug 1957.
51. *Annual Statement of Trade* for imports recorded 1952-58 inclusive.
52. Mrs. P. M. Smith of J. Sloman Ltd.
53. Cyril George of Edmund Taylor (Teazle) Ltd., 1973.
54. Details about the end of growing in America from Skaneateles Historical Society, also letter from Oregon State Department of Agriculture, 1973.
55. Cyril George.
56. [Leeds] *Evening Post*, 16 Oct 1980, p. 8, and Cyril George 1985 and 1987.

Part 3: The commerce

5 Growers and dealers to the 1860s

1. Marshall, *Review and Abstract*, II, p. 458, relating to Gloucestershire, for March as the time when selling began. For the Shropshire teazle dealer Esau Palmer, in Leeds in the month of April, see West Yorkshire Archives Service, Kirklees, KC 165/157.
2. Ashby, p. 167.
3. McMillan (1984), p. 160.
4. White, *West Riding* (1837-38), II, p.22.
5. McMillan (1984), p. 162.
6. White, *West Riding* (1837-38), I, p. 666; [White, Leeds and West Riding Clothing District Directory, 1842], p. 181; William White, *Directory and Topography of the Borough of Leeds and the whole of the Clothing District* (Sheffield, 1843), p. 181; William White, *Directory and Topography of Leeds, Bradford, Halifax, Huddersfield, Wakefield and the whole of the Clothing District* (Sheffield, 1847), p. 221.
7. See also [Pigot's Directory of Yorkshire 1830], p. 1102; *Pigot and Co's National Commercial Directory* (London and Manchester, 1834), p. 467, as well as the Leeds directories.
8. For Jonathan Wilson see the various directories between the 1820s and the 1840s. For the consignment, see Yorkshire Insurance Company, endorsement to Farming Policy F6611, September 1840, details kindly supplied by Miss Alice W. Knight, company archivist.
9. See entry for Church Fenton in *Post Office Directory of Yorkshire* (London, 1857). William Bean's ledger was kindly made available by a descendant in the Church Fenton area. William Bean died on 9 Feb 1874 at the age of seventy-seven, having been predeceased by his wife Martha, who died on 21 April 1866 aged eighty-six. Their gravestone stands in the churchyard of the parish church of St. Mary the Virgin, Kirk Fenton close to the entrance to the church, with two other family graves nearby.
10. William Bean's decision to leave the teazle trade may also have had a more personal motivation. His elderly wife Martha died at the time when he was making his deliveries of his unsold stocks of teazles to Lambert's warehouse, and if her death had been preceded by a period of illness he may have been aiming to reduce his business activities accordingly.

6 Leeds teazle dealers, agents and merchants to the 1880s

1. *A directory, for the town of Leeds* (Leeds, 1800), p. 15, and *A New and Complete Directory for the Town of Leeds* (Leeds, 1807), p. 13.
2. *The Leeds Directory for 1809* (Leeds [1809]).
3. *Directory, General and Commercial of the Town and Borough of Leeds for 1817* (Leeds [1817]), pp. 53, 128, 205.
4. *Baines's Yorkshire*, p.127.
5. William Parson, *General and Commercial Directory of the Borough of Leeds* (Leeds, 1826), pp. 9, 178; and Parson and White, *Directory of Borough of Leeds* (1830), p. 167, where, as will be seen, one of the two named as dealers, George Pearson, was actually an agent rather than a dealer.
6. George Booth, Thwaite gate, Hunslet, George Dunnell or Denham, New Wortley, Leeds, and Richard Pearson, Halton, Leeds, see *General and Commercial Directory of the Borough of Leeds* (1834), pp. 286 and 335.
7. *A General Commercial Directory of the Borough of Leeds* (1839), p. 279 and also p. 364 for Joseph Baker of Stanks, Leeds.
8. Although the West of England dealers brought their supplies with them, by the 1830s, there was regular canal and waterway traffic up and down the country, and an agent such as William Dawson may have been overseeing consignments sent from Somerset or Gloucestershire in response to orders placed with him.
9. William White, *White's General and Commercial Directory of Leeds, Bradford, Huddersfield, Halifax, Wakefield* (Sheffield, 1875), p. 116 of advertisements.
10. See Leeds directories of 1839, 1841 and 1842 for Eliza Cornock.
11. *Porter's Topographical and Commercial Directory of Leeds* (Leeds, 1872-73), p. 168.
12. *McCorquodale and Co.'s Topographical and Commercial Directory of Leeds* (, 1876), p. 444.
13. A Batley mill record of teazle purchases in 1876 shows teazles bought from Thomas Bruce Cornock & Co. in March and May, including one lot auctioned, with all the following purchases into

1877 then made from Charles Yendole.

14. [Slade and Roebuck's Leeds Directory 1851], p. 41 of advertisements; William White, *Directory and Gazetteer of Leeds, Bradford* (Sheffield, 1853), p. 36 of advertisements; [Gillbank's Leeds and Neighbourhood Directory and Gazetteer, 1856], ref. p. 190; William White, *Directory and Topography of the Borough of Leeds* (Sheffield, 1857-58), p. 40 of advertisements; *Post Office Directory of the West Riding of Yorkshire* (London, 1861), p. 59 of advertisements; *The Post Office Directory of the West Riding of Yorkshire* (London, 1867), ref. p. 1523; William White, *White's General and Commercial Directory of Leeds, Bradford, Huddersfield, Halifax, Wakefield* (Sheffield, 1875), p. 116 of advertisements.

15. For the beginning of the Cornock operation at Sherburn, see *Post Office Directory of Yorkshire* (London, 1857), p. 1110. The next, and last, reference occurs in *Post Office Directory of the West Riding of Yorkshire* (London, 1861), p. 1309. In 1861 a Cornock child, Mary Eliza, was born in the Wetherby district, suggesting the presence of Thomas Bruce Cornock in the area to manage the Sherburn outpost. Mary was the name of Cornock's first wife who died in 1858, and Eliza and Elizabeth were Cornock family names.

16. Batley mill ledger purchase 20 March 1876 of '15 packs 38 staves of Teazles' from T. B. Cornock, Leeds, annotated in pencil '45 in pack', apart from the indication from the number of staves.

17. White's *Leeds directory* (1857-58), pp. 83 and 372.

7 The Leeds teazle merchants from the 1880s to 1914

1. *Oxford Companion to British Railway History*, p. 259.

2. S. Parker Jones.

3. Before World War I, for instance, Smith & Co. of Avignon, Vaucluse were able to supply stem teazles and also Moser spindle teazles, whilst the Normandy growers were also able to supply prepared and sorted stem and spindle teazles.

4. *Yorkshire Textile Directory* (1920-21).

5. [Leeds Post Office Directory] (Leeds, 1882). p. 588.

6. *Yorkshire Textile Directory* (1920-21) for the first specific known reference to the 'Teazle Works' at Gelderd Road.

7. Drying shed and barn described by Fred Boston of South Milford, whose father worked for James Bortoft & Sons, and William Bradley, South Milford.

8. For instance, probably, the delivery of a case of teazles, 12 November 1898 to C. Hemingway & Co. of Bradford Road, Batley, 'Bought Day Book', from South Milford.

9. William Bortoft, whose father George Bortoft was a cousin of Gib Bortoft.

10. *Yorkshire Textile Directory* (1914-15).

11. Information about Jacob Sloman and French teazles from Mrs. P. M. Smith, the daughter of Jacob Sloman's son Solomon Sloman.

12. C. Hemingway & Co., 'Bought Day Book', 1897-1900.

13. John Matthews, Todmorden, and his sister André Searle, Australia, descendants of Jacob Sloman.

14. Census, 1901.

15. 1861 Census.

16. William White, *White's General and Commercial Directory of Leeds, Bradford, Huddersfield, Halifax* (Sheffield, 1870), p. 199.

17. Ledger of Batley mill, Bagshaw Museum, 1876-77.

18. For the McLaughlin history see the article on the Internet by Jack Major, *Have teazels, will travel*.

19. C. Hemingway & Co., Bradford Road, Batley, 'Bought Day Book', Bagshaw Museum, shows a case of teazles bought from McLaughlin Brothers, Leeds, 29 June 1899.

20. *Yorkshire Textile Directory* (1913-14), p. 216.

21. For the relationship between the Yorkshire teazle merchants and the remaining Somerset growers prior to 1914, see Ashby, pp. 166-167, 169-171. The connection sometimes extended to the merchants providing seed from good quality foreign teazles to growers, with good results, it was said in 1913, though according to Edmund Taylor (Teazle) Ltd., French seed grown in England produced a crop of the usual English kind. Ashby thought it would have been a good idea for the growers to have banded together against the merchants, for higher prices, but the formation of a Teasel Growing Association about 1921, at Skaneateles, with this aim, had the unintentional

result of helping to push the American growing trade into further decline in the 1920s, Gentry, p. 54.

22. F. Matravers was undoubtedly Fred Matravers, born in Ilminster, Somerset about 1869, growing teazles at Latney's Farm, Hatfield Peverel, Essex, along with his brother-in-law Samuel Shavers, a farmer and teazle grower, also from Ilminster, and who in 1901 was farming at Great Coggeshall, and was presumably still growing some teazles.

8 The Huddersfield trade to 1914

1. Inventory of John Bothomley, late of Tunstead in Saddleworth, taken on 21 Mar 1708, copy in Saddleworth Museum, Uppermill.

2. D. G. Hey, 'The use of Probate Inventories for Industrial Archaeology'; *Industrial Archaeology*, May 1973.

3. *Huddersfield Woollen Industry*, p. 58, quoting the historian Morehouse.

4. [Baines's History and Directory of Lancashire] (1825), II, p. 44.

5. Pigot and Co.'s *Royal National and Commercial Directory and Topography* (London and Manchester, 1841), p. 293.

6. *Rochdale Recorder*, 11 Aug 1827.

7. *Directory of the Borough of Leeds* (1830), pp. 302 and 318.

8. *Yorkshire Textile Directory* (1923-24).

9. *Jones's Mercantile Directory of Halifax, Huddersfield and Dewsbury* (London, 1863-64), p. 412.

9 The Yorkshire teazle merchants after 1914

1. For Longroyd Bridge, see [Kelly's West Riding of Yorkshire Directory, 1917], p. 1416, and taped interview in 1987 oral history project at Tolson Memorial Museum, Huddersfield, Acc. No. 354 IN, with [Mr. Easton] 'teazle maker' at Edmund Taylor (Teazle) Ltd. from about 1951. My thanks are due to Chris Yates of Kirklees Libraries and Museums for informing me of this and kindly supplying a copy.

2. Norman Dawson, who started work in 1923 at Wormald & Walker's of Dewsbury, and was sent to help collect teazles from the various merchants, recalled a very old man at William North & Son. He assumed this to have been William North, but it can only have been his son, George Edward North.

3. The family quarrel was mentioned by Harry Sloman, Alfred Sloman's son, and the details came from Mrs. P. M. Smith, daughter of Solomon Sloman.

4. Details from Harry Sloman.

5. Cyril George and Mr Easton, former teazle setter, Edmund Taylor (Teazle) Ltd.

6. Norman Dawson and Mr. Easton.

7. Information about J. Sloman's imports of Spanish teazles during the Second World War from Mrs. P. M. Smith.

8. Details about J. Sloman Ltd. from Mrs. P. M. Smith.

9. Information supplied by Harry Sloman.

10. Mr. Easton.

11. Cyril George of Edmund Taylor (Teazle) Ltd.

12. *Yellow Pages* (1998-99), under Textile Machine Accessories.

13. Information from Border Technologies, Cleckheaton.

Part 4: Practices and Methods

10: Stem teazles

1. Carus-Wilson, p. 111.

2. *The Textile Revolution*, p. 73.

3. Norman Dawson.

4. Rowe, *JBWSGS*, p. 35, photograph B, shows a man wearing a long apron and a protective sleeve on his arm, with a West of England stav, probably late nineteenth century. The stav has twenty layers, each made of a fan-shaped bunch of twenty-five, giving a total of 500. Forty of these stavs made a West pack of 20,000, though when they reached the dealers and merchants in Yorkshire, they were sold on to the mills at the rate of twenty-seven to the (Yorkshire) pack of 13,500.

5. Marshall, *Review and Abstract*, II, p. 457.

6. Mr. Harrison, Church Fenton.

7. *Leeds Woollen Industry*, p. 302.
8. Gentry, p. 32. At a later time the teazles were packed in cartons calculated to hold a certain number rather than a certain weight, p. 34.
9. *Ibid.*, p. 34.
10. Ashby, p. 166.
11. Further to this, at J. Sloman packs of 13,500 for sale to Yorkshire or UK mills were weighed up rather than counted individually
12. Rowe, *JBWSGS*, p. 38, and Cyril George for 'two to one'.
13. R. A. McMillan, '“The Old Cropping Shop”', *Yorkshire Archaeological Journal*, 51 (1979), Fig. 1.
14. Dimensions from an original handle, perhaps nineteenth century, at the Tolson Memorial Museum, Huddersfield. However there was some variation in the design of handles, some having a transverse rod making it possible to hold a third row of teazles, see for instance medieval glass panel at Semur cathedral. Carus-Wilson, Plate XVI, B.
15. *Leeds Woollen Industry*, p. 15; and Norman Lowe, *The Lancashire Textile Industry in the Sixteenth Century* (Manchester, 1972), p. 112, quoting 'vi doossen of handells' in the will and inventory of George Holt of Salford, 1598.
16. *Leeds Woollen Industry*, p. 307; also *Costume of Yorkshire*, 'The Preemer Boy', p. 61 and plate XVI.
17. *Leeds Woollen Industry*, plate V.
18. Partridge, p.74.
19. *Ibid.*, p. 77.
20. *Ibid.*, p. 77
21. *Ibid.*, p. 77
22. Ammon Wrigley, *Annals of Saddleworth* (1901, ed. G. Kelsall, 1979), p. 42. Gig rods are referred to in a British patent of 1825. An illustration of rods being set can be seen in Charles Knight, *The Pictorial Gallery of Arts*, vol I *Useful Arts* (London, 1845), p. 105.
23. Baines, I (Book 2), p. 653.
24. D. F. E. Sykes, *Life of James Henry Firth* (Huddersfield 1897) pp. 71-72.
25. *The Victoria History of the Counties of England, Yorkshire* (London, 1912, repr. 1974), II, p. 335.
26. *The Textile Manufacturer*, 21, 15 Feb 1895, and C. Hemingway & Co., 'Bought Day Book', 1897.
27. William, South Milford.
28. Norman Dawson.
29. Bill Aston. For setting see also R. A. McMillan, 'The Last of the Teazle Setters?', *Country Life* 3 March 1977, and *Yorkshire Post* 6 September 1979.

11 Spindle or cut teazles

1. Norman Dawson.
2. Ashby, p. 167.
3. Mr. Bowring, finisher at Longwood Finishing Company, Huddersfield.

12 Teazles in use

1. *Costume of Yorkshire*, p. 61; also, *Leeds Woollen Industry*, p. 41.
2. *Costume of Yorkshire*, plate XXI.
3. *Leeds Woollen Industry*, p. 41.
4. *Ibid.*, p. 44.
5. I am grateful to Ian Mackintosh of the Stroudwater Textile Trust, Gloucestershire, for kindly supplying this reference, and for information about the use of gigs in the West of England.
6. E. A. Posselt, *Wool, Cotton, Silk from Fibre to Finished Fabric* (Philadelphia and London [c. 1904]), IX, pp. 319-322.
7. Bean Ing details from D. T. Jenkins, *The West Riding Textile Industry 1770-1835* (Edington, 1975), p. 64.

