

## PROSPERITY FORGOTTEN

### A study of the Stroudwater mills, 1850 to 1871

By Ian Mackintosh

There is a tendency to describe the fortunes of the Stroudwater textile industry in the mid 19th century in apocalyptic terms. History students ring me up and ask if I can help them with their essays on the 'collapse of the mills' in the 1830s. Any attempt to question this assumption can be met with astonishment and, at times, the severing of any further contact.

Certainly the situation can appear terminal. There were many bankruptcies, including the high profile one of Sheppard, which so decimated Uley. Chalford also suffered from the virtual disappearance of the coarse cloth trade. The masterful *Report on the Condition of the Handloom Weavers* paints a painful picture of the dislocation of historic textile communities.

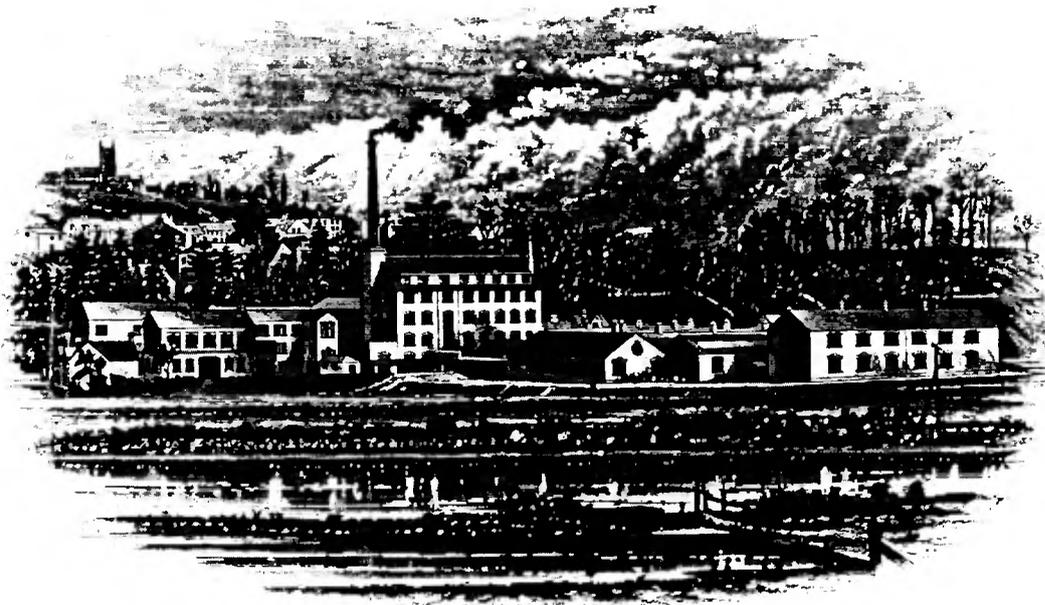
While the number of mills at Bradford in Yorkshire increased from 3 in 1800 to 160 in 1851<sup>1</sup> Jennifer Tann's maps of the mills catalogue a drastic decline in numbers, while her tables of cloth production suggest that the local mills were losing markets in a variety of products.<sup>2</sup> Add to these indicators the succession of bankruptcies, closures and sales of mills and machinery and the

presumption taken by history books that the region was unable to adapt seems to be conclusive.

However in 1853 the editor of the Stroud Free Press denounced the national papers when they ignored Stroud and district when considering a report on Australian wool.<sup>3</sup> Indeed the Great Exhibition of 1851 demonstrated that the industry was not entirely defunct. Two gold medals were won by local companies. Messrs J. & D. Apperly of Dudbridge won one for the finest English wool dyed black cloths and W. Helme esq. of New Mills was awarded his for the finest milled black doeskin of permanent colour. Black was a difficult colour which clearly the mills had the manufacturing

skills to handle but perhaps the most important point is that doeskins were a new product, developed only 14 years before in Rastric in Yorkshire.<sup>4</sup> Yet the West of England became major producers of this very fine, fashionable cloth.

This ability to reach high standards in fashionable materials continued in 1871, according to the *Report on the London International Exhibition of 1871*. 'West of England woollen cloths are superior to most others, owing to the care with which the materials are selected, and prepared, and also to the great skill used in dyeing and finishing the manufactured webs....' It goes on to say that Stroud (and Trowbridge) manufacturers 'well sustain the high reputation of the West of England

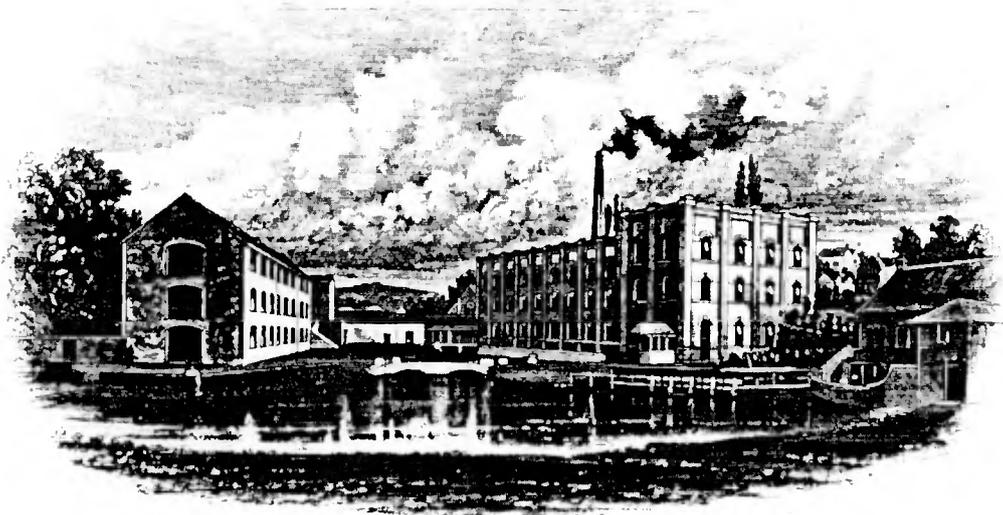


FROME HALL MILLS.

Gloucestershire Record Office (ref. D1815, 4/4)

as the oldest, and, for quality, the most important manufacturing district in Great Britain for the woollen trade.' New Mills, now owned by John Libby & Co., was one of the companies singled out for praise.<sup>5</sup>

The foundations for this eminence had been laid in the first half of the 19th century. By the 1840s mills had been transformed. Instead of simply being a source of power for the finishing machinery, the fulling stocks and the teasel raising gig, the successful mills had become centres for all stages of production. Carding and spinning by the jenny had become increasingly centred on the mill in the early 1800s while the invention of the rotary



LODGEMORE MILLS.

Gloucestershire Record Office (ref. D1815, 4/4)

cropper at Brimscombe in 1815 was quickly taken up nation-wide.

In 1848 Dunkirk used waterpower for all stages of manufacture except weaving.<sup>6</sup> This, though, was soon to change, no doubt driven by the speeding up of spinning as well as the development of better power looms. By the 1840s spinning was in its second generation of machinery at William Playne & Co. The company was installing mules, probably at their Avening mill. However in 1856 all production was concentrated at Longfords. An imposing new building contrasted in scale with the hotch potch of earlier structures. By 1878 a high pressure steam engine powered 1775 spindles on the top floor and 33 power looms below.<sup>7</sup> The exterior gives a superficial similarity to the neighbouring buildings because it is built of local stone and slate. However it is really a fine example of early Victorian design. It is well lit not only by large windows but also by rows of top lights. Four rows of mules can be housed because massive imported timber beams are supported on cast iron columns.

It is hard to trace the increasing use of power looms. Their use had been pioneered by the Stantons at Staffords Mill and William Marling at Ham in the early 1830s. However Peter Playne, who had suffered a painful strike by his hand-loom weavers, remained convinced that their jobs were secure provided they did not demand too much money.<sup>8</sup> Power looms were installed at Ebley Mill sometime after the arrival of Samuel Marling from Ham. A painting, dateable to the late 1850s shows

loom sheds in the background.<sup>9</sup> They survive there, though they now have a modern, raised roof. It is only at Fromehall Mill that the designer of such structures can be positively identified. In 1855 James Ferrabee invited builders to deliver quotes to his Phoenix Ironworks.<sup>10</sup> The loom sheds still survive, pre-dating the development of the much more common north light buildings. As at Ebley they are simple, single storey structures; the mill at Longfords is exceptional because of the limited space available. However there is one small feature, a square window in the gables at Fromehall that is echoed at Longfords and suggests that Ferrabee was the architect of both.

The expansion of production implied by the use of mules and power-looms would have been frustrated without the replacement of fulling stocks. William Partridge in his *Practical Treatise on Dying* recommended that fine cloths needed 16 to 18 hours continuous pounding to shrink to the right size.<sup>11</sup> At Stanley cloths were sometimes fullled for 24 hours.<sup>12</sup> Further expansion would therefore meet a bottleneck at the most important stage, the finishing of the cloth. Improved stocks were being made with iron supports. This meant that more compact and heavier hammers could be used. The Cam Mill ones survive and the hammers weigh around two hundredweight each.

However stocks could only work slowly and an invention at Trowbridge rendered redundant the extensive research done in Yorkshire to speed up the process. The rotary milling machine is a largely unreported development which could transform productivity. Instead of being dependant

on a waterwheel, rows of this compact machine could be placed anywhere convenient and driven from line shafting. It is true that the process was just as slow; fine cloths still needed 24 hours at Cam in the 1940s, and the cloths might become creased. This explains why the fulling stocks were kept at Cam in working order to the 1960s.<sup>13</sup> However the benefits far outweighed the problems and by 1871 the *Report on the London Exhibition* reported that the pounding of the stocks had fallen virtually silent.<sup>14</sup> The mills had cut their last link with the pre-industrial age.

Such mechanisation could not be achieved without an improvement to water power. Millowners in the early 1800s had sought to maximise this, to the consternation of the directors of the Stroudwater Canal. At Stanley five wheels generated 200 horse power while John Figgins Marling at Ebley had made do with four water wheels generating 80 horse power when the seven acre mill pond was full.<sup>15</sup> Far up towards the watershed the Playnes at Longfords had created a 15 acre mill pond to enable them to drive five wheels on the diminutive river Aven. They were helped in this by the development of all metal breast wheels such as those John Ferrabee, James's father, was installing in Dunkirk and in St Mary's in the early 1840s.<sup>16</sup> However they, like many others locally, were already investing heavily in steam power. Whereas the cost of buying land for the lake at Longfords and building a dam in 1806 was over £1300 one engine in 1815 cost £970, exclusive of carriage and setting up.<sup>17</sup> The Playnes had bought three steam engines by the end of the 1820s.

Steam power is always considered to have been there to support the wheels. At Dunkirk the 1848 analysis of water power implied that the 51 horse power provided all the energy needed to work the machinery.<sup>18</sup> However investment in mules, power looms and milling machinery reduced the possibility of depending on water. If all stages of production were centred on one site, steam power was essential. Furthermore the quality that manufacturers were striving for demanded that the machinery worked efficiently.

When he took over Ebley Mill in 1840 Samuel Marling recognised the need to exploit all forms of power available. He added an extra waterwheel which later was believed to be the largest in Gloucestershire. He also installed a compound engine and brought the best boiler over from Ham. Another 50 h.p. steam engine was later added to serve the western canal-side end of the site.<sup>19</sup> I have found nothing more about this engine, but the

one in the main block worked until the 1930s, supplementing the power of the remaining waterwheel. Between them they were able to drive carding machinery and spinning mules on three floors.



Ebley Cloth Mills, - painting by Daniel N Smith to be displayed at the new Museum in the Park in Stroud, opening December 2000. © Stroud District (Cowlē) Museum Trustees.

Local manufacturers have been criticised for their continued reliance on water-power. It is taken as evidence that they were technologically backward. However they faced the predicament of competing with an area, Yorkshire, where coal mines were integrated with the textile industry. In Gloucestershire the fuel had to be brought from the Forest of Dean. As early as 1844 Longfords took delivery of around 640 tons of coal. This was brought in 11 trows and delivered at Dudbridge wharf. The cost is only rarely recorded but a load in 1837 of High Delft coal cost 8/6d a ton.<sup>20</sup> It then had to be carted along the turnpike road to Nailsworth and then along the road to Longfords and Avening that William Playne's father had built back in the 1820s.

The canal and the turnpike were the contributions of the previous generation; now the millowners were deeply involved in the construction of the railways. The records of Longfords demonstrate the value put on this most reliable and efficient transport. As early as 1839 the firm had a consignment delivered by steam to Bristol and then fetched by the local carrier, Tanner and Bayliss. No doubt therefore the Great Western Railway's arrival in Stroud was welcomed. The company was sending large amounts to China through Liverpool, and their cloth was being sold as far away as Scotland. Then in May 1853 the romantic image of the G.W.R. is undermined by a letter to the local agent, W. Holmes & Co., complaining that a consignment to Dundee, sent by rail to London and thence by sea had been 'plundered'. On 30th May

Playne went further. He said that he had 50 tons of raw wool coming from Germany and unless Holmes could guarantee that the 'villainous system' of plunder ceased then the G.W.R. would lose his business. He planned to order it to Hull for the Midland to take it if London was not to be trusted. Obviously he was not satisfied, he remarked that the G.W.R. officials disclaimed responsibility for these "unbusiness-like proceedings". So on 1st September he wrote to the Midland Railway Company informing them that he had a final load of the season, weighing 30 tons, and he wanted them to collect it from Great Grimsby and deliver it to Stonehouse.<sup>21</sup>

Here were sown the seeds for the prolonged campaign to build a railway from Stonehouse to Nailsworth and even beyond, past Longfords Mill. William Playne and Samuel Marling were among the founder members of the Local Committee and Playne was elected chairman. The rationale for the project, which was dogged by financial problems, was the industrial demand. The General Manager of the Midland Railway in 1864 explained: 'To take the coal alone, I find we are shipping at Stonehouse some 15,000 tons a year of coal and a very large weight of goods. I think we must be sending at least 10,000 tons of goods from Stonehouse by canal.' Even a manufacturer close by the G.W.R., Richard Grist, stated that he would welcome the new railway because he could send his 'Huddersfield traffic' more directly. In the Commons Committee discussions Marling proved a strong supporter of the scheme. With his mill at Ebley and his interests in Kimmins corn mill and the Dudbridge iron works he foresaw plenty of advantages. A siding was duly provided for Kimmins but his dream of one for Ebley died with him.<sup>22</sup>

These investments in machinery, power and transport demonstrate the vibrancy of the local cloth industry. It is true that the area is dotted with

imposing houses built with the profits. Stanley Park established Marling's position as the largest manufacturer in the area while Longfords House, built in three phases, demonstrates the wealth that a lesser manufacturer could generate. The achievements of William Hunt, of Lodgemore and Fromehall, are largely unrecorded, presumably because of his sudden death in 1852. However he established a flourishing business that grew to be second only to Marling's and is presumably forgotten due to the family's unfortunate propensity for sudden death. William's brother Enoch recorded the family fortunes and described how William's son John and his son both died suddenly of an infection in 1869. He claimed that William was worth £80 to £100,000. In the 1860s Henry Mayhew had published a description of the works which concluded 'we bowed our head as we left the works in respect to the great manufacturing artists...who think it worth their while to devote some five months continued labour to the production of a single piece of perfect cloth.' These are the skills that Strachan inherited when he took over the mills in 1870, and his name is still with us.<sup>23</sup>

The records of the Marling business demonstrate more precisely the tremendous returns generated by a successful business. The stock balances for the firm survive. In 1842 his brother Thomas left the partnership, with a consignment of cloth sent in 1841 to Canton still unaccounted for.<sup>24</sup>

In 1872 the balance had reached over £210,000 and profits were over £23,000. One of the junior partners, Samuel Stephens, recorded his share of the profits from 1852 to 1862. It averaged £2,761 within a range of £1500 in 1852 to £6115 in 1859. After the retirement of J.G. Strachan in 1862 the profits of the firm for the seven years 1862 to 1869 kept within a range of £22,000 to nearly £27,000 (1869).<sup>25</sup> By this time Marling was employing 800

#### Summary of the Accounts of Samuel Marling and his Partners.

	1842	1852	1862 Ebley & Stanley
Machinery	£5500	£9839	£16,500
Wool	£9022	£31,743	£42,506
Finished Cloth	£1118	£1966	£2658
Cloth in Process	£11,449	£24,810	Ebley £33,061 Stanley £13,661
Soap, Oil, Teasels Etc.	£1588	£2849	Ebley £1842 Stanley £865
<b>Total</b>	<b>£79,769</b>	<b>£121,516</b>	<b>£190,342</b>
Profits		£12,131 (1855)	£22,080 (1863)

people at Ebley and 500 at Stanley Mills<sup>26</sup> (though his son William ran it as a separate company). All the stages of woollen cloth manufacture were being performed on site and the buildings were between fifty and ten years old. The company was in good fettle to survive the difficult era that followed the 1871 London Exhibition.

This period did not see the tremendous efforts at mill building undertaken earlier in the century. The



Ham Mill

building of loom shops has already been mentioned and in the 1850s a block combining a warehouse and stables was opened to great admiration at Ebley.<sup>27</sup> Meanwhile the fine structures of the early 19th century fulling mills at Ebley, Cam and Stanley were accepted as they were. They provided plentiful space for spinning mules and no doubt scribblers and carders at Stanley. The dimensions of the Long Block at Ebley, built in 1818, were ideal for two banks of mules facing out to the wall. Meanwhile the finishing could be done on the ground floor.<sup>28</sup>

Four substantial mills survive in the Stroud area that date from this period. By far the most famous, as well as the earliest, is the Bodley Block at Ebley Mill. Samuel Marling had previously added a five storey block to the end of the Long Block. This was classical in appearance with, like the earlier Woodchester and Stanley Mills, a pediment. Inside it contained the boilers and the steam engine on the ground floor and carding machinery on the floors

above. This structure had a short and unfortunate history. In December 1852 the boilerman, through forgetfulness, blew up the boiler, and himself with it. A hole in the wall twenty feet wide and five storeys high left people clinging to machinery. Fortunately no one else was killed. However a more comprehensive disaster struck in December 1859 when a fire of overwhelming power wrapped every part of the building in its destructive embrace. £20,000 of damage was done, with all the carding machinery destroyed.<sup>29</sup> Marling must have employed the Arts and Crafts architect G.F. Bodley to build a new block almost immediately because within two years the imposing construction was complete. Of all the mills this is the only one known to have been designed by an architect and it enjoys a French chateau style for the staircase tower. This building though reflects the practical nature of the enterprise. It provided a fireproof staircase, a clocktower which housed Big Tom, a bell to call the employees to work. It also contained a hoist for pulling the bales of wool up to the top floor, by hand.<sup>30</sup>

Fire was also the impetus for the reconstruction of others also, though they lack any architectural flamboyance. Ham Mill was burnt down in 1866.<sup>31</sup> Owned by the Marlings it had been leased to Alfred Ritchie. It is interesting that he, though by no means in the first rank of manufacturers, felt the confidence to buy the ruins and rebuild it. There is a two storey long block which is in the position of the historic mill and has stones stained red apparently by the fire. This housed at least one water wheel and on the floors above there were spinning mules. Adjoining is a three storey block which from the evidence of Ebley would have been suitable for carding machinery. Large windows ensure that all the floors are well lit. Port Mill also was rebuilt around this time and a similar structure was erected, presumably by James Ferrabee, as he occupied it.<sup>32</sup> Ham Mill has such similar features that it seems likely that Ferrabee was the architect of it as well.

More is known about the aftermath of the disastrous fire at Lodgemoor in 1871. Photographs show that the traditional stone building, with its early 19th century features had been gutted.<sup>33</sup> This time Ferrabee broke entirely with tradition. He designed a red brick building with blue brick decoration. Built on three storeys it makes use of the sloping site, which had constrained the previous edifice, to create a spacious top floor that is lit from above. The traditional privacy of the millowners is secured by having blind windows

where people could have looked in. This substantial block matches Ebley in its confidence, though not in its elegance. It reflects the work of an engineer rather than an architect and is Ferrabee's last and most substantial undertaking. In the year of the London exhibition it neatly suggests the confidence of manufacturers in an expanding future.

In conclusion it can be said that Stroudwater textiles most definitely had not collapsed. They were thriving during the third quarter of the 19th century, the period when Britain was the workshop of the world. The standards of production had not fallen either from the cloths that had delighted Henry Mayhew. The Times' judgement listed Stroud as producing a blue milled Venetian from Stroud as 'the best we ever saw'. Then he delights in the brilliant show created by 'the fine scarlets that clothe the officers of the British army' and the 'Navy Blues' for the naval officers. However a stout scarlet Melton, intended for hunting coats, was perhaps 'the best example of colour.' Among the drab cloths for driving coats it was again Stroud that took the palm while in plain narrow goods it was again a blue milled Stroud doeskin that was 'of surpassing quality and finish.' Only Stroud displayed 'thin fine cassimeres', in colours ranging from black to delicate colours such as canary, magenta and cream white.<sup>34</sup>

This was a gratifying commentary for people in Stroud and the *Stroud Journal* dealt with it at length. As James Ferrabee wrote in a letter to the paper, Stroud was still holding 'first place against all comers.' Ferrabee himself was dead within two years but he left a disturbing judgement on the future of the industry. The Times correspondent had briefly passed over the Scotch Tweeds, which were to prove so fashionable in due course. On the other hand he wondered whether the production of the cheap goods turned out by Northern factories did not demand even higher skill than the Stroud cloths. These used only the best materials as against the 'union cloths' mixing a cotton warp with a mixture of wool and waste. Ferrabee took this further, making a thoroughly gloomy prediction: '...the fine cloth trade is gradually declining, and another thirty years will probably see it either confined to two or three large manufacturers, or altogether vanished from the neighbourhood-the latter most likely.'<sup>35</sup>

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A view of Longford Mills from the lake in the 1880s

[Image from front cover]