Treadwheels, the ‘everlasting staircase’, as the ‘regulator of the unruly’

[Terry Newman, 2021]

Treadmills and treadwheels, colloquially dubbed the ‘stepper’ or ‘everlasting staircase’, were used in British prisons from the 19th century to extract hours of effort from prisoners, with only brief rest periods. Indicating the usage of the term ‘everlasting staircase’, the Reverend, Walter Louie Clay, in his book entitled, *Our convict systems*, compared various forms of punishment

> The gallows, the old gaols, with their manifold miseries; the pillory, the stocks, scourging at the cart-tail, and similar penalties, had checked crime in some degree; or, at any rate, the two first had decimated criminals. But corporal barbarities and the gallows had now fallen into almost total disuse, and the gaols had been made wholesome, not to say comfortable. To replace all the old deterrent agencies, the treadmill alone had been introduced; but the terrors of the "everlasting staircase" had already proved less effectual than the country justices had fondly anticipated.¹

Supposedly ‘wholesome’ prisons aside, in Tasmania this form of penal discipline was meted out by judges or magistrates for what we would today deem minor misdemeanours. Depending upon who presided over any given case, a convict might endure a few days, or a fortnight, of this often unproductive punishment. The Hobart press even gave nicknames to the government treadmill, reporting that men were sentenced to the ‘roundabout’, the ‘amusements of the whirligig’, or to ‘dance on...[the] stepper’.²

Here the terms treadmill and treadwheel will be interchangeable, although they were originally intended for different purposes; treadmills were to transform the human effort into an ancillary benefit, such as grinding grain into flour, hence a ‘mill’. Alternatively, treadwheels might also perform secondary functions, such as pumping water, but could be designed to achieve absolutely nothing! In that regard, although not discussed here, a ‘walking wheel’, was a ‘treadwheel of large diameter that was worked by prisoners walking both inside the wheel and around the periphery’.³

John West, in his classic *History of Tasmania* [1852], recorded that at least some people ‘proposed that the tread-wheel should measure the progress of the culprit, and that every revolution should bring him nearer to liberty.’ While this hardly the case, after a visit to Tasmania, Godfrey Charles Mundy published his *Our Antipodes* [1855] in which he wrote that

> The treadmill appears to be the only species of laboratory where the operative must work, and work hard, or inflict self-punishment. He may, indeed, doggedly resolve to mount no higher on the rotary stair, but then his shins must suffer for it! ⁴

But not only legs were involved on the ‘stepper’, because, while in motion, convicts had to also maintain a firm grip on a horizontal bar in order to remain upright... So one might assume that being
forced to undertake such gruelling toil would be imposed for a substantial reason, but this was not always the case. An example is given below of a Tasmanian convict who suffered the punishment for riding a horse! But first some background on treadmills generally.

**Australian and British background**

David Collins, in his history of NSW, described Australia’s first such man-powered wheel for grinding grain. In 1793, he wrote of a two-man ‘walking wheel’ to mill flour, but this substitute for wind, water, or horse-power, proved too prone to problems and was abandoned. Meanwhile, more ‘efficient’ treadmills gained wider use in England, being installed in British gaols between 1811-1819. Some wheels were used for productive purposes, others were based on simple resistance, such as turning a large fan, which was dubbed ‘grinding the wind’. Yet, a Tasmanian cleric, named Henry Phipps Fry, argued that such an ‘unproductive treadwheel would be considered an engine of torture’.  

In this image, behind the wall against which this wheel is built, lay the Brixton prison’s mill-stones for grinding flour. Of interest, in this early form of treadmill,

- each prisoner gradually moves from the end which he mounted towards the opposite end of the wheel, from when the last man taking his turn descends for rest, another prisoner immediately mounting, as before, to fill up the number required without stopping the machine.

On later, ‘improved’ versions of the treadwheel, convicts did not move along it. And, in some cases, to limit talking, each man was separated by wooden screens from the others, and might also rest in a small cubicle or cell, which, apparently, had a seat, mug and a bible – which presumed the convict was literate...

Evidence exists that this separation was long-term, because in 1844 the government set aside £100 for the wages of a treadwheel overseer of ‘colonially convicted persons’.  

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**Notes**

3. The Brixton Prison’s mill-stones are copyright free.
Either way, other treadmills, while still effectively one giant wheel, could separate groups of convicts by classification, according to their ‘crimes’. That is, some buildings used brick or wooden walls to divide the room into ‘two apartments, one for the Free Offenders, the other for the Crown Prisoners’, but they all still worked the same wheel.\(^9\)

As to the ‘everlasting staircase’ being torture, in December 1824 Sir Robert Peel [famous for forming the police force, the ‘Peelers’] asked British prison magistrates and medical officers, to ‘inform him whether any bodily mischief or inconvenience had been experienced by the prisoners working on the tread mill?’ Their general response was that the health of prisoners was actually ‘manifestly improved’. One respondent even reported that a ‘woman who had been at the wheel for a month, and who went to work with a rheumatic complaint, being asked how she felt when she went away, replied, that her rheumatism was completely cured.’\(^10\)

Medically true or not, in 1824 the *Sydney Gazette* wrote that:

> many novelties of this inventive age, not a few of which are more splendid than useful, the... Tread-mill, though humble in its pretensions, is distinguished by its skilful adaptation to the purpose for which it was constructed...The Tread-mill was invented by Mr. William Cubitt, Civil Engineer,... and was originally constructed for the employment of thirty men, and made to suit a millhouse... The object of it is, the adoption of a kind of hard labour, to which every one would have a natural dislike, and yet such as every one can perform without previous instruction;... and the [prisoners’] punishment consists in perpetual climbing, without being able to idle away a single moment. They are, however, permitted by the overseer to descend occasionally from the wheel, to repose a few minutes from their fatiguing operations.

An Australian report, issued in 1825, describes two flour grinding wheels and the number of men operating them – and their resting periods:

36 men [convicts] being employed at a time, 18 on each wheel. The full complement of men required to work the greater mill is 60; the lesser mill 30 ... each man being on the greater mill 36 minutes, and off 24; on the lesser mill 40 minutes and off 20, in each hour of labour.\(^11\)

In Australia, only male convicts were subject to to the ‘everlasting staircase’. However, along with the female with her rheumatic complaint, a British report, from November 1841, on the treadwheel at the Cold Bath Fields – later renamed Middlesex Prison – noted that when it was brought into operation ... all the prisoners in the Gaol, both male and female, were set to work. At the first onset it was looked upon as a mere matter of amusement, but the experience of a quarter of an hour at once proved that it was a most irksome occupation.\(^12\)

Shortly before this report, contemporary British attitude towards treadwheels was encapsulated by the Committee of Prison Discipline in an 1838 report. This Committee noted that ‘there are
treadwheels in 67 gaols in England, a sufficient proof that they are found beneficial.’ According to the report:

If it be agreed to enforce labor in gaol, there are two plans of doing so. First, to employ prisoners at such trades as will most readily pay for their maintenance,... and teaching some trade to those who know none; and, secondly, to employ them in some dull, monotonous, wearisome, and uninteresting task, such as stepping upon a treadwheel, turning a capstan or hand-crank, pumping water, pounding bricks, grinding flour, or the like...

And, as an aside; a hand-crank was an elevated box filled with sand, in which ‘cups’ rotated causing resistance circulating the sand endlessly, and uselessly! As punishment, prisoners worked the crank up to six hours a day, and a warden could adjust the effort required by turning a screw – hence the nickname for prison wardens.13

Another British report from 1841 included evidence from Edinburgh Prison, based on ‘sturdy’ facts:

Most of the prisons lost weight, though a few gain ... On prisoner, aged 19 years, lost thirty-one and a half pounds, in rather more than three months. There are several more cases in which the falling off is nearly as great... many leave prison in too feeble to work for a time at their usual employment in consequence of the hard work and low diet to which they have been subjected’.14

Nevertheless, by 1850 there were 95 treadwheels in use in the 212 British prisons.15

Regarding similar views were held in Tasmania; in March 1835 the Colonial Times reported a case involving a convict:

Martin Collins, a short but very fat fellow, was charged with very improper conduct as a constable. The terrors of the tread wheel alarmed him, and he begged to be excused such violent exercise, as being very detrimental to his corpulent personage. The Magistrate deemed it expedient that he should enjoy six day’s at it, to open the pores of his flesh, and suppurate some of his excessive fat.16

Aged 45 years, Collins, was described as just 5foot 2inches tall, and ‘stout made’.17 He had arrived in Tasmania in July 1832, having been sentenced in 1831 to transportation for life for being part of a forgery gang. Perhaps because he voyage reports reported were ‘orderly’ and ‘very good’, by September 1834 he was made a constable. Three years later he obtained a ticket-of-leave for ‘detecting a robbery’. Lastly, Collins’ conditional pardon was granted in April 1838, followed by a Free Pardon in June 1842, only to die of a ‘decay of nature’ in 1853.18

Meantime, not everyone supported the use of treadmills. In 1847, yet another British parliamentary committee heard from a law reform society. It’s submission was that:

In most of our houses of correction, hard labour is introduced in the shape of the treadwheel. This punishment is certainly an object of fear ... but then, instead of reforming
the prisoner, it has a directly opposite tendency. Indeed, no labour can be imagined more irritating than this. It is utterly valueless, since, with the exception of one or two places, no corn is attempted to be ground; and, even where it is, the prisoner knows perfectly well that he is only employed in the place of the [natural] elements. Instead, then, of acquiring a habit of labour, which may be useful to him when his term is expired, his abhorrence of all work, and his revengeful feelings towards those who impose it, are only aggravated and confirmed. We think, therefore, that this species of labour should no longer be imposed.

Long before such negativity, in September 1823 a Tasmanian newspaper described two treadwheels newly built at Carters’ Barracks, Sydney, which produced substantial amounts of flour. The journalist explained that:

we understand, that one of these machines is also about to be erected in Hobart Town. The tread mill, in England, is held in great abhorrence by the inmates of those prisons where it has been introduced. In one gaol a series of revolving wheels has been invented, which gives most wholesome labour to the convicts, many of whom, disgusted by the serious exertion which it enforces, at first revolted, but were obliged to submit. These mills are generally applied to productive uses.

Abhorrence, or dread, was undoubtedly harboured by those forced to tread the ‘everlasting staircase’. Even so, regarding generating some productivity, the Colonial Times wrote that from the wheel, at least, some ‘good may be extracted from evil’. An example, was that private settlers could pay to have their grain ground by convicts.

Tasmanian treadmills

Hobart’s treadmill is discussed below, but first Launceston and Port Arthur also had treadwheels. On 21 December 1834 the Hobart Town Courier advertised a tender to obtain bricks to build a treadmill beside the Launceston Gaol. Yet by January 1837 the Cornwall Chronicle complained about construction delays. It did so because the ‘The fear of the treadmill would operate [as a] veil among the profligate, and one cannot be too soon prepared for setting in motion’. Except that ‘soon’ was still five years away. [Eventually the treadmill was sold for £45 in 1859].

In 1839, the treadmill at Port Arthur, was erected in the granary, where it was also planned to incorporate a waterwheel, with the man-powered treadmill for use in drier months. After several delays, by March 1843 the first convicts trod the Port Arthur wheel, which was 12 foot diameter, which, along with the waterwheel, operated three millstones. Supposedly, the convicts commented that the treadmill was ‘steadier in operation than the Hobart one’.

However, by 1848-9, with fewer able-bodied convicts at Port Arthur, and greater use of solitary confinement as punishment, the treadmill was frequently unused. Mundy, [quoted above] described the end of Port Arthur’s treadmill.

All the machinery for this punishment exists on a large scale at Port Arthur; but I was told that it had been discontinued, because the wheel required too many hands, or rather, too many feet, to make it pay.
In March 1825 the Hobart Town Gazette, compared flogging to the treadwheel as a means of reforming convicts:

> the lash as a weapon of penal vengeance is totally ineligible ... It degenerates the sufferer if he be not hardened; and it is smiled at by the veteran inheritor of dungeons, as only productive of "a mere tickling." ... [Instead] after profound consideration, and ... the advice of the first medical authorities, [government has] concluded that in future the treadmill shall be employed as a general instrument of punishment instead of the whip, except for such offences as are specifically charged as amenable to it. And as we are informed that a mill of this description will be speedily erected here.27

Despite being described as ‘totally ineligible’, flogging continued to be used for decades. Even so, after many delays were associated with the ‘much-wanted and desired’ treadwheel, Until, in February 1827, the Colonial Times wrote:

> we are glad to see [a wheel] is in a forward state at the [Campbell Street] Penitentiary, which, as far as it goes, will be of great benefit in correcting a certain portion of male offenders. Most undoubtedly, we again say, that the treadmill is a preferable mode of punishment to the cat-o'-nine tails, especially for assigned servants.28

The same newspaper noted some interesting British statistics. In the Lewes Prison ‘each prisoner walks at the rate of 6,600 feet in ascent per day’. At ‘Reading, the summer rate exceeds 13,000; while at Warwick, the summer rate will be 17,000 feet in ten hours’. Contrary to these bald statistics; although a convicts’ legs might develope, their arms and shoulders became ‘emaciated’, which did not augur well for future labour. Besides, convicts often sweated so much that they developed kidney complaints, and their pulses rose over 130 beats per minute!29

On 6 July 1827, Hobart’s Colonial Times finally reported that

> this regulator of the unruly, so long talked of and anticipated with different emotions by different characters, was put in motion for the first time, in the presence of the Acting and Assistant Engineer, Principal Superintendent, and some other public officers and gentlemen. The machinery ... promises, when properly adjusted, to turn out well, and with the new Government Mill, proves that machinery can be got up in Tasmania in good style.30

Despite supposedly ‘regulating the unruly’, by February 1828, a rival newspaper, the Hobart Town Courier, was more qualified:

> The engine now erected in Hobart Town will, we learn, grind at the rate of, 3½ bushels of wheat per hour, but from the number of hands required to turn it, we conceive little advantage will be derived over the produce of labour, from those employed in the chain gangs, especially when the expense of the mill itself is taken into account. The great advantage arising from it, we presume will be this, that the inevitable nature of the labour exacted – its closeness and severity, will afford a salutary example, and place in the minds of magistrates an additional means of preserving the good order of society. But even this will be frustrated if
the sentence exceed three or four days, for by that time it has usually been found that the limbs and muscles become habituated to the new, mode of exercise, and what was at first a painful exertion becomes at last but a slight exercise, or even recreation. On the whole, however, whatever objections we may have here made to the economy of this machine, we are sensible that the tribe of evil, wicked, and ill-disposed, will have many more serious and painful objections to it, and this is as it should be. 31

Ignoring description of the convicts as ‘evil’; this newspaper was obviously not wholly in favour of the new ‘engine’. Instead, it preferred chain gangs performing useful public works. And even solitary cells as a means of punishment – ignoring their potential for psychological harm.

One of the convicts sentenced to the ‘stepper’ who illustrates several features of the convict system was William Grimwade. He comes to attention in early 1836 when he was reported by Joseph Pettingell – self-described as once ‘tailor and breeches maker to the King and the Royal Horse Guards’. Self promotion aside, Pettingell accused Grimwade of misdeeds in Mr Baynton’s premises, - whose name becomes relevant. According to a voyeuristic Pettingell, Grimwade was, being too intimate and amorous with his female assigned servant, [and] having been informed that such was the case, he was induced to watch them, and found them tete-a-tete to his utter astonishment in the stable. As a check to such improper conduct, his ticket-of-leave was suspended one month, and to cool his passion for that period, was ordered to take a few steps at Lieutenant Gunn’s.32

William Gunn was Superintendent of the Hobart Prison Barracks where his ‘stepper’ was located, where convicts might be sent to ‘Gunn’s flour grinder’.33 As to Grimwade, he had been a butcher by trade, - and had scars on his fingers and arm to prove it. He was transported for seven years in 1830 for larceny. He had, apparently, been imprisoned before, where his character was described as ‘very bad’. Except that during the voyage he was ‘very good’, which was perhaps why he was made a ‘woodcutter at Government House, and gained a ‘ticket of leave’.34

However, Grimwade’s record lists an earlier incident in December 1835. He was drunk at the time, and insulted a constable, which earned a hefty 40s fine! A female named Mary Thomas was also involved, of whom Grimwade was accused of ‘abusing and threatening to assault’ – hardly amorous... Even so, the stables incident occurred in February 1836, with the sentence mentioned. But, of note, it had occurred at ‘Baynton’s premises’, which will become relevant. Then, in September, Grimwade’s violence flared once more, when he assaulted another man. For this his ticket was suspended again – and was sent to the St Peters Pass Road Gang. After which he was ‘not allowed to live in Hobart again’.

On 17 January 1837, while in Campbell Town, Grimwade was found drunk and earned four more months of hard labour. Then, on the 27th, because he ‘would be free from punishment on 16 May’, this sentence was partially remitted under the prerogative of the Lt-Governor. This was equivalent to a royal degree, and became operative on 18 April.

Was this the end of Grimwade’s story – but wait there’s more! Grimwade explained that his last Tasmanian employment was with the VDL Company, and that he then travelled to England with Mr
Baynton [of the stable premises]. However, although now a free man at home in England, he fell foul of the law in August 1843, for ‘highway robbery and stealing £9 12s’. At that time, this type of crime, and amounts over £10, could result in the death penalty. Instead, he was sentenced to 12 years transportation back to Tasmania.

For his second sojourn as a convict, Grimwade returned during the probation era, which followed the assignment system. He was, therefore, required to undertake eighteen months hard labour at Fingal– at least he was in the third class, which was the most lenient of the three probationary levels. However, Grimwade was found drunk in October 1846, but was lucky to be only admonished. That is, until his violent streak arose in, when he assaulted someone and gained fourteen days solitary confinement; the use of the lash was then being progressively replaced by other punishments.

On 12 May 1847 Grimwade earned three more months hard labour for being AWOL ‘all night’. Quite harsh for a single evening abroad... Then, by December, while toiling at Deloraine, he was accused of ‘larceny under £5’, but this charge was dismissed. Finally, Grimwade captures not only the ‘stepper’, but his case illustrates that often trivial misdemeanours might earn harsh punishments. That, if a convict did not have conditions placed upon on their pardon, they could return to England. Also that the assignment system did not always match employment with a convicts trade – it was notoriously a ‘lottery’, which extended to getting a good or bad master or mistress. That is, Grimwade, a butcher, was turned into wood-cutter, and the probation system forced convicts into a period of hard labour before they were ‘released’ to work for themselves – if employment was even available!

In 1833 the *Hobart Town Almanac* queried the use of treadmills as unproductive punishment. It asked; ‘can the walking on a treadmill, even in solitary compartments, have that [same] moral effect on the minds and habits of the culprit which agricultural labour in a new country [can]?’ But these arguments were not persuasive – recall that Port Arthur’s treadwheel was built over a decade later. In fact, in 1834, because its parts were deteriorating, Hobart began construction of a new treadmill at the Hobart Prison, which was not effectively decommissioned until 1858.

As mentioned at the opening of this paper, a horse-rider named Thomas West was put to the tread wheel. But before describing his story, similar outcomes could be told of countless convicts sent to the treadwheel for supposed insolence or misconduct. For example, a convict’s refusal to work because of poor diet could result in the treadwheel. Also convicts might walk the ‘everlasting staircase’ for two or three days if unable to pay fines imposed upon them for their minor misdemeanours. One such convict was fined £5 for a ‘most violent and outrageous assault’, but, in default of payment, was ‘imprisoned and kept to hard labour... [on the] treadwheel for two months.’

Thomas West was a 21 year old ploughman. He was single when arrested, and although just 5’ 4’ tall was described as ‘stout made’. He had been tried at Somerset Assizes on 28 March 1829 for stealing two ducks, and received a 7 year sentence. He arrived in Hobart on the *Sir Charles Forbes* on 27 July 1830.

According to his convict record, he had been ‘bad’ while briefly gaol, but ‘good’ while equally briefly on a hulk. Alternatively, his ships’ surgeon report was that he was a ‘very good lad onboard’. It was probably this comment that, as early as the 1830 census, he was recorded as a ‘constable’. This type of employment was often given to convicts because Tasmania had little choice of personnel. Thus, Thomas’ initial Tasmanian sojourn was relatively easy. Indeed, his convict record has just four full lines, whereas some convicts’ records span several pages.
Nine months after his arrival, and while still a constable, West was ‘severely reprimanded’ for ‘insubordination and neglect of duty’. This caused his employment to be terminated, and he was instead assigned to a settler. Then, on 17 August 1832, West was found guilty of ‘furiously riding his master’s horse over Wellington Bride at 6 o’clock in the evening’.39 Of note, part of Wellington Bridge, which crossed the Hobart Rivulet in Elizabeth Street, remains visible in Hobart’s Mall.

West’s master was perhaps being lenient because many convicts had strict curfews; or perhaps Thomas was racing home to beat the sunset! Either way, he received three days on the treadwheel for this misdemeanour. Perhaps his ‘stout made’ physique may have helped him endure the fatigue during his brief stint on the wheel?

However, West went on to endure the treadwheel a second time in August 1836. He had been found in possession of ‘one piece of sawed timber and other articles of goods’. This crime saw Thomas ‘committed to trial’. On the far left of West’s record it shows that on 4 October 1836 he was sentenced in the Supreme Court to two months hard labour. This was confirmed on the 4 November, ‘to be worked on the treadwheel during sentence’.

No further entries appear on West’s convict record. But even before his theft of some timber, the government clerk did not even record that Thomas had been granted a ticket-of-leave in 1835. And, in March 1836, it was left to the press to include his name amongst sentence expirees.40 For Thomas West, of the Sir Charles Forbes, this was noted as 28 April 1836, a full seven years from the date of his trial. Finally, because of the commonality of Thomas’ name, it is, difficult to trace his ultimate fate.

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1 W. L. Clay, Our convict systems, Macmillian, 1862, p.12.
2 Nicknames; eg; Colonial Times, 16 June 1834, p.8, 29 September 1835, p.8, Hobart Town Advertiser, 4 April 1945, p.2.
3 ‘everlasting staircase’ - [https://www.britannica.com/topic/treadwheel](https://www.britannica.com/topic/treadwheel), and W. L. Clay, Our convict systems, p.12.
5 John West, History of Tasmania, (1852), Vol 2, p.271, G. C. Mundy, Our Antipodes: or, residence and rambles in the Australasian colonies. with a glimpse of the gold fields, 1855, p.213, [adc.library.usyd.edu.au].
6 D. Collins, An account of the English colony of New South Wales, Chapter XXV, p.197 and Sydney Gazette, 24 April 1823, p.2.
7 [https://www.notechmagazine.com/2010/03/prison-treadwheels.html](https://www.notechmagazine.com/2010/03/prison-treadwheels.html); H P Fry, A system of penal discipline, London, 1850 p.4 [Henry Phipps Fry was Rector at St George’s Church, Battery Point, Hobart, 1839-49].
8 ‘Description of the tread mill recommended by the society for the improvement of prison discipline’, Gentleman’s Magazine, Vol XCII, Series 15 Part 2, 1822, pp.9-11 – also has an image of Brixton’s treadwheel.
11 Hobart Town Gazette, 8 January 1824, p.3, 11 March 1825, p.2.
13 ‘Description of the tread mill...’ in Gentleman’s Magazine, – has a different image of Brixton’s treadwheel. 13 [https://en.wikipedia.org/wiki/Crank_machine 14 Examiner, [London], 4 December 1841, p.771.
15 Colonial Times, 10 March 1835, p.8.
Collins is also recorded as a ‘Labourer, ‘Married, 4 children’; Death, 1853 - RGD35-1-4, No.367.


Colonial Times, 20 February 1829, p.3.

Technical information on Hobart, Launceston & Port Arthur treadmills refer Preston, ‘prison treadmills’.

Hobart Town Courier, 21 November 1834, p.2, Cornwall Chronicle, 7 January 1837, p.2, Hobart Town Courier, 22 November 1839, p.2. Launceston Advertiser, 1 March 1859, p.3]


G. C. Mundy, Our Antipodes, p.213.

Hobart town gazette, 11 March 1825 p.2

Colonial times, 15 September 1826, p.2, 2 February 1827, p.3.

H. P. Fry, System of penal discipline, p.9, where he lists several reasons against treadwheel usage.

Colonial times, 6 July 1827, p.2.

Hobart Town Courier, 16 February 1828, p.4.

People’s Horn Boy, 26 September 1834, p.3, Colonial Times, 14 October 1834, p.3. Colonial Times, 13 October 1835, p.6.

CON 31-1-16, p.43.

CON 33-1-53, p.130.

Hobart Town Almanac, 1833, p.93.

Tasmanian, 10 August 1832, p.6.

CON 31-1-46 p.18, CON 18-1-79.

Tasmanian, 17 August 1832, p.7. 40 Examiner, 10 March 1836, p.4.