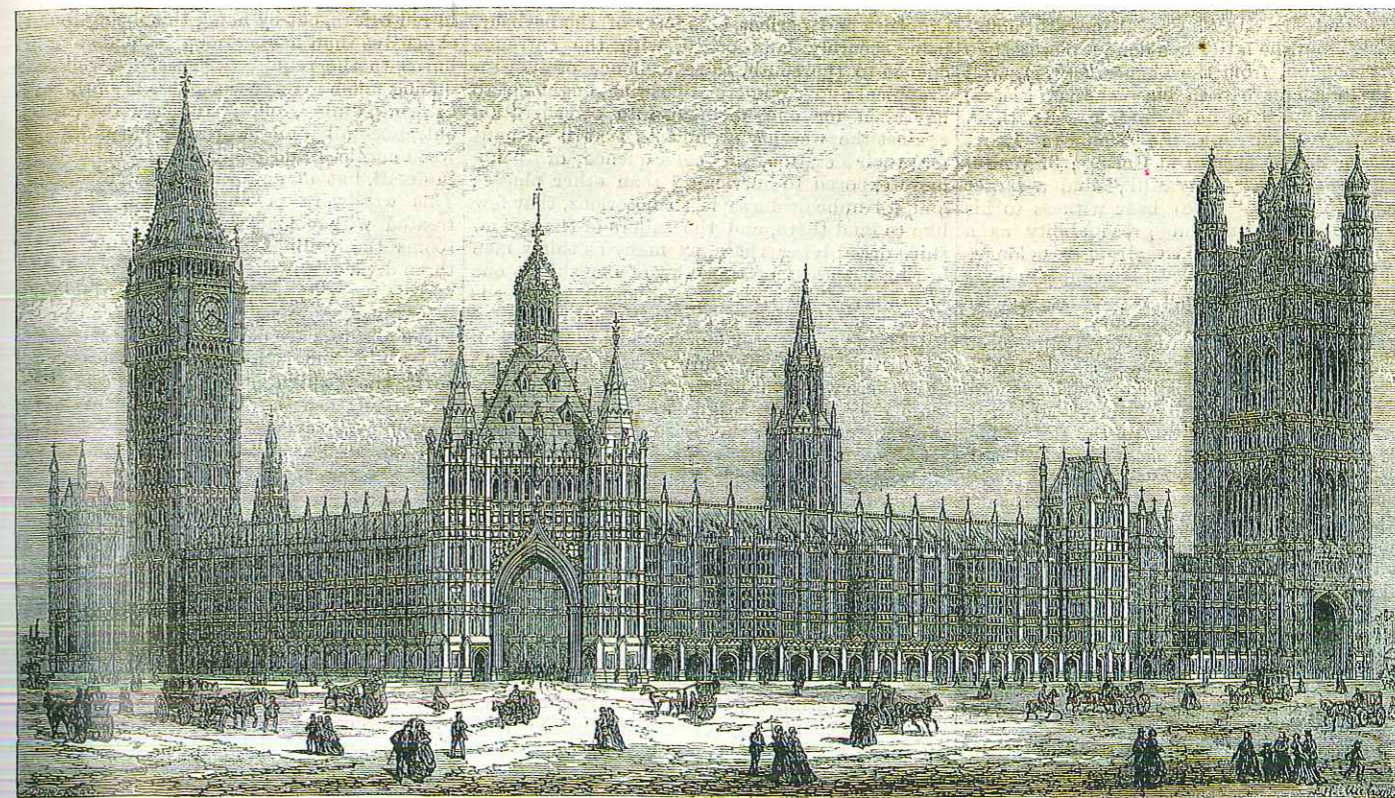


# 25 Years Later- It Still Holds Water



WESTMINSTER NEW PALACE.—SIR CHARLES BARRY, R.A. ARCHITECT.

30 NOVEMBER 1867

## THE SAGA OF THE PALACE OF WESTMINSTER

GRAHAM RIDOUT

The construction of the Houses of Parliament is one of the great building sagas of the past 150 years. When architect Charles Barry won the design competition in February 1836, it was to be the start of a 32-year construction period riddled with controversy, acrimonious battles and huge cost overruns. Barry was pilloried by MPs, the public, and nearly driven to suicide.

**C**HARLES BARRY got sucked into quicksand right from the start. He encountered the physical variety as soon as work started on site on his Gothic Revival masterpiece. But he also had to struggle through the metaphysical quicksand created by the constant infighting between MPs and various government departments – a battle that started long before he won the design competition for the new Houses of Parliament and one that embroiled him until his death in 1860.

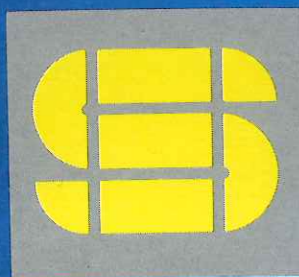
It was during the second half of the 18th century that St Stephen's Chapel, then home to the House of Commons, was first criticised on three grounds – lack of space, inefficient ventilation and inadequate protection against fire. All three criticisms were to resurface, but this time directed at Barry's plans for the new parliamentary building on the same site.

Between 1791 and 1831, six parliamentary committees drew up reports on what needed to be done to cure the three problems. Though considerable expenditure was lavished on countless alterations, additions and experiments, the problems just would not go away.

Finally, in 1833, a 10-strong committee of many of the country's leading architects reinforced the view that a new House was necessary. Joseph Hume, a radical MP and the leading agitator for improved accommodation, campaigned to make the Treasury release money for the new building. Hume's pleas fell on deaf ears.

The solution to the Treasury's intransigence was provided by Richard Whibley, the clerk of works to the Palace of Westminster. An assistant surveyor by the name of Phipps was instructed to destroy a vast number of wooden tally boards that were no longer required as a result of reforms made in accountancy in 1826. Whibley's advice to Phipps was to burn them in the House of Lords' furnaces. By 6pm on 16 October 1834, the overheated flues gave up the unequal struggle and flames engulfed the two chambers and the Commons' Library. By daybreak they were smouldering shells. Contemporary reports carry a quip made by a bystander to the conflagration: "Mr Hume's motion for a new House is carried without a division."

Prime Minister Sir Robert Peel acted quickly and appointed architect Sir Robert Smirke, who at the time was involved with building the British Museum, to assess the damage. Smirke

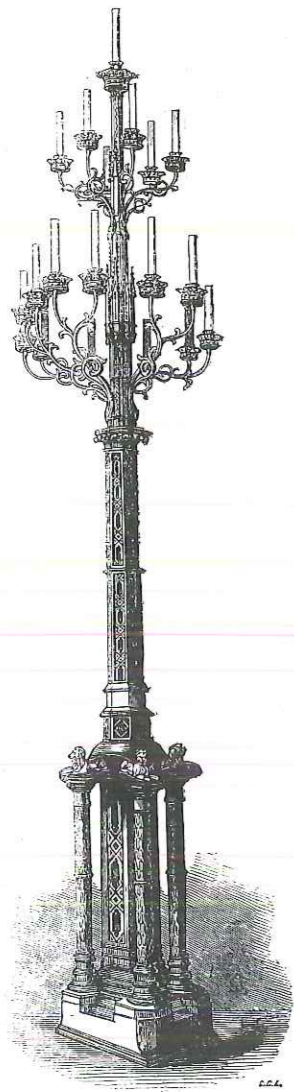


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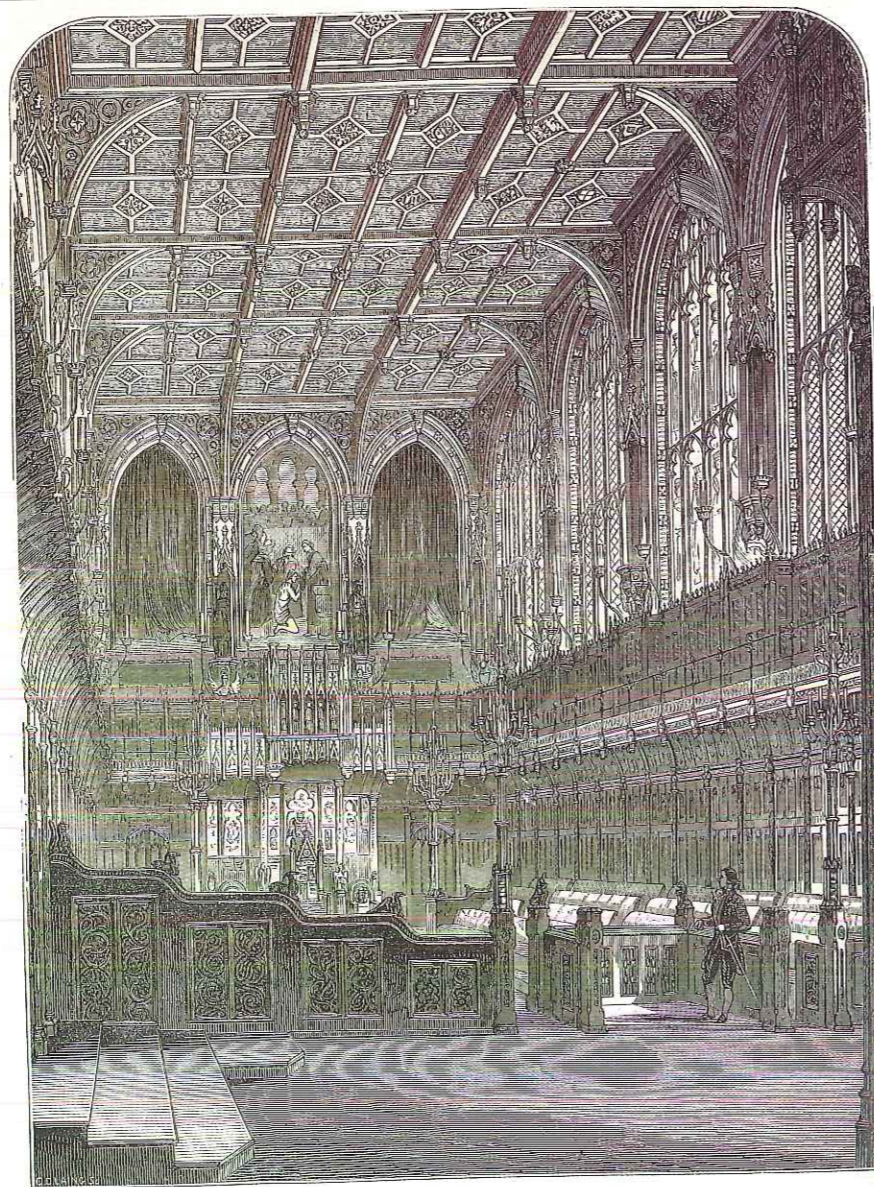
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15 MAY 1847

IN THE HOUSE OF LORDS.



17 APRIL 1847

INTERIOR OF THE NEW HOUSE OF LORDS.

reported back five days later. His solution was to fit out the largely undamaged Painted Chamber for the peers while the Commons would be temporarily accommodated by re-roofing the shell of the old House of Lords.

This left a clear space along the Embankment for building the new Houses. By February 1835, the Commons were able to move into their "temporary" accommodation – a tenure that was to last 17 years, much to their annoyance. The same month Smirke outlined his plans for reconstruction to Prime Minister Peel and King William IV.

Immediately the knives came out for Peel and Smirke. As Smirke's known patron, Peel laid himself open to charges of favouritism, while Smirke's professional colleagues accused him of converting a rescue operation into a major commission.

Initially it was Hume who fuelled the criticisms. He found an eloquent ally in Sir Edward Cust, a courtier, who whipped up popular agitation via an open letter to Peel on 31 January 1835. He wrote: "A rumour is in circulation that an architect has been already directed to prepare plans – that he has been, in fact, appointed to the duty of building a new House of Parliament. I hope this is not so. I will take the liberty of speaking of that eminent individual with the freedom that is permitted towards a known public character. I do not think the selection will give satisfaction. I doubt whether the poverty of his taste is counterbalanced even by his other professional acquirements and by the unimpeached respectability of his character." Cust went on to say that the old system of public works

produced feeble architecture at great expense. He proposed instead a competition for selected architects overseen by a commission of five people which would also set the design brief. Cust's aim was to chair the five-strong judging panel. Although chosen to sit on the panel, he was not made chairman. He also lost out to Parliament because it set up an internal committee to set the design brief and said it would be an open competition.

A total of 97 architects entered the competition with the brief that the new palace should be designed in either Gothic or Elizabethan styles. Barry's design was finally approved on 29 February 1836, after much talk of skulduggery during the competition. Rumours were rife that Cust openly favoured Barry to do the work. There was even a report that the carriage of one of the judges had been seen at Barry's door.

Extra time was allowed for the submission of entries after accusations that preferential treatment had been given to certain architects. One condition of the competition was that the drawings should be anonymous with no indication as to the designer. However, a number of those submitting entries got around this by including emblems on the drawings. Chessell Buckler, one of four shortlisted entrants, chose to adorn his drawings with an R inside a buckle. William Railton, who also reached the shortlist, chose a winged orb.

Barry's entry was numbered 64, and included the emblem of a portcullis. The judging panel said his design "bears throughout such evident marks of genius and superiority of talent, as fully to entitle it to the preference we have given it... The elevations

used to berate Barry. But missing from the estimate were: £44 000 for the embankment works; £70 000 for land acquisition; £3000 for carriageway; furnishings; fittings; heating; lighting; ventilation; even the great clock.

In February 1838, the commissioners recommended that Barry's remunerations should be a fixed fee and that £25 000 was "fair and liberal remuneration". The Treasury endorsed that view on 28 February. But this letter was "somehow lost" and it was not until one year later that Barry was informed that his fee was fixed at £25 000, equivalent to 3% of the estimated construction costs. Barry protested saying it fell short of the customary 5% remuneration and asked how the commissioners had arrived at the figure. He was never offered an explanation.

Denied any details, his ill-considered response was to write that he had "no wish to do otherwise than bow" to the decision. At once, the Government seized on the phrase and it was used against him in all discussions for extra fees until Barry capitulated shortly before his death.

Another of Barry's ill-considered pronouncements that would later be used against him was that the palace would take six or seven years to complete. The first phase of what was to be a 31-year construction nightmare began in 1837. Twin rows of timber piles were driven to create a cofferdam within which workers could safely start on building the new river wall and the foundations for the palace. Messrs Henry and John Lee of Lambeth won the contract in September. Progress was slow at first, the work difficult and Messrs Lee not especially adept. Barry and his adviser James Walker, the eminent Victorian engineer, complained about "a want of proper management and the non-employment of a sufficient number of hands".

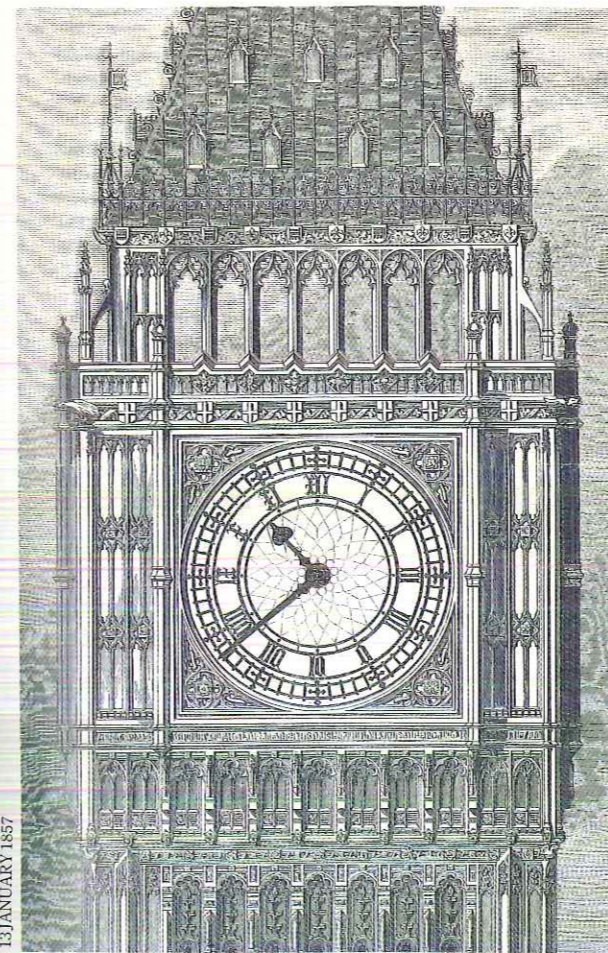
Nevertheless, by June 1839, work was sufficiently advanced for thoughts to turn towards letting the first contract for the superstructure. The Treasury stalled for a month and insisted on a laborious tendering procedure. Messrs Grissell and Peto's bid of £159 718 was the lowest. It won the contract and priced the job on the assumption that Bolsover stone would be used. This was to prove a costly error by Barry.

In July 1838, he wrote to the Commissioners of Woods suggesting he led an expedition of "scientific gentlemen" to tour the country to select the most suitable stone. Bolsover stone was chosen after a six-week tour and Barry even made a return visit to ensure there would be no supply problems. But problems there were. Only the river wall and some lower parts of the superstructure were built with Bolsover stone before the supply dried up. Neighbouring Anston stone was substituted, even though this was not alluded to in the petrological report. Within a decade of being laid, brickbats were flying because the Anston stone was decaying.

On 27 April 1840, the first stone was laid. Less than nine months later, Barry felt the first sting over his decision to bow to the £25 000 fee. On 2 January 1841, he requested that arrangements be made, using some of the money in the contingencies, for measuring the works and preparing the accounts for the work executed. Back came the reply that this was all included in his fee.

Early 1840 also saw the start of Barry's long and acrimonious dealings with Dr David Reid, a Scottish chemistry teacher. On 24 January 1840, Reid was given charge of warming and ventilating the new Houses at a salary of £500 per annum. Barry objected to the diminution of his responsibility brought about by Reid's appointment. He argued in vain against the decision, so the seeds of distrust were sown between the two. Over the next 12 years, Reid launched a continuous stream of vitriol against Barry which drove the architect to near suicide.

Reid was appointed on the strength of his success in providing a heating and ventilation system to the temporary House of Commons' building in November 1836. However, Reid's attempt at a similar feat for the temporary House of Lords' building was a failure. This created a division



13 JANUARY 1857

THE CLOCK-TOWER, WESTMINSTER NEW PALACE.

are of an order so superior, and display so much taste and knowledge of Gothic Architecture, as to leave no doubt whatsoever in our minds of the Author's ability to carry into effect Your Majesty's Commands, should you be pleased to honour him with your confidence."

More rumblings of discontent followed when Barry was forced to redesign some elements of the scheme after criticisms were aired by a Commons select committee, mainly orchestrated by Hume. The redesign was finished in January 1837, but there were suggestions that the "revised designs contained some hints from the plans of Barry's competitors".

Another jibe was that the cost of the works would be near to £2m, not the £500 000 that Hanbury Tracy, chairman of the judges, had sought to suggest. The final figure was £2.4m. Thirty-four of the losing architects set out to petition Parliament, ably assisted by Hume, to get Barry's scheme withdrawn on the grounds of cost. Hume wanted a fresh competition. He lost. The attack then turned to have Barry's design declared not Gothic because of Perpendicular tracery.

After much debate, Barry's design was finally endorsed by the Commons. He was instructed to prepare working drawings as a basis for a firm estimate which was to be checked by the Commissioners of Woods and Works. On 17 April 1837, the commissioners reported a total bill for the works of £642 822 – a mere £6871 over Barry's estimate. Adding the traditional 10% for contingencies brought the estimate to £707 104.

This became the official figure and one which was constantly

FEBRUARY 1837



between the two Houses – the Commons had faith in Reid, but the Lords did not – as Barry found out later to his cost.

Reid's original plan was to draw in fresh air, depending on wind direction, either from the stately Victoria Tower to the south or the Clock Tower to the north. Fresh air would be warmed, if required, and fed via channels to the two Houses where they would enter the chambers via metal grilles in the floor. Smoke and vitiated air would be drawn out through apertures in the ceilings and funnelled to a central flue.

These proposals meant that Barry had to radically review his design. The elegant 300 ft high spired lantern Centre Tower over the Central Hall was added to act as the central flue at an estimated cost of £20 000. Fireproofing the floor, brick arches on iron girders, added £20 680 to the bill. A further £12 320 was estimated as the cost of adding fresh-air ducts and chimney flues, plus £12 000 for Reid's apparatus.

In the autumn of 1840, on Barry's recommendation, Grissell and Peto won the £163 350 contract for the foundations to Central Hall, the Royal Staircase and the remainder of the south flank of the palace. Barry also recommended a start be made to the foundations of the Victoria Tower, though neither the height of the tower nor its use was certain. The original intention was that the tower be used for storage of infrequently used records but Parliament was toying with the idea that it should house all the public records.

February 1841 heralded the start of the 17 years it would take to build the tower. Immediately, Grissell and Peto hit quicksand and aquifers. A double enclosure of timber piles was driven in the clay stratum below to form a cofferdam and workers gingerly excavated down to foundation level. "A concrete of hydraulic lime and metallic sand was thrown in to a depth of 10 ft 7 inches. Two courses of 6 inch landings were then placed on the concrete, and upon them the walls were carried up, without accident of any kind."

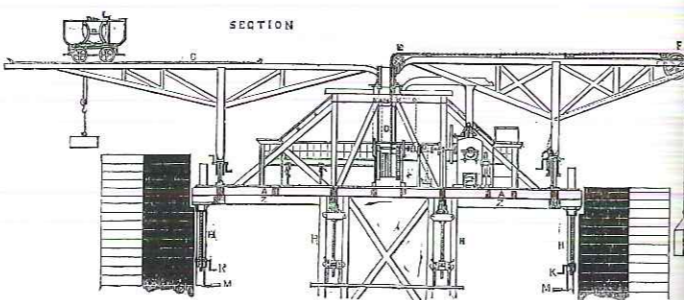
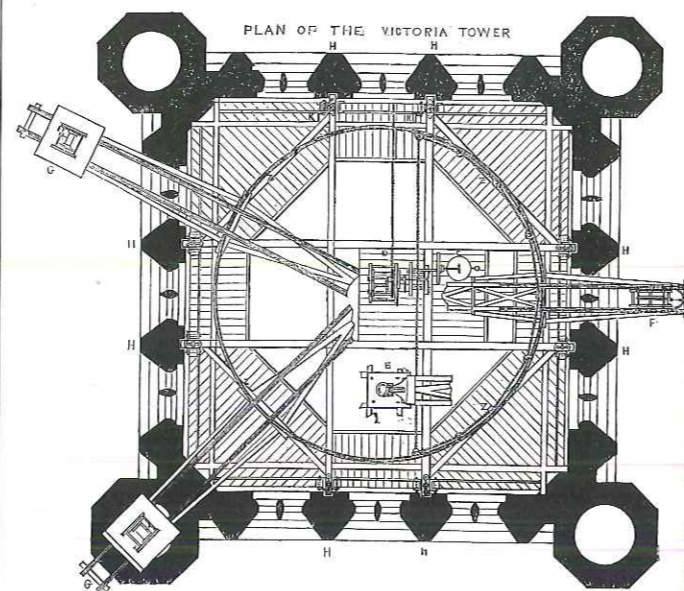
The number of workers employed on the site by Grissell and Peto had now risen to around 500. But before the year's end that number had reduced when the site was hit by a strike. In September 1841, masons working on the river front downed mallets. They wanted Allan – Grissell and Peto's foreman – removed from site because he had complained in too colourful language of "want of exertion on the part of some of the workmen". Grissell and Peto backed Allan and got permission from the Office of Works to recruit new labour. The masons stayed out for 20 months and only resumed work in May 1843.

By March 1842, Barry was able to report that the river front had risen 23 ft above the main floor, and that the foundations for the two Houses and the Clock Tower were near to ground level. The good working relationship forged between contractor and architect moved Barry to suggest that the firm be given the next phase to construct the superstructure of the spine of the palace. The Treasury formally sanctioned the go-ahead for the £212 249 and two-and-a-quarter-year contract in August 1842. Apart from the main part of the palace, the schedule included raising the Victoria Tower and Central Tower to heights of 83 ft and 86 ft respectively.

It was also clear at this time that definite decisions needed to be taken about the warming and ventilation system before the contract was completed, otherwise delays were inevitable.

During 1843 and 1844, Barry had received several rebukes from the parliamentary select committee for undertaking alterations without prior authority from the Office of Works and for slow progress on parts of the 8 acre site.

He was also to make a major *faux pas* that set the Lords firmly against him. In March 1843, a Lords' committee – already irritated by their uncomfortable accommodation and the slower than anticipated progress on construction – requested their new home be ready by the 1844 session. Barry argued against undue haste but said it could be done if a wooden ceiling was used instead of plasterwork, if the walls were lined with temporary fittings, and if the Lords were prepared to put up



SCAFFOLDING OF THE VICTORIA TOWER, HOUSES OF PARLIAMENT.

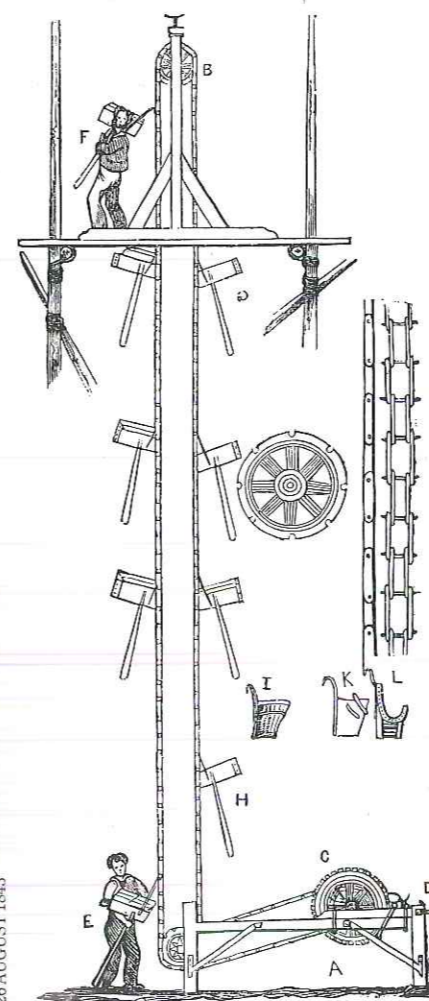
*On the top of Grissell and Peto's ingenious scaffold were three cranes, driven by a 2.5 horse-power steam engine, that were used to lift and place the masonry.*

with temporary seating arrangements. But he then made no effort to hasten completion because the committee's report was not notified to the government. Barry was severely censored over the matter and sternly told "to advance the works with the greatest speed".

He turned to master draughtsman Welby Pugin to help prepare working drawings for the fittings and decorations for the House of Lords. Pugin had assisted during the original design competition. Barry also looked to Grissell and Peto for help. The contractor won the fitting-out works in December 1844 with both parties having the option of determining the contract earlier than its stated three-year term. Grissell and Peto's lowest bid followed the normal procedure of the day which was to state what percentage reduction it would give on a schedule of prices prepared by the Office of Works.

The contract was ultimately to be the undoing of the good working relationship between contractor and architect. Barry must have at least had an inkling of that when he remarked that the firm's tender was "much below the amount at which any other respectable and competent building firms in London, would be inclined to offer".

At Barry's suggestion, the firm used newly invented wood working equipment to machine the ornate mouldings and carvings. Less than a year later, in October 1845, Grissell and Peto said it no longer wanted the joiners' work because it was not paying. Barry sought an increase on the prices but the contractor wanted them backdated to February. Stalemate



DOCTOR SPURGIN'S MACHINE FOR HOISTING BRICKS, MORTAR, &c.

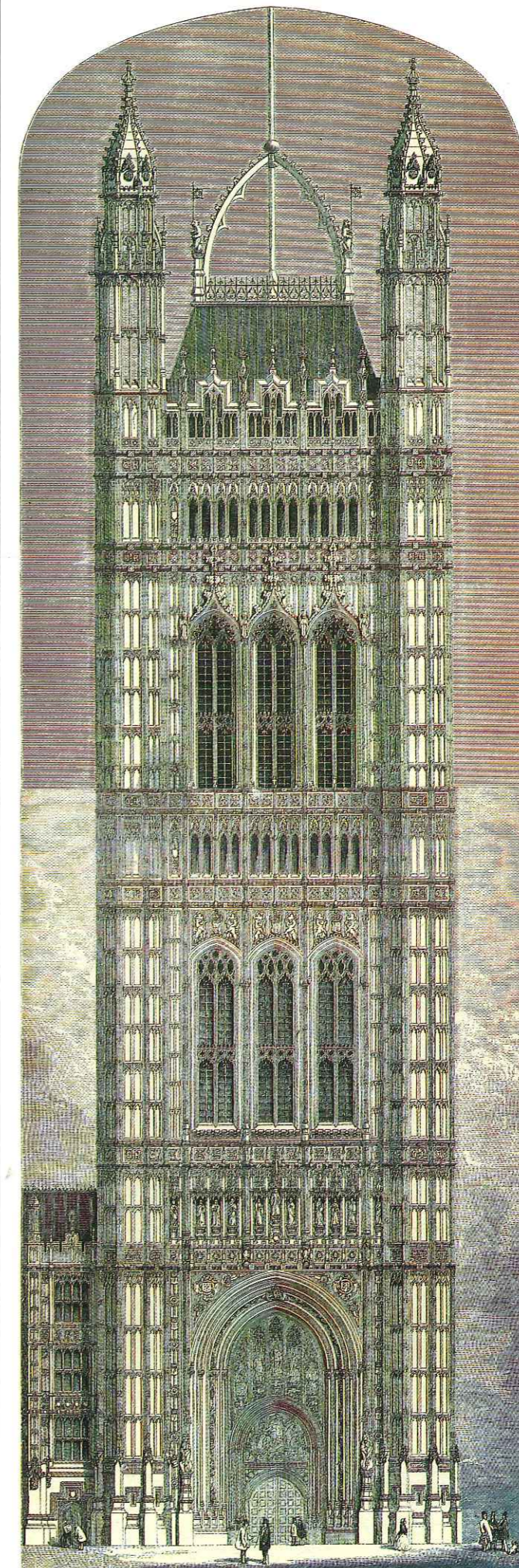
*More ingenuity – a steam engine driven hoist delivered a continuous stream of hods of bricks and buckets of mortar to the masons.*

ensued. No agreement could be found over the level of remuneration for Grissell and Peto, nor could any decision be reached over which parts of the contract should be allocated to other tradesmen.

This was not to be the only event in 1845 to set the project hurtling on a downward path. In August *The Spectator* carried a complaint that craftsmen who were recommended for employment after entering a competition ordered by the Royal Commissioners on the Fine Arts were being shunned. It read: "There are at this time some 60 or 80 decorators, wood-carvers and ornamental painters at work upon the enrichment of the Chamber of Peers in the new palace; and among them I believe, are only one or two of those artists whom the commissioners expressly recommended for employment. Certain it is that the most skilful and experienced practical workmen among the carvers and painters thus recommended have not been engaged; and what makes this still more extraordinary, is the statement by Mr Pugin, who superintends the interior decorations, that for want of competent assistance from Englishmen he is compelled to send for foreigners."

But the event of 1845 was the Barry and Reid set-to. In March, Reid wrote to Barry: "I protest against your telling me that I have altered my plans, or that any addition has ever been asked for..."

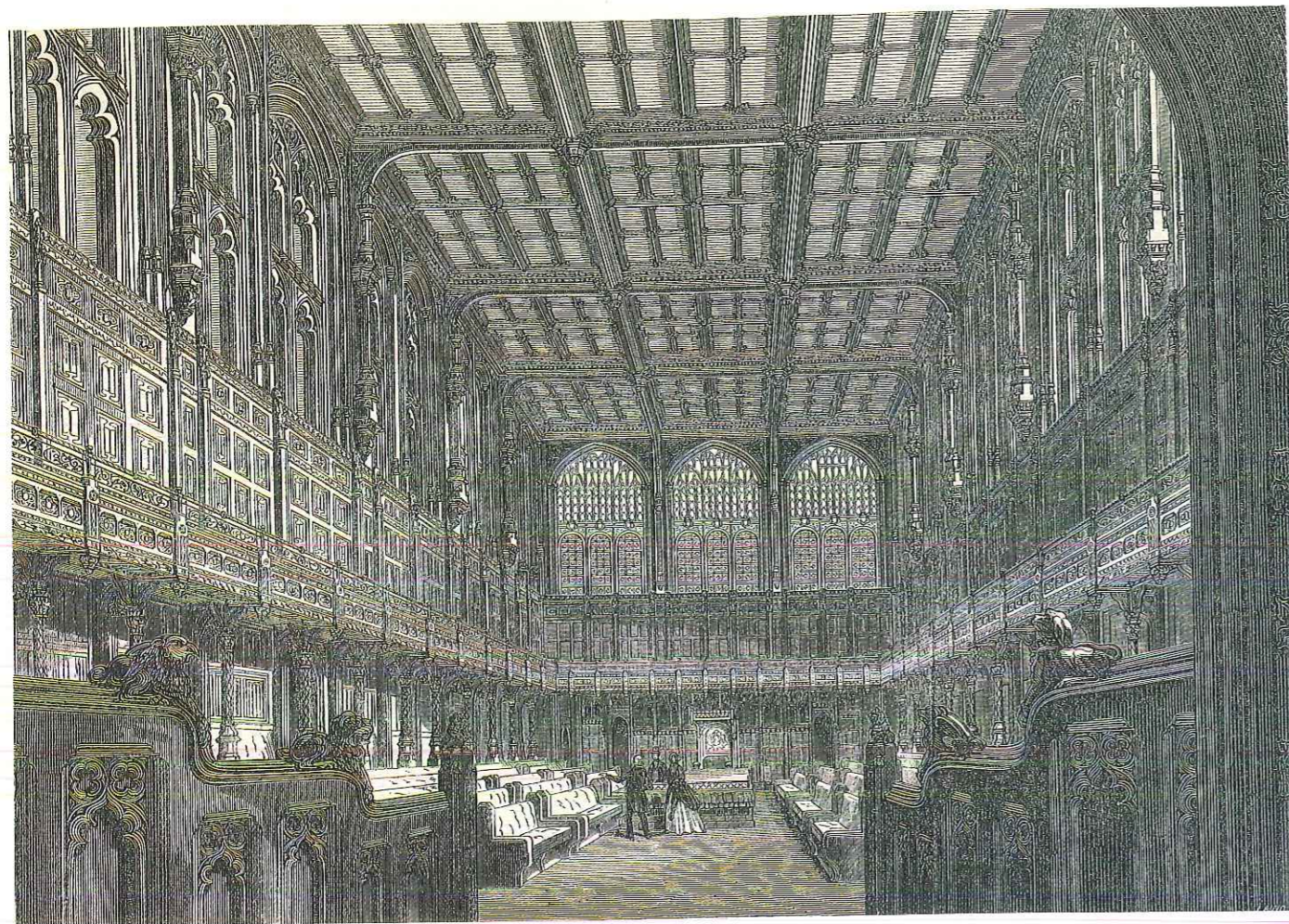
This was too much for Barry. He replied: "It is only now upon being made acquainted for the first time with the method in



THE VICTORIA TOWER, WESTMINSTER.

13 AND 27 MARCH 1858





THE NEW HOUSE OF COMMONS, WESTMINSTER.

5 JANUARY 1850

which you propose to complete the unfinished arrangement hitherto made, that I consider it is my duty to object to them as interfering with the fireproof principle of the building."

An independent arbitrator, Joseph Gwilt, was appointed to sort out the mess. Gwilt found in Barry's favour and urged he should take over from Reid. His report to the Commissioners of Woods and Works on 28 September fuelled Reid's hatred of Barry. Gwilt reported Reid's "total unacquaintance, as he himself admits, with all matters connected with the design and constructions, was of itself, even though he was assisted by competent persons, sufficient to cause delay and confusion in the works. For want of detailed drawings, such as are usually furnished by ventilators, an extraordinary number of flues have been introduced into the building."

Despite Gwilt's overwhelming condemnation of Reid's abilities, the commissioners and the Lords' committee could not make up their minds. The commissioners suggested the appointment of an intermediary between the two pugilists. The Lords' committee prevaricated for nearly a year while it interrogated both men. It was told by Barry that Reid had proposed eight different ways for ventilating the House but "was always very unwilling to commit himself to anything definite on paper", and "matters are now in a perfect state of stagnation, as to proceeding with the finishings of any portion of the building." Their Lordships finally decided on 23 June 1846 to back Gwilt's judgement and let Barry be responsible for warming and ventilating their new chamber.

The debacle over the House of Lords prompted the Commons to undertake a similar assessment. The Commons' natural predilection for the ventilator led to the fudged decision, on 1 April, to appoint a three-man arbitration panel. One month later, the Commons' committee changed its mind and called for three experts to assess an alternative scheme proposed by rival ventilator Goldsworthy Gurney. By August, the Commons' committee went back to its first idea of an arbitration panel of "eminent scientific persons" to advise the Board of Woods.

Understandably, the idea did not appeal to Barry because he would again have to deal with Reid. He declined to state officially how he would ventilate the Commons and said he would give the Board details in private. Barry's estimate of £6200 to ventilate the Lords was accepted. His first act was to write, on 30 September 1846, banishing Reid and his assistants from the works: "I (Barry) have given orders to close the doorway by which you have lately been in the habit of obtaining access to them."

This raised Reid's fury to fever pitch. He began a new and even more invective campaign against the architect. Reid also set about seeking damages because the Government had breached the contract it had given him in 1840.

Within two months, the Whig Government had done another U-turn. Chief Commissioner Lord Morpeth reappointed Reid on 28 November 1846 to prepare plans for ventilating the Commons. The next eight months saw ventilator and architect at each other's throats because they had to swap design

centred on the Reid versus Barry fight. Meanwhile between 600 and 700 workers continued their duties on the site. Working under the hissing incandescent glow of gas lamps, masons fixed the Painswick and Caen stonework for the interior of the palace. Alongside them in the House of Lords were joiners, glazers, artists and decorators. Above them were the roofers, mastic asphalters and ironworkers.

By 1845, the difficulties supplying the vast quantities of Caen stone required for the interior were past. And normality was returning to the iron trade after "difficulties with the workmen interrupted the fixing of the roof". Work on raising the Clock Tower and the Victoria Tower was ambling along at a reasonably consistent 20 ft per year on each.

In April 1847, the Lords' near 11-year wait was over and they took possession of their new premises, although considerable work on the glazing and mural remained outstanding.



he House of Commons was another matter. Work was not far short of a near standstill. Reid and Barry's warring was one reason. Lack of money was another. Increased expenditure on defence pegged the money available to Barry. In June 1848, Barry sought £5000 to carry out alterations to a records store and convert it into a smoking room and offices for the Commons. The Treasury would have none of it despite the architect's warning that the alterations were essential if the building was to be ready for the Commons in 1850. In return the Treasury warned that Barry must, under no circumstances, exceed the sum allocated for each year's expenditure even if it meant laying off workers. Work slowed still further. By the turn of 1848, fewer than 500 were employed. And the general public was starting to clamour about the cost and time taken. Barry was tagged "Tarry".

On 27 February 1849, Barry's estimate of £1 025 000 to complete the palace caused apoplexy at the Treasury. More committee meetings were held. New commissioners were appointed to look at costs and what work remained. Little work on site was overtaken by virtually no work on site.

One year later, the disastrous state of affairs was graphically brought to light by *The Builder* (see next page). The public mood was also well illustrated by a two-liner in the play *Frankenstein* at the Adelphi Theatre:

*Long in getting through with,  
Like certain Houses Barry has to do with.*

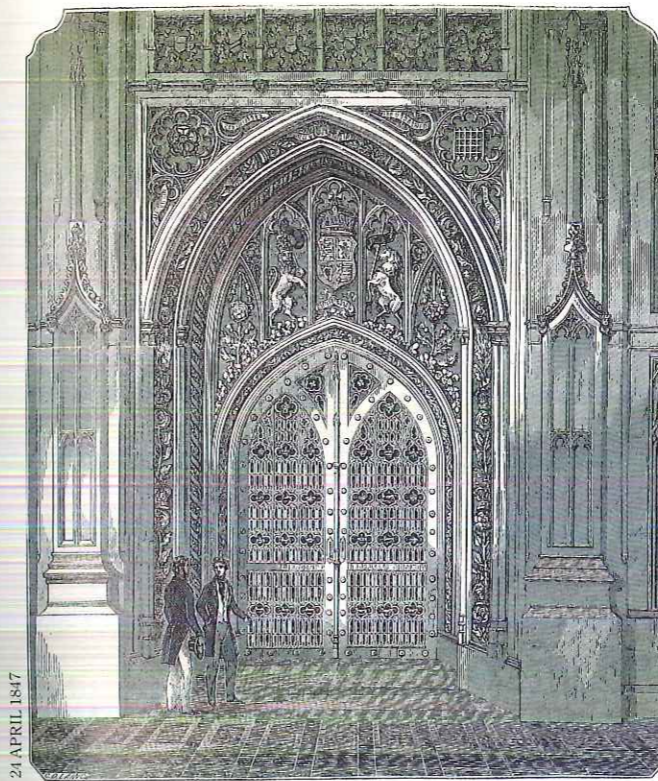
The national outcry struck home. More money was released and the workforce gradually increased. In May 1850, the Commons' chamber was temporarily fitted-out for experimental sittings. The experiments offered fresh ammunition for Barry's old adversary Hume to launch a new attack. This time it was the acoustics.

The Commons had somehow got the idea that the acoustics would be uniform throughout the chamber. Barry proposed putting in a central wood-panelled ceiling six feet lower than the original with the outer sections sloping towards the windows. This blocked out part of the windows so the sills were cut down by about one foot to let in more light. The cost of these alterations added £9400 to the bill.

Hume was soon on the offensive – "any schoolboy would be flogged for designing such a place". Hume's attack found favour with MP Benjamin Disraeli for whom flogging wasn't enough. He repeated a remark made in one of his books, and aimed at Barry, that "to hang an architect" would strike terror in all designers of bad architecture.

While all this was going on, the Barry versus Reid saga took a new twist. Architect took ventilator to the Court of Common Pleas and claimed damages after Reid accused Barry of forging a document to the Commissioners of Woods. Justice Wilde, however, ruled that he thought the real reason the matter was brought before court was "in order to try the merits of their respective plans" and dismissed the case.

The two arch-enemies soon found another matter to argue over – the sewerage system. Barry was attacked by



ENTRANCE FROM THE PEERS' LOBBY TO THE HOUSE OF LORDS.

24 APRIL 1847

information. Reid complained: "The most audacious effrontery has been practiced by the architect in representations made to the commissioners". Barry replied: "The personalities and insinuations which pervade this letter are unwarranted and in bad taste but are beneath Mr Barry's farther notice."

After eight acrimonious months, Barry was able to report that Reid's plan was practical but expensive. Reid protested. However in December 1846 the Board of Woods submitted three estimates to the Treasury for consideration: £14 368 from Reid; £17 491 – Barry's estimate of Reid's design; and £6472 for Barry's own design. These figures meant that Reid's estimate for warming and ventilation of the entire palace was £62 000, whereas Barry's design would have cost £39 000. Despite the cost differential, the Treasury capitulated to Commons support for Reid and backed his scheme.

Although Reid had won, it did not stop him pouring scorn and derision on the loser. The architect's design for the Central Tower was much criticised because it did not accord with the ventilator's design objectives. Reid went as far as accusing Barry of blocking up "by brickwork the principal channels of supply of fresh air from the Clock Tower to the New House of Commons" making ventilation "utterly impractical".

These outbursts led to Reid being censured by the board – "this continuing vacillating mode of proceeding is extremely inconvenient to this department as well as detrimental to the public service..."

But Reid persisted. Most reports during 1845 and 1846



## THE PALACE OF WESTMINSTER

When, on the evening of Monday 4 February 1850, a question was asked in the House of Commons about when the new building would be ready for occupation, the members dissolved into mocking laughter. The MP's response prompted The Builder to go and see for itself:

We walked from one end of the enormous building to the other, a few days ago, and were grieved by the air of desolation which everywhere prevailed:

Few workmen were to be seen except in one or two quarters; and these moved with that listlessness which follows want of energy in the direction. To a very large portion of the building nothing whatever has been done for four years:—there it stands in carcass just as it did four years ago! The first contract, commenced ten years since, and which was to have been completed in three years, is positively not yet wound up. In the Commons' lobby the scaffolding is standing exactly as it was eighteen months ago, and there are no orders yet given for building it. In the Commons' library there had not been a man at work for two or three years till last week, when three or four joiners were sent in to—take down some pedestal presses which had been put up. Here and there you may see other pairs of men amusing themselves pleasantly by altering a panel or putting up a moulding,—evidently set to it to prevent them from suffering from ennui, and avoid the necessity of discharging them altogether. Our readers who understand these things will laugh when we tell them, that the whole number of joiners now employed on the building is thirty:—four flies to eat up an elephant: they perhaps may get through the job if they live long enough, but it will be a weary while first.

Members who produced the "tittering" and "much laughter" of Monday night, and shrugged their shoulders to express their belief that under the present direction they never would get into their new quarters, surely cannot know the real facts of the case. They cannot be aware that the fault is their own, and solely their own.

Not very long ago the Government spent at least 20,000*l.* in the erection of workshops at Thames-bank, with provision of gas, water, and costly machinery, to admit of greater rapidity in the progress of the works: the machinery is silent, the shops empty, the expenditure lying waste, and here the contractor has no less than fourteen thousand pounds' worth of materials, timber and deals, wainscot, &c., purchased through the necessity of providing seasoned stuff for what was anticipated to go on, and which have been lying there and spoiling for four years.

Looked at every way, the results of the course which has been pursued are seen to be bad, and we would very seriously urge on the attention of Government, the importance of doing differently in future and proceeding vigorously with this great work: employment is wanted, loss is caused by delay,—nothing can be gained by it; enormous rents are being paid which might be saved, and the dignity of the country is in a degree compromised.

9 FEBRUARY 1850

consulting engineer Henry Austin over the main sewer that was to run beneath part of the new palace. Austin reckoned the smell of sewage would easily find its way into the building. Nonsense, Barry replied. But Reid won the sympathy vote. He pointed out that he had gone to great pains and cost to design a system that relied on drawing in fresh air and this would be nullified by the proximity of the sewer. The sewer was moved.

As 1850 turned to 1851, the Victoria Tower reached the 140 ft mark. But still no decision had been taken on its ultimate height. The new year did at least signal increased activity. Craftsmen could be seen laying the Minton floor tiles and progress was noted on decorating and fitting out the House of Commons. But 1851 was to be little different for Barry in so far as the persistent grumbles laid against him. The decorative design for the ornamental shields in the Commons met with displeasure. After granting £8600 for decorations, there was even talk about scraping the gilt off the shields and recouping the money by selling the gold. Barry also came under immense pressure to say when the House would be finished. Next year, was the reply.

On 3 February 1852, Queen Victoria entered Parliament via the tower named after her and formally opened the House of Commons. Eleven days later, Barry received his knighthood.

In the course of those 11 days, Reid was called to the bar of the House to answer questions about the warming and ventilation. Although his responsibility, Reid placed all the blame on Barry. By August, the select committee had enough information to produce a report on the efficacy of the system. *The Builder* reported: "It fills 670 pages, the greater part of it, as humbly it seemeth to us, the merest verbiage and twaddle that ever a nation had to pay for printing."

But what it did contain led to the downfall of Reid. The report noted: "The atmosphere of the House is in a desiccated and ferruginous state, and subject to constant disturbance from initial and retrograde currents passing in all directions, apparently at random and without control, producing direct draughts in parts of the House and oppression in others."

The Commons had finally had enough. Reid was dismissed but he carried out his earlier warning about any breach of his contract and won damages. A mechanical engineer, A Meeson, who had helped develop the ingenious scaffold and crane machinery used to place masonry on the Victoria and Clock Towers, was given the job. Two years later, in 1854, Goldsworthy Gurney took over and the entire system was much simplified.

However, costs continued to soar and progress was not helped by the termination of Grissell's contract in 1852 for being too expensive. After 13 uninterrupted years on the site, Grissell made way for contractor John Jay.

In April 1856, *The Builder* reported: "Sir Charles Barry's great works is approaching towards completion: the whole outline of the Clock Tower is now to be seen and the Victoria Tower is finished to the top of the parapet and the foot of the turrets. The turrets will be 70 ft high topped with a flagpost."

Between 1856 and 1860, work continued on the towers as well as the outer parts of the palace including the committee rooms. When Sir Charles Barry died on 12 May 1860, the vast palace was substantially complete although the finishing touches were to take nearly another decade—his son Edward Barry was entrusted with many of these.

Barry took to the grave with him deep dissatisfaction about the way he was reimbursed for his labours. But the deep respect he won can be judged by the fact that 500 craftsmen and labourers attended his funeral.

Graham Ridout is assistant editor of *Building*. Main sources of information: *The History of the King's Works, Volume VI, 1782-1851* by J Mordaunt Crook and M H Port, and *The Builder*.

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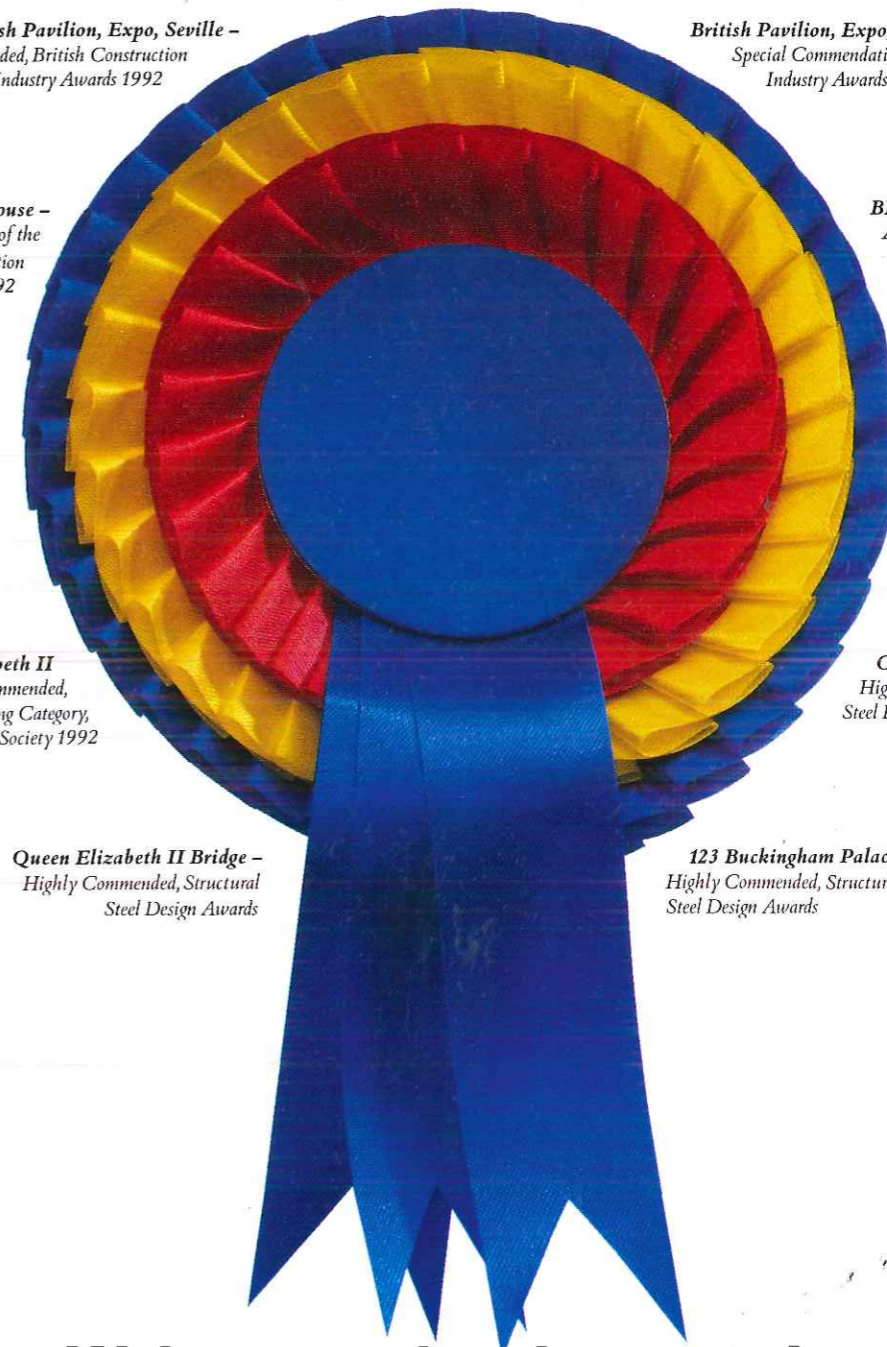
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