

IFES Convention 2005

Presentation by Michael J. Davies, MA, University of London.

'The Great Exhibition of 1851'

What can we gain by looking into the history of exhibitions and exhibition stand design?
Two things, I believe.

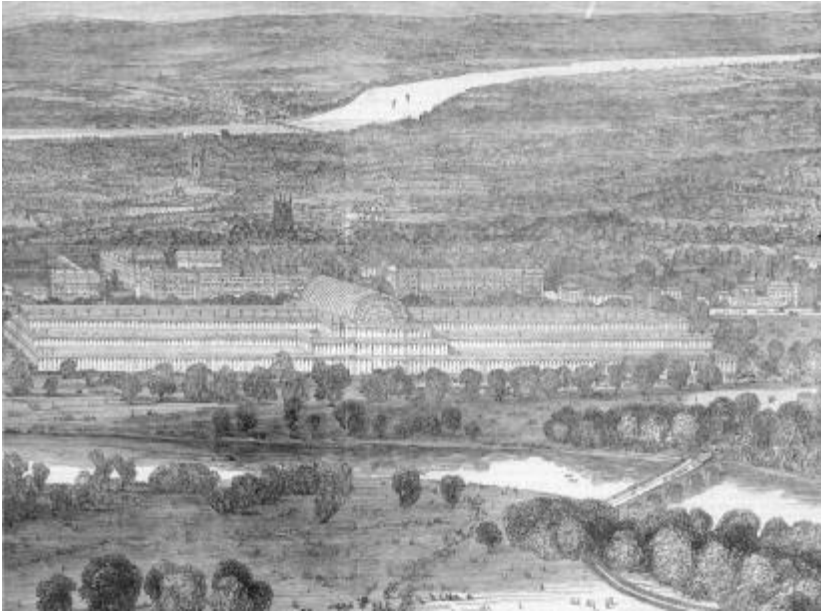
First, history can give us a sense of continuity and pride in our industry.

And secondly, I think we can learn from the past. We can gain by seeing how the industry has been organised, what exhibitors' objectives have been, whether these objectives have changed over the years, and how designers and contractors have responded to these changes.

It is highly appropriate that this IFES Convention has been held in London' where the first international exhibition ever held took place, just over 150 years ago. This was the Great Exhibition, held inside the Crystal Palace in Hyde Park in 1851.

This one event stands head and shoulders above all others as a landmark in the story of exhibitions in this country, and I think it is of interest and relevance to us, as a group of international exhibition contractors, because:

- It was the first International exhibition ever held
- It was held in a massive building – three times the length of St Paul's Cathedral
- It was designed and built in such a short space of time. St Paul's cathedral took 35 years to build, The Crystal Palace was built in 17 weeks.
- 11 months before the Great Exhibition opened not even a sketch design for the Crystal Palace had been produced.
- It was a truly 'great' exhibition. There were nearly 14,000 exhibitors showing over 100,000 exhibits, and it was visited by over 6 million people.
- It was a huge success, and actually made a profit.
- And, above all, the structure was modular and re-usable.



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This view, looking south across London gives you an idea of the location of the 1851 Great Exhibition building, which was given the nickname 'The Crystal Palace' by Punch magazine, because so much glass was used in its construction.

The driving force behind the Exhibition was Prince Albert, the husband of Queen Victoria. It was he who promoted the idea that the exhibition should be International. For the first time an exhibition would be held which welcomed overseas exhibitors - half from Britain and its Empire, and half from the rest of the World.

The British Government had already said that it would not finance the exhibition, so the whole project would have to be financed by public subscription – by individuals and groups making donations. It seems extraordinary to us now, but exhibitors were not charged for space. All the money had to come from the gate receipts. Prince Albert became the figurehead behind the fundraising campaign for which he was lampooned by the press.



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The Organising Committee announced on 13th March 1850, that it was going to hold a competition for the design of the Exhibition building. It issued a brief, and invited proposals which had to be submitted in only 25 days' time. The design brief specified that the building should be capable of being manufactured and produced in a matter of months, to a very limited budget, and that the structure should be de-mountable and re-usable at the end of the exhibition. There would be prizes for the best submissions, but no fees would be paid.

The organisers were asking designers and contractors:

- to produce design proposals for a massive project
- on a speculative basis
- for no fee
- in a very short space of time.

Now doesn't that sound very familiar to us today ?

In the event, 253 proposals were submitted by the deadline of 8 April 1850, but none was considered acceptable. Many of the designs were too expensive, while others were for semi-permanent buildings, despite the fact that permission to build in Hyde Park had been granted only for a temporary building.

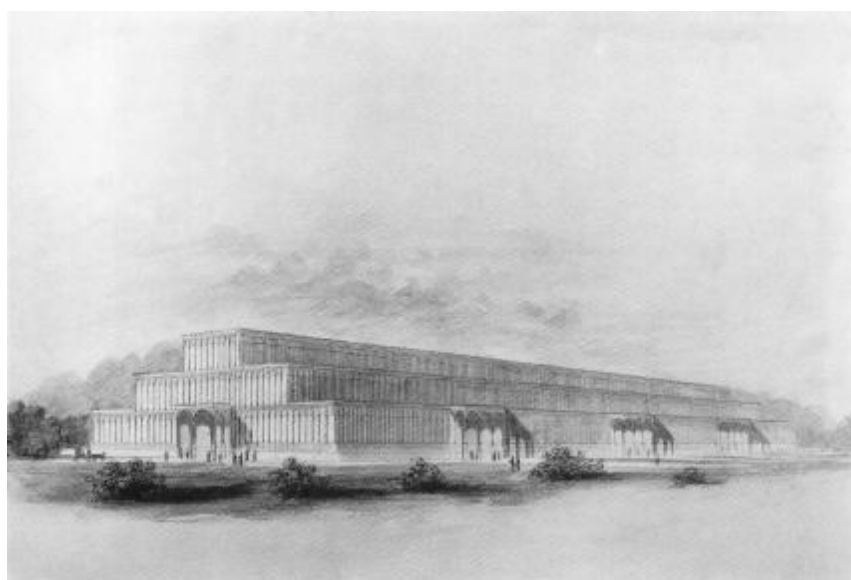
At this stage, in June 1850, 11 months before the exhibition was due to open, a Mr Joseph Paxton took an interest in the competition. Paxton was described later by Queen Victoria as a "humble gardener". It is true that he began his career as a gardener, but by 1850 he had become a successful entrepreneur, a garden designer, and builder of conservatories.

In the early 1840s he had developed his own design for a Great Conservatory for the Duke of Devonshire at Chatsworth House in the North of England. In 1849 Paxton designed a new conservatory at Chatsworth, this time to house a newly discovered plant from South America, the Victoria Regia Lily. Paxton was impressed by the structure of the plant which enabled it to be light enough to float, and yet have immense strength. He incorporated features of the lightweight structure of the lily in the design of his conservatory

When he heard about the difficulties the Great Exhibition organisers were having in finding a suitable building for the exhibition, he was convinced that the structures he had used to build the 2 conservatories at Chatsworth could be developed into a building large enough to house the proposed exhibition, he contacted the organisers and said that if they would allow him to make a late entry he would produce a design within nine days. They agreed.

Paxton was heavily committed on other business for several days and could not start work on his design straight away. However, at a business meeting he was attending in Derby on 11 June, he made a sketch, or doodle, on the piece of blotting paper on the table in front of him. That doodle was very close to the final design for his exhibition building.

Paxton was not only energetic and talented, he also had a flair for publicity and self-promotion. Before submitting his proposal to the Committee he published his design in a weekly illustrated magazine, *The Illustrated London News*, on 6 July 1850.



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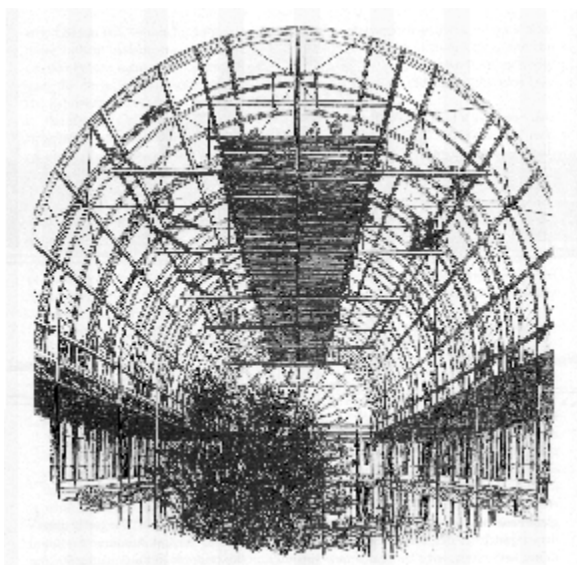
His proposal not only caught the imagination of the public, it was also supported by many members of the Committee.

There was however, one drawback to his design – it involved cutting down 10 tall elm trees which stood in the centre of the exhibition site. There was a public campaign to save the trees mainly targeted at Prince Albert.



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Paxton's solution was simple and ingenious – to introduce a vaulted transept which would arch over the top of the trees.



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This feature, which he immediately added to his design proposal, created the most distinctive and famous feature of his design.

Tenders for the design and construction of the exhibition had to include prices. To produce his tender Paxton worked in co-operation with the building firm Fox, Henderson &

Co. They not only submitted a competitive tender, but also offered the option of an even lower price if they could retain the structure at the end of the exhibition. The building would not only be re-usable, it was being offered on a rental basis.

Fox, Henderson and Co.'s tender was accepted, and they were given verbal instructions to proceed on 16 July 1850. This left only 8 ½ months before the date set for the opening on 1 May the following year.

However, at that stage, the Committee was not able to issue an official contract, so they approached Fox, Henderson & Co. and asked, in Charles Fox's words:

“Whether under these circumstances we should consider it running too great a risk to enter at once upon execution of the work, as otherwise many weeks would unavoidably be lost, and the chance of opening the Exhibition on 1st May placed beyond possibility.”

In other words, should Fox and Henderson, the contractor, take a risk

- by starting straight away
- with no written order
- or progress payment,

or delay until they had an official order and then try to fulfil a fixed price contract in an unrealistic timescale ?

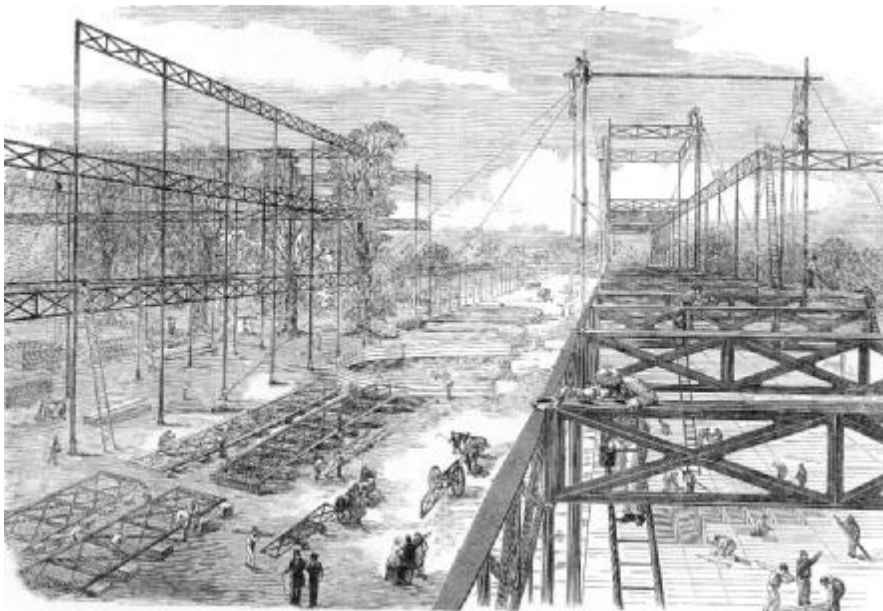
Haven't all exhibition contractors been put in that position at one time or another?

Well, Fox, Henderson & Co. took the risk and started straight away. Charles Fox with a small team of draughtsmen worked for 18 hours a day until they had produced the necessary working drawings. As these were completed they were checked, and the necessary calculations made to enable production to start on manufacturing the component parts of the building.

The site in Hyde Park was handed over to the contractors on 30 July 1850. A hoarding was constructed using the wooden boards which were later used as the floorboards inside the exhibition building. The site was levelled and the positions of the columns were

marked on the ground. Meanwhile the columns, girders, castings and glass were being manufactured in the Midlands, and transported to Euston Station in London by rail, and then transported to Hyde Park by horse and cart by the transport company Pickfords, who are, I am glad to say, still in business today.

On 26 September the first column was raised and construction of the building started in earnest.



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At this stage there were just 4 ½ months before the exhibitors were due to move in. Construction work was carried out using horses for heavy lifting, but more usually using only pulleys and manual labour for lifting beams into position. The workforce on the site started with 39 men in early September, reaching a peak of over 2,000 by December. Prince Albert took a personal interest in the progress of the work, making frequent visits to the site.



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The workmen are shown here cheering, but it is not clear whether they are cheering Prince Albert as he leaves on the right, or cheering the barrels of beer as they arrive on the left.

At this stage, in early December 1850, the ribs for the transept were ready to lift into place.



© Michael J Davies

These were made up of overlapping sections of timber. These were then assembled in pairs and braced diagonally, ready to be lifted into place. This was not as easy as a straight lift, because the transept arches were designed to sit on top of the side walls, and were therefore wider than the available opening. This meant that each section of the transept had to be lifted

up at an angle. This was a delicate operation, which was personally supervised by both Mr Fox and Mr Henderson themselves, using loud hailers.

The most remarkable thing about this engraving is the date. This is the first transept arch being lifted into place on 4 December 1850, and the first exhibitors started to arrive on 12 February 1851, 70 days later. Anyone involved in the exhibition business must feel a sense of admiration for the energy and courage of these contractors.

As the structure of the building neared completion, attention moved to the needs of exhibitors. In early January 1851 Fox and Henderson, who already had a workshop on site, and a large workforce available to carry out work on individual stands announced ...

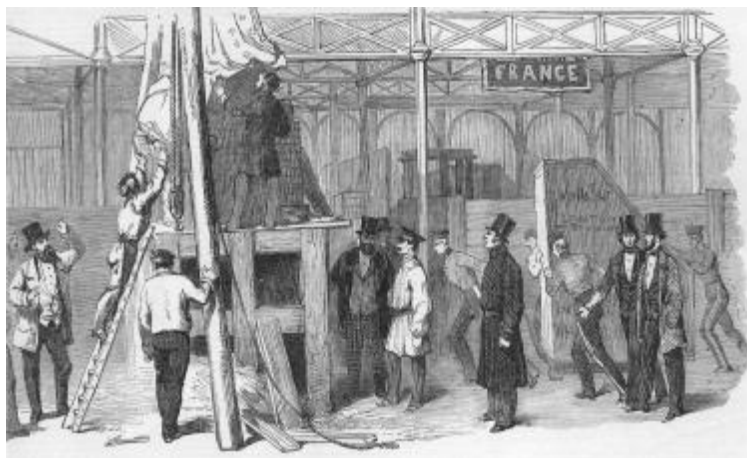
“Messers Fox, Henderson and Co, the Contractors have to announce that they are prepared to supply glass-cases, stands etc, of particular kinds, to furnish and fit up open cases or shelves, and decorate stalls according to the wishes of the Exhibitors.”

The work mainly involved providing dividing walls, counters, plinths and some showcases. Fox, Henderson & Co. published illustrations of available options, and even included an order form. The organisers, for their part, published for the guidance of exhibitors, rules and regulations many of which sound familiar today, for example:

“Exhibitors are reminded that there must be always a clear passage of 5 feet next the railings in the galleries, and no intermediate passage less than 3 feet.

No vertical or counter space in the galleries must rise above 7 feet from the floor.”

While fitting out work was nearing completion, exhibits began to arrive from all over the world.

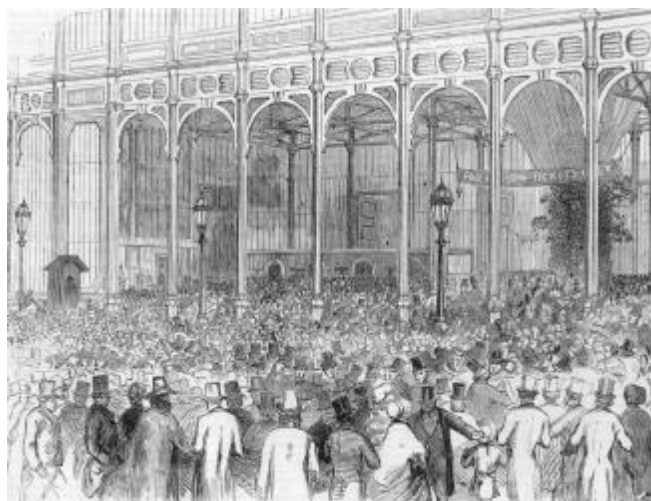


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It is interesting to see that the packing case shown in the background on the right being wheeled into place, is addressed to the **World's Fair** – it appears that even before it had opened the exhibition was seen as a global event.

All offloading, handling and unpacking of exhibits was handled by a team of Army Engineers provided by the organisers - a system similar to the drayage system in the United States today. Exhibitors and contractors faced many of the kind of problems familiar today. However, eventually, on the last day of April the Great Exhibition was ready – that is to say it was “ready” rather than completely finished. Workmen were in fact still painting the outside of the building, and some of the displays, particularly those from overseas, were still not fully complete.

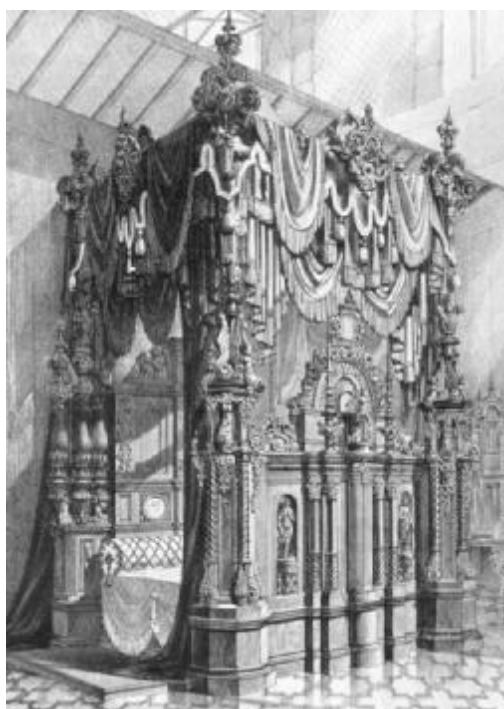
Despite this the exhibition was opened as planned by Queen Victoria on 1 May. There was enormous public interest and enthusiasm for the exhibition, and it was an immediate success.



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Within three weeks of the opening the organisers were able to repay their loan from the Bank of England in full. The visitor numbers kept up through the exhibition, peaking at just under 110,000 in one day on 7 October.

The exhibits were all things to all people, and there was something of interest to everyone. Today, the highly decorated designs of many of the exhibits are, perhaps, difficult to for us to understand. The architect Mies Van der Roh coined the phrase with which we are all familiar: "Less is more" about architecture and design. As far as added decoration is concerned, the designers of many of the exhibits at the Great Exhibition, such as this bed,



© Michael J Davies

appear to have taken the view that "More is More" and the More the Better. It is so encrusted with decoration that it is difficult to see how you would get into bed at night.

Well, all good things come to an end ! And On 11 October 1851 the Great Exhibition closed. The structure of the Crystal Palace was sold, taken down piece by piece, and transported by horse drawn cart to a new site at Sydenham, a suburb of South London which has since been officially re-named Crystal Palace. Here it was rebuilt and re-opened in 1854. It remained a landmark in south London for over 80 years until 1936 when a fire broke out one night and within hours all that was left of Crystal Palace was a heap of twisted metal and molten glass.

But this was not really the end of the story of the Crystal Palace. The Great Exhibition of 1851 was not only a great success, it also made a profit – in fact £186,437. With this profit the organisers, directed by Prince Albert, bought a large area of land to the South West of the exhibition site. Here they established a unique area of museums and centres of learning, which was named Albertopolis after Prince Albert. They also set up scholarships to finance promising students through university, which are still awarded today.

When Prince Albert died only ten years later in 1861 a grieving nation built a memorial to him in Kensington Gardens, directly to the west of the site of the Great Exhibition, and exactly north of his Albertopolis.



© Michael J Davies

In the centre of the memorial is a massive gold statue of Prince Albert. He is gazing south over the area of London that he helped to create and in his hand, as though he has just paused from reading it, is a copy of the catalogue of the Great Exhibition of 1851.

The Great Exhibition of 1851 was a global event, the first of its kind, and one which was built on an unprecedented scale. It was also the first exhibition in which trade exhibitors were

incorporated into a non-selling event, to display and provide information, but not to sell. For example, they were not allowed to display prices. So, for the first time, trade exhibitors were showing samples, rather than selling directly from an exhibition. This is what came to distinguish Trade Exhibitions from the traditional Fairs and Markets which had taken place around the world for centuries. The Great Exhibition was not only a landmark event in its own right, but was also the first of what we would come to understand as Trade Exhibitions, and laid the foundations for the worldwide exhibition industry that we know today.

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Michael Davies has been directly involved in the exhibition industry for over thirty years as an exhibition stand designer and managing director of his own international exhibition contracting company based in London. He is currently taking four years away from the industry to study for a doctorate at the University of London on the History of Exhibition Stand Design. He would very much welcome any information about the history of exhibitions in all parts of the world, including articles, book titles, names of design colleges, names of writers, academics and historians. He can be contacted on mdavies@merlin-expo.com