

Schwabe-Hasait Cyclorama Lighting

A 100 year retrospective

David Bertenshaw

On 8th March 1923 at the London St Martin's Theatre, the renowned theatrical producer Basil Dean gathered the press and theatre representatives for a private demonstration of his new installation of Schwabe & Co. cyclorama lighting system. This included horizon lights, acting area downlights, a cloud machine and panorama projector system, together with a Max Hasait designed, encircling cloth cyclorama, all from Germany. He was also supporting Schwabe's importers, GEC, coining the name 'Schwabe-Hasait' to describe and promote the combination. 'Tarn' of the Spectator described the event:

'The "day" began with a fine light-blue summer sky traversed by light fleecy clouds. These clouds gradually massed low on the horizon – dark, threatening, cumulus clouds with bright high-lights of white that rode high were crossed by a low, threatening cloud vapour. The wind got up, the sky grew blacker, there was distant lightning, and at last the thunderstorm broke with a wailing wind and torrents, sheets, veils, of driving rain. The Illusion was complete.'

George Bernard Shaw was less impressed:

'I'll take good care you don't use any of these contraptions in my plays, young man. The audience would be so busy staring at the clouds they wouldn't listen to my words.'

Since the Schwabe cyclorama lighting system used seven colours to provide a very broad range of tones, Rob Halliday recently compared this to modern LED stage luminaires that similarly blend multiple primary and secondary colours, rather than

attempt to achieve every tint with just three primaries. Harold Ridge had even considered the Schwabe system an *'outstanding scientific achievement'* in 1928. So what brought about this installation?

The initiative came from Dean's frustration with the very conservative state of British theatre at that time. In 1911 Dean saw Max Reinhardt's *Sumurun in London* and was immensely impressed by how *'colour, light and movement were combined to such brilliant effect'*. He immediately visited the great man in Germany himself, at Reinhardt's Deutsches Theater and Kammerspiele in Berlin. Here he watched rehearsals and studied the stage technology, especially the large encircling plaster cyclorama with central arc lighting system supplied by Schwabe & Co, which *'produced effects of space and light quite unlike anything to be seen at home at that time'*.

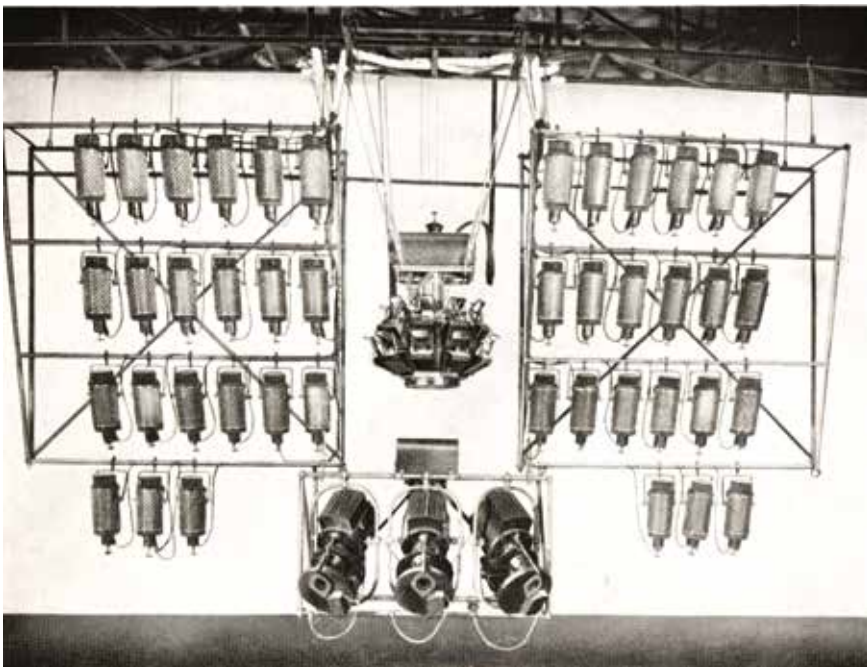
For centuries in theatre the scenic backcloth had ruled, painted to be part of a living picture but it was always an illusion that collapsed when performers interacted with it. Herbert Beerbohm Tree's 1900 *A Midsummer Night's Dream* was perhaps the epitome of this style. An early reaction came from the famous artist Herbert Herkomer in an 1892 lecture, who complained of *'layers of canvas hanging from the sky like so much washing on a line'*, but to no effect. British stage lighting also progressed little in the early 20th century, with James Fagan, sometime Director of the London Royal Court Theatre, declaring in 1919 *'I have not seen a single stage in this country which in my opinion was properly lighted'*.

Meanwhile in Germany pictorial illusion was already challenged successfully by such as Otto Brahm at the Berlin Deutsche Theater, who in 1889 initiated a new 'Naturalism' approach. But while disillusion with 'Illusionist' presentation meant it was already dying out in Germany, leading to 'Naturalist', 'Realist' and 'Expressionist' styles, in early 20th century Britain it remained staple fare, hence the enthusiasm of such as Dean on his German visits.

A key figure in the unfolding lighting revolution was Max Reinhardt who replaced Brahm as Director at the Deutsche Theater in 1905. Reinhardt looked towards a new 'realism' for his epochal 1905 *A Midsummer Night's Dream*, described by Michael Patterson:

'When in Max Reinhardt's production of A Midsummer Night's Dream in 1905 the lights went up on a slowly revolving woodland scene, the audience witnessed more than ... a stage set, they were seeing the beginnings of a revolution in theatre itself.'

Schwabe apparatus at St Martin's Theatre, showing horizon lamps, cloud machine and panorama projectors. GEC 'Modern Lighting', 1923.



The major shift in German scenic realisation was underpinned by 'plastic' (i.e. solid) scenery and demand for a realistic sky. This required a cyclorama, cloth or solid, to envelop the visible stage rear and sides, hence the German term 'Rundhorizont', together with lighting that could make it appear infinite like the sky. But this did not only begin in Germany.

An encircling painted backdrop has been known since the Greek Hellenistic Theatre, however the representation of a realistic sky whose nature could be changed by illumination had to await the arrival of electric light. Probably the first British instance was achieved by the artist Herbert Herkomer. He constructed the small, electrically lit, Bushey Theatre, where he wrote, designed and directed musical plays. His 1889 music play, *An Idyl*, provided an opportunity to prove that solid scenery and a convincing infinite sky could be achieved. The critics were delighted:

'an old English village with its half-timbered houses, its glowing sunset, its deepening gloaming, its distant landscape ... is simply one of the most beautiful stage pictures that can be imagined. No horrible "sky borders", no descending rags and "battens" down at Bushey.'

While the British commercial theatre was unmoved, Herkomer was in the vanguard of a mainly German naturalism movement that strove to achieve natural lighting as well as scenography. Wagner's operas, and especially the 1876 Ring Cycle, had immensely challenging outdoor scenic directions including skies, storms and rainbows. The accomplished artist and Wagner admirer Mariano Fortuny y Madrazo first visited Bayreuth in 1892, where despite the new electric lights, he witnessed the inadequacy of the lighting and scenography, in particular attempts at weather-changing skies, sunrises, sunsets and rainbows. Determined to resolve this, in 1899 he devised a system of an encompassing folding dome cyclorama, with simulated sky and acting areas separately lit by arc lighting reflected off coloured silks.

The first use of a Fortuny dome and its specialist lighting was in Comtesse de Béarn's private Paris theatre in 1906, with an opening public performance of a ballet with music by Charles-Marie Widor. He judged the dome a spectacular success, however Bayreuth was not won over and rejected Fortuny's invention.

Despite the impressive results and a joint company with AEG to market the concept, domed systems proved troublesome in practice; solid ones intruded excessively into the stage space while folding ones showed



dirt lines and creases. This led to many stages retaining or reverting to simple cloth cycloramas despite their visual drawbacks. A resolution came from Max Hasait, Technical Director of the Dresden State Opera and a prolific stage machinery inventor. In 1921 he patented a cyclorama track system and devised a cut of the cloth that would make sure it hung wrinkle-free in use and could be rolled up when not needed. Hasait designed cycloramas subsequently became a common feature of many stages.

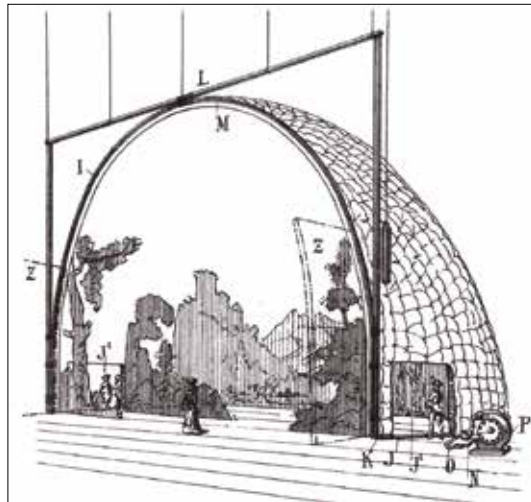
A Midsummer Night's Dream, Her Majesty's Theatre, London, 1900 © Victoria and Albert Museum, London

The arrival of efficient, gas-filled lamps also encouraged development in Germany of more flexible cyclorama lighting systems, using multiple single colour luminaires instead of colour-changing arc lamps. This was typified

A Midsummer Night's Dream, model by Max Reinhardt and Karl Walsler, Neues Theater, Berlin, 1905. © Kunsthistorisches, Museum Wien.



Fortuny's patent design
for an artificial sky using a
folding dome



by the standard 'horizon' luminaires from Schwabe, using seven glass colour filters: red, yellow, green, plus daylight, light, middle and dark blue.

Having observed Reinhardt's achievements in Germany over several years, Dean decided to install a Schwabe cyclorama lighting system (including dimmers and control) at St Martin's Theatre (which he managed), where he also erected a new Hasait designed cyclorama. GEC were appointed as Schwabe's importers with Dean as sales consultant. In addition to supporting normal productions, Dean had also hoped that the new system would enable his matinee series of mid-week Playbox plays to be presented more economically with limited scenery, relying on his new system for projected effect. But by 1924, he concluded the ability to project various natural phenomena on the cyclorama was of 'limited usefulness'.



Schwabe cylindrical 1000W
horizon luminaire 1921

Despite Dean's use and promotion, there is no record of Schwabe and Hasait collaborating in the design of this system. The Schwabe system of cyclorama lighting was not dependent on the Hasait cyclorama cloth or vice-versa. The term 'Schwabe-Hasait' was Dean's invention, with the subsequent common British use of the term derived from Dean's and GEC's promotional material for it. The term Schwabe-Hasait was a misnomer not used outside Britain.

The combined Schwabe-Hasait system went on to be installed in only a few London theatres, St Martin's and the Queens in 1923, the Fortune in 1924 and a Venreco copy in the Coliseum in 1931. A very small number of cinema theatres with large stages also installed the system for the cyclorama effects.

In 1926 a Schwabe seven colour cyclorama lighting system was installed at Gray's Cambridge Festival Theatre for use on a painted cement cyclorama. Later in 1934 a Hasait designed cyclorama was installed at the Covent Garden Opera House, London with a Strand Electric three primary colour (red, green, blue) lighting system.

Sadly Dean's initiative made little impression on British theatre of that time. It remained usual for London stages to be fitted with sets of four colour battens and footlights as the standard installation, supplemented by followspots to light the principals. The existing three primary colour cyclorama lighting approach endured. Neither did the dramatic content improve, Allardyce Nicoll lamented in 1928 'a darkness of outworn tradition hangs over the professional theatre'.

Meanwhile in continental Europe, especially Germany, the concept of 'Creative Light' promoted by Appia continued to move forward in the work of such as Reinhardt, Jessner, Brecht, and Piscator. However the seven colour system of Schwabe was eventually found too complex even in Germany, with Friedrich Kranich describing only four colour cyclorama systems by 1932.

An extensive and referenced technical study of the system's development and background to cyclorama lighting is available as a free ebook and pdf.

Schwabe-Hasait Cyclorama Lighting: a British failure but a window on a revolution in stagecraft

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