LET THERE BE LIGHT

A Private Supper by Candlelight, engraving after a drawing by J M Moreau [Le Monument de Costume, Paris, 1871]
Decorative lanterns for modern lighting, 1925 [Luckiesh]

A lantern in which a street-lighting reflector is incorporated for the purpose of distributing light primarily in a direction slightly below the horizontal [original picture caption]
LET THERE BE LIGHT

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10. STREET LIGHTING
The Illuminating Engineering Society was founded in 1909 by a small enthusiastic group consisting of lighting engineers, architects, electrical and gas engineers and representatives of other professions.

The inaugural meeting took place on 18 November 1809, by which time the membership was 157.

The chair was taken by Professor Silvanus P Thompson, the first President. Leo Gaster was appointed Hon. Secretary with J S Dow as his assistant.
Leon Gaster, the youngest son of Chevalier A E Gaster was born in Bucharest, Rumania. He came to Britain in about 1895, later practising as a consulting engineer, receiving the Silver Medal of the Royal Society of Arts in 1906. In 1908, he founded "The Illuminating Engineering" magazine and through his initiative the IES was set up in 1909.
IES PRESIDENTS

1909-13 Prof. Silvanus P Thompson FRS

1921-23 Sir John Parsons CBE FRS

1927 Sir Duncan Wilson CVO CBE

1929 Dr J W T Walsh

The Right Hon. The Earl of Mount Edgecumbe TD
IES PRESIDENTS

1932 Hayden T Harrison
1940 J T Macgregor Morris
1942 R O Ackerley
1944 E Stroud
Joseph Wilson Swan 1828/1914

For some years I have been working at the problem of Electric Lighting by incandescence of carbon. I have watched with much interest your experiments in the same direction and the thought has occurred to me that we might with mutual advantage exchange ideas on the subject......

Letter from Swan to Edison, 24 September 1880.

Born in Sunderland, Swan was a physicist and inventor, and a manufacturing chemist by profession. He originated a method of dry plate photography (1871) which led the way to Eastman's later developments. But many years before this he had become involved in attempts to produce light by electricity. He began by using thin strips of carbonised paper within an evacuated bulb (1848) and after many experiments had an electric light with a carbon filament (1860), some twenty years in advance of Edison. However, he was unable to obtain a vacuum good enough to keep it working. Eventually, the techniques for producing a vacuum had improved and Swan in England and Edison in the USA produced a practical incandescent bulb at about the same time (1879).

Swan lamps quickly gained popularity and were used in the House of Commons and the Savoy Theatre [210]. After various legal disputes, Edison and Swan settled their differences out of court and formed a joint UK company (1883) to exploit their invention. This was the Edison & Swan United Electric Light Co Ltd [22]. Swan was subsequently elected an Honorary Fellow of the IES (1909).

2. DAYLIGHTING

The Great Western (City) Arcade, Corporation Street to Colmore Row, Birmingham, built 1902
[The Story of Typhoo, Ken Williams, 1990]
One of the glazed arches providing day lighting to the Lyons Satolas railway station, 1994
Designed by Santiago Calatrava [Station to Station, Steven Parissien, 1997]
A Christie’s auction, 125 Pall Mall, London
Drawing: Augustus Pugin & Thomas Rowlandson
[Ackerman’s Illustrated London, 1810]

Advertisement for outside blinds,
R Lowther & Co Ltd, London, 1886
[The English Terraced House, S Muthesius, 1982]

Leicestershire Banking Co, Granby Street,
Leicester, A Cathedral of Banking, 1874
Architect: Joseph Goddard [Banking, 1989]

County Arcade, Leeds, 1900
By famous theatre architect Frank Matcham
[Architecture of the 19th Century,
Claude Mignot, 1983]

Palm Court of the Hôtel Bellevue, Berne, 1913

Loxwood Baptist Meeting House, Devon, 17C
[West Country, Michael Jenner, 1990]
The largely transparent Van Nelle factory, Rotterdam, 1931
Architects: J A Brinkman & L C van der Vlugt

Perspex roof, Olympic Stadium, Munich. Günter Behnisch & Frei Otto, 1972

San Fermín School, Madrid, 1985. Alberto C Baiza
[Architecture in the 20th Century, P Gössel & G Leuthäuser, 1991]

Pyramide, Le Grand Louvre, Paris. I M Pei, 1993
[Icons of Architecture: The 20th Century, 1998]

Atrium of Guggenheim Museum, Bilbao, 1997
Architect Frank O Gehry
3. CANDLE LIGHTING

Advertisement for Clarke’s Pyramid & Fairy night lights, manufactured by Price’s Patent Candle Company Ltd, London, founded in 1830
A Flemish nobleman entertains by candlelight, c.1500
[Princely Feasts and Festivals, Bryan Holme, 1988]
Menorah, synagogue candlestick
[Geneva Bible, 1587]

Candle & lens, a water filled globe, 16th century
[Flickering Flames, Leroy Thwing, 1958]

Dimming mechanism for theatre lights
[Sabbatini, Ravenna, 1638]

Evening party by candlelight, possibly Viennese, 1640
[The Italian Renaissance Interior, Peter Thornton, 1991]

The artist in his studio, painting (detail) by R M Poye, 1783
[Eighteenth-Century Decoration, Charles Saumarez Smith, 1993]

Tallow chandler, 1806

Lighting the footlights, early 19th century
[Theatre and Playhouse, Richard & Helen Leacroft, 1984]
Price's candle manufactory. London: steam boiling and engine house, 1849

The Light of the Home

PRICE'S CANDLES

Coconut oil & stearine candle produced for Queen Victoria's wedding, 1840

Palmitine Candles & Night Lights, 1882.
The scene is of Grenadier Guards during the Egyptian War
4. OIL LIGHTING

A selection of early oil lamps, probably Dutch
[website of de Luikerwaal]
Poster for lighting oil for lamps, Italian Distillery, Milan, Italy, probably c.1910
[Brian Roberts Collection]
5. **ACETYLENE LIGHTING**

Ornate three-arm gasolier, originally for acetylene at The Argory, County Armagh

Designed to have the appearance of an electolier, possibly made by The Welsbach Incandescent Gas Light Company

[Artificial Sunshine, Maureen Dillon, The National Trust, 2002]
The Victorian acetylene gas installation at The Argory country house in County Armagh which continued in use until 1983 [Artificial Sunshine, Maureen Dillon, The National Trust, 2002]
6. GAS LIGHTING

Advertisement for William Sugg’s patent Christiania burners, 1886
[Christopher Sugg Collection]
The Blessed Effects of Gas Lights, or a New Method of Lighting as Practised in Great Peter Street
Cartoon, c.1820 [Paul Yannie Collection]
Gas control station, “Jeu d’orgue”, Paris Opera, 1875
[Theatre Lighting in the Age of Gas, Terence Rees, 1978]

Sugg ventilating gas lights
Arcot (above) & Mecca
[Christopher Sugg Collection]

Clemancou gas table for control of theatre lights, France, 1880
[Theatre Lighting Before Electricity, Frederick Penzel, 1978]

Italian poster (detail), c.1900
Gas Light & Heat. Note the meter
[Posters in History, Gallo, 1972]
Wm Murdock, 1754-1839
Father of Gas Lighting

Samuel Clegg, 1781-1861
Pioneer inventor

Bray’s “Specials”, 1870s
[Lighting by Gas, 1936]

The Gas Works at Chirk Castle, North Wales, 1857
[Artificial Sunshine, Maureen Dillon, The National Trust, 2002]

William Sugg
[Chris Sugg Collection]

Member’s Certificate, National Union of Gas Workers, founded 1889
[The Nineteenth Century, Asa Briggs, 1985]
Electric lighting power station at 57 High Holborn, London, 1882
Edison Jumbo dynamos, Porter-Allen 125 hp steam engine and Babcock & Wilcox water tube boilers [Poster, Brian Roberts Collection]
Poster for Tungsram light bulbs, Budapest, Hungary, by Géza Faragó, c.1910
Edison & Swan catalogue, c.1883
[Electric lamps – 100 years on, Thorn, 1979]

"Rashleigh"
Electric Lamps
[Rashleigh electric lamps, c.1900
[Victorian Design Source Book, Noël Riley, 1989]

Osram AZO, lithograph, c.1910
[The Modern Poster, 1988]

AEG wire lamp, lithograph, c.1915
[The Modern Poster 1988]

Vertex electric light bulbs, Finland, 1912
[Posters in History, Max Gallo, 1972]
8. EXTERIOR LIGHTING

The Château d’Eau with the Palais de l’Electricité behind at the Paris Exposition of 1900 [The Great Exhibitions, John Allwood, 1977]
Butterfly Theatre, Milwaukee, 1916
[Ticket to Paradise, John Margolies & Emily Gwathmey, 1991]

Tribune Tower, Chicago, Howells
& Hood, 1925 [A History of Postcards, Martin Willoughby, 1994]

The National Radiator Building (Ideal House), London, 1928
Designed by Raymond M Hood & Gordon Jeeves
[Art Deco Architecture, Patricia Bayer, 1992]

Design for Max Reinhardt Theatre
New York, Josef Urban, 1929
[Wiener Werkstätte, 1994]

Times Square, New York, 1948 [New York, Michael Marqusee, 1988]
Lighthouse exhibit at Chicago World's Fair, 1893
Left: hyper-radiant lens  Right: first-order Fresnel lens
[Lighthouses, P Ross Holland, 1995]

The Dunes & Oasis Casino, Las Vegas, 1983
[Viva Las Vegas, Alan Hess, 1993]

Saloon Carousel, Kaatsheuvel, Holland
[Fairground Art, G Weedon & R Ward, 1985]

Glasgow School of Art, 1897-1907
Designed by Charles Rennie Mackintosh
[Building Services Heritage, B M Roberts, 2003]

Piccadilly Circus, London, 1952 postcard
[The Postcard Century, Tom Phillips, 2000]

Shell-Mex House, Embankment, London, 1930s
[The Pageant of the Lamp, c. 1960]

The Rex Cinema, Paris in 1992, built 1932
9. INTERIOR LIGHTING

Illuminated decorative panel at Sid Grauman’s Egyptian Theatre, Hollywood, 1922. Architects: Meyer & Holler
[The Last Remaining Seats, 1997]
The Garrick Theatre, London, Charing Cross Road, London, 1889
Now with lighting bars across the balcony fronts
[Photograph National Monuments Record, AA020204]
Silver entrance, Park Lane Hotel, London, 1927
[In the Deco Style]

Dress boxes, King’s Theatre, Edinburgh, 1906
[Victorian & Edwardian Theatres, Victor Glascott, 1975]

Bullocks Wilshire department store, Los Angeles, 1929
[LA, Lost & Found, Sam Hall Kaplan, 1987]

V & A Museum, London, 1909
Gasolier, now electric
[CIBSE Heritage Group]

Daily Express, London, 1939 [In the Deco Style]

New Victoria Cinema, London, 1930
[Cinemas in Britain, Richard Gray, 1996]
Portsmouth Head Post Office, 1979
[Engineering into the Eighties, Drake & Scull]

The Egyptian Halls, Harrods, London, 1991
[Harrods: A Palace In Knightsbridge, 1995]

Unilever House, London, 1984 [In the Art Deco Style]
10. STREET LIGHTING

Street lighting by gas, cartoon 1807 [Lighting by Gas, Dean Chandler, 1936]
The Lamp-Lighter. Street lighting was introduced in London from 1417
By around 1736 the number of oil-burning lamps had reached some 15,000
Gas street lamps in Lombard Street, City of London, 1827 [What the Industrial Revolution did for us, G Weightman, 2003]

Lighting the Victoria Embankment, London by Jablochkoff candles, a form of arc lamp [Woodcut from The Graphic, 4 January 1879]

Street lighting in the Haymarket, London’s West End, in Edwardian Times [Detail from painting by G H Pownall, Bright Lights, Big City, Gavin Weightman, 1992]