

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]



Ornate three- arm gasolier, originally for acetylene at The Argory, County Armagh. Designed to have the appearance of an electrolier, possibly made by The Welsbach Incandescent Gas Light Company. [Artificial Sunshine, Maureen Dillon, The National Trust, 2002]

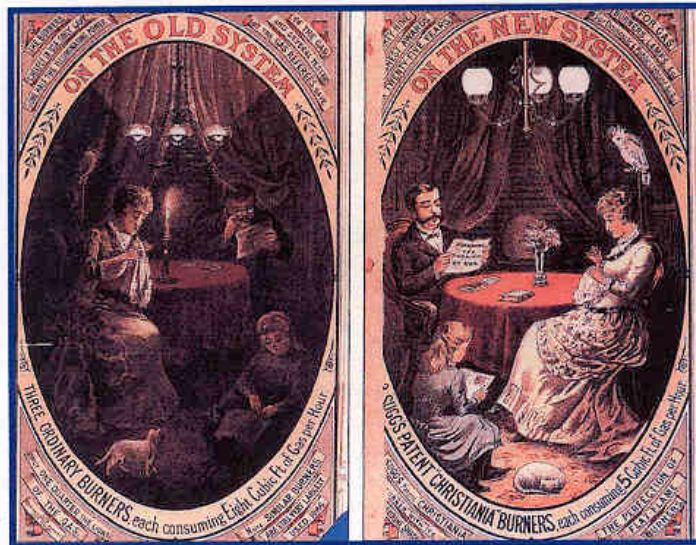
ACETYLENE LIGHTING

Acetylene (C_2H_2) was discovered in England in 1836 by Edmund Davy. It was first used for lighting about 1892. It has a flame of high luminous efficiency, a good "daylight" colour and is easily generated in small quantities. Lighting by acetylene was considered ideal for country house owners, providing a cheap and fairly trouble-free system if properly installed. Being more explosive than coal-gas the plant needed to be enclosed in a dry space away from the house. It provided a brilliant white light with no harmful products of combustion or soots to dirty furnishings.

Studland Manor and the Argory in County Armagh were lit by acetylene. Early in the 20th century, as the carbide lamp, it was also used in miners' lamps and for vehicle lamps. It was also used in a few towns for lighting, including North Petherton in Somerset, where it was installed in 1902. It has been reported that by 1909 some 290 American towns were lit by acetylene.



*The Blessed Effects of Gas Lights, or a New Method of Lighting
as Practised in Great Peter Street
Cartoon, c.1820 (Paul Yummie Collection)*



Advertisement for William Sugg's patent Christiania burners, 1886.
[Christopher Sugg Collection]

GAS LIGHTING

In the 17th and 18th centuries various experiments were carried out to obtain gas from coal and use it for lighting. In 1792 William Murdock (Murdoch) lit his offices and cottage at Redruth in Cornwall by gas. In 1798, while working for Matthew Boulton and James Watt at their Soho Works in Birmingham, he built an apparatus to make and store gas for factories. The Soho Works were lit by gas and floodlit on the occasion of the Peace of Amiens in 1802. Murdock was assisted by Samuel Clegg who set up on his own as a gas engineer and in 1805, at the age of 24, installed and put into operation a gas plant at Lodges Cotton Mill in Halifax. A few months later Murdock provided gas lighting at Phillips & Lee's factory in Salford, using 271 Argands and 633 other burners. His 1808 paper on gas lighting earned him the Royal Society's Rumford Gold Medal.

In France, in 1801, Le Bon gave a public demonstration of gas lighting. In 1803, the Austrian Frederick Winzler came to England, changed his name to Windsor and demonstrated gas lighting at the Lyceum Theatre. He went on in 1807 to illuminate the Mall by gas. Developments in gas burners saw the introduction of the batwing (1816), the fishtail (1820), the steatite burner tip of William Sugg (1858) that did not corrode, and the high-quality flat-flame burners of Geo Bray (c.1870). Meanwhile other experiments on heating refractory materials to luminescence were carried out by Bunsen, Drummond and Gurney (in the 1820s), by a gentleman names Frankenstein (1849) and by the Frenchman Clamond (1882). But between 1884 and 1889, Carl Auer made his epoch-making experiments into the use of rare earths, taking out his master patent for the incandescent mantle in 1893. The Austrian Government conferred on him the title of Carl Auer von Welsbach and the Welsbach mantle revolutionised gas lighting, prolonging its period of competition with the new electric light for many years.



Wm Murdock, 1754-1839
Father of Gas Lighting



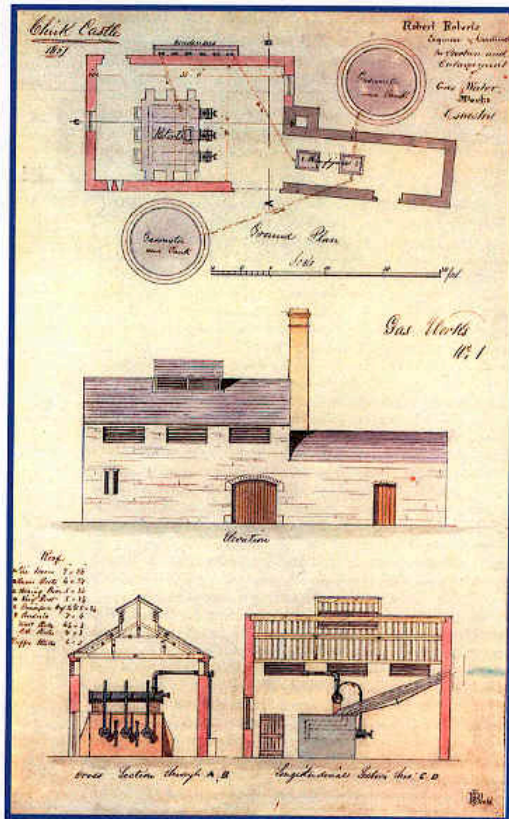
Samuel Clegg, 1781-1861
Pioneer inventor



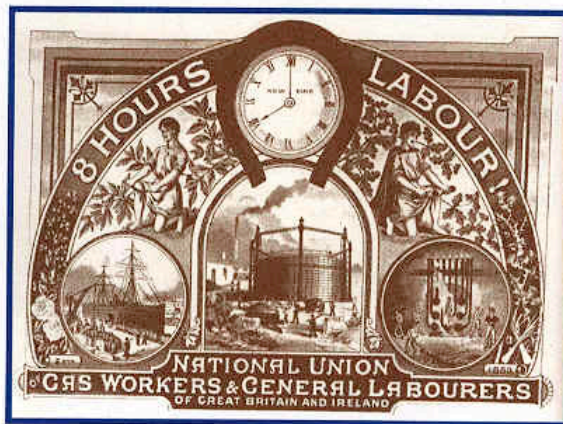
Bray's "Specials", 1870s
[Lighting by Gas, 1936]



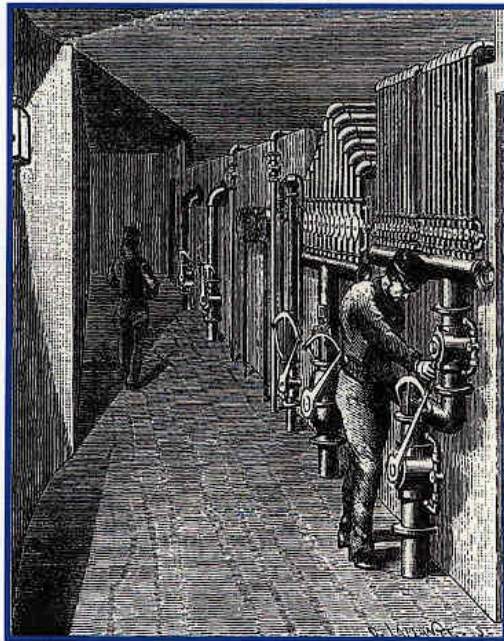
William Sugg
[Chris Sugg Collection]



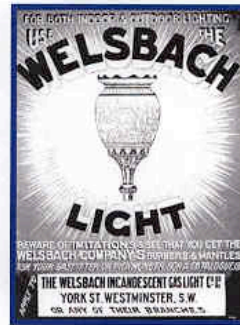
The Gas Works at Chirk Castle, North Wales, 1857
[Artificial Sunshine, Maureen Dillon, The National Trust, 2002]



Member's Certificate, National Union of Gas Workers, founded 1889
[The Nineteenth Century, Asa Briggs, 1985]



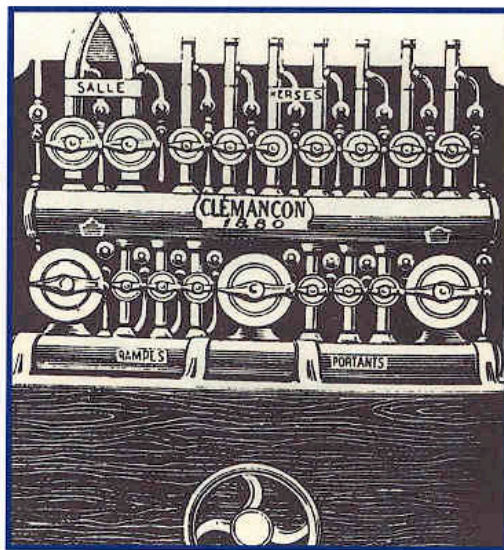
Gas control station, "Jeu d'orgue", Paris Opera, 1875
 [Theatre Lighting in the Age of Gas, Terence Rees, 1978]



Welsbach Light, 1885



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

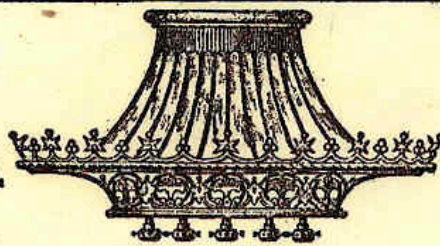


Clemanccon gas table for control of theatre lights, France, 1880
 [Theatre Lighting Before Electricity, Frederick Penzel, 1978]



Italian poster (detail), c.1900
 Gas Light & Heat. Note the meter
 [Posters in History, Gallo, 1972]

NINE
Prize Medals.



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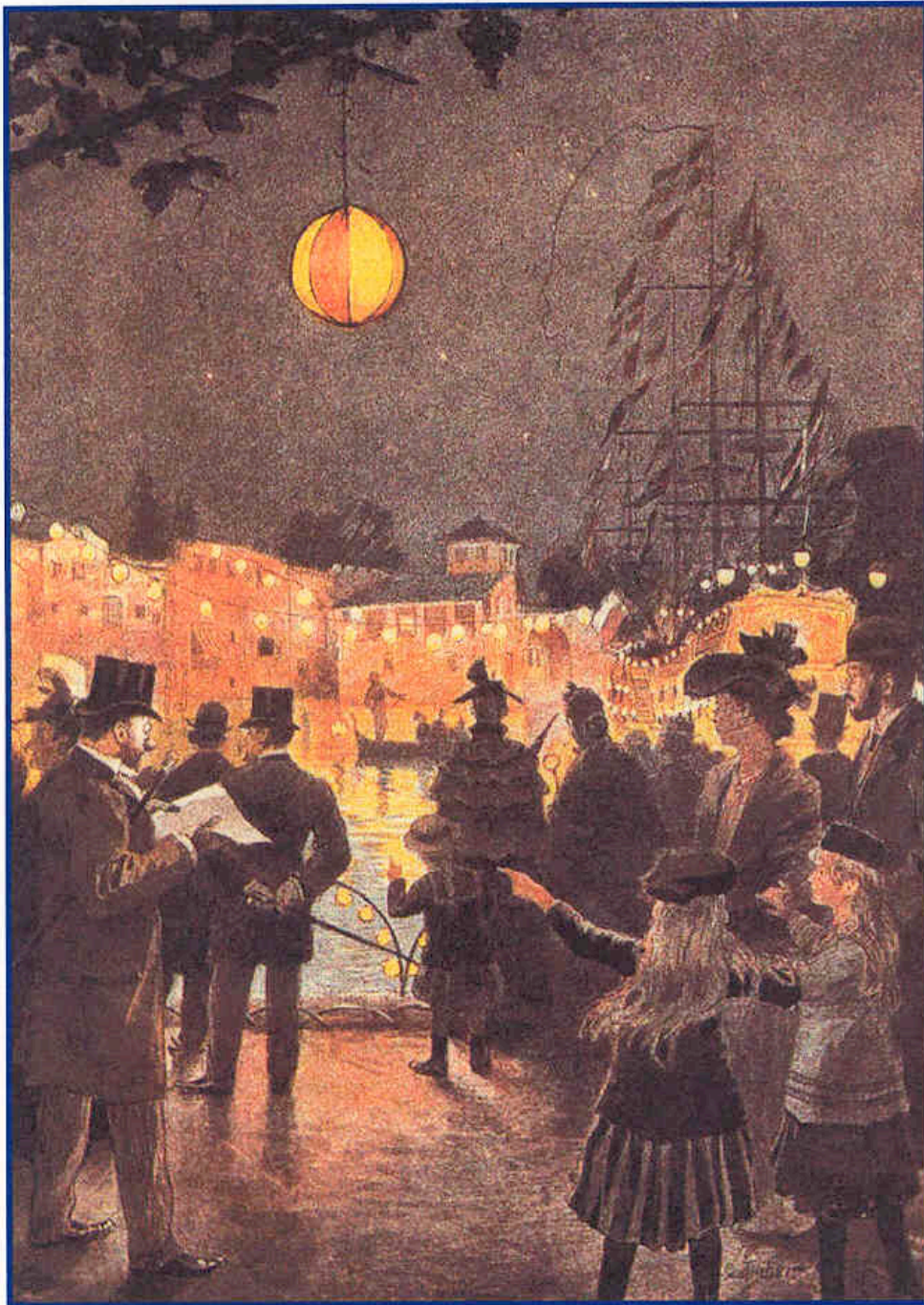
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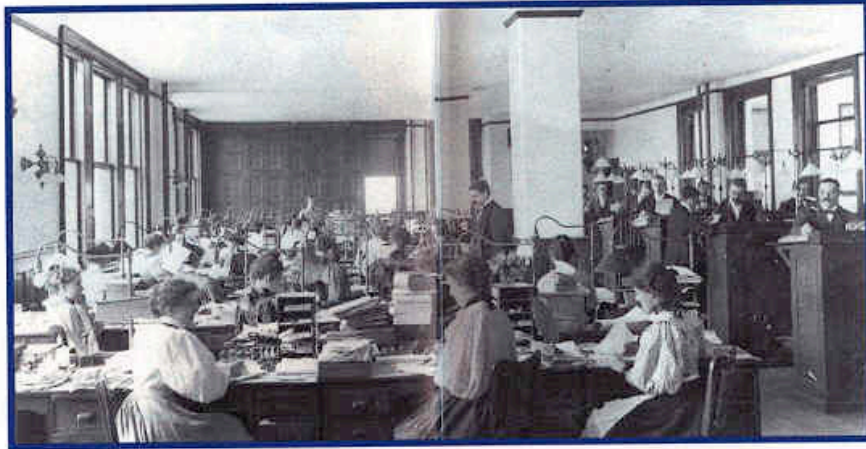
Alhambra.	Edinburgh Theatre Royal.	Nottingham.
Aberdeen.	Gaiety, London.	Novelty.
Alexandra, Liverpool.	Gaiety, Dublin.	Opera House, Florence.
Adelphi.	Glasgow.	Opera House, Leicester.
Astley's.	Grafton, Dublin.	Portsmouth.
Bradford.	Haymarket.	Princess's.
Belfast.	Her Majesty's,	Prince of Wales', London.
Brighton.	Leamington.	Prince's, Manchester.
Bristol.	Londonderry.	Prince of Wales', Birmingham.
Cork.	Lyceum, London.	Plymouth.
Dumfries.	Lyceum, Edinboro'.	Queen's.
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*Gas Light Gala in the Tivoli Gardens, Copenhagen, late 1880s.
Street lighting by gas was introduced in Copenhagen in 1857 and in 1858 the Tivoli had its own gasworks.
[The Story of Tivoli, undated]*



*Metropolitan Life Insurance Co, New York, 1896. Note lamps at each station
[Form Follows Finance, Carol Willis, 1995]*



Peoples Gas Company, Chicago, 1911 [Form Follows Finance]