



THEATER LIGHTING
BEFORE
ELECTRICITY

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Early Lighting with Candles

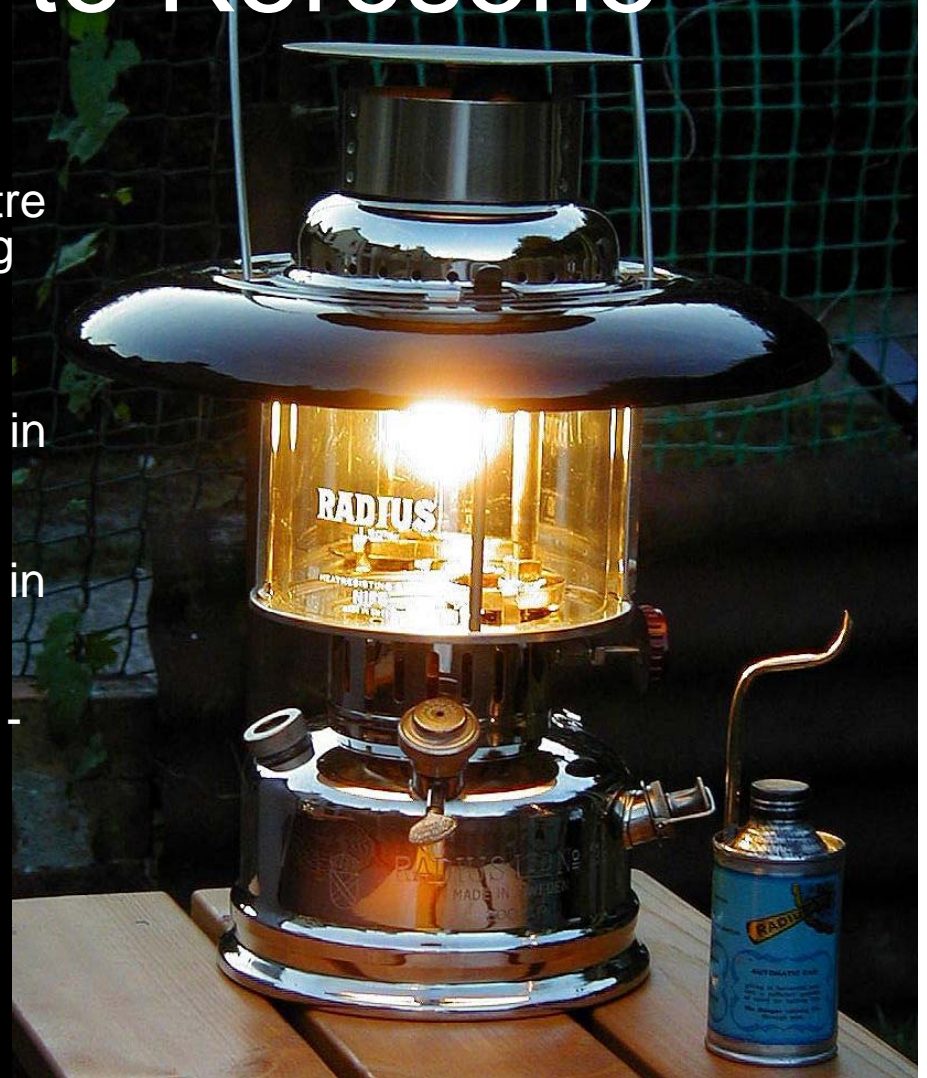
- 1545:
Sabastiano Serlio -- colored light liquids in bottles (red wine, saffron (yellow), ammonium chloride in a copper vessel (blue)).
Brightly-polished barber basin and a round bottle as a lens
- 3 qualities of light: distribution, intensity, color
- 1550:
Leone de Somi - full illumination for happy scenes, but tragedy much darker (candles, crude oil lamps, torches, and cressets (hanging lamps)).
Stagehands walked around and snipped wicks, the audience was lit
Candles were of tallow and fat





From Candles to Kerosene

- 1638:
Nicola Sabbatini - writes book on theatre
- suggests system of dimmers lowering
metal cylinders over the candles
E Giacomo da Vignola - ideal lighting
angle is along the diagonal of a cube
(1930's - Stanley McCandless writes it in
book)
- 1783:
Candles ruled the day till the invention in
1783 in France of the kerosene lamp
with adjustable wick
Followed closely with a glass chimney -
could make individual float lights
Used for 100 years



Gas Lighting

- 1791:
Illuminating gas produced in quantity -
William Murdock - each building could
produce its own
However, gas required constant attention
and wasn't easy to control
- 1803:
Limelight
Invented by Henry Drummond - heating a
piece of lime with a flame of oxygen and
hydrogen (for a followspot or to indicate
sunlight). A green-ish tint.
Was used as the first spotlight in Paris
Opera houses
- 1845:
Drury Lane Theatre is the first to use gas in
England)

Electric Lighting Discovered, Gas still used

- 1809:
Electric Arc -- discovered by Sir Humphry Davy -- took 90 years to be fully accepted.
- 1816:
First fully gas lighted theatre -- Chestnut Street Theatre in Philadelphia
Greater control of and more brightness (color silk cloth or woven cotton).
Increased heat and many fires caused, and had gas smell and green-ish tint.
- 1878-1898:
Henry Irving (and [click here](#)) (England) initiated lighting rehearsals, transparent lacquers of colored glass to limelight with electricity to incandescents, footlights of different colors and broken into sections, and wanted to dim the house lights
- 1841:
First incandescent lamp patent - Edison - not practical

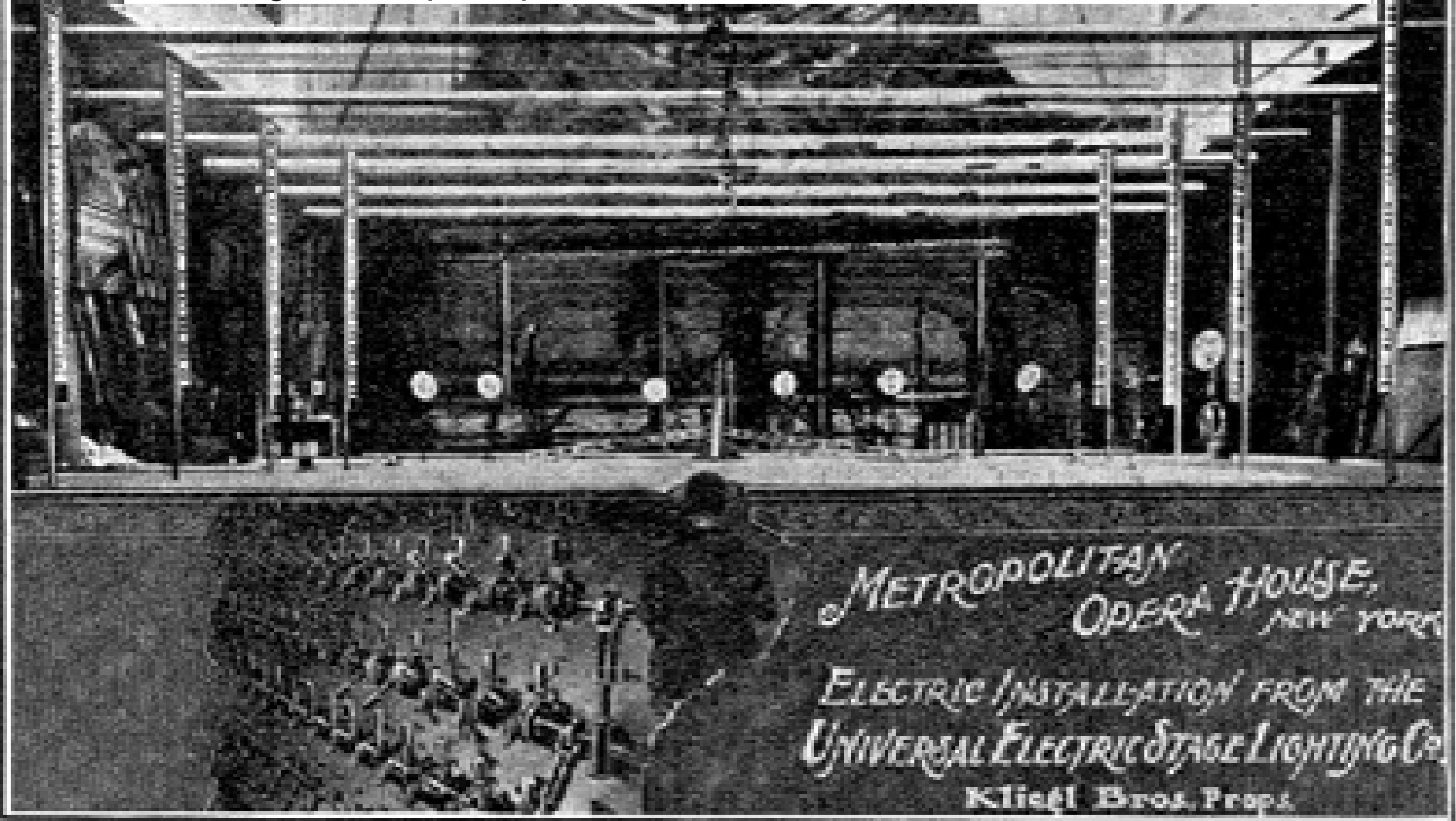
Electricity Used

- 1846:
The first electric carbon arcs used as spotlights at the Paris opera - inefficient -- not a serious threat to limelight
- 1879:
The Jablachkoff candle - the first useful light bulb - "electric candle" - used at Paris Hippodrome - a carbon arc (invented 40-50 years earlier, but limelight was too ingrained, even well into the 1920's).
The first practical electric spotlight
- 1881:
Savoy Theatre in England - the first completely electric theatre

A Big Push to Electricity

- Electric theatre at the exposition in Munich, Germany – with a saltwater dimmer to control the new power source – went like wildfire...
- As technology develops and advances at a more rapid rate, so did development of more effective lighting equipment
- Edison – produced the first practical light bulb
- Incandescent to tungsten – halogen lamps
Lacquer to gels.
- Electric lighting went from the marquee to the outer lobby to the inner lobby to the house to the stage

- The above illustration of the "new" electrical system at the **Metropolitan Opera House** is from a 1913 *Kliegl Brothers* catalogue. Note the eight set of *border lights* above. the four sets of *wing lights* on the sides of the stage, the seven *bunch lights* mostly up stage, the *switch board* in the basement and the *electrician* standing in the "prompter's box."



Bibliography

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