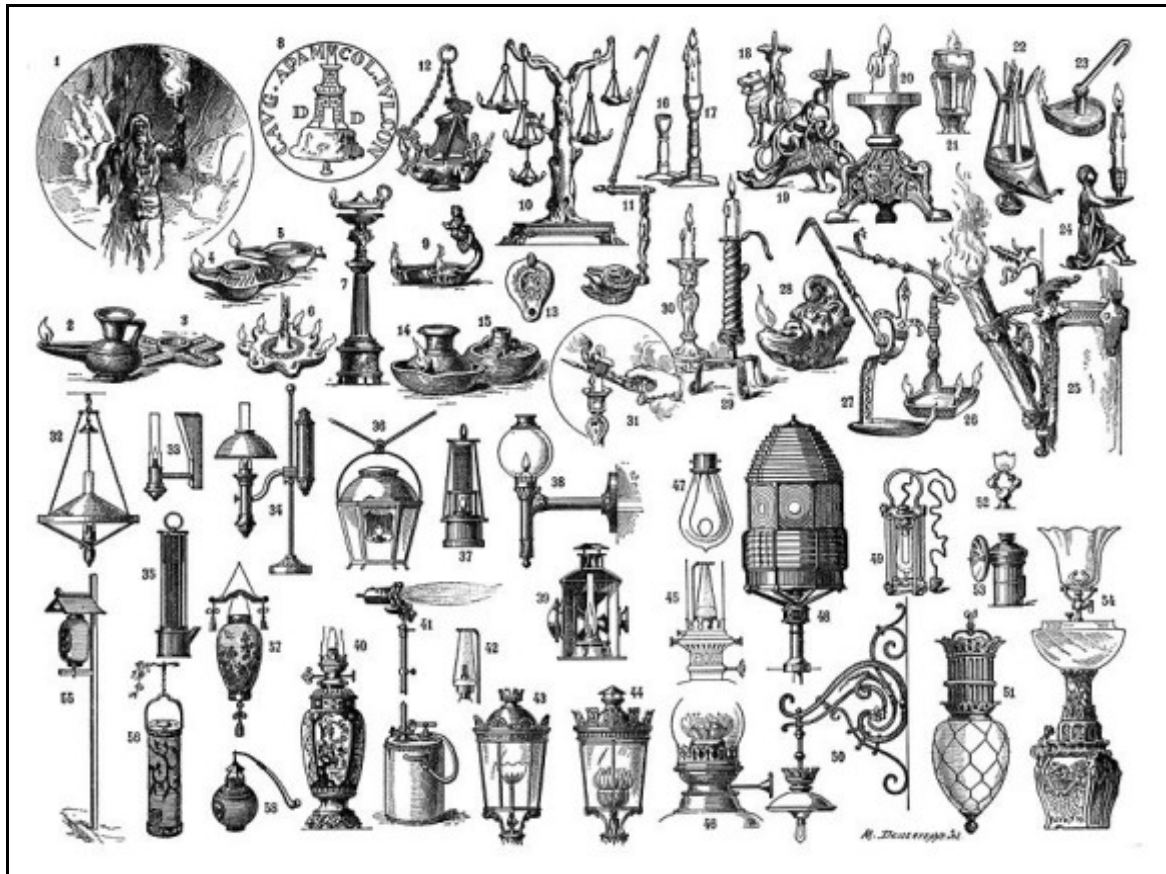


Timeline of lighting technology

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Lighting through the ages

Antiquity

- 70,000 BC A hollow rock or shell or other natural found objects was filled with moss or a similar material that was soaked in animal fat and then ignited.
- c. 4500 BC oil lamps
- c. 3000 BC candles are invented.
- c. 900 AD Muhammad ibn Zakarīya Rāzi (Rhazes) invents kerosene lamp^[1]
- c. 1000 The first street lamps appear in Cordoba, Al-Andalus^[2]

18th century

- 1780 Aimé Argand invents central draught fixed oil lamp
- 1784 Argand adds glass chimney to central draught lamp
- 1792 William Murdoch begins experimenting with gas lighting and probably produced the first gas light in this year.

19th century

- 1800 French watchmaker Bernard Guillaume Carcel overcomes the disadvantages of the Argand-type lamps with his clockwork fed Carcel lamp.
- 1802 William Murdoch illuminated the exterior of the Soho Foundry with gas.
- 1805 Phillips and Lee's Cotton Mill, Manchester was the first industrial factory to be fully lit by gas.
- 1813 [National Heat and Light Company](#) formed by [Fredrich Winzer](#) (Winsor).
- c. 1802 Humphry Davy demonstrates arc-lighting in free air.
- 1815 Humphry Davy invents the miner's safety lamp.
- 1835 James Bowman Lindsay demonstrates a light bulb based electric lighting system to the citizens of Dundee.
- 1840 modern kerosene lamps (oil lamps that burn fuel from petroleum)
- 1841 Arc-lighting used as experimental public lighting in Paris
- 1853 Ignacy Lukasiewicz invents kerosene lamp
- 1856 glassblower Heinrich Geissler confines the electric arc in a tube.
- 1867 A. E. Becquerel demonstrates the first fluorescent lamp
- 1875 Henry Woodward patents an electric light bulb.
- 1876 Pavel Yablochkov invents the Yablochkov candle, the first practical carbon arc lamp, for public street lighting in Paris.
- 1879 Thomas Edison and Joseph Wilson Swan patent the carbon-thread incandescent lamp. It lasted 40 hours.
- 1880 Edison produced a 16-watt lightbulb that lasts 1500 hours.
- c. 1889 Incandescent gas mantle invented, revolutionises gas lighting.
- 1893 Nikola Tesla uses cordless low pressure gas discharge lamps, powered by a high frequency electric field, to light his laboratory. He displays fluorescent lamps and neon lamps at the World Columbian Exposition.
- 1894 D. McFarlane Moore creates the [Moore tube](#), precursor of electric gas-discharge lamps.
- 1897 Walther Nernst invents and patents his incandescent lamp, based on solid state electrolytes.

20th century

- 1901 Peter Cooper Hewitt demonstrates the mercury-vapor lamp.
- 1911 Georges Claude develops the neon lamp.
- 1925 The first internal frosted lightbulbs were produced.
- 1926 Edmund Germer patents the fluorescent lamp.
- 1962 Nick Holonyak Jr. develops the first practical visible-spectrum light-emitting diode
- 1986 The "White" SON Sodium vapor lamp is introduced.
- 1991 Philips invents a fluorescent lightbulb that lasts 60,000 hours. The bulb uses magnetic induction.
- 1994 First commercial sulfur lamp.

