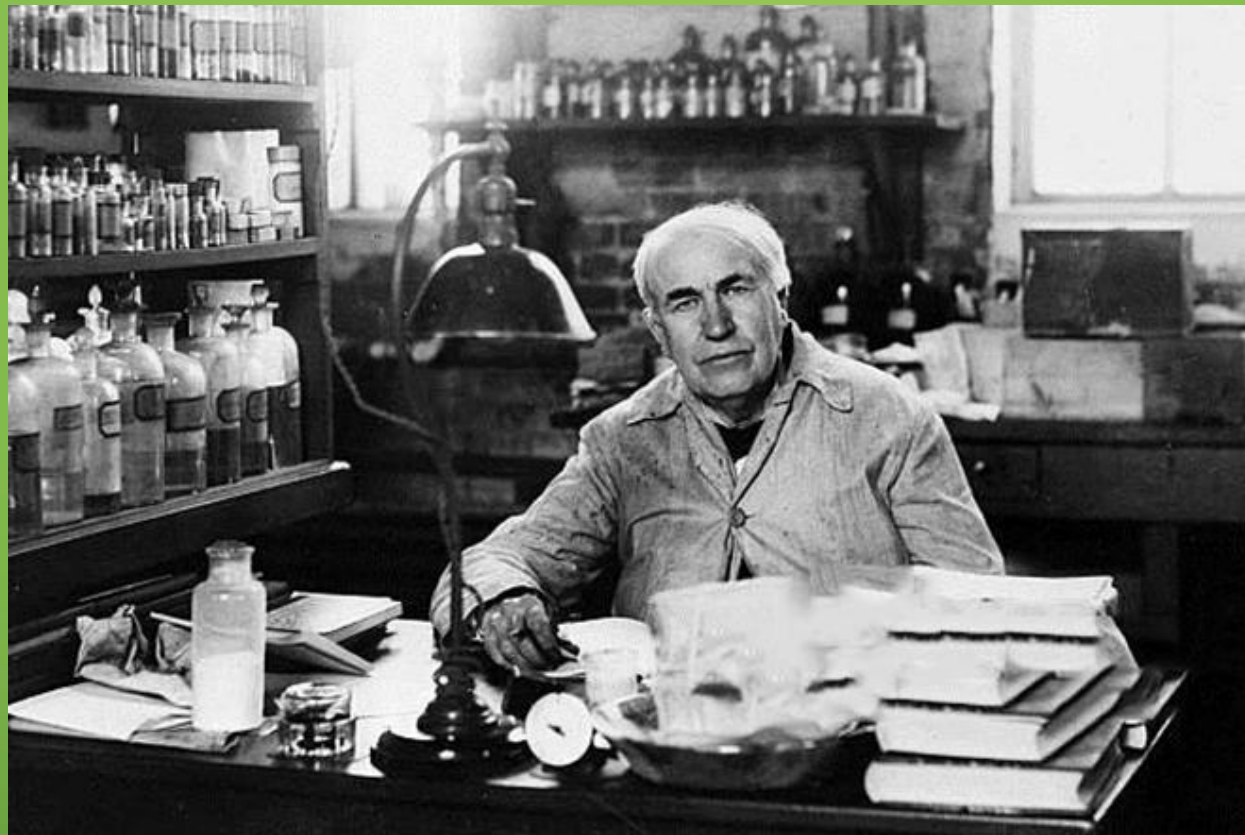


EDISON'S LIGHTING SYSTEM



Mnatsakanov Sergey

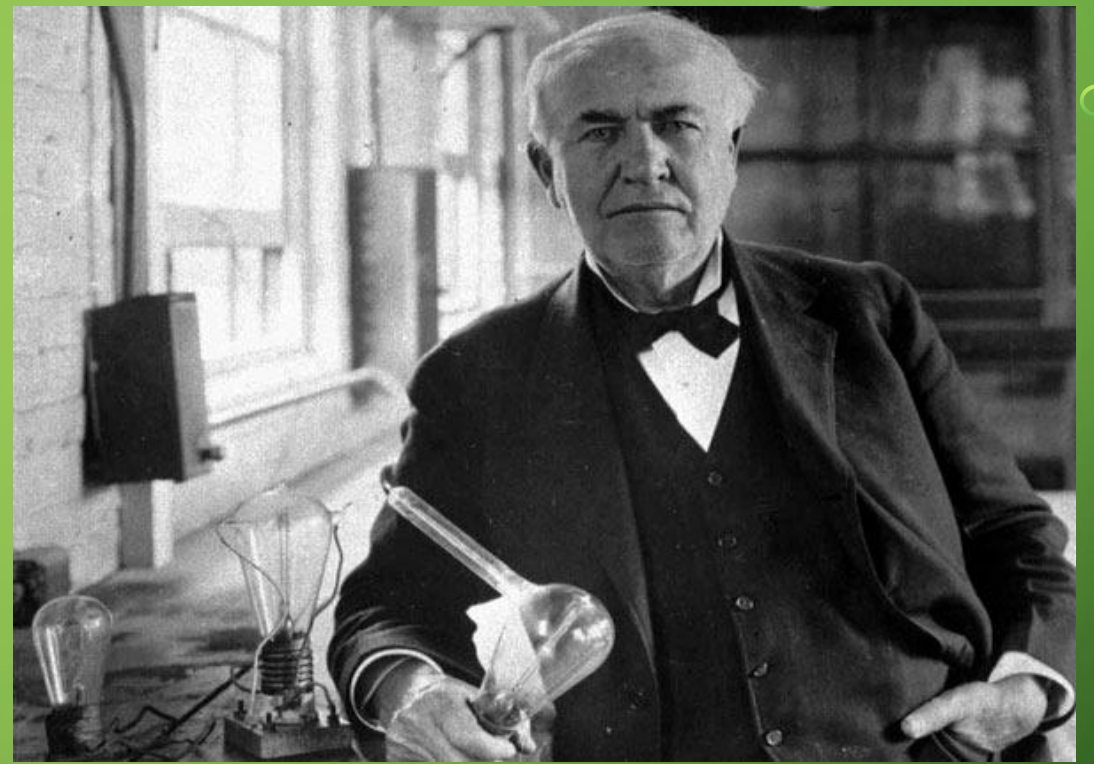
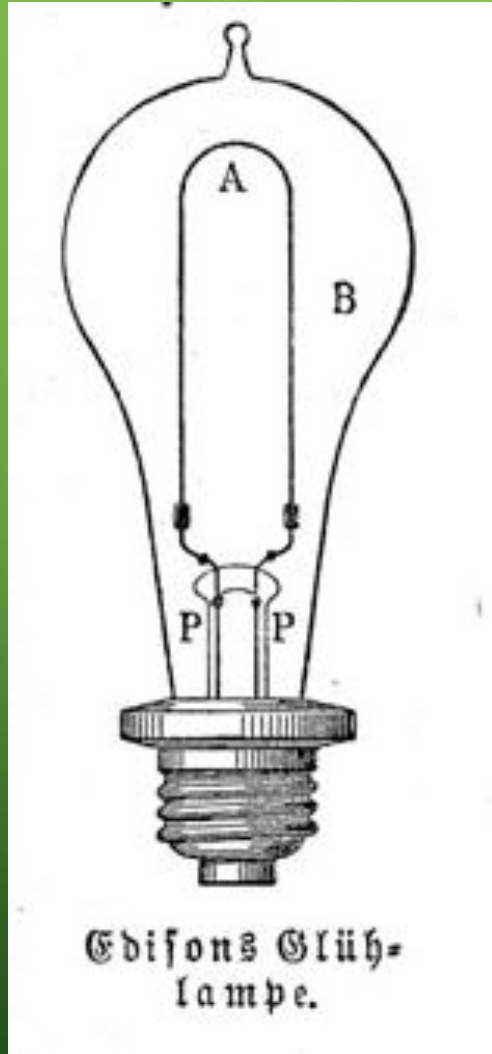


- Thomas Alva Edison interested in the problem of electric lighting. Edison was no scientist and never bothered much about theories and fundamental laws of Nature; he was a technician simple, and a very good business man as well. He knew what had been done in the field of electric lighting before his time, and he had seen some appliances of his contemporaries, such as the arc-lamp.

EDISON PUT HIS ENTIRE LABORATORIES AT MENLO PARK TO THE TASK OF DEVELOPING A LAMP

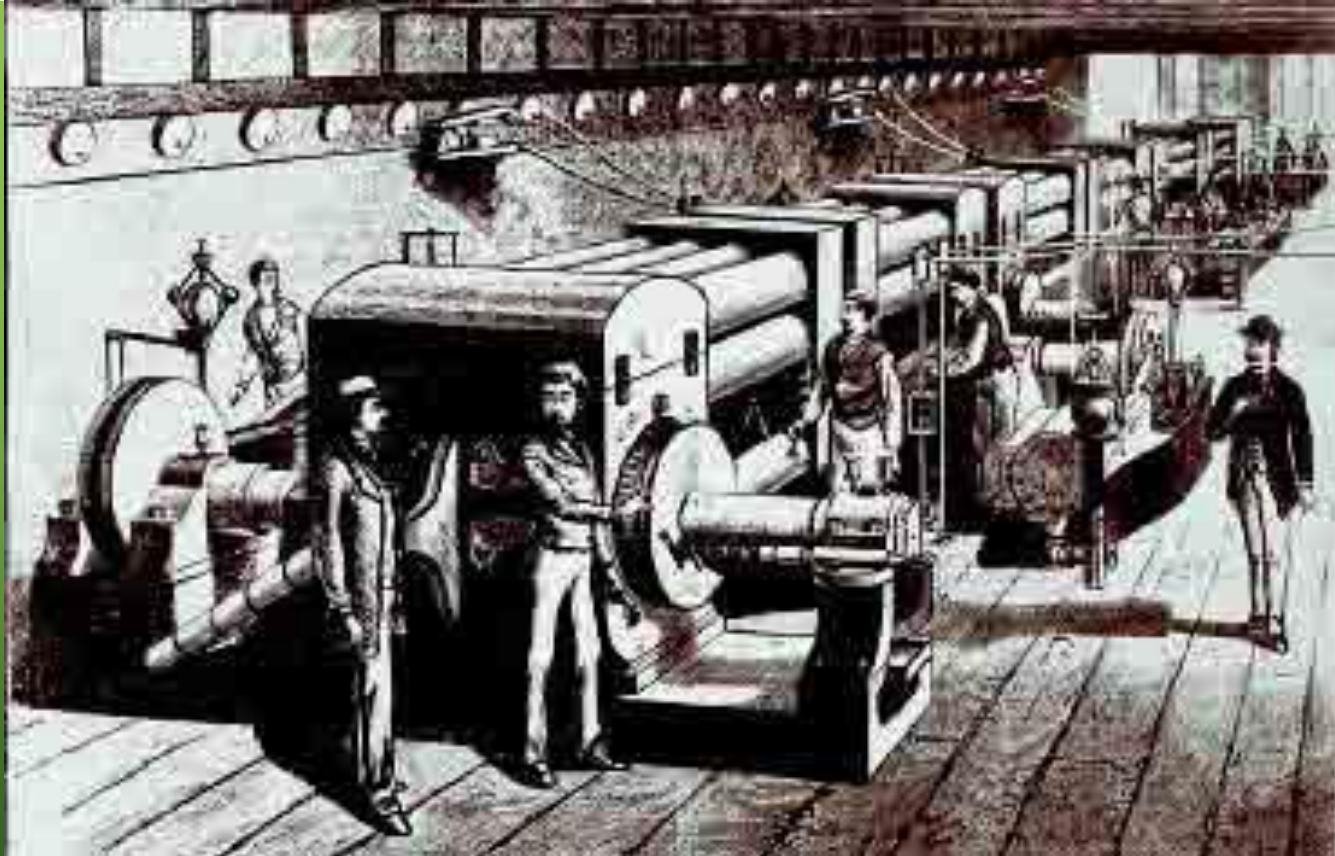


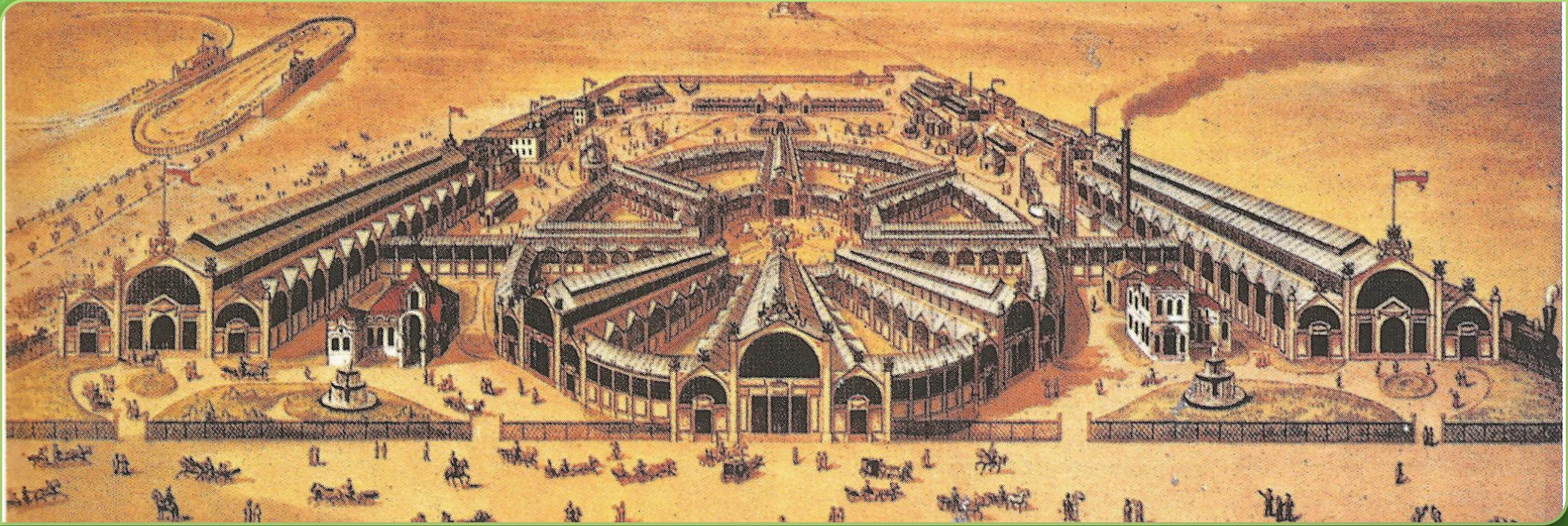
His first experimental lamp of 1879 shed its soft, yellowish light for forty hours: the incandescent electric lamp was born.



He found that 110/220 volts was the most suitable potential difference and would reduce transmission losses of current to a minimum – he could not have foreseen that the introduction of that voltage was to set the standard for a century of electric lighting.

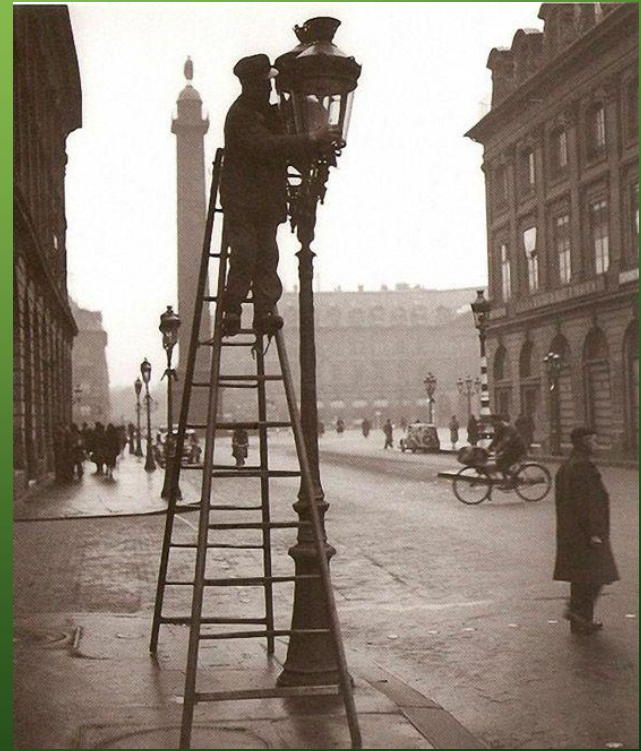
- Most important of all components of the lamp was the generator that could produce the necessary high-tension current.
- None of these generators answered the particular requirements of Edison's electric light; so he had to design his own generator.



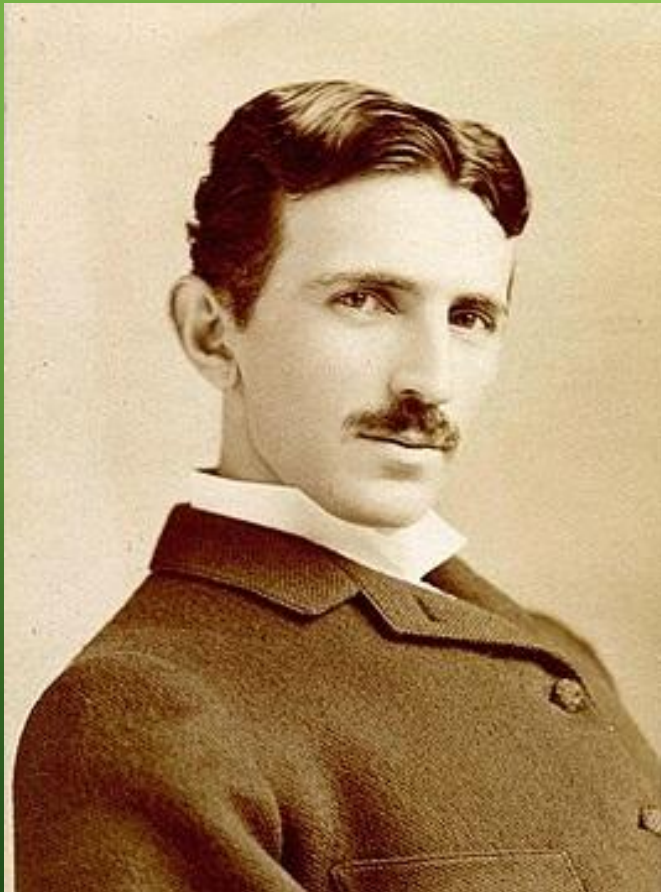


- Edison, a superb showman as well as a brilliant inventor, introduced his electric lamp to the world by illuminating his own laboratories at Menlo Park with 500 bulbs in 1880.
- There was much talk about the end of gas-lighting, and gas shares slumped on the stock exchanges of the world. But a famous Berlin engineer pronounced that electric light would never take the place of gas when Edison showed his lamps for the first time in Europe, at the Paris Exhibition of 1881.

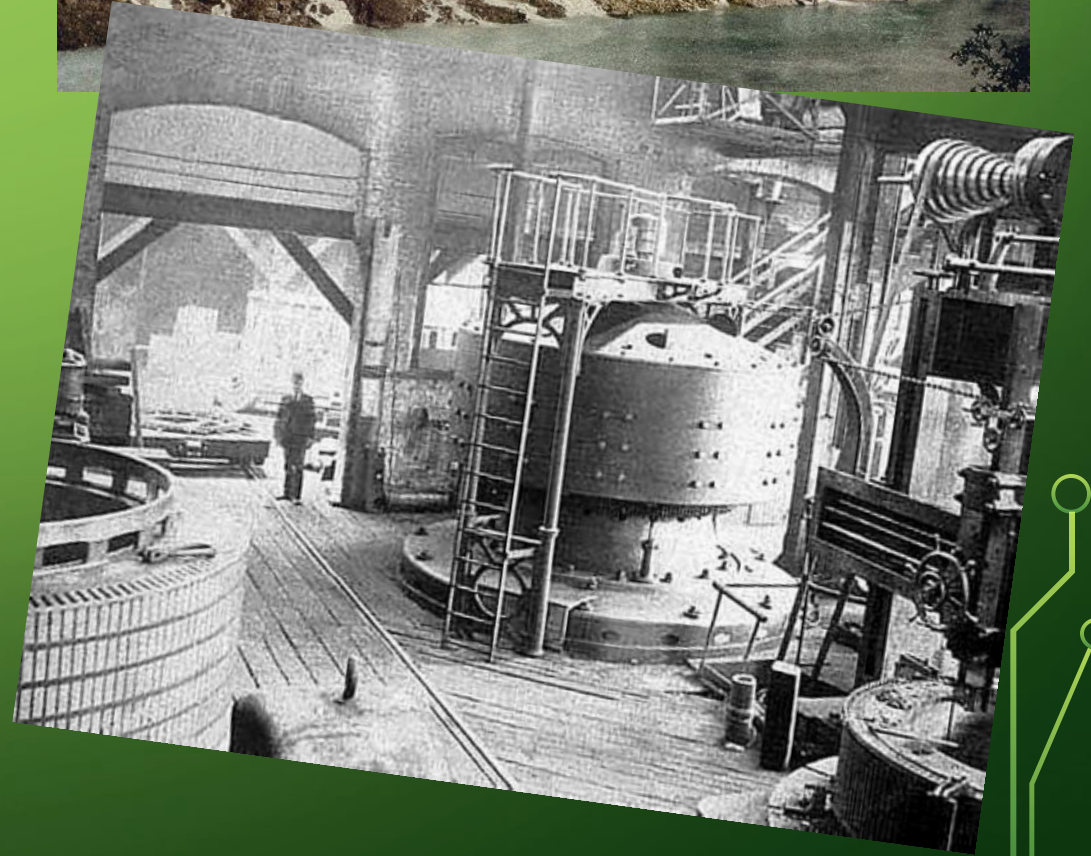
- Edison bought a site on Pearl Street, moved into it with a small army of technicians, and built six large direct-current generators, altogether of 900 horsepower, powered by steam-engines.
- On 4 September 1882 New Yorkers had their first glimpse of the electric age when 2,300 incandescent lamps began to glow at the throwing of a switch in the Pearl Street power station.



- *In 1888, Professor Galileo Ferraris in Turin and Nikola Tesla in America invented, independently and without knowing of each other's work, the induction motor. It has two robust circular rings made of copper or aluminum joined by a few dozen parallel bars of the same.*



- In the 1880's, an American engineer designed a turbine wheel with enormous bucket shaped blades along the rim, and a few American towns with waterfalls installed these turbines coupled to Edison generators. This type proved especially efficient where the fall of water was steep. The power station which convincingly showed the enormous possibilities of hydro-generated electricity was the one at Niagara Falls, begun in 1891, and put into operation a few years later with an output of 5,000 horsepower.



- Thus, electricity entered people's lives and was firmly fixed in them.



THANK YOU FOR ATTENTION

