

Industry Expansion

Raw Materials

- Q • Steel – Bessemer process
 - Skyscrapers
- Oil – Edwin L. Drake
 - steam engine oil drill

The Telephone

- 1876 - Alexander Graham Bell
- Women operators replaced men
- Add typewriter = %women working in clerical jobs ↑ 5 – 40% by 1910
- Add sewing machine = even more women in workforce

Electric Systems

Thomas Edison

- Invention Factory
 - 1st research & development lab
- 1879 – 1st light bulb
- 1st electric system – direct current (DC)
 - Competition = George Westinghouse
 - Alternating current (AC)
- AC used for 1st electric chair execution
- Now both used
 - AC - homes
 - DC – industrial & batteries

Railroads

- Transcontinental Railroad 1863
 - Union Pacific –built on whiskey (Irish)
 - Central Pacific –built on tea (Chinese)
- Early Railroads = unregulated & unsafe
- 1893 – Railroad Safety Appliance Act
 - Start of industry regulation for safety
- Freight + refrigeration allowed industry to specialize & not worry about location
- Q • Standard Time Zones- made for railroads
- Railroads combined into “Big Businesses”
 - helped other industries grow (like steel)

The Environment

- Q • Haystacks to Smokestacks
 - =less farms, more factories
- Telephone = better communication inside factories = more productive & with other businesses across nation
- Q • Electricity – “freed” factories from rivers + longer work day or night shifts
- Railroads – allowed cities/factories to spread out across nation
- Pollution from factories began to degrade the air, water, & land

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