

American Industrial Revolution

Steel Production

- Bessemer Process
 - steel could be produced quickly and cheaply
- Pittsburgh became the steel making capital of the U.S.
- Andrew Carnegie - King of Steel
 - Used vertical integration, owning businesses involved in each step of the manufacturing process to lower costs

Railroads

- Steel prices dropped and caused a boom in railroad construction
- Rail travel was fast and comfortable
- Sleeping and dining cars were added
- Railroad barons forced smaller companies out of business
- Most powerful railroad baron - Cornelius Vanderbilt
- He controlled 4500 miles of railroad track
- Railroads helped the U.S. grow and prosper
- It opened up every part of the country to settlement
- Railroads created jobs in other industries
 - Steelworkers
 - lumberjacks
 - Coal miners
 - railroad workers

Big Business

- J. P. Morgan - most powerful banker
- Gained control of the nation's major rail lines
- Sold them and bought up steel companies
- Merged all of them into one big company, U. S. steel in 1901
- 1st business worth more than 1 billion dollars

Oil

- Chemists invented a way to convert crude oil into fuel called kerosene in the 1850s
- Kerosene could be used for cooking, heating, and lighting created demand for oil

- Oil industry developed after a way to pump oil from the ground was developed in 1859
- The 1st oil strike was near Titusville, Pennsylvania
- John D. Rockefeller believed competition was wasteful
- Bought up refineries and forced rivals out of business
- Combined them into one big corporation, Standard Oil Company

Corporations

- Corporations developed in the late 1800s
 - Business that sell portions of ownership called stock shares
 - Investors hope to receive dividends (profits)
- Corporate leaders became the most respected members of American society

Problems Begin

- Many businesses made their fortunes through unfair business practices
- Trusts began – a group of corporations run by a single board of directors
 - Sell goods and services below market value until competitor forced out of business, then raised prices
- Trusts gained monopolies - total ownership of a product
- By the 1890 monopolies and trusts controlled the nation's most important industries
- Trusts and monopolies put an end to competition
- The Sherman Antitrust Act passed in 1890
- It banned the formation of trusts and monopolies
- The act did not clearly define a trust in legal terms, so it was hard to enforce
- Corporations and trusts continued to grow in size and power

Inventions

Communications

- 1844 Samuel Morse invented the telegraph - people could send messages quickly
- 1858 Cyrus Field installed the transatlantic cable on the floor of the Atlantic Ocean – U.S. and Europe connected
- 1876 Alexander Graham Bell invented the telephone

Thomas Edison

- Set up his invention factory in Menlo Park
- Goal – a minor invention every 10 days and a major invention every 6 months
- 1879 invented the Light bulb
- Other inventions: phonograph, motion picture projector, and storage battery
- Known as the Wizard of Menlo Park

Technology

- 1868 Christopher Scholes invented the typewriter - changed the way office work was done
- 1888 George Eastman developed the camera
- In the 1880s Gustavus Swift developed a way to use refrigeration that allowed fresh meat to be sent to market

Automobile

- 1893 U.S. built its first practical motorcar
- 1908 Henry Ford introduced the Model T
- Ford was the first to implement the moving Assembly line in manufacturing
- The use of mass production (the making of large quantities of a product quickly and cheaply) made cars more affordable

Airplane

- 1903 Orville and Wilbur Wright invented an airplane powered by a gas engine
- First flight took place in Kitty Hawk, North Carolina
- Flight lasted 12 seconds and went 120 feet

Working Conditions

- Machines and unskilled workers replaced skilled craftspeople
- Injuries increased
- Small crowded rooms
- Stuffy air
- Long hours and low wages
- No job security

Workers Organize

Knights of Labor

- First national labor union started in 1870s
- Pushed for 8 hour workday
- Equal pay for work
- End to child labor
- Included both skilled and unskilled workers
- Terence Powderly became the leader in 1879

Haymarket Riot

- Workers in Chicago strike the McCormick Harvester Company
- Workers clash with strike breakers
- Police called in and 4 workers killed
- Next day workers gathered in Haymarket Square to protest killings
- Bomb explodes killing a police officer
- Police shoot into crowd - kill 10 people injured 50
- 4 men tried, convicted, and executed even though no evidence against them
- Contributed to an anti-labor feeling in the U.S.

American Federation of Labor

- Started by Samuel Gompers
- Organized individual national unions (like mineworkers and steel workers)
- Limited membership to skilled workers
- Used collective bargaining – all workers act together to negotiate with management
- By 1904 had 1 million members
- Used strikes to achieve goals

Strikes

Homestead Strike

- Occurred at Carnegie steel Company in Homestead, Pennsylvania
- Resulted in workers and Pinkerton guards dead

Pullman Strike

- George Pullman cut the pay of workers who made Pullman train cars
- Most workers lived in houses he owned and he did not lower their rent
- Workers walked off the job
- Joined by workers who worked on the trains
- Federal troops were sent in to stop the strike
- This was a major set back for unions