

# CHAPTER 19 – THE GROWTH OF INDUSTRY

## SECTION 1: RAILROADS LEAD THE WAY

### RAILROAD EXPANSION

- From 1860 to 1890 the United States had rapidly increased the amount of railroad within its borders
- The expansion of the railroad system was accompanied by consolidation (the practice of combining separate companies within an industry)
- Large railroad companies began to buy small railroad companies in order to expand
- Railroad Barons (owners of large consolidated railroad companies)
- Cornelius Vanderbilt – New York Central Line (New York to the Great Lakes)
- James J. Hill – Great Northern Line (Minnesota to Washington State)
- Collis P. Huntington and Leland Stanford – Central Pacific (California to Utah)
- Railroad Barons were aggressive and competitive, and their methods were highly questionable (very little regulation on business)

### RAILROADS STIMULATE THE ECONOMY

- Railroads important for the transportation of raw materials and manufactured goods
- Demand for railroad making industries grew (iron, lumber, steel)
- Railroad companies provided thousands of jobs for Americans
- In order to improve and unify the railroad system, standard gauge (set distance between the rails of railways) was used to allow the faster shipment of goods at reduced cost
- Air brakes, couplers (to link railcars), refrigerated cars, “sleeping” or luxury cars, dining cars

### EFFECTS ON THE ECONOMY AND THE NATION

- Competition for customers caused many larger railroad companies to give rebates to their biggest customers, which smaller companies couldn't offer
- Railroad Barons made secret agreements amongst themselves called pools, which allowed each baron to completely control a certain region of business
- Centers of certain economies shifted from the East to the Midwest
- Trains redistributed the population of the United States
- Spread of the railroad system led to the national system of time with 4 time zones

## SECTION 2: INVENTIONS

### COMMUNICATION CHANGES

- Communication technology - helped people communicate – leads to economic growth

- (1860) Telegraph – Samuel Morse – Morse code – instant communication throughout the country and eventually internationally
- (1876) Telephone – Alexander Graham Bell – 1<sup>st</sup> customers were businesses, then in homes

## THE GENIUS OF INVENTION

- 1860-1890, a burst of inventions spilled throughout the United States. (over 400,000 patents)
- Many inventions helped businesses operate more efficiently
- Other inventions affected everyday life: (Camera – George Eastman, Vacuum – John Thurman)
- Thomas Edison (Wizard of Menlo Park) – phonograph, motion picture projector, telephone transmitter, storage battery
- Most important Edison invention – light bulb (and eventually power plants that could provide the electricity needed)
- George Westinghouse – took Edison's light bulb and incorporated it to be used more universally
- African American inventors:
  - Lewis Howard Latimer – improved filament to be used in the light bulb
  - Elijah McCoy – mechanism for oiling machinery
  - Jan E. Matzeliger – shoe-making machine

## CHANGING OF SOCIETY

- New era of transportation – Henry Ford establishes the automobile making industry
- Model T – 1<sup>st</sup> affordable car created for mass production and the average consumer
- Ford pioneered the assembly line – more efficient way to make goods
- Mass production of goods (through the assembly line) would make more good cheaper to make and sell
- Mail delivery to rural and urban areas allowed companies to ship and advertise to a much larger population
- Chain stores grew rapidly – Woolworths (5 and 10 cent stores)

## SECTION 4: INDUSTRIAL WORKERS

### WORKING CONDITIONS

- As goods became more affordable, workers paid the price with continually deteriorating working conditions
- Industrial laborers worker 10-12 hour days
- Fired for any reason – replaced by immigrants who would work for less
- Noisy, unhealthy, unsafe workplaces – sweatshops
- Women typically worked in textile factories – received lesser salaries than men
- Industries hired children – many states pass child labor laws making it illegal for children to work under 12 years old or more than 10 hours a day

### LABOR UNIONS REFORM

- Dissatisfied workers organized into groups called labor unions in order to demand better treatment
- Trade Unions have little influence because each one represented their own trade

- Knights of Labor (Terrence Powderly) – recruited and represented those left out of trade unions including African-Americans, women, immigrants, and unskilled laborers
- American Federation of Labor (Samuel Gompers) – represented skilled workers in various crafts
- Collective bargaining – unions represented workers in bargaining with management for better pay and conditions
- Mary Harris Jones (Mother Jones) works for women’s rights at the turn of the 20<sup>th</sup> century
- Triangle Shirtwaist Fire – led to the International Ladies’ Garment Workers Union – pushed for a safer working environment

## THE UNIONS ACT

- Unions responded to company firings in the 1870s and 90s with strikes that sometimes sparked violence
- Companies hired strikebreakers to replace striking workers – federal troops used to restore order
- Haymarket Riot: causes Americans to associate the labor movement with terrorism and disorder
- Homestead Strike: after clashes with armed guards, the steelworker’s union dwindles
- Pullman Strike: railroad workers strike refusing to work the railcars suspending transportation of goods and services
  - US Attorney General orders an injunction to put the railroad workers back to work
  - Eugene V. Debs – leader of strike, refuses to end the strike and is sent to jail
- Failure of the Pullman Strike deals another blow to the labor unions