DBQ Time

- You have 5 minutes to do any last-minutes revisions or additions to your DBQ!

Shout-outs!

- For Ch. 17-23 Exam Multiple Choice:

Per. 5
1st: Giselle
2nd: Chris
3rd: Cindy, Eduardo, Rogelio, Monica

Per. 6
1st: Bryan
2nd: Aaron, Natalia
3rd: Erick, Haidar

Industry Comes of Age

1865 - 1900

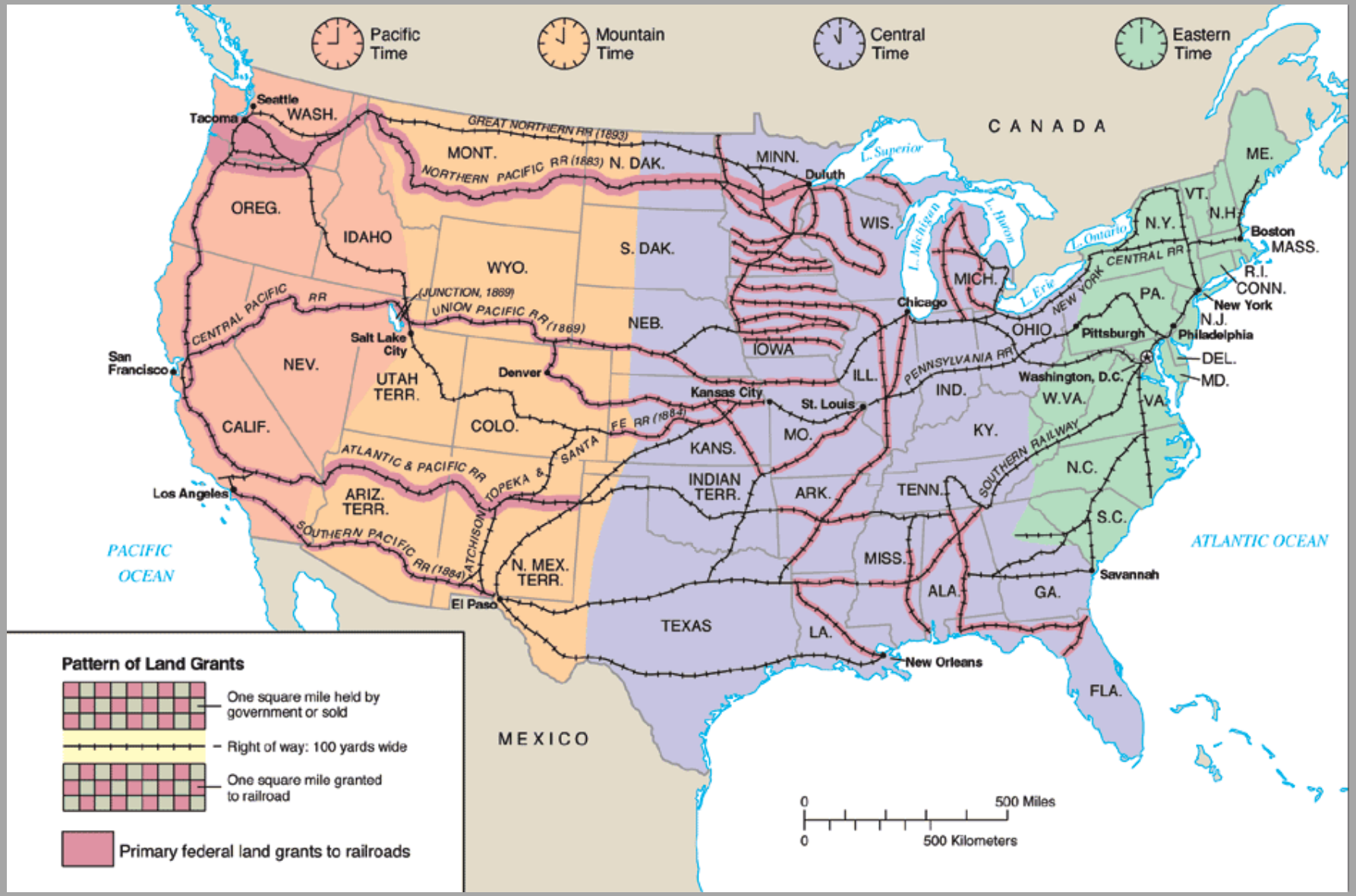
Industrial Changes in the Late 1800s

- Brilliant men drawn to industry and business, not politics
  - US became an industrial giant under their leadership
  - Lives of workers transformed in the process

The Iron Colt Becomes an Iron Horse

- 1865 – 1900 – railroad lines increased
  - 35,000 miles to 192,000 miles
  - Much of the new track was west of the Mississippi

Federal Land Grants to Railroads



The Iron Colt Becomes an Iron Horse

- Government gave railroad subsides in land to help offset the risk
  - Building railroads in West, profits would not come for years, when settlers came to the area
  - The 2 companies that built the transcontinental railroad given generous loans at low interest

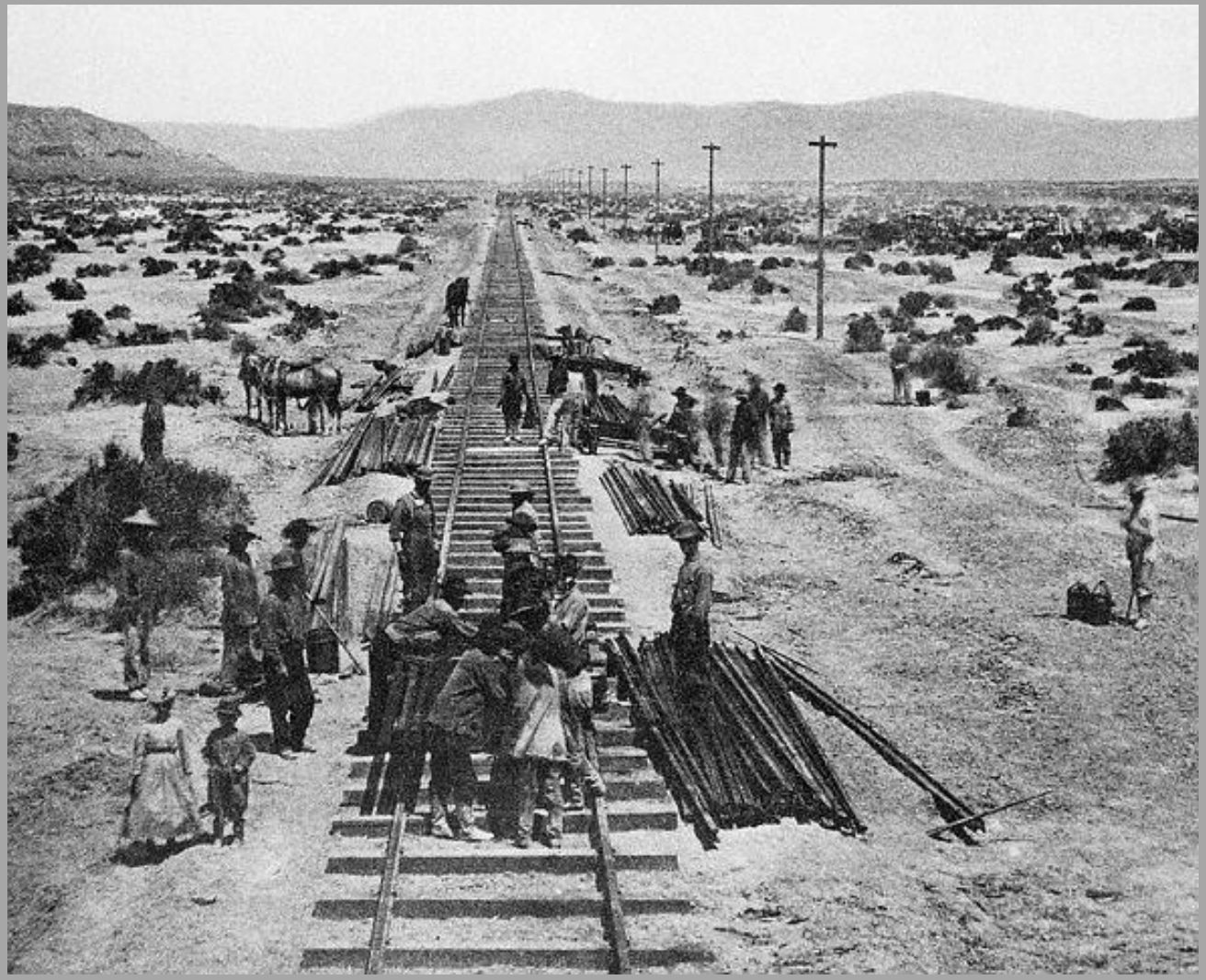
The Iron Colt Becomes an Iron Horse

- Justifying the giveaway of the land
  - Government got long-term lower rates for postal services and military traffic
  - Cheap way to subsidize railroads, without passing new taxes or directly giving away cash
  - Railroads increased value of government's land also
  - Railroads brought civilization to the West
    - Cities fought for railroads to pass through them

Spanning the Continent with Rails

- Union Pacific Railroad began during Civil War from Omaha, Nebraska
  - Incentive during Civil War to bind California to the Union

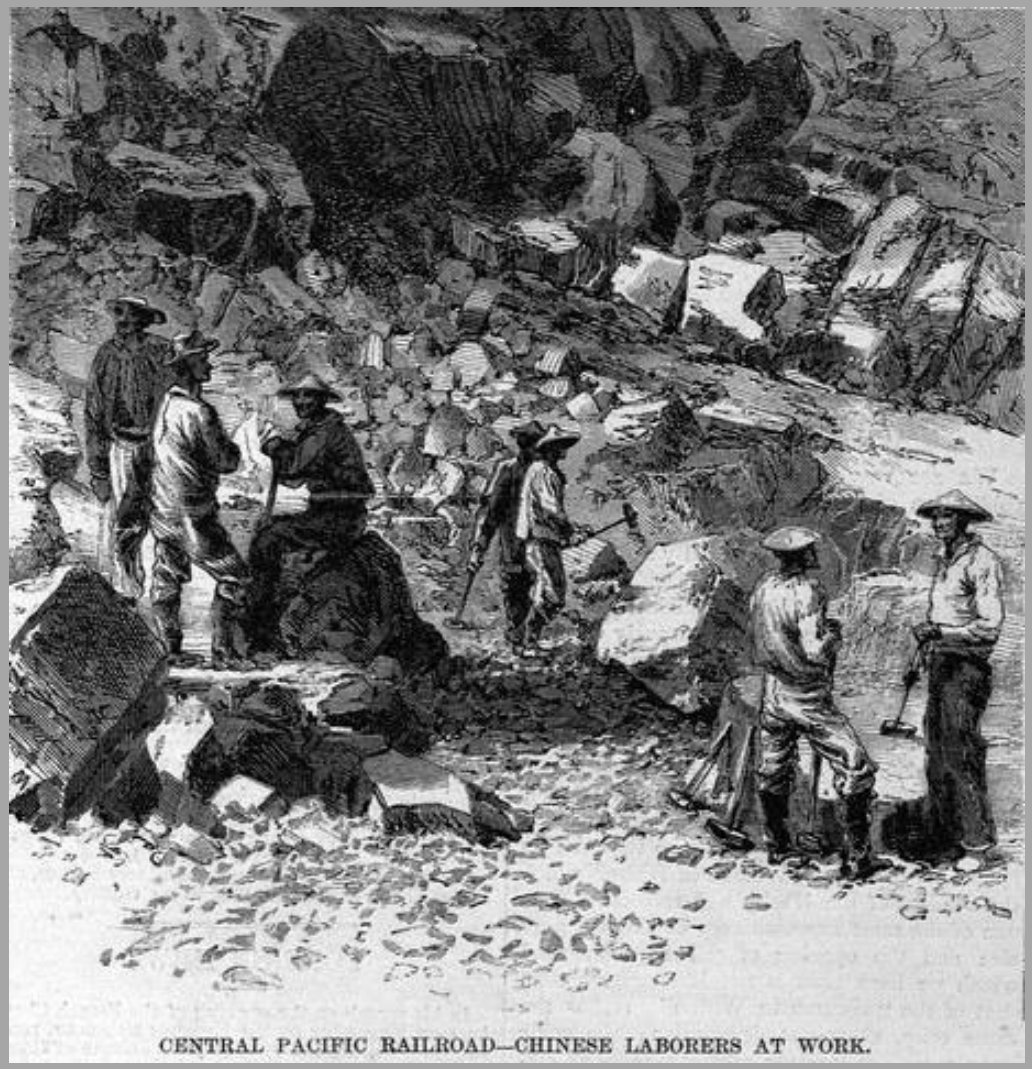
Irish Rail Workers in Nevada, 1869



Spanning the Continent with Rails

- Building the Central Pacific
  - 10,000 Chinese workers provided cheap, dependable labor
  - Sierra Nevada mountains were huge obstacle to overcome
    - Blasting through mountains only moved a few inches a day; hundreds of workers killed in accidents

Chinese Workers on the Central Pacific Railroad



CENTRAL PACIFIC RAILROAD—CHINESE LABORERS AT WORK.

Spanning the Continent with Rails

- May 10, 1869 – Union Pacific (from east) and Central Pacific (from west) met at Promontory Point, Utah
  - Union Pacific had built 1,086 miles of track; Central Pacific had built 689 miles
  - Called the Transcontinental Railroad
  - Golden spike driven into ground while workers and owners celebrated

Promontory Point, Utah
May 10, 1869

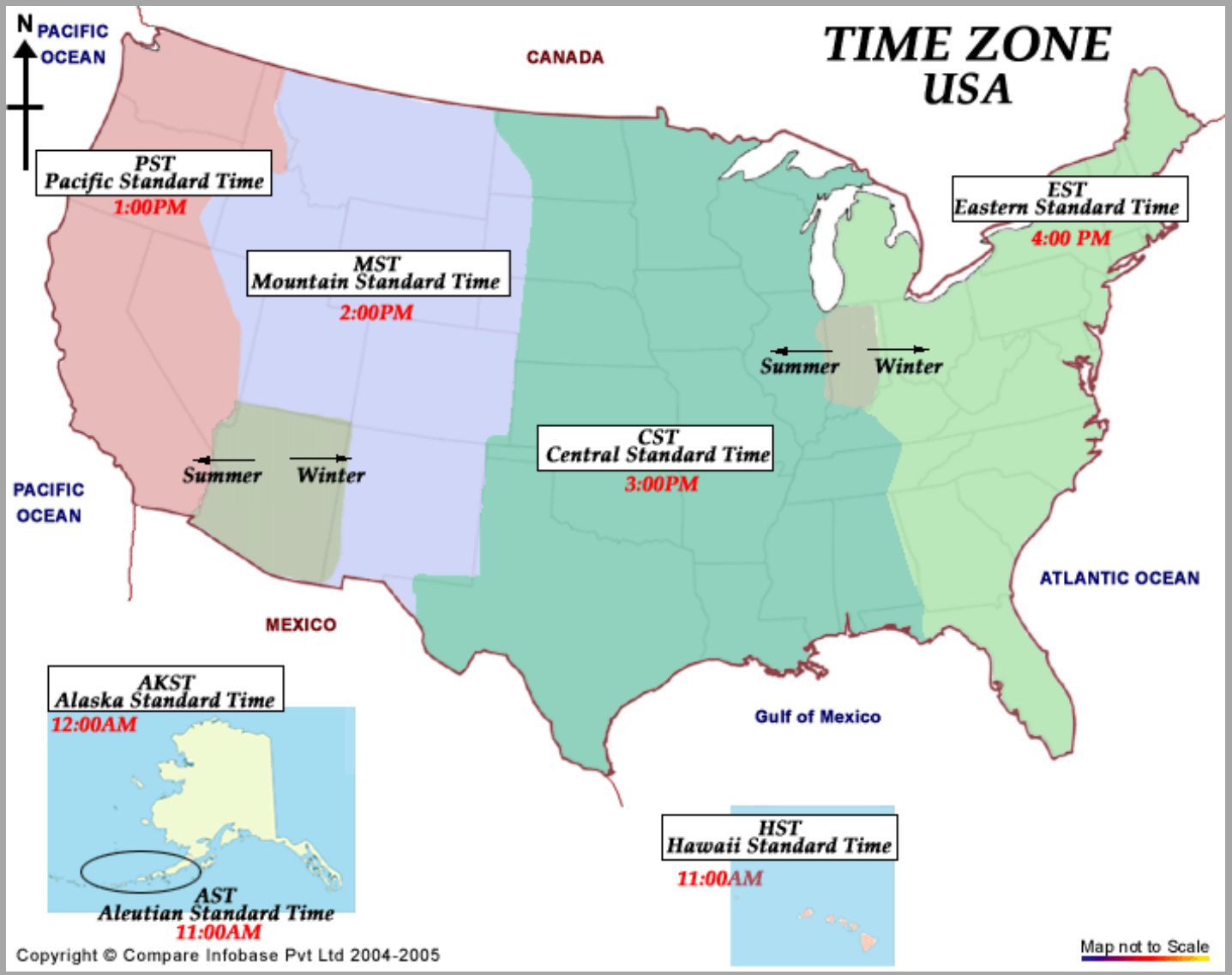
Spanning the Continent with Rails

- Importance of the transcontinental railroad
  - Amazing engineering accomplishment
  - Tied California to Union
  - Expanded trade with Asia (because goods from Asia could be shipped to more populous East and goods from East could be shipped to California for shipment to Asia)
  - Expanded growth of West

Revolution by Railways

- Railroad time
  - Until 1880s, each town had its own local time, based on the position of the sun
  - Small differences in time made it extremely difficult to make railroad schedules
  - 1883 – railroads agreed that the US would be divided into 4 time zones

Time Zones in the US



Wrongdoing in Railroading

- Stock watering
  - Sellers of stock would make wild claims about value of a company, selling the stock far beyond what it was worth
  - Railroad managers then forced to charge extremely high rates and fight ruthlessly competitive battles with rival railroads to try and make the railroad worth what the stocks said it was on paper

Wrongdoing in Railroading

- Railroads worked to restrict competition by cooperating with each other
    - Lowered profit made up by charging higher prices for short hauls or to small shippers than for long hauls for large shippers

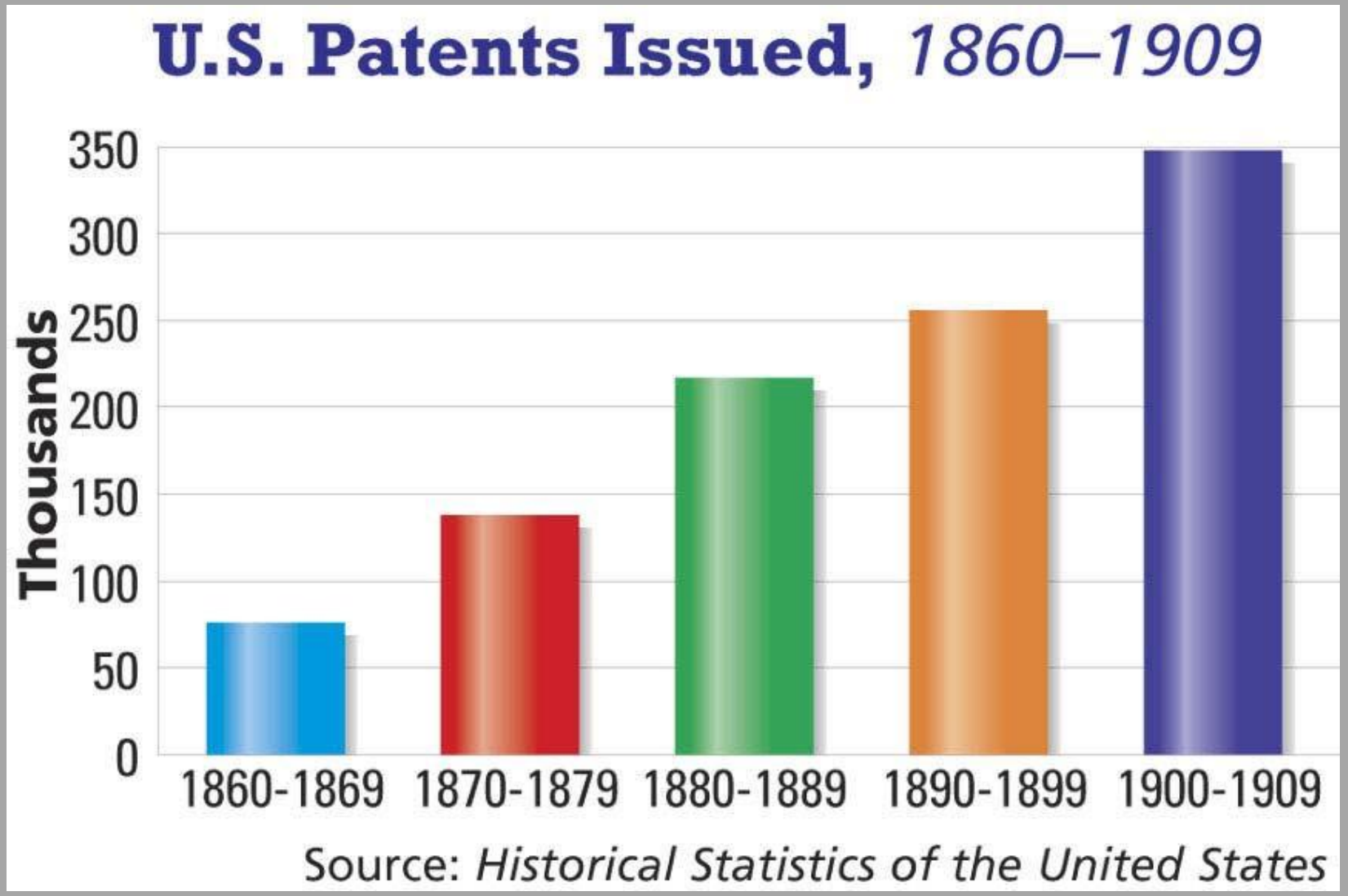
Government Bridles the Iron Horse

- Americans slow to use governmental force to combat economic injustice
  - Most believed in free enterprise and competition
  - Generally opposed to using government to correct economic problems

Government Bridles the Iron Horse

- 1887 – Interstate Commerce Act passed by Congress
  - Required railroads to publish rates openly
  - Stopped unfair discrimination against shippers
  - Prohibited charging more for short hauls than long hauls
  - Interstate Commerce Commission (ICC) set up to enforce the law

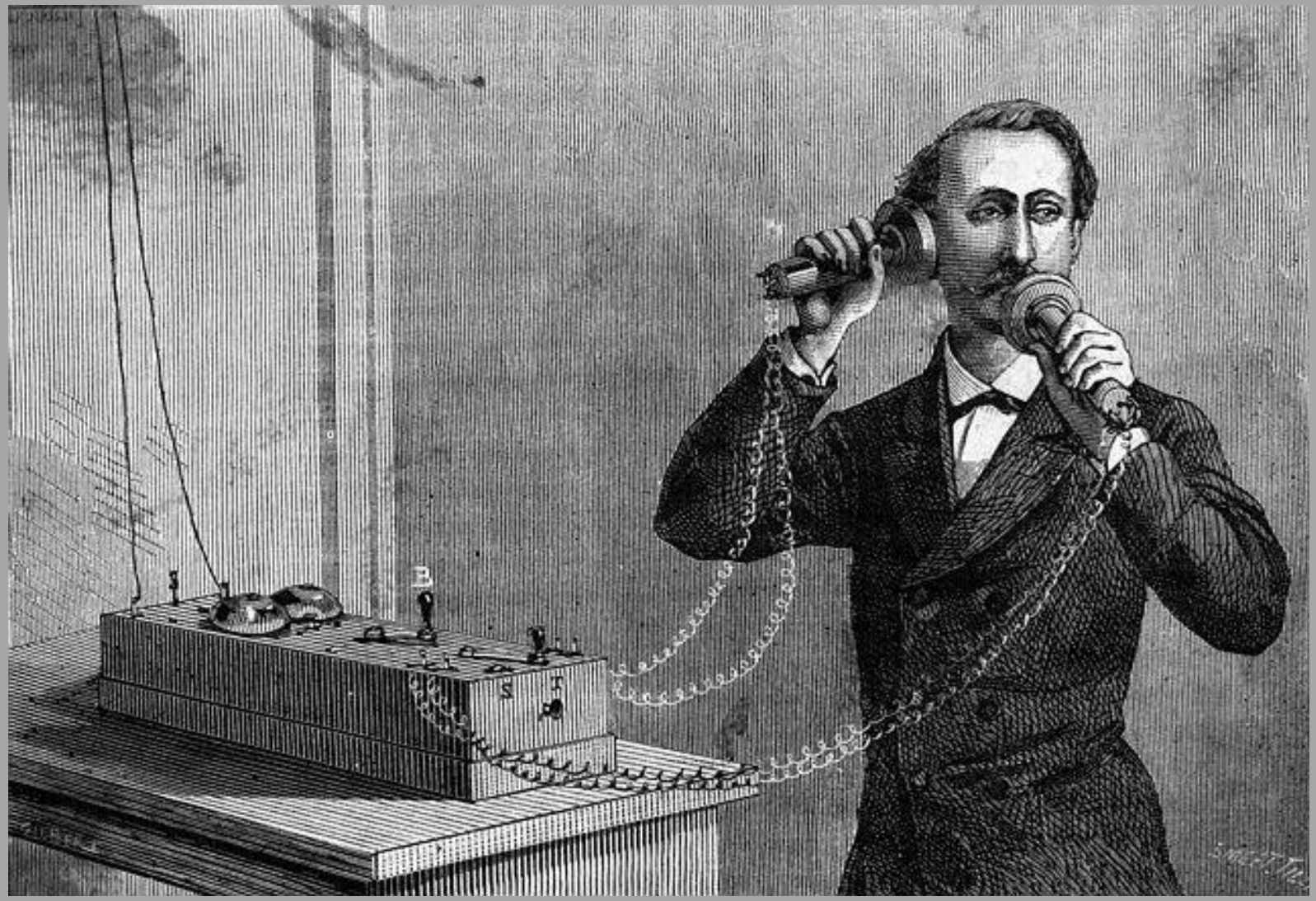
US Patents Issued, 1860 - 1909



Miracles of Mechanization

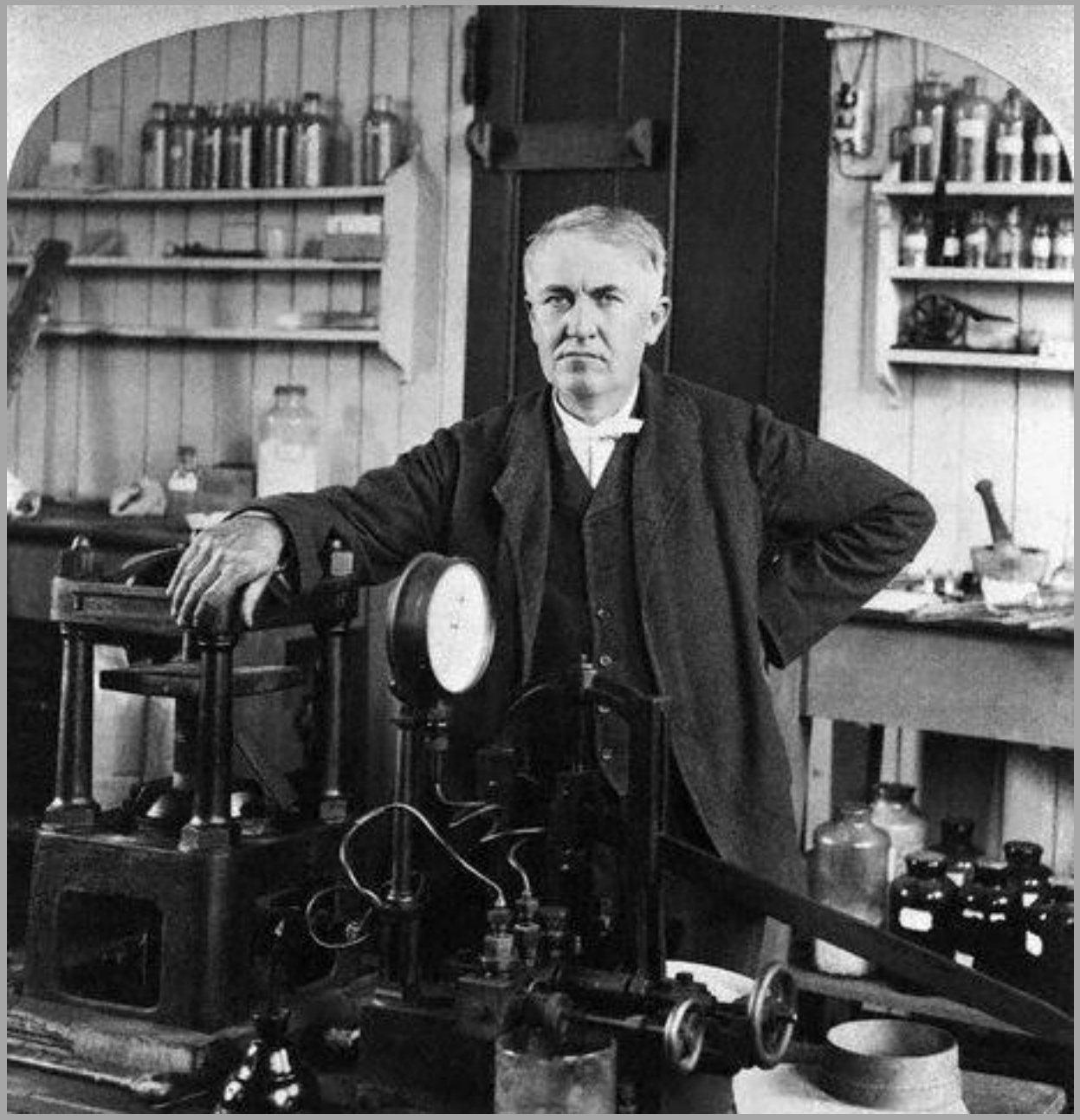
- The telephone
  - Invented by Alexander Graham Bell in 1876
  - Brought nationwide, rapid communication to America
  - Brought women to work as operators on switchboards
    - Men had at first been used, but profanity and rudeness led to women being used

Alexander Graham Bell and His Telephone



Miracles of Mechanization

- Thomas Edison
  - Deafness allowed him to work and concentrate without distraction
  - Invented through tinkering and trial-and-error; did not make discoveries through pure scientific research
  - Invented phonograph, mimeograph, dictaphone, moving picture, and (most famously) the light bulb



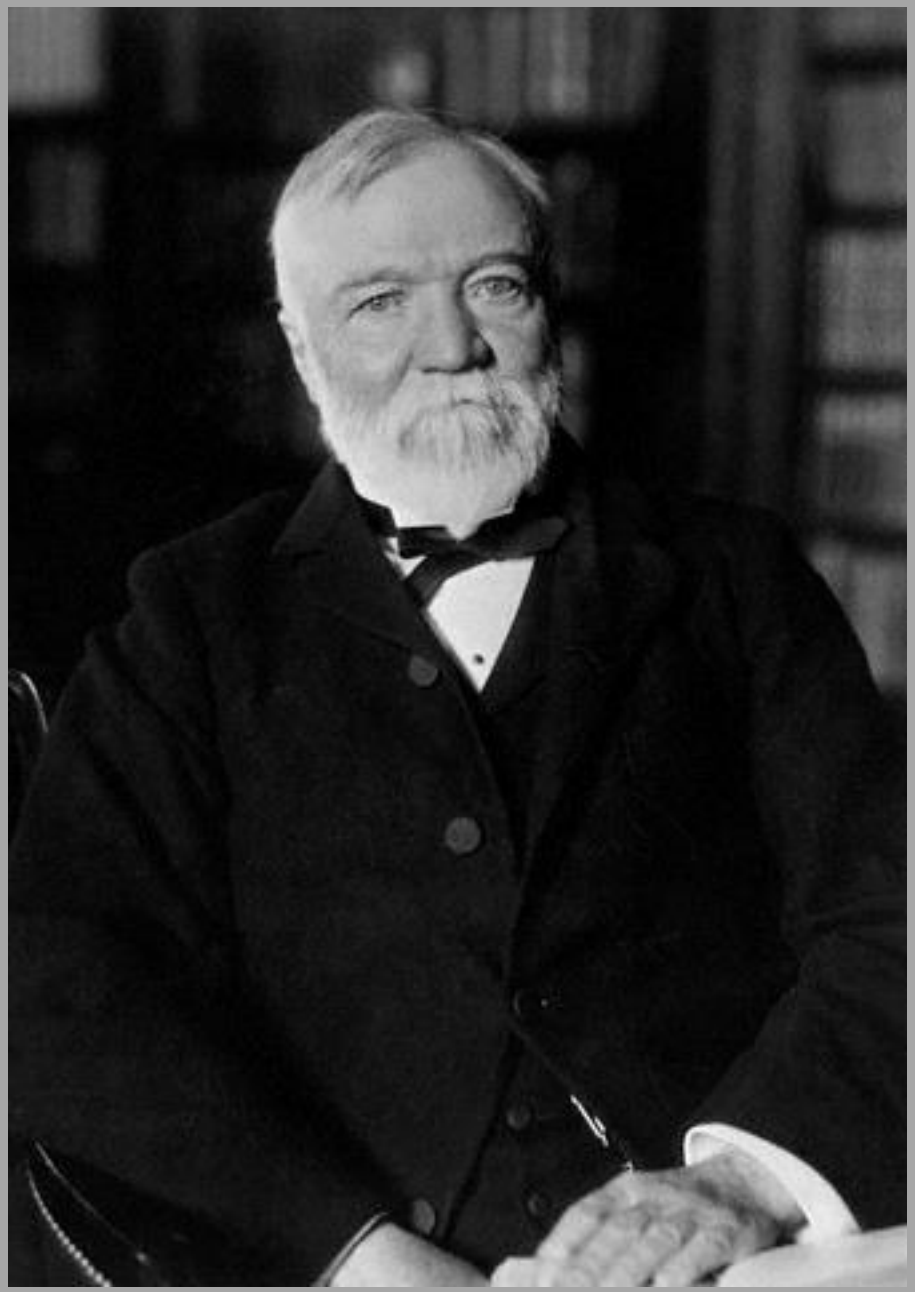
Thomas A. Edison in His Lab

The Supremacy of Steel

- Steel transformed America
  - Railroads, skyscrapers, industrial machinery
  - Typified new dominance of heavy industry making capital goods – goods used to make other goods (as opposed to consumer goods, sold directly to consumers)
  - At first (through the 1870s), steel was scarce, but by the 1890s US was leading producer of steel in the world

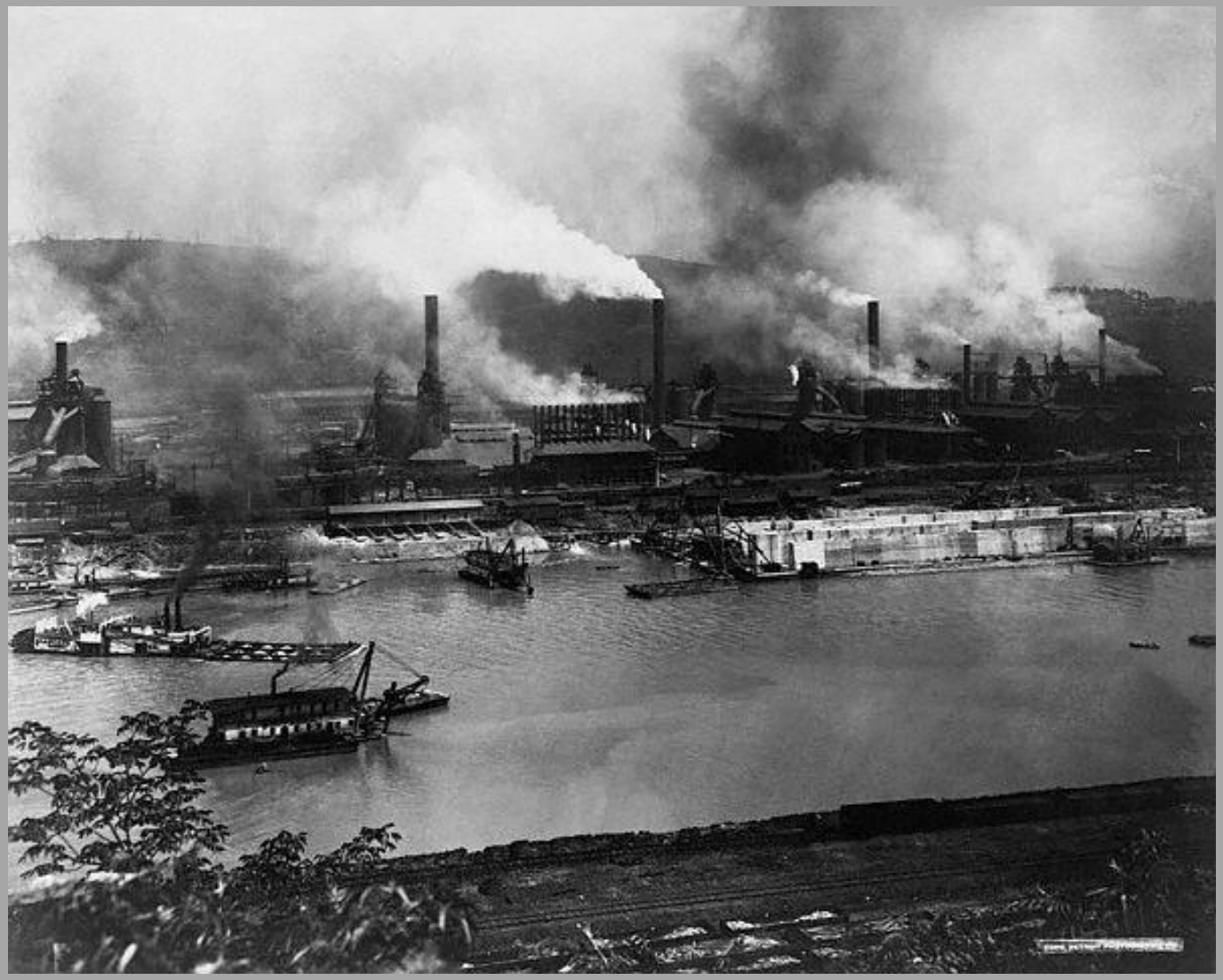
The Supremacy of Steel

- How US became leading steel producer in the world
  - Bessemer process
    - Cold air blown on very hot iron ignited carbon in the ore and burned out the impurities
    - Made possible cheap production of high-quality steel
  - America had important natural resources close together
    - Coal (for fuel), iron ore, other important ingredients
  - Abundant labor supply



- Andrew Carnegie was most important steel producer
  - Brought to US by Scottish immigrant parents in 1848 (age 13)
    - Began factory work and rose quickly

A Carnegie Steel Plant



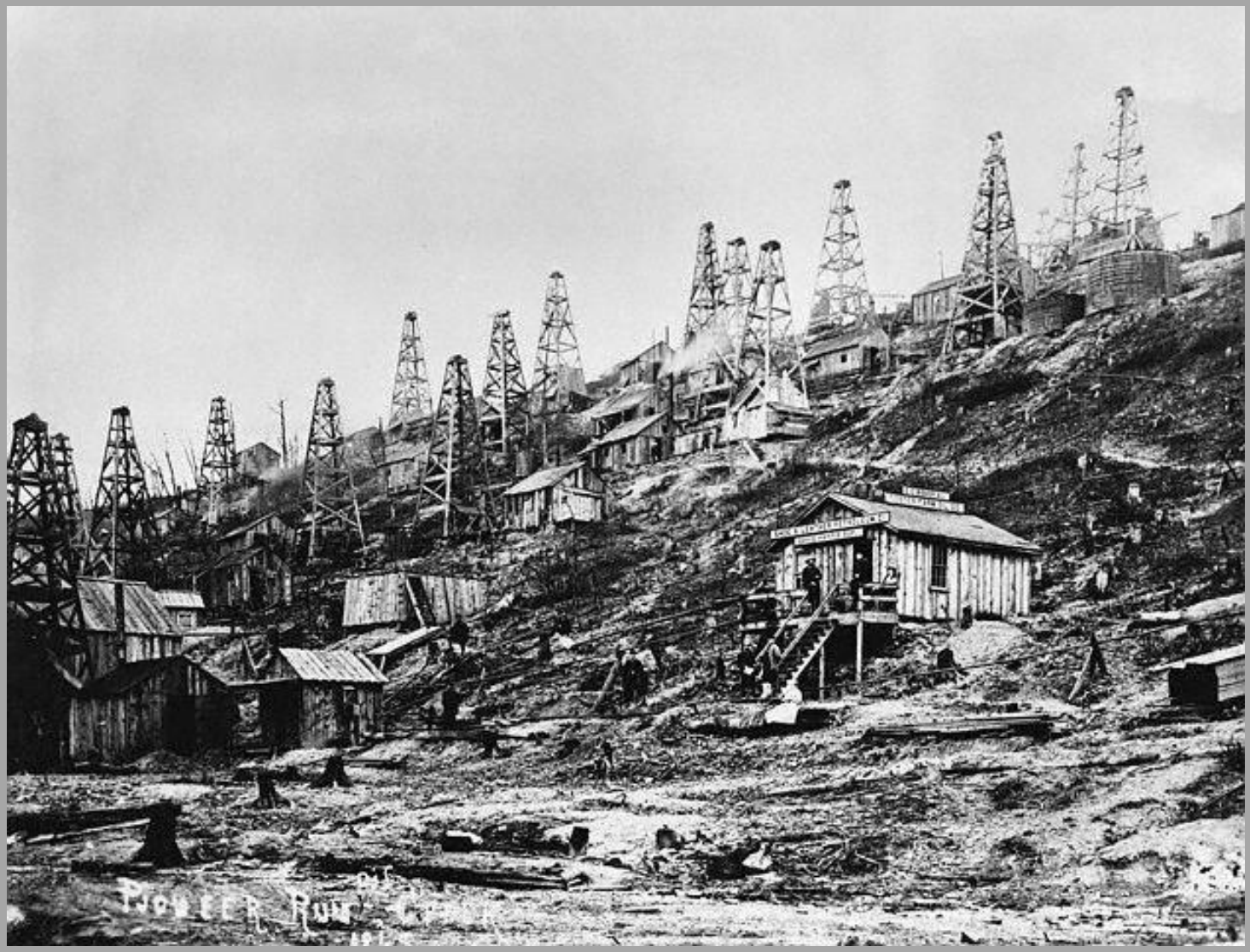
Carnegie and Other Sultans of Steel

- Banker JP Morgan buys Carnegie Steel for $400 million
- Carnegie after sale of his steel company
  - Believes he will die “disgraced” if he dies with all his wealth
  - Spends the rest of his life giving away $350 million
    - Money given to libraries and universities to help people improve themselves

Rockefeller Grows an American Beauty Rose

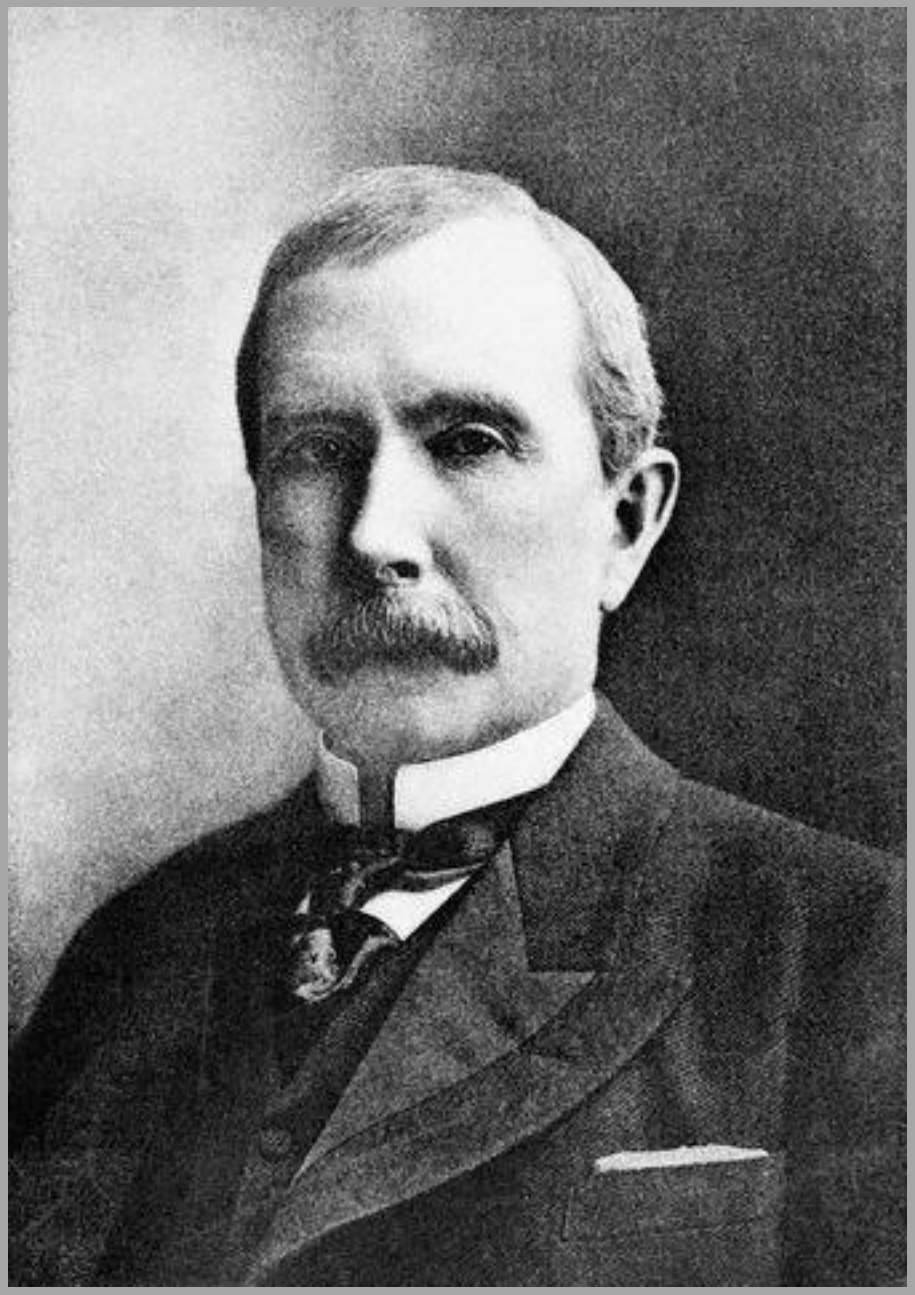
- Emergence of the oil industry
  - 1859 – first oil well in Pennsylvania drilled
  - Kerosene (used for lighting) became first important derivative of oil
    - Burned brighter than whale oil
  - Late 1800s – invention of light bulb by Edison made burning kerosene obsolete

The First Commercial Oil Well



Rockefeller Grows an American Beauty Rose

- Mid 1890s – automobile invented, burning gasoline (derived from oil) for power
  - Internal combustion engine gave oil industry a huge, profitable boost that still continues today



John D. Rockefeller

- Born into poor family
- Became successful in business early
- 1870 – organized Standard Oil Company of Ohio

Rockefeller Grows an American Beauty Rose

- Rockefeller's ruthless tactics
  - "Sell all the oil that is sold in your district." was his order to Standard Oil agents
  - Used spies and extortion to drive competitors out of business and get secret rebates from railroads

The Gospel of Wealth

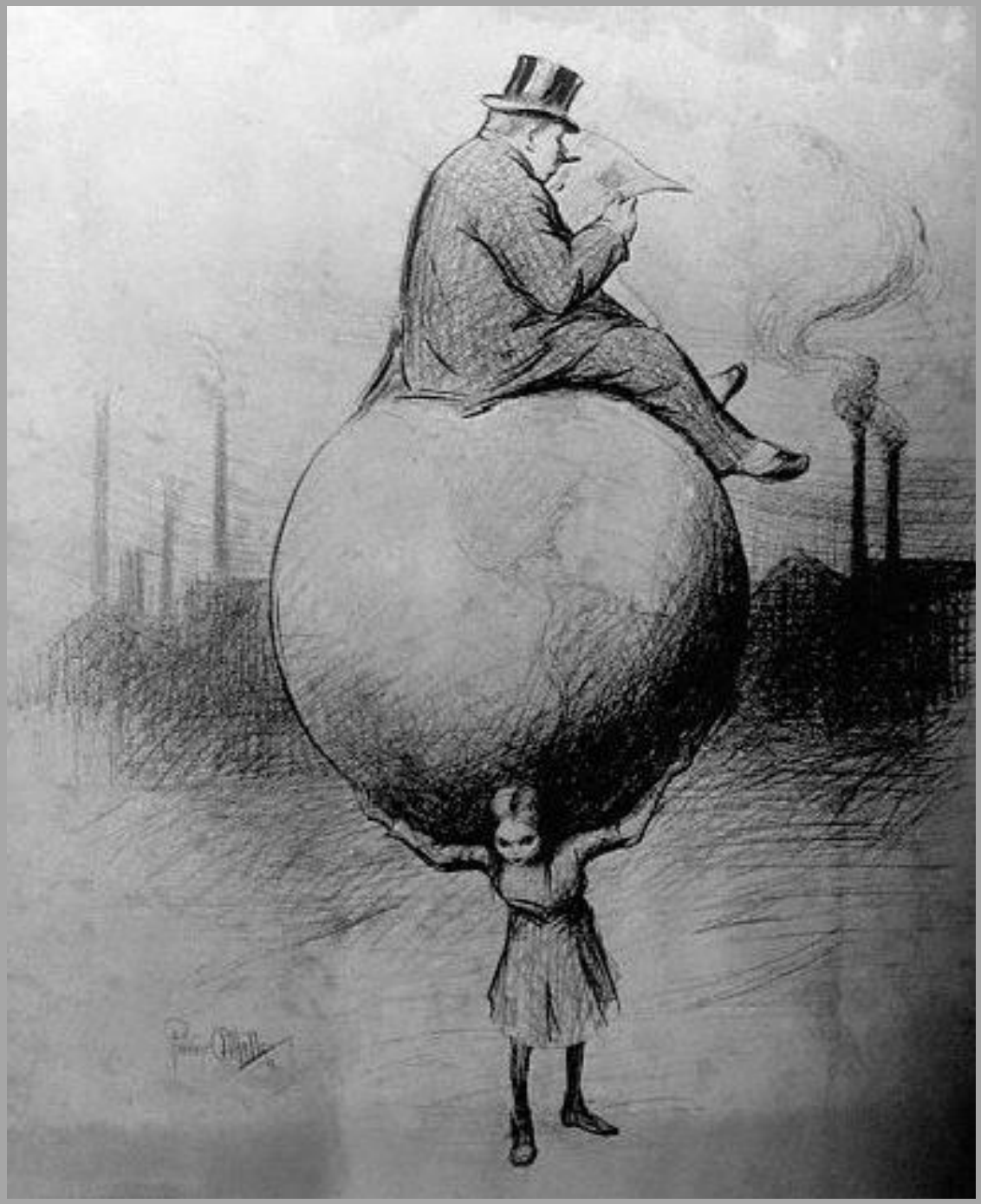
- “God’s will" justification
  - Many industrialists believed it was God’s will that they be rich and control their businesses
    - “the good Lord gave me my money” (Rockefeller)

The Gospel of Wealth

- “Survival of the fittest" justification
  - Used Darwin’s theory of natural selection to argue that human’s were also products of evolution
    - Rich industrialists earned the right to their power and riches by adapting better than others

Government Tackles the Trust Evil

- Sherman Anti-Trust Act of 1890
  - Tried to outlaw trusts and monopolies, but mostly ineffective
  - Contained huge loopholes that corporation lawyers used
    - More trusts formed in 1890s than ever before
    - Most government cases decided in court in favor of corporations



Homework

- Read Ch. 25, pg. 557-571
- Finish Ch. 24 Key Terms