



# Creating An Empire

**Day 2 – The Gilded Age**

**BECAUSE IT'S GREAT TO WORK HARD AND PLAY  
HARD... EVEN WHEN YOU FORGET TO PLAY**

# OBJECTIVES

- Identify the contributions of five key inventors during the Gilded Age
- Understand how their inventions both improved lives, but divided classes
- *Terms:*
  - Thomas Edison
  - Samuel Morse
  - Alexander Bell
  - Wright Brothers
  - Henry Ford
  - Assembly Line
  - Standardized Parts
  - Mass Production
  - Gilded Age



# ***REMIND ME...***

- ***What was so different about immigration in the late 1800s?***
- ***How did it affect living arrangements?***
- ***What about workplaces?***
- ***Aside from legal reforms, how could we possibly “make life better”?***



# MAKING LIFE BETTER...

- They say that “necessity is the mother of invention,” and in an effort to meet peoples’ “needs” several inventors and minds stepped up to the plate.
- Between 1860 and 1890 the U.S. Government granted more than 400,000 patents!
- For the purpose of THIS class, we will focus on a few key “inventors”...
  - If you’re interested in others... save that for Personal Projects next Spring 😊



# THE WIZARD OF MENLO PARK

- *Called “dull” by his teachers, and removed from school for poor hearing, Thomas Edison was primarily self-taught and became one of the eminent minds of his age, holding over 1,000 patents himself!*





# THE WIZARD OF MENLO PARK



Thomas A. Edison

- Inventor of:
  - Phonograph
  - Motion Picture Camera / *Projector*
  - **Storage** Battery
  - **Electric** Light Bulb

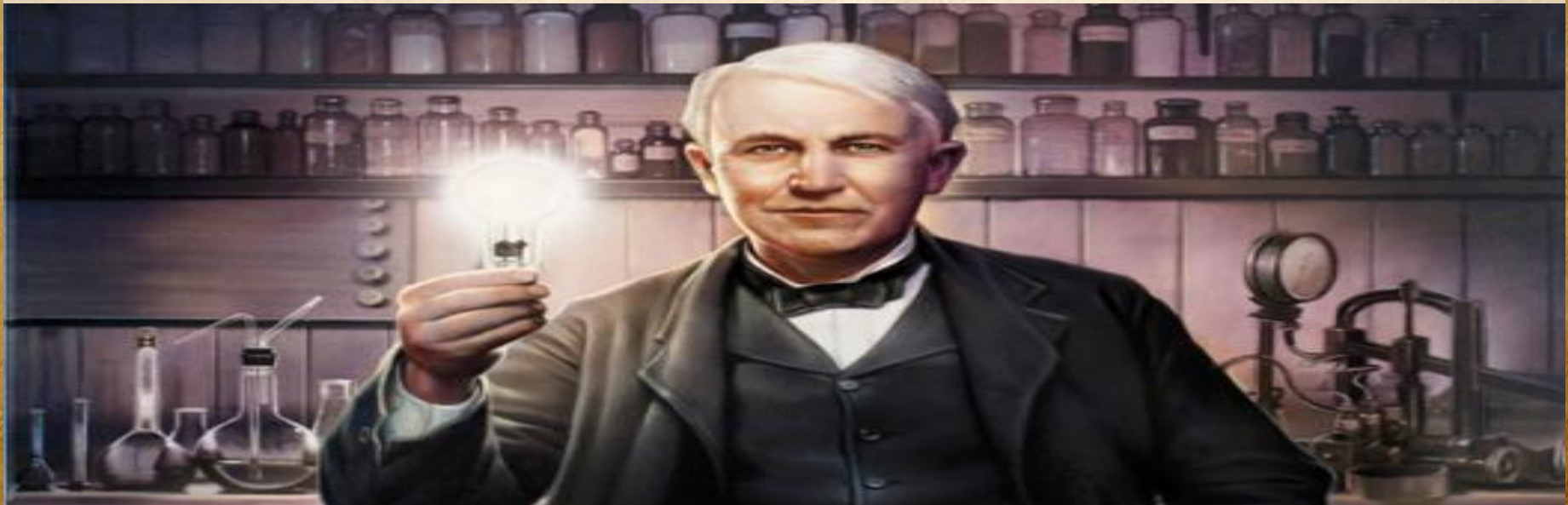




# THE WIZARD OF MENLO PARK

*"We sat and looked as the lamp continued to burn, and the longer it burned, the more fascinated we were. None of us could go to bed. There was no sleep for any of us for 40 hours."*

*- Thomas Edison, on inventing the light bulb*





# COMMUNICATION

- Samuel Morse

- Telegraph

- Instant communication with clicks and code

*Sam. F. B. Morse.*



- Alexander Graham Bell

- Telephone

- Transmits voice and sound

*Alexander Graham Bell*



# COMMUNICATION



*In a building in Boston in 1876, Bell makes the first phone call to his assistant upstairs. His message is simple:*  
*“Mr. Watson, come here. I want you!”*



# ***TRANSPORTATION***



- At Kitty Hawk, **NC** in **1903**, Orville and Wilbur Wright invent a working airplane
  - *It was made of wood, canvas, and bicycle parts and flew only 120 ft.!*



# ***TRANSPORTATION***

- *Meanwhile on the ground...*
  - *The exact “inventor” of the automobile is a matter of historical debate and difficult to prove (Go Mercedes!) but what we CAN track is some specific models, makers, and types... and one becomes more important than all others...*



# A "MODEL" CITIZEN

- Henry Ford got his start working as an engineer in Detroit. He experimented with gas-powered engines, and had an idea for a “new type of car – one that could be made quick, cheap, and in large quantities.”





# A "MODEL" CITIZEN

- Henry Ford invented a new automobile: The Model T
- Ford's success was also key in developing a few methods:

- Assembly Lines
- Standardized Parts
- Mass Production





# INDENTURES ASSEMBLE!

## Assembly Lines

- Arranging machines and workers to each perform **only** a simple task repeatedly
- *Also called “specialization”*
- *i.e. being the person who just tightens the lug nuts on a tire*



# INDENTURES ASSEMBLE!





# HIGH STANDARDS

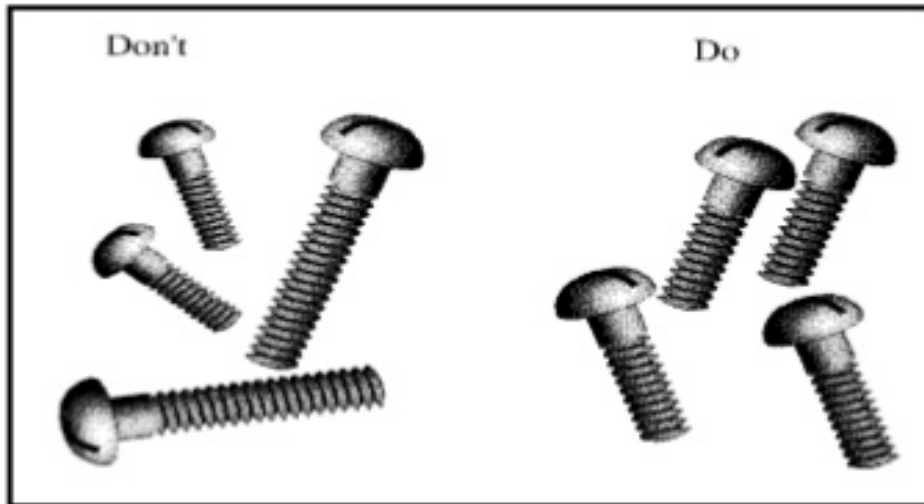
## Standardized Parts

- **Making** rules for every part **of a thing** so that it is “identical”
- **Makes parts** interchangeable and replaceable
- ***i.e. a rule that all cell phone chargers must be the same...***



# HIGH STANDARDS

## STANDARDIZED PARTS:





# MASS EFFECT

## Mass Production

- Using machinery, standardized parts, and assembly lines to be able to produce large quantities of goods





# THE "GILDED AGE"

- A famous writer of the late 1800s, Mark Twain (*not his real name*) nicknamed this era **"The Gilded Age"**
- Period between Civil War and WWI
- **Because of the** vast differences between the highest and the lowest in society
  - "Gilding" is when something that is *not* gold is gold-plated to appear more valuable



# THE "GILDED AGE"



HISTORY REPEATS ITSELF.—THE ROBBER BARONS OF THE MIDDLE AGES, AND THE ROBBER BARONS OF TO-DAY.



# AND SO...

- *Men like Henry Ford are able to use the inventions of others to produce on large scales goods for people*
  - *What do you think happens to THEM as a result?*
  - *What happens to the WORKERS?*
- *What we'll see, leading into the Spanish American War, is that our pursuit of a "better life" often makes the high end of society wealthier, and the poor poorer...*

**And now, let's hear and see the actual men – Ford and Edison**







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