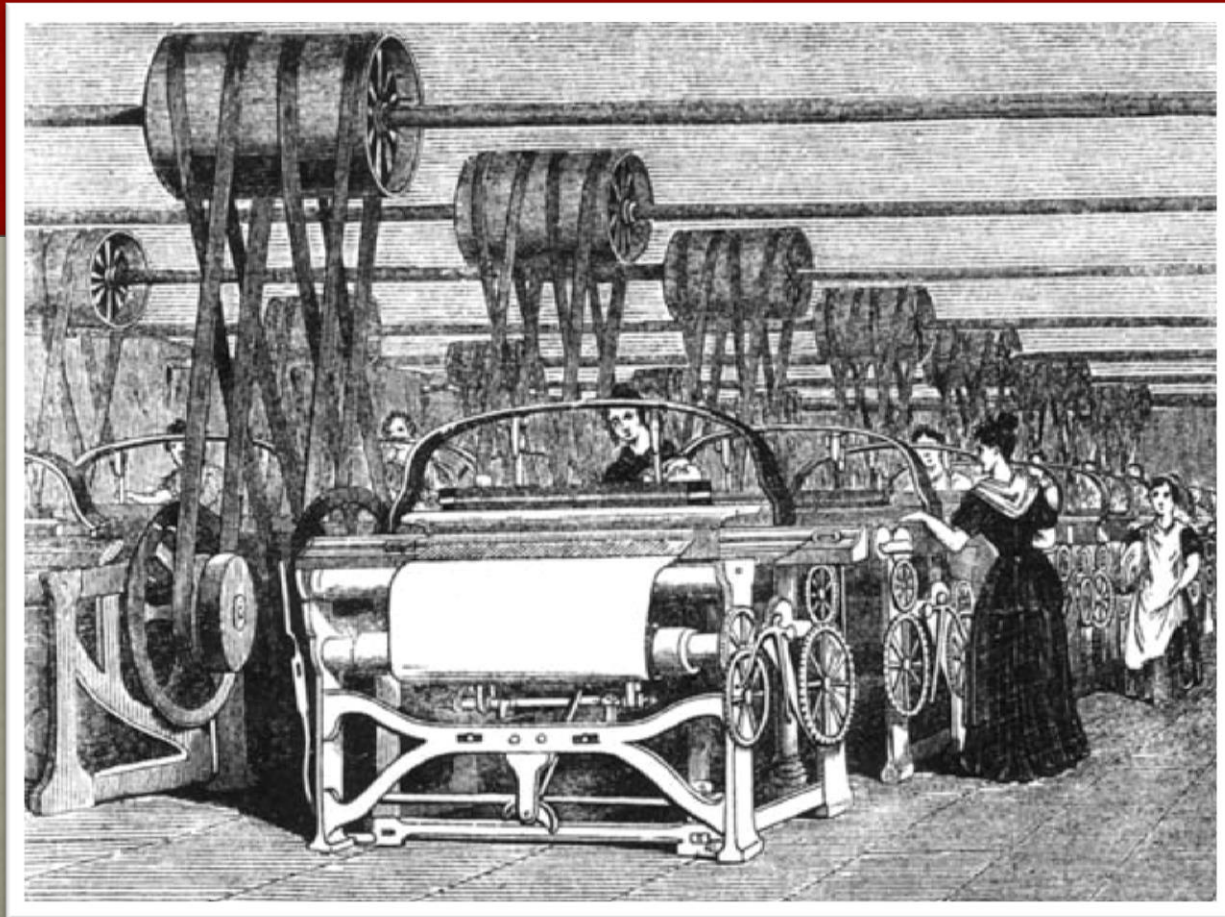


# THE INDUSTRIAL REVOLUTION



# ENGLAND

- 1760s - England
- Machines started taking the place of many hand tools
- Power of men and horses were replaced with flowing water water wheels and steam engines
- Three major needs – Food, clothing & shelter
- Improvements in the Textile Industry - Clothing
- Richard Arkwright invented the water frame – spinning machine powered by running water.

**Spinning Machine – History Channel**

<http://www.history.com/topics/industrial-revolution>

# FACTORIES

- Factory Systems – Bringing workers and the machinery together in one place.
- Building factories on rivers had some disadvantages
  - Dry season
  - Water/rivers may not be close to the city
  - Up-water rights – fighting over control of water
- Uses women and children to run factory (Terrible Conditions)
- STEAM POWER
  - Factory could now be in city without river/flowing water
- TOP SECRET – Britain tries to guard its industrial secrets

# AMERICA

- Samuel Slater
  - Apprentice of Arkwright
  - Memorizes machinery and other details
  - Immigrates to America
- Moses Brown
  - Wealthy RI merchant
  - Likes inventions / Has a crude textile mill
  - Slater joins Brown – Reconstructs spinning machine (by memory)
- New factory starts creating cotton thread

## **Industrial Revolution Comes to America**

<http://www.history.com/topics/industrial-revolution/videos/the-industrial-revolution?m=528e394da93ae&s=undefined&f=1&free=false>



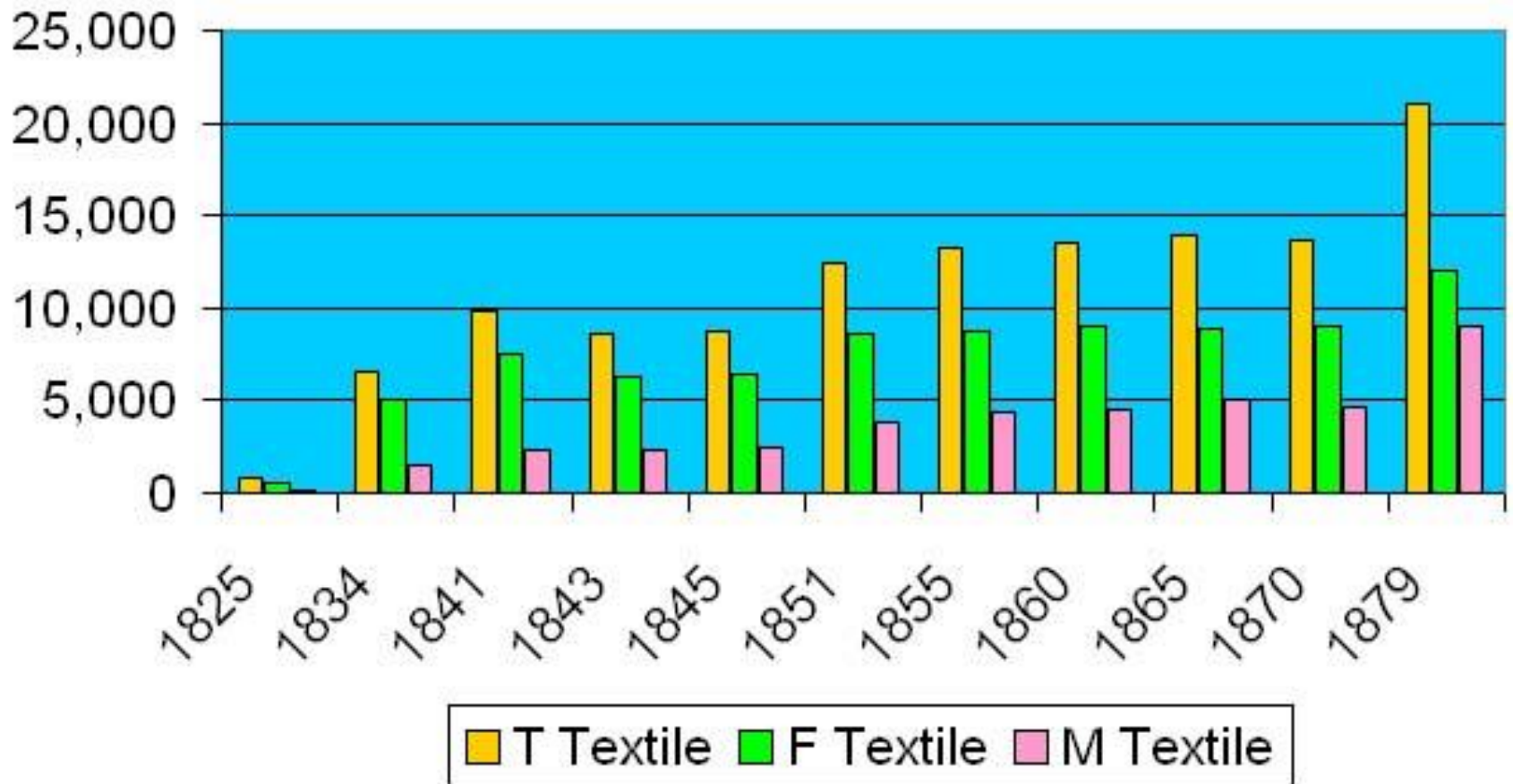
# AMERICA

- War of 1812
  - British blockades force America to depend on her own resources. Creates a need for factory system in America.
- IMPROVING the English System
  - Francis Cabot Lowell saw English factories
  - Returned to improve American factories
  - Improved English machinery as well
  - Brought together spinning and weaving into one factory
- LOWELL GIRLS
  - Wanted improved labor conditions – Not like English factories
  - Factories were staffed with young women from nearby farms
  - Boarding houses – strict rules in place
  - Lectures and libraries – Education

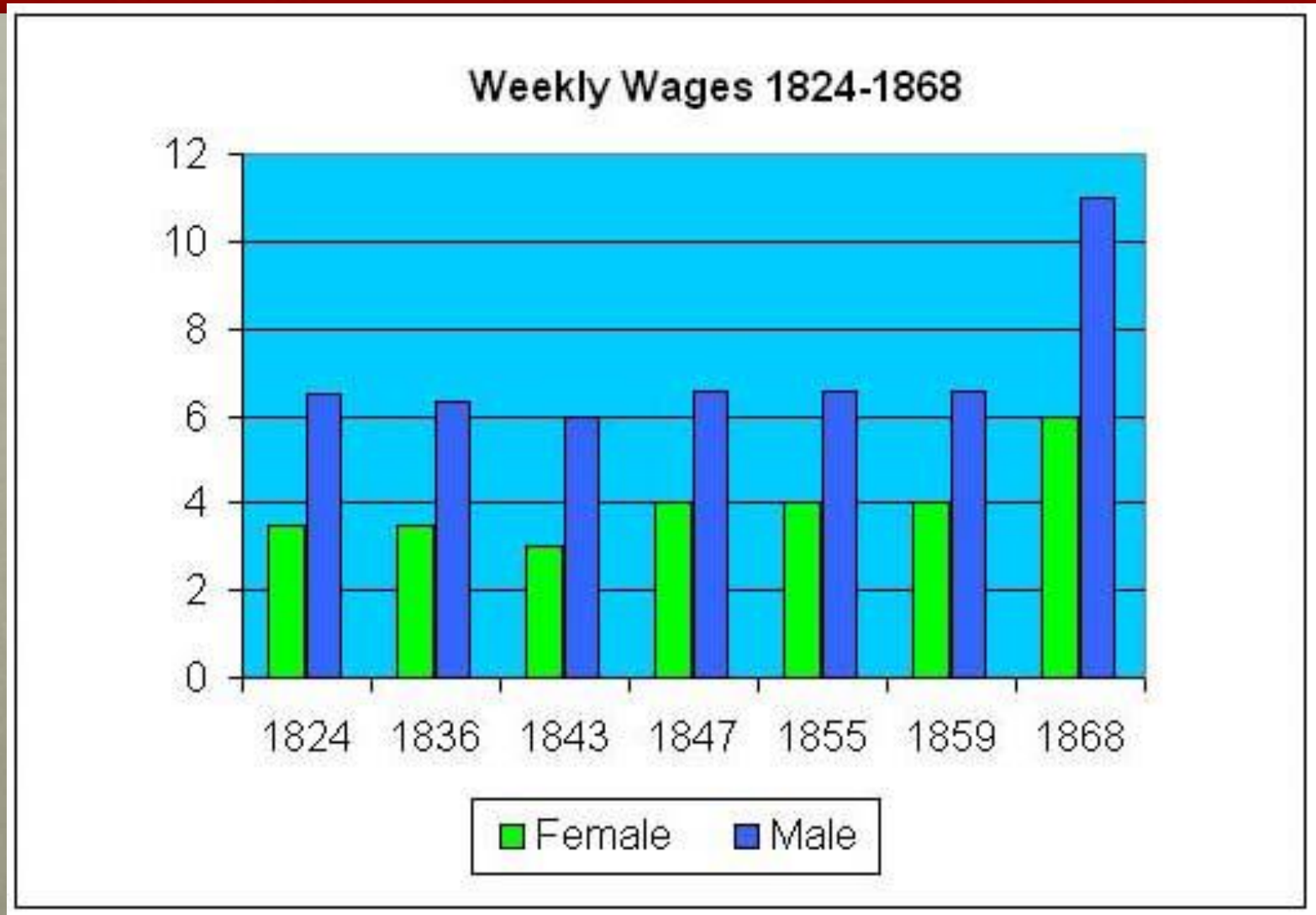
Dwelling-house numbered in the order of visitation.	Families numbered in the order of visitation.	The Name of every Person whose usual place of abode on the first day of June, 1850, was in this family.	DESCRIPTION.			Profession, Occupation, or Trade of each Male Person over 15 years of age.	Value of Real Estate owned.	PLACE OF BIRTH. Naming the State, Territory, or Country.
			Age.	Sex.	White, black, or mulatto.			
1	2	3	4	5	6	7	8	9
1		Jane P. Richardson	33	F				Me
2		Mary Richardson	31	"				"
3		Harriet E. Flagg	15	"				Mass
4		Caroline Stone	22	"				Me
5		Almira Stone	19	"				"
6		Mary Stone	19	"				"
7		Esther Ingersoll	24	"				"
8		Hannah Bedford	20	"				N.Y.
9		Phebe Holladay	19	"				"
10		Emily Widmarth	34	"				Me
11		Mary Loomby	17	"				Me
12		Sarah B. Patchelder	26	"				Me
13		Susane B. Patchelder	24	"				"
14		Emeline Stevens	37	"				"
15		Lavinia Bartlett	20	"				Mass
16		Amanda Webster	26	"				Me
17		Esther Webber	28	"				"
18		Elizabeth Hopwood	28	"				Me
19		Mary Lovel	28	"				Me

This chart shows the increase number of female and male textile workers in Lowell from 1820 to 1879.

### Lowell Textile Workers



This chart shows the change in weekly wages for female and male textile workers from 1824 to 1868.





# FACTORY LIFE

- CHILD LABOR
  - Textile Factories / Coal Mines / Steel Foundries
  - Starting at 7-8 years of age
  - No education opportunities
  - Very dangerous conditions / many injuries
  - 1880 – 1 million children between 10-15 worked for pay
- FACTORY CONDITIONS
  - Poorly lighted / little fresh air
  - Machines were unsafe – Easy to lose a hand/foot
  - No help if you were injured – Let go!
  - Workdays – 12-14 hours long