HISTORY of AMERICA

Fifth Edition

bju press
Greenville, South Carolina

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1869
Train air brakes patented by George Westinghouse

1870
Standard Oil Company founded

1874
Woman's Christian Temperance Union founded

1875
Andrew Carnegie's first steel plant opened

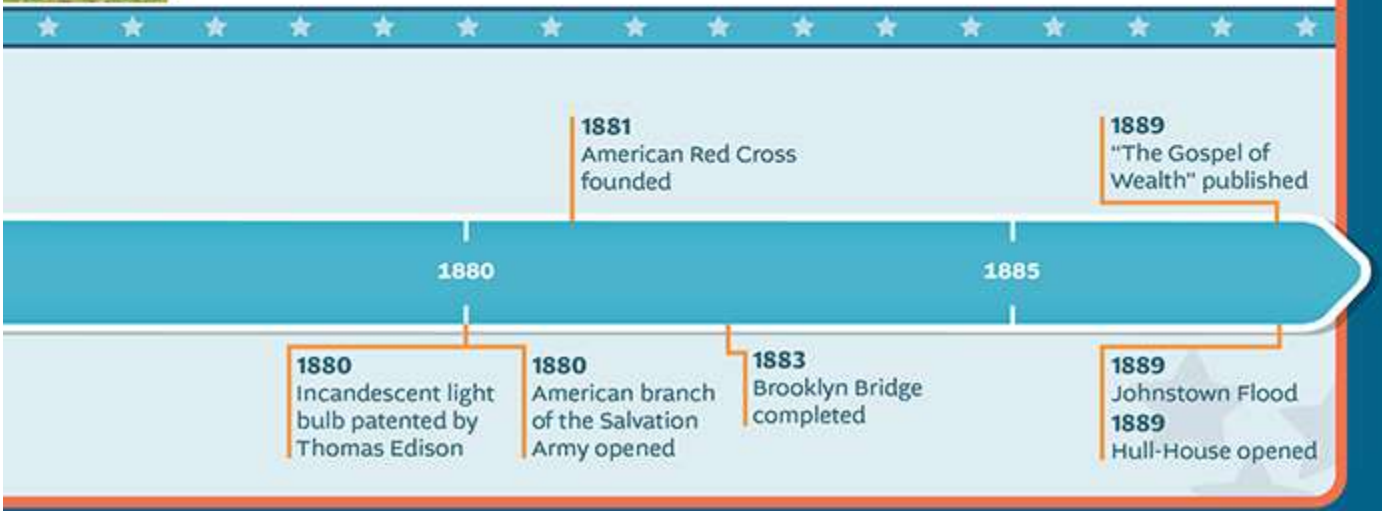
1876
Telephone patented by Alexander Graham Bell

The Gilded Age

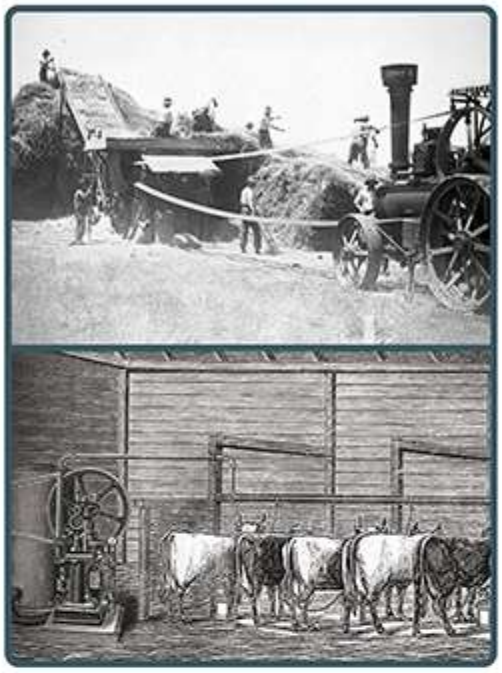
What new problems did growth and prosperity bring to America during the Gilded Age?

With the Civil War and Reconstruction behind them, Americans enjoyed a period of freedom from war. In the late 1800s, prosperity increased in the United States. New cities were thriving. In some parts of America, the landscape was changing. Instead of long, unbroken views of trees and fields, tall buildings could now be seen on the horizon. Immigrants steadily increased the population. More people in America meant more work could be done. Inventors and businessmen were developing new ways to work faster. And some Americans were growing wealthier than ever before.

The late 1800s in the United States is often called the Gilded Age. Something that is **gilded** has a thin covering that looks like gold, but it is not real gold. Although this period was a prosperous time, it presented Americans with new problems. On the surface, life in America seemed to glitter like gold. But beneath the surface, not everything was golden.



Steam-powered threshing machine



Hydraulic milking machine

An Age of Glitter

? What industries grew during the Gilded Age?

The Growth of Industry

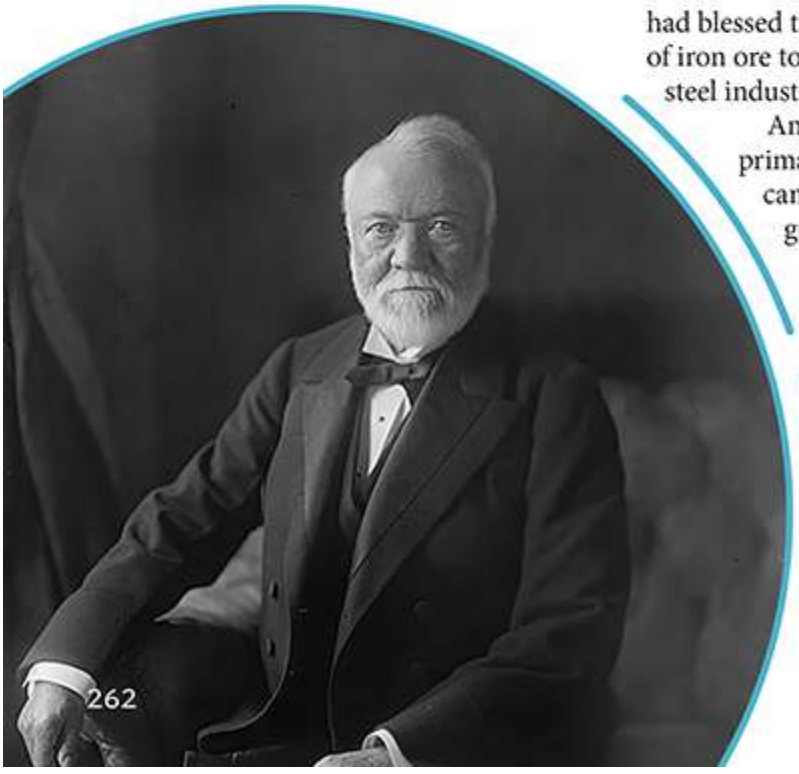
The Gilded Age was an era of growth and success in American business. From the colonial period onward, Americans had made their living mainly from farming, operating small businesses, and practicing trades. Before the Civil War, factories were limited, and most were in the North. But after the war, more factories opened, and cities grew up around them.

America still had farms, but these farms did not need as many workers. New machines could do much of the work that people had done before. Many people moved from farms to cities to find new work in large industries.

Carnegie and the Steel Industry

The steel industry was one of the most important industries of this era. An English inventor had recently found an inexpensive way to produce steel from iron. The railroad and construction industries needed large amounts of steel. God had blessed the United States with an abundance of iron ore to meet these needs. This allowed the steel industry to prosper in the United States.

Andrew Carnegie



Andrew Carnegie became America's primary steel manufacturer. Carnegie came from a poor family that immigrated from Scotland. He worked hard at various jobs until he rose to a management position at the Pennsylvania Railroad. After the Civil War, he invested in the steel industry. He opened his first steel plant near Pittsburgh, Pennsylvania, in 1875. Carnegie soon became the leading steel producer in the world. His success eventually made him a millionaire.

Rockefeller and the Oil Industry

Oil production was also an important industry during the Gilded Age. Before the Civil War, people had used whale oil to light lamps and keep machines running smoothly. But crude oil, drilled from underground, was quickly replacing whale oil. Crude oil could be refined and used for many different purposes. One of the most popular uses was making kerosene for lamps.

How did the oil industry change around the time of the Civil War?

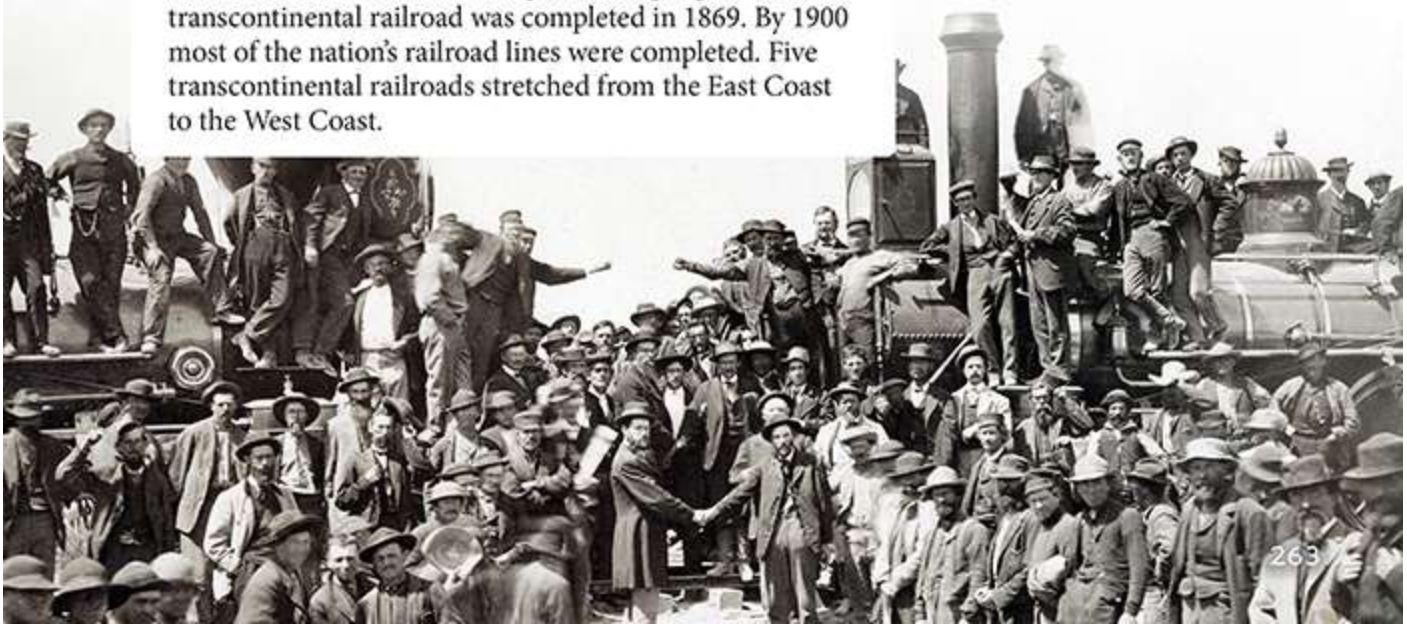
John D. Rockefeller was the nation's leader in the oil industry. He built an oil refinery in Cleveland in 1863. Rockefeller and a few associates started the Standard Oil Company. He was able to lower the price of kerosene. Other oil companies could no longer compete with his. Standard Oil bought out other refineries until it controlled nearly all the oil production in the United States. The company employed thousands of workers. It made a fortune for the Rockefeller family.

▲ Standard Oil Company

The Railroad Industry

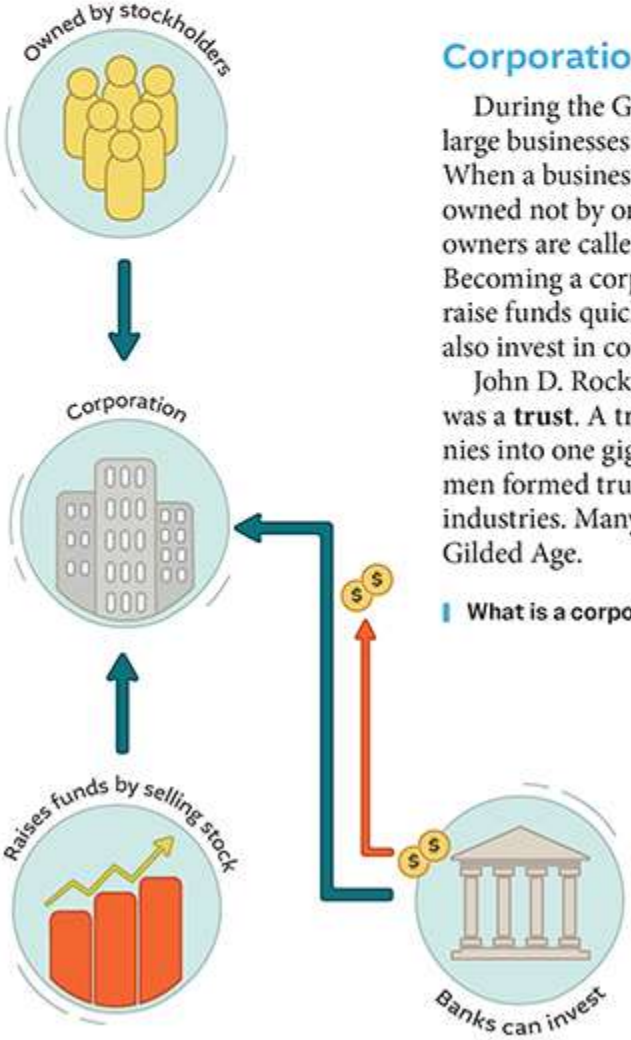
Along with the rise of the steel and oil industries came the expanding of America's railroads. As Americans manufactured more products, they needed more railroads to transport these goods around the country. More people were traveling west to settle and farm or find jobs. More railroads were needed to transport these people. The first transcontinental railroad was completed in 1869. By 1900 most of the nation's railroad lines were completed. Five transcontinental railroads stretched from the East Coast to the West Coast.

Celebrating the completion of the first transcontinental railroad ▼



One of these lines, the Great Northern Railway, was the project of James J. Hill. Hill wanted to build a quality railroad while keeping costs down. He built his railroad without using government money. In addition to building a railroad, he helped settle the West. He allowed immigrants to travel west on his railroad for a low price. The only condition was that they must agree to build settlements along his railroad.

Hill bought several other lines over the course of his life. He constantly worked to improve his railroads. Because of his wise management, he was nicknamed the Empire Builder.



Corporations

During the Gilded Age, many owners of large businesses decided to form **corporations**. When a business becomes a corporation, it is owned not by one person but by many. These owners are called investors, or **stockholders**. Becoming a corporation allows a business to raise funds quickly by selling stock. Banks can also invest in corporations.

John D. Rockefeller's Standard Oil Company was a **trust**. A trust combines smaller companies into one gigantic corporation. Businessmen formed trusts in order to control entire industries. Many trusts formed during the Gilded Age.

What is a corporation?

New Inventions

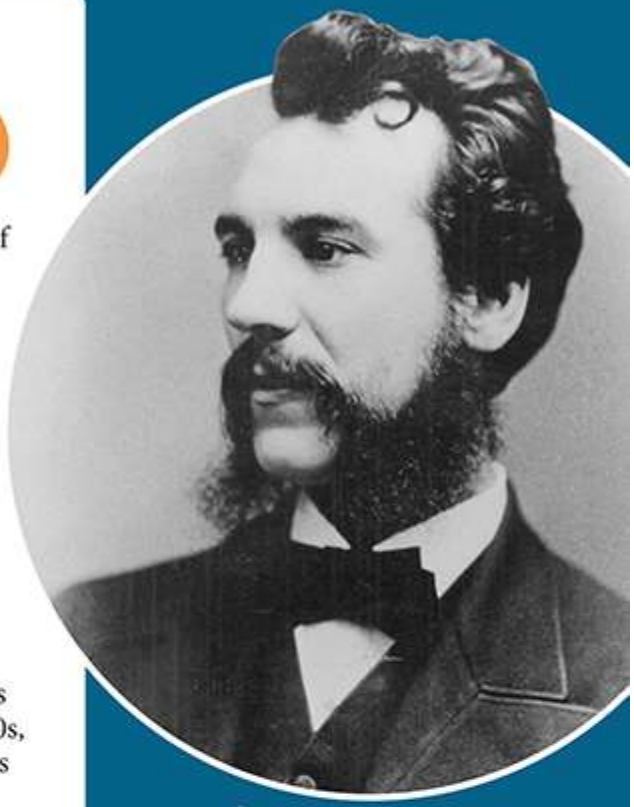
? What inventions of the Gilded Age changed people's lives the most?

New inventions were also a key to the progress of American industry. During the Gilded Age, God allowed several important scientific advancements to be made. These advances in technology and communication changed the way Americans lived and worked.

Bell and the Telephone

Electricity was the focus of many experiments in the late 1800s. People had grown in their understanding of electricity throughout the century. But during the Gilded Age, some of the most practical uses for electricity were found.

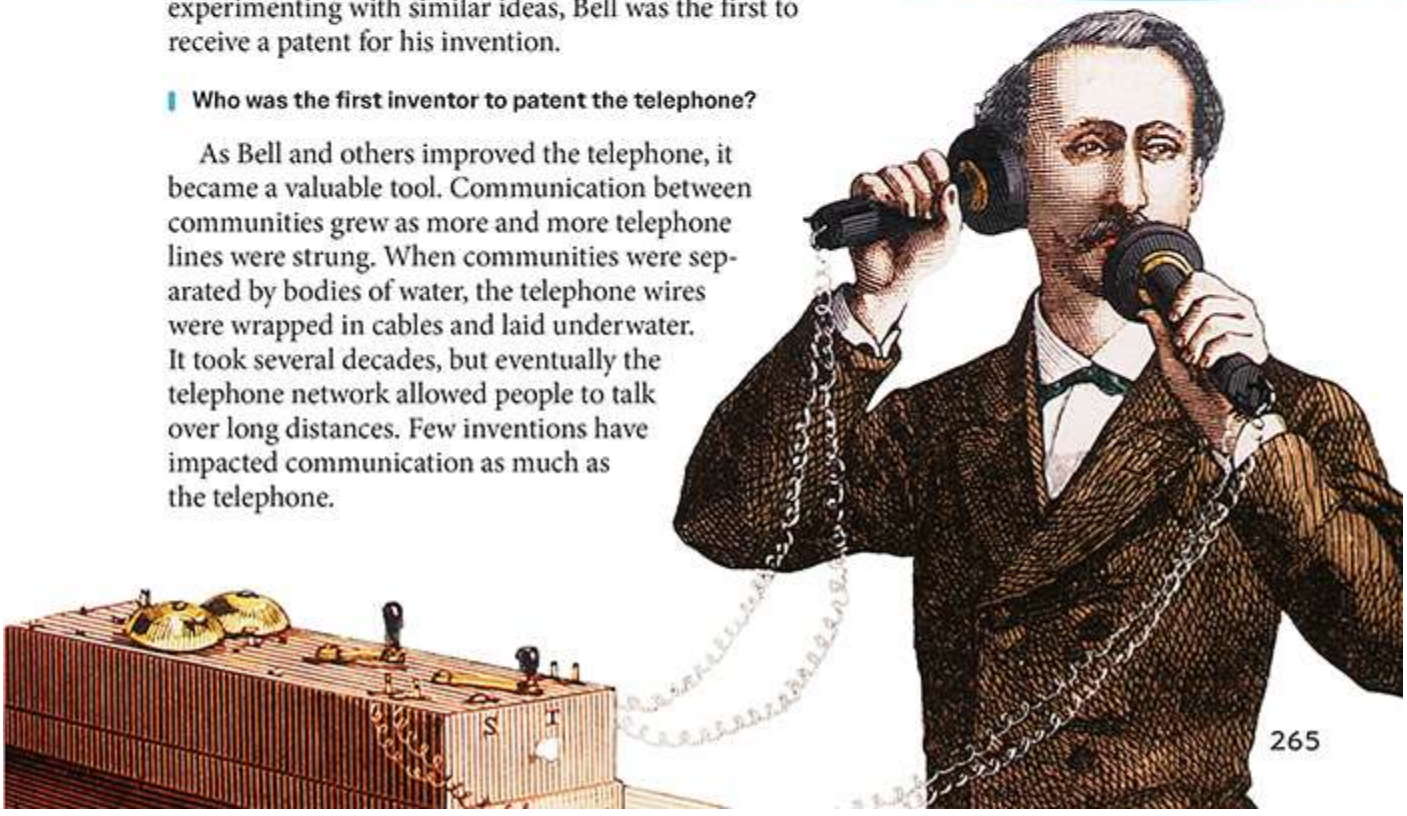
The telegraph was already using electrical signals to send coded messages over a wire. But in the 1870s, Alexander Graham Bell tried using electric currents to transmit spoken messages. As a teacher of deaf children, Bell had researched the ear, the voice, and sound waves. His study led to the development of a working telephone. Although other inventors were experimenting with similar ideas, Bell was the first to receive a patent for his invention.

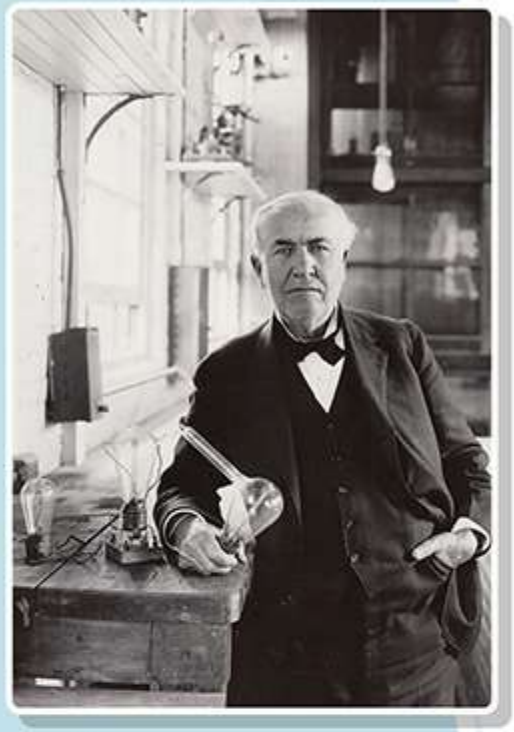


▲ Alexander Graham Bell

Who was the first inventor to patent the telephone?

As Bell and others improved the telephone, it became a valuable tool. Communication between communities grew as more and more telephone lines were strung. When communities were separated by bodies of water, the telephone wires were wrapped in cables and laid underwater. It took several decades, but eventually the telephone network allowed people to talk over long distances. Few inventions have impacted communication as much as the telephone.





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Thomas Edison in his lab

Edison and the Electric Light

Thomas Edison was one of several inventors to experiment with an electric light bulb. He was not the first to find a working design. But he was able to design a light bulb that was both practical and affordable. His light bulb lasted longer than others and was cheaper to produce. He also created the system of electrical plants and wiring that would power electric lights.

The light bulb changed the way Americans lived. Electric lighting cost less than kerosene. Before electric lighting, families often gathered around one light source in their homes in the evenings to read or do needlework. Now families could put more lamps in their homes and spread out around the house at night. Factories and stores could stay open in the evenings. People could stay later at dinner parties and evening events. The light bulb may seem like a small invention, but it had an enormous effect on American family life and culture.

In addition to the light bulb, Edison invented the first phonograph in 1877. This device recorded the human voice and played it back. Edison also did some early work with motion pictures.

How It Was

Peter stood next to his father, listening to the low murmur of the crowd around him. The city had just finished installing Mr. Edison's new invention, an electric lighting system. Any moment now, the mayor would flip a switch and . . .

Suddenly the nearby buildings burst into light. A cannon blasted, and all around people gasped and shouted. Then the crowd exploded into deafening applause. A band began to play. "It's like magic!" Peter shouted.

"It's not magic, son," said his father. "It's progress."

Other Inventions

Not every invention created as much change as the telephone and electric lighting. But other inventions improved everyday life for Americans during the Gilded Age.

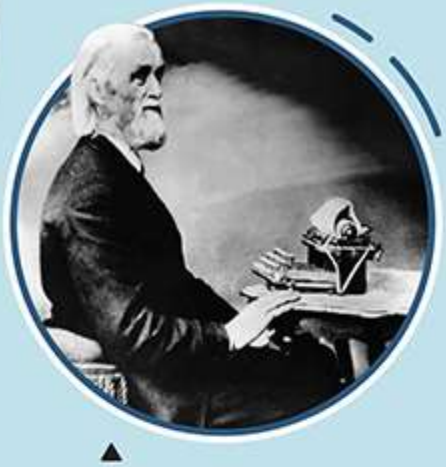
Christopher Sholes is credited with inventing the typewriter. His machine was the first to use the QWERTY keyboard that is still in use today. Sholes's invention was first used by telegraph operators to type out messages they received in Morse code.

George Eastman invented the Kodak camera. It was the first camera that was easy for nearly anyone to use. Eastman also invented rolled film. A roll of film took the place of heavy plates and could be easily loaded into a camera.

George Westinghouse experimented with electricity. He knew that Edison used direct current (DC) for his experiments. But Westinghouse's experiments proved that alternating current (AC) was a better electrical system than direct current. He is also known for inventing an air brake for trains in 1869. His brake worked better than old train brakes and prevented the problem of runaway trains.

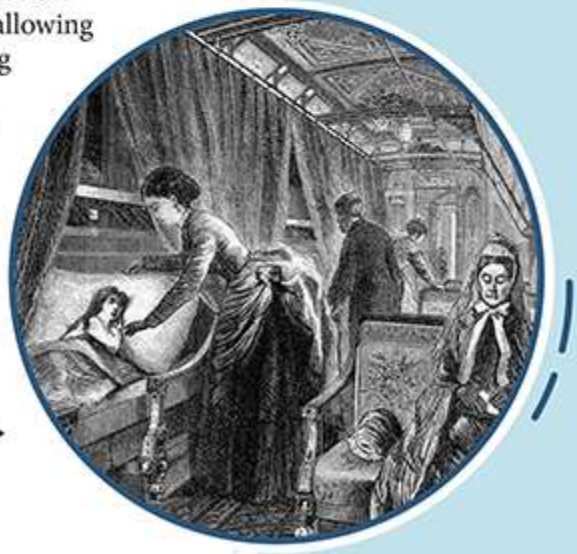
At the same time the air brake was invented, George Pullman was rising to fame in the railroad industry. He knew it could be uncomfortable to travel long distances on trains. He decided to improve the unpleasant sleeping cars that were just coming on the scene. Pullman's sleeping cars were comfortable, allowing passengers to enjoy better sleep on long journeys. His sleeping cars were built for luxury. Pullman also created fancy parlor cars and dining cars.

How did George Pullman make traveling by train more comfortable?



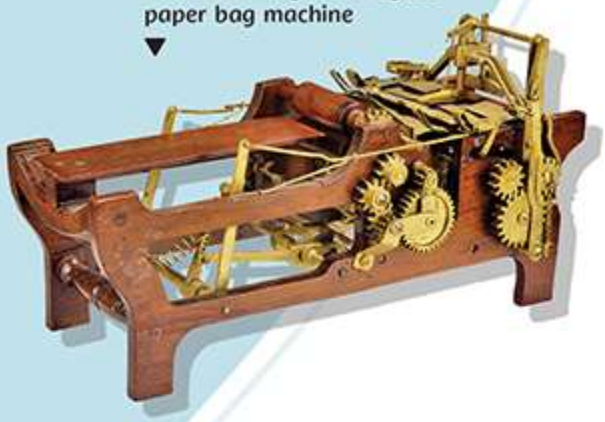
▲ Christopher Sholes with his typewriter

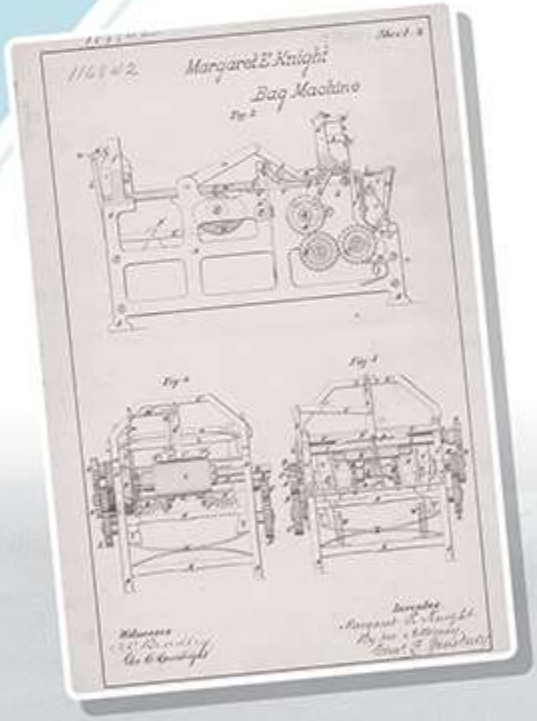
▲ George Eastman holding a Kodak camera



Pullman sleeping car ▶

Model of Margaret Knight's paper bag machine





Not all inventors were men. Margaret Knight was a factory worker who loved watching machines work. At the age of twelve, Margaret worked in a cotton mill where workers were often injured. She noticed that many workers were injured by metal shuttles flying off the looms as they wove thread. She made a safety gadget to stop this from happening. During her life, she invented numerous machines. Her most famous invention was a machine for folding and gluing a flat-bottom paper bag. Knight also patented a shield for protecting skirts from rain and dirt and an improved machine for cutting shoe leather.

Sadly, few inventors gave glory to God for their successes. Many of them rejected the Christian faith entirely. Yet it was God who gave them gifted minds and creative skills. God allowed them to exercise their gifts to improve life for people in many parts of His world.

New inventions helped give the Gilded Age its glitter. But some inventions also brought changes that were not positive. Some people misused these new inventions, and some people began to believe that science would solve all their problems. New technologies are helpful when used as tools that make life better. But using technology should not become so important that we neglect the importance of God's guidance in our lives. We must not allow technology to distract us from pursuing the Lord (Ephesians 5:15–17, Colossians 3:2, Romans 12:2). People of the Gilded Age knew inventions would change their lives. They would have to choose whether they would respond to those changes with the wisdom of God's Word.

Industrial smokestacks fill the skyline.