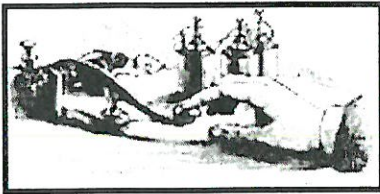


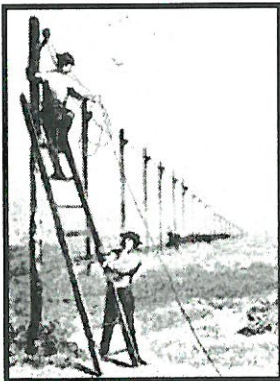
The Telegraph



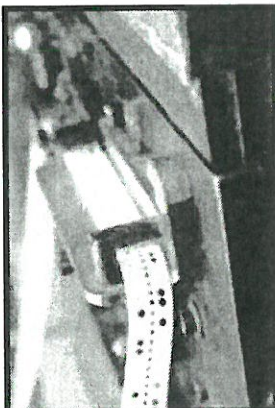
Messages began by "tapping" the transmitter end of the telegraph. The transmitter sent a signal based on how long the button was held down.

A	B	C	D
E	F	G	H
I	J	K	L
M	N	O	P
Q	R	S	T
U	V	W	X
Y	Z		

The "language" that was sent across telegraph lines was known as Morse Code. Short dashes were "short" pushes of the button while long dashes are "push and holds."



In 1838, Congress approved \$30,000 to construct a telegraph line from Washington D.C. to Baltimore, a distance of 40 miles.



The original Morse telegraph printed code on tape. However, in the United States the operation developed into sending by key and receiving by ear. A trained Morse operator could transmit 40 to 50 words per minute.

Before the age of smartphones and laptops, people still used technology to communicate – albeit at a slower pace – with an Industrial Revolution invention called the telegraph.

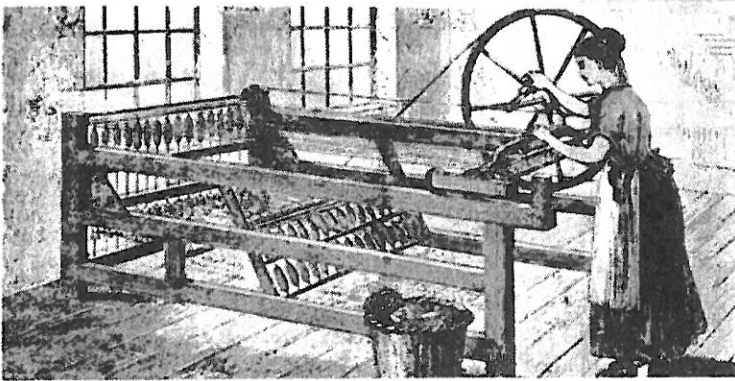
Through an electrical system of networks, the telegraph could transmit messages from one location to another over long distances. The receiver of a telegraph message would interpret the markings produced by the machine, which were encrypted in Morse code.

The first message sent in 1844 by Samuel Morse, the telegraph's inventor, indicates his excitement. He transmitted "What hath God wrought?" with his new system, expressing he had discovered something big. That he did! Morse's telegraph allowed people to communicate almost instantaneously without being in the same place.

Information sent via telegraph also allowed news media and the government to share information more quickly. The development of the telegraph even gave rise to the first wire news service, the Associated Press. The Associated Press is a news agency formed in the spring of 1846 to transmit news of the Mexican-American War by boat, horse express, and telegraph.

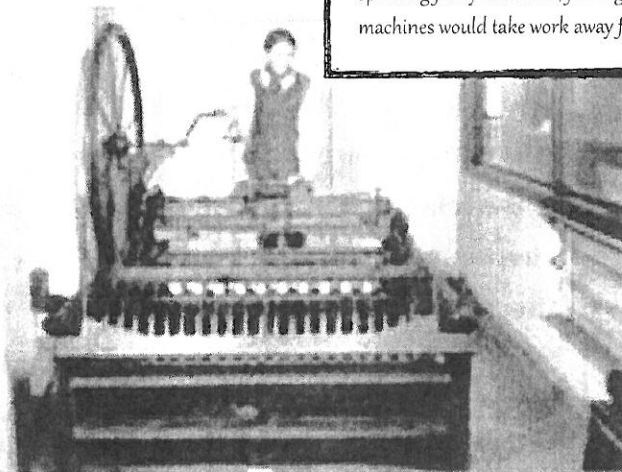
Eventually, Morse's invention also connected America to Europe – an innovative and global feat at the time.

Spinning Jenny



Legend has it that Hargreaves' daughter Jenny knocked over a spinning wheel and as Hargreaves watched the spindle roll across the floor the idea for the spinning jenny came to him.

The labor saving "Spinning Jenny" threatened workers and in 1768 a group of spinners broke into Hargreaves' house and destroyed his spinning jenny machines, fearing that the machines would take work away from them.



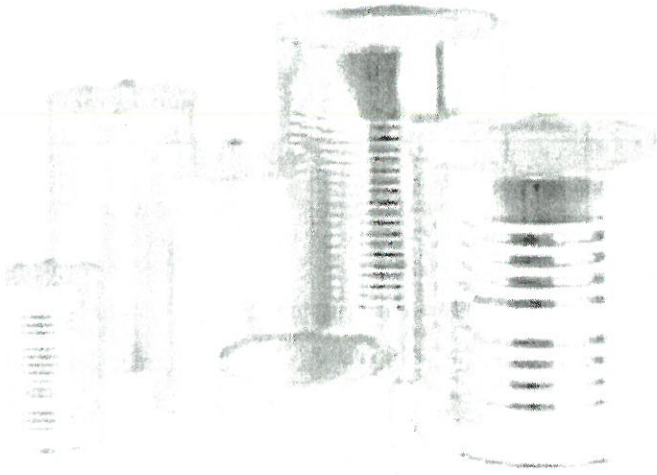
Whether it's the contents of your sock drawer or the most fashionable article of clothing, advancements in the textile industry during the Industrial Revolution made mass production possible.

The spinning jenny had a big part in these developments. Once raw materials such as cotton or wool were gathered, they had to be spun into yarn -- an often laborious task for people.

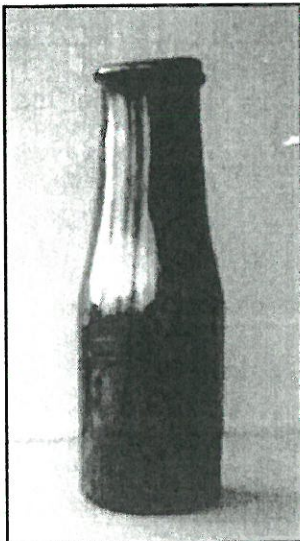
James Hargreaves had pity on those poor souls. Accepting the challenge of the British Royal Society of Arts, Hargreaves developed a device that exceeded the contest's requirements to spin more than six threads simultaneously. He constructed a machine that spun eight threads at once, dramatically increasing the efficiency of the activity.

Hargreaves' device consisted of a spinning wheel that controlled the flow of material. One end of the machine held the spinning material in place while another spun it into thread by manually spinning a wheel.

Food Canning



Meat and vegetables were packed into small tin cans and packaged up airtight. With this method of storage, food could be kept good for much longer than it had even been kept before. Some of the foods that were packaged in cans included beef, pork, ham, and many others. Apples, cherries, pumpkin, squash, and beans were also put in cans. Canning foods made everything more convenient for everyone.



An Appert canning jar,
one of the first ever used!



Open your kitchen cabinets and you're bound to find a particularly useful Industrial Revolution invention. It turns out the same period that brought us the steam engine also altered how we store food.

After spreading from Great Britain to other parts of the world, inventions continued to fuel the Industrial Revolution at a steady rate. One case involved a French chef and innovator named Nicolas Appert. Devising ways to preserve foods without stripping them of their flavor or freshness, Appert tested several methods to store food in containers. Remember, storing food required drying or salt -- treatments that didn't bode well for flavor.

Appert also thought storing food in containers would be useful to sailors suffering from malnutrition at sea. Driven to succeed, he worked on boiling techniques that consisted of adding food to a jar, sealing it and then boiling it in water to create a vacuum-tight seal. He achieved this by developing a special autoclave for food canning in the early 1800s.

The basic concept took hold, and today we enjoy canned goods ranging from Spam to SpaghettiOs.