

The North**Section 4****MAIN IDEAS**

1. The telegraph made swift communication possible from coast to coast.
2. With the shift to steam power, businesses built factories closer to cities and transportation centers.
3. Improved farm equipment and other labor-saving devices made life easier for many Americans.
4. New inventions changed lives in American homes.

Key Terms and People

Samuel F. B. Morse the inventor of the telegraph

telegraph a device that could send information over wires across great distances

Morse code a system in which dots and dashes are used to stand for each letter of the alphabet

John Deere a blacksmith who first used the steel plow design

Cyrus McCormick the developer of a new harvesting machine called a mechanical reaper

Isaac Singer an inventor who made improvements in the design of the sewing machine

Section Summary**TELEGRAPH SPEEDS COMMUNICATION**

Samuel F. B. Morse invented the **telegraph** in 1832. Morse used the work of two other scientists in making this practical machine. Telegraphs carry pulses, or surges, of electric current over wires. The operator touches a bar, called a telegraph key, that sets the length of each pulse. At the wire's other end, the pulses change into clicks. A short click is a dot; a long click is a dash.

Morse's assistant, Alfred Lewis Vail, developed the **Morse code**. Some people did not think Morse could actually read messages sent across long distances. But during the 1844 Democratic Convention in Baltimore, Maryland, a telegraph wired news of a nomination to politicians who were

What was the invention of the telegraph based on?

Did everyone accept the telegraph's power at first?

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in Washington. Soon telegraphs were relaying messages for businesses, the government, newspapers, and private citizens. Telegraph lines were strung on poles next to railroad tracks across the country.

Why did telegraph messages become so widely used?

STEAM POWER AND NEW FACTORIES

Most factories, operating on water power at first, had to be built near water. With the use of steam engines, factories could be built almost anywhere. Still, most were in the Northeast. By 1860 New England had as many factories as all of the South had. Many new factories were near cities and transportation centers, giving them better access to workers. In addition, by the 1840s new machinery could produce interchangeable parts.

Why could newer factories be built almost anywhere?

IMPROVED FARM EQUIPMENT

John Deere was selling 1,000 steel plows a year by 1846. **Cyrus McCormick** mass-produced his reapers in a large Chicago factory. His company advertised, provided service, and let customers buy on credit. The plow and the reaper allowed Midwestern farmers to harvest huge wheat fields.

Circle the sentence that explains what new methods McCormick used to persuade people to buy his reapers.

CHANGING LIFE AT HOME

The sewing machine was among the American inventions that made home life easier. **Isaac Singer** modified the sewing machine and worked hard to sell his product. Prices of many household items had decreased, giving many more people the ability to afford them.

Why did the purchase of many household items increase?

CHALLENGE ACTIVITY

Critical Thinking: Evaluating Write a brief essay explaining which invention mentioned in this section made the biggest change in people's lives.