Technology and the Conduct of the American Civil War

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Steam engines were key to the creation and rapid expansion of:
- Manufacturing, mining, publishing
- Railroads
- Ships (ocean, and especially river and coastal)

The electrical/magnetic telegraph
The postal, finance, and publishing infrastructures

These infrastructures were becoming increasingly integrated. They were built to a national scale in the 2-3 decades before the war and were in place at its start.
And Their Application to the War Effort

- Necessary for the mobilization of the two economies to greatly increase the manufacture, transport, and deployment of machine tools, metals, arms, ammunition, food, quartermaster goods, and more infrastructure to sustain a new level of industrialized warfare over a large geographic area for four intense, high consumption, years.

- Necessary for the deployment of huge military and naval forces over a large...
• It became a war of building, protecting, and maintaining your infrastructures and destroying or exhausting those of your enemy. By 1864, Georgia became the focus of a great deal of attention by both sides for these reasons.

• The Civil War was substantially won by the attrition and exhaustion of the South, and was a harbinger of the industrial era wars of the 20th Century.
Innovation in process, product, and organizational change appeared over the duration of the war in the technologies already briefly discussed, and a sample of others, including (but not limited to):

- Other forms of telegraphy
- Weapons and ammunition
- New forms of ships (and a new US Navy)
- Medical practices and organizations
- Photography
- Expanding the battlefield domain by going to ground and trying to rise above it
Back on the ground after an observation, Lowe is dictating a dispatch for General McClellan to telegrapher Park Spring. A reporter for the Philadelphia Inquirer takes notes and at the right, on horseback, are orderlies awaiting dispatches.

— Cutler Lowe Brown collection
There are 6 distinct information technologies shown in this illustration. Only one was widely used during the Napoleonic Wars. How many were used by Sherman in Georgia on his March to the Sea in 1864?