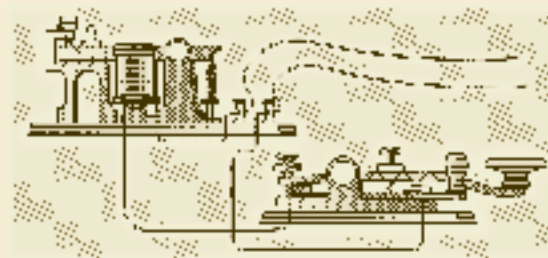




MR. LINCOLN'S HIGH-TECH WAR

• THOMAS B. ALLEN & ROGER MACBRIDE ALLEN •

HOW THE NORTH USED



THE TELEGRAPH,
RAILROADS,



SURVEILLANCE



IRON-
CLADS,



BALLOONS,
HIGH-POWERED
WEAPONS,

• AND MORE TO WIN THE CIVIL WAR •

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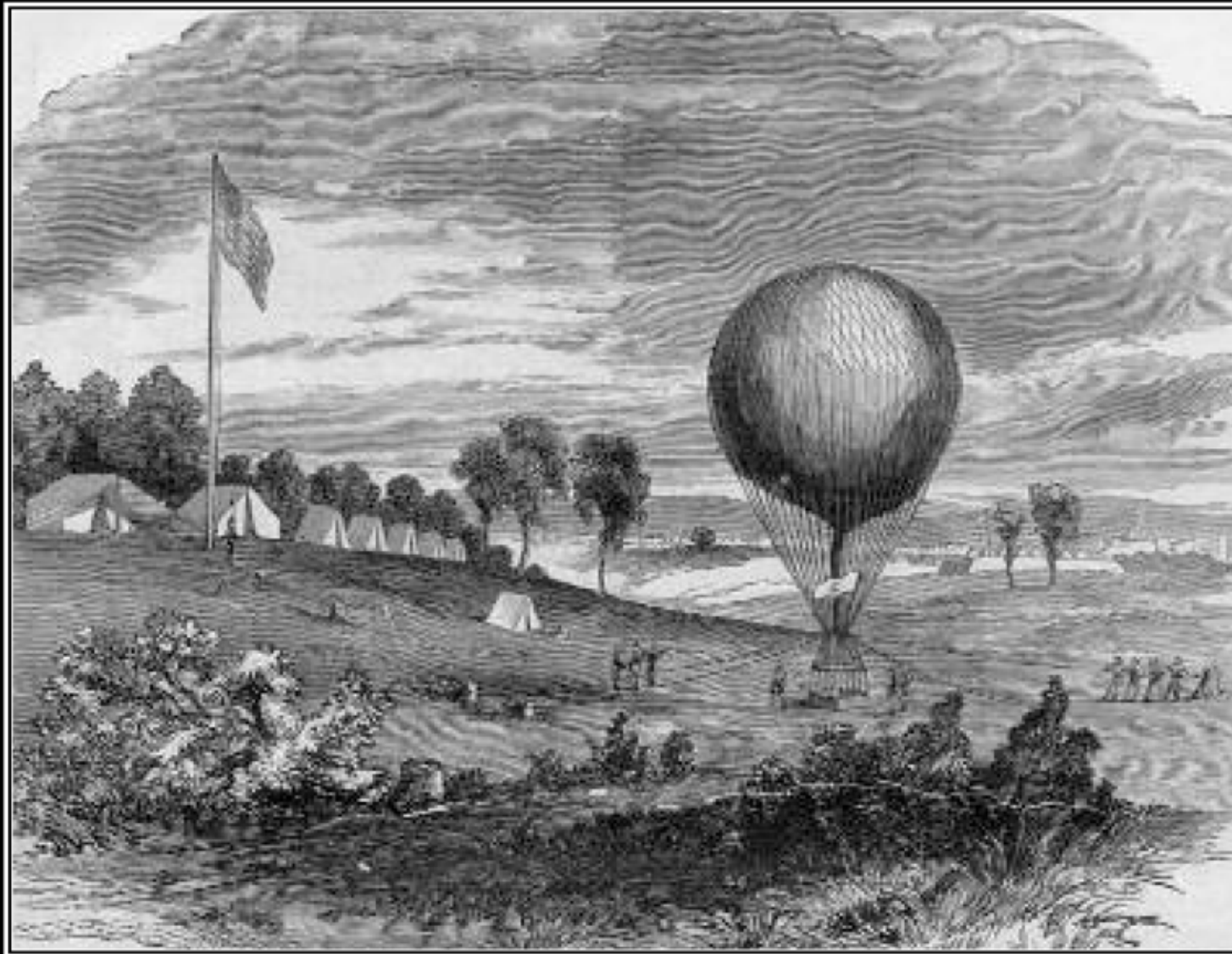
In 1861, there was a different list of wonders: printed telegraph messages, long-haul railroads, and rifles that could shoot three rounds a minute. How, then, does the Civil War qualify as the first modern war? Much of the credit belongs to one man: Abraham Lincoln.

Lincoln knew that winning the war would take more than the same old strategies and maneuvers. It would require using technology to create new ways of waging war. Lincoln worked to make sure his soldiers and sailors had the best and latest hardware. He witnessed high-powered weapons testing at the Navy Yard, used the telegraph to keep in constant contact with his generals, approved plans for ironclad warships and the launch of surveillance balloons, and ordered railroads to transport troops and supplies. By combining these new tools of war with time-tested tactics, he helped revolutionize warfare.

In *Mr. Lincoln's High-Tech War*, the father-son team of Thomas B. Allen and Roger MacBride Allen combine their knowledge of military history and technology with archival illustrations and diagrams to introduce readers to this new warfare and to reveal a seldom-seen portrait of Lincoln as the driving force behind the innovative technology that helped the North win the Civil War.

Sample Text from Mr. Lincoln's High-Tech War

**MR. LINCOLN'S
HIGH-TECH WAR**



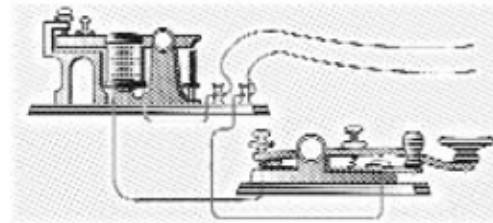
A new tool of war carries soldiers' eyes aloft.



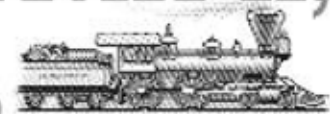
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HOW THE NORTH USED



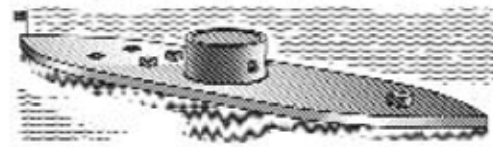
THE TELEGRAPH,
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Sample Text from Mr. Lincoln's High-Tech War

To Chuck Hyman—toiler in the same vineyards.

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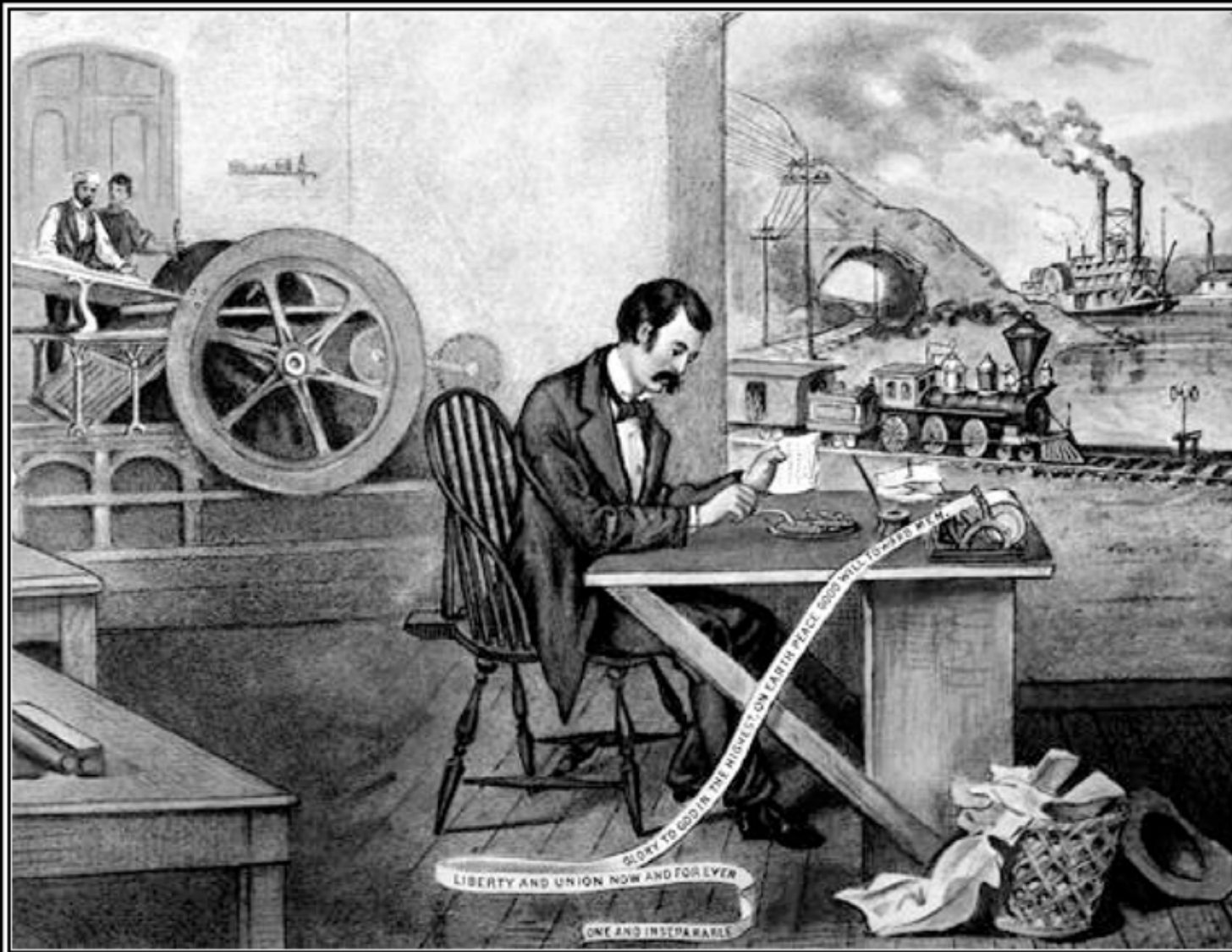
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The new age of invention, captured in this print by Currier & Ives, inspired young Abraham Lincoln. As President, he transformed railroads, the telegraph, and steam-powered ships into high-tech weapons of war.

Sample Text from Mr. Lincoln's High-Tech War

• PROLOGUE •

• THE SPIRIT OF INVENTION •



In 1809 Abraham Lincoln was born into the last generation of Americans who did not expect technology ever to change. Young Abraham lived, with the rest of his family, in a series of dirt-floor cabins in Kentucky, Indiana, and Illinois. Those cabins, the farm implements, the guns used for hunting, all the cooking utensils, and everything else the family owned would have seemed quite familiar to Abraham's father, his grandfather, and his father before him—and not all that different from the things that Abraham's great-great-great-grandfather Samuel Lincoln might have used at the time he arrived in America from England in 1637. Samuel would have instantly recognized and known how to use nearly all the tools and farm implements that young Abraham would have worked with in the 1810s and 1820s. Even the flintlock gun in the Lincoln



As a boy, Lincoln lived in a log cabin like this.

cabin wouldn't have changed all that much in the last 150 years.

But Abraham's own father, Thomas Lincoln, would have been dumbfounded by the railroad, the steamboat, the telegraph, and the dozens of other inventions that came boiling out of inventors' workshops in the early years of the 19th century.

By the start of the 1800s, technology had already begun to transform work, transportation, education, and other parts of life for Americans. The Industrial Revolution was well underway in England while Abraham Lincoln was growing up, and it would change the lives of millions of people around the world in the years to come.

As a father, Lincoln wanted to show his five-year-old son Robert what technology was bringing to America. So, one day in 1848 Lincoln, at the time a first-term U.S. Congressman from Illinois, walked with Robert up the

TO FIND MORE INFORMATION ABOUT SUBJECTS IN THIS BOOK AS WELL AS THE CIVIL WAR IN GENERAL, VISIT THIS BOOK'S WEB SITE: www.mrlincolnhightechwar.com

Sample Text from Mr. Lincoln's High-Tech War

• MR. LINCOLN'S HIGH-TECH WAR •

broad steps of the Patent Office Building. In the Model Room, they saw small-scale versions of ideas. The little machines and gadgets looked like toys to Robert.

At that time, inventors had to send the Patent Office models of their inventions. After examiners looked over a model and decided that it demonstrated a new idea, they would give it a patent. This allowed the inventor to be the only person with the right to own and sell that invention.

A while after Lincoln and Robert visited the Patent Office, Lincoln was aboard a river steamboat that ran aground and had to struggle to get underway again. The mishap gave him an idea for a device that could be attached to the sides of a ship. Filling it with air would lift the ship and allow it to float over a shallow stretch of water.

He began whittling a model that he took to a lawyer who specialized in patents. The lawyer prepared the necessary papers and sent them, with the model, to the Patent Office. On May 22, 1849, the model earned Abraham Lincoln Patent Number 6469 for "A Device for Buoying Vessels Over Shoals." Lincoln is the only President ever to be granted a patent.

Lincoln understood the importance of inventions—and patents like his—to the country. Patents, he said, "secured to the inventor, for a limited time, the exclusive use of his invention; and thereby added the fuel of interest to the fire of genius, in the discovery and production of new and useful things."

Decades later, as President during the Civil War, he would see the military importance of the telegraph and railroads and many other "new and useful things" long before his generals did. Lincoln became the first U.S. President to step fully into the role of Commander in Chief in wartime. Within six months of taking office, he took control of the North's railroads and telegraph lines, introduced aerial surveillance to the Union army, urged the production of advanced weaponry, ordered the building of ironclad ships, and began a naval blockade that strangled the South's economy.

The Civil War was the climax of a struggle between free states and slave states that had been going on for a bloodstained decade. When Lincoln became President, that struggle would be his to finish, once and for all.

Sample Text from Mr. Lincoln's High-Tech War

• SITUATION REPORT •



1850-1860:

• A NATION MOVING TOWARD CIVIL WAR •

1850

- Congress passes the Fugitive Slave Act, aimed at stopping the flight of slaves to the North by making it illegal for anyone to help a slave escape from a master.

1854

- A law introduced by Senator Stephen A. Douglas of Illinois threatens the balance between the Union's slave and free states by letting people in the Kansas Territory vote on whether to allow slavery in their future state.
- In "Bleeding Kansas," abolitionists (people opposed to slavery) fight pro-slavers, many of them armed border-crossers from Missouri. One of the abolitionists is Connecticut-born John Brown.
- The Republican Party is formed in opposition to the Douglas-sponsored law, which wipes out the Missouri Compromise. Republicans, opposing expansion of slavery, defeat many Democrats in Congressional elections.

1856

- Brown and his followers, including four of his sons, kill five pro-slavers in Kansas as he begins a crusade to free all slaves.

1857

- The U.S. Supreme Court, under Chief Justice Roger Taney, rules seven to two against Dred Scott, a slave who said he ought to be freed because he had lived in free states. The Court says Scott had no right to go to court because black people could not be U.S. citizens and thus "had no rights which the white man was bound to respect."

1858

- Illinois Republicans nominate Lincoln to oppose Democrat Douglas in the U.S. Senate race. In a campaign speech Lincoln says, "A house divided against itself cannot stand. I believe this government cannot endure permanently half slave and half free."

1859

- The Illinois legislature chooses Douglas for the U.S. Senate over Lincoln by a vote of 54 to 46. (Not until the 17th Amendment is ratified in 1913 will the U.S. Constitution call for the election of Senators by a vote of the people rather than by the state legislature.)
- John Brown, leading 21 men (16 whites and 5 African Americans), raids the federal arsenal at Harpers Ferry, Virginia, planning to arm slaves for his crusade. Federal soldiers and Marines, under the command of U.S. Army Lieutenant Colonel Robert E. Lee, wound Brown and kill most of his men, including two of his sons.
- Convicted of treason against Virginia, John Brown is hanged. Before he is executed, he predicts that "the crimes of this guilty land will never be purged away, but with Blood."

1860

- Lincoln, chosen by Republicans as their candidate for President, begins his campaign, running against Democrat Douglas, Southern Democrat John C. Breckinridge, and John Bell of the Constitution Union Party.
- Lincoln is elected President on November 6. Beginning on December 20, Southern states vote to secede from (leave) the United States and begin the process of forming the Confederate States of America.
- Southern Congressmen begin resigning and heading home to support the Confederacy.
- Outgoing President James Buchanan, who has Southern sympathies, denies the right of states to secede but believes that the federal government does not have the legal power to stop them.

Sample Text from Mr. Lincoln's High-Tech War

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Sample Text from Mr. Lincoln's High-Tech War

• ONLINE RESOURCES & QUOTE SOURCES •

ONLINE RESOURCES

Note: A list of links to the online resources below, updated links to new Web sites, and other Web sites of interest for specific topics as well as additional information about the high-tech war and more information on many Civil War topics can be found at this book's Web site: www.mrlincolnshightechwar.com

Mr. Lincoln's High-Tech War was written at the dawn of a golden age for finding things out. The amount of information available on the Internet is utterly overwhelming. Here are a few of the most valuable resources for studying the Civil War. Note that the addresses and contents of Web sites are subject to change. Those listed below are not only of especially high value for general research into the Civil War but also likely to remain available for the foreseeable future.

The *War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies*, and *Official Records of the Union and Confederate Navies in the War of the Rebellion* are commonly referred to as the Official Records and Official Records, Navy. They are often abbreviated as OR and ORN. They represent the primary sources for virtually any research into the Civil War. The 70 volumes of the OR and ORN are available in searchable form at Cornell University's Making of America site [<http://cdl.library.cornell.edu/moa/browse.monographs/war.html>] for the OR; <http://cdl.library.cornell.edu/moa/browse.monographs/ofre.html> for the ORN. These resources were invaluable in the writing of Mr. Lincoln's High-Tech War. (Many other texts are available at the Making of America home site [<http://cdl.library.cornell.edu/moa/moa/browse.html>], including 19th-century editions of *Scientific American* and *Harper's Monthly*. The pages of the original volumes can be displayed as facsimiles or as plain text, though the conversion to text is sometimes unreliable, and the full text of the OR and ORN is searchable.) The OR is available as searchable text at <http://ehistory.osu.edu/osu/sources/records/> along with the *Atlas to Accompany the Official Records*, which includes many spectacular maps as well as diagrams of weapons, uniforms, equipment, and flags used in the war.

The *Dictionary of American Naval Fighting Ships*. There are many online versions of DANFS, but the definitive one, maintained by the U.S. Navy Historical Society, is at <http://history.navy.mil/danfs/index.html>. It provides histories of virtually every U.S. and Confederate ship, along with a vast selection of photographs and other images and links to accounts of important battles and actions.

The *Lincoln Log: a day-to-day record of Lincoln's life*, available at www.thelincolnlog.org, provides a day-by-day, and sometimes hour-by-hour account of Lincoln's life. Searchable by date and keyword, it provides citations and links to many other resources. The *Collected Works of Abraham Lincoln* with searchable text is available at <http://quod.lib.umich.edu/l/lincoln/>. Mr. Lincoln's White House at <http://www.mrlincolnswhitehouse.org/> provides maps, diagrams, histories, and a great deal more.

The full text of all of *Harper's Weekly* for the war years is available at <http://www.sonofthesouth.net/>.

Here are some other sites on specific topics. The Central Intelligence Agency offers a Web site on intelligence in the Civil War at <https://www.cia.gov/library/publications/additional-publications/civil-war/index.html>. The Monitor Center at <http://www.monitorcenter.org> provides a look at many aspects of the U.S.S. Monitor and the C.S.S. Virginia. The privately run site www.cssvirginia.org is a good source as well. A personal Web page on "Ironclads and Blockade Runners of the Civil War" is at <http://www.wideopenwest.com/~jenkins/ironclads/ironclad.htm>. The Friends of the Hunley site at <http://www.hunley.org> details the doomed sub's career along with information on her rediscovery, recovery, and ongoing reconstruction—and a Hunley simulator. See also <http://home.att.net/~JVNautilus/Hunley/reconstruction.html> for a fascinating ongoing effort to do a digital reconstruction of the Hunley.

Many 19th-century books pertaining to the Civil War have been placed online as text or in scans of the original book's pages. See archive.org, books.google.com, and www.gutenberg.org. Most texts are downloadable in one form or another; others must be viewed online.

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THOMAS B. ALLEN & ROGER MACBRIDE ALLEN

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