

A low-angle photograph of the Statue of Liberty in New York City. The statue is shown in a state of construction or restoration, with several cranes and scaffolding visible around its head and crown. The sun is positioned behind the statue, creating a bright, glowing effect and casting long shadows. The sky is a mix of blue and orange, suggesting a sunset or sunrise. The overall mood is one of historical significance and ongoing development.

AMERICA

The Story of Us



AMERICA

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How do we tell the story of the American nation? From the earliest days of European settlement in the New World, Americans from all backgrounds have recorded their stories and attempted to make sense of their place in history. Each generation craves its own definitive version of the story of the American past. *America The Story of Us* is a six week television event on HISTORY starting Sunday, April 25th. This series captures the vast sweep of American history, focusing on the extraordinary story of how the United States was fashioned from technological innovation and an ongoing belief in the possibilities of experimentation.

From the earliest interactions between Europeans and Native Americans through the harnessing of the Mississippi River to the moon landing, *America The Story of Us* explores the turning points that have shaped U.S. history. Featuring surprising detail and colorful CGI (computer generated imagery), each one-hour episode moves through a significant chapter in the American story. With roots in the physical world, the series captures the ways everyday people confronted and interacted with animals, unforeseen weather, and the power of rivers and the sea. There are also stories of conflict – wars with Native Americans, the scourge of slavery, the Revolutionary War that birthed the nation, and the Civil War that nearly pulverized it. At every turn, the series shows how Americans created new tools, structures, and machines to blaze forward and build towns, cities and eventually, a diverse and distinct national culture.

This series offers educators and students an extraordinary opportunity to connect with the American past, learning about fascinating individual stories of everyday Americans. The 12 episodes in this series provide a roadmap for learning about U.S. history, with stories along the way that are engaging touchstones for students to delve deeper into their own

studies of our nation's past. The final episode brings the story of America up through today as some of our most revered leaders and artists reflect upon the nation's past, and challenge us to imagine the American stories that have yet to be told.

Curriculum links:

America The Story of Us would be useful for history, American culture, social studies, geography, journalism and ethnic studies courses. It is recommended for 6th grade students and above. It connects with many state standards and benchmarks in history and social studies. Families are encouraged to watch this series together and discuss its meaning and relevance in relation to their own local and family histories. **Visit us online for additional curriculum resources, information about contests, and much more at www.history.com/classroom. Questions? Email us at america@aetn.com**

Episode Guide

EPISODE 1: Rebels

The founding of Jamestown and Plymouth, the hardships of the early colonies, the arrival of Africans and development of slavery, and interactions with Native Americans, are explored. As the colonies prevail, tensions with the British ignite.

EPISODE 2: Revolution!

The sparks of rebellion, the Declaration of Independence, and the drama of the American Revolution are examined in this episode. The triumph of General George Washington and his troops pave the way for a new nation; the United States is officially born.

EPISODE 3: Westward

As wagon trains and cattle barons headed westward, they confronted Native American Indians, the Spanish and the French. Westward migration, the discovery of gold and other resources, and the battles to dominate the American landscape are covered in this episode.

EPISODE 4: Division

America became a nation just as a revolution in commerce and industry swept the western world. This episode explores the economic growth of the U.S. in the context of rising divides between the North and South over slavery. After the election of Abraham Lincoln, Civil War became inevitable.

EPISODE 5: Civil War

In 1863, the Confederate Army seemed poised to overtake the Union forces. Following the bloody battle of Antietam, Lincoln issued the Emancipation Proclamation. Former slaves joined the Union army in droves. With battlefield technology and steely resilience, the Union prevailed and America was perched to become a global superpower.

EPISODE 6: Heartland

In 1869, the Atlantic and Pacific coasts of America were linked by continuous metal rails. Railroads connected Americans in new ways and altered the ecology of the continent. The vast Plains, where buffalo and Native Americans had roamed, were remade by land speculators and industrialists. In less than a quarter of a century, the West was transformed.

EPISODE 7: Cities

In 1871 Chicago burned to the ground and from the ashes of the old a new kind of city rose. A flood of new immigration, resistance among workers to unfair conditions, and the expansion of mass transportation are covered. The innovative, entrepreneurial American spirit embodied by business leaders and everyday Americans come to life in this episode.

EPISODE 8: Boom

Henry Ford's Model T and assembly line, together with the discovery of abundant oil reserves, opened up a new way of life in the 20th-century U.S. This episode traces the significance of WWI, African American migration to northern cities, prohibition, and the onset of the film industry.

EPISODE 9: Bust

On October 29, 1929 the boom time of the 1920s crashed on Wall Street. The dramatic effects of the Great Depression and New Deal are the topics of this episode. Despite economic collapse, major public works projects such as the Hoover Dam proved the might of the U.S. worker.

EPISODE 10: WWII

America was still mired in the Great Depression, but U.S. involvement in WWII revved the engines of the U.S. economy – and changed American society forever. This episode delves into the WWII era with attention to the role of women and African Americans, the use of new technologies of war, and the enormous effects of this era on the place of the U.S. in the world order.

EPISODES 11+12: Then and Now

America's most prominent leaders and personalities reflect on the defining moments of post-WWII America including the Cold War, the space race, the civil rights movement, the Vietnam War and Watergate. September 11th is memorialized and the significance of President Obama's election is analyzed. The series concludes with a look at what has endured – and what has changed – over 400 years of U.S. history.



Rebels



Jamestown Colony

For an adventurer like John Rolfe, America is a continent of dreams. He heads from the crowded island of England to a land with nine million square miles of wilderness. As many as sixty million buffalo and dozens of other species of wildlife roam its plains and woods. Its coastal waters are some of the richest fisheries on earth. The settlers dream that in this land of plenty they will find gold and silver to make them rich.

But in 1609, for the English settlement of Jamestown, the American dream has turned sour. Two years ago, these English settlers arrived in Virginia. They set up their colony in the middle of the powerful empire of the Powhatan peoples, a confederacy that historians estimate may have reached 21,000 people – hunters, fishers and farmers.

The settlers plan to make their fortune plundering the abundant resources of America. But in Virginia, they've found none of the treasures they hoped for: no silk, no spices, no valuable medicinal plants — and no gold.

Jamestown is not the first attempt by Europeans to create a settlement in North America, many others before them have failed. The settlers have failed to grow food or trade with their Native American neighbors

GEORGE PERCY

Having fed upon horses and other beasts... we were glad to makeshift with vermin, dogs, cats, rats and mice — and to eat boots, shoes, or any other leather some could come by... Those being spent and devoured, some were enforced to search the woods and to feed upon serpents and

snakes and to dig the earth for wild and unknown roots...

Almost half of the 600 settlers have died. Many others have fled back to England. There are just sixty men left, and they are starving to death.

But John Rolfe arrives in Jamestown in the spring of 1609 with something that will change everything — a supply of South American tobacco seeds.

The tobacco plant is unique to the Americas. Brought back to Europe by Spanish explorers, it has England hooked. Sweet South American tobacco is an expensive luxury. The Spanish guard their monopoly on the seeds and trade jealously.

No one knows how John Rolfe gets hold of his contraband seeds. But in the warm, humid climate and the alluvial soil of Virginia, tobacco flourishes. Rolfe, America's first entrepreneur, spots a gap in the market and works out how to turn a profit in the New World.

In 1614, he marries the Princess we know as Pocohontas.

JOHN ROLFE

Pocahuntas, to whom my hearty and best thoughts... have long been entangled and enthralled in so intricate a labyrinth...

The love match adds a happy twist to Rolfe's business plan. In America's first international marketing campaign, Pocohontas becomes the face that rebrands America as a land of opportunity. This was also a strategic decision politically—she was the daughter of Chief Powhatan, the head of the native people.

Within two years tobacco grows in every Jamestown garden, and within twenty years it becomes Europe's main source of tobacco.

Among the new settlers in this boomtown are 19 Africans from Angola, taken from a Spanish slaving ship. But here they are



John Rolfe & Pocohontas

not slaves — slavery doesn't yet exist under English law. Like most of Jamestown's laborers, they're employed as indentured servants, tied to a contract for seven years, after which they are free.

cution and build a new society based on their religious principles.

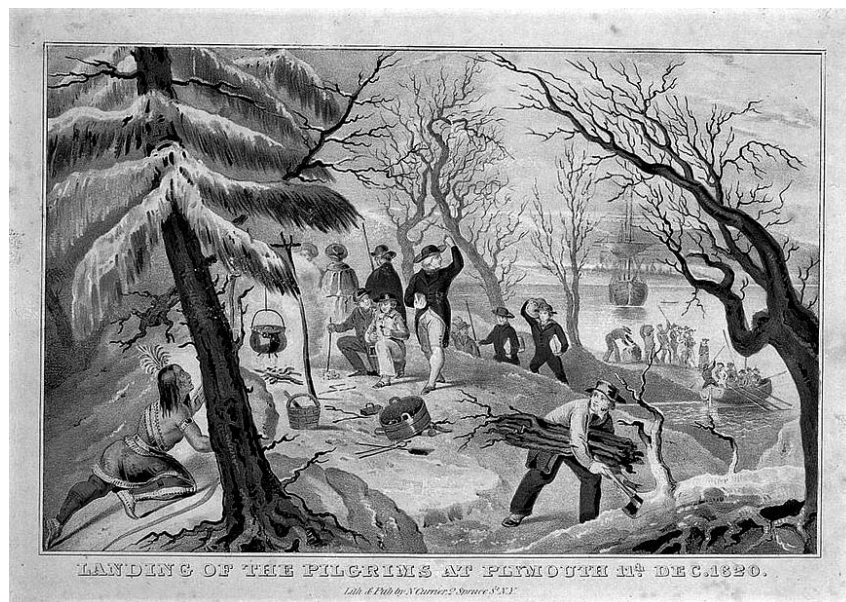
They are religious separatists — radical Puritans who want to cut themselves off from the Church of England in an unknown land 3,000 miles across an ocean.

They have landed hundreds of miles further north than they intended, far from the fledgling settlements in Virginia. But this isolation is what they hoped for. Plymouth is a social experiment. They are literally planning to build a "New World."

These people are revolutionaries experimenting with a new egalitarian, spiritual way of living, utterly different from the aristocratic England they have left behind, and believe their community should govern itself — and elect its own leaders and ministers.

The settlement survives a harsh first winter. In 1621, the northern hemisphere is in the grip of a mini Ice Age: Winter lasts from October to April.

The site they have chosen for their settlement of Plymouth is on sandy, infertile



Some will go on to farm their own land in Virginia and Maryland. They are the first African Americans.

PLYMOUTH

Ten years after Rolfe arrives in Jamestown, in the spring of 1621, a very different group of English settlers have planted a toehold on the coast of New England, laying the foundations of their New World. They arrived six months before on board the Mayflower.

They have not come to America to make a profit. They have come to escape perse-

soil. Over a harsh winter, food runs short. Between January and March, over half of the settlers have died from starvation and disease.

William Bradford, elected governor of the small community, keeps a record of their hardships.

WILLIAM BRADFORD

It pleased God to visit us then with death daily, and with so general a disease that the living were scarce able to bury the dead... They died sometimes 2 or 3 a day. Of 100

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Rise

(continued from page 3)

and odd persons, scarce 50 remained.

This is not an empty wilderness. The Pilgrims have built their houses near the ruins of a Native American settlement. In the ten years before their arrival, a large percentage of the Native American population of New England died by the plague, brought to their shores by unknown European explorers. But there are only fifty pilgrims, and New England is the domain of powerful Native American nations, who still number in the thousands.

The survival of the Plymouth pilgrims lies in Native American hands. The pilgrims strike a deal with the most powerful nation in New England, the Wampanoag. Each promises to support the other in the case of an enemy attack.



First Thanksgiving

The rival Narragansett tribe threatens both allies, putting the future of Plymouth in danger. They plan a preemptive strike to save their new world from destruction.

WILLIAM BRADFORD

It was resolved to send... 14 men, well armed, and to fall upon them in the night. The Captain gave charge to let none pass out.

The Pilgrims are idealists – but they are also pragmatists. They have struck a deal with Wampanoag, and they follow through with it. This alliance secures their future.

EDWARD WINSLOW

We have found the Indians very faithful in their Covenant of Peace with us... They are people without any religion, or knowledge of any God, yet very trustie, quick of apprehension, ripe-witted [and] just...

The feast we know of today as Thanksgiving marks the start of fifty years of peace that will transform New England and America.

Revolution



In the second half of the 18th century, Boston is the third largest port in the British Empire, fed by the vast natural resources of a continent. In its dockyards, over 200 ships are built and fitted out each year with wood from the vast forests of America.

The New England fishing fleet ships thousands of tons of salted cod across the Atlantic and to the Caribbean each year. Boston merchants export hundreds of thousands of gallons of rum, made in New England from Caribbean sugar and molasses.

Much of this rum will be shipped to Africa, and used to buy one of the most profitable cargoes for Boston merchants – slaves. In the 18th century some 250,000 slaves from west and central Africa are transported to America.

Most of the captives are sold to plantation owners further south, but not all. There are nearly 50,000 slaves in the Northern colonies. One tenth of Boston's population is black—some slave, and some free.

THE BOSTON MASSACRE

With 4,000 British troops quartered in a

city of 16,000, the people of Boston feel under occupation.

On March 5, 1770, a musket shot rings out on King Street that moves America one step closer to war. One soldier thrusts his bayonet into a young man lunging forward with a club.

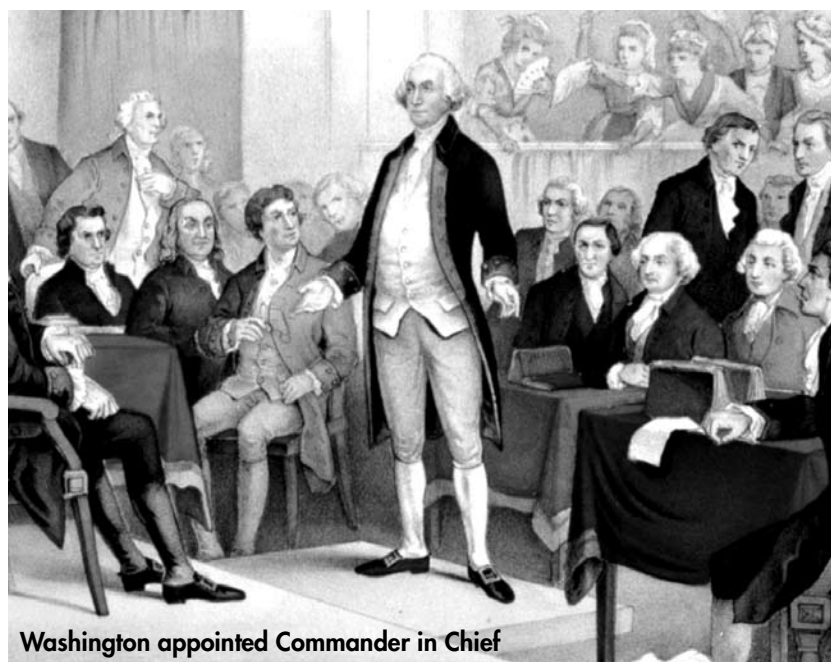
In the confusion another soldier fires. The officer shouts: Do not fire! A bullet hits a young man, who falls down. The soldiers retreat in the confusion towards the gates. Another shot rings out, then several more. A black man, Crispus Attucks, is hit in the chest and dies.

More shots are fired as the crowd tries to run back, falling over each other as they throw themselves to the ground. Then another man running for cover is shot down. American blood lies on the streets.

Boston radical Paul Revere coins a phrase that spreads across the colonies: the Boston Massacre. He publishes a print that turns the night's events into propaganda. Revere's print is sold through the Boston Gazette, in a black-bordered special issue.

Boston alone has seven newspapers, and Americans are avid readers — a legacy from the first Puritan settlers. Within days, amplified by the newspaper reports, most of America has heard about the Massacre.

In 1773, the *Boston Gazette* breaks another story that will move America closer to rebellion — and Paul Revere spreads the news to New York. The Boston Tea Party is direct action by Boston radicals



Washington appointed Commander in Chief

against a British attempt to force Americans to buy taxed tea. American liberties are under threat, and 90,000 pounds of tea ends up in Boston harbor.

The British response is to close down Boston harbor, the busiest and wealthiest port in America. Hundreds lose their jobs. The British mean to clamp down on the Boston radicals and isolate the rebellious colony of Massachusetts.

CONTINENTAL CONGRESS

Fifty-six delegates from 12 of the 13 colonies meet in Philadelphia to debate their response to British coercion. This is the birth of American democracy. From the First Continental Congress will one day evolve the government of the United States of America.

For delegates in the middle colonies and South, like Virginia landowner George Washington, the issue is not just taxes, but also land. Many have their eyes set on new land west of the Appalachians. But the British government has banned white settlement in the west.

GEORGE WASHINGTON

If the strategists in London chose to block this manifest destiny, they were either stupid or sinister—plotting to reserve the bounty of the American interior for themselves!

DELEGATE

In the course of our inquiry, we find many infringements and violations of [our] rights, which... demonstrate a system formed to enslave America!

JOHN ADAMS

A military action... would make a wound which would never be healed...

CONCORD AND LEXINGTON

Across New England weapons are collected and stored.

Back in Massachusetts, at five in the morning of April 19, 1775, six miles from Concord, the Lexington militia led by Captain John Parker intercepts the British troops. Most of the men are dairy farmers and artisans, but the company also includes freemen and slaves.

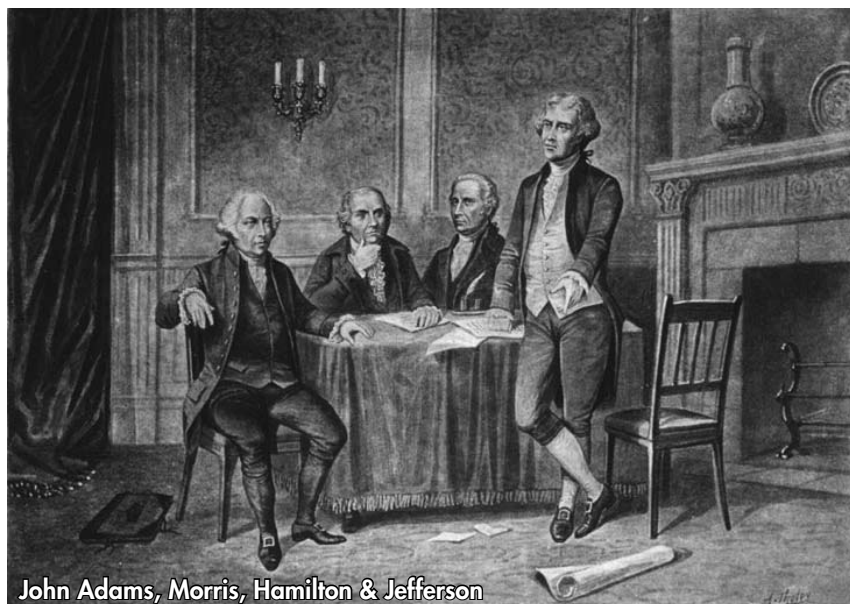
CAPTAIN JOHN PARKER

Stand your ground; don't fire unless fired upon, but if they mean to have a war, let it begin here.

Among those gathered is Prince Es-

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Revolution



tabrook, who will be the first African American to fight in the Revolution.

From nowhere an unidentified shot rings out, triggering confusion. Nervous redcoats and militiamen fire their weapons. Heavily outnumbered, the militia break and run. A few only get a step or two before they are shot down.

No one knows who fired the first shot at Lexington.

The militiamen run for it. Both sides open fire and then the redcoats charge with bayonets. In just thirty seconds, eight militiamen are killed, and ten are wounded. Prince Estabrook, hit in the shoulder, survives.

INVASION OF NEW YORK CITY

On June 29th, 1776 the City of New York prepares for the biggest land invasion in American history. A mile out of town, Kips Bay, at the end of modern East 33rd Street, will be at the frontline of any invasion.

On the 1st of July, British warships gather off New York. On the same day in Philadelphia a historic meeting takes place, as 50 democratically elected delegates from each of the 13 colonies debate the future of America.

On July 2nd, the delegates vote to “dissolve the connection with Britain” and two days later they approve a declaration of the independence of the United States of America. It starts with “*We hold these truths to be self-evident, that all men*

are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.”

Now, American soldiers know what they are fighting for.

British soldiers prepare to take New York. The five largest British ships carry more firepower than all the American guns in the city.

The battle for New York begins with cannon fire that strikes the city streets. Washington’s army is forced to retreat from the hamlet of Brooklyn. Through August and September the city awaits the final assault.

At daybreak on September 15th, a mile north of New York City, inexperienced American soldiers prepare to defend Manhattan Island.

PLUMB MARTIN,
A 16-year old Patriot soldier
It was quite a dark night, and at daybreak, the first thing that ‘saluted our eyes,’ was all the four ships at anchor, with springs upon their cables, and within musket shot of us. The Phoenix lying a little quartering, and her stern towards me, I could read her name as distinctly as though I had been directly under her stern...

On horseback, George Washington shouts at his retreating soldiers, watching his army collapse in the face of vast British firepower and exclaims, “*Good God! Have I got troops such as these!*”

They make their way back to safety along an ancient Native American track that will later become known as Broadway.

On the 20th of September, New York, now in British hands, burns. Over two days, 500 homes are destroyed. Almost 3,000 Americans are taken prisoner. Over the next two years, two thirds of these men will die in British prison ships in New York harbor.

New York is lost to an overwhelming British force.

VALLEY FORGE, PA CAMP, January 1778

Washington must hold his army together through a winter that will test his leadership and the resilience of his army.

Just 18 miles from Philadelphia, where British soldiers are billeted in comfort, lies the winter quarters of the American Continental Army. Washington has moved his troops here to ensure the British don’t raid the fertile lands of central Pennsylvania.

Albigeance Waldo, a surgeon in the Connecticut line, arrives with the first troops at Valley Forge in December, and watches a crisis develop.

ALBIGENCE WALDO
The army, which has been surprisingly healthy [...], now begins to grow sickly from the [...] fatigues they have suffered this campaign.

In a freezing winter, Washington’s men have built 900 huts in just 40 days. Each small hut houses 12 men. Over 2,000 of

Washington’s army are sick. Mites spread camp fever or typhus. Typhoid and dysentery result from unclean water.

They have run out of meat, and are down to their last 25 barrels of flour. They barely survive on ‘firecake’, a mixture of bread and water. One fifth of the soldiers are without shoes. Over the course of the winter, some 2,500 men will die — 20% of the army.



Valley Forge 1777

JOHN ADAMS
We are in the midst of revolution, the most complete, unexpected, and remarkable of any in the history of the world.’

JOHN DICKINSON
We are about to brave the storm in a skiff made of paper!

Within a month of the first arrival, 400 more ships will appear, in what will be the largest armada until D-Day. Some 32,000

The British are so close that the Americans can hear every word the sailors speak.

Five ships launch a ferocious bombardment of the defenses at Kip’s Bay. In just one hour, the British fleet fires over 2,500 cannonballs at point-blank range. A terrifying second barrage of cannon fire blasts away.

Four thousand British troops storm onto Manhattan Island.

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Revolution

PLUMB MARTIN

We were now in a truly forlorn condition — no clothing, no provisions and as disheartened as need be. Our prospect was indeed dreary.

Two years into the war, each state struggles to fill its quotas for the Continental Army. Enthusiasm for the conflict has ebbed. The farmers, craftsmen and artisans who made up the rebel army in Boston and New York have returned to their farms and businesses. Convicts recently released from jail, freed slaves, and the destitute now fill the ranks, along with immigrants just off the boat, with no property and no prospects. Many are from England. They may even face their former neighbors in battle.

WASHINGTON

To see Men without Clothes to cover their nakedness, without Blankets to lay on, without Shoes, by which their Marches might be traced by the Blood from their feet is a mark of Patience and obedience which in my opinion can scarce be paralleled.

But over the hard winter at Valley Forge, the type of young man who now makes up his army works in Washington's favor. They are used to hardship. Everywhere he goes, men in the poorest state of health stand to attention. As a leader, Washington inspires loyalty. Against all the odds he keeps this starving army together.

MILITARY TRAINING

Throughout the war Washington picks unconventional men whose talents he trusts and places them in positions of authority. In February 1778, he introduces a new recruit to the Continental Army, a Prussian army officer named Baron von Steuben.

Von Steuben's task is to transform a ragtag army into a highly trained professional fighting force capable of taking on the British army on their own terms. By this stage of the war, guerilla tactics are no longer enough.

He drills into Washington's men the strict discipline of the European military machine. But the freethinking Americans are unlike any soldiers he's trained before.

VON STEUBEN

The genius of this nation is not in the least to be compared with that of the Prussians,



Baron Von Steuben

or Austrians, or French. You say to your soldier, 'Do this,' and he [does] it. But I am obliged to say [to the American soldier], 'This is the reason why you ought to do that'; and then he does it."

Within days, Von Steuben introduces new standards of hygiene that help to reduce disease and infection. The men dig latrines 300 yards from their quarters

and food stations. The rules and order he brings to Valley Forge will become the standard for the American army for the next 150 years.

Von Steuben handpicks 100 men for training. Once trained and drilled, each of them will train their own hundred men. Within months, a new discipline spreads throughout Washington's Continental Army.

The most important skill Von Steuben brings to the American army is the deadly use of the bayonet. On a flat piece of ground, soldiers charge with bayonets at straw-filled bags on posts. In the final reckoning, this simple weapon will turn the tide of the American Revolution.

BATTLE OF YORKTOWN

In July 1781, a French fleet blasts Britain's warships out of Chesapeake Bay, and forces a British army back into the city of Yorktown, Virginia.

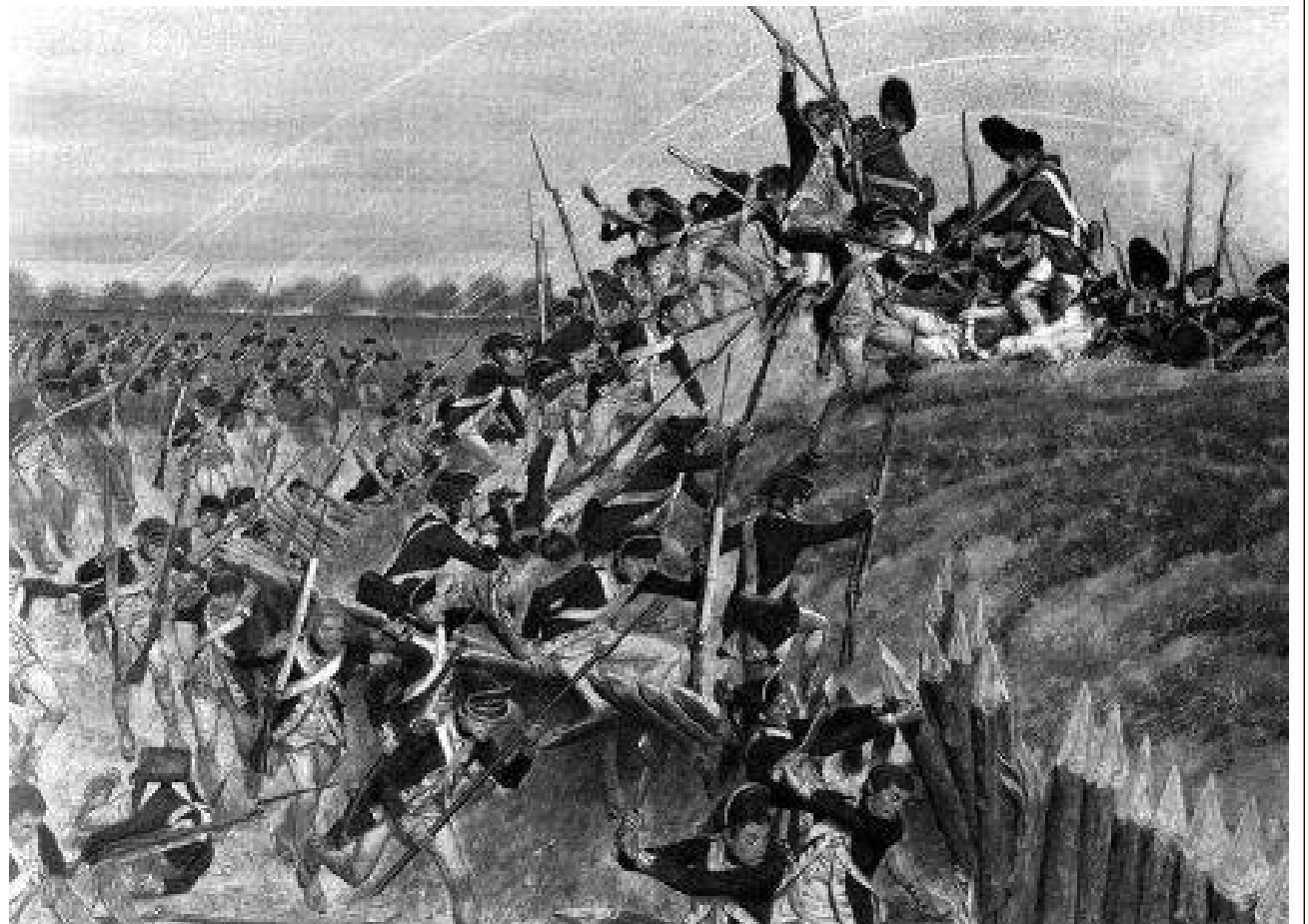
On the night of October 14th, in fortifications surrounding the city, 400 American soldiers await the order to storm British lines. It's the final push for Washington's army.

The Americans unleash a heavy bombardment, but behind these defenses lay 9,000 well-drilled, battle-hardened British troops. However, the security of Yorktown lies with two smaller fortifications. If the soldiers can break through British lines and take these, then the British army will be left defenseless. A force of 400 American infantrymen and sappers prepare to descend on the British redoubt.

Sappers cut through the defenses. As the American soldiers storm the redoubt, with muskets unloaded to avoid friendly fire, the bayonet becomes the key to their victory.

Over the last 6 years, leadership, training, weapons and intelligence have all proved vital. The Americans have done the impossible. America is the only country to win independence from the British Empire in war.

Liberty comes at a price. The new nation is \$150 million in debt. Almost 30,000 American men have lost their lives in the struggle for independence.



Westward



Cumberland Gap

A meteorite the size of Manhattan slammed into the Appalachian Mountains three hundred million years ago. The gap it cut becomes the seam through which America spreads westward.

In 1775, America is not yet a nation. Thirteen colonies of just two and half million people huddle east of the Appalachians on a strip of land just 300 miles wide.

The mountains form a mighty barrier to the interior. No colonists live beyond them. But for thousands of years, wild animals have migrated west to the salt licks of Kentucky through a pass carved long ago by a meteorite: the Cumberland Gap.

This is Shawnee land. For generations, the Shawnee have hunted here, and fought for these rich hunting grounds with their neighbors, the Cherokee

In March 1775, Daniel Boone, a hunter from Pennsylvania, leads a band of frontiersmen through the Appalachian forest on a mission that will change America forever. In two weeks, they cut through one hundred miles of forest and dense undergrowth to blaze a trail through the Cumberland Gap.

DANIEL BOONE

The aspect of these cliffs is so wild and horrid. The spectator is apt to imagine that nature had formerly suffered some violent convulsion, and this are the dismembered remains of the dreadful shock!

What they are doing is illegal. All settlement west of the mountains is forbidden by royal decree of King George III. But the colonists are fighting for their independence. Boone's mission is driven by that struggle. He's bankrolled by wealthy Virginians patriots defying the royal decree. They are determined to push

beyond the Appalachians, and open new lands for settlers. The path Boone opens will allow the new nation to spread west. It's wide enough for a packhorse. But soon it will be graded for wagons.

In the next twenty years, 200,000 Americans will flood along the new road and into the West.

The Shawnee know what happens when white men are hungry for land. Their ancestors were pushed out of Virginia and Delaware in a bloody war with American colonists 100 years ago. They will fight fiercely to keep colonists out of their new territories.

Boone knows the risks of trespassing on Shawnee land. Two years ago, he saw his eldest son James tortured and killed in these same forests by warriors. But even the death of a son hasn't dampened his frontier spirit. Boone and his men will reach the Kentucky River — and found the first settlements west of the Appalachians.

In just four years the Shawnee will lose their hold on Kentucky, and move further west into Missouri.

Tales of Boone's exploits sell out across the new American nation and his fame spreads as a "Columbus of the Woods" leading settlers into the promised land of the west. This is the beginning of the conquest of the West.

In 1803, the young nation cuts one of the best land deals in history, and buys 800,000 square miles at just three cents an acre. The Louisiana Purchase adds to the United States all the former Spanish lands between the Mississippi and the Rockies.

LEWIS AND CLARK

Meriwether Lewis and William Clark map

the uncharted territories on a 4,000-mile journey west by keelboat, on foot, and in dugout canoes. In October 1805 they reach the mouth of the Columbia River, becoming the first Americans to reach the Pacific Ocean overland. As the sea mist lifts, Clark records in his journal: *Ocean in view! O — the joy!*

In the Rocky Mountains, in the footsteps of Lewis and Clark, comes a new breed of pioneer: fur trappers. In October 1822, a party of trappers led by 22-year-old Jedediah Smith ventures deep into the Rocky Mountains on a journey that will shape the story of the American West. In the six months since they left St Louis, traveling up the Missouri river, their boat has sunk and they have fought off a Sioux war party.

Life expectancy for a mountain man is low — one in five will be dead within a year. For trappers like Jed Smith, the profits to be made in the mountains are worth the risks.

The fur of the American beaver is the most valuable luxury commodity in America. Used to make felt hats, a single pelt fetches \$4, twice what a skilled worker back east can make in a day. Smith holds the record for the greatest haul of beaver: 668 pelts in a single season, worth \$7,000 in the markets of St. Louis.

Smith discovers more than beaver. Guided by the Crow, he rides through the South Pass on the way to becoming the first American to enter California overland. At 7,000 feet above sea level, the South Pass cuts straight through the peaks of the Rocky Mountains in what

will one day be the state of Wyoming. Within twenty years, this will be the route for thousands of wagon trains, connecting the east and west coasts of America.

As Jed Smith enters California, pioneers flood into Kentucky, Ohio, Indiana and Illinois.

The government encourages western expansion with a fire sale on land. Regular plots sell for just \$2 an acre. The offer of cheap land draws 100,000 pioneers a year. What their money buys is a wilderness.

Late summer and early autumn brings hot weather and heavy rainfall. With the heat come mosquitoes and the sweating fever: malaria. The Midwest, from Indiana south to Louisiana, is rife with malaria. A third of the population is bedridden at any time.

By 1820, over a quarter of the population of the United States lives west of the Appalachians. In 1800, Ohio, Illinois and Indiana were 90% forest. By 1870, many settlers turn this forest into farmland.

The settlers' connection to the outside world is the great rivers of the Midwest.

In 1828, a young man named Abraham Lincoln (later, he would become the nation's 16th President) sets off on an epic 1,200-mile journey down river to New Orleans. He carries corn to trade, and the pioneer's staple goods: corn-fed pigs, and corn distilled as whiskey.

The Mississippi is the central artery of the continent. Fed with water from 31 states, it's over 2,000 miles in length. But the wa-



The Alamo

Continued on page 8

Westward



Wagon Train

ter only flows one way. For generations, farmers transport their goods south by raft, sell their goods and rafts — and then walk hundreds of miles home.

Steamboats, which can make the journey back upstream, transform the Midwest, revolutionizing trade and settlement. A steamboat can carry 230 tons of freight. A flatboat carries just thirty.

By the 1830s, 1,200 steamboats head up the Mississippi each year — and with them, thousands more settlers. In the fifty years after Independence, the population of the United States increases by a third every decade. In 1821, there are ten million Americans. By 1836, there are sixteen million.

THE ALAMO

Barricaded inside an old Spanish mission in San Antonio, Texas, in March 1836, land-hungry pioneers are about to pay the highest price of all. American mother, Susanna Dickinson, shelters with her two-year-old daughter Angelina inside the sacristy of the Alamo. In all, 189 American pioneers barricade themselves against Mexican soldiers. They're outnumbered twenty to one.

Among the men is Susanna's husband Almaron, a blacksmith. Another is Davy Crockett. Two months before, Crockett called Texas: *The richest country in the world. Good land and plenty of timber... good range, clear water and every appearance of good health, and game plenty.*

In 1836, Texas is a province of Mexico. For fifteen years American settlers have taken up generous land grants from the Mexicans. The pioneers holed up inside the Alamo are mostly young married men and their families who have come to Texas to farm and ranch cattle. They've braved spring tornadoes, autumn hurricanes, big cats, scorpions and a hundred species of snake — all for the promise of land. But now Mexico wants Texas back.

It takes just an hour for the Mexican army to take the Alamo. The men who survive the assault are executed. Only the women and children are spared. Wounded in the leg, her husband dead, Susannah is sent by the Mexicans to warn other Texans of the consequences of defiance.

Instead, her story spurs the pioneers to victory. "Remember the Alamo!" is the rallying cry for Texan independence. Within a month, the Alamo is avenged — and in May 1836, the Lone Star Republic is born.

With independence, Americans flood into Texas, tempted by offers of land on an astonishing scale. Single men receive 640 acres; families twice that. Married women and squatters have property rights.

When Texas enters the union, it measures a quarter of a million square miles in size — bigger than France — subdivided into 250 counties, some larger than Connecticut.

INDIAN LANDS

In the east, eyes turn on pockets of land still controlled by Native American tribes. Since the first decades of colonization, a hunger for land pushes white settlers into conflict with Native Americans.

Over the past 50 years, the Cherokee have taken up many of the customs of their neighbors, raising corn, tending livestock — some even own slaves. But speculators keen to get hold of their land argue the Native Americans must be relocated to protect their culture, preserving them from too much 'civilization'.

American opinion is divided. The order, promoted by President Andrew Jackson, passes Congress by a single vote. Their property is divided by lottery, while Cherokee families are forced west towards reservations in Oklahoma.

The march of a thousand miles, across dangerous rivers, becomes known as the "Trail of Tears".

SALLY FEARNEY

Many fell by the wayside, too faint with hunger or too weak to keep up with the rest. The aged, feeble, or sick were left to perish. Only a bowl of water was left within reach, thus were they left to suffer and die alone.

Of the 15,000 Cherokee forced west, at least 4,000 die on the march, an episode in the struggle for land that even some of the soldiers who take part find shameful.

WAGON TRAIN

In May 1846, a wagon train rolls out of Missouri on a 2,000-mile journey to the Mexican state of California. At the walking speed of an ox the journey will take five months.

It's a journey to a Promised Land that will test the endurance of American pioneers to its limits.

RICHARD DANA

The climate is better than any in the world, free of diseases; the waters are filled with fish, the plains with cattle, and corn yields from seventy to eighty fold. In the hands of an enterprising people, what a country this might be!

Although California belongs to Mexico, American pioneers now head west for this promised land in the largest organized migration in American history.

For one of the first groups of pioneers, the journey starts in Nebraska in May 1846. Ahead of them is a 2,000-mile trek across some of the challenging terrain in the world: 800 miles across the treeless expanse of America's Great Plains in scorching sun, sudden storms and tornados; across the rough high passes of the towering Rocky Mountain range; across the scorching expanses of the Utah Salt Flats; through the waterless desert of the Great Basin; then on to their final and greatest obstacle, the mountains of the Sierra Nevada — before the blizzards of winter block their way.

Westward



Gold Rush

In twenty years, half a million people will make the journey west. Over 20,000 will die along the way: ten graves for every mile.

Sixty per cent of the men heading west are farmers, looking for fertile land on the Pacific coast. Others are escaping the diseases that plague life in the Midwest.

Some in the party are Mormons, escaping religious persecution. Over 70,000 Mormons will head west over a quarter century, starting a new life on the salt flats of Utah.

As the wagons head into the mountains, weight is the defining factor. Emigrants carry the tools and seeds they'll need to start a new life, but guidebooks advise them to carry only the essentials.

LANSFORD HASTINGS

The loading of the wagons should consist mostly of provisions. Do not burden yourselves with furniture or beds. Bring a few light trunks or very light boxes to pack clothes in. No heavy articles except a few cooking vessels.

GOLD RUSH

Deep beneath the Sierra Nevada mountain rock lie riches that will draw tens of thousands more to California: Gold.

A hundred million years ago, magma in the earth's crust cooled and solidified to form the rocks of the Sierra Nevada. In the volcanic cauldron, a unique element, gold, was laid down in veins of quartz in concentrations 200,000 times higher than

elsewhere on earth.

Over hundreds of thousands of years, as the peaks of the Sierra Nevada pushed upwards, ice, rain and wind eroded the rocky peaks. Water washed mountain debris along rivers and streams. Flakes of gold, seven times heavier than quartz, accumulated as nuggets in the riverbeds of California.

In March 1848, in the bed of the California River, a carpenter, James Marshall, uncovers this secret treasure, and launches a gold rush that transforms California.

War with Mexico delivers California into the hands of the United States. Just a week after gold is found, Mexico agrees to recognize California as part of the U.S. in return for \$15 million dollars.

It's one of the best bargains in history. Within ten years, California will yield over half a billion dollars worth of gold. In two years, the population of California leaps from 15,000 to 100,000. Most newcomers are male, armed, and under thirty.

In November 1851, rumors of a single pit yielding thousands of dollars worth of gold draws hundreds of miners to Bear Valley. The famous 'pit of profit' is only 6 feet wide, 15 feet long, and 10 feet deep. But for 12 Mexican prospectors, it yields \$22,000 worth of gold.

Within a month of the strike, Jean-Nicholas Perlot joins 400 prospectors working small claims beside the famous pit.

JEAN-NICOLAS PERLOT

Wait until you have [lived] like me... spending the day in a ditch, your pick in your hand, the night under a live oak, cooking your own stew... Then you will see what becomes of your coat, your hair, your beard, your face... under these conditions a man... can well look like a savage.

As miners compete to find the precious nuggets, hand-held panning gives way to new frontier technology. Sloping funnels need teams to operate. Long lines of sluice boxes rework the waters to get the finer nuggets earlier miners missed.

But year on year, as extraction becomes harder, the profits to be made by each new prospector drop.

The first miners could dig up as much as \$1,000 worth of gold a day. By the end of 1848, average profits have dropped to \$20 a day. By the time Perlot gets to Bear Valley, most prospectors take home just \$3 a day.

It's still 3 times the average wage back east. But the men making the real money in Gold Rush California are not miners, but the businessmen who supply them.

In 1853, German immigrant Levi Strauss sets up in California and makes a fortune supplying clothing to miners, who especially like the durable canvas pants that are known as Levi's.

Traders can charge what they like. Picks, pans and shovels sell for \$200. A knife costs \$25, a woolen shirt \$50. Breakfast

here costs \$2, compared to 25 cents back east.

Fewer than one in twenty of all the gold miners in California ever make a profit.

After seven years of hard work, Perlot, like many others, gives up his dreams of untold wealth and moves on to another life.

But the dreams of these pioneers transform California. Their mining shanties become cities: Sacramento, Stockton, Modesto, Fresno. By 1860, there are 400,000 Californians.

In 1850, Perlot described San Francisco as 'fifteen adobe houses and some tents'. Seven years on, it's become a city.

JEAN-NICOLAS PERLOT

Already it has its paved streets, its [...] sewers, its gas and its trams. The streets, the wharves [...], the public squares and the promenades [full of] people and merchandise. How many changes!

Seventy-five years have passed since Daniel Boone blazed the first trail west across the Appalachians. In just four years between 1845 and 1849 the U.S.A. doubles in size, gaining 1,200,000 square miles. The nation spreads across vast new territories: from the Pacific Northwest to the southern deserts of New Mexico and Arizona, pushing its border with Mexico to the Rio Grande River.

Division

Once cotton was a luxury fabric. In the early 1800s, industrially-produced cotton becomes cheap and available to all. It is the first great consumer product of the industrial revolution.

Britain invented the power loom and its technology is a closely guarded secret. England makes it a crime for workers to immigrate to America — in case their expertise immigrates with them.

By 1813, the secret's out. Artisan Samuel Slater and industrial spy Francis Cabot Lowell bring the spinning machine and the power loom home to America. And America is about to give Britain a run for its money.

Cotton drives America's industrial revolution. By the middle of the century there are 500 mills feeding into America's insatiable export industry. Lowell, Massachusetts is the most successful mill town



Lowell Factory

in America. Called "The City of Spindles," Lowell produces over a million yards of cloth every week. It outstrips the mills of Manchester, England to become the world's biggest producer of textiles.

Lowell is a world of opportunity for women who would previously have been tied to the family. Of the 18,000 people who work here, eighty five percent are single women aged between 15 and 25. For the first time, large numbers of young women earn their own wages — between \$6 and \$10 a week.

Some of the Lowell girls are even younger. Harriet Robinson is ten years old when she starts working in the mill's spinning room.

They work a 14-hour shift from five in the morning until seven at night. The average week is 73 hours. Windows are kept shut — even in summer — so that the dry heat doesn't destroy the cotton threads. In the winter, the air is clogged with the fumes of gas lamps. Lung disor-

ders are common because of the lint and dust. The women also battle boredom.

HARRIET ROBINSON
Reading books on factory time was against the rules. But we hid books in apron pockets and wastebaskets. Often we tore books apart and read them a page at a time. Sometimes we pasted poems to the windows or on our looms to memorize.

Despite the harsh working conditions, Lowell offers women a new intellectual independence. They devour novels — reading them by the light of whale oil lamps — and start their own newspaper, the Lowell Offering.

In 1836, 1,500 mill girls go out on strike to protect their wages against a rent hike to be deducted from their pay. For the first time in America, the voices of work-women are being heard.

MILL GIRLS CHANT
*Oh! Isn't it a pity, such a pretty girl as I
Should be sent to the factory to pine away and die?*

These women will go on to win rights that would have been unimaginable a generation earlier.

SLAVE ECONOMY
In the South, most of the economy is tied up in slaves. By 1850 over \$2 billion is invested in slaves — the equivalent of \$60 billion today.

Slaves are expensive, but the crops they are forced to grow are extremely profitable for plantation owners. The most lucrative crop of all is cotton. In the agricultural South, cotton is "white gold". It spreads west into the Mississippi delta, where it thrives in the rich alluvial soils. It creates and supports lifestyles of unimaginable wealth and opulence. It's a different world from the urban and industrializing North.

The backbreaking work of slaves makes cotton harvest possible — it is a system of enormous brutality and violence against humanity.

Cotton is notoriously hard to process. The first job is cleaning the raw cotton. Seeds are embedded in the short, dense cotton fibers and have to be pulled out by hand. It's a slow process. One slave cleans only one pound of raw cotton in a day



Cotton Gin

— working solidly for 14 hours.

That's not enough to feed the cotton mills across the Atlantic in Britain, which are relentlessly devouring America's exports of raw cotton. Southern farmers must find a way to clean the cotton faster. The answer lies in the processing powers of a simple mechanical device, the Cotton Gin. Two contra-rotating drums with teeth to part the short cotton fibers from the seeds. Gin is short for "engine". Overnight, it revolutionizes the cotton industry in the South.

Production is increased by 500% — in one day, one man can now clean 50 pounds of raw cotton. The cotton gin transforms the economy of the Southern states. The cotton crop explodes almost ten-fold from just over 300,000 bales in 1820 to nearly 3 million in 1850.

America overtakes India as the cotton producer of the world.

Plantation owners build great houses, designed to make a statement. Their aristocracy is built upon slavery. Owning 20 or more slaves put a man into the elite — the "planter class". One man, Nathaniel Heyward, owns nearly 2,000.

Powered by slavery, driven by the popularity of cotton, the economy of the South booms.

LEAD-UP TO THE CIVIL WAR
Even as the South sows the seeds of its fortune, it is harvesting the results of 60 years of human bondage, which will ultimately lead to the bloodiest conflict ever to be fought on American soil.

America produces more raw cotton than it can process. Ships laden with cotton travel from New Orleans to New York. From there fast packet ships transport the cotton to England where it is spun and woven. The finished cloth is shipped back to America. The cotton triangle makes New York America's premier port.

But Mayor — soon to be Governor — DeWitt Clinton of New York has bigger plans. He wants to make New York City the financial hub of America. Ships arrive

daily in New York carrying cheap manufactured goods and cheap immigrant labor. If Clinton can work out how to ship these goods out to the Midwest, New York will become the lynchpin of trade. Everything will pass through New York. DeWitt's idea is about to redraw the trade map of America.

In 1824 a ravine is blasted through the hard blue limestone at Lockport, NY. Great chunks of earth and shards of limestone fly through the air. A group of Irish laborers seek shelter beneath their shovels as rocks rain down like deadly hail. This is the beginning of the Erie Canal.

America is building one of the most ambitious engineering projects of the century — a project that will propel the nation into the modern world. The Erie Canal is built by 9,000 workers who dig



Erie Canal at Lockport, NY

out eleven million cubic yards of rock — four times the volume of the great pyramid of Giza. Stretching 364 miles from Lake Erie to the Hudson River, the canal will be the world's longest, connecting the agricultural wealth of the Midwest with New York — the gateway to the Atlantic and America's rapidly growing export trade.

America lacks highly trained civil engineers. What it does have is the labor of thousands of new immigrants to the young nation. At Lockport, most of the workers are Irish. Newspapers hail their achievement.

NEWSPAPER ATTRIBUTION
There are several types of power working at the fabric of the Republic. Water power, steam power and Irish power. This last works hardest of all.

In America, these men earn five times what they could make back home. But it's a risky business. Over a thousand men die of swamp fever cutting through the Montezuma Marsh. Now they face their most perilous challenge: blasting through the eighty-foot limestone Niagara Escarpment.

Continued on page 11

Division



Harriet Tubman

There's only one way through — black powder. Black powder is a highly combustible mix of nitrate, charcoal and sulfur. Nitrate provides the oxygen to make it ignite, charcoal fuels the burn and sulfur increases the speed of combustion.

Getting the mix right is a matter of life — or death. The black powder used to blast through this limestone has to contain exactly the right level of nitrate. Too little and the rock simply fractures. Too much and the explosion is impossible to control. The fuse is a crude twist of brown paper. No one can predict the timing of the explosion.

EDNA SMITH

On some days, the list of killed and wounded would read like a Battlefield. If the fuse went out or burned slowly, they would rush back recklessly to see what was the matter ... often blowing on them to revive the dying fire. Many a poor fellow was blown into fragments this way.

THOMAS NICHOLS

The Irish laborers grew so reckless of life that at the signal for blasting, instead of running to the shelter ... they would jut hold their shovels over their heads to keep off the shower of small stones and be crushed every now and then by a big one.

After eight years of digging and at a cost of thousands of lives and the equivalent of \$4.5 billion, the Erie Canal opens.

It is ten times longer than any other canal in the world. Where it once took three weeks and cost \$120 to send a ton of flour from Buffalo to New York City, it now takes 8 days and costs \$6. The Erie Canal connects New York to the West providing a cheap and easy route for goods and people. DeWitt Clinton's critics are silenced. The canal transforms New York

into America's biggest and wealthiest city.

The Wall Street stock market takes off — fueled by the success of the Erie Canal.

SLAVERY MUST END

America is a vast new country, rich in resources and undergoing a seismic change — in trade, transport and manufacturing. Its rapid industrialization is quickly turning it into one of the most affluent nations on earth. But its new wealth is based on an old system — slavery — and slaves and abolitionists are fighting back.

All black Americans, slave or free, must carry documents proving who they are or to whom they belong. Frederick Douglass, one of the lucky ones, escapes slavery and flees north, finding refuge in a safe house, as a “passenger” of the Underground Railroad.

FREDERICK DOUGLASS

My whole future depended upon the decision of this conductor: This moment of time was one of the most anxious I ever experienced. Had the conductor looked closely at the paper, he could not have failed to discover that it called for a very different looking person from myself, and in that case it would have been his duty to arrest me on the instant.

The Underground Railroad is a secret network of people — mostly free blacks, but also white abolitionists — who help fugitive slaves on their journey to freedom in the North and West. Supporters open their houses — “stations” — to fugitives on the run.

One of the most famous conductors is Harriet Tubman, who escaped slavery in 1849. Now she risks her life to return south and liberate others. She uses every trick she knows: disguises, concealed identity, coded messages. She uses hymns

and spiritual songs to signal danger.

HARRIET TUBMAN

“I'll meet you in the morning, I'm bound for the promised land.”

“The Promised Land” is Tubman's ironic code word for the slave-owning Southern States. Her own codename is “Moses”. She always travels alone. Her specialty is mass escapes, guiding groups of up to 10 slaves to freedom.

The journey north from Maryland to Pennsylvania is 90 miles across country. Always made at night using the North Star as a guide, the journey takes between five days and three weeks.

Tubman hides her charges in swamps and woods. Cold, hungry and in peril, slaves sometimes feel that they cannot continue. They want to go back

Tubman had a strict line for faint-hearts. *“Move — or die!”*

Despite the \$10,000 dollar reward on her head, Tubman returns behind enemy lines no less than 13 times and personally liberates 70 slaves. She never gets caught and never loses a “passenger”.

During this period up to 2,000 slaves escape every year. The South is about to take drastic action to get its slaves back.

In 1850, a new law is passed that catapults the slave culture of the South onto the doorstep of the North — and brings both to the brink of civil war. Under the Fugitive Slave Act, the punishment for helping a slave was 6 months in prison — or a fine of \$1,000.

Even free blacks can be coerced into slavery. They are powerless to defend themselves in court and find it almost impossible to prove their free status. Under this law, Northerners find themselves propping up slavery. Abolitionists are incensed. It's the trigger that catapults the anti-slavery movement into the mainstream.

Two different Americas — united in prosperity but divided by culture — face each other across a growing gulf.

As the nation expands, new states enter the Union. Opinions clash: should they be slave or free? In 1854 with Kansas poised to enter the Union, the battle is drawn. Abolitionist Freestaters from New England and Pro-Slavery settlers from Missouri rush in to try to sway the vote.

On Election Day, Kansas votes to enter the union as a slave state. But the referendum has been rigged by pro-slavers and freesoilers have boycotted the vote. Tensions between the two factions escalate, leading to an attack by pro-slavers on Lawrence, Kansas, a stronghold of freestaters.

JOHN BROWN

We must fight fire with fire, strike terror in the hearts of the pro-slavery people. Something must be done to show these barbarians that we too have rights.



Radical abolitionist John Brown, who sees himself as “God's chosen instrument,” is prepared to exact violent retribution. On May 23rd, the day after the sack of Lawrence, he selects a band of seven men to join him on a secret and bloody mission deep into a pro-slavery settlement. A night and morning of frenzied bloodshed follow.

Brown's victims, although they supported the pro-slavery movement, did not own slaves and had nothing to do with the looting of Lawrence.

Violent eruptions in Kansas continue for two years after the massacre. “Bloody Kansas” sees each side murder over 200 of their fellow Americans. Kansas is having its own civil war. Soon the whole of America will be dragged into the fight.

THE CIVIL WAR

November 6th, 1860 brings Election Day, on which hangs the fate of the Union. The South threatened to secede if Lincoln wins. But the North embraces Lincoln, who wins by half a million votes, with 98% of his support from the North.

Three months later South Carolina secedes. The rest of the South soon follows. In February 1861, the Confederacy is born.

Lincoln's victory makes war inevitable. He pledges to preserve the Union and is willing to fight for it. Secession is the trigger but the cause at stake will become slavery. The war that John Brown predicted finally arrives.

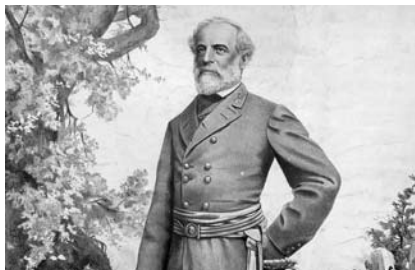
Division

In 1862, America's new industrial might produces a new weapon that changes the face of warfare: the Minie ball. Invented in 1848 by a French ballistics expert, this perfect sphere of soft lead travels faster through the barrel of a gun than any previous bullet, giving rifle muskets twice the range as the old smoothbore muskets. And they can be reloaded twice as fast — the best soldiers can fire a minie ball once every thirty seconds.

As it rotates along the barrel's rifled grooves, the minie ball picks up momentum and strikes with maximum velocity. When the target is a human body, the soft minie ball flattens and spins, and tears a terrible swathe through muscle and bone.

At the second battle of Bull Run, August 1862, both Union and Confederate forces are armed with this devastating new technology. Minie balls are responsible for the vast majority of soldiers' wounds in the Civil War.

In the six months after Lincoln is elected, eleven southern states secede from the Union and declare independence. The nation is divided; the industrial North versus the agrarian South. This war is being fought on a mammoth scale — larger than any war fought on American soil before or since.



When war breaks out, Major General Robert E Lee is offered positions in both northern and southern armies. A graduate of West Point Academy and a decorated veteran of the Mexican War, Lee comes from an aristocratic Virginian planter family and owns slaves. He fights for the South. As commander of the Army of Northern Virginia, he demonstrates decisive strategy and gains a psychological advantage over his Union rivals.

Lee's army has been welded into a formidable force through rigid training, strict military discipline and an unshakable self-belief. They have the advantage of fighting on their own soil and are battle hardened.

Some 120,000 soldiers fight at the Second Battle of Bull Run. Even with fewer men, the Confederates inflict huge casualties

on the Union army. Over 10,000 are killed or wounded. The 5th New York regiment loses more men in ten minutes at Bull Run than are lost by any other regiment during the entire Civil War. The Second Battle of Bull Run is Lee's greatest victory so far. His army is now just a day's march from Washington D.C. and the heart of the Union.

Two weeks later, Lee's army of over 51,000 marches towards Sharpsburg, on the banks of the Antietam River in Maryland. They head right into the midst of Union territory, a risky move. Up to now, Lee's armies have fought on their own soil. Now, they go on the offensive and take the fight north.

Although his men are exhausted, Lee is bent on swift and decisive action. He wants to capitalize on his victory and win the war before the North has time to harness its industrial might.

There's another reason to strike now. The South hopes that the world's superpowers, Britain and France, might recognize Southern independence in return for guaranteed supplies of tobacco and cotton. To convince Europe that they have the strength to go it alone, they need to prove their military might.

Lee believes that if he can win this battle, he can win the war.

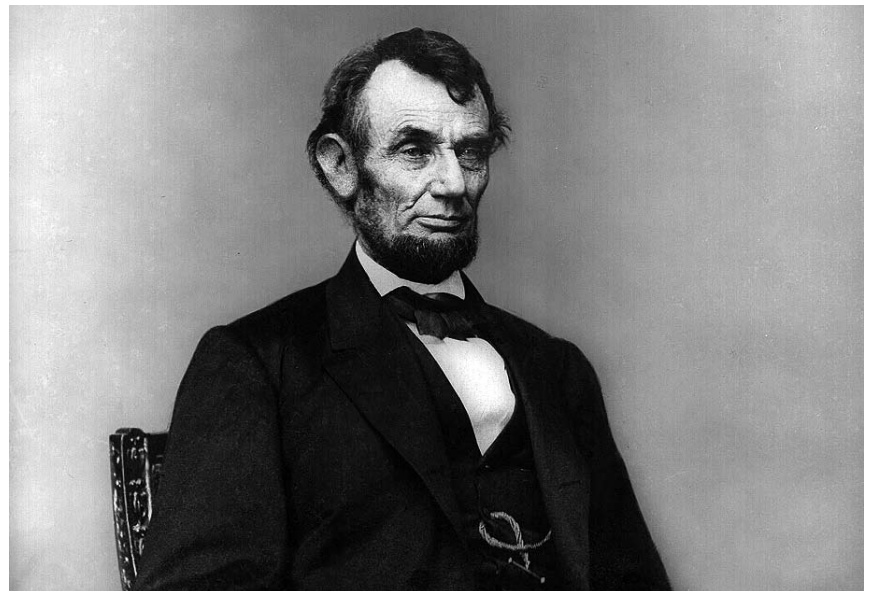
BATTLE OF ANTIETAM

On September 17, 1862, the Battle of Antietam becomes the single bloodiest day in American history.

In fields around the Antietam River near Sharpsburg, over 6,000 men lie dead or dying. In one day, twice as many men are killed as in the entire course of the War of 1812, the Mexican War and the Spanish-American war combined. There are four times as many casualties as will fall on the Normandy beaches on June 6th, 1944.

Lee's army withdraws from the Antietam battlefield, and the Union army is left to deal with the dead. Confederate corpses are thrown into long trenches, 30 at a time, while Union corpses are buried in individual graves, marked where possible. The soldiers wear no tags to identify them so many families will never know how or where their brothers, sons or fathers die.

The Confederate advance has been halted by the Battle of Antietam. The war has now been raging for one and a half years, and it is unclear who will win.



President Abraham Lincoln

EMANCIPATION PROCLAMATION
Antietam becomes a turning point. The Union armies suffer over 12,000 casualties; the Confederates, 10,000. Neither side has won. But Lee's invasion of the North has been halted. This gives Lincoln leverage that will eventually help free 4 million slaves.

From the moment war breaks out, slaves start escaping. They flee to Union lines, hoping for refuge. But Lincoln's first priority is to preserve the Union, not to end slavery. To reassure the border slave states that have not seceded, Lincoln promises that the army will respect the property rights of slaveholders. He instructs his soldiers to turn away fugitive slaves and return them to their masters.

Colonel Harris of the 2nd Regiment is finding these orders hard to obey. *As a soldier I am compelled to execute an order which is repugnant to my feelings as a man. If I remain in the army I have no alternative but to execute these orders, or resign. I prefer the latter ...*

Union soldiers begin to question the humanity of returning slaves to their masters. Generals justify putting able-bodied fugitive slaves to work within the Union camps — depriving the Confederacy of the benefits of slave labor whilst satisfying the labor needs within Union lines.

By law, black men — whether fugitive slaves and freemen — are not allowed to join up. But they are increasingly tolerated — even welcomed — as volunteers. Still, few whites believe that blacks are capable of actually fighting.

In January 1862, John Boston escapes

from the South and joins a Union regiment. *My Dear Wife. I am now in safety in the 14th Regiment of Brooklyn. This Day I can address you thank god as a free man. I had a little trouble in getting away, but as the lord led the Children of Israel to the land of Canaan, so he led me to a land where freedom will reign in spite of earth and hell...*

John Boston is not a free man yet. Legally he is contraband — stolen goods — still legally the property of his Southern owner.

Three months later, in March 1862, Congress finally passes legislation forbidding Union soldiers from returning fugitive slaves from Confederate states to their owners, and officially allowing them into Union lines. And soon men like John Boston will hear news that will change their lives even more dramatically.

On New Year's Eve 1862, the congregation in Boston's Tremont Temple awaits an extraordinary announcement that has long been their dream. Abolitionist Frederick Douglass is amongst them.

FREDERICK DOUGLASS

Whether we should survive or perish depended in large measure upon the coming of this proclamation. There was room to doubt and fear. Would it ever come?

In September, Lincoln had announced a Preliminary Emancipation Proclamation — declaring that all slaves in areas still in rebellion on January 1, 1863 would be forever free. As of New Year's Day, the Emancipation Proclamation is law. From the Telegraph office of the War Depart-

Continued on page 13

Division

ment, the news is transmitted across America.

The proclamation also announces the acceptance of black men into the Union Army and Navy. Former slaves and free black men enlist in the thousands.

JAMES HENRY GOODING

The American people, as a nation, knew not what they were fighting for till recently, and many have different opinions now as to the ends and results of the contest. Blacks, and especially free blacks, had a clear duty to liberate their race and demonstrate that they can become something more than hewers of wood and drawers of water all their lives.

In July 1863, Union General James Blunt reports: *I never saw such fighting as was done by the Negro regiment... they make better soldiers in every respect than any other troops I have ever had under my command.*

As former slaves abandon plantations, emancipation deals a heavy blow to the economy of the South.

NORTH'S INDUSTRIAL ADVANTAGE
A moral crusade alone will not win the war for Lincoln. The North must harness its industrial might.

The northern states have over 90 percent of the country's manufacturing capacity. By the fall of 1862, this vast industrial power shifts to supplying the Union

Cotton and carpet mills switch to making woolen cloth for uniforms and blankets. Production more than doubles from peacetime levels.

Pitchfork manufacturers start making swords. Saw factories churn out sabers. Jewelry workshops craft brass buttons for the troops. And a chandelier factory makes cavalry spurs.

It's not just the military hardware. The North has twice the miles of railroad and locomotives as the South. Goods and troops can be transported quickly around the whole network, all managed by the Department of War. When it comes to logistics, the North leaves the South standing. While the North suffers more casualties, it starts with a population twice that of the South, and nearly half of the Southern population are slaves. In a war of attrition, the North will win.

General Lee achieved a stunning victory at Chancellorsville, Virginia. He knows the Confederacy cannot win a long war. His time is running out. In the summer of 1863, he moves his army north towards a small Pennsylvania city called Gettysburg. This is his final chance to break the Union forces.

THE BATTLE OF GETTYSBURG

Out of the 175,000 men gathered in a vast amphitheatre of war, Lee's army numbers 75,000 — three-quarters of the size of the Union force. But for Lee, it's now or never. For three brutal days, Lee

wounded. Lee's forces are devastated. He has lost a third of his men in his worst defeat of the war.

The Confederates have lost their air of invincibility. Lee has paid the price for his aggressive tactics. Gettysburg cost him more men than he can afford to lose. He will never again have the confidence to take the war to Northern soil.

His only hope that Union politicians will grow sick of the bloodshed and come to terms, but Lincoln is in no mood to negotiate. A presidential election is looming. And to win the election, he needs to win the war — and fast.

To win the election and save the Union, Lincoln will need to use the full force of the North's industrial might to crush the southern rebels.



Gen. William Tecumseh Sherman

SHERMAN'S MARCH TO THE SEA

On September 1st, 1864, Atlanta is burning. Lincoln's new general-in-chief, Ulysses S. Grant, pursues an aggressive new strategy. His armies push deep into Southern territories, destroying everything in their path.

Grant appoints General William Sherman to take his armies South. Sherman has made it as far as Atlanta. The city is surrounded. The Confederate forces are besieged. Their supply lines have been cut and they are vastly outnumbered. Defeated in their attempts to drive off Sherman's forces, they have no option but to withdraw. First, they torch their own arsenals and munitions stores to stop them falling into Union hands. Then they abandon their smoldering city.

On September 2nd, Union forces take Atlanta. This is a key victory for Lincoln. It proves that his campaign against the South is working, and it boosts his standing in the public eye.

The Civil War is the first war to be fought on the front pages of newspapers as well as on the front lines. It is the first time that reporters and photographers report directly from the battlefields in such numbers.

To keep the stories coming there are 350 special correspondents reporting in the North, and 150 in the South. Most reporters are partial, writing propaganda according to which side they are on.

Using the 15,000 miles of telegraph wires, more than 100 million words are filed by journalists over four years of conflict, feeding an insatiable public appetite for news. This is the first war of the telegram age, and the Union has the technological edge. Telegraph is the e-mail of the era.

The developing technology of photography brings images of war home. As many as 1,500 men and women took photographs of the war and a million photos were produced. Now, pictures of victorious Union troops at Atlanta sway public opinion in support of Lincoln.

Two months later, on November 8, Lincoln wins the election by over 400,000 popular votes. For the first time, several states allow soldiers in the field to vote. Over 70% vote for Lincoln.

Lincoln is determined to press his victory home. Sherman's scorched earth tactics create a new standard for military operation known as "total war," in which civilians are no longer treated as innocent bystanders and their property becomes fair game. He leads his troops on his infamous "March to the Sea".

They destroy all that stands in their way: sacking villages and burning crops. They cripple the South and destroy everything of military value — including the railroad.

It takes six more months, and the application of overwhelming force to convince the Confederacy that their cause is lost. In the last months of attack, the Union Army employs trench warfare, Gatling guns, repeater rifles, observation balloons, telegraph, and railroad mobility to force the Confederacy into unconditional surrender.

With the war over, Lincoln makes it his new mission to heal the country's wounds. *Let us strive on to finish the work we are in; to bind up the nation's wounds; to care for him who shall have borne the battle, and for his widow, and his orphan — to do all which may achieve and cherish a just and lasting peace, among ourselves, and with all nations.*

Lincoln is assassinated just 5 days after Robert E. Lee surrenders.



The Battle of Gettysburg

armies. Metal working shops become gun factories. In three years, they produce a million and a half rifle muskets.

throws his men against the Union lines, trying everything to break them. The battle turns into a bloodbath. By the end, 34,000 men from both sides are dead or

Heartland

In 1850 in America, 23 million people live in 30 states in the eastern half of a continent. West of the Mississippi Valley lies a wilderness. A million square miles of prairie, towering mountains and deserts divide the settled east from the new territory of California.

The backbone of the workforce are Chinese immigrants.

In the middle of the American Civil War, President Abraham Lincoln makes a bold decision: to build a railroad linking the east and west coasts of the continent. For a decade, Americans agree the railroad will happen — but North and South disagree on the route. Lincoln takes advantage of the War to push ahead with his preferred plan — the northern route.

Until now, there were only two ways to reach California. Those who could afford to pay \$1,000 could book passage south by sea to Panama, across land to the Pacific, and then north by ship to San Francisco, a journey of 45 days. But most Americans heading west faced a five-month journey through the vast emptiness of the interior. On the Great Plains, they endured storms and tornadoes. They forced ox teams through the steep bluffs of the Rockies and pushed forward through the high arid deserts of the Great Basin. Their final challenge was crossing the great mountain range of the Sierra Nevada. Some abandoned all their possessions and ate their livestock along the way, arriving in California broke and barefoot. Twenty thousand died — ten graves for every mile of trail.

One man's vision will change all that. Theodore Judah, a railroad engineer from Connecticut, comes to California to build the Sacramento Valley Railroad, the first railroad line west of the Missouri.

He's become obsessed with an even greater engineering challenge — a project so ambitious they call him "Crazy Judah". He aims to build a railroad linking California with the rest of America — through the Sierra Nevada.

In June 1861, Judah's team risks their lives to turn the vision into reality.

THEODORE JUDAH

The river is 1200 feet below us — the top of the ridge 700 feet above, in places so steep that if you slip it is all over. The boys fasten ropes around their waists, with a man above holding on with a turn around a tree. We make only one mile a day.

Stretching 400 miles from North to South, the Sierra Nevada presents a mighty land barrier between California from the rest of America.

For Judah, the challenge is to map a route 700 miles long through the Sierras where a railroad can pass. No railway in the world crosses such difficult terrain.

In the spring of 1862, he finds his route: through the notorious Donner Pass, where 12 years before the Donner Party came to grief. Here, the double range of the Sierras merges, making a route through possible. But even so Judah estimates the price tag to cut through these mountains will be over \$40 million.

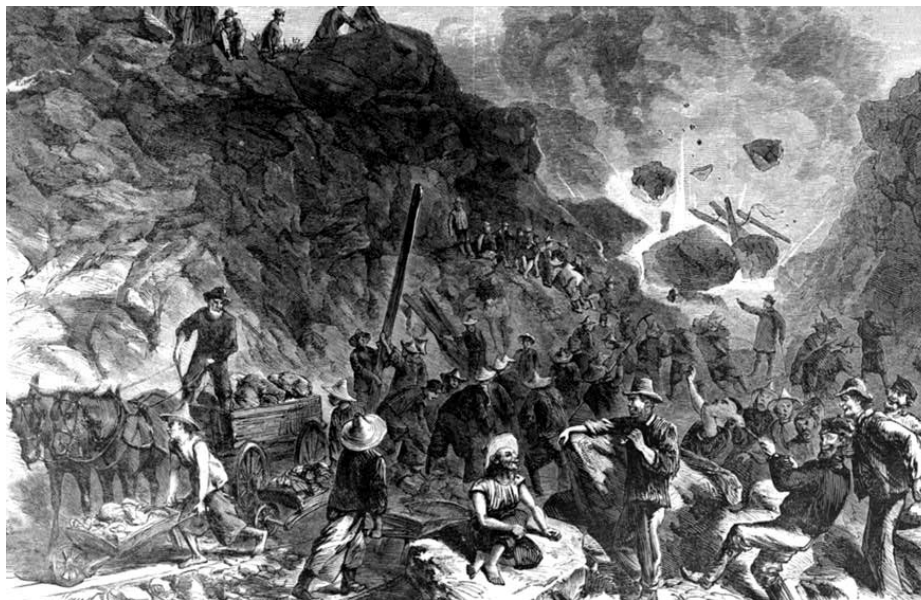
A year later, Lincoln approves Judah's plan. Work begins. To speed the project, the President charters two companies. In the east, a line begins in Missouri. But the Central Pacific Railroad Company in the West has the more formidable task.

The project is backed by four Sacramento storekeepers with no experience of railway construction. Federal funds will reward them with ten square miles of land grants for every mile of track laid. But the task ahead is monumental. The Central Pacific Railroad Company must level miles of mountain, build miles of embankments, and cut 15 tunnels through solid granite.

The bill for bolts and spikes alone, nine hundred tons of them, is two million dollars. Under the government contract, every length of track, every steel bolt, spike and brace, must be shipped eighteen thousand miles to California from the steelworks in Pittsburgh, on a four-month journey around the treacherous waters of Cape Horn in South America. Two years can pass between placing orders and receiving the goods.

Some 13,500 men are recruited to work on the railroad. Eighty percent of them are Chinese. Most are fugitives from poverty and hunger at home, lured to California by the Gold Rush. But prejudice and discrimination force them out of the mines to find work elsewhere.

White workers are paid two to three dollars a day, Chinese workers, just a dollar. And this doesn't include their food. Most of the Chinese workers come from a place in Canton Province that becomes known



as 'Railroad Town'.

Penetrating these mountains is a huge challenge. Formed from volcanic magma 20 million years ago, the granite of the Sierra Nevada is embedded with even harder xenoliths of crystalline rock, trapped in the granite as the magma cools.

The battle to carve through the mountains will not be won by steel and manpower alone. It will take a new and deadly invention — nitroglycerine.

In February 1867, the fifth year of the massive engineering project, progress is slow. But in a specially reinforced laboratory below the Donner Pass, Scottish chemist James Howden is employed to produce a clear yellow liquid that will blast the railroad through the Sierras in record time.

Nitroglycerine, the precursor to dynamite, is brewed from three inert ingredients: nitric acid, sulfuric acid and glycerol. Combined, they form one of the world's most powerful explosives, thirteen times more destructive than gunpowder. Used right, nitroglycerine can double the tunnelers' pace. But it is highly unstable and dangerous to handle. Any physical shock and nitroglycerine can explode.

When 15 men are blown to pieces on a San Francisco wharf, a ban is placed on transporting the deadly liquid.

To get around the ban, Howden manufactures his own nitroglycerine on site each day — at a cost of only 75 cents per pound.

After a fatal explosion in Tunnel 8, the company's Irish crews refuse to use nitroglycerine. Only Chinese workers are will-

ing to work with the volatile substance. Over 1,500 Chinese workers die in rock falls and explosions, but with nitroglycerine, the pace of tunneling picks up from two to three inches, to two feet a day.

Once through the mountains, track laying accelerates to ten miles a day. Each spike is struck three times; each rail requires ten spikes. At 400 rails to the mile, hammers are swung 21 million times before the railroad is complete. A third of the forests of California are cut down for wood.

In April, 1868, the Pacific company crosses the state line to Nevada. In May 1869, the eastern and western stretches of the railroad meet, and the Transcontinental Railroad is complete. For the nation, it's a day of celebration. The future has arrived.

Before the Transcontinental Railroad, it took months of hardship to cross the continent. Now, for \$65, you could travel from New York to San Francisco in just seven days.

Goods travel thousands of miles, radically changing the lives of ordinary people. New Yorkers taste California oranges for the first time. Communications are revolutionized. The telegraph follows the railroad. The Pony Express becomes outdated overnight.

The Railroads pass through the Great Plains, the last great tract of American soil untouched by settlement. Here, the impact of the railroad is devastating.

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Heartland

THE GREAT PLAINS

The Great Plains cover a quarter of the North American continent, from Iowa to the Rocky Mountains. Flattened by retreating glaciers at the end of the last ice age ten thousand years ago, a unique ecosystem takes shape in the rain shadow of the mighty Rockies.

There are no trees, and few rivers. The climate is semi-arid, and strong winds gust across the flat grasslands. This is the most fertile, untamed landscape in America.

At the end of the Civil War, 20 million bison roam the Great Plains. The bison are the largest land mammal in America — the descendants of an even larger race of bison that crossed an ice bridge from Asia 20,000 years ago. Moving south into warmer climates, they colonize land as far south as Florida and Central America.

The herds migrate north in the spring and south in the fall. In the “running season” at the end of summer, herds 25 miles long stampede across the grasslands.

Two hundred years ago, guns and horses brought to the Americas by the Spanish allowed Native farmers to become hunters. They’re the most skilled horsemen in America. They hunt with guns — but their weapon of choice is the bow. In the time it takes to discharge and reload a gun, a warrior can ride 300 yards and discharge 20 arrows.

The Ogallala Sioux move with the herds. They’ve built a civilization around them.

Black Elk is a six-year-old boy when the railroads first cross the Plains. He remembers the days of the great bison hunts — a sacred Sioux ritual.

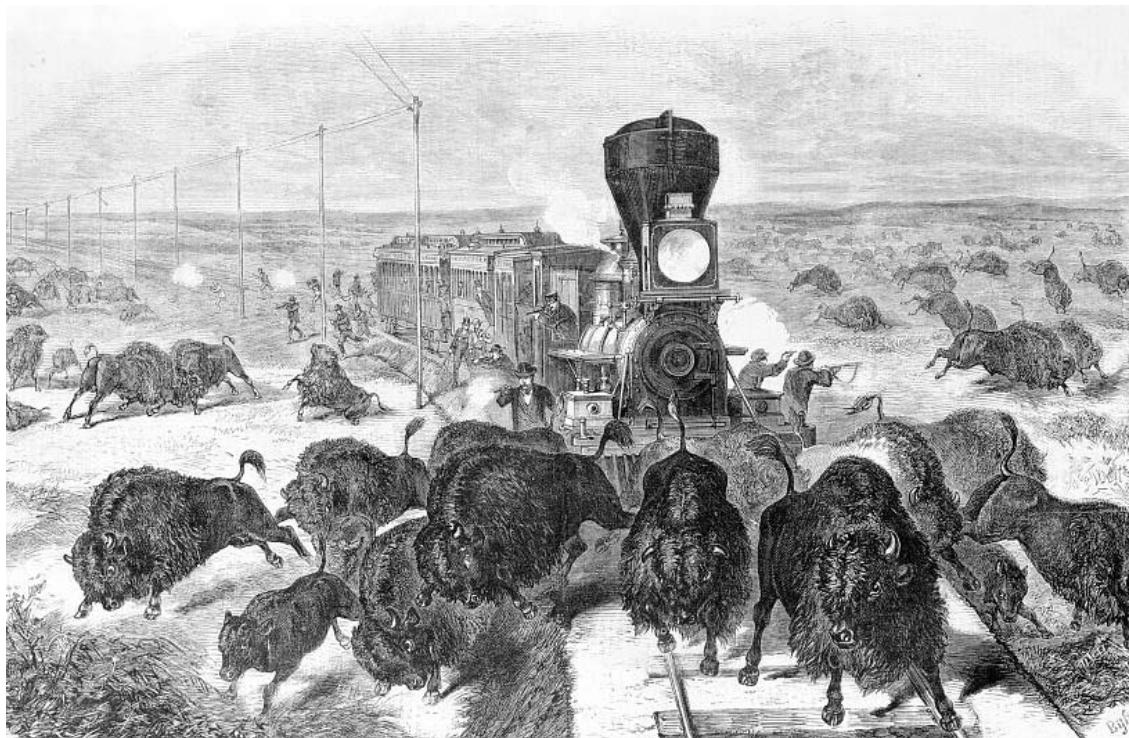
BLACK ELK

The hunters circled around them, and the cry went up, as in a battle, “Hoka hey!” which meant to charge. Then there was a great dust and everybody shouted and all the hunters went in to kill.

For the Sioux, the bison is a mobile general store. It provides fresh meat, clothes and bedding, covers for tepees

and the outer casing of boats, bags and water carriers — even coffins. They turn buffalo horns into spoons and cups. Even the beast’s sinews become fiber for ropes, thread, and the strings of hunting bows.

But the railroads bring other hunters to the Plains. The first white hunters are sportsmen. But big business is not far behind.



BLACK ELK

I can remember when the buffalo were so many that they could not be counted... But more and more white men came to kill them until there were only heaps of bones scattered where they used to be. The white men didn't kill them to eat. They killed them for the metal that makes them crazy, and they took only the hides to sell.

Back east, America is being transformed by an industrial revolution. Its factories and mills draw resources from across the continent. As the railroads spread west, the great natural resource of the Plains will now feed the wheels of industry. Belts turn the wheels of a mechanized loom. The cotton mills and factories of Massachusetts need long belts to drive machinery. Leather from a bison’s hide is of a size and strength that fits the bill.

In 1865, there are over 20 million bison roaming the Great Plains. A bison hide is worth three dollars, and a cartridge costs 25 cents. For a young hunter like Frank Mayer, the math makes sense: *The whole Western country went Buffalo mad. It was*

like a gold rush. Men left jobs, businesses, wives and children, sold whatever they had and put the money into outfits, wagons, rifles and ammunition. It was a harvest and we were the harvesters.

In one year in 1873, hunters on the Plains kill over 5 million bison.

Shooting into a herd from a distance, a skilled shot like Mayer can take down as

sands. In just one year, between 1870 and 1871, 40,000 settlers arrive in Nebraska. A quarter are single women; others, freed slaves. But what the settlers encounter in Nebraska are the harshest conditions imaginable — with the least resources to survive them.

In summer the temperature averages 110 degrees. There are no rivers, and little rainfall. Droughts last for up to ten months. Prairie fires are a constant danger.

To make good the claim, settlers must build a house. But there are no trees on the Prairie. The only building material is the prairie sod: the matted roots of grass cut into rectangular blocks.

Uriah Oblinger, a farmer from Indiana, puts a brave face on it: *All we have to do is plow up some sod, ...cut it in lengths to suit and lay up a wall & cover it — and you have a house.*

In a letter home to her brother, Mattie Oblinger describes the flat emptiness of the land: *Charlie, if you was here you would never get done looking, for you can see ever so far. I*

expect you think we live miserable because we are in a sod house. But I tell you in solid earnest I never enjoyed myself better. It is because every lick we strike is for our selves and not half for some one else.

On a good day, he can make a net profit of \$200 — more than the President makes.

In the winter of 1873, the railhead at Dodge City, Kansas ships out over 200,000 bison hides. Within a decade, the number of bison killed will reach 20 million.

SETTLERS

The railroads bring the hunters. And in their wake, the railroads bring a new breed — the settlers. The challenge of surviving on the Plains will test the settlers to the limits.

In 1862, Americans are made an incredible offer. Under the terms of Lincoln’s Homestead Act, heads of household can claim 160 acres of prairie land free, provided they stay for five years and make good the land. Ten percent of the U.S. is up for grabs, the biggest giveaway of free land in history.

Settlers head west by railroad in the thou-

To keep their new land, settlers have to stay put for at least five years. Tens of thousands give up. The loneliness of the Plains gives birth to a new condition: “Prairie Madness”.

One especially harsh summer, 30,000 newcomers to the new territories abandon their land, driven back east by drought, wind and dust storms.

Locusts threaten their crops. In 1874, 200,000 square miles of Nebraska — an area bigger than the size of California — are devastated by the world’s biggest locust plague. It contains 12 trillion insects and weighs 27 million tons.

Between 1888 and 1892 half the population of western Nebraska head back east

Continued on page 16

Heartland



to Iowa and Illinois. Over a third of all homesteaders eventually abandon their farms.

But first, they will need a resource America has in abundance, but located thousands of miles from these empty plains.

Great tracts of land in Michigan, Wisconsin and Minnesota are covered in forest. In the 1870s, trees seem a limitless resource. This is the wood the settlers need to build barns, farms and fences. Whole forests in the north are sacrificed.

The white pines stand 200 feet tall. White pine is strong and light, and perfect for construction.

In just twelve years, loggers cut down 90 per cent of Michigan's forests.

The lumber these men risk their lives to bring down river transforms the Great Plains. The timber, cut into uniform planks, is delivered west by railroad. Armed with planks and machine-made nails, settlers raise barns, houses, churches, even whole towns, at speed.

CATTLE AND THE COWBOY

In Kansas, at the railheads, the timber is used to build stockyards. And the railroads bring another character to the American west — the cowboy.

The population of America is booming. The Civil War effort stripped the nation of resources and decimated the cattle herds of the eastern States. And there are mouths to feed.

The East needs meat. And Texas has cows

— millions of them. In Texas a cow is worth just \$4, but in the booming eastern cities, \$35 to \$40.

As the railroads spread west into Kansas, Texas ranchers see fortunes to be made by driving their cattle north to meet them.

In 1879, 23-year-old Teddy Blue Abbott heads north with a vast herd of cattle: *All the cattle in the world seemed to be coming up out of Texas. On the trail we were hardly ever out of sight of a herd, and when we got to that big, flat country along the North Platte, we could see the dust of the others for twenty miles.*

Like many cowboys, Teddy is a farm-boy, bored of the homesteader life and looking for adventure. Others cowboys are Civil War veterans or freed slaves. A third are African American, or Mexican gauchos.

It takes at least ten men to drive a herd of 3,000 head of cattle north to the railheads.

TEDDY BLUE ABBOTT

One afternoon ... I rode up onto a little hill ... and I could see seven herds behind us. I knew there were eight herds ahead of us, and I could see the dust from thirteen more of them on the other side of the river.

In the 15 years after the Civil War, 10 million head of cattle are driven from Texas to the railheads. In 1871, a herd of 600,000 cattle come north in one epic drive.

But as settlement spreads across the West, the cowboys' days are numbered. Land in Kansas and Nebraska is parceled up for homesteads, blocking the cattle trail.

Homesteaders charge cowboys for use of the water holes, and claim for damages when cattle trample their crops.

The Wild West is tamed by a new invention — barbed wire. Before, it cost a thousand dollars to fence a claim of 160 acres. Barbed wire is cheap, and can be laid at speed. Its inventor, Nebraska farmer Joseph Gliddens, becomes one of the richest men in America, earning a 25-cent royalty on every hundred pounds of wire sold.

Cowboys parcel up the land in their turn, converting the western plains into a new cattle kingdom. The cattle graze on land where the bison once roamed. The days of the open range are over.

For the Native Americans of the Plains, this is the endgame. Two civilizations, hunters and settlers, come head to head in a final and unequal struggle.

The Fort Laramie Treaty of 1868 preserved the tribal homeland of the Sioux “as long as grass grows and rivers flow”. When white settlers encroach on land, the Sioux resist.

By 1876, Black Elk is 12 years old. *They told us they just wanted a little land... but our people knew better.*

Black Elk's people, the Ogalala Sioux, seek refuge with over 7,000 other displaced Native Americans in the Black Hills, under the command of Crazy Horse and Sitting Bull.

On the 25th of June 1876, Lt. Colonel George Custer reaches the “largest Indian camp on the North American continent”. He determines to attack, even though he has too few bullets to kill an estimated 7,000 Native Americans.

By the end of the day, Custer and 210 of his cavalrymen are massacred.

But the Native victory at Little Big Horn provokes a backlash, which leads up to the massacre in 1890 of Native Americans in the snow at Wounded Knee.

Now 27-year-old Black Elk is one of the few survivors: *When I look back now, I can still see the butchered women and children lying heaped and scattered as plain as*

when I saw them with eyes still young. And I see that something else died there and was buried in the blizzard. A people's dream died there. It was a beautiful dream.

That same year, the American Census Bureau declares the frontier closed. All available settlement land is taken. The Great Plains, the last sanctuary of the Native Americans, is parceled up into homesteads. What Black Elk calls ‘The great food pack for my people’ has become the great food source for the entire American nation.

INDUSTRIAL DEVELOPMENT

Railroads have tamed the West and transformed America. By 1890, 160,000 miles of new railroad connect the nation. Twelve lines cross the Mississippi and five transcontinental lines connect the coasts.

The railroads are the Internet of the era, transforming everything they touch. Goods travel thousands of miles, radically changing the lives of ordinary people. “Railroad time” replaces a patchwork of 20 irregular time zones, creating the system we use today.

In 1886, Richard Sears, a farm boy from Minnesota, sets up the world's first mail order catalogue, and creates an empire distributing manufactured goods. His 500-page catalog is mailed to over 200,000 homes. It lists thousands of items for sale: shoes, ploughs, fishing tackle, cutlery. Each new edition offers more items: bicycles, clothes, curtains and gramophones.

Catalogue goods and timber are shipped west to the Plains. Cattle and grain go east. And where the railroads meet, a city is born: Chicago. In Chicago, 2,000 trains arrive and depart daily. This is the railroad hub of the continent — and the commodities capital of America.

In the docks at Chicago, grain elevators process 11.8 million bushels of grain a year. Wood from a quarter of a million trees is piled in Chicago's lumberyards, and Chicago's stockyards hold 21,000 head of cattle. The beef is processed in Chicago's meatpacking plants, and delivered east in refrigerated railway cars. The price of beef halves and a new invention transforms the diet of the nation — the hamburger.

As the western frontier closes, another frontier opens: Chicago's first skyscrapers point the way to the future. For America, the only way now is up.

Cities



THE MODERN CITY —
MADE OF STEEL
They're called 'rough necks' — the Irish, Scandinavian and German immigrants and Mohawk Indians who build America's skyscrapers

WILLIAM STARRETT
Building skyscrapers is the nearest peacetime equivalent of war.. Even to the occasional grim reality of an accident where maimed bodies, even death remind us that we are fighting a war of construction against the forces of nature.

The skyscrapers won't exist without these men, nor will the modern America exist without that other magic ingredient that makes it all possible — steel. Steel will become the vital factor in the making of the American city. Combining the flexibility of wrought iron and the brute strength of cast iron, it's twenty percent stronger than both. But for steel to become the building material of the future a manufacturing revolution needs to take place.

Nowhere is the need for steel greater than in Chicago. Originally built of timber, the city burns to the ground in a devastating fire in 1871. If Chicago is to rebuild itself, the pressure on land values will mean it can only go one way — up.

To do this Chicago needs steel. In 1871 steel is still a rare luxury item, expensive and difficult to make. It takes a Pittsburgh businessman with an audacious vision to change all that.

In 1873, Andrew Carnegie attempts something never done before — the first mass-produced steel plant in the world. Having made his fortune in iron, he's

about to gamble it on steel. The plant, if it is completed, will transform not only Pittsburgh, but the entire industrial landscape of America.

CARNEGIE
Up to this time I had the reputation in business of being a bold, fearless, and perhaps a somewhat reckless young man. I then entered upon the most anxious period of my business life.

Carnegie shows plans to potential investors and explains excitedly and emphatically how his vision will take shape. But stock markets around the world have just crashed. The economy is in free fall America is experiencing a massive credit crunch.

Several investors pull out and Carnegie will have to buy their shares to prevent the project from collapsing. But if there is one thing that sums up Andrew Carnegie it is his belief in progress. A Scottish immigrant with a humble background, he is the embodiment of the American dream.

Bobbin boy in a textile mill, messenger boy, telegraph operator and now captain of his own iron business, Carnegie is now ready to risk everything on what he hopes will be the next big thing.

He has seen the latest steel technology in England: the Bessemer Steel Converter, capable of making high quality steel at a fraction of the normal cost.

The process is surprisingly simple: Molten pig iron is poured into a massive egg-like converter and blasted with air to remove the carbon impurities. When alloys are added to the molten metal, the

iron transforms into steel. For the first time in history, steel can be made quickly, cheaply and in vast quantities. Carnegie is an instant convert.

CARNEGIE
I have no faith in the policy of scattering one's resources. Put all good eggs in one basket and then watch the basket!

On August 22, 1875, despite severe delays, America's first Bessemer steel mill finally blasts into action. Carnegie is leading the way to the mass production of steel — from a mere few hundred tons of the stuff in 1860 to 11 million tons by 1900.

His steel will instigate the dawn of a new technological revolution. Cities like Pittsburgh will become manufacturing dynamos powering the new America.

In Chicago, Carnegie's steel helps rebuild the city from the ashes as the world's first skyscrapers are born.

Between 1885 and 1892, sixteen, eighteen, even twenty story steel-framed towers



Brooklyn Bridge Workers

transform Chicago's skyline. Steel provides the strength on which outrageous dreams will hang— and makes Andrew Carnegie the richest man in the world.

There are 66 skyscrapers under construction in Lower Manhattan in 1902. Many of the men working on them are ex-sailors. Others are the Irish immigrants who assembled the giant steel cables across the new Brooklyn Bridge. From Canada, Mohawk Indians arrive. They've been building iron and steel bridges and are skilled at working with steel at heights.

The pay is high — twice that of an average sailor — but so is the risk. A sudden gust of wind or bout of dizziness can be fatal.

The most famous skyscraper of all is being designed by George Burnham and built by engineer William Starrett. Originally called the Fuller building, it will forever be known another name: The Flatiron.

This 380-foot skyscraper is at the cutting edge of new technology. Unlike buildings made of heavy masonry or iron, which are limited in how high they can go, this skeleton of steel can go as high as it likes. The frame takes all the weight; the walls simply hang on it like a blanket. The steel frame also means thinner walls, bigger windows, and more light. The Flatiron, say its fans, is to the United States what the Parthenon is to Greece. To its enemies it's a disaster waiting to happen.

When New York's first skyscraper is completed in 1902, pessimistic locals take bets on how far its debris will spread when

the wind knocks it down. Although now dwarfed by taller skyscrapers, the Flatiron still stands strong.

STATUE OF LIBERTY AND IMMIGRATION

In 1885, construction is under threat on the most iconic structure in American History. The Statue of Liberty, a gift from the French people to America to commemorate the centennial of the Declaration of Independence, was designed and built in Paris, dismantled into parts, then

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Cities

shipped across the Atlantic to New York. But the Americans can't afford to build a pedestal, so it lies in bits on Bedloe's Island.

Newspaper Editor Joseph Pulitzer calls this a scandal: *It would be an irrevocable disgrace to New York City and the American Republic to have France send us this splendid gift without our having provided even so much as a landing place for it.*

Time is running out for Lady Liberty. If Pulitzer can't raise the cash through his newspaper, other cities like Baltimore, San Francisco and Philadelphia threaten to claim the statue for themselves.

PULITZER

We must raise the money. It is a gift of the whole country of France to the whole American people. Give something, however little. Let us hear from the people!

Pulitzer's words have a miraculous effect. From all over America donations begin to flood in. After four months, the \$100,000 needed to complete the pedestal is raised.

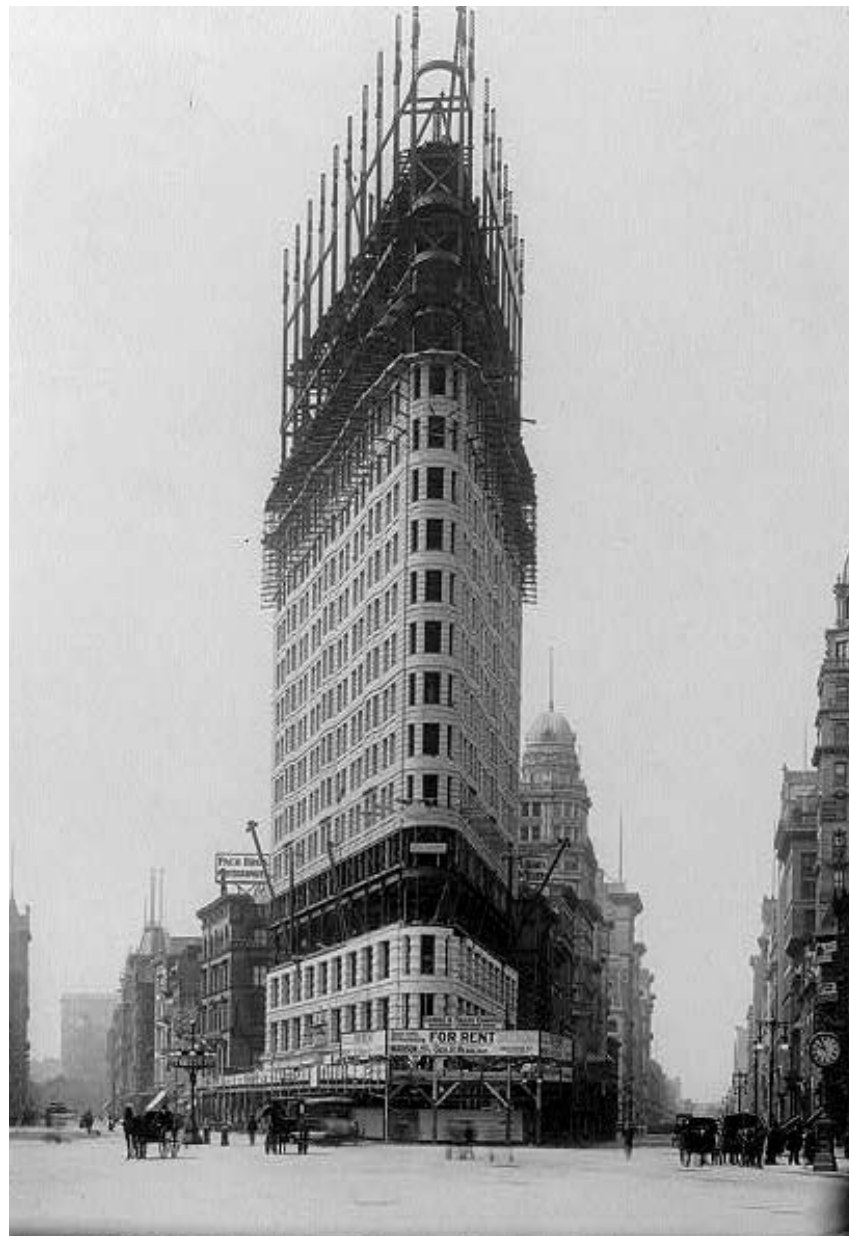
On April 22, 1886, after a hard winter building the pedestal, the workmen can finally celebrate. The 150-foot high pedestal complete with its foundations constitutes by far the largest single concrete mass of its time — more than 27,000 tons.

Now that the pedestal is complete, the iron skeleton can be assembled. Designed by Gustave Eiffel, who will later build the famous Eiffel Tower in Paris, the statue is built on a ninety-two foot high iron skeleton that forms the framework on which the copper shell must hang. A group of 200 immigrants must clad the statue using ropes and cranes.

The statue has over 350 individual copper pieces. Each one has to be attached to the metal frame, requiring more than 300,000 copper rivets. A bar is held against the head of the rivet to hold it firm during the hammering. The scale of the statue is enormous. Her index finger alone is 8 feet long.

By early October 1886, the bizarre specter of a headless Liberty towers over the harbor. The giant face is finally winched into position. Liberty nears completion. At the base a poem is carved:

*Give me your tired, your poor,
Your huddled masses yearning
to breath free,*



Flatiron

*The wretched refuse of your teeming shore.
Send these, the homeless,
tempest-tost to me.
I lift my lamp beside the golden door!*

The Statue of Liberty will come to represent not just New York but an entire nation. It faces southeast, the perfect viewing angle for those entering this new world for the first time. Between 1892 and 1919, 12 million immigrants will arrive here — Jews escaping the pogroms in Russia and Poland, Italians and Sicilians looking for a better life. The statue's power to symbolize the hope of a new kind of country where everyone has a chance to make it remains as powerful today as it was when the it was unveiled on October 28, 1886.

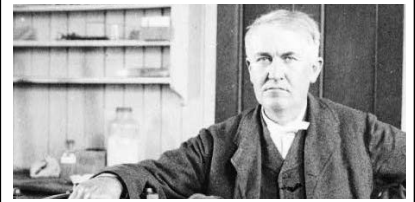
As the new arrivals pass through the immigration center on Ellis Island, many

will reinvent themselves. Schmuell Gelbfisz will become Sam Goldwyn. Angelo Siciliano will become Charles Atlas, Israel Isidore Baline will become Irving Berlin.

What they are coming to is a new type of city and a new type of civilization — vigorous, argumentative and optimistic. This civilization will spread across America in the first years of the new century.

An immigrant guidebook on survival in America sums up what is at stake: *Forget your customs and ideals. Select a goal and pursue it with all your might. You will experience a bad time but sooner or later you will achieve your goal. Do not take a moments rest. Run!*

THOMAS EDISON — MENLO PARK LABORATORY



Working in his lab in Menlo Park, New Jersey, Thomas Alva Edison is on the brink of an innovation that will revolutionize America.

His team works day and night to find the perfect filament for an electric lamp. Electricity isn't a new idea, but no one, so far, has managed use it as a light source. Americans use gas lamps to light homes and streets. Edison says he can light the whole of lower Manhattan with electricity. Now he has to prove it.

Edison needs a filament that will burn slowly in a vacuum. He's already tried hundreds of materials: thread rubbed with tarred lampjack, cotton, Chinese and Italian raw silk, horsehair, teak, spruce, boxwood, cork, celluloid, parchment — even beard hair.

He finally tries carbonized cardboard, which burns an astonishing 300 hours, longer than any other material so far.

By New Year's Eve 1879, Edison is ready to show off his new invention. Three thousand electricity sightseers flock to the Menlo Park laboratory. The Pennsylvania Railroad has arranged special trains to bring pilgrims from all directions.

Among the crowd is York Herald reporter Marshall Fox: *Incredible as it may appear, Edison's electric light is produced from a tiny strip of paper that a breath would blow away.*

Edison's lights are still experimental models. He'll go on to test 6,000 filaments from around the world. He'll improve vacuum processes and dynamos, the conducting wires and insulations. He'll go to extraordinary lengths to light not just a room, but an entire city.

By 1900, the country is turning electric. New York's first power station at Pearl Street lights up the city. Electric elevators are installed in the hundreds of new high-rise urban factories — a massive advance on the old slow steam elevators Elisha Otis first invented in 1852. In March the ground is broken for an electric powered subway.

Boom



Spindletop

OIL BOOM

Oil is a brutal business. Accidents are common. Drilling at Spindletop (a salt dome field outside Beaumont, Texas) has been tried on and off for years, without result. Now in January 1901, the Hamills, known as the best drillers in the business, are making one final attempt to make Spindletop pay.

Even with new technology, it's a painfully slow process. They have been drilling this single hole for months. Their funding is running out. They will only get paid if they strike oil.

Their steam-powered apparatus has already drilled through 500 feet of quicksand and bedrock. Their goal is 700 feet below — oil, formed from prehistoric organisms: plankton and algae that settled on ancient seabeds and were buried in

sediment. The Hamills don't know it but they are drilling towards a massive oil field 5,000 feet thick.

They hit oil and the gusher spouts two hundred feet into the air. The Hamills were hoping for fifty barrels a day of crude under Spindletop. It's more like 70,000 barrels, more than the total previous output of the American oil industry combined.

The oil spouts for nine days. The Hamills have tapped the vast oil reserves under Texas for the first time, opening billions of barrels of oil.

As America enters World War I, the need for oil becomes compelling. Oil-fired ships achieve full power faster, can travel further and can be refueled at sea. But as the conflict rages at sea and on land,

ensuring a constant supply of oil is a struggle. America is the largest producer of oil in the world, and when she enters the war in 1917, supplies of the precious commodity are guaranteed for the allies. Allied Victory, when it comes in 1918 is underpinned by American oil. The nation's role on the world stage is changed forever.

THE GREAT MIGRATION

Between 1916 and 1930 a million black southerners — from Alabama, Mississippi, Arkansas, South Carolina, Louisiana and Georgia escape poverty and persecution in search of a better life. Over 58,000 Mexicans join them. Called the great migration, this movement of people is the largest ever witnessed within the U.S.

Many head for the Ford plant in Detroit. Ford is unique in the automobile industry for paying all workers the same. Henry Ford causes a national sensation when he announces \$5 a day for all in 1919. The pay is a staggering 5 times more than the average wage for a sharecropper in Alabama.

Equal pay does not bring equality for the black and other minority workers who make their way to Detroit.

FRANK HADAS

You could have them [blacks] on some dirty, rough job where there wouldn't be many whites to complain against them. But if you tried to mix them in the assembly lines or any place else where whites predominated and hung their coats touching those of the whites you know... you couldn't do that.

Not only in Detroit, but also in other American cities where migrant workers have gathered, racial tensions worsen beyond the factory gates. White workers fear job competition once the wartime boom ends. African American workers become scapegoats in labor disputes. In Chicago, the tension is palpable on Chicago's unofficially segregated beaches. Residents and realtors predict properties will lose value as black families move in. They urge the city council to send the migrants back. Resentment reaches a boiling point in the hot summer of 1919. A black teenager inadvertently drifts into a white beach and drowns when he is struck by a rock thrown by a white man. A race riot ensues.

In Chicago, hope for an integrated city is destroyed by the riot. People call the summer of 1919 'The Red Summer'. Twenty-six riots break out across America — in Arkansas, South Carolina, Tennessee, Texas, Nebraska, and Washington, D.C. The racial boundaries have been drawn. Policemen patrol white public parks and beaches; theatre seating is segregated. White residents refuse to sell houses to blacks. At the same time whites living in black enclaves move out. The ghetto is born and as ghettos become more crowded they turn into slums.

Bust



GREAT DEPRESSION

In the 1920's, Los Angeles was in the grip of a property boom. With more money and mobility, people pour into the city from all over the country. Some 25,000 homes are built and sold in 1923 alone, making this the fastest growing city in the world. As the advertisements put it: 'The magnificent hills of Hollywoodland hold every metropolitan advantage.'

A new, upmarket housing development is being built just 6 miles from downtown Los Angeles. It's more than housing that's for sale. Millions of Americans want to own what they once only dreamt of and America's aspirations are driving its consumer and economic boom.

Car ownership rockets from 8 million in 1920 to 23 million by 1929. Toasters, vacuum cleaners, radios, telephones, irons, are bought in record numbers — on the installment plan. Consumers are between \$2 billion to \$3 billion in debt.

Cinema going went up 250% over the decade. By 1930, 100 million people go to the 'dream palaces' every week.

For many, the ultimate aspiration is to live in suburbia: *'a clean, pure atmosphere and a wonderful climate make Hollywoodland the 'Supreme Achievement in Community Building'.* The businessman developing this particular housing project

is getting his men to erect the largest advertising sign in the world, at an astronomical cost of \$21,000.

Made of 3' x 9' steel plates and wired with 4,000 light bulbs, his sign will read the name of his development, Hollywood, in 50 foot high letters. The name of this housing development will become a byword for wealth, consumption and entertainment — all the things that the nation aspired to in the 1920's.

Biggest is best. Real estate values rocket. In Manhattan, where land is at a premium, they build straight up. Skyscrapers soar in a race to be the world's tallest. Banks build biggest of all — seventy-seven floors of steel girders are thrown up in only three months on the Bank of Manhattan building. But the real revolution is happening on Wall Street. Banks invent the personal loan — and the personal check. Now everybody can buy shares. The stock market soars even faster than the skyscrapers. From the East Coast to the West, everybody wants a slice of the action.

The Wall Street Crash of October 1929 saw \$30 billion wiped out of the value of shares on the stock exchange. This initially affects only stockholders. For over a year, most people still think the country's economy — and the banks — are sound. Six months after the Crash,

President Herbert Hoover still exclaims *'I am convinced we have now passed the worst and with continued unity of effort we shall rapidly recover.'*

But by December 10, 1930 rumors are spreading about the Bank of United States's instability. Share prices drop from \$200 to \$20. When the bank starts selling their own shares to customers to try and spread the risk, people get nervous.

The psychological impact at home and abroad is huge. The Bank of United States is a private bank but its name is emblematic to people everywhere in the world. Confidence in American banks disintegrates. In the last 60 days of 1930, 600 banks close their doors.

The crisis of confidence in America's banks has a domino effect around the world. The U.S. had lent Germany \$1.4 billion to pay WWI reparations. As U.S. banks fail, they call in their foreign loans, causing the German banking system to collapse. Social and political upheaval results. The run on the banks of the United States helps put the Nazis into power in Germany.

Germany's fascist leader Adolf Hitler thinks America is a destitute country and always will be. *The Grapes of Wrath*, John Steinbeck's story of impoverished Dust Bowl migrants, only confirms Hitler's

view. Americans are, he thinks, a mongrel race doomed to the trash heap of history ever since they'd made the 'mistake' of freeing their slaves.

America is reeling. It is the world's biggest economy but the unemployment rate still stands at 17% in 1936. The Depression is not going away despite a second phase of President Roosevelt's New Deal policies.

In 1938, the Nazis take over Germany and threaten their neighbors. Fascism blooms in Italy and Spain.

Even in the midst of despair, a phenomenon of the time is the extraordinary popularity of radio. Despite the Depression, by 1935 there are over 20 million radio sets in America reaching 80 million listeners — twice as many as own telephones. Isolated rural communities are connected to networks across the nation. For the first time in history, one person with a microphone can speak to many, influence them, and perhaps change the course of history.

President Roosevelt harnesses this new technology to address the problems of the nation. He promotes 'The New Deal.' Government legislation and funding are used to tackle the country's instability — from agriculture through banking to unemployment.



CREDIT: LANCE KITCHENS

After years of isolation, America is about to receive the biggest wake-up call in history. People will be mobilized as never before — into armies, into munitions factories, into navies and into laboratories where new technology and inventions will drive the nation's war effort. But the biggest invention of all is a new type of war: a war of logistics, organization and planning.

On December 1941, in an Opama, Hawaii, radar station, Joe Lockard, a radar operator, spots something on the screen. Two pulses are showing something out to sea.

Lockard is new to this job. At first he thinks it is an equipment fault. Radar will ultimately become crucial to America's air defense systems, but for now the technology is still in its infancy and little understood.

The oscilloscope is an early warning radar system, using sonar to detect objects in its range. When a sound wave bounces off something hard — like an incoming plane — it causes the graph to peak. More planes means more peaks. But the American Army still regards radar as an unproven gadget. The radar station on Hawaii is manned only 4 hours a day.

All the plotters have gone home early to enjoy their first day off in over a month.

Earlier that morning, Lockard heard Hawaiian music on the radio. A pilot on the base has told him that whenever B-17 bombers fly from the U.S. mainland to Hawaii, this music is played to act as a homing beacon.

The radio signal is being used as a hom-

ing device, but not by American B-17s. Approaching are 353 Japanese aircraft. Six aircraft carriers have brought them within flying range of the American base.

Even a radio signal as low-strength as this can stretch many miles across the sea — guiding the incoming Japanese. If the American high command underestimated the need for radar, they also underestimated the threat posed by the Japanese.

America has built up its Pacific Fleet in Hawaii but it is not expecting to be attacked, especially not by Japan, which is over 3,700 miles away.

The Japanese are flying the world's first long range escort fighter: the Mitsubishi A6M Model 21 Zero Fighter. In 1941, it could out-fight and out-range any Allied fighter. The Zero fighters are more sophisticated than anything the allies have.

High command is never told that there are more than 50 planes on the radar screen. A fleet of 50 US B-17's would never fly all the way to Hawaii, but Lockard doesn't know that fact, so he isn't alert to the danger.

The Zero Fighter carries an astonishing 250 gallons of fuel, giving it a flying range of over 1,600 miles. Because this plane can fly much further from its aircraft carrier than any other fighter, this gives it one crucial advantage: SURPRISE.

The early radar system has its faults. The Japanese air squadron has flown into the equipment's "blind spot".

Although the radar behavior was out of the ordinary, Lockard cannot know that a fleet of Japanese bombers is within min-

utes of reaching Hawaii. At 7:58 am the Japanese begin one of the most audacious attacks in military history — the bombing of Pearl Harbor.

Under a barrage of bombs, in less than three hours the bulk of the US Pacific fleet is damaged beyond repair.

Twenty-seven hours after the attack America declares war on Japan. Pearl Harbor changes America forever. For the first time the country must take its place in the world — at a moment of crisis. Industry has been in decline for over a decade. Now the country must forget its peacetime attitudes and mobilize on a massive scale. America puts out a call to arms and industry from its people. The country must exploit every resource to become a machine of military might. Overnight, America transforms into an "Arsenal of Democracy".

Pulled into a global war, America must mobilize both men and machines.

WAR MACHINE

On the English south coast on August 17, 1942 a quiet buzz in the distance becomes a roar. A bombing raid is on its way to occupied Europe. What is extraordinary is that this flight takes place in broad daylight.

If these men can complete their mission and come back alive, the very way that war is fought will be changed.

American military planners want to destroy the network that holds together the Nazi occupation of Europe. Strate-

gic targets such as airfields, shipyards, communications and railways will be hit. Until now, the Allies considered daylight raids too dangerous. But U.S. military commanders want to hit the Germans around the clock with high altitude precision bombing.

Leading the mission is Colonel Paul Tibbets from Quincy, Illinois. A love for flying steals him from his original profession, medicine. America's Eighth Air Force considers him one of the best pilots of the B-17E bomber — the 'Flying Fortress'.

The crew has to be tough to withstand the cramped conditions, the altitude sickness and frostbite that come with flying above 20,000 feet. Air Force strategists count on the B-17E bomber to be just as tough.

In development at Boeing since 1935, the plane can carry 2,000 pounds of bombs for at least 2,000 miles. With four engines, it can go faster, higher and further while carrying a bigger payload and is equipped with eight 50-caliber machine guns to fight off enemy air attacks.

The target is Rouen — the German's biggest railway marshalling yard in northern France. Trains are vital to the Germans, supplying their empire across Europe. Tibbets and his crew are on a mission to wipe the yard from the map.

The weather is favorable with only a few small clouds. Visibility is virtually infinite. But even flying at 23,000 feet, visibility

Continued on page 22



B-17E Bomber, The Flying Fortress

WWII



goes both ways. Anti-aircraft fire shoots up just ahead of the plane. Tibbets heaves the plane to the side.

The B-17 bombers drop 36,900 pounds of bombs on the yard. The raid causes massive damage to the railway infrastructure. Although only 50% of the bombs fall in the target area, in 1942, that is precision bombing and a big improvement over nighttime attacks.

Only two of the B-17's sustain slight damage. Convinced by the accuracy of the bombing and no loss of American lives, the military initiate wide scale daylight bombing of strategic German sites across Europe.

Not all strategic bomb runs are so successful. B-17s become big targets for the Germans. America responds by upping production — for every B-17 shot down, American workers produce two more. The plan is simple: out-produce the enemy. That takes not only firepower but manpower.

The triumph of American technology, industry and planning is tested beyond anything seen before in warfare.

D-DAY

By June 1944, Southern England has become a massive army camp consisting of one and a half million Americans. General Dwight D. Eisenhower takes command of the biggest military operation in history, codenamed Operation Overlord. To the world, it will be known as D-Day.

America prepares itself, catering for every material factor of war. The Medical Corps alone stockpiles tens of thousands of tons

of medical supplies: bandages, morphine, surgical instruments, bedpans, oxygen tents, and X-ray machines. There are thousands of prosthetic limbs; even thousands of eyeballs in 5 sizes and 4 colors.

Before computers, calculators or even ballpoint pens, U.S. planners are able to prepare the biggest military operation ever seen. In an age before e-mail, the pencil and the carbon copy are king. Everything is done by hand. The system is precise, but labor intensive.

Hundreds of millions of finger-sized ampoules of penicillin are mass-produced. The world's first antibiotic prevents wounds and infection from killing men.

By 1943, an American soldier can draw on 4 tons of supplies. A Japanese combatant has just 2 pounds. But all these supplies are useless without men prepared to die.

A million and a half US soldiers have flooded southern England ready for the invasion of France, six times the number of U.S. combat troops that invaded Iraq.

This is the night of June 5th 1943 — the night before the biggest single military operation the world has ever seen — D-Day.

Many of these men have less than 12 hours to live.

BAUMGARTEN

I did not expect to come back alive. I wrote such to my sister to get the mail before my parents and break the news gently to them when she received the telegram that I was no longer alive.

Some shave their heads to make it easier for medic to deal with head wounds while others do it as an eve-of-battle ritual.

Kit and hardware take on a talismanic significance. Soldiers stuff their pockets with anything they can lay their hands on, from compasses to chocolate bars. Paratroopers' leg pouches alone weigh in at up to 80 pounds each.

Brigadier 'Slim Jim' Gavin addressed the men of the 82nd Airborne Division: *What you are going to go through you won't want to change for a million dollars — but you won't want to go through it very often again. For most of you this will be the first time going into battle. Remember — you are going to kill or you will be killed*

Nearly 5,000 American troops will die in one day — a day the world will never forget.

One and a half million American troops stand ready in southern England to storm German-held 'Fortress Europe'.

The first troops hit Omaha Beach, meeting ferocious German resistance. Barrage balloons, nicknamed Air Whales, fill the skies, their purpose to prevent the German Air Force from flying low and strafing the Allied troops with deadly machine gun fire. Their cables are a potential spider's web and they are armed with an explosive charge if they are hit. But they have another effect too.

These enormous helium filled silver sacks are attached to the waists of the men of the 320th Anti-Aircraft Barrage Balloon Battalion — hampering their every move and making them an obvious target to the incoming Luftwaffe (German Air Force).

There are 2,400 U.S. casualties at Omaha Beach alone. Yet Operation Overlord is a logistical miracle. Over 6,000 ships, 1,300 aircraft and 800 gliders are involved in this first wave alone.

Brilliant planning, courage and technology help the Allies to victory, even though 4,900 Americans die.

Across the Pacific hand to hand fighting is taking a terrible toll on American lives. The military once again turns to technology. A weapon to end the war — a weapon to change the world.

ATOM BOMB

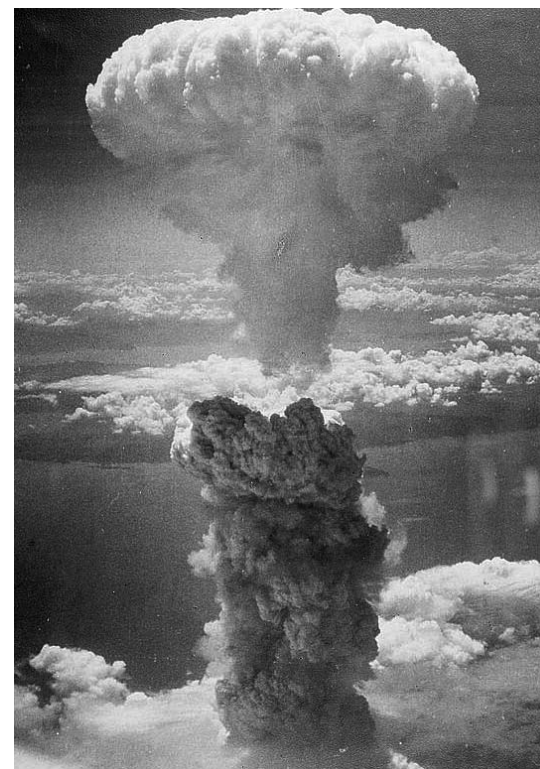
This is the middle of the Alamogordo desert in New Mexico. It is 5:45 AM on July 16, 1945. In less than a minute, American technology will change the world forever.

For Robert Oppenheimer, the Scientific Director for the top secret Manhattan Project, this is the culmination of nearly three years of work. His entire career rests on the success of this experiment. This is the most technologically advanced mechanism in the world. But nobody is sure whether it will work.

At the explosion of the atom bomb, a mushroom cloud rises high over the desert, billowing, huge, impossibly powerful. It will bring an end to the war against Japan. The human costs were devastating. Yet the war was over.

Where every other great nation on earth is left in ruins, America emerges from the war stronger than it went in. Quality of life has risen by 15%, and a previously crippled economy is back on track. America's distance from battle has left its infrastructure intact and its economy vibrant.

America's technical innovation has been decisive in winning the bloodiest war in history. In six short years America has risen from the Great Depression to become the most powerful nation in the world.





NATIONAL HISTORY DAY 2010 INNOVATION IN HISTORY

Moving students from “historical apathetic” to “historical engaged” is always a challenge for classroom teachers unless you are a National History Day teacher. National History Day teachers erase boring lessons of learning history through questions at the end of the chapter and challenges students to become historians. Paralleling the work of a historian, students select a topic of personal interest connected to a historic theme and then read widely. The reading leads students to uncover sources in archives, museums, libraries, and perhaps, even in the family attic. At this point students are just getting started. NHD participants spend a year researching, reading, analyzing, interpreting and finally presenting their research. The research experience

is profound. Years later, former NHD participants report the research process for National History Day was the single most empowering learning experience in their mid-school or high school years.

One of the most powerful tenets of NHD is the historical theme. The theme allows for a microscopic look below the surface of history to discover connections and cause/effect in and between events. Teachers report, when using the theme, students must “dig deep” to determine the direct impact and the long term change of their selected topic.

When students explore history through the theme they soon find innovation is everywhere. If they have a special interest in economics, civics, world or

American history, medicine, literature, industry, architecture or music students can find a topic to research. For instance, for the student who is interested in war and weapons, a research project on the impact of the stirrup or the longbow might be a perfect fit. Another possibility is a project on how the longbow, with its superior range, transformed the strategies of battles.

If students are interested in exploring things closer to home they might look at the invention of the vacuum cleaner or the TV dinner. Through the research students will discover the answer to the questions; did the innovations make life easier or did the innovations add more work? If students are interested in medicine they could examine

the discovery of the laser and trace medical breakthroughs. For the fashion enthusiast, what about the impact of blue jeans in the late 1890s?

History Day breathes life into the traditional history curriculum by engaging students and teachers in a hands-on and in-depth approach to studying the past. By focusing on a theme, students are introduced to a new organizational structure of learning history. Teachers are supported in introducing highly complex research strategies to students. Everyone wins. When NHD is implemented in the classroom, students are involved in a life changing learning experience. For more information, please visit our website at www.nhd.org.

America: The Story of Us

Lesson Activities Related to Viewing the Story

Pre-Viewing Activities:

1. This series explores the American landscape over time. Before viewing an episode, ask students to review a map depicting the United States during the time period covered in the episode or episodes they are watching.
2. The *America* series touches upon many specific stories to give perspective on the growth of the nation as a whole. Before watching an episode, ask students to make a list of 5-10 important events and people from the time period it covers. The class can review these lists together and discuss, before or after watching an episode.

Viewing Activities:

3. **Ace Reporters.** This 12 part series covers critical events from Jamestown through today. Imagine you are a reporter from any era in U.S. history and chose one important figure from American history to interview. Write 5 questions you would ask this historical figure and a short one-paragraph biography of your interview subject.
4. **Then and Now.** *America The Story of Us* depicts pivotal moments in U.S. history. What are some of the key moments or changes your community has experienced? You can explore this topic through photography. Locate a photograph that captures your community; this photo can be of any interesting person, place, or scene from the past. Then, find a photo that depicts a related scene from today. Compare and contrast these photos in a short essay.
5. **Slavery Depicted.** The Fugitive Slave Act of 1850 declared that all runaway slaves from slave states be returned to their masters. In the aftermath of this law, ads seeking runaway slaves appeared throughout U.S. newspapers. Ask students to locate one of these ads online or using the internet, and discuss these ads in small groups or with the larger class.
6. **Building the Rails.** The construction of the transcontinental railroad was made possible by the hard work of thousands of workers. The railroad would also not have been possible without substantial funds allocated by the U.S. government to the large railroad companies. Students should write an opinion piece or letter to the editor arguing for or against the use of government funds for the construction of the railroad, from the perspective of someone living in the 19th century at the time it was being constructed.
7. **Behind the Scenes at the Erie Canal.** The Erie Canal was one of the greatest engineering feats in U.S. history. Ask students to imagine they were a laborer working to help build the canal, and have them write a letter home to their families. Since many canal workers were immigrants, these letters could be to family members in other parts of the U.S. or overseas.
8. **Sky High in Chicago.** *The Chicago Daily News* documented transformation of that city from a small midwestern town to an industrial giant. The Library of Congress has digitized many articles and photos from this paper. Ask students to search the American Memory Project online (<http://memory.loc.gov>) to locate images and articles from Chicago's industrial heyday. They can choose an image or document and write a short one page analysis about what it reveals about Chicago during this era.
9. **WWII Remembered.** Many veterans of WWII are still alive to tell their stories. Ask students to locate and interview WWII vets to record their stories. Learn how to submit them to the Library of Congress Veterans History project at www.loc.gov/vets

AMERICA

The Story of Us



A vibrant 12-part series event connecting Americans of all ages with our shared past through remarkable computer generated imagery (CGI) and new perspectives on the people and places that have forged our diverse national culture.

Interested in learning more about **America The Story of Us**? Visit us online at www.history.com/classroom to read more about the following contests and find official rules and submission forms:

- **Libraries** - Create an original exhibit based on American or local history topics
- **Teachers** - Submit an innovative American history lesson plan
- **Students** - Create a short video on American history, or about your local history



THE ADVENTURE BEGINS
SUNDAY APRIL 25 9/8c