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18 Samuel Adams
Father of the
American Revolution

24 Siberian Trek
Hop aboard the
Trans-Siberian Railway

30 The Pony Express
A great saga of the
American West

BOSS

SPRING 2017 ASIA/PACIFIC – FALL 2017

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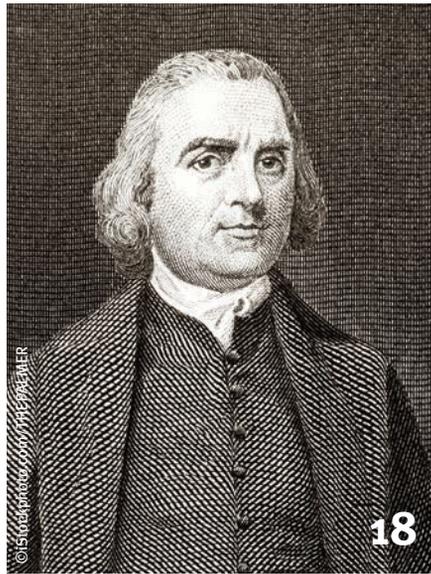
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ASIA/PACIFIC –
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THE VALUE OF “DOWN TIME”

After reading this issue’s travel story, “Adventures in Siberia,” I found myself wishing I had the time to take the Trans-Siberian Railway across Siberia. But wow—5,500 miles! I don’t think I could fit that in while working full time.

Of course, not having the time to take a months-long trip does not change the fact that time off from work, and vacations, are not only fun but important.

The theme for our 100th birthday at Dixon (1916-2016) was “Uncommon Excellence.” I believe that it is impossible to be excellent if you do not take time to unwind. Weekends and vacations are vital. Some of us like time off to be relaxing while others prefer travel and adventure. Whether you spend your “down time” reading a good book or hiking the Appalachian Trail or visiting an island, I am convinced that you will be a more productive person when you return to work.

Over the years, I have told many of the folks at work that I hope they look forward to Friday evening and the weekend but also to returning to work on Monday morning. We work hard and hopefully we have fun at work while satisfying our customers—but we all have our personal lives, and companies need to understand that.

Have fun this weekend—and start planning now for a great summer vacation.

Thanks for reading,

Dick Goodall

BOSS

SPRING 2017

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Publisher

Dixon Valve & Coupling Company

Editor

Sue De Pasquale

Editorial Board

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Scott Jones, Vice President, Sales &
Marketing, Dixon

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Joseph Dawson, Marketing Specialist

Bill Harr, Global Marketing Director

Karen R. Hurless, Art Director

Editorial & Design

Mid-Atlantic Media

Director of Custom Media

Jeni Mann

Designer

Cortney Geare

Please submit address changes and requests for new subscriptions to:

Dixon Valve & Coupling Company

Attn: Marketing Department

800 High Street

Chestertown, MD 21620 USA

boss@dixonvalve.com

410.778.2000, ext. 1220

Fax: 800.283.4966

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Dixon Valve & Coupling Company

800 High Street

Chestertown, MD 21620

877-963-4966

Fax: 800-283-4966

www.dixonvalve.com

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ON THE COVER

Smoked Gouda cheese wheel

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BUILDING CHARACTER /

How Much is Two Plus Two

> **A SELECTION COMMITTEE** of the board of directors was assigned the task of hiring a new CEO. The chairman decided to ask only one question: How much is two plus two?

The first candidate was the chief financial officer. Baffled by the question, he answered straightforwardly, "It's four."

The second candidate was a chief engineer from the company's research lab. He proudly answered that the result depends on whether the twos were positive twos or negative twos. The answer could be minus four, zero or plus four.

The sales manager was more creative: "Well, the way I look at it, two plus two is 22."

Finally they brought in legal counsel. He wrote the question down on a yellow legal pad, looked directly in the eyes of the questioner and said: "How much do you want it to be?"

This story illustrates how easy and tempting it is to suspend any notion that we should be candid and truthful in answering questions. And it's not just lawyers and politicians who succumb to the temptation. Lots of us delude ourselves into thinking it's part of the game to give an answer we think the interviewer wants to hear. So we lie to potential employers, government bureaucrats and others as if it is our right to do so.

This is not only dishonest, but in many cases it's counterproductive. Experienced interviewers can usually tell when they are being conned. And it doesn't make a good impression.

I'm sure some companies place a higher value on cleverness than credibility, but anyone worth working for wants integrity. It's often hard to be honest when we think the truth will be used to our disadvantage, but to a person of character there's no choice. ●

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Nurse, Patriot ... Spy?

Edith Cavell's execution set off a furor—and fueled anti-German sentiment during the Great War

> WHEN A 49-YEAR-OLD British nurse running a Red Cross hospital in occupied Belgium was executed at dawn on Oct. 12, 1915 by a German firing squad, the outrage was instant and enormous.

Daughter of a village vicar, Edith Cavell had readily confessed to helping some 200 British, French and Belgian soldiers caught behind enemy lines return safely to their countries. And though the Germans had loudly proclaimed that the penalty for such assistance was death, in practice, most people who were caught—women, in particular—were simply sent to prison or even fined.

Like the sinking of the *RMS Lusitania*, Cavell's killing seemed to confirm the barbarity of the German enemy, feeding war fever in the United States and inspiring twice as many young men in England, Australia, Canada and other parts of the United Kingdom to enlist. The furor was so intense that the Germans commuted the sentences of 33 of Cavell's co-defendants to prison terms.

A slight, unassuming woman, Cavell by all accounts accepted her fate with equanimity. She famously told an Anglican minister who was permitted to give her Communion the night before her death: "Patriotism is not enough. I must have no hatred or bitterness towards anyone." The words are inscribed on her statue near Trafalgar Square in London, the city's only statue honoring a female heroine of World War I.

After the war, her remains were returned to England and conveyed with solemn fanfare, first to Dover and a

great chorus of bells, then to Westminster Abbey for a state funeral, then to Norwich Cathedral, where she was buried and where a graveside service is still held every year on the anniversary of her death.

Canada named a mountain for her. Books and songs were written, films produced, hospitals and homes for nurses named for her, and she served as inspiration to the women of the resistance during World War II.

But Cavell always insisted she was simply "a nurse who tried to do her duty."

Born in Swardston in the district of South Norfolk in 1865, the eldest of four children raised to share everything they had with the poor, young Edith loved animals, wildflowers, tennis and dancing.

She worked as a governess but became fascinated by nursing. She trained at the London Hospital, worked in private nursing and in hospitals for the poor, and became both a teacher and an administrator. In 1907, a doctor in Brussels, inspired by Florence Nightingale, put her in charge of a pioneer training school for lay nurses to replace the untrained nuns who had traditionally cared for the sick. Cavell was reputedly a kind but demanding teacher, and her nurses were devoted to her.

In August 1914, Cavell was visiting her widowed mother in Norfolk when Germany invaded Belgium. She returned immediately to Belgium and instructed her nurses to treat every soldier, German and Allied, with equal



The Print Collector Heritage Images/Newscom

care. Her clinic became an arm of the Red Cross.

It was later that month, after the Battle of Mons, that Allied soldiers trapped behind enemy lines started showing up at her clinic. Cavell became part of a network that spirited them to neutral Holland. Everyone in the network knew the possible penalty, and soldiers would sometimes unthinkingly endanger their benefactors—getting drunk and calling attention to themselves, or sending incriminating postcards from England thanking Cavell for her help. But infiltration was the greatest danger and, in August 1915, betrayed by a Belgian collaborator, Cavell and dozens of her compatriots were arrested by the German secret police.

After 10 weeks in prison and a two-day trial, Cavell was sentenced to death. Despite last-minute pleas by the U.S. and Spanish governments, Cavell and a young colleague—a Belgian architect named Philippe Bauco—were led the very next morning to the killing ground. Each was blindfolded, tied to a post and died in a barrage of bullets.

The Germans insisted, in their defense, that Cavell was guilty of espionage. And for a century, the British government insisted that she had been nothing more than a nurse helping soldiers on all sides. But in 2015, on the centennial of Cavell's death, Dame Stella Rimington, former director general of the British security service MI5, presented new archival evidence in a BBC radio documentary suggesting that Cavell's work might have been more complicated.

Informally, Cavell and her network were passing along information they deemed interesting to the British War Office. The information was written in minuscule script on tiny pieces of fabric sewn into the clothes and tucked into



Pa/ZUMA Press/Newscom

Cavell, whose coffin is shown here in a file photo dated Jan. 5, 1919, was eventually buried in Norwich Cathedral, after a state funeral at Westminster Abbey.

the shoes of the soldiers they were sending home.

“Edith Cavell was not just a nurse who helped soldiers escape from occupied Belgium,” Rimington says. “She was also part of an active, if amateur intelligence network. We may

never know how far she was personally involved in espionage. Whatever the truth, she was a patriot who faced death by firing squad with courage and, in her own words, ‘without hatred or bitterness towards anyone.’

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Say Cheese!

The tasty food, served in thousands of different flavors and forms the world over, originates from three simple ingredients

BY MARY K. ZAJAC **“C’MON, GIRLS,”** Mary Holbrook says to the goats at Sleight Farm, her property outside of Bath, England. With little coaxing, the silky-haired animals leave their pen and trot with purpose down the picturesque country lane napped in morning fog. Bleating softly, the goats enter the milking chamber, lining up efficiently, necks stretching for their feed trough. Milking commences, and before long the pale liquid is heading to the creamery, where

it will eventually become one of Holbrook’s award-winning cheeses sold at gourmet British shops, like Harrods and Neal’s Yard Dairy.

Halfway across the globe and just a few miles from the Pacific Ocean, nearly the same routine is underway in Tillamook, Oregon, if on a slightly larger scale. Cows replace goats on the roughly 100 farms that comprise the Tillamook County Creamery Association. Every day, milk from the farms in this cooperative is trucked to the Tillamook Cheese Factory, where, within 24 hours, it will be transformed into cheese (as well as yogurt, ice cream, sour cream and butter).

In 2015, Americans consumed a record-breaking 35 pounds of cheese per capita; in contrast, France tops world cheese consumption at 58 pounds per capita. Cheese fills our grilled sandwiches, tops our pizzas, melts over our burgers. We grate it on tacos and pasta. We fry it, bake it, slice it and eat it on crackers. Globally, there are nearly 2,000 recognized varieties of cheese—a diverse array of wheels, loaves, pyramids



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and logs of blue and white, orange and yellow, soft, hard, dry or creamy, made on small farms or in large factories from the milk of cows and sheep, goats, and even the occasional buffalo or camel.

And yet, all this variety comes from three simple ingredients: milk, salt and enzymatic starter. How these ingredients are coaxed together, treated and aged makes up the magic of cheese.

A Flavorful History

Technology, human resourcefulness and creativity are at the heart of cheese making. Archaeological evidence points toward the first

**Globally,
there are nearly
2,000
recognized
varieties of cheese**

attempts to produce cheese at around 6500 to 6000 B.C. in Mesopotamia (what is now Iraq and parts of Syria), making cheese one of the world's oldest foods.

A somewhat fanciful story-myth credits the discovery of cheese to a shepherd who was transporting milk in a pouch made from the lining of a cow's stomach. When he arrived at his destination, the milk had become curdled solids. But the reality is that the "invention" of cheese relied on a number of agricultural and technological advances.

First steps included the domestication of sheep and goats around 7000 B.C. and a shift to using



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Thanks to the spread of new techniques in cheese making by the Celts, different parts of Europe were able to develop new styles of cheese making that were particular to their regions.

this livestock for milk, as well as meat, production. The invention of pottery, circa 7000 to 6500 B.C., also marked a turning point. Pottery not only meant that milk could be stored for future use, but it also meant available vessels to heat or ferment milk, sieves to strain and separate curds from whey, and

basins to hold and age cheese.

The earliest cheeses were most likely very soft—along the lines of modern ricotta cheese in style—and made from heating milk and relying on the natural coagulation properties of the lactic acid found in the milk to cause the separation of curds (solids) and

whey (liquid). This kind of cheese would have had high moisture content and would spoil quickly. To prevent the latter, the cheese would be salted and packed in airtight containers.

By the early Middle Ages, thanks to the spread of new techniques in cheese making by the Celts, different parts of Europe were able to develop new styles of cheese making that were particular to their regions.

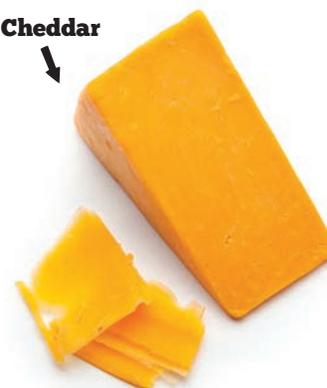
Cheese makers in France developed three families of soft-ripening cheeses: those with “bloomy rinds,” like brie, that produce a soft and edible white rind; lactic cheeses, like chevre, that rely on lactic acid in milk for coagulation; and



American



Cheddar



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A modern milking parlor

Dixon Sanitary products used in cheese manufacturing:

- Centrifugal Pumps
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washed-rind cheeses (also known as monastery cheeses) that are rinsed with liquids, including beer or wine, to encourage the growth of the bacterium *Brevibacterium linens*, which results in a pungent cheese with a flavorful rind, like Crottin or Limburger. (These cheeses are still made by Trappists in the United States and Europe).

The Alpine region created large, firm cheeses that were named for their regions of origin: Gruyere, Comte and Emmental. And in the 18th and 19th centuries, Britain developed stone presses, and adopted the use of liberal salting of the curds and a method known as “scalding” to promote better expulsion of whey—all technologies that resulted in English cheddar becoming a luxury item.

It was the Puritans who initially brought cheese making to America, where it flourished in the mid-19th

century. In 1850, New York produced the most cheese, followed by Ohio and Vermont. Cheddar was the most commonly produced cheese because the quality was relatively easy to control, and the cheese fetched top dollar on the London market.

By 1874, the United States exported more than 100 million pounds of cheese to England, but as demand climbed,



Bulk milk tanks



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Milk filling in a vat

supply could not keep up. Factories began to cut corners, skimming butterfat to make the milk go farther or using oleomargarine as a substitute. This practice eventually became discouraged and regulated by the federal government at the end of the 19th century.

Next came large-scale manufacturing, which led to the homogenization of cheddar and other

mass-produced cheeses in the American market.

“Pasteurization and standardization, ... drastically reduced the incidence of quality in factory cheese and also made it difficult to achieve the full range and character that are evident in cheddar cheeses made by traditional methods,” notes food scientist Paul Kindstedt in *Cheese and Culture*.

He concludes: “It’s a trend toward blander flavor.”

In the 21st century, we find that reversing itself, with the rise of artisan and farmstead cheese makers and the growing popularity of farm-to-table dining. These movements have renewed the public demand for high-quality and distinctive cheeses across the spectrum.

Recipe for Success

Tillamook Cheese Factory sits on Oregon’s Highway 101, nestled in the valley between the Northern Oregon Coast Range and the Pacific Ocean. The company’s cheddar recipe,

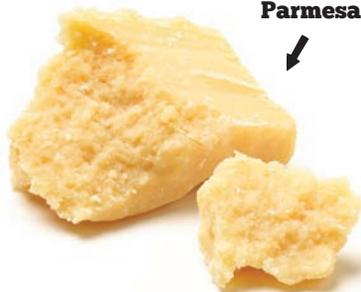
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Adding starter culture

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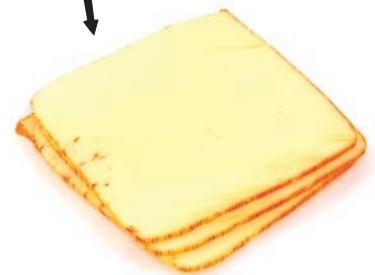
Parmesan



Feta



Muenster



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Heating and stirring the milk



Separating curds from whey

according to Dale Baumgartner, the company’s head cheese master, dates back to 1894, when Peter McIntosh, a Canadian who became known as “cheese king of the coast,” brought it to Oregon. Although production has become more mechanized and modernized at Tillamook, little has been done to tinker with the original recipe.

One hundred pounds of milk will yield approximately 10 pounds of cheese, and Tillamook produces roughly 171,000 pounds of cheese per day. The process begins with the daily delivery of milk from Tillamook’s cooperative farms. The milk is poured into large vats, and then a starter culture is added. In earlier times, the separation of curds and whey was propelled by lactic acid within the milk itself, and later by rennet, a substance

found in the lining of cows’ and other milk-producing mammals’ stomachs. Today, a variety of starter cultures replace rennet, including the most common, *Lactobacillus*, and other

begin to separate from the whey, the milky liquid. In some larger operations, even late into the last century—and still in some small operations—the stirring process

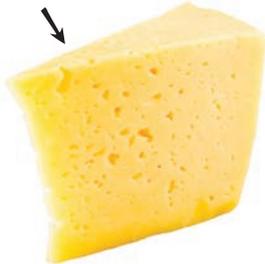
One hundred pounds of milk will yield approximately 10 pounds of cheese, and Tillamook produces roughly 171,000 pounds of cheese per day.

cultures that are used for specific cheeses, particularly blue cheeses. There are also vegetarian options, like thistle, that act in the same manner as animal-derived starters.

Once the starter is stirred into milk, the curds, or solid portions,

was done by hand. “Cheese making was a very physical, labor-intensive job,” says John Umhoefer, executive director of the Wisconsin Cheese Makers Association. “Cheddar [curds], for example, had to be lifted and turned constantly.”

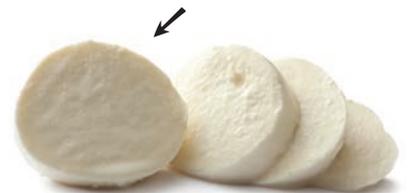
Havarti



Camembert



Mozzarella





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Preparing curd for forms

“Automation has replaced manpower in performing many tasks. It’s all the rage now to replace difficult hand work with machinery,” explains Umhoefer.

Now, instead of human arms, a large metal forklike structure combs through the slushy liquid at Tillamook and most other commercial cheese operations.

“The biggest change in cheese making in the last 30 years is automation,” explains Umhoefer. “Automation has replaced manpower in performing many tasks. It’s all the rage now to replace difficult hand work with machinery.”

At Tillamook, once the separation is complete, the curds are siphoned off into a 20-foot-long tunnel, where mill-like wheels rotate the curds, so that Baumgartner can look for the amount

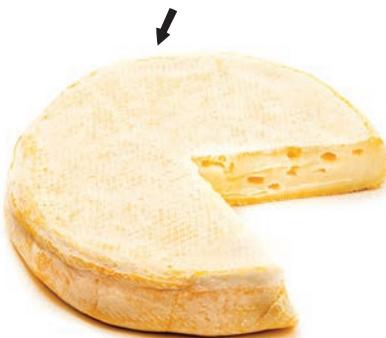
of “stretch” in the curd that indicates the cheddaring process is underway. Once the proper stretch is reached, salt is worked through the curds before they are packed into metal towers, where they rest for 20 to 25 minutes before being pressed into 42-pound blocks.

The cheese is then placed in a temperature-controlled storage area (42 degrees Fahrenheit or 5.5 degrees Celsius), where it will age from 60 days to three years. Then, each block of cheese is quality tested before being cut into 1-pound “loaves” or bricks and packaged. The packing process, too, used to be done by human hand. Now,

Ricotta



Reblochon



Gevrik



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Pressing cheese curd into forms

robotic devices are used to cut, weigh and wrap each unit of cheese. “Robotics is really a chance for precise calibration,” says Umhoefer. “You can get a more precise cut, a more exact weight.”

The Charm of Artisan

Perhaps the biggest recent change in the cheese industry has little to do with technological advances and everything to do with artisanal methods. Umhoefer characterizes the growth of artisan and farmstead cheese making as “explosive.” “It’s really reinvigorated the whole industry,” he says.



Packaging the completed product

He estimates there are nearly 500 artisan cheese makers in the United States alone, many of them in top cheese-producing states, like Wisconsin, California and New York.

Several things set apart artisan cheese makers from the larger companies. Around the world, artisan cheese makers often rely on their own herds, like Cypress Grove in Humboldt, California, which began when founder Mary Keehn asked a neighbor if she could buy a pair of goats. She was told she could have them for free if she could catch them (she did). Some 30 years later, Cypress Grove’s dairy today allows the small company to control breeding and herd health, and raise their animals in humane conditions to produce high-quality milk. Much of the cheese production at Cypress Grove, including

the creation of its flagship cheese, Humboldt Fog, relies on human labor. The vegetable ash that separates the two layers of Humboldt Fog is sprinkled by hand, for example, and every round of cheese is hand-wrapped.

Along with a high level of quality control made possible by smaller production levels, artisan and farmstead cheeses also often reflect all the variations possible within cheese due to seasonal fluctuations and breeds of animals. “Milk changes every day and every season,” says Umhoefer. “Summer milk becomes lower in fat and becomes more yellow because the cows are eating more grass. That’s part of the charm of farmstead cheeses.”

Cheeses can also take on the characteristics of the area in which

Colby-Jack



Cheshire



Emmentaler



By the Numbers



France leads the world in per capita global cheese consumption with **26.8 kg** (roughly 58 lbs.) annually in 2015.



The **United States** leads the world in quantity of cheese production, followed by France, Germany and Italy.



France produces **1,200** varieties of cheeses.



There are around **2,000** varieties of cheeses.

Americans eat **35 lbs.** of cheese a year.

In 2015, the **United States** produced a record-breaking **11.8 billion pounds** of cheese. This is **3%** more than in previous years, and **29%** more than in 2005.



Wisconsin leads the United States in cheese production (producing 20% of all cheese made in the U.S. and 600 different varieties of cheese), followed by California, Idaho and New York.

The most popular cheese recipe is the United States is "macaroni and cheese."



Mozzarella is the most produced cheese in the United States, followed by cheddar.

they're made, or the terroir, a term most closely associated with wine. "Terroir is real," says Umhoefer. "You can taste it." Cheddar from different parts of the United States will have different flavor profiles. Umhoefer pronounces cheddar from New York as having "a sulfur-y note" because of local mineral content and Wisconsin cheddar as being more mellow "with a meaty, broth-y note." "Out west, cheese is milder still," he says. "Tillamook is milder and creamier."

"There really is something to the fact that animals eating different feed and grass really impact flavor, and those differences can be perceived. That's part of the fun."

Umhoefer credits artisan cheese for reinvigorating the entire cheese industry by creating demand for distinctive, often original cheeses, something that hasn't happened since feta cheese entered the market more than 30 years



ago. "That product that was micro has now become macro," he explains of feta. "When you think about Asiago or havarti cheese—people couldn't have named them 20 years ago, and now they

order them on their sandwiches at Panera."

"We in the cheese industry are excited about this," he says. "It has given us new growth." ■

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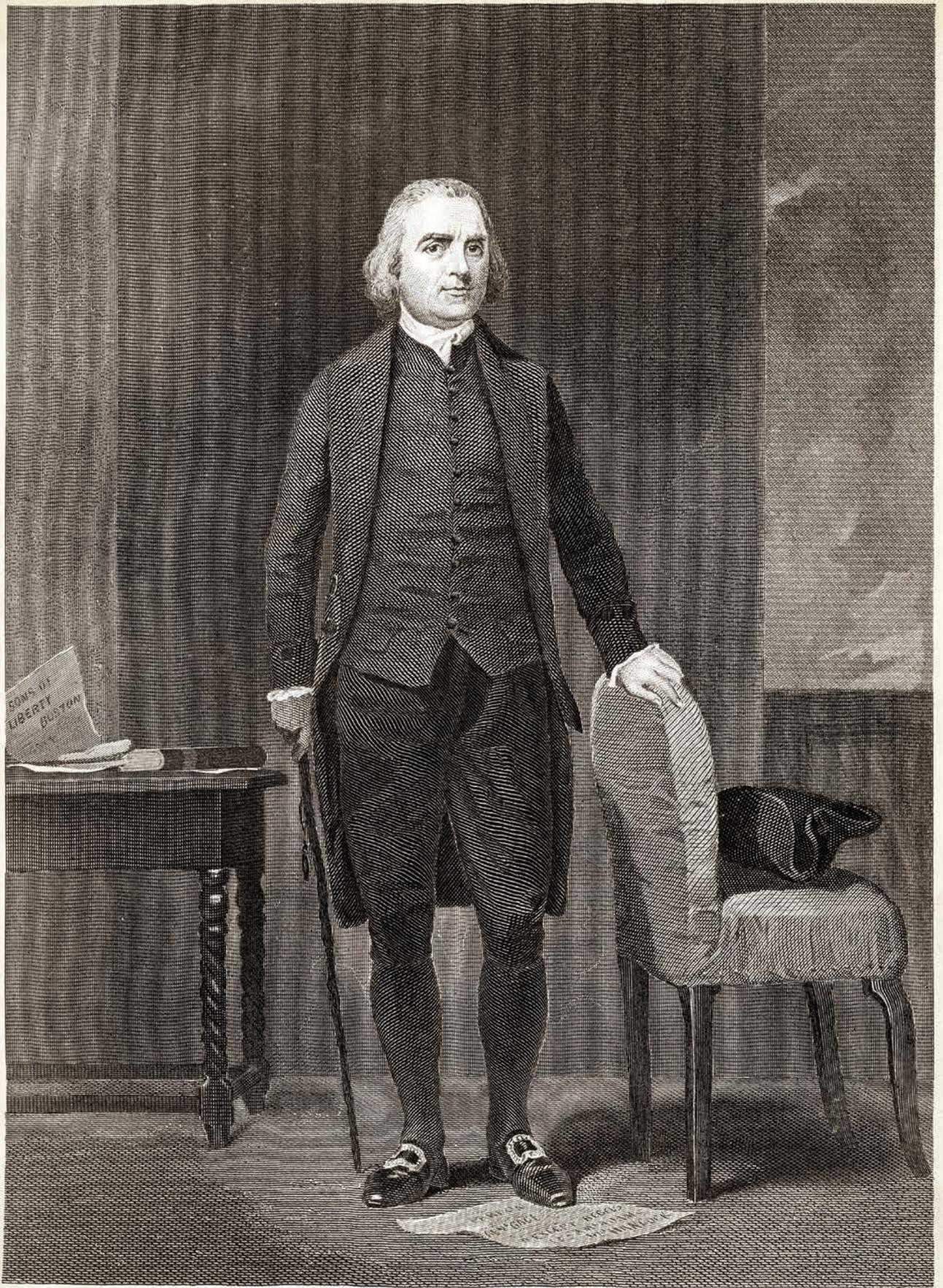
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Sam Adams



Father of the American Revolution

Samuel Adams single-mindedly
pursued the creation of America

BY DAVID HOLZEL

On March 6, 1770, a day after the Boston Massacre left five townspeople dead from gunshots fired by British troops who were occupying the city, a committee of seven local leaders went to confront the acting governor of Massachusetts, Thomas Hutchinson.

The Boston men found Hutchinson—King George III's man in the colony—and his 28-member council dressed in white wigs and scarlet robes. Officers of the British army and navy, in full regalia, were also in attendance. It was a display calculated to humble and intimidate any average British subject into realizing that arrayed against him were both the magnificence of the royal authority and its inexhaustible military.

That's why the people of Boston sent Samuel Adams to head the group meeting with Hutchinson. Adams, 47, was the one man not to be cowed by demonstrations of the king's authority.

With the backing of 3,000 town residents who had met in assembly that day, Adams and his committee faced

Hutchinson to reject a British offer to withdraw just one of two regiments occupying Boston. "Nothing less will satisfy than a total and immediate removal of all troops," Adams told Hutchinson. "Both regiments or none."

"The troops are not subject to my authority," Hutchinson replied. "I have no power to remove them."



GOVERNOR HUTCHINSON

"If you have the power to remove one regiment, you have the power to remove both," Adams said.

The British withdrew to deliberate privately. When they returned, they announced the troops would be removed from town to an island in Boston Harbor.

The British had blinked first. They had occupied Boston to blunt the town's boycott of British goods—a boycott enacted because of unfair taxes and a threat to American self-government. Now, with the added threat of insurrection, the British had been outmaneuvered by these same colonials, who were led by Adams.

Adams rose to his role as leader of the resistance on the strength of his Puritan religion, his reading of Enlightenment philosophy and a single-minded focus on the cause of America. While other founders had their vocations that vied for their time and energy, Adams focused on the creation of America. He was at once a politician, organizer and theoretician.

“Thomas Hutchinson” ©iStockphoto.com/mashuk; “Pen and Ink” ©iStockphoto.com/DNY59



John Adams, Samuel Adams and James Bowdoin are shown here drafting the Massachusetts Constitution of 1780.

“If taxes are laid upon us in any shape without our having a legal representative where they are laid, are we not reduced from the character of free subjects to the miserable state of tributary slaves?”

—Samuel Adams

His association with beer making—popularized today by Samuel Adams beer—was brief. But because he was the first to the finish line calling for independence, he became known in his time as the father of the American Revolution.

“He supplied colonists not only the reasons to fight for their rights but with the political weapons to do battle,” wrote biographer Mark Puls in *Samuel Adams: Father of the American Revolution*.

Adams was born in Boston in 1722. His father, Samuel, sold malt to beer makers. His mother, Mary, was a woman of “severe religious principles.” Of the 12 children she bore, Samuel, the fourth, was only one of three who lived past age 2.

Samuel attended Boston Latin School. He entered Harvard at age 14 and received a master’s degree from the college in 1743, at age 21. He became an apprentice in the counting house of a Boston merchant and later was a tax collector.

All this was prelude to what followed after Adams began submitting political essays to newspapers. Massachusetts had always been the best-educated American colony, with a literacy rate for men at 85 percent. While the towns and villages of Massachusetts were intimately connected, newspapers brought the people closer still, sending ideas far beyond the local taverns and town meetings. Adams discovered the power of mass media just as he discovered his cause.

The Problem Was Taxes

The French and Indian War in America, which began in 1756, led to a great victory for the British, but it was an expensive one. Fighting the French and protecting the coastal colonies racked up so much debt that by 1763, when the war ended, Great Britain’s interest payments on the war debt equaled half of its annual budget.

Tax collection in the colonies had always been lax. Adams knew from experience how much his neighbors hated paying taxes. And when Parliament passed the Sugar Act in 1764 to revive some uncollected taxes on the colonies, Adams was struck by its injustice. In a speech, he roused Bostonians to his view and was given the job of writing his town's instructions for its representatives to the Massachusetts legislature. Such instructions were published widely and read on both sides of the Atlantic.

In those instructions, Adams drew a line that eventually led to revolution.

"If taxes are laid upon us in any shape without our having a legal representative where they are laid, are we not reduced from the character of free subjects to the miserable state of tributary slaves?"

More than the "no taxation without representation" bumper sticker message, Adams' argument reverberates with the biblical story of the Hebrews in Egypt. Puritans had escaped their Old World Egypt to find their freedom in Massachusetts. Adams seemed particularly tuned to noticing any infringement of that freedom.

Parliament repealed the Sugar Act but followed with the Stamp Act in 1765. In Boston, mobs hanged the local stamp master in effigy on what became known as the Liberty Tree. Adams wrote that the tax violated the British constitution. "The most essential rights of British subjects are those of being represented in the same body which exercises the power of levying taxes upon them."

With the colonies boycotting or skirting the regulations, the stamp tax failed and was repealed in 1766. By then, Adams had been elected to the Massachusetts legislature and was appointed its clerk, giving him a much-needed income and the power to phrase the assembly's decisions.

The Townshend Acts followed in 1767. They laid duties on imported items and raised the number of customs agents in America. While many Americans saw such taxes as just part

of doing business, Adams saw them as a threat to home rule.

Early on, Adams had been influenced by English philosopher John Locke. "Locke argued that all men were born with natural rights ordained by God," Puls wrote. They were entitled to "life, liberty and property."

The British taxes, Adams reasoned, were a threat to property. "What a man has honestly acquired is absolutely his own, which he may freely give, but cannot be taken from him without his consent," he wrote.

So the colonists boycotted the taxed goods. While this was a hardship on the colonists, it also hurt British merchants, many of whom faced bankruptcy from the boycott.

Adams proposed that the Massachusetts House send "circular letters" to the other provincial legislatures to discuss the Townshend Acts and gauge "the true sentiments of America."

As was the fate of earlier taxes, Parliament repealed the Townshend Acts in 1769—except for the tax on tea, to demonstrate the right to tax America. Boston was now under British military occupation, which heightened tensions and led to the Boston Massacre in 1770. Resentment was spreading to other

colonies and, as the Britain shut down colonial legislatures, Adams in 1771 proposed the creation of "committees of correspondence" to allow colonial leaders to remain in contact.

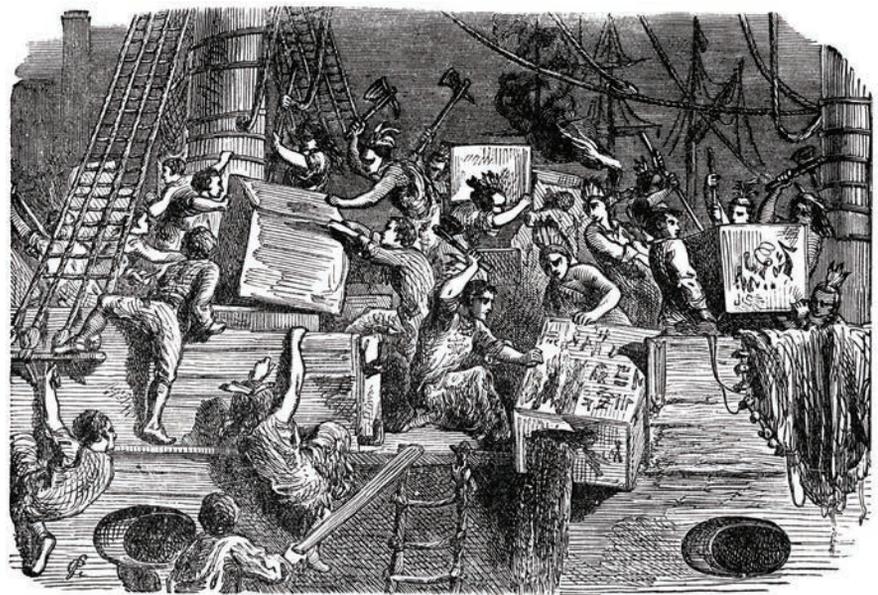
As war approached, Adams in 1773 called for "a Congress of American States to be assembled as soon as possible to draw up a bill of rights and publish it to the world..." He was the first American leader to do so.

Working Behind the Scenes

With the tea tax still on the books, Parliament passed the Tea Act in 1773, to allow the East India Company to sell tea directly to the colonists, cutting out middlemen and undercutting competitors, even with the 3-penny-per-pound duty. In Boston, Adams led radicals in an effort to force ships containing tea back to England. When that failed, and with no compromise coming from British authorities, a group of men, thought to be led by Adams, hatched the Boston Tea Party. On the night of Dec. 16, they threw 342 chests of tea into the harbor to keep it from being unloaded.

Parliament retaliated by prohibiting shipping in Boston Harbor. On the day

Destruction of tea in Boston harbor



©iStockphoto.com/ivan-96

the act was to take effect, colonial leaders called a day of prayer and fasting all over America.

When the Continental Congress gathered in Philadelphia in the late summer of 1774, Adams worked behind the scenes to improve chances of pursuing independence rather than reconciliation with Britain. He believed that if Virginia representatives were given leadership roles, the other colonies would go along. But if Massachusetts men were in charge, the conflict with Britain would be seen as regional. So Adams worked the delegates to see that George Washington of Virginia was named commander of the army, over Massachusetts' John Hancock, who was appointed president of Congress as a consolation.

In 1775, Britain extended martial law to all of the colonies. Loyalists began raising their own army. Most Americans wavered on independence,

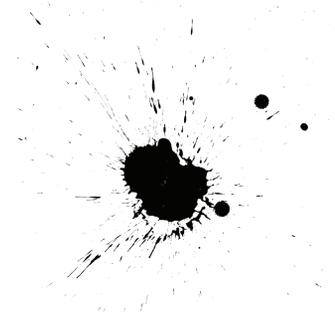
but Adams pushed for a declaration, "believing the colonies would find no allies if Congress was unwilling to declare independence," Puls wrote.

While others, including Thomas Jefferson, were appointed to draft the Declaration of Independence, Adams was named to a committee to draft Articles of Confederation, which would stitch together the new country. Congress endorsed the articles in November 1777. The next year, France recognized the United States of America, entered the war and helped the United States prevail against the British.

After the British surrender at Yorktown in 1781, Adams returned home to Boston. His salary as clerk of the legislature hadn't been paid since 1774, and his house had been ruined in the British occupation. In peace, he was elected lieutenant governor of Massachusetts and then governor.

He was 82 when he died on Oct. 2, 1803. By then, three presidents had been elected under the U.S. Constitution, which supplanted the Articles of Confederation. Adams supported the Constitution, although he worried it could once again erode the natural rights of men.

Jefferson, who shared Adams' concern about federal power, wrote: "I always considered him [Adams] more than any other member the fountain of our more important measures. If there was any Palinurus [helmsman] to the revolution, Samuel Adams was it." ■



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Did you know that...

TRIVIA

1. Where was Snoopy born in Charles Schulz' popular Peanuts comic strip?
2. What was Babe Ruth's win/loss record as a Big League pitcher?
3. Fred Cox, former Minnesota Vikings kicker, holds the patent on what athletic toy?
4. What was the only U.S. battleship to be present at both the

Japanese attack on Pearl Harbor, on December 7, 1941, and at the D-Day invasion, on June 6, 1944?

5. The walls of what structure—made entirely of natural material—stand up better to modern artillery than a concrete barricade, according to tests conducted by the Swedish army?

6. What year was the first Dixon Driller mailed?

7. What was the last 12-cylinder car produced in the United States?

8. What product was the first to use animated characters in its television commercials?

1. At the Daisy Hill Puppy Farm. 2. 94-46.
3. The Nerf Ball. 4. The U.S.S. Nevada.
5. The igloo. Not only do its walls absorb an artillery blast, but they are almost invisible from the air and can't be spotted by the infrared sensors that guide today's missiles.
6. 1918 7. The 1948 Lincoln Continental.
8. Ajax cleanser. The Ajax pixies used to tell us, "You'll stop paying the elbow tax when you start cleaning with Ajax."

(excerpted from 5087 Trivia Questions & Answers)

ON THE LIGHTER SIDE

I've started an exercise program. I do 20 sit-ups each morning. That may not sound like a lot, but you can only hit that snooze button so many times.

An old timer sat on the riverbank, obviously awaiting a nibble, though the fishing season had not officially opened. The game warden stood behind him quietly for several minutes. "You the game

warden?" the old-timer inquired. "Yup."

Unruffled, the old man began to move the fishing pole from side to side. Finally, he lifted the line out of the water. Pointing to a minnow wriggling on the end of the line, he said, "Just teaching him how to swim."

A taxpayer received a strongly worded "second notice" that his

taxes were overdue. Hastening to the collector's office, he said apologetically that he had overlooked the first notice.

"Oh," confided the collector with a smile, "we don't send out first notices. We have found that the second notices are more effective."

(excerpted from Braude's Treasury of Wit & Humor for All Occasions)

Dates in History

1841:

On April 20, Edgar Allen Poe's story, *The Murders in the Rue Morgue*, first appears in *Graham's Lady's and Gentleman's Magazine*. The tale is generally considered to be the first detective story.

1860:

On April 3, the first Pony Express mail, traveled by horse and rider relay teams, simultaneously left St. Joseph, Missouri, and Sacramento, California. Ten days later, on April 13, the westbound rider and mail packet completed the approximately 1,800-mile journey and arrived in Sacramento, beating the eastbound packet's arrival in St. Joseph by two days and setting a new standard for speedy mail delivery.

1912:

On April 15, the RMS *Titanic*, billed as unsinkable, sinks into the icy waters of the North Atlantic after hitting an iceberg on its maiden voyage, killing 1,517 people.

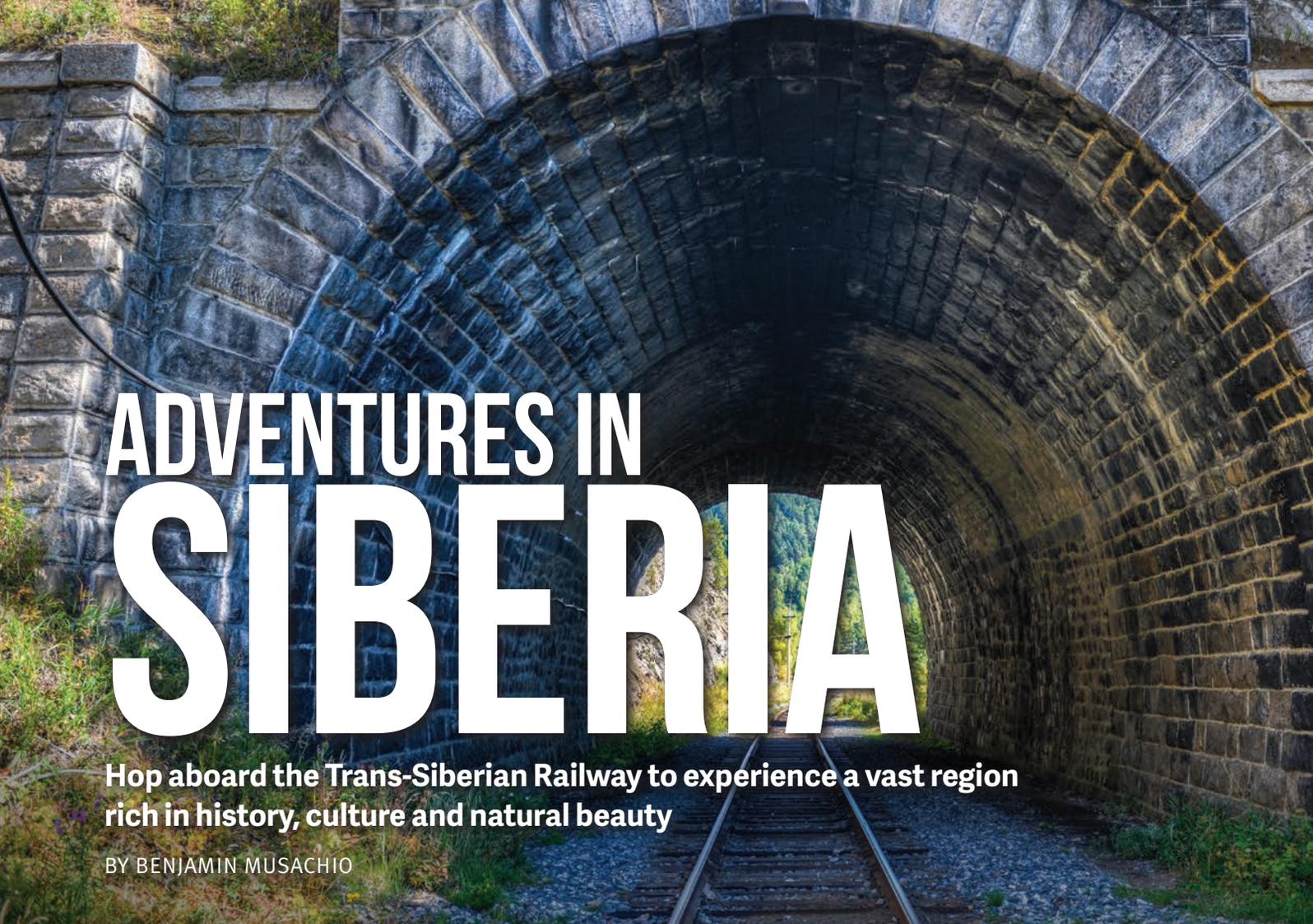
1974:

On April 8, Hank Aaron of the Atlanta Braves hit his 715th career home run, breaking Babe Ruth's legendary record of 714 homers. A crowd of 53,775 people, the largest in the history of Atlanta-Fulton County Stadium, was with Aaron that night to cheer when he hit a fourth inning pitch off the Los Angeles Dodgers' Al Downing.

1982:

On April 2, Argentina invades the Falklands Islands, a British colony since 1892 and British possession since 1833. Argentine amphibious forces rapidly overcame the small garrison of British marines at the town of Stanley on East Falkland and the next day seized the dependent territories of South Georgia and the South Sandwich group. The British lost five ships and 256 lives before regaining the Falklands on June 14.

www.historyplace.com



ADVENTURES IN SIBERIA

Hop aboard the Trans-Siberian Railway to experience a vast region rich in history, culture and natural beauty

BY BENJAMIN MUSACHIO

Mention “Siberia,” and many immediately think of a vast and inhospitable arctic exile. But the sprawling region belonging to Russia, which stretches southward from the Arctic Ocean all the way to the national borders of Mongolia and China, today offers a variety of exotic cultural and natural treasures that are quite enticing for the adventurous traveler.

Unless the prospect of subzero temperatures is appealing, Siberia is best experienced during the summer. For travelers with a few weeks to spare, taking the Trans-Siberian Railway is the ideal way to experience the richness of the region. For the full impact, embark from **Moscow**, then ride the train all the way to the end of the line in **Vladivostok**. Totalling more than 5,500 miles (about 8,850 kilometers), the Trans-Siberian trek covers more than twice the distance of the continental United States.

While the list of possible stops on the main train line numbers in the dozens, here is a handful you won't want to miss.

YEKATERINBURG

About 1,000 miles (1,700 kilometers) into your journey, plan to spend a day or two in **Yekaterinburg**, known as the gateway to Siberia. Russia's fourth-largest city by population is the unofficial capital of the Ural mountains, which divide Europe and Asia. The city

is rich in history, from its founding in 1723 under Peter the Great to the post-Soviet era, initiated by Russian President Boris Yeltsin, a Yekaterinburg local. Lakes, fountains and wide promenades make the city center especially welcoming to pedestrians.

Your first stop should be the memorial complex erected in the early 2000s on the execution site of the Romanovs, the last Russian royal family. In July 1918, Nicholas II, his wife and his five children were lured to the basement of the home that once sat



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LOST IN TRANSLATION?

Throughout much of Russia, it can be tricky to get around without any knowledge of the Russian language. Street signs and many museum exhibits are usually in Russian Cyrillic. With that said, many non-Russian speakers do travel through Siberia. Persistence and a smile will go a long way in successful navigation. Moreover, many Russians welcome the chance to practice their English.

Clockwise: The Circum-Baikal Railway Tunnel, an historical railway that runs along Lake Baikal; a panoramic view of Yekaterinburg at night; Church on the Blood; a sign with Russian Cyrillic.



Benjamin Musachio



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A memorial sign in honor of the border of Asia and Europe

©iStockphoto.com/evgovorov



Panorama of Irkutsk and the Angara River on a hot July afternoon

©iStockphoto.com/ivan_off

on the site to be executed by Bolshevik revolutionaries. With the death of the last tsar of Russia, the once-mighty Russian Empire fell into the dustbin of history, to be replaced by years of civil war between “red” and “white” revolutionaries.

The majestic **Church on the Blood** honors the royal family, where masters of the Orthodox icon form have depicted the family’s haloed figures on the walls of the church’s candlelit crypt. Additional chapels and churches are situated nearby this Byzantine masterpiece. A solemn morning spent exploring the church stands as a perfect introduction to the ancient and living faith of Russian Orthodoxy.

For a more upbeat afternoon, visit Yekaterinburg’s pleasant **Museum of Fine Arts**, which is just a 20-minute walk from the Church on the Blood. Western European (Flemish and Italian canvases in particular) and Russian art are both on display here.

Travelers looking for a drink and a lively pub atmosphere would do well to

stop by **Kollbasoff**: The beer mugs are large, while the prices are reasonable. American visitors to Siberia will be pleasantly surprised by the favorable U.S. dollar-to-Russian ruble exchange rate. Travelers on a budget can eat their fill in Siberia for \$15 to \$20 a day.

Don’t leave Yekaterinburg before visiting the obelisk marker dividing Europe and Asia. To get there, hail a taxi, travel a bit outside the center of town and take a photo on the spot straddling the two continents.



Eastern Siberia, Irkutsk region, Lake Baikal

©iStockphoto.com/rutins5

IRKUTSK AND LAKE BAIKAL

More than 1,700 miles (3,400 kilometers) separate Yekaterinburg and **Irkutsk**, a lovely city known as “the Paris of Siberia.” Founded in 1666, Irkutsk proudly asserts its status as one of the oldest cities in the region.

A stroll down **Yuri Gagarin Boulevard** provides a view of the beautiful **Angara River**. While it’s possible to spend an enjoyable day or two visiting the city’s numerous monasteries, churches and regional history museums, many tourists primarily view Irkutsk as a comfortable base from which to explore the region’s principal attraction:

Lake Baikal.

Lake Baikal and its environs are Russia’s answer to U.S. national parks like Yellowstone and Yosemite. Considered Siberia’s pearl, the region features the deepest lake on Earth—which contains almost 20 percent of the entire world’s freshwater supply—and the surrounding coastlines offer countless hiking trails, camping sites and other outdoor recreational activities. Plan to stay a few days at one of the waterfront towns that ring the perimeter of the gargantuan lake (**Listvyanka** and **Bolshie Koty** are popular), where you can indulge in hot thermal springs and fresh seafood.

Most visitors take at least one dip in the pure blue waters of Baikal during their stay. Those who don’t are regarded as “blasphemers” by many Russians. But be prepared: Even in July, water

IT'S ALL ABOUT THE JOURNEY



Top: A tourist train at the Circum-Baikal railway;
bottom: Irkutsk cityscape, showing the Angara River and Trans-Siberian Railway.

HOW TO DESCRIBE THE RHYTHM OF LIFE ON A RUSSIAN

TRANS-SIBERIAN TRAIN? Much depends on the type of ticket.

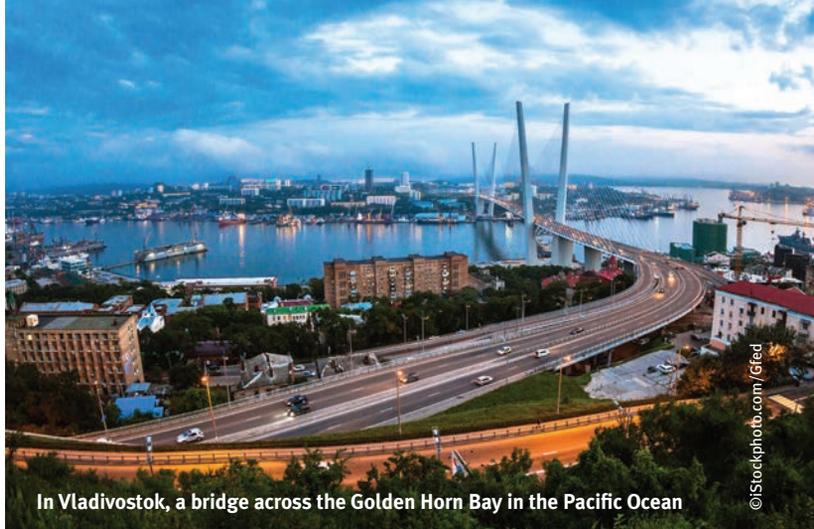
Three exist: Platzkart, a third-class option that throws you into a wagon with dozens of fellow travelers; Coupe, second class, with four beds to a closed compartment; and SV, the VIP first-class offering. Prices vary considerably depending on the length of your trip but are very reasonable. Coupe tickets for the 3,300-kilometer journey from Yekaterinburg to Irkutsk, for example, cost only about \$95 (5,750 rubles).

Slurping copious amounts of sugary black tea cuts across class lines. So does staring out the window at the pristine Siberian countryside. And for the longer legs, vodka or homebrewed concoctions (“Samogon”) liven up conversation. Each train has a dining wagon that serves up standard Russian fare for moderate prices. All three classes provide beds for passengers. (Throughout Siberia, Western hotel chains or local inns provide alternatives to spending nights in the train bunks.)

Russian passengers can often be counted on to invite Western travelers into conversation, card playing and supper, especially in the Platzkart class. Be forewarned: A shower, much less a bath, cannot be found in Platzkart or Coupe class, so make sure to clean up in the hotel/hostel prior to your leg of train travel.



Olkhon Island



In Vladivostok, a bridge across the Golden Horn Bay in the Pacific Ocean

temperatures rarely rise above 20 degrees Celsius (68 degrees Fahrenheit).

For the true Baikal experience, a trip to **Olkhon Island** is a must. Buses and ferries depart daily from Irkutsk to Olkhon's quaint village of **Khuzhir**, an especially popular destination during the summer, when gorgeous sunsets bathe the cliffs in hues of smoky red and orange. Olkhon is also an important religious site for the local Buryat people, who originally hailed from Mongolia and practice shamanism. Daylong bus excursions around sites of

interest offer fascinating detail about the history and beliefs associated with the Buryats' shamanism. These tours will also take you to impressive vista points, where the tour guides prepare sumptuous fish soup made from the local catch, omul.

VLADIVOSTOK

The economic and cultural hub of Russia's Far East, **Vladivostok** marks the end of the train line. When you disembark, don't miss the fitting monument to the construction of the Trans-Siberian Railroad in

the Vladivostok train station. (A trans-Siberian train route has existed in Russia since the end of the 19th century.)

After 100-plus hours of tea drinking and card playing on the train (see sidebar page 27), most Trans-Siberian travelers consider the sloping hills of cosmopolitan Vladivostok to be a refreshing change of pace. The city has drawn comparisons to San Francisco—not only for its hills, the way it hugs the Pacific Ocean, and its Golden Horn and Russky bridges (constructed in 2012), but also for its economic prosperity and

A GRIM HISTORY

Throughout most of the 20th century, the Soviet regime viciously repressed its own people. Millions in the Soviet sphere—ethnic minorities, religious believers, landowners, nonconforming artists—were exiled to the labor camps of Siberia and the Far East via the Trans-Siberian Railroad. Many never returned home.

Under Vladimir Lenin, a system of coerced labor was established in 1919. In 1930, Josef Stalin dramatically expanded this system, which took on the infamous name “Gulag” (a transliterated Russian abbreviation for “Chief Administration of Corrective Labor Camps”).

Many prisoners were forced to work 12-plus hours each day, toiling away at dangerous tasks such as mining, construction or timber removal. Food was scarce and conditions were far from comfortable: Prisoners in Siberian Gulags had to contend with subzero temperatures in the winter and swarms of mosquitoes in the summer.

Many never returned home. Conservative estimates say that 10 million people were sent to the Gulag in the 1934–1937 period alone. Western historians put the number of Gulag-associated deaths at 15 to 30 million for the 1918–1956 period. In short, the Gulag was an exploitative system that led to mass murder on a gigantic scale.

Travelers interested in learning more about this grisly chapter in Soviet history can visit memorials throughout their trans-Siberian journey, including:

- A sizable memorial ground, which sits a bus ride away from the center of **Irkutsk**. In the quiet suburb of **Pivovarikha**, hike a mile or so off the main road and into the hills to find a site with numerous tombs, crosses and photographs. Friends and family of the repressed make an annual pilgrimage on Oct. 30 to lay fresh flowers at the gravesites.
- On **Olkhon** in **Lake Baikal**, a memorial cross north of **Khuzhir** reminds tourists of the former Gulag camp on the island. A humble chapel in Khuzhir depicts in artistic detail the Bolshevik slaughter of the Orthodox clergy (a prime target for the atheistic Soviets) in the 1920s.



Benjamin Musachito

Irkutsk Memorial Stone



thriving tech industry. Investment from Moscow and partnerships with Asian firms invigorate economic life in this coastal city.

Be sure to take a ride on Vladivostok's funicular, an inclined cliff railway, praised by Lonely Planet as "the smoothest-running operation in the Far East." From the top, you'll be rewarded with an expansive view of the bay and ocean below. Once you've descended, plan to stop by the S-56 Submarine Museum—a refurbished sub with fascinating exhibits that provide a flavor of (cramped) nautical life during World War II.

When it comes to cuisine, Vladivostok offers a welcome antidote to those who've grown tired of Russia's meat and potatoes fare: a taste of the Orient. With Korea, Japan and China counting among the city's closest neighbors, visitors can choose from



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Passenger cars line up along the siding at the Trans Siberian Express terminus in Vladivostok.

a wide variety of Asian-inspired eateries—including Dumpling Republic and Korea House, located a short distance from Vladivostok's coastal boardwalk.

While a weekslong trek across Siberia may not be luxurious, for adventurous travelers, Russia's

eastern expanse offers innumerable one-of-a-kind attractions at a very low price. You may end your trip feeling exhausted, but you'll undoubtedly emerge feeling richer for having experienced Russia's history, culture and natural beauty. ◀

Loading Arm Swivels

Applications:

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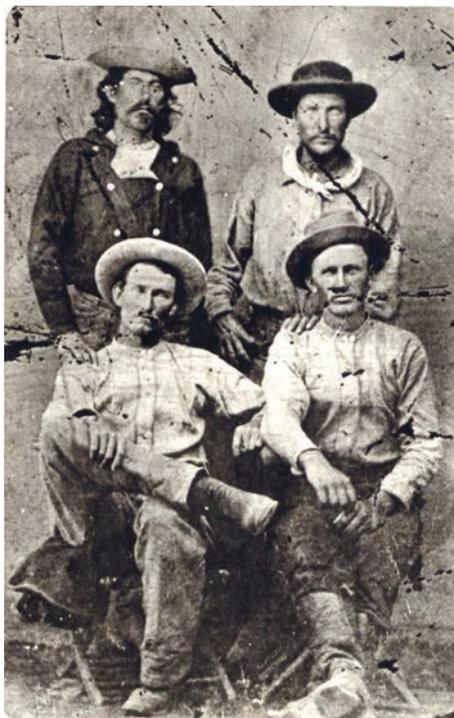
The Right Connection®



THE PONY EXPRESS

Though short-lived, it became a great saga of the American West

BY EUGENE FINERMAN



Public Domain

Top: 1860 Postmark, Pony Express;
Below: Pony Express Riders could weigh no more than 120 pounds.

Robert Haslam never knew what mail he was carrying. Neither does history; that particular detail has eluded the legend. What we know is this: The 20-year-old Haslam had just completed his route on the Pony Express, 75 miles and seven hours of hard riding. He expected to hand over the mailbag to the next rider, but there was none. Reports of Indian war parties now threatened the operation of the Pony Express. Haslam was offered \$50 if he would ride 120 miles to the next station. That was half a month's good wages, so of course he accepted. In 10 minutes, Haslam was off, riding 120 miles in eight hours. The ride back was more perilous; the Indian war parties were not just rumors. An arrow in the jaw cost him three teeth. By the time he arrived back at his home station in California, Haslam had completed a 380-mile ride, night and day, with only nine hours of rest. The feat was unequalled, and the tireless hero is remembered in western lore as "Pony Bob."

Yet Haslam was not exceptional in his daring. The Pony Express had some

hundred such men, young adventurers who formed a circuit from Missouri to California. Mail from St. Louis could now reach San Francisco in 10 days—two weeks faster than the U.S. Postal could offer. It was through the Pony Express that California learned of the election of Abraham Lincoln and read the earliest reports of the Civil War. Yet the Pony Express was only in operation for 19 months, from April 1860 to October 1861. As a commercial venture, it was a failure. However, its historic role was significant and its story remains the stuff of legend.

California was an anomaly in the expansion of the United States. The nation had grown in a logical westward progression, from Virginia to Tennessee to Missouri, from Pennsylvania to Ohio to Indiana and Illinois. No one seemed in a rush to settle California. The Spanish had claimed the territory since 1602 but dithered until the 1760s to establish a token presence. In the 1820s, California passed to Mexico but the province remained ignored. Its population in 1840 was approximately 8,000. California did not learn of the



Pony Express Stables at the Pony Express Museum, which was the eastern terminus of the overland mail service to California.

Mexican War until two months after it had started. In 1847, California became American territory, valued primarily for its ports. A year later, 80,000 people flooded into the territory, expecting to strike it rich in the gold fields. By 1850, the booming California earned statehood. Even the failed prospectors decided the state was a good place to live. The 1860 census recorded California's population as 379,994.

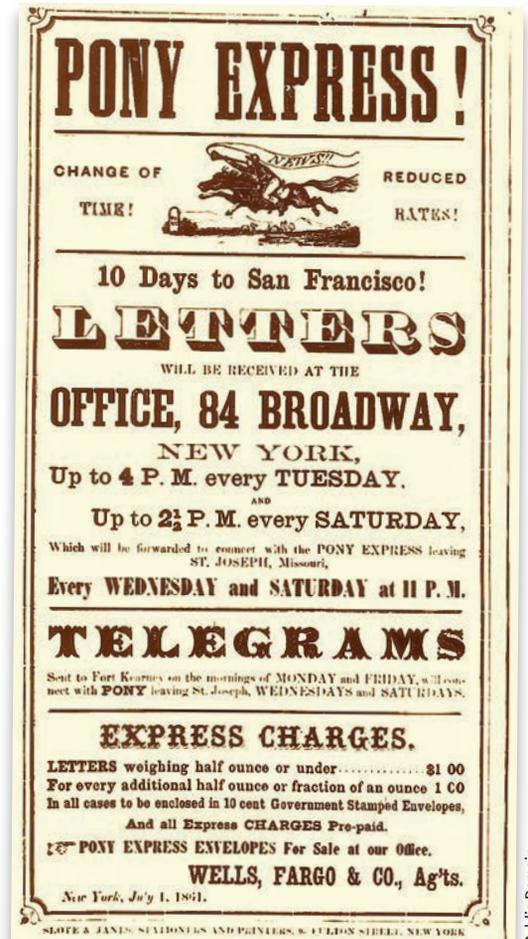
As a state, California was entitled to postal service. In 1857, the government authorized a mail route between St. Louis and San Francisco. The mail would be delivered by stagecoach, proceeding from Missouri, through Arkansas, Texas, New Mexico and Arizona to California. It was a circuitous route, taking 25 days, but

the U.S. Postal Service was for all the states and not just California.

A direct route between St. Joseph, Missouri and San Francisco would take only 10 days; would there be a market for such venture? Three businessmen, all veterans of the freighting industry, thought so.

In 1859, Alexander Majors, William Russell and William B. Waddell organized the Leavenworth & Pike's Peak Express Company. The Pony Express proved a more compelling name. Their plan was to provide courier service, with a circuit of riders carrying the mail across the 1,900-mile distance between Missouri and California. Riding hell to leather, night and day, a courier would change horses every 10 miles; the rider himself would be

Riding hell to leather, night and day, a courier would change horses every 10 miles; the rider himself would be changed every 75 or 100 miles. The horses were mustangs: sturdy and fast. Their couriers had to be excellent riders, steady with a gun.

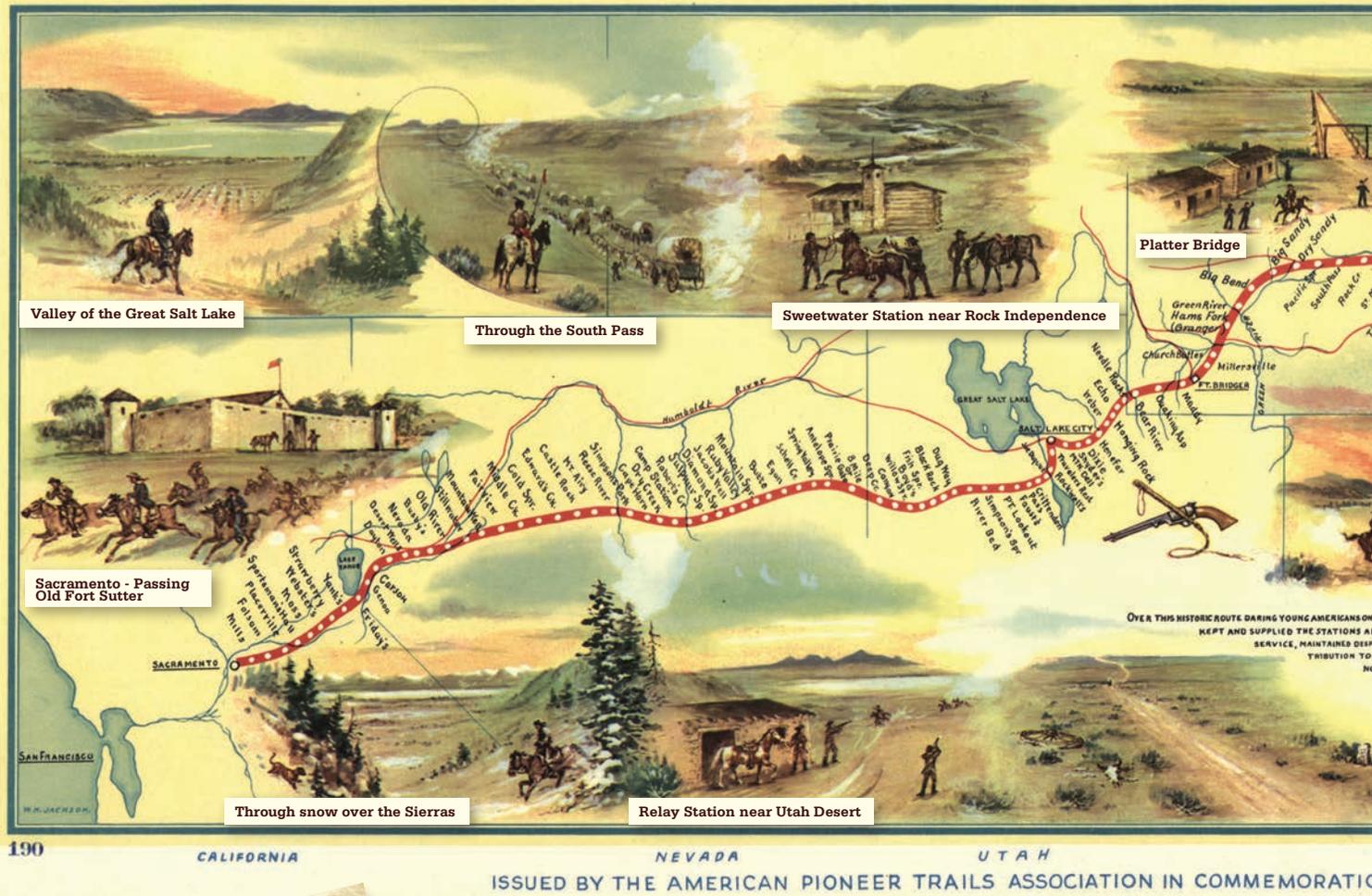


Poster from the Pony Express, advertising fast mail delivery to San Francisco.

changed every 75 or 100 miles. The horses were mustangs: sturdy and fast. Their couriers had to be excellent riders, steady with a gun and none could weigh more than 120 pounds. The job would be grueling, probably dangerous, and paid \$100 a month. That was approximately three times what a laborer might earn. With an initial expenditure of \$70,000 (the equivalent of \$2 million today), the company built 157 relay stations, bought 600 horses and hired 75 riders.

Of course, the riders could only transport a limited amount: More than 20 pounds would slow the horse and the whole purpose of the enterprise. To meet the initial costs and ongoing expenses of the staff and stables, the freight would be expensive. The price of a half-ounce letter was \$5; the U.S. Postal Service would have charged a 3-cent stamp. But the Pony Express offered a savings of time: two weeks.

PONY EXPRESS ROUTE APRIL 3, 1860 – OCTOBER 24, 1861.



Above: Map of the route followed by the Pony Express; left: first Westbound Pony Express cover, postmarked April 3, 1860.

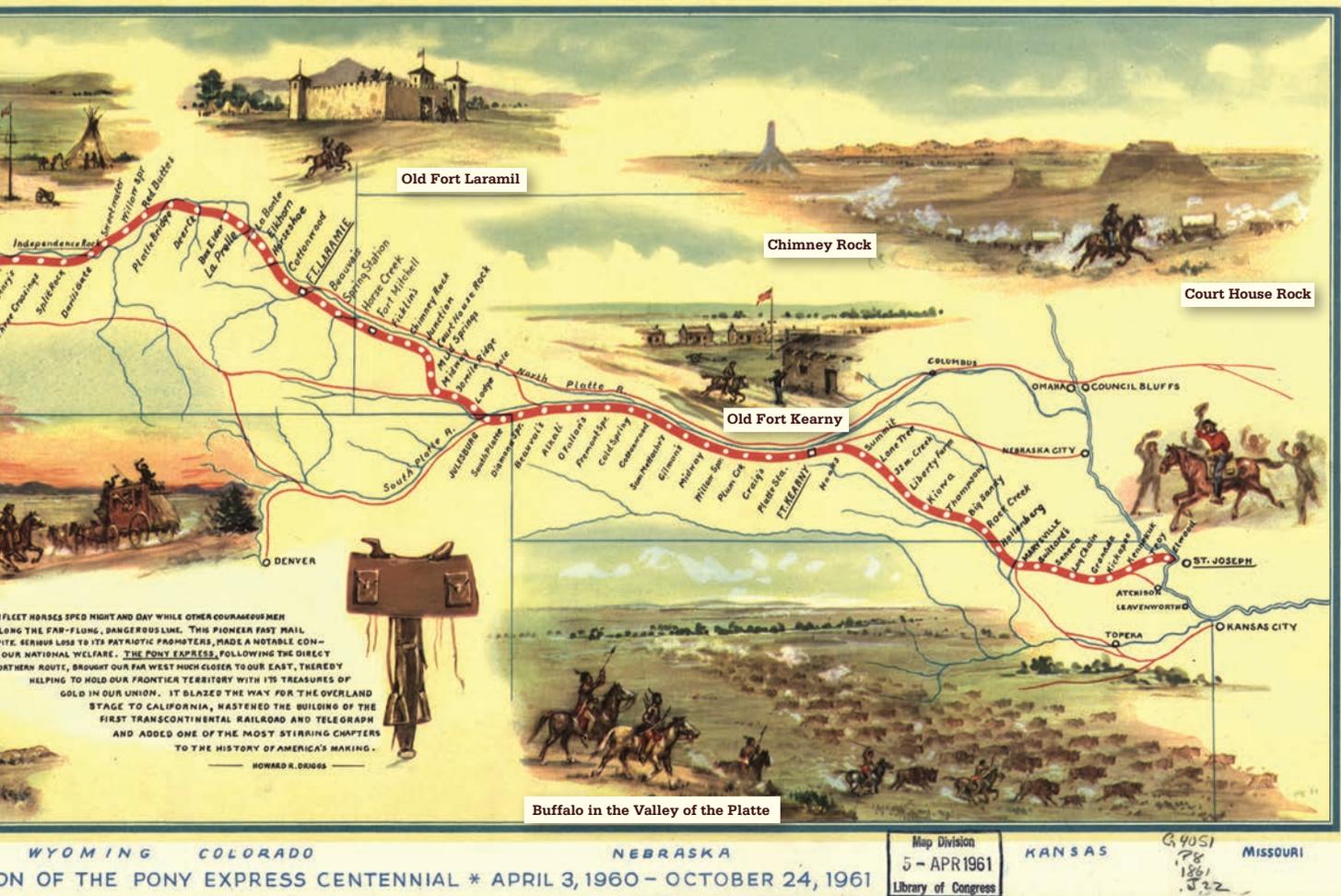
To a business or a newspaper, \$5 might be a bargain. That was the rationale of the Pony Express. On April 3, 1860, the Pony Express began with impressive fanfare. Departing from St. Joseph, the first rider was seen off by a delegation led by the city's mayor. The dispatches included a letter to California's

governor from President James Buchanan. The rider and his fellow couriers would follow the Oregon Trail to Fort Bridger, Wyoming, then the Mormon Trail to Salt Lake City. From there the route was to Carson City, Nevada, then over the Sierra Mountains into California.

Eleven days later, the Pony Express rider reached Sacramento, California. He found the state legislature assembled to meet him. As *The New York Times* reported, "The city was gay with flags and crowds lined the street along which he was to pass. A troop of horsemen went out to meet him and to escort him into town... amid the booming of cannon, ringing of bells and cheering of the multitude."

On June 16, 1860, Congress authorized the creation of a transcontinental telegraph line. Ironically, the Pony Express carried that news—the news of its obsolescence and demise.

"Letter" https://commons.wikimedia.org/wiki/File:First_Westbound_Pony_Express_Apr_3_1860.jpg

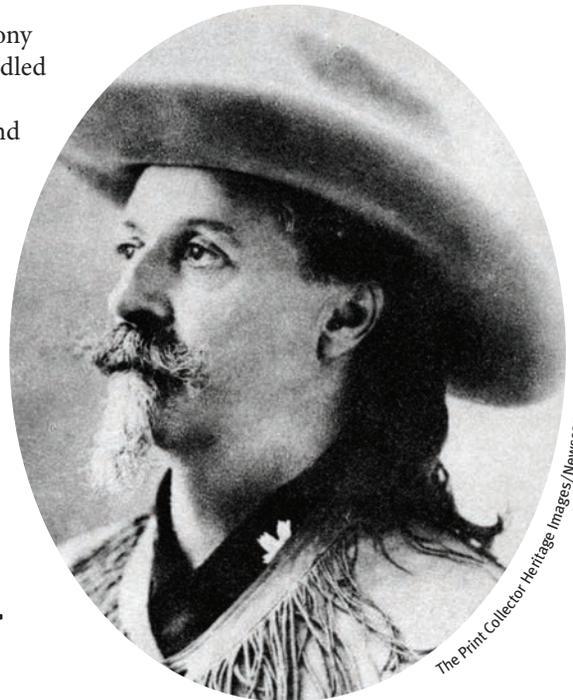


Top: Photo by Buynenlarge/Getty Images; Bottom: Library of Congress, Geography and Map Division.

The three partners would not share in the celebration. The Pony Express never made money. Yes, the public enjoyed reading of the derring-do of its riders, but for its mundane needs preferred 3-cents postage. Newspapers did appreciate the speed of Pony Express, but journalism soon had a faster alternative. On June 16, 1860, Congress authorized the creation of a transcontinental telegraph line. Ironically, the Pony Express carried that news—the news of its obsolescence and demise. In October 1861, a telegraph line connecting Nebraska and Nevada—2,000 miles of wire on 27,500 poles—completed the transcontinental line. The cost of a telegram—25 cents for 10 words, per 100 miles—was as expensive as the Pony Express letter; but a message across the continent now took hours rather than days.

Among the hundreds of Pony Express employees who were idled was a 15-year-old stock hand named William Cody. He found other work as a scout, buffalo hunter and eventually as the great impresario of the Wild West. In his dramatized recollections, Buffalo Bill Cody extolled the heroics of the Pony Express. His shows always included a reenactment of the exploits, including Pony Bob's ride. What might have been a footnote in history became one of the great sagas of the West.

And the legend lives on. ◀



Colonel William F. Buffalo Bill Cody

The Print Collector Heritage Images/Newscom



A Leak-Free Solution

Dixon's Mann-Tek Dry Disconnect System is a proven winner for rail unloading of caustic soda—eliminating spills and ensuring safety.

> **CAUSTIC SODA** (sodium hydroxide) is widely used in the manufacturing of many products—including pulp and paper, alumina, soap and detergent, and mineral oils—and for metal processing and glassmaking.

Caustic soda is also dangerous to handle. It is highly reactive and highly combustible and can result in burns if it comes in contact with the skin. Thus, manufacturers and chemical plants must take every possible step

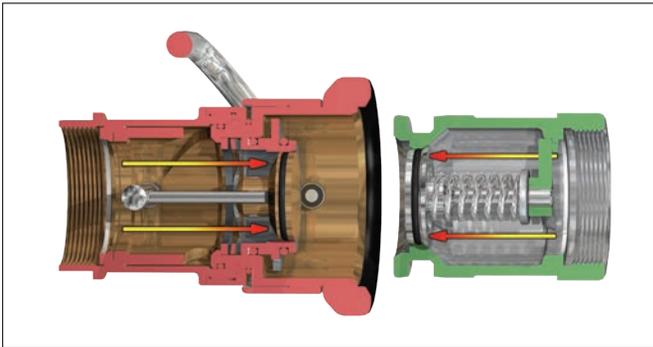
to reduce the potential for spills.

With Dixon's Mann-Tek Dry Disconnect System, that job has gotten a lot easier.

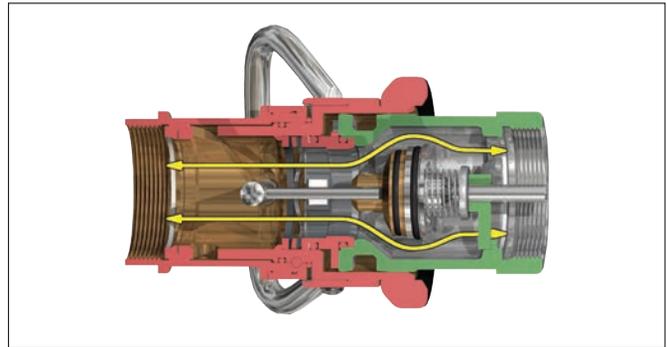
Consider the recent experience of a chemical plant in Georgia, which had been receiving eight truckloads of caustic soda each month (32,000 gallons per month). With every delivery, truck drivers spilled a significant amount of the substance, leading to big headaches for the plant manager who had to devote time and money to extensive cleanup. The spills also raised safety concerns for the plant's workers.

When a new rail spur was established on the plant's property, the manager decided to switch from truck to rail delivery: Two rail cars per month would deliver 16,000 gallons of caustic soda each. But what connections would provide the safest environment for the operators working on top of the pressurized cars to offload the caustic soda?





Closed: Turn and pull, it's released – no spillage



Open: Push and turn, it's coupled – full flow

For added safety, proximity switches were wired to an actuated valve that controlled air pressure to the rail car. That way, the caustic soda could only be offloaded if the dry disconnects were fully engaged.

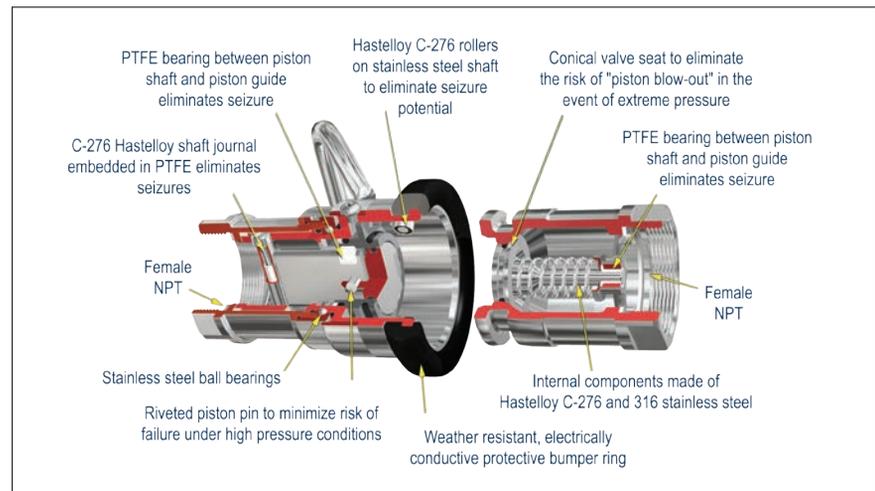
Enter Dixon and the Mann-Tek Dry Disconnect System—a leak-free solution. After consulting with Dixon salespeople, the plant's engineers decided on the 3-inch Dry Disconnect option, with a safety breakaway on the pipe inlet. For added safety, proximity switches were wired to an actuated valve that controlled air pressure to the rail car. That way, the caustic soda could only be offloaded if the dry disconnects were fully engaged.

The result? When connecting and disconnecting the hoses, plant workers could operate safely, without spilling product.

By making the switch from truck to rail delivery, the plant estimates that it will save \$100,000 annually in transportation costs.

To find out how Dixon's Mann-Tek Dry Disconnect System can provide a leak-free solution to your needs, boosting safety and saving time and

money, call 877.963.4966, or email your request to: sales@dixonvalve.com, or visit dixonvalve.com.



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Back Attack

Managing this common source of pain is easier than you think

> YOU THREW OUT YOUR BACK moving some heavy boxes in the garage, and even a few days later, you're still in pain.

If this sounds familiar, you've got company—you're one of the 59 million Americans who have recently experienced back pain. Most aches are caused by poor body mechanics employed when lifting, bending, twisting or carrying certain weights and loads.

As you get older, the chances you'll feel a twinge only go up—80 percent of people will have back pain at some

time in their life. Osteoarthritis of the spine, a major cause of back pain in older adults, becomes more likely the more birthdays you have. It's a normal wear-and-tear process that happens over time and is sometimes accompanied by acute flare-ups.

But will you need surgery?

This is one of the most common misconceptions about back pain, says Akhil Chhatre, a physical medicine and rehabilitation physician with Johns Hopkins Medicine. "Ninety percent of back pain patients don't need surgery," he says. "Most just need full-spectrum management."

This could include medications, physical therapy or injections, like nerve blocks, steroids or stimulators.

Most, if not all, of these treatments are covered by most health insurance plans. In even better news, 85 to 90 percent of patients who are prescribed medication for back pain will be off the drugs within a year, says Chhatre.

The percentage of those needing lifelong injections is even lower.

There are plenty of holistic ways that can keep you out of the doctor's office, though.

Proper technique is key when lifting or picking up objects of any size.

- For heavy items, use the **squat lift**, where you plant your feet shoulder-width apart, squat



BACK PAIN RED FLAGS

When is it time to call your primary care provider? Make an appointment if you have any of the following symptoms in addition to back pain:

- Loss of strength
- Sudden loss of bowel or bladder function
- Numbness or tingling that doesn't go away after 24 hours
- Loss of balance

down, wrap your arms around an object and stand up with the power of your legs.

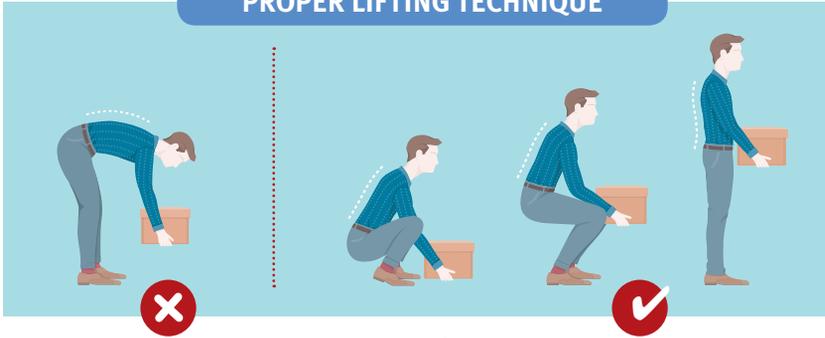
- For heavier items that won't work with a squat lift due to their size, practice the **crane lift**. Stand with your knees shoulder-width apart, like the squat lift. Bend at the hips, keeping your head and back straight, and stick your butt out behind you. Grab an item and lift, pulling it as close to your body as you can. Put it down the same way.
- If you drop a small item, like a pen, try the **golfer's lift**—put all your weight on one leg and hold onto a sturdy object with the opposite hand. Then, bend from the hip and let the other leg come off the ground a bit you as you pick up the pen.

Gentle stretches and exercises can also be great preventive measures, says Chhatre. Try a knee-to-chest stretch, a rotational stretch of your lower back, a bridge and a shoulder blade squeeze. Repeat these a few times each every day for the most benefit. And make sure you're getting in some movement most days of the week, whether that's going for a brisk walk, taking a yoga or Pilates class, or doing some strength training.

A healthy diet low in pro-inflammatory foods (like red meat,



PROPER LIFTING TECHNIQUE



white bread and pasta, fried foods, alcohol and anything with partially hydrogenated oil) helps, too, since inflammation exacerbates pain. If you're a smoker, consider stopping. Smoking can damage tissue in the lower back, slowing down circulation. And maintaining a healthy weight keeps the

strain off your joints and bones.

You can even make an impact on your back health at night. If you sleep on your back, put pillows under your knees. A side sleeper should wedge pillows between the knees to keep the spine in a neutral position. Avoid sleeping on your stomach, as it causes

the neck and head to twist, putting stress on your back.

If you do feel a pang at home, try nonsteroidal anti-inflammatory medication, like ibuprofen or aspirin, as long as it's OK with your primary care doctor. You can also exercise as long as it's not painful, and alternate hot and cold packs. If you do need to make a call to your physician, make sure to share the symptoms you have and how long you've had them.

Warding off back pain isn't difficult, but it does take persistence, says Chhatre. "Fine health is a marathon, not a sprint, and it requires daily maintenance and discipline." ●

"Lifting Illustrations" ©iStockphoto.com/wet cake

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The Right Connection®

Post-it Notes

After an uncertain start, the sticky notes developed staying power

> IT ALL STARTED TO COME TOGETHER, as so many business deals do, on the golf course. Art Fry, a chemical engineer at 3M, was at the second hole one day in 1974 when a fellow golfer from 3M's research department stopped to chat. He mentioned a curious adhesive developed by another 3M colleague, Spencer Silver. Fry, whose job it was to identify promising new products for business development, was intrigued.

He went to a seminar Silver gave about his adhesive. It was unusual because it had "high tack" but "low peel," and could be repositioned. Silver had actually been going for a super strong adhesive for the aerospace industry when he concocted this one that stuck and then peeled off easily. Certain that it could be used for something, if only he could figure out what, he offered the seminars in an attempt to garner interest from colleagues.

After the seminar, Fry filed away the information. Then, while singing in his church choir one day, he grew frustrated at losing his place when the scraps of paper he used as bookmarks slipped out of his hymnbook. Fry remembered the adhesive. He requested a sample from Silver, made a few tweaks and solved his choir vexations by affixing sticky bookmarks to his pages.

Fry went on to test the bookmark idea on some colleagues. There wasn't much interest. Then one day Fry used

one of the sticky slips to write a question to his supervisor on the cover of a report, and the supervisor responded on the same paper and re-attached it to the report. The Post-it Note was conceived.

Under the direction of lab manager Geoff Nicholson, 3M manufactured samples for internal use, which proved

The "Boise Blitz," in which 3M deluged the Idaho town with free samples, yielded an undeniable demand: 90 percent of those who tried the sticky notes wanted more.

wildly popular among executives. Fry remembers some execs walking through knee-deep Minnesota snow for replacement pads. But test runs in four U.S. cities bombed. It looked like the invention was headed back to a dusty shelf, until Nicholson and his boss,



Art Fry, inventor of the Post-it Note

Joe Ramey, prevailed upon the company to give it one more push.

The "Boise Blitz," in which 3M deluged the Idaho town with free samples, yielded an undeniable demand: 90 percent of those who tried the sticky notes wanted more.

That was enough to spark 3M's investment in the machinery required to mass-produce pads of the stuff, and two years later, in 1980, the Post-it Note was released throughout the United States. Today, it stands as one of the top five office supply products in the world, with those machines churning out 50 billion a year.

And why are they yellow, you might ask? Nicholson reports that the lab adjacent to where they were fine-tuning the Post-its donated some yellow scrap paper to the cause. When the engineers ran out and needed to buy more paper, they simply kept the yellow going. ◀

"Adhesive notes" ©iStockphoto.com/goir



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*“Do you want to sleep well at night? Then buy Dixon.
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— Jimmy from Louisiana

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