

A Story of
Pennsylvania
Told in
100 Buildings

HOW THE
KEYSTONE STATE
HAPPENED



CRUDEN BAY BOOKS

INTRODUCTION

If those walls could talk...this is what they would say. A story about Pennsylvania.

Stone arch bridges... octagon buildings... Presidential beds... iron horses... seeds... pretzels... mimetic architecture... crayons... the CCC... heart-shaped bathtubs... kit houses... the golden age of motoring... irrigation canals... early aviation... wagon building... roller-coasters... fire towers... waterworks... Frank Lloyd Wright... movie sets... trolley parks... tollbooths... lighthouses... Carnegie libraries... This book will have you telling stories like a native in no time.

The photos and stories collected here are a fast and fun way to learn the explanations behind the quirks, the traditions and the secrets that make Pennsylvania uniquely Pennsylvania. What is the only agricultural product Pennsylvania leads the nation in producing? Solved. What was the first sports stadium in America to have two decks? A mystery no more. Where is the oldest transportation tunnel? Identified. What Pennsylvania golf course is the oldest in continuous use in the country? Revealed.

Imagine a group of settlers arriving in an undeveloped location. First come shelters in which to live and then structures in which to work and shop. There are buildings for worship and education. As the community grows government buildings are required. With prosperity comes places in which to spend leisure time. And each step along the way builds a story only Pennsylvania can call its own. A story told in 100 buildings. Almost all of the selections within are open to the public, or at least visible from public spaces. So, if you haven't seen these landmarks in person, fire up your GPS and get out and see the story of the Keystone State standing in plain sight on Pennsylvania streets!

**A STORY OF PENNSYLVANIA TOLD IN 100 BUILDINGS
...HOW THE KEYSTONE STATE HAPPENED**

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Frankford Avenue Bridge

Philadelphia
1697



In the 1650s word came to the colonial governors in America from the motherland in England to link the important towns of Charleston, South Carolina and Boston, Massachusetts with a road. After William Penn founded the Pennsylvania Colony thirty years later one of the first acts of his new "Frame of Government" was to require the building of bridges across all the creeks along this "King's Road." The unprepossessing Pennypack Creek was one of those streams. The King's Road was, of course, a long time coming. When the 1,300 miles had finally been completed in the 1730s the Pennypack crossing became a vital link in the post road - the delivery of mail was its primary importance - between New York City and Philadelphia. In 1756 the first passenger stagecoaches rumbled across the 73-foot bridge as part of their three-day journey. With traffic increasing in 1803, the Frankford and Bristol Turnpike Company began charging tolls which would last until 1892 when the City bought the bridge and began widening the structure to facilitate streetcar traffic. Today the Frankford Avenue Bridge is the oldest roadway bridge still in active use and considered the oldest stone arch bridge in the nation.

Bartram's Garden

Philadelphia
1732



John Bartram purchased 102 acres along the Schuylkill River in 1728 and set out to build the first garden for scientific study and exhibition in colonial America. He worked on the ground for the next 50 years, interrupted by long journeys from the Great Lakes to Florida, much of it on foot. Bartram was able to identify and cultivate more than 200 native plants, building a thriving Transatlantic seed business. In 1765 King George III made the 66-year old Bartram the "Royal Botanist," which didn't keep him from being fast friends with revolutionaries like Franklin, Jefferson, and Washington. His son William literally followed in his father's footsteps, undertaking an epic tramp from the foothills of the Appalachian mountains to Florida, and all the way to the Mississippi River, collecting specimens and sketching plants. He became the country's first nature writer in 1791 with the publication of *Travels*, an account of his adventure. The seed business continued for three Bartram generations and 50 acres of the original garden survive as a National Historic Landmark. The stone barn is considered the oldest in Philadelphia County.

Cornwall Iron Furnace

Cornwall

1742



In 1742 a 30-foot tall sandstone pyramid rose above the Cornwall Ore Banks, then the greatest known deposit of iron yet discovered in colonial America. The furnace built by Peter Grubb was the seventh in the Pennsylvania colony. At first it produced stoves and farm tools but during the War for Independence the output became cannons and ammunition. In the 1800s Cornwall was the bustling heart of a 10,000-acre "iron plantation," a self-sufficient community that existed solely to keep the furnace in blast. By 1878 Cornwall was the oldest furnace in America still in operation. But its glory days were running out; within five years the furnace was cold. Most of its hundreds of iron-making cousins are little but stone rubble these days but remarkably at Cornwall, with the benefit of extensive renovations in the 1850s, the entire complex survived intact. Nowhere else in America, and only a few places in the world, has a charcoal-fueled furnace been so well preserved.

McConkey's Ferry Inn

Washington Crossing

1752



George Washington's little Revolutionary army had taken one pounding after another as they camped on the western bank of the Delaware River in December 1776. Knowing that upcoming enlistments would expire with the new year and probably reduce his 2,400 men by about half, Washington decided to strike unsuspecting Hessian mercenaries across the river in Trenton before they swarmed into Philadelphia. Using specially designed Durham boats, wide and flat and capable of handling heavy loads, the men started the 300-yard crossing late in the afternoon of Christmas Day. The last of Washington's troops and supplies reached the New Jersey side at 3:00 in the morning, more than three hours after he had hoped. The crossing had taken seven hours in pelting snow and hail. Washington led his troops seven miles south from this to the climatic attack. The Continentals killed some 100 enemy and captured another 900, including their arms and artillery. That afternoon the Hessians were marched back through the snow and rowed to Pennsylvania. On New Year's Day the captives were paraded through the streets of Philadelphia, boosting morale and convincing many that actual independence was indeed viable. The brown fieldstone McConkey's Ferry Inn was where Washington made his final call to green light the operation; Samuel McConkey had just bought the ferry business that year.

Deschler-Morris House

Germantown

1752



This fine Georgian house was built in 1772 by merchant David Deshler; British General Sir William Howe stayed here after the Battle of Germantown in the Revolution. In 1793 a yellow fever epidemic swept through the nation's new capital of Philadelphia sending people from the city into the fresh air of the surrounding countryside. President George Washington and his cabinet sought relief in Germantown. Washington lived and conducted business in this house, then owned by Colonel Isaac Franks. Colonel

Franks and the President had some disagreements about the rent and costs along the way. Franks charged Washington \$131.56, which included Franks' traveling costs to and from their temporary digs in Bethlehem, the cost of furniture and bedding for his own family, the loss of a flatiron, one fork, four plates, three ducks, four fowl, a bushel of potatoes, and one hundred bushels of hay. Despite these extra costs, Washington returned to the house the next summer with his family to take a break from his duties as Father of Our Country. Later the house was sold to Elliston and John Perot and, in 1834, to son-in-law, Samuel B. Morris. Inside the house there is a portrait of the earlier Samuel Morris, signed by Washington. The Morris family lived in the house for over one hundred years before donating it to the National Park Service in 1948 as the oldest surviving presidential residence.

Pennsylvania Hospital

Philadelphia

1752



Thomas Bond came up with the idea for America's first hospital while traveling in Europe, a place "for the reception and cure of poor sick persons." His friend Benjamin Franklin brought the petition before the Pennsylvania Assembly on January 20, 1751. Rural representatives saw no benefit to them so Franklin made a deal: if I prove the people want this by raising 2,000 pounds the bill passes and the Assembly matches the funds. Thinking it an absurd amount, hands were shaken. Franklin was back with the money and the bill was passed within four months. The first patient was admitted the following year. The hospital's original home was the Pine Building, still a part of the facility, which was built in three sections over 50 years. The central component is a standout Federal design by David Evans, Jr. from 1800. In 1847, when the American Medical Association was founded, the Pennsylvania Hospital's library was designated as the first and most important medical library in America. Pennsylvania Hospital is a non-profit teaching hospital today; it has had fire insurance longer than any other building in the country.

Independence Hall

Philadelphia

1753



Construction of the Pennsylvania State House, which lives in history as Independence Hall, began in 1732. At the time it was the most ambitious public building in the British colonies and since the government paid for construction as they got the money, it took 21 years to complete. It was within these walls that the Declaration of Independence was adopted.

It was here that the Constitution of the United States was debated, drafted and signed. That document is the world's oldest federal constitution in existence. Independence Hall is flanked on its left by Congress Hall, occupied from 1790-1800 by the new United States Congress. The House of Representatives - the "people's house" - convened on the first floor and the upper floor was occupied appropriately, by Senate, the "upper house." In 1793, President George Washington was inaugurated here for a second term. Four years later, in a scene unlike any the world had ever seen, George Washington ended his presidency and voluntarily passed the reins of power to his successor, John Adams. Finally, and perhaps most important of all, the Bill of Rights was ratified while Congress met in these rooms. The building has undergone many restorations, notably by Greek Revival architect John Haviland in 1830, and served a number of purposes. The second floor was home to Charles Willson Peale's groundbreaking museum of natural history and the basement was once the city's dog pound. In 1950 the National Park Service returned the Pennsylvania State House to its 1776 appearance finalizing its status as the birthplace of the United States.

Fort Necessity

Farmington

1754



In 1753 when the British decided to drive the French from the Ohio Valley Lt. Governor Robert Dinwiddie of Virginia selected an untested 21-year old major, George Washington,

to deliver the eviction notice. In the spring of 1754 Washington's vehicles and artillery were the first such armaments to cross the Alleghenies. Meanwhile, the French forced a British fort-building detail at the Forks of the Ohio, now Pittsburgh, to desert the area. Meeting the returning British, Washington learned of the action and interpreted it as an act of war. At a place called Great Meadows on the morning of May 28 Washington and some 60 men surprised a French scouting party and attacked at Jumonville Glen, a wooded area surrounded by 30-foot walls. Ten French, including the commander Joseph Coulon de Villiers, Sieur de Jumonville, were killed. Another 21 were taken prisoner but one man escaped to return to Fort Duquesne. Knowing retaliation was certain to come, Washington hastily began to fortify Great Meadows, which he referred to as "Fort Necessity" in a journal entry. The French entered the area on a rainy July 3, buoyed with some 600 troops and 100 Indians. The British trenches filled with water and after exchanges of small arms fire Washington was induced to surrender and allowed to withdraw under the honors of war. It was the future Continental Army leader's first command and the start of the French and Indian War. The reconstructed earthworks are on their original locations.

Fort Pitt

Pittsburgh

1759



During the mid-1700s, the armies of France and Great Britain jockeyed for control of the Ohio Valley. Four different forts were built at the forks of the Ohio within a period of five years. The British, in the form of a group of Virginians, came first. In 1754, French forces captured Fort Prince George. George Washington led British forces to recapture

the position, but suffered his first and only surrender at Fort Necessity, 50 miles to the south. The French then built Fort Duquesne at the Forks. Back came the British in an effort that fell eight miles short and cost General Edward Braddock, commander-in-chief for the Thirteen Colonies, his life. Not chancing another debacle, General John Forbes amassed an army 6,000 men strong in Carlisle and marched west. The French, realizing they were badly outnumbered, burned the fort and skedaddled two days before the British arrived on November 25, 1758. The British set to work on four blockhouses that were destined to be their most extensive fortification in North America, named in honor of William Pitt, English secretary of state. In 1777, the Continental Army used the fort as its western headquarters; the first peace treaty between the Native American and the United States was signed here. Fort Pitt was finally abandoned in 1792 due to its deteriorating condition. The fort had served to open the frontier to settlement as Pittsburgh became the "Gateway to the West." One blockhouse remains, the oldest structure in Pennsylvania west of the Allegheny Mountains.

Waterworks

Bethlehem

1762



In 1741 a small band of Moravian missionaries representing the Unitas Fratrum, founded in 1457 by followers of John Hus and now recognized as the oldest organized Protestant denomination in the world, walked into the wilderness and began a settlement on the banks of the Lehigh River near the Monocacy Creek. From the start Bethlehem was to be a planned community in which property, privacy and personal relationships were to be subordinated in a common effort to achieve a spiritual ideal. Integral to that ideal was a small handhewn limestone building with brick arched windows that functioned as a waterworks beginning in 1762. It was, in fact, the first pumped municipal water system in the American colonies and would not be duplicated elsewhere for another 35 years. An undershot waterwheel powered three pumps, forcing spring water uphill into a collecting tower where Central Moravian Church now stands. From here it flowed into cisterns and then into individual houses and shops for use by everybody. The patched up Old Waterworks is a National Historic Landmark.

Mill Grove

Audubon

1762



Alexander Wilson died in 1813 at the age of 47. The cause was said to be exhaustion. In the previous seven years he had waved bye-bye to his life as a Philadelphia school teacher and traveled some 12,000 miles to 15 of the existing 18 states, illustrating birds for his eight-volume opus, *American Ornithology*.

In his travels Wilson met an enthusiastic young illustrator named John James Audubon; he was unable to make a book sale but he made a memorable impression. After Audubon's flour mill went bankrupt in 1819 and he was condemned to debtor's prison, he struck upon an idea. Building from Wilson's work he would find every bird in America and paint them in their natural habitat. This would involve killing many birds but condemnation of that inconvenience would come later. Audubon began publishing his ornithological paintings in 1827, funding the costly color printing process through subscriptions. When the full set of the magisterial *The Birds of America* was complete in 1838 it featured 445 life-size prints. Audubon's work relegated Alexander Wilson to a footnote in history. Only 120 complete editions of *The Birds of America* exist and just 13 of those are in private hands. When one came up for auction in 2000 it was purchased for \$8.8 million, a record for any book. Audubon was born in Haiti in 1785, the illegitimate son of a French sea captain and sugar planter. His father purchased Mill Grove in 1789 and sent 18-year old John to develop a lead mine here in 1803. When John James married Lucy Bakewell five years later the house was sold. That short spell was enough to create a National Historic Landmark.

Cliveden

Germantown

1764



Cliveden, built as the country estate of Benjamin Chew, stands as both one of America's finest examples of Late Georgian architecture, and as one the nation's most important surviving battle-field landmarks from the American Revolution. In the dense morning fog of October 4, 1777 George

Washington, desperate for some sort of victory for his Continental Army, launched a counterattack against the British, who were occupying Germantown on their march into Philadelphia. General John Sullivan smashed into an outpost led by Lt. Col. Thomas Musgrave and forced the outnumbered British into a rare retreat. Musgrave and about 120 men holed up in Cliveden. Despite standing impotently isolated behind American lines Musgrave refused to surrender. General Henry Knox began pounding the thick stone walls with six-pound cannon shells that produced no effect. A frontal charge achieved only American dead. The rebels attempted to burn the British out, but there was little that was flammable in Cliveden. The fruitless half-hour assault bought the British valuable time and the American attack disintegrated into chaos in the still foggy morning. Although sent in disorganized retreat the Battle of Germantown buoyed the spirits of the Americans. Washington's audacious strike convinced European observers of American commitment to freedom and French military assistance would be shortly forthcoming. Chew, a Colonial chief justice of Pennsylvania, refused to endorse either side in the conflict and was jailed for a time in 1777. The main house, with its battle-scarred walls, is fronted by a garden sanctuary, including two stone lions on the doorstep, which observed it all.

Fort Mifflin

Philadelphia

1771



British military engineer Captain John Montresor applied his genius to the defenses of the Delaware River on Mud Island in 1771. But formidable Fort Mud became an American stronghold in 1777 when it was occupied by Lt. Colonel Samuel Smith. But an anticipated

river assault by the British on Philadelphia never materialized. General William Howe succeeded in taking the colonial capital overland on September 26. But the prize would be worthless without the capture of Fort Mifflin - renamed for Major General Thomas Mifflin - which impeded British supplies from coming up the river. Howe turned to the master builder Montresor to dismantle the fortifications he had once built. Montresor's first bombardment began on October 15. The guns at Fort Mifflin easily turned the British back. Heavy rains further deterred the attackers as they laid siege to the fort. The doomed fate of the Americans was certain, however, as Montresor prepared batteries against the land side of the fort he had left unprotected - an inconceivable threat only six years earlier. By November 9 the batteries on nearby Providence Island were ready: two 32-pounders, six 24-pounders, one 18-pounder and many lesser guns were leveled at Fort Mifflin. Also in the artillery were two floating batteries. American guns were silenced but the defenders fought valiantly. By November 15 seven British ships joined the assault. At its height 1,000 British cannonballs rained on the fort every 20 minutes. Finally the Americans deserted the position after one of the most memorable defensive stands ever made on American soil. The fort never saw action again but the U.S. Army Corps of Engineers still use a sliver of the grounds making Fort Mifflin the country's oldest fort in military use.

Potts House

Valley Forge

1773



The most famous name in the American Revolution comes to us from a small iron forge built along Valley Creek in the 1740s. No battles were fought in Valley Forge, but 12,000 Continental troops, weary from marching and battlefield setbacks, set up camp here on December 19, 1777. George Washington had been

informed that his support from the Pennsylvania militia, upon whom he depended heavily, would evaporate if he retreated more than 25 miles from British-occupied Philadelphia. Valley Forge, 18 miles northwest of the city, was close enough to harass the invaders, yet far enough away to remove the threat of British surprise attacks. In addition Washington could place his army between the British and the temporary headquarters of the Continental Congress in York. Although the winter was comparably mild more than 2,000 men perished in the primitive conditions. Prussian officer Friedrich Wilhelm von Steuben arrived in February with a mandate to instill a formal training program and order the ranks. The martial appearance and revived spirit of the troops helped gain French recognition for the Revolutionaries on May 6, 1778. It was a formidable Continental Army that marched from Valley Forge on June 19 to pursue the British across New Jersey and drive them away from the colonies by 1781. America's attention was redirected to long forgotten Valley Forge during a centennial celebration in 1878. Preservation efforts began with Washington's Headquarters at the Isaac Potts House and evolved into a state park and then a national historic park.

Carlisle Barracks

Carlisle

1776



This colonial ammunition plant was called Washingtonburg when it was built during the War for Independence, the first place in America named for George Washington. After the hostilities he selected the site for the new nation's first arsenal and its first military school,

although the latter would be settled in West Point. In 1879 the military handed the barracks over to the Bureau of Indian Affairs for use as the first government-run boarding school for Native Americans. That education would be in the ways of European descendants. Children were forced to come to Carlisle from 140 tribes, to cut their hair, change their names and convert to Christianity. In the words of first Carlisle Indian Industrial School superintendent, Richard Henry Pratt, the goal was to "Kill the Indian, Save the Man." Hundreds of similar schools followed the Carlisle model before the federal government abandoned its program of forced cultural assimilation in 1931. Their success was a mixed bag. Demand for some Indian schools outstripped capacity, attracting students from distant tribes. Others devolved into cheap labor camps, rife with student abuses. Carlisle students did find their way into society via the school's internationally recognized band and celebrated athletic programs. Jim Thorpe, when he wasn't on the dance floor winning the 1912 inter-collegiate ballroom dancing championship, won letters in 11 sports at Carlisle. He also found time that year to win gold medals in the pentathlon and decathlon at the Olympic Games in Stockholm, Sweden. The Carlisle School closed in 1918 and the buildings were returned to the War Department; today it is home to the U.S. Army War College.

Solitude

Philadelphia

1784



Sir William Penn was a British naval hero but he realized early on not to expect his son and namesake to wear the same epaulets. The younger Penn was not only a religious rabble rouser but he joined the Society of Friends, a radical pacifist sect, that landed him in prison four times for spreading heretical beliefs. King Charles II was more than happy in 1682 to cancel a debt of 16,000 pounds owed to Penn's deceased father by giving him

45,000 square miles of land - about the size of England - in the American colonies. William Penn could take his troublesome Quaker friends and start anew in "Penn's Woods" that Charles named for the admiral. Penn called the capital city in his new haven Philadelphia, the "City of Brotherly Love." Penn saw a city that would one day stretch from the Delaware River to the Schuylkill River. He had surveyor Thomas Holme lay out a plan for the city to match that far-reaching vision. But for the next 100 years the city still clustered only six blocks from the Delaware River. So it was when grandson John Penn built one of the country's first Neoclassical homes just a few miles from the center of the city he was able to name it "Solitude." Penn was also a pioneer in incorporating the landscape into the architecture. He lived in Solitude only four years before sailing to England and never coming back. The mansion remained in the Penn family into the 1800s when it became a part of Fairmount Park; it is the only home of a Penn family member still standing in the United States.

Sturgis Pretzel House

Lititz

1784



French monks are credited with twisting the first pretzels 15 or 16 centuries ago but it is the Germans who most embraced the soft, doughy treats. Some sources say that a soft pretzel could be scored from a Philadelphia street vendor as early as the 1820s. What is known is that Julius Sturgis opened the country's first commercial pretzel bakery

in the Bavarian stronghold of Lititz in 1861. Sturgis set up shop in a building already 77 years old, built from stones dug up in the street. Julius did not rely on a family pretzel recipe dating back hundreds of years; he adapted a recipe his father had gotten from a passing hobo in exchange for a meal. Until the 1930s pretzels were handmade and even the nimblest fingers could not produce more than 40 per minute. In 1935 the Reading Pretzel Machinery Company introduced the first pretzel-making machine and the salted snack began its assault on national markets. Today, the Keystone State is still the epicenter of pretzel production in America, churning out 80% of the nation's pretzels, both soft and hard. The Sturgis Pretzel House still makes pretzels in its 200-year old ovens as well, aimed at local markets. And every golden treat counts - whereas the average American eats two pounds of pretzels per year the typical Philadelphia gobbles down 12 pounds.

Bradford House

Washington

1788

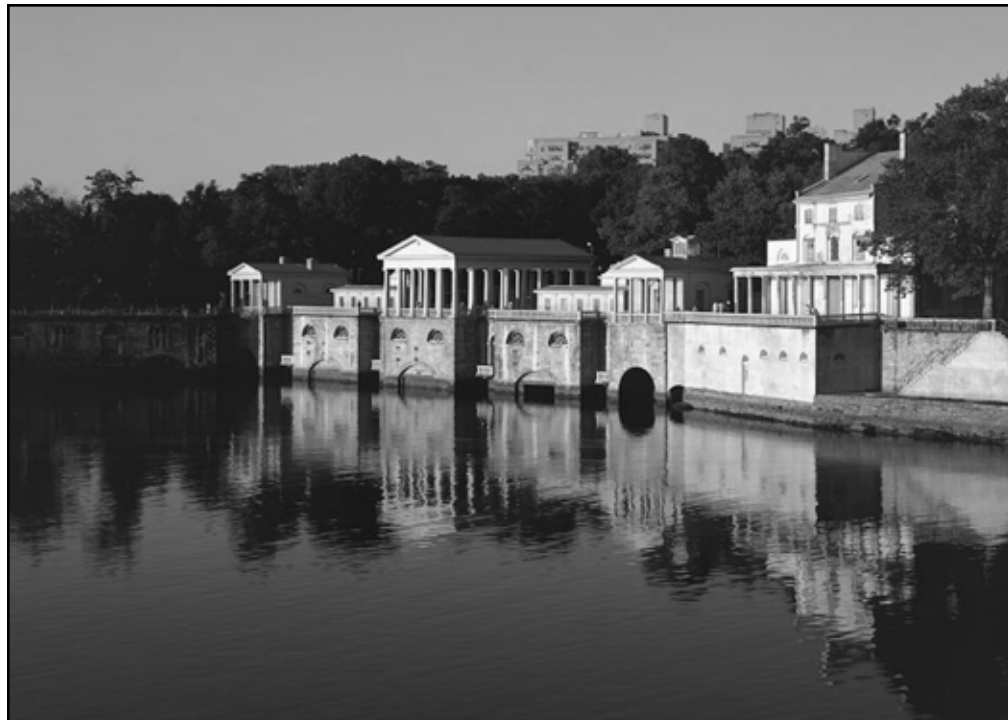


David Bradford, businessman and Deputy Attorney General of Washington County, built the finest house west of the Allegheny Mountains. With its cut-stone exterior it made quite an impression in a rustic village of small, log buildings. Even the woodwork inside was brought from England. Bradford and his family lived in this house until 1794 when his involvement as the leader of the "Whiskey Rebellion" led to a warrant for his arrest,

sending him south to Spanish West Florida (present-day Louisiana). In that year the federal government, only six years old and which isolated settlers on the frontier scarcely recognized, imposed a high excise tax on whiskey. This bite was particularly onerous because local farmers typically converted their grain to whiskey to lessen the shipping expense. When federal tax collectors appeared in the area local mobs drove them off. If this experiment in democracy was ever going to work, decided President George Washington, it was critical to enforce its laws. A militia of more than 12,000 men assembled in Harrisburg and Washington took command of the march. It was the only time a sitting President personally commanded the military in the field. The rebellion was squashed without opposition and signaled to the new American people that changes to any law would have to take place through Constitutional means. Eventually, David Bradford received a pardon for his role in the Whiskey Rebellion from John Adams and he came back to sell the house; it was converted into a furniture and coffin store in the early 1900s and is a museum today.

Fairmount Waterworks

Philadelphia
1801



Perched on the banks of the Schuylkill River, the Water Works was not only a source of the City's water, its rambling Classic architecture and cutting-edge engineering made it a world famous 19th-century tourist attraction. Built between 1812 and 1815 by Frederick Graff, the waterworks comprise a dam, pumphouse and reservoir. Water was pumped from the river into the artificial lake (where the Art Museum now stands) and then distributed through the city via wooden water mains. Graff was a draftsman on the city's first waterworks built a decade earlier after which he became superintendent. He remained at the post 42 years, becoming America's foremost authority on delivering fresh water to the people. Graff's son replaced him as chief engineer of the Philadelphia Waterworks, entertaining visiting engineers who came to admire some of the best of America's earliest industrial architecture.

Bedford Springs Hotel

Bedford
1806



Eight mineral springs, each of a distinct chemical composition, gurgle from the base of the Allegheny Mountains south of Bedford. In Native American lore the waters were "good for what ails you" although how that exactly worked was a bit fuzzy. John Anderson knew that wealthy Americans were already hooked on seeking out these medicinal pools so he bought 2,000 mountainside acres in 1798 and started putting the word out. Anderson put up tents to house the visitors seeking the "Bedford cure" and couldn't put the canvas up fast enough. By 1806 he had a stone inn ready and within a few years was hosting 300 guests, many who stayed for months. In 1816 James Buchanan, a member of the Pennsylvania House of Representatives from Lancaster County, made his first trip to Bedford Springs. Buchanan would return annually and in 1857, when Buchanan became the first Pennsylvania-born President, his vacations here would have made the hotel his "Summer White House," were the Executive Mansion actually named the White House which it wasn't until the 1900s. Seven U.S. Presidents visited Bedford Springs while in office and another handful have signed the guest register out of office. The hotel has been a National Historic Landmark since the 1980s.

Sparks Shot Tower

Philadelphia

1808



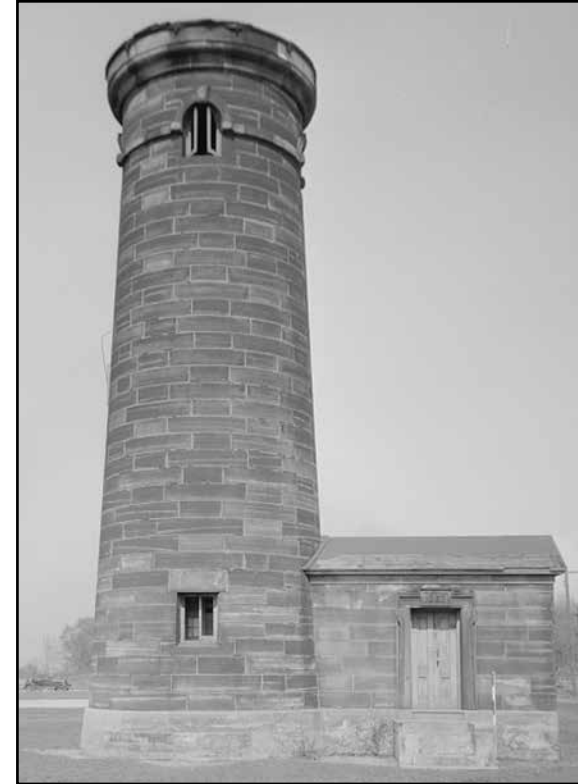
William Watts, an English plumber, and Sir Isaac Newton had a lot in common. Newton observed an apple falling and came up with a theory of gravity. Watts observed that he could pour molten lead into a perforated metal pan and after the droplets fell through space he could collect them from water troughs below as perfectly round bits of shot. It sure beat the current way of making lead in wooden molds that produced uneven quality. Watts patented his idea and built the first shot tower in 1782,

about 90 feet tall. Fast forward to Philadelphia in the Thomas Jefferson administration and another plumber. Jefferson signed the Embargo Act of 1807 which strangled American trade, cutting off supplies of lead shot. Sparks spearheaded the construction of a 142-foot brick tower on the Delaware River waterfront to fill the void. Jefferson repealed his own act before he left office but one of the country's first shot towers was already built. The War of 1812 provided steady business and the Sparks family kept the molten lead falling in the "factory in a smokestack" until 1903. The tower has been in the hands of the City of Philadelphia for more than a century, a testament to its splendid brickwork. It currently anchors a playground.

Erie Land Light

Erie

1818



In 1818 when construction began on Pennsylvania's first lighthouse Presque Isle on Lake Erie already possessed an enduring maritime legacy. Five years earlier the Americans had set up a makeshift shipyard in the bay on the east side of the peninsula. Six light gunboats were constructed that enabled commander Oliver Hazard Perry to send a fleet of nine against six more formidable British warships. After four hours of engagement in the Battle of Lake Erie on September 10, 1813 Perry was able to report, "We have met the enemy and they are ours." In a conflict

not littered with American military success, the United States was able to retain control of the Great Lakes for the remainder of the war. The original lighthouse - the first on the Great Lakes - and its 1858 replacement were both abandoned for this tower after their foundations began to sink. When the Presque Isle Lighthouse was erected on the peninsula in 1873 the Erie Land Light was deactivated. After the public squawked the government paid twice the price it got selling the sandstone tower and put back in service. It was decommissioned permanently in 1899. The tower is now owned by the City and open to the public from time to time. Erie maintains three lighthouses today. The Schuylkill River and Delaware River in Southeast Pennsylvania have boasted lighthouses through the years but none are active.

Union Canal Tunnel

Lebanon

1827



The canal era began in America on the South Hadley River in Massachusetts in 1795. Two years later riverboats were navigating past the Conewago Falls on the Susquehanna River through Pennsylvania's first canal. After New York opened the Erie Canal in 1825 to grab a monopoly on trade to America's interior the Commonwealth got serious about canal building. Work on the the nation's first transportation tunnel started in May 1825 with hand drills and black powder to penetrate a ridge between Quittapahilla Creek and Clark's Run. Progress was about two feet a day. The tunnel was completed in 1827 but it wasn't wide enough to include a towpath. Mules were led over the ridge while boats poled through the tunnel against the ceiling. The Pennsylvania Canal would eventually reach into every corner of the state with 726 miles of waterways, railways, and inclined planes. The canal age, however, was almost over when it fully blossomed. The Pennsylvania Railroad completed its Main Line from Pittsburgh to Philadelphia in 1852 and before the decade was out all the canals owned by the Commonwealth were sold. Canal boats could still be seen hauling freight into the 1940s when the tunnel was purchased by the Lebanon Historical Society to preserve as a park.

Eastern State Penitentiary

Philadelphia

1829



Crime was an American spectator sport in the early 1800s. Hangings were public spectacles and people would make a day of it, toting picnic lunches to the gallows. In the 1820s the Eastern State Penitentiary was far and away the most expensive prison ever built, created around

the principle of solitary confinement that kept prisoners from seeing each other and, the thinking went, prevent them from sharing their underworld secrets. Thousands of visitors showed up at Eastern State to watch the condemned men at hard labor - and it was a day's trek since the prison was constructed in what was then the Philadelphia countryside. Municipal officials also made the trip; they came from around the world. John Haviland's spoke-like design of the cells made it possible to oversee the workhouse from a central location. Eastern State was said to be the most imitated building in the world with 300 copycat incarceration facilities adopting the "Pennsylvania system." The harsh solitary confinement system was officially abandoned in 1913 and mobster Al Capone even enjoyed paintings on the walls of his cell and a finely crafted cabinet radio during a stay in 1929. The first escape occurred in 1832 and hundreds would follow. Only one inmate, Leo Calahan in 1923, was never recaptured. He may have been motivated to stay away since that was the year female prisoners were removed from Eastern State. The Penitentiary shuttered in the 1970s and rehabbed for popular public tours in 1994.

Yuengling Brewery

Pottsville

1831



In 1829 David Yuengling, a newly arrived German immigrant, opened the Eagle Brewery in the foothills of the eastern Appalachian Mountains. His plan was to produce Lord Chesterfield Ale and Porter. The new brewhouse, located on Centre Street, was

not two years old before fire consumed it. In 1831 Yuengling rebuilt on Mahantongo Street tucked, like many old-time brew houses, into a mountainside where tunnels gouged from the rock provided natural cold temperatures necessary for aging and fermentation. In 1840 brewmaster John Wagner set sail from Bavaria with a different plan. He was going to cross the Atlantic quickly in a fast, new clipper ship carrying a supply of delicate lager yeast that required cold storage. He made it to Philadelphia and set up the continent's first brewery with light lager beer brewed with a bottom-fermenting yeast unlike the heavier top-fermented ales and stouts the British brought with them to America. Wagner had the initiative but not the working capital. His operation, never more than a kettle that could produce eight barrels, did not survive but his lager yeast did. The Germanic population of eastern Pennsylvania lapped up the lighter beer from their homelands and lager was especially popular on hot work days in the summer. By the 1850s some 30 Philadelphia breweries were selling lager beer and Pennsylvania rivaled New York and Wisconsin as beer-consuming states. David Yuengling began putting his Eagle brand on the new lagers as well. During Prohibition grandson Frank, who would lead the company for 64 years, produced three near-beers and built a dairy across the street. There were 2,156 American brewing companies in 1919; Yuengling was one of the few to survive the only Amendment to the U.S. Constitution so unpopular that it had to be repealed. The five-story brewery continues today as America's oldest brewery.

Staple Bend Tunnel

Mineral Point

1833



Pennsylvania saw its first railroad when the Mauch Chunk Switch-back Gravity Railroad began rolling coal cars down 14 miles of track in 1827. In the 200 years since there has still never been discovered a better replacement for moving tonnage across land than on rails. Pennsylvania has been the repository

of much of that railroading history - by 1840 no state could match its 700 miles of track and by 1880 more than 6,000 rail miles crisscrossed the Commonwealth on its way to a high of 11,500 in the 1920s. The 36-mile Allegheny Portage Railroad was the first line constructed through the Allegheny Mountains, with an emphasis on "through." To breach the rugged terrain the nation's first railroad tunnel was blasted through the rock, growing 18 inches a day. A three-man crew would spend the morning drilling a three-foot long hole and packing it with black powder. After lighting the fuse they would break for lunch. Afternoons were spent clearing the rubble. It took two years to complete the 901-foot passageway. When it was completed the portals were given a fancy Greek Revival treatment with Doric pilasters and stone blocks - half of the total cost of \$37,000 was just for the entranceway. Modern motorists don't see that kind of fancy entering highway tunnels today. The Staple Bend Tunnel only carried trains until 1857; it is open again as part of the Allegheny Portage Railroad National Historic Site.

Merchants' Exchange Building

Philadelphia

1834



In the 1830s the City of Philadelphia decided to rescue traders from the cramped and noisy meetings in coffeehouses and taverns by building a grand "temple of commerce" as a permanent home for the Philadelphia Stock Exchange. After Dock Creek was filled in, William Penn's carefully laid-out grid of 90-degree angles suddenly had a curved street intruder. Architect William Strickland, the leading cheerleader in America for the Greek Revival style, solved the problem with traditional pedimented exterior on one side and a grand semi-circular Corinthian portico on the other. His masterwork became one of the treasures of the first national American architectural style. The much-admired building, constructed completely of marble, was having a tough go of it by the 1900s. It was sold to a firm that made it a Produce Exchange and an open-air market surrounded the glorious exterior. Vendors hawked vegetables from pushcarts. A gas station was built on the Dock Street side. Finally in 1952 relief came with a conversion into headquarters for Independence Park; today this is the oldest stock-exchange building extant in the nation.

Searights Tollhouse

Uniontown

1835



The National Road became America's "Gateway to the West" when the federal government authorized construction in 1811. For the first decade everyone could travel for free. In 1822 Congress passed a bill authorizing the collection of tolls but President James Monroe vetoed it. There were plenty of

Americans who believed the government had no role in anything besides managing foreign trade, protecting the borders, and delivering mail. They certainly had no business collecting money to use roads. The federal government got out of the road-building business in 1835 and Pennsylvania took over responsibility for its share of the National Road. The first thing the State did was to begin installing toll booths. William Searight pulled every political string at his disposal to secure the position of Commissioner of the National Road that put him in charge of all operations from hiring to taking tolls from travelers. Searight did not mess around - he constructed his brick toll house right on the highway with a log gate to block traffic. Monies collected paid for road maintenance and salaries, including his own \$730 yearly take - at a time when \$1 a day was a handsome wage. Searight's Tollhouse, a National Historic Landmark, is one of only two remaining on the National Road and the only one in Pennsylvania.

Sodom School

Lewisburg

1835



Orson Squire Fowler was responsible for two wildly different fads in the middle of the 19th century. One was phrenology, the practice that mental acuity could be determined by the bumps on ones head. The other was eight-sided houses that he championed in a book called *The Octagon House, A Home for All*. Neither are much

in vogue these days but the octagon at least made sense - at least for barns. They offered a greater space-to-surface ratio and thus were cheaper to construct than rectangular barns. Octagonal barns were a thing in the 19th century. An extra dose of walls could also bring more sunlight indoors which is likely why octagons were popular with one-room schoolhouses in Pennsylvania countrysides after passage of the 1834 Free Schools Act. Before that communities started a school only when they felt the need - and could find a teacher willing to work for next to nothing. The Sodom School was fabricated from limestone blocks and originally boasted a belltower that disappeared in the late 1800s. The students, which at their peak numbered 101, were gone as well by 1916 and the octagonal schoolhouse received its first makeover by the Works Progress Administration in the 1930s. The Sodom Schoolhouse Memorial Association formed about that time to keep the historical landmark in preservation mode.

Jennie Wade House

Gettysburg

1842



Gettysburg's trajectory as a typical Pennsylvania county seat and market town took a dramatic detour on July 1, 1863 when the Union Army of the Potomac, 92,000 men under General George Meade, clashed by chance with the invading Confederate Army of Northern Virginia, 70,000 troops led by General Robert E. Lee. Fighting raged for three days over 25 square miles around Gettysburg, culminating in a desperate Confederate charge across an open field into the center of the Union line under deadly fire. When the disastrous charge ended, the South's ranks were shattered and the ultimate outcome of the Civil War was never in doubt again. Lee had pressed the attack onto Northern soil and had been repulsed. It was his last major offensive of the Civil War. More men fought and more men died at Gettysburg than in any battle before or since on North American soil. Jennie Wade, the only civilian killed in the battle, died while baking bread for convalescing troops. The 20-year old Jennie was visiting her sister when more than 200 bullet holes riddled the building. She was the fiancée of Corporal Johnston H. "Jack" Skelly. Skelly was wounded in the Battle of Carter's Woods near Winchester, Virginia. He died July 12, 1863, without ever knowing of Jennie's fate. The town survived the battle mostly intact. It wasn't long before the agricultural economy sprinkled with light industry was humming again. But as important anniversaries of the battle ticked off over the years, veterans began returning and America's most famous battlefield became speckled with 14,000 monuments, statues and markers. The Gettysburg economy shifted to tourism. When departing 34th President Dwight David Eisenhower decided to settle in Gettysburg - the first house he had ever owned - people had another reason to come visit.

Starrucca Viaduct

Lanesville

1848



The art of American stone bridge building reached its pinnacle at Starrucca Creek. The Erie Railroad, chartered in 1832, was still building out its 483-mile main line when it needed to find a way across the wide creek valley. Despite being able to pay top dollar the railroad had trouble finding contractors willing to execute superintending engineer Julius Adams' audacious designs. Veteran bridge builder, and husband to Adams' sister, James Kirkwood was imported as the only man who could get the job done. Kirkwood was armed with an open checkbook and 800 workers completed the Starrucca Viaduct in one year from locally quarried bluestone. The final tab was \$316,770 - the most expensive bridge ever built to that time. Towering 100 feet above the valley floor it was also one of the most beautiful. The magnificent structure was the largest stone railway viaduct in the world and just about the last. Stone vault engineering was rapidly being replaced by iron and steel. The stone arch bridge remains virtually unaltered, carrying trains four times the weight of those it was designed to serve.

Delaware Aqueduct

Lackawaxen

1849



Suspension bridges are one of our oldest forms of bridgebuilding, dating back to the 1400s when Thangtong Gyalpo used iron chains to hang decks around Tibet and Bhutan. The first American iron chain bridge crossed Jacob's Creek in Westmoreland County, Pennsylvania in 1801. Cables consist-

ing of intertwined strands of wire were used instead of chains for the first time on the Spider Bridge at the Falls of Schuylkill in Philadelphia. John Roebling, a German bridge engineer, sailed for Pennsylvania in 1831 where he hoped to establish a utopian agrarian community called Saxonburg. After five years of tilling the soil Roebling began seeking bridgebuilding work again. He completed several suspension bridges in western Pennsylvania and won the commission to construct four suspension aqueducts on the Delaware and Hudson Canal. With business booming Roebling shifted his wire-making cable operation to Trenton, New Jersey. Following his canal work Roebling went on to create major bridges across Niagara Falls, the Allegheny River and the Ohio River. John Roebling died in 1869 after an accident in the early stages of building the Brooklyn Bridge, which he designed. His son Washington, finished the country's most famous bridge 14 years later. Water was drained from the Delaware Aqueduct when the canal closed in 1898 and it operated as a toll bridge until the 1970s. Today it is the oldest existing wire suspension bridge in the United States.

PA Railroad Station

Lewistown

1849



Pennsylvania business and political leaders were the last to buy the idea that “the iron horse” would ever out-compete canals in the transportation game. The Pennsylvania Railroad was born out of necessity, not chartered by the legislature until 1846 when the state was being squeezed by the successes of the Baltimore & Ohio Railroad to the south and the New York Central to the north. Until that point railroads in the Commonwealth had only been constructed between canals. Now the goal was to link Harrisburg to Pittsburgh. In 1849 the line completed its first stretch to Lewistown where a small brick freight warehouse was constructed on the banks of the Juniata River. It was converted to passenger use in 1868 and stands as the oldest Pennsylvania Railroad building and the oldest depot served by Amtrak. In 1854 the first trains rolled between Philadelphia and Pittsburgh and required 15 hours - a remarkably fast journey compared to just years before. The fare was \$8, about the equivalent of a good weekly wage. The Pennsylvania Railroad was only founded as an in-state line but shrewd management transformed it into the nation’s greatest railroad. By 1880 it was America’s biggest corporation with 30,000 employees and 20 percent of all passengers were boarding Pennsylvania Railroad trains.

Asa Packer Mansion

Jim Thorpe

1862



Packer mansion sits high above the town where 17-year old apprentice boatbuilder Asa came to town in 1822. He died 57 years later as a millionaire after founding boatyards, construction and mining companies, the Lehigh Valley Railroad, and Lehigh University. His three-story Victorian home has a center hall plan, though at each end of the house is a one-room extension with a bowed end. Designed in 1861 by architect Samuel Sloan of Philadelphia, the home was constructed over a cast iron frame at the cost of \$14,000 and renovated twenty years later with another \$85,000. Several stylistic details mark the exterior, including elaborate Italianate wooden roof brackets, Gothic window arches, and gingerbread trefoil motifs trimming the verandah. The chandelier inside is said to have been the model for the one that appears in *Gone With The Wind*. The most amazing story about this National Historic Landmark, now open for tours, is that the mansion was boarded up from 1912 until 1956 and it was never vandalized and nothing was ever stolen from the house.

Miners Village

Eckley
1854



The first coal mine in Pennsylvania opened near Pittston in 1775. Nearly 250 years later only West Virginia and Wyoming reliably produce more coal each year than the Keystone State. In fact, when the term "Coal Region" is invoked it is reserved exclusively for the six counties of northeastern Pennsylvania - the only place American land yields anthracite coal. Known as hard

coal, the fossil fuel is almost pure carbon, best used for energy and light. For much of its early history the wealth of Pennsylvania was directly tied to coal. Elaborate systems of canals were required to get early coal to faraway markets and to attract workers to those remote locations companies often constructed entire communities, known as "patch towns." As mines became unprofitable the operations were closed and towns usually abandoned. Eckley was one such planned patch town and ticketed for a similar fate when a movie scout spotted the town's Main Street with its nicely spaced clapboard buildings. With a little sprucing up and a couple of re-builds, Paramount Studios had a set for its Sean Connery-led drama about 19th century Irish miners, *The Molly Maguires*. After shooting wrapped up the town was given to the Pennsylvania Historical and Museum Commission that uses Eckley to tell the story of coal mining from the viewpoint of those doing job.

Horseshoe Curve

Altoona
1854



For many years in the 1800s Altoona was the greatest railroad town in America. The Pennsylvania Railroad built the largest complex of railroad shops ever seen in Altoona. West of town the challenge of carrying the Main Line over the steep Allegheny Mountains was met with a design and construction of the "Horseshoe Curve." The huge loop connects one side of the valley with the other and was carved from the rugged landscape using only picks, shovels, and horses. To this day, the National Historic Landmark is hailed as an engineering marvel. The job to reduce the railroad grade required three years and provided hundreds of Irish immigrants a foothold in America. The Horseshoe Curve became one of the first tourist destinations in America; an observation park to watch the trains battle the mountain grade was constructed in 1879. More than 50 trains a day can still be viewed rounding the "Amphitheater of the Alleghenies." Or you can just leave a live stream in the corner of your computer.

Academy of Music

Philadelphia
1857



In the 19th century an “opera house” was a catch-all for all sorts of live entertainment from lectures to school graduations to wrestling bouts to even an occasional performance of opera. The Academy of Music is the oldest known opera house continuously in use in the United States and has often been praised as the finest. Napoleon LeBrun won a design competition with a Rundbogenstil (“round arch style”) exterior and a lavish interior modeled on La Scala Opera House in Milan, Italy. The Republicans held their National Convention in the building in 1872 and there may have been an indoor University of Pennsylvania football game here and there along the way. The most celebrated tenant was the Philadelphia Orchestra which stayed for 100 years after its founding in 1900 by German conductor, Fritz Scheel. Scheel was known for his martial music and directed in military garb. The Orchestra returns every January to play the Academy Anniversary Concert and Ball.

Drake Well

Titusville
1859



There was never any “first” discovery of oil. Petroleum had been known for thousands of years, gurgling to the surface from oil springs and seeps. It was used as medicine and for light in its natural state despite a nasty odor. The Seneca Oil Company of New Haven, Connecticut was one skimming oil off springs in western Pennsylvania. In 1858, Edwin Drake was sent to Titusville to find a way to increase production. Drake tried digging and then decided to drill a well. Progress was slow until he hit upon the idea of driving a pipe down to bedrock and drilling inside it. Sixty-nine feet down, Drake hit paydirt. Speculators soon lined Oil Creek with derricks and pumps. The world had never seen anything like it. Boomtowns burst into existence overnight. Pithole City went from a farm to a city of 15,000 people to a ghost town all in a span of 500 days. Drake himself made no fortune from oil. The glut drove the price so low by 1862 that he and his partners went bust. He died 30 years later, a poor and forgotten man. Today, after that first well, 32 states produce oil and half of them bring more “black gold” from the ground than Pennsylvania.