

Article

## The Chicago Fire of 1871 and the 'Great Rebuilding'

For the complete article with media resources, visit:

<http://education.nationalgeographic.com/news/chicago-fire-1871-and-great-rebuilding/>

BY MARY SCHONS

Tuesday, January 25, 2011

*On October 8, 1871, a fire broke out in a barn on the southwest side of Chicago, Illinois. For more than 24 hours, the fire burned through the heart of Chicago, killing 300 people and leaving one-third of the city's population homeless.*

*The "Great Rebuilding" was the effort to construct a new, urban center. Big businesses, innovative buildings, and a new style of architecture were the results.*

The [Great Chicago Fire](#) started on the evening of Oct. 8, 1871. While there is little doubt that the fire started in a [barn](#) owned by Patrick and Catherine O'Leary, the exact cause of the fire remains a mystery. From the barn at 137 DeKoven Street, on the city's southwest side, the fire spread north and east, into the heart of Chicago's business district.

Rain put out the fire more than a day later, but by then it had burned an area 4 miles long and 1 mile wide. The fire destroyed 17,500 buildings and 73 miles of street. Ninety thousand people—one in three Chicago residents—were left homeless by the fire. While only 120 bodies were recovered, it is believed that 300 people died in the blaze.

Chicago's summer and fall in 1871 were unusually dry, with only one-fourth the normal amount of rain falling between July and October. Many of the city's wooden buildings and sidewalks had dried out in the summer's intense heat.

On the first night of the fire, strong southwesterly winds fanned the flames high into the sky and created [convection spirals](#), or "fire devils." Fire devils spit burning [debris](#) in all directions, causing more buildings to burn.

Buildings often had a single layer of [fireproof](#) material on the outside, hiding the wooden structure beneath. The Waterworks, on Pine Street, was just such a building. Its wooden [roofing shingles](#) had been replaced with slate, but the structure itself was [pine](#). When a burning ember struck the roof in the first hours of the fire, the Waterworks was quickly destroyed. It was the main source of water for the city's [understaffed fire department](#).

On the first Sunday after the fire, the Rev. [Robert Collyer](#) spoke to his [Unitarian congregation](#) outside the ruins of Unity Church on Dearborn Street. "We have not lost, first, our geography. Nature called the lakes, the forests, the prairies together in [convention](#) long before we were born, and they decided that on this spot a great city would be built." Unity Church was rebuilt the following year.

The fire destroyed the city's [business district](#), but it left the [stockyards](#) and the new packing plants on the South

Side untouched. Known as the “Hog Butcher of the World,” Chicago’s stockyards processed more meat than anywhere else on Earth.

Most of the [wharfs](#), lumberyards, and [mills](#) along the Chicago River survived, as did two-thirds of the [grain elevators](#) to the west. The industries surrounding [agriculture](#) and [trade](#) kept the city’s [finances](#) as stable as possible, and employed thousands of people.

Most [railroad](#) tracks were not damaged. This allowed shipments of aid to come pouring in from across the country and around the world. Book donations collected in England became part of Chicago's first free, public library. The Chicago Public Library opened its doors on Jan. 1, 1873. Its original building was a water tank on LaSalle Street that had survived the fire.

In 1956, the Chicago [Fire Academy](#) was built on the site where Mr. and Mrs. O'Leary's barn once stood. The school trains new firefighters to this day.

### **First Phase of the Great Rebuilding**

The rebuilding of Chicago started immediately. Sometimes, construction began even before the [architect](#) and [engineers](#) had completed the design.

After the fire, laws were passed requiring new buildings be constructed with fireproof materials such as [brick](#), [stone](#), [marble](#), and [limestone](#). These building materials, much more [expensive](#) than wood, are held together by a sticky, strong substance called [mortar](#). The construction technique using mortar is called [masonry](#). [Masons](#) are a skilled group of construction workers.

Many poorer Chicagoans couldn't afford the fireproof materials or skilled masons to rebuild. In addition, many could not afford fire [insurance](#). (Before the fire, many people had insurance, but their policies were burned in the fire.) Without the means to rebuild or insure their [property](#), thousands of people and small businesses were crowded out of Chicago.

Many other businesses simply ignored the new building laws. Wood often replaced stone, and builders decorated their buildings with wooden [awnings](#), [cupolas](#), and [cornices](#).

### **Terra Cotta**

Two events stopped this [phase](#) of reconstruction. The first was the failure of a [bank](#), Jay Cooke and Company, in September 1873. The bank's failure triggered a nationwide [depression](#) that [halted](#) much of the Chicago construction. The second event was another, somewhat smaller fire, in July 1874. This fire destroyed more than 800 buildings over 60 acres.

After the 1874 fire, the slow and expensive process of rebuilding with fireproof materials began. Big banks and businesses, which handled millions of dollars in [revenue](#) every year, dominated Chicago's new business district.

[Terra-cotta](#) clay emerged as a popular and effective building material. By the mid-1880s, terra cotta tiling made Chicago one of the most fireproof cities in the nation.

The renovation of Palmer House, a luxury hotel on Monroe Street, is an example of how reconstruction efforts used terra cotta. Palmer House had opened only 13 days before the Great Fire. When it looked likely that the Palmer House would be destroyed, its architect, [John M. Van Osdel](#), buried the [blueprints](#) in a hole in the basement, and covered them with a thick layer of sand and clay. Sand and clay are the chief materials used in the building material known as terra cotta. The blueprints survived the fire, and Van Osdel became convinced that clay terra cotta tile would make an excellent fireproof material.

Terra cotta tiles became roofing materials for the new Palmer House. The building itself was made of [iron](#) and brick. Palmer House, which is now part of the Hilton hotel chain, advertised itself as “The World’s Only Fire Proof Hotel.”

Terra cotta would also be used in the [Montauk Block](#), on Monroe Street, often regarded as one of the world’s first high-rise buildings. The Montauk was [10 stories tall](#), with 150 offices. After the fire, clay tiles formed fireproof [insulation](#) around the building's iron frame. The Montauk was also the first building in Chicago where the construction didn't stop during the winter, and it was the first building in the world to be built at night, using the new technique of electric lighting.

## Chicago School

Chicago's architects worked to meet the demands of commercial businessmen. Businessmen preferred plain-looking buildings, because putting on fancy [ornaments](#) cost more money. This streamlined style became known as the [Chicago School](#) of architecture. [William Le Baron Jenney](#), Daniel Burnham, John W. Root, [Louis Sullivan](#), and Dankmar Adler are some of the most well-known Chicago School architects.

The construction of the Home Insurance Building is a good example of how the Chicago School architects worked with businesses to form a new style. When the New York Home Insurance Company relocated its business to Chicago, they challenged the architectural community to come up with a design to bring natural light to all parts of the building. William Le Baron Jenney came up with a solution: [Steel](#), lighter and stronger than iron, could be used on the upper floors.

Jenney's Home Insurance Building, on LaSalle Street, was the first to make use of a steel cage to provide a building's support. The steel frame allowed more large windows to be constructed on every side of the building. Natural light flooded the tall structure. The partitions between offices were made of brick and terra cotta. Built in 1884, the Home Insurance Building is considered to be the world's first skyscraper.

## VOCABULARY

Term	Part of Speech	Definition
<b>agriculture</b>	<i>noun</i>	the art and science of cultivating the land for growing crops (farming) or raising livestock (ranching).
<b>architect</b>	<i>noun</i>	person who designs buildings or other large structures.
<b>awning</b>	<i>noun</i>	construction that extends above a doorway or window, to provide shade and shelter from the weather.
<b>bank</b>	<i>noun</i>	organization that loans, protects, and exchanges money to and from individuals and organizations.
<b>barn</b>	<i>noun</i>	shelter where animals and farm equipment are kept.
<b>blueprint</b>	<i>noun</i>	detailed plan and technical drawings for the construction of a building.
<b>brick</b>	<i>noun</i>	block of clay and sand, dried and used for construction.
<b>business district</b>	<i>noun</i>	geographic area where trade, banking, and retail industry is conducted.
<b>butcher</b>	<i>noun</i>	person who cuts, prepares, and sells meat and meat products.
<b>Chicago School</b>	<i>noun</i>	(1880-1910) architectural style that pioneered the design of skyscrapers and other commercial and industrial buildings.

<b>congregation</b>	<i>noun</i>	group of people who worship at the same church.
<b>convection spiral</b>	<i>noun</i>	pattern where heat energy travels in a widening spiral.
<b>convention</b>	<i>noun</i>	formal meeting, usually with representatives from different regions or parties.
<b>cornice</b>	<i>noun</i>	window feature used to hide a curtain rod.
<b>cupola</b>	<i>noun</i>	dome-like structure on the top of a building.
<b>debris</b>	<i>noun</i>	remains of something broken or destroyed; waste, or garbage.
<b>depression</b>	<i>noun</i>	period of economic hardship, when employment and wages are low, and the value of businesses declines.
<b>ember</b>	<i>noun</i>	small piece of wood, coal, or paper still slowly burning from a fire.
<b>engineer</b>	<i>noun</i>	person who plans the building of things, such as structures (construction engineer) or substances (chemical engineer).
<b>expensive</b>	<i>adjective</i>	very costly.
<b>finances</b>	<i>noun</i>	budget, or money available for a specific project or goal.
<b>fire academy</b>	<i>noun</i>	educational institution that trains professional firefighters.
<b>fire department</b>	<i>noun</i>	professional or volunteer organization that works to prevent and put out fires, usually in a specific geographic area.
<b>firefighter</b>	<i>noun</i>	person who works to control and put out fires.
<b>fireproof</b>	<i>adjective</i>	describing a substance that will not burn in a fire.
<b>forest</b>	<i>noun</i>	ecosystem filled with trees and underbrush.
<b>geography</b>	<i>noun</i>	study of places and the relationships between people and their environments.
<b>grain elevator</b>	<i>noun</i>	large storage facility for grains, equipped with lifting mechanisms.
<b>Great Chicago Fire</b>	<i>noun</i>	(1871) urban disaster that killed hundreds and destroyed almost all of downtown Chicago, Illinois.
<b>halt</b>	<i>verb</i>	to stop.
<b>insulation</b>	<i>noun</i>	material used to keep an object warm.
<b>insurance</b>	<i>noun</i>	money paid in good health to guarantee financial or physical health if injury or damage occurs.
<b>iron</b>	<i>noun</i>	chemical element with the symbol Fe.
<b>John M. Van Osdel</b>	<i>noun</i>	(1811-1891) American architect.
<b>lake</b>	<i>noun</i>	body of water surrounded by land.
<b>library</b>	<i>noun</i>	place containing books and other media used for study, reference, and enjoyment.
<b>limestone</b>	<i>noun</i>	type of sedimentary rock mostly made of calcium carbonate from shells and skeletons of marine organisms.
<b>Louis Sullivan</b>	<i>noun</i>	(1856-1924) American architect.

<b>lumber</b>	<i>noun</i>	precisely cut pieces of wood such as boards or planks.
<b>luxury</b>	<i>noun</i>	expensive item.
<b>marble</b>	<i>noun</i>	type of metamorphic rock.
<b>mason</b>	<i>noun</i>	person who works with bricks, stone, and mortar.
<b>masonry</b>	<i>noun</i>	construction made of stone or brick.
<b>mill</b>	<i>noun</i>	machine used for grinding or crushing various materials.
<b>Montauk Block</b>	<i>noun</i>	(1882-1902) high-rise office building in Chicago, Illinois.
<b>mortar</b>	<i>noun</i>	sticky substance, such as cement, used to bond bricks or stones.
<b>ornament</b>	<i>noun</i>	decoration.
<b>partition</b>	<i>noun</i>	structure that divides or separates.
<b>phase</b>	<i>noun</i>	stage in a process or transformation.
<b>pine</b>	<i>noun</i>	type of evergreen tree with needle-shaped leaves.
<b>prairie</b>	<i>noun</i>	large grassland; usually associated with the Mississippi River Valley in the United States.
<b>property</b>	<i>noun</i>	goods or materials (including land) owned by someone.
<b>railroad</b>	<i>noun</i>	road constructed with metal tracks on which trains travel.
<b>revenue</b>	<i>noun</i>	income, or money earned before production costs are subtracted.
<b>Robert Collyer</b>	<i>noun</i>	(1823-1912) American religious leader (Unitarian).
<b>roofing shingle</b>	<i>noun</i>	piece of tough material used in overlapping layers to protect a roof.
<b>skyscraper</b>	<i>noun</i>	very tall building.
<b>slate</b>	<i>noun</i>	type of metamorphic rock.
<b>steel</b>	<i>noun</i>	metal made of the elements iron and carbon.
<b>stockyard</b>	<i>noun</i>	pens or other areas where livestock are kept.
<b>stone</b>	<i>noun</i>	piece of rock.
<b>terra-cotta</b>	<i>noun</i>	type of brown-orange clay.
<b>trade</b>	<i>noun</i>	buying, selling, or exchanging of goods and services.
<b>understaff</b>	<i>verb</i>	to not employ enough people to do the work demanded in a reasonable amount of time.
<b>Unitarian</b>	<i>noun, adjective</i>	a Christian denomination
<b>wharf</b>	<i>noun</i>	structure built above or alongside a body of water, usually so boats can dock.
<b>William Le Baron Jenney</b>	<i>noun</i>	(1832-1907) American architect.

## For Further Exploration

### Articles & Profiles

- National Geographic Kids: Keeping Cool in the Kitchen—National Fire Prevention Week

**Maps**

- Encyclopedia of Chicago: Progress of the Chicago Fire of 1871

**Video**

- The Weather Channel: Building Chicago for Disaster

**Websites**

- Chicago Historical Society: The Great Chicago Fire and the Web of Memory



© 1996–2015 National Geographic Society. All rights reserved.