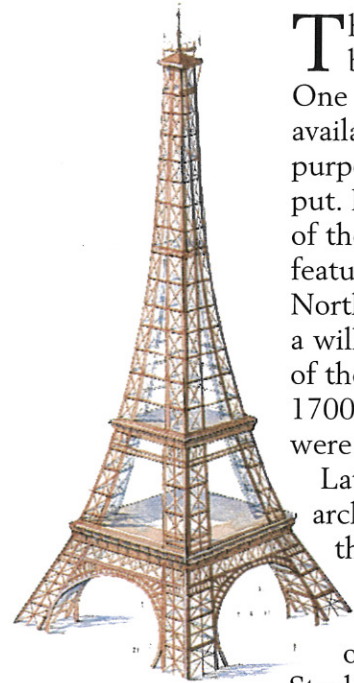


# ARCHITECTURE 1836–1913

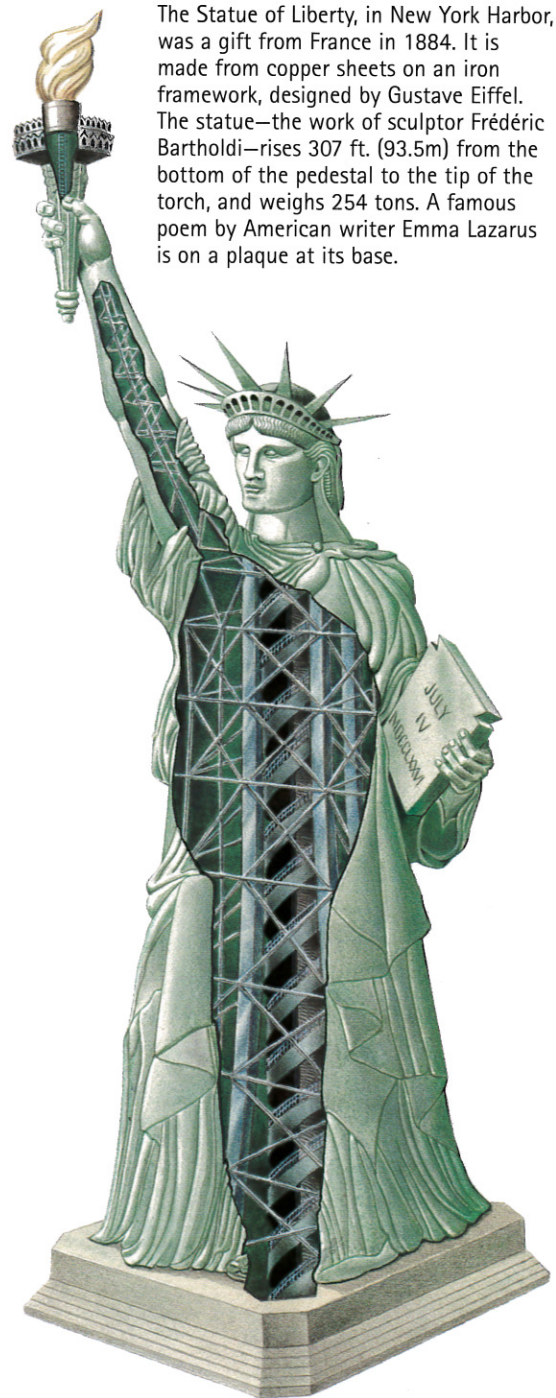
Architecture during the late 1800s reflected a new freedom of expression and a willingness to use modern technology.



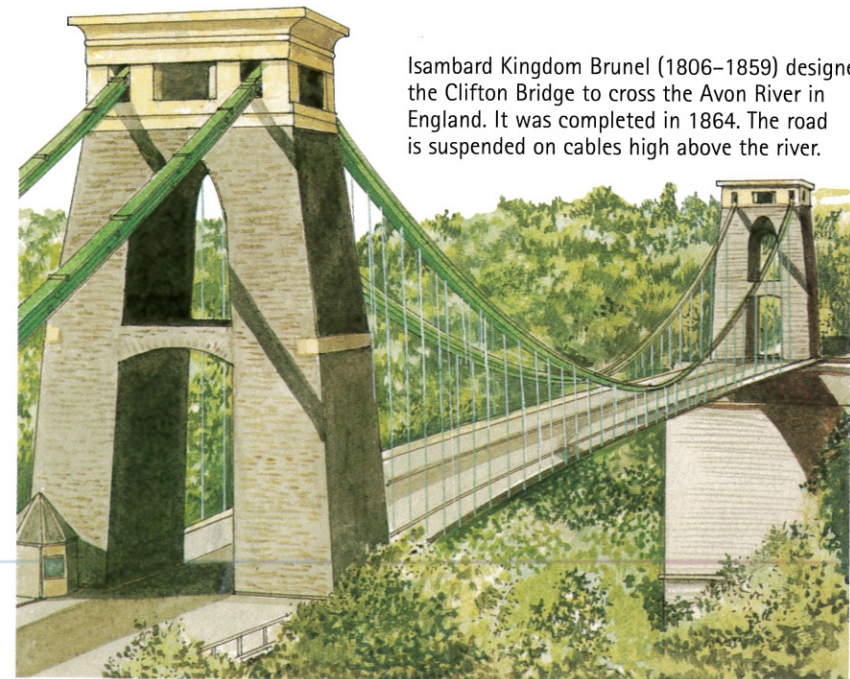
The Eiffel Tower, named after its designer, Gustave Eiffel (1832–1923), was built for the Paris Exhibition of 1889. It is 989 ft. (300 m) high, made from iron, and held together by 2.5 million rivets.

The style of architecture used for a building can depend on several factors. One consideration is that of the materials available to the builders. Another is the purpose to which the building is to be put. Equally important is the imagination of the architects and their clients. The main feature of architecture in Europe and North America during the 1800s was a willingness to use all the great styles of the past, from ancient Greece to the 1700s. Sometimes, very different styles were used in the same building.

Later in the century, a new kind of architecture developed. It was based on the use of steel to form the framework, or “skeleton,” of a building. Since the walls did not have to support their own weight, buildings could be higher. Steel-framed skyscrapers were first made practical in the United States by the elevator, invented in 1852 by Elisha Otis (1811–1861). In 1884, William Le Baron Jenney (1832–1907) built the world’s first skyscraper in Chicago. At ten stories, it would not be a skyscraper today, but its metal-frame structure set a new trend.

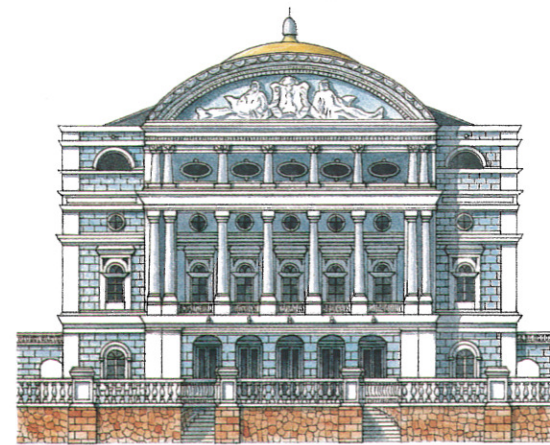


The Statue of Liberty, in New York Harbor, was a gift from France in 1884. It is made from copper sheets on an iron framework, designed by Gustave Eiffel. The statue—the work of sculptor Frédéric Bartholdi—rises 307 ft. (93.5m) from the bottom of the pedestal to the tip of the torch, and weighs 254 tons. A famous poem by American writer Emma Lazarus is on a plaque at its base.



Isambard Kingdom Brunel (1806–1859) designed the Clifton Bridge to cross the Avon River in England. It was completed in 1864. The road is suspended on cables high above the river.

As towns and cities became more and more densely populated, it was vital that services such as fresh water and removal of sewage were adequate. New water pipes were built under cities, and when cast-iron pipes became available it became easier to build drains. As engineering knowledge improved, it was also possible to build bridges that spanned ever greater distances.



◀ Opera became very popular during the 1800s, and many elegant opera houses were built. This opera house is at Manaus, in the Brazilian jungle. The town was very rich for a short time thanks to profits from the local rubber industry.

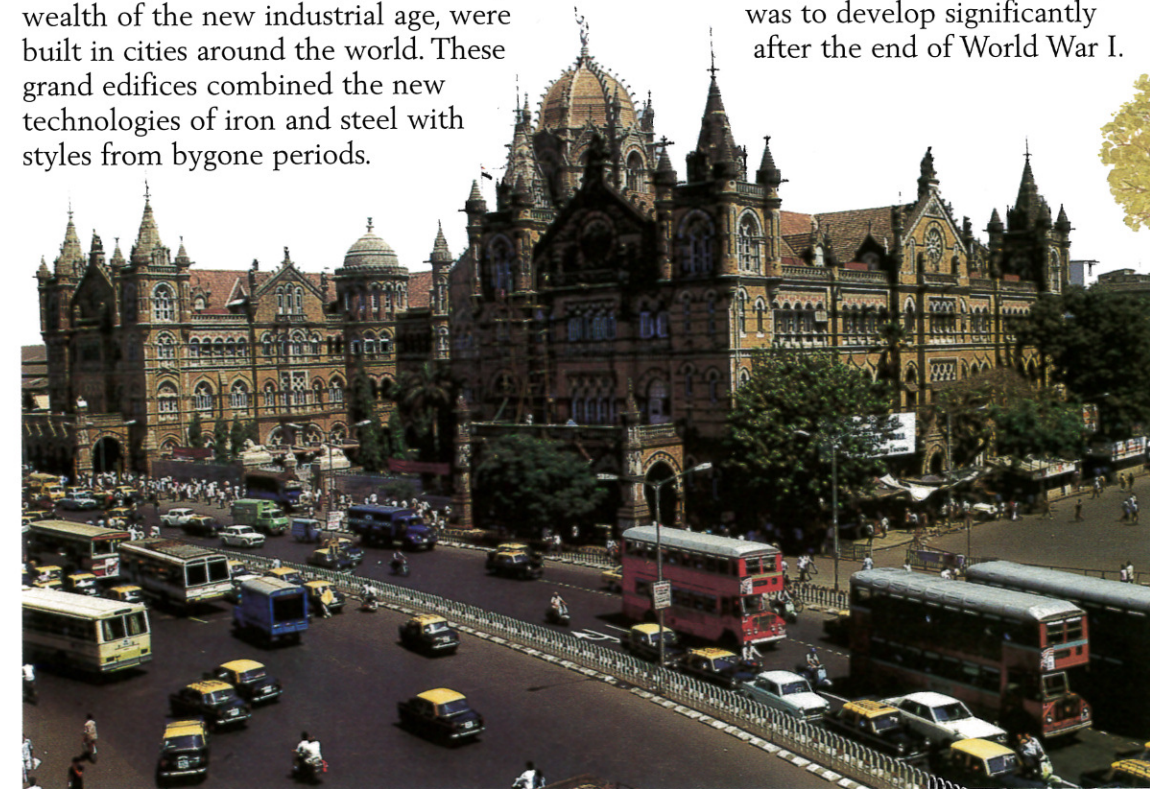


▶ The ten-story steel-framed Home Insurance Building in Chicago is often described as the first skyscraper. After a fire destroyed most of the original city in 1871, the price of building land increased—if buildings were taller they needed less land.

## NEW TECHNOLOGY

The architecture of the late 1800s was adapted to make use of the discoveries of engineers and the availability of iron and steel. In addition to skyscrapers, the use of steel frames also made possible structures such as the Eiffel Tower in Paris, built for the great exhibition of 1889, and the Statue of Liberty in New York Harbor, a gift and symbol of friendship from the people of France to the people of the United States to celebrate the centennial of the Declaration of Independence.

The railroad age brought with it many new opportunities for architects and builders. Railroad stations, symbolizing the wealth of the new industrial age, were built in cities around the world. These grand edifices combined the new technologies of iron and steel with styles from bygone periods.



However, the use of reinforced concrete in the early 1900s brought about a major change in architecture. Building design began to become simpler and less decorative. This “modern” style was to develop significantly after the end of World War I.

▲ During the 1800s in Europe and the United States, the prosperous middle classes lived in imposing townhouses set in quiet, tree-lined streets.

◀ The main railroad station in Bombay was opened in 1866. It was built in a mixture of the European Gothic and Renaissance styles, but the domes are Indian.