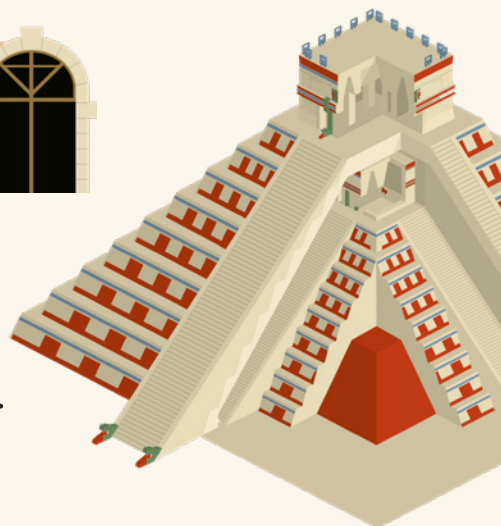
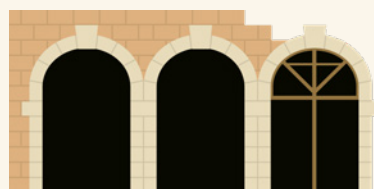
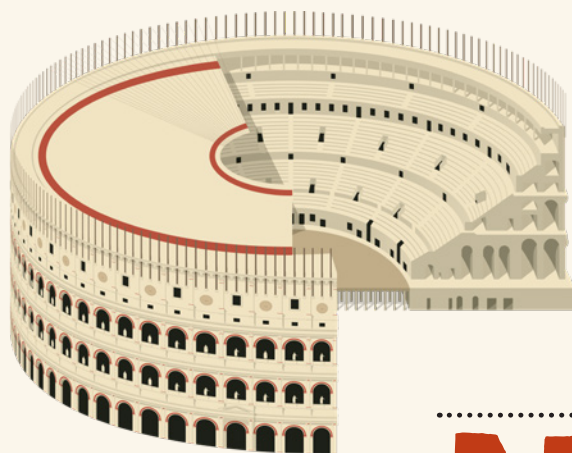
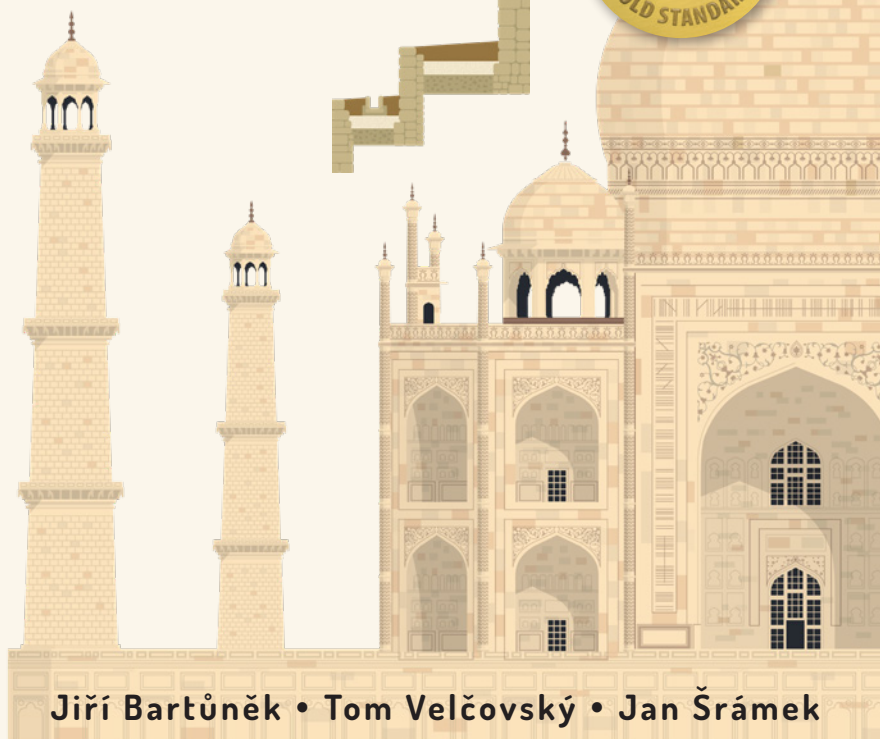
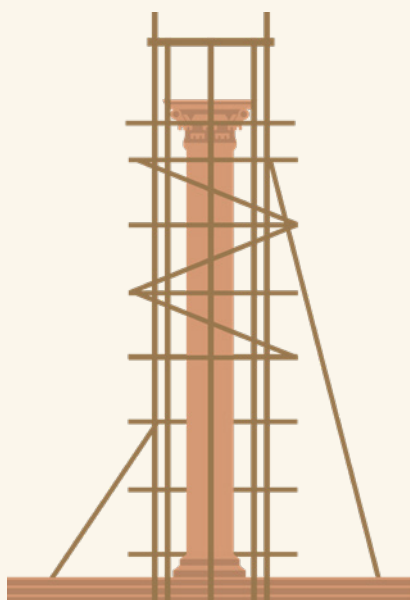
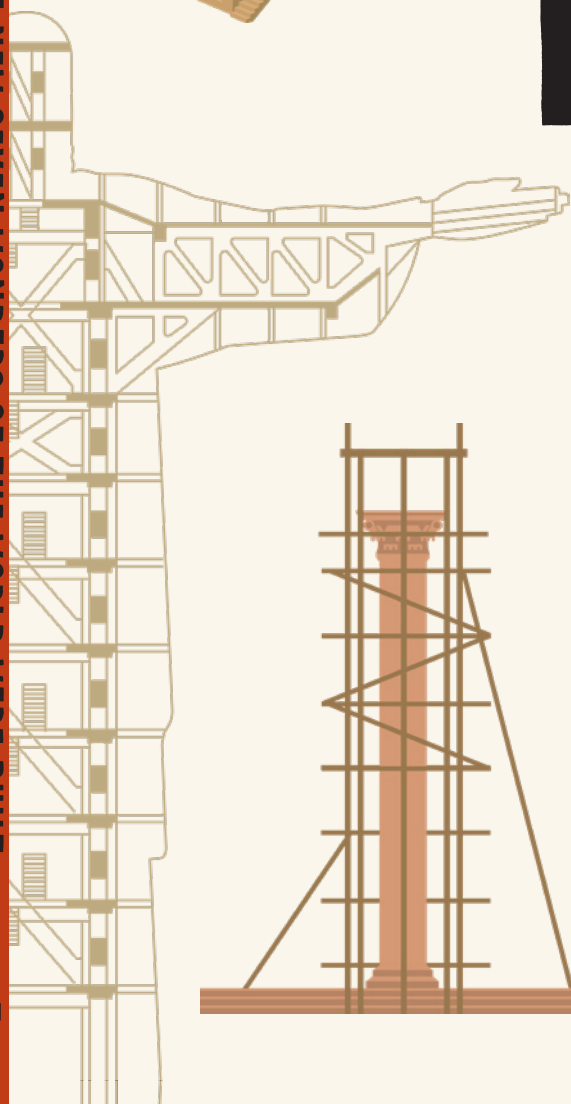
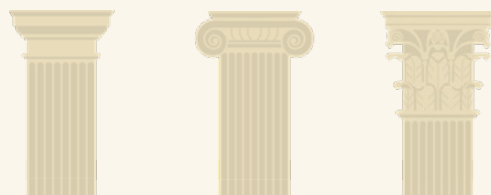




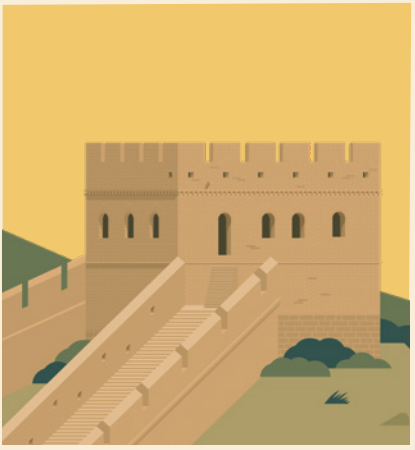
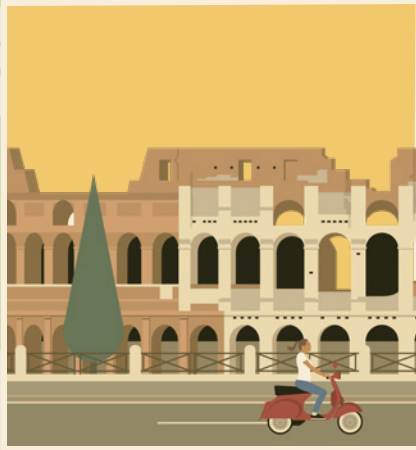
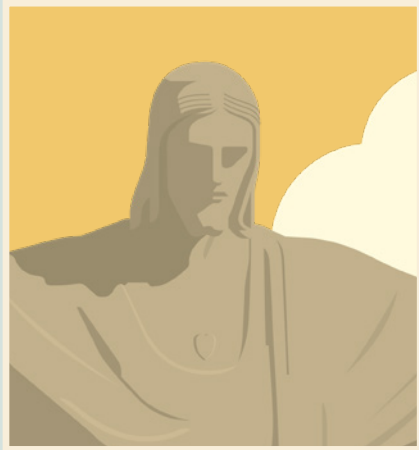
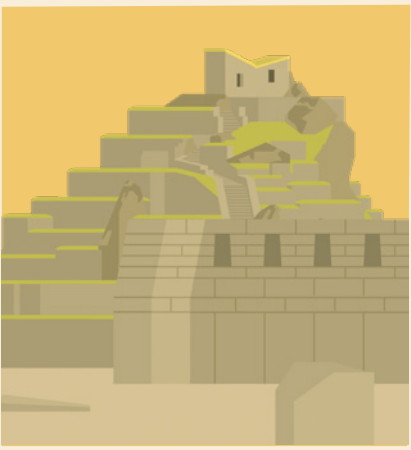
HOW THE
NEW
SEVEN
WONDERS
OF THE WORLD WERE
BUILT



Jiří Bartůněk • Tom Velčovský • Jan Šrámek



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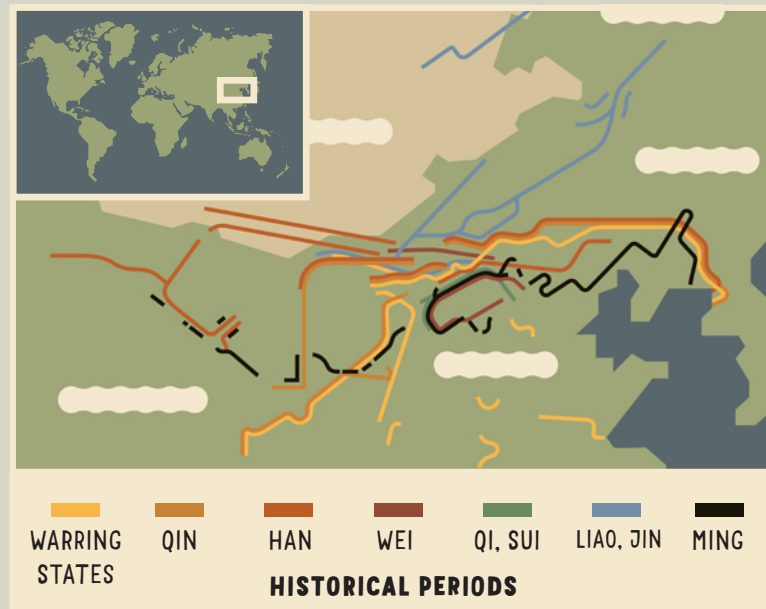
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The Great Wall of China

CHINA 7th CENTURY BCE

It is called the Great Wall of China mainly in America and Europe. In China, it is more precisely called the Long Wall. Measuring the wall is quite difficult, but counting all the bends and breaks, it is a staggering 13,170 miles.



Timeline

Construction on the Great Wall dates back to the 7th century BCE, back during the period of the Warring States. When this period ended, the states joined together to form China. The main building of the wall dates back to the first Qin dynasty, around 210 BCE. During the Han dynasty in the 1st century BCE and during the Jin Empire (1138–1198), construction took place on the fortifications north of today's Great Wall of China, at the boundary of Outer and Inner Mongolia. The last period of construction was during the Ming dynasty (1368–1644).

Emperor

The complex of the original defensive walls from the 3rd century BCE gradually grew to prevent raids from marauding tribes. The first emperor to connect the defensive walls was Qin Shi Huang, founder of the Qin dynasty. However, the wall acquired its current form only during the Ming dynasty in the 14th–17th centuries.



EMPEROR
QIN SHI HUANG

Meng Tian

A wide range of builders and architects took part in the construction, but one of the few prominent names to withstand the test of time is Meng Tian, a major Qing dynasty general who personally managed and led the work on the wall.



GENERAL MENG TIAN

ROBBER
NOMAD



The Advantages of the Terrain

The Great Wall often uses the landscape to have stronger defenses, which is why it often leads along mountain ridges in remote terrain. The wall was not intended to repel a massive attack by enemy troops, but rather to make it difficult for nomadic tribes to raid the interior of the empire.



DAO
(SWORD)

SPEAR

ROCKET

FIRE
LANCE



CHINESE
SOLDIER

Badaling

This section, the most famous one, is very easy to get to from the metropolis of Beijing. The ascent is not too difficult either. However, it is necessary to prepare for the crowds of tourists and vendors.

Simatai

Although such extensive renovations have not taken place in this section, it has both ruins and parts that are intact. Many fans from China and abroad consider it the best stretch of the entire Great Wall. While the eastern part requires visitors to be more physically fit, the western part is a lot easier to climb. You will rarely come across tourists here.



Mutianyu

After Badaling, this is the second best-maintained section of the wall. It is surrounded by forest and offers beautiful views of the surrounding countryside in the summer and fall.

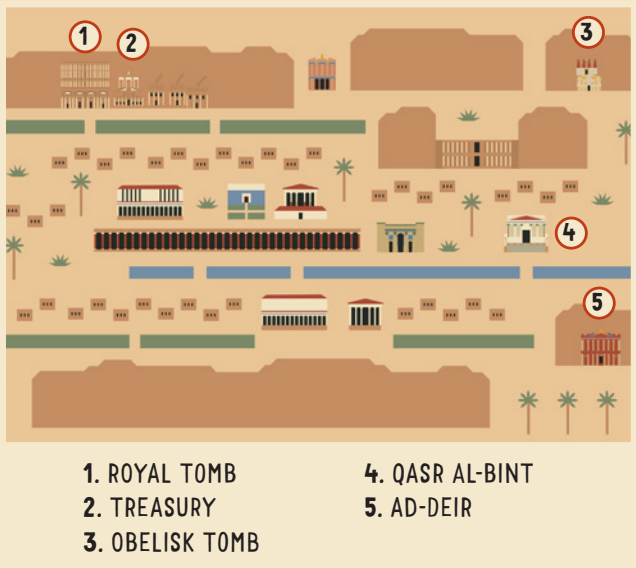


Petra

Petra is a Greek word meaning “rock.” It is also the name an ancient rock town and burial ground and a current archeological site of the Nabataean Kingdom in modern-day Jordan.

MA'AN
JORDAN

3rd CENTURY BCE



Rock City

According to legend, Moses led the tribes of the Israelites, who were thirsty from a water shortage in the dry desert. So, he struck a rock with his staff and out of the rock gushed drinking water. Real-world springs like these served as a reservoir water for the city, thanks to an ingenious system of inflow channels, along with cisterns and tanks.

Oasis

Petra was the only place in this inhospitable landscape at the crossroads of routes that could provide caravans with supplies and refuge. Oases, as such places are called, make Petra a green city in the middle of an arid sandy desert, thanks to springs and reservoirs.

The Nabateans

Originally a nomadic tribe, the Nabataeans settled in the area before the 4th century BCE. Given the strategic location of land lying on several important trade routes connecting Egypt, the Mediterranean, India, and China, the Nabataeans soon became traders.

Caravan

A caravan is a group of people, accompanied by animals, who travel for a specific reason like trading or moving. In this case, they were traders traveling on camels accustomed to life in the desert.

SANDSTONE CHANGES
COLOR DEPENDING
ON THE TIME OF DAY.



CARVED PORTRAITS OF
NABATAEAN DEITIES ARE CALLED
BETLYS. THIS ONE IS THE
GODDESS OF HAYYAN

ROYAL
TOMB

TREASURY

TRADITIONAL WOMEN'S CLOTHING

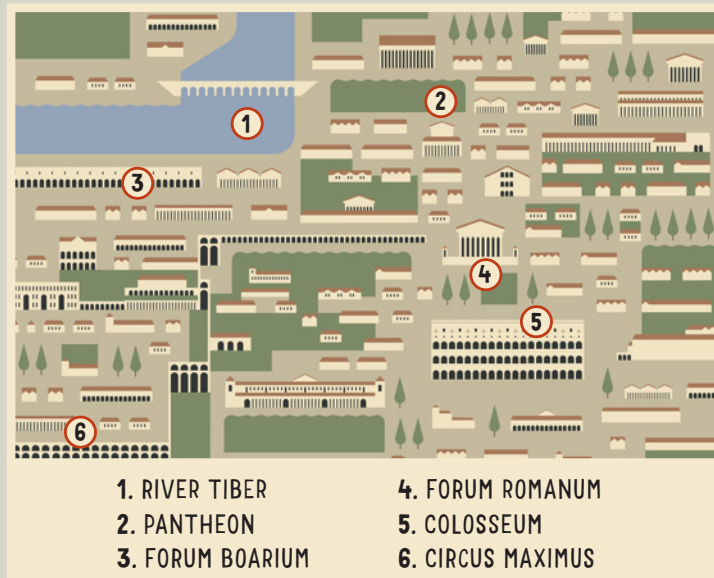
NABATEAN WARRIOR

The Colosseum

ROME
ITALY

1st CENTURY CE

The Colosseum in Rome—also called the Flavian Amphitheater, from the original Latin name *Amphitheatrum Flavianum*—is perhaps the most famous building of its type. Its nickname comes from the emperors of the Flavian dynasty, who built it. It is a magnificent arena that once hosted gladiator games and battle reenactments—even sea battles with sailing ships!



Arena

The Colosseum is an open arena shaped like an ellipse enclosed by a protective wall and surrounded by an auditorium (Latin: *cavea*). It was similar to the ancient theaters, divided into wedge-shaped sections (*cune*). The amphitheater was intended for a wide range of events, especially gladiatorial games (*munera*), the hunting of wild animals (*venatio*), executions, mythological scenes, historical battle reenactments, and even naval battles (*naumachia*).

Seating Arrangements

There were 48,000 seats on three levels and 4,500 standing-room-only seats on the fourth level. The leading places just above the arena belonged to the elite. The highest part was reserved for commoners and peasants.



EMPERORS, CONSULS, AND SOLDIERS BELONGED TO THE ELITE OF SOCIETY, UNLIKE WOMEN AND ENSLAVED PEOPLE.



At the Bottom of the Arena

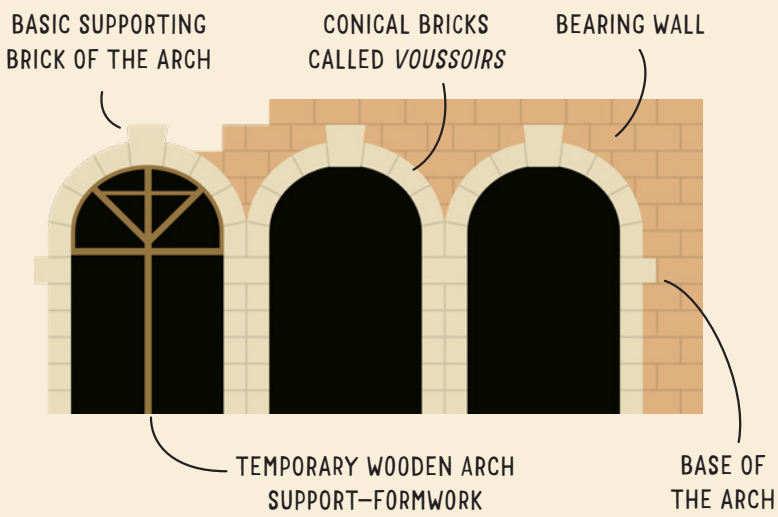
The construction of the Roman Colosseum was underway, the watery area dried out for the needs of the building. It was then filled in layers with pieces of stones and covered by mortar with *pozzolana* (volcanic ash) and strengthened by repeated pressure, called compaction.

Four ways

Minor differences in the construction have led archaeologists to think that the construction was carried out by four different contractors at the same time, each working on a separate quarter of the Colosseum.

The Crane

During the construction of the Colosseum, builders used large cranes, pulleys, and sophisticated scaffolding. *Magna rota*, or polyspaston, was a human or animal-powered crane that is not very different in principle from the current ones. The current ones are, of course, more complex and, instead of slaves and animals, they are powered by fuel, but both of these machines use the principle of a hoist.

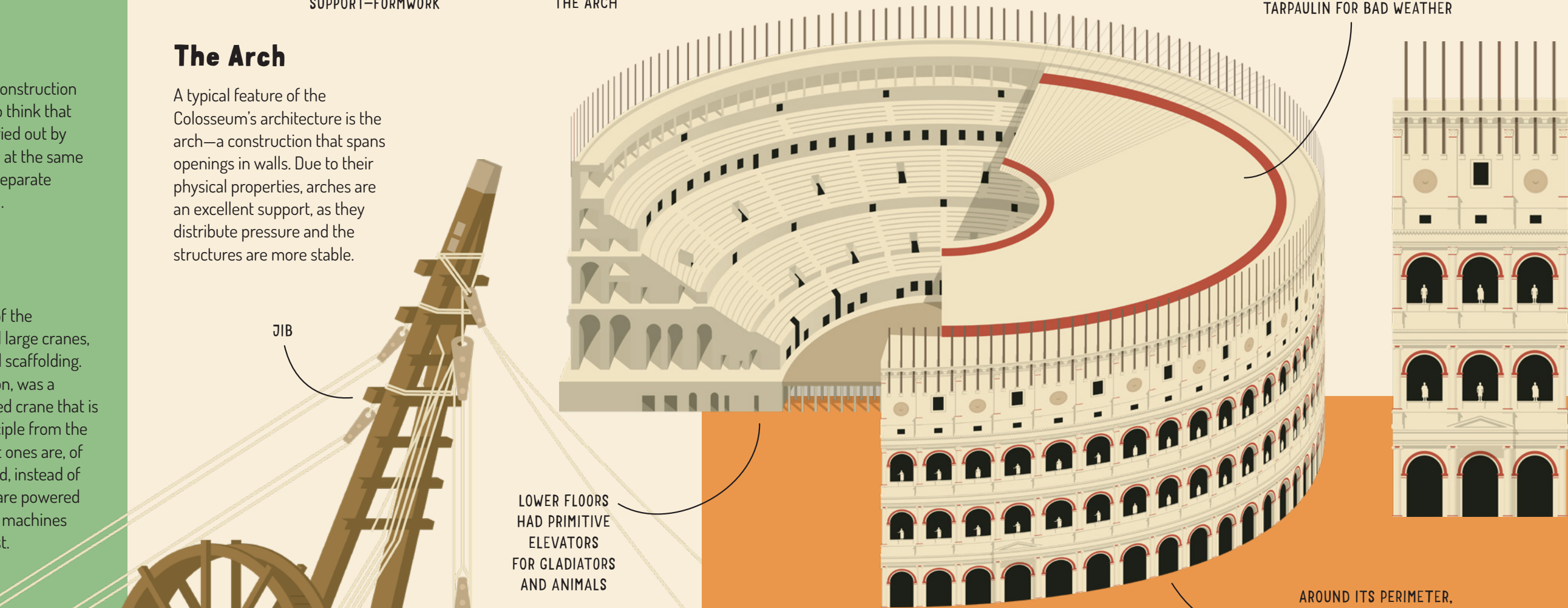


The Arch

A typical feature of the Colosseum's architecture is the arch—a construction that spans openings in walls. Due to their physical properties, arches are an excellent support, as they distribute pressure and the structures are more stable.

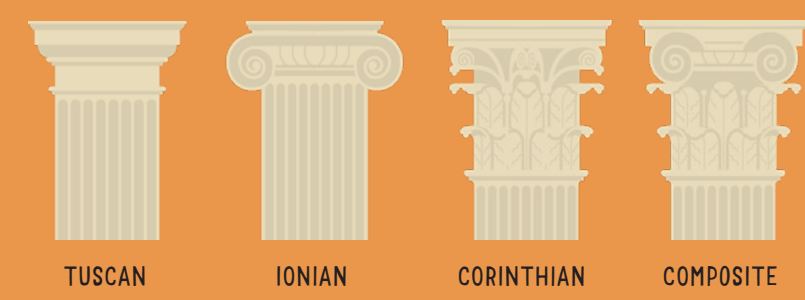
Tools

At the time of construction, the workers used metal and bronze tools. The tools were not very different from today's tools. Wooden handles and metal heads were the basis for the weapons of the gladiators and soldiers. Common throughout Rome was also ceramic, the main material for producing containers.



Orders

The façade of the Colosseum stands out with its superposed so-called *orders*, where the individual ancient architectural styles follow from bottom to top. On the ground floor is the Tuscan order (the Roman version of Doric). Above it is Ionian and Corinthian, with Composite on the top floor.



AROUND ITS PERIMETER, THE AMPHITHEATER HAD 76 NUMBERED ENTRANCES

Christ the Redeemer

The Statue of Christ the Redeemer (*Cristo Redentor* in Portuguese) stands on the peak of Corcovado Mountain (2,340 feet above sea level), towering over the Brazilian city of Rio de Janeiro.

Designers

Back in 1859, the priest Pedro Maria Boss decided on the position of the statue, suggesting it to the Brazilian Princess Isabella. Engineer Heitor da Silva Costa then laid the cornerstone in 1922, and in 1923 a competition was finally held to pick the right statue. The winning design depicted Jesus with arms outstretched, symbolically embracing and protecting the city. The work itself began in 1926. However, the final form is the work of a French sculptor of Polish descent: Paul Landowski.



HEITOR
DA SILVA COSTA

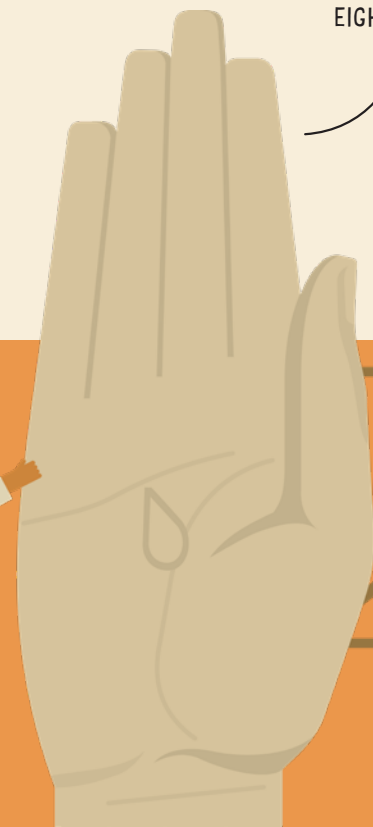


PAUL LANDOWSKI



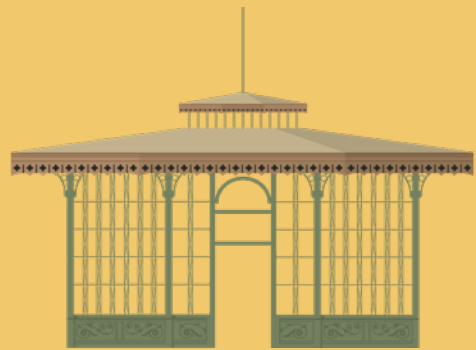
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|-------------------------|---------------------------|
| 1. MARACANÃ STADIUM | 4. PORT OF RIO DE JANEIRO |
| 2. STATUE OF THE CHRIST | 5. SUGARLOAF MOUNTAIN |
| 3. CORCOVADO MOUNTAIN | 6. COPACABANA BEACH |

ONE HAND WEIGHS
EIGHT TONS



RIO DE JANEIRO
BRAZIL

1922



Chapéu do Sol

An observation point called Chapéu do Sol (meaning “sun hat”) originally stood on the top of the mountain. It earned its name for its shape. Pedro II, the last Brazilian emperor, had it built, along with what was the first tourist railway in South America.

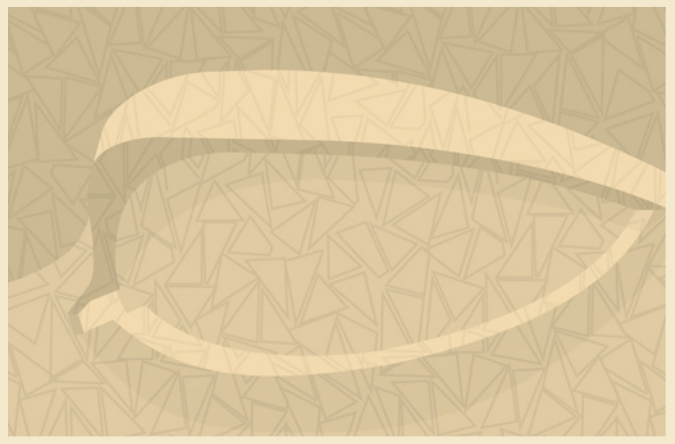
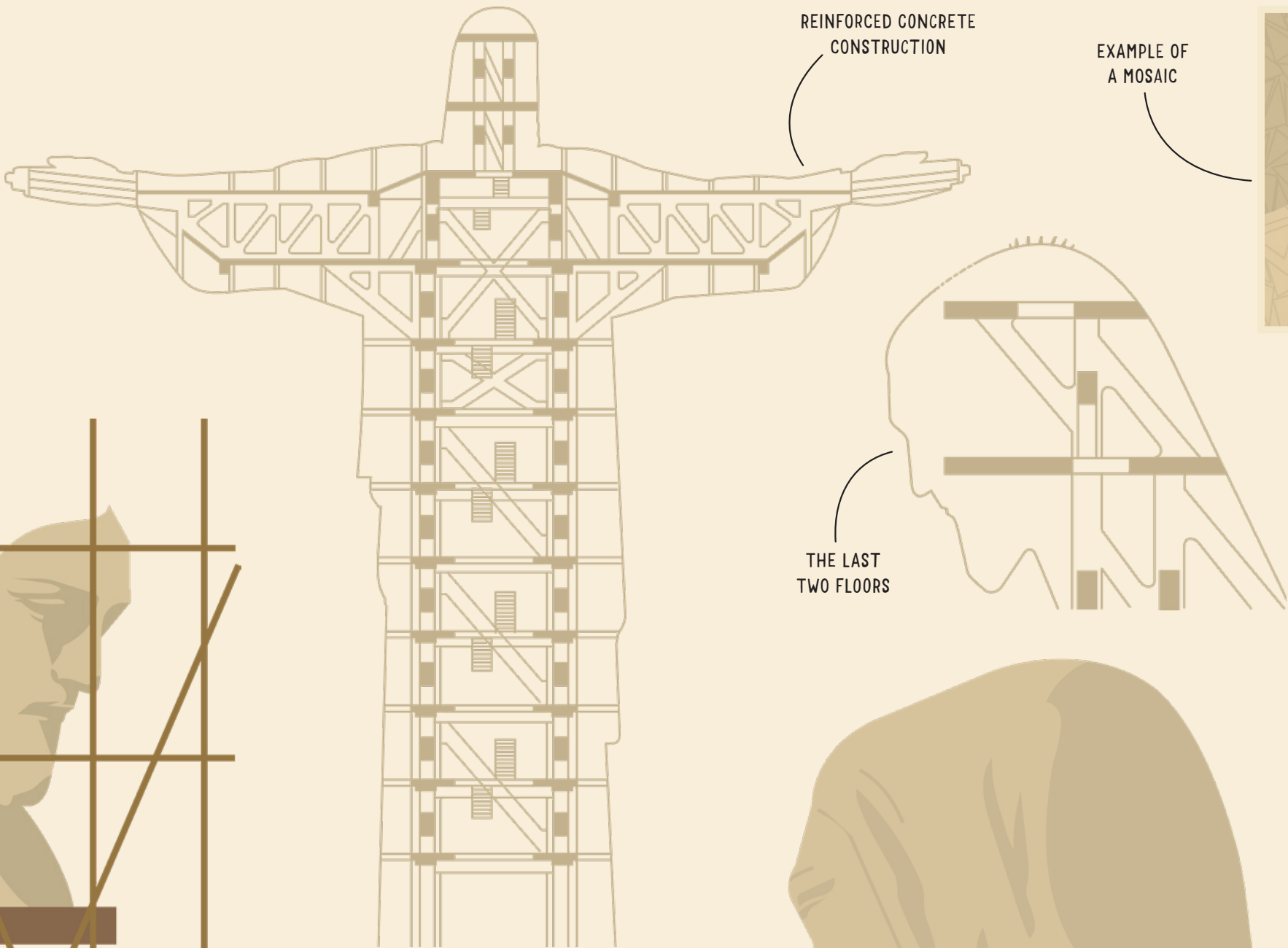
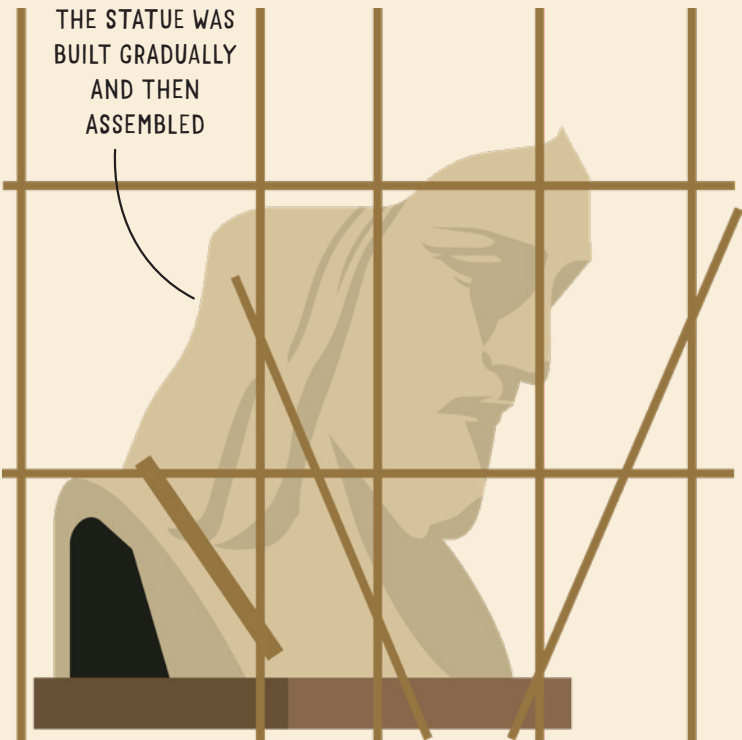


A Concrete Cross

Artist Carlos Oswald first came up with the idea that the statue itself should have the shape of a cross. But the shape of outstretched arms creates structural problems. To support them, Silva decided to use what was then “the material of the future”—concrete.

A Statue of Reinforced Steel

Other than the outer layers, the statue is made of reinforced concrete. For the outside, the designer Heitor da Silva Costa chose soapstone (steatite), a material with enduring qualities that is easy to work. The statue is 98 feet high and stands on an octagonal black-granite pedestal 25 feet high. The distance between outstretched arms is 75 feet. The whole statue weighs about 700 tons.



Materials

The original technical plan provided for the creation of a steel structure in the shape of a cross. But this didn't work, so it was replaced by reinforced concrete. As a mosaic, they then added pieces of soapstone, which is better and easier to work with. In the long run, it's more stable than other materials and gives the statue its trademark white color.

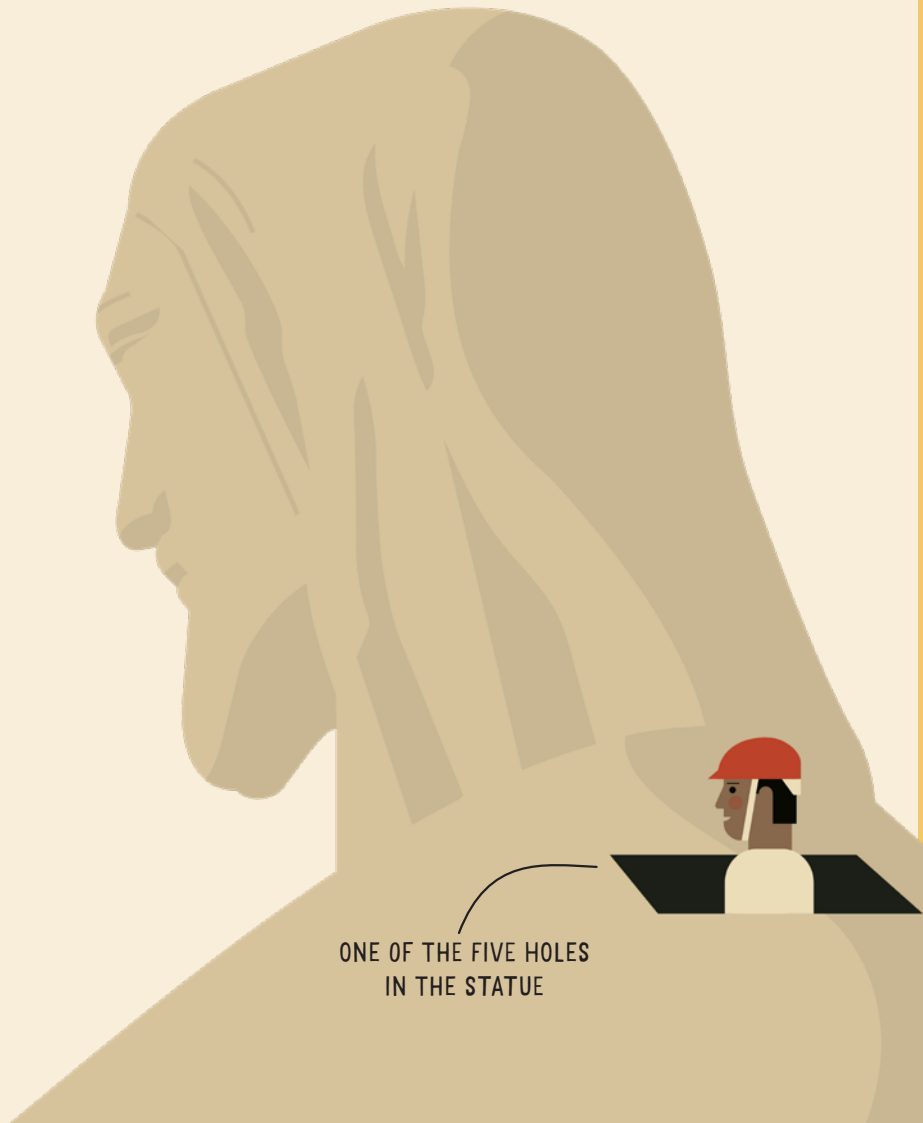
The Inside of the Statue

Inside the Christ, reinforced beams form 12 floors connected by a staircase. The tenth floor is at the level of the hands, and the last two floors are in the head. Five holes in the statue are used to access its surface. One of them is at the head, two on the shoulders, and two at the elbows.



Damaged by Lightning

In 2008 and again in 2014, the statue was damaged by lightning, requiring partial repairs. Every year, the statue is hit by two to four bolts of lightning, but most fortunately don't cause any damage. For protection, the statue has a steel lightning rod on its head in the form of an inconspicuous "crown of thorns" from which the steel ropes lead over both hands to the ground, where they are grounded.

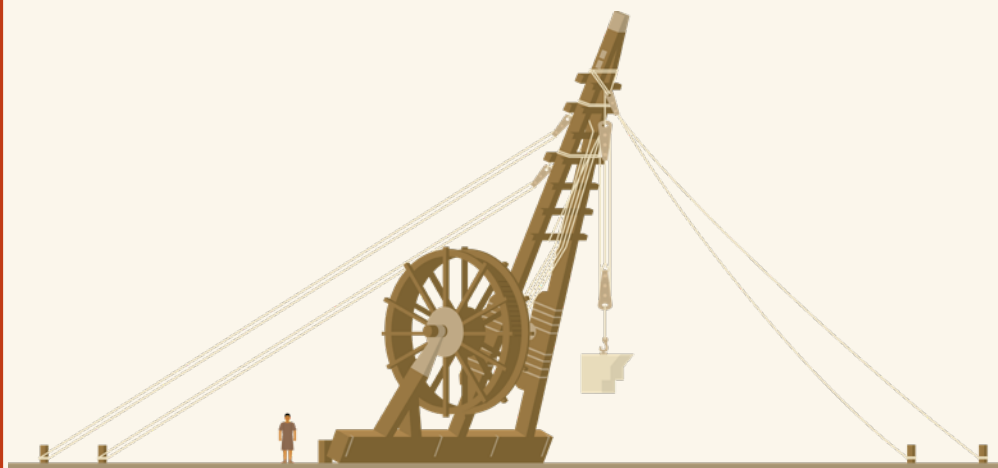




Illustrated by Jan Šrámek
Written by Jiří Bartůňek and Tom Velčovský

The list of the Seven Wonders of the Ancient World has existed for many centuries, and the wonders of ancient architecture at that time were chosen by privileged scholars. The *New Seven Wonders of the World*, however, were selected by over 600 million people who voted for the structures from 2000 to 2007. The Great Wall of China, Petra of Jordan, the Roman Colosseum, the Indian Taj Mahal, the Central American Chichén Itzá, and the South American

Machu Picchu and Statue of Christ the Redeemer—these structures are a unique cross-section of world architecture. They offer a unique opportunity to compare the approaches, as well as the cultures, of different global historical periods. Come travel with us across the globe and back through history. Let's peek behind the curtains of the architectural monuments that have helped shape the world we live in today.



ISBN 978-80-00-07634-8



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\$12.99
Printed in China
by Leo Paper Products Co., Ltd.
www.albatrosbooks.com

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