

MEANS OF TRANSPORT THAT CHANGED THE WORLD

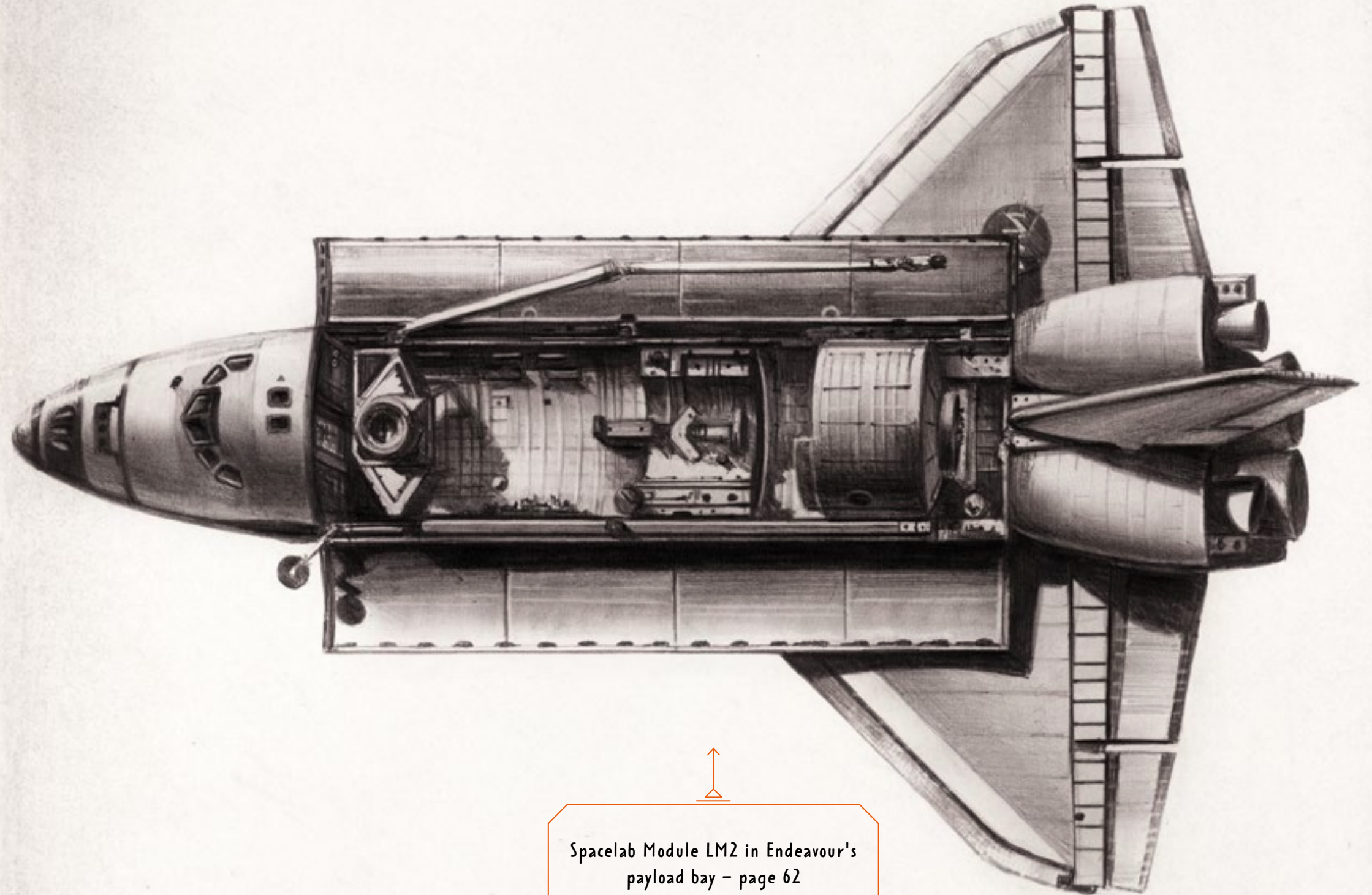


Illustrated by Martin Sodomka

Albatros

INTRODUCTION

We all travel sometimes — to school, to see a friend in another town, perhaps even to a foreign country on holiday. Have you ever wondered how people travelled centuries ago, and what earlier generations had to do to get from place to place? Today we take cars for granted, but in earlier times a car was a dream, at best an idea. But all grand schemes begin with an idea. Once upon a time someone had the idea of crossing the open sea in search of a new world, using nothing but the wind, paddles and a few tons of wood. Today, the ships that battled the ocean waves are in a museum or at the bottom of the sea. Modern vessels of today are at peace with the sea: they are far larger than their predecessors and can move without the wind's help, something the first seafarers would have found fantastical. What if our ancestors had learned that birds were not the only creatures that could fly, because we terrestrial bipeds can transport thousands of people from one end of the planet to another? And that we can even fly beyond our own world, into space? Maybe one of our young readers will be inspired by these pages to come up with an idea so grand that people of the future will write about it. Who knows?

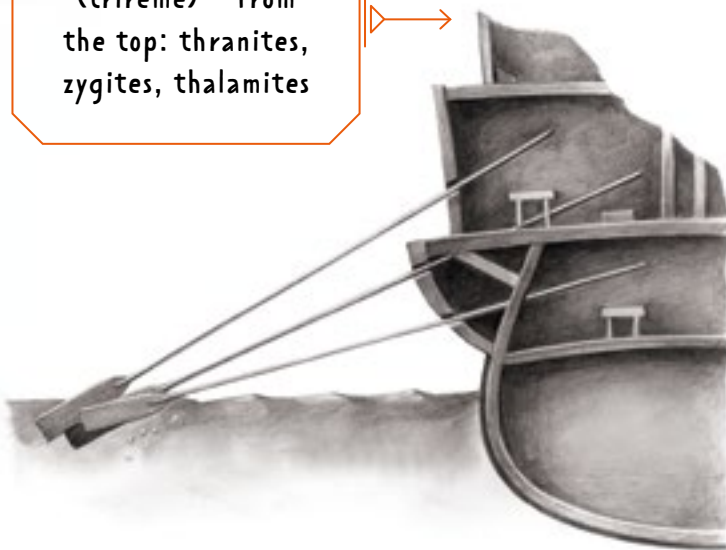


Spacelab Module LM2 in Endeavour's payload bay – page 62

TESSARA-KONTERES

The galley Tessarakonteres is without doubt the largest non-motorized ship the world has ever seen. Although commissioned by the pharaoh Ptolemy IV, who ruled Egypt from 221 to 204 BCE, this enormous ship—she was 128 metres long—was not built in Egypt. At Ptolemy's request, she was constructed and named in ancient Greece. The name is loosely translated as with forty oars or forty-rowed. "Forty oars?" you say. "That's not so many." How wrong you are! The oars of this huge ship were no ordinary light or midweight paddles; they were great logs of wood, each of which needed eight strong men to work it! As there were eighty oars in total—forty on each side—the ship had to be powered by 640 oarsmen, most of whom were prisoners. For a single voyage, 640 oarsmen were too few, however. So that they could eat, sleep, rest and

Oars in three banks (trireme) – from the top: thranites, zygitēs, thalamites



The ship may have looked like this. Due to a lack of historical evidence, we can only speculate about its appearance.

recover their strength, they had to take the rowing in turns. Multiply 640 by six and you get to 4000—and that was the number of oarsmen on board. Then add to this 400 crew and a further 2850—the number of soldiers the galley Tessarakonteres was able to transport. Indeed, she was built to take soldiers from place to place. As you see, then, this rowing boat was pretty massive.

How fine it would be to see her, and to walk across her deck! You could believe yourself to be in a floating city. What a pity we will never have the opportunity! Tessarakonteres, this showcase of Ptolemy's power, is with us no longer. Indeed, we can't be sure that she ever truly existed ...

SHIPS AT THE LAKE NEMI

The emperor Caligula is one of the best known and most controversial figures of ancient Rome. He is the emperor who had his horse appointed a senator, carried on long debates with the Moon and had

a liking for occult rituals. So great was his admiration for Diana, goddess of the hunt, the Moon and chastity, that he decided to build two enormous ships at Lake Nemi and dedicate them to her. At certain times, the lake reflects the moon to breathtaking effect, which explains why it was known as Diana's Mirror. The problem was, as no river flowed into the lake, it was impossible to reach by boat. We still don't know how Caligula's ships were carried to the lake.

What we do know—from wrecks that ended up on the lake's bed, forgotten like the rule of the mad emperor—is that the ships were magnificent floating palaces,

surely one of the wonders of the world. They were plentifully adorned with statues made from precious metals, and they contained drainage and water systems and spas. Fishermen continued to pull treasures from the lake for centuries; even today, archaeologists dream of retrieving fragments of mad Caligula's incredible ships. In 1446, a young cardinal and nephew of the Pope called Prospero Colonna attempted to pull one of the ships ashore with ropes, but he succeeded in retrieving only a few rotten beams.

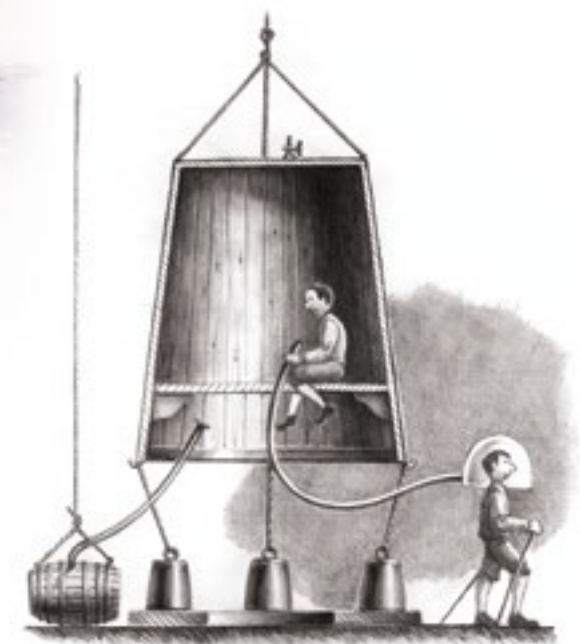
In 1535, Italian inventors Guglielmo de Lorena and Francesco de Marchi had more luck when they boldly

set out to explore the ships underwater in an invention known as the diving bell. By their actions, these two daredevils unwittingly laid the foundations of modern diving. It wasn't until the years of the II. World War, however, that the colossal ships (they were almost 74 metres long) were at last pulled from the lake, after dictator of Italy Benito Mussolini had the lake drained. The ships were taken to Rome, where they came to a sorry end in the final days of the war, when the Italian capital was bombarded. Pride comes before a fall, they say—two despotic Italian rulers could tell you about that.

It was basically a floating palace with marble decor, works of art, a mosaic flooring, plumbing, heating, gardens and bathrooms. Some of the ship's conveniences seemed to come from a later age.

The astronomer Edmond Halley, for whom Halley's Comet is named, invented a diving bell that used barrels filled with oxygen.

Lake Nemi, which is in the Alban Hills about 30 km south of Rome, is of volcanic origin.



SANTA MARÍA

The prow of the Santa María ploughed into the sand of the New World. Having jumped overboard, the crew came to terms with the flat surface. The leader of the expedition, the celebrated Christopher Columbus, was about to speak. “Gentleman,” he declared, “we have reached the shores of the Indies, of this I am sure. I am also sure that we are the first men ever to have reached this continent.” These may not have been Columbus’s exact words, but the content is about right. Truth be told, however, the Santa María, the Pinta and the Niña had discovered the shores of not Asia but of South America. This explains why Columbus referred, wrongly, to the local population as Indians. America became America less than thirty years later, named for the equally famous navigator Amerigo Vespucci. Columbus’s second assertion isn’t altogether correct, either. A full five centuries earlier, a party of Vikings led by Leif Eriksson had set foot on the shores of North America. The Vikings were well known for their sturdy Drakar longships, which were extremely advanced for their time. They used the wind as their main source of propulsion, supporting it with the work of oarsmen.



From left: the PINTA,
the SANTA MARÍA and the NIÑA

A Drakar longship



The unique hull of the Drakar was made from wet wood bent over fire. Thus equipped, the dreaded Norsemen succeeded in conquering the land with something to spare. Remarkably, the far newer Santa María wasn’t much more powerful than the centuries-old Drakar. If you are thinking of her as a ship of great magnificence, you are as much mistaken as Columbus with his identification of

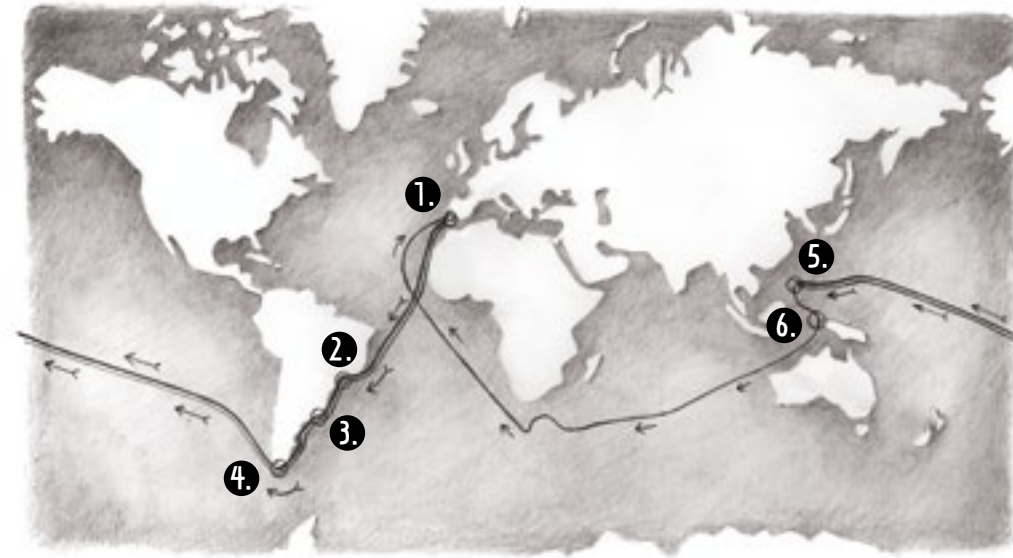
the Indies. The Santa María was the slowest ship in the expedition, and she was not particularly large. Although only her anchor survives today, historians believe that she was only about 26 metres long. Some moments in history simply aren’t as they first appear. What we can say for sure about Columbus, however, is that his expedition changed our world once and for all.

VICTORIA

Believe it or not, people used to believe that our planet was as flat as a pancake, and that if you were to reach the end of it, you would fall into space. This assumption was at last refuted in the early 16th century—for that was when an expedition led by Portuguese navigator Fernão de Magalhães (better known to us as Ferdinand Magellan) achieved the first circumnavigation of the Earth. Sadly, Magellan never made it home: he died in battle in the Philippines, having become embroiled in a fight between native tribes. Only one of the five ships that set out on the expedition from Spanish harbours in 1519 returned. It was left to the Victoria to bring this ground-breaking three-year expedition to a successful conclusion. A carrack, she first crossed the Atlantic Ocean to the southern tip of the American continent—a tip which since that time has been known as the Strait of Magellan. After that, she sailed the Pacific to the Philippines. Not only the leader of the expedition met his end there; so, too, did the ship the Concepción. Chaos, skirmishes and constant changes in command resulted in the order to burn the ship and abandon the expedition. The Victoria was left as the sole surviving vessel. With only fifty sailors on board, she sailed around Australia and Africa on her return to European waters. The Victoria would make two more trips to north America. On the second of these she would perish. The first ship to circumnavigate the Earth now rests in peace at the bottom of the Atlantic ...

MAGELLAN'S CIRCUMNAVIGATION

1. Sanlúcar de Barrameda, Spain – 1519, September 20
2. Santa Lucia Bay – 1519, December 13
3. Río de Solis – 1520, January 12
4. Strait of Magellan – 1520, October 21
5. Kingdom of Mactan, Philippines – 1521, April 27, Ferdinand Magellan died
6. Ambon Island – 1521, December 21
Juan Sebastián Elcano became captain



Of the five ships that set off on the voyage, only the VICTORIA completed the circumnavigation. TRINIDAD: captured in the Moluccas; SAN ANTONIO: deserted in South America; CONCEPCION: burned by natives in the Philippines; SANTIAGO: wrecked off South America.



GOLD STATE COACH

Had you attended every coronation of a British monarch, you would be almost 1,000 years old. Of course, no one can reach such a great age. Nevertheless, members of the British royal family tend to be long-lived, which means that many of us would manage only one such coronation in our lifetime. There is one thing about these coronations that hasn't changed for almost 250 years, though—and we can see this thing on other occasions, too. It is the ceremonial coronation carriage, nicknamed the Gold State Coach. Take a look at it and you will soon see where the nickname comes from.

The Gold State Coach was designed by Samuel Butler and built in his workshops. Made to demonstrate the wealth and power of the British Empire, it is a truly impressive sight. As it was intended to last for many centuries, it is no wonder that no expense was spared in its creation. It is adorned with countless sculptures, paintings and carvings, and it is coated in real gold. The Kingdoms of Denmark and the Netherlands can today boast of similar carriages.

One thing of which the wearer of the British crown would not boast is the fact that a ride in this super-carriage is a pretty unbearable experience. King George VI declared himself to have had “one of the most uncomfortable rides I have ever had in my life” in it; by her use of the words horrible and not very comfortable to describe the way to her coronation, Queen Elizabeth II seemed to agree with him. Perhaps the carriage has remained in perfect condition for over two centuries because no one has ever volunteered for a ride in it. As we travel in far greater comfort in the automobiles of today, we might expect the Gold State Coach to remain in its pristine state for some centuries to come.

As the Gold State Coach weighs four tons, it must be pulled by eight horses. It is on view to the public at the Royal Mews of Buckingham Palace.

Crown Jewels of the United Kingdom



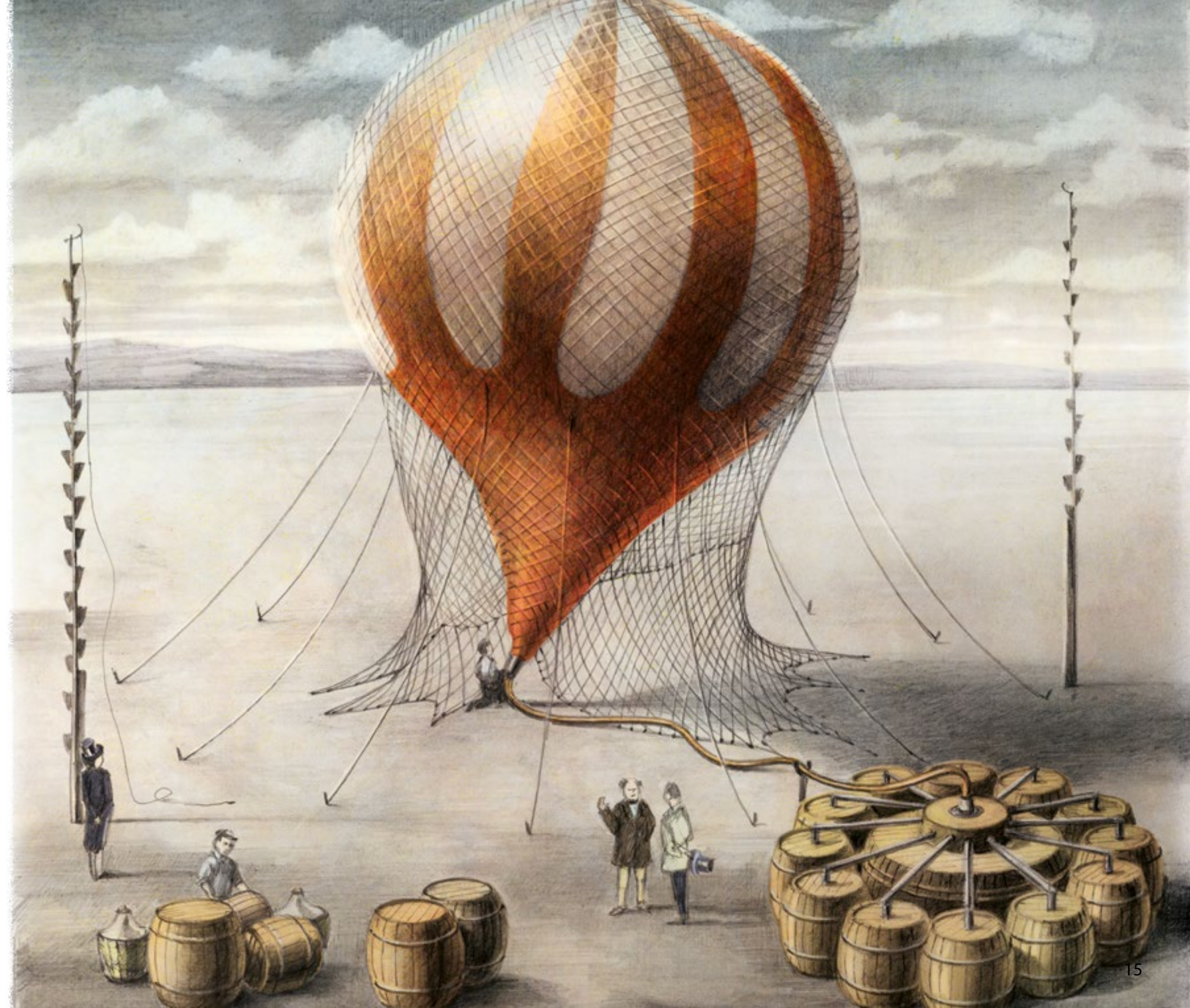
The coach is 7.3 m long and 3.7 m high

A DAUNTLESS AIR BALLOON

It is a beautiful Saturday afternoon in 1783 in a small French village in the commune of Gonesse. Jean-Paul has opened a bottle of red wine, filled his pipe and is sitting comfortably on the doorstep of his house. "What a lovely quiet summer's day!" he sighs with satisfaction. He has just lit his pipe and taken his first puff when his contemplations are disturbed by sounds reminiscent of an army on the march, followed by the sight of an angry, disorderly crowd pushing past his house. Dogs bark, men wave pitchforks, women scream. "By the saints, what's going on?" mutters Jean-Paul. One look at the sky is enough to tell him. As he stares up in astonishment, he doesn't realize that his pipe has fallen from his mouth. Above the fields is a large white ball, and it seems to be heading for the ground—for the land of his parents and their parents before them. "No way!" Jean-Paul growls, before grabbing his pitchfork and joining the ranks of his neighbours. Advance to combat with the mysterious ball!

These simple, enraged villagers of Gonesse commune succeeded in destroying the monster underfoot and with their pitchforks. But it was no monster: it was the very first hydrogen-filled balloon, and it had been in flight for 45 minutes.

Before long, gasballoons were far more common. They were filled with hydrogen transported in wooden barrels. Eleven years later, at the Battle of Fleurus, the French army monitored enemy forces using a balloon that worked on the same principle, so helping itself to victory—making L'Intrépide the very first gas-powered vessel to determine the course of a battle.



MEANS OF TRANSPORT THAT CHANGED THE WORLD

Written by Štěpánka Sekaninová & Tom Velčovský



Illustrated by Martin Sodomka

Travel back with us as we explore the world's most important milestones in the development of travel and transportation. From little-noticed ideas that launched a technological revolution, through expeditions that reached for the stars, to tragedies that ended vast projects once and for all. As this book will show, every ending stands at the beginning of something new. Take a ride with us on the fastest, greatest, most awesome, most controversial machines that moved humanity forward.

ISBN 978-80-00-06355-3



9 788000 063553

5 1895



\$ 18.95

Printed in Czech Republic by FINIDR, s.r.o.
www.albatrosbooks.com