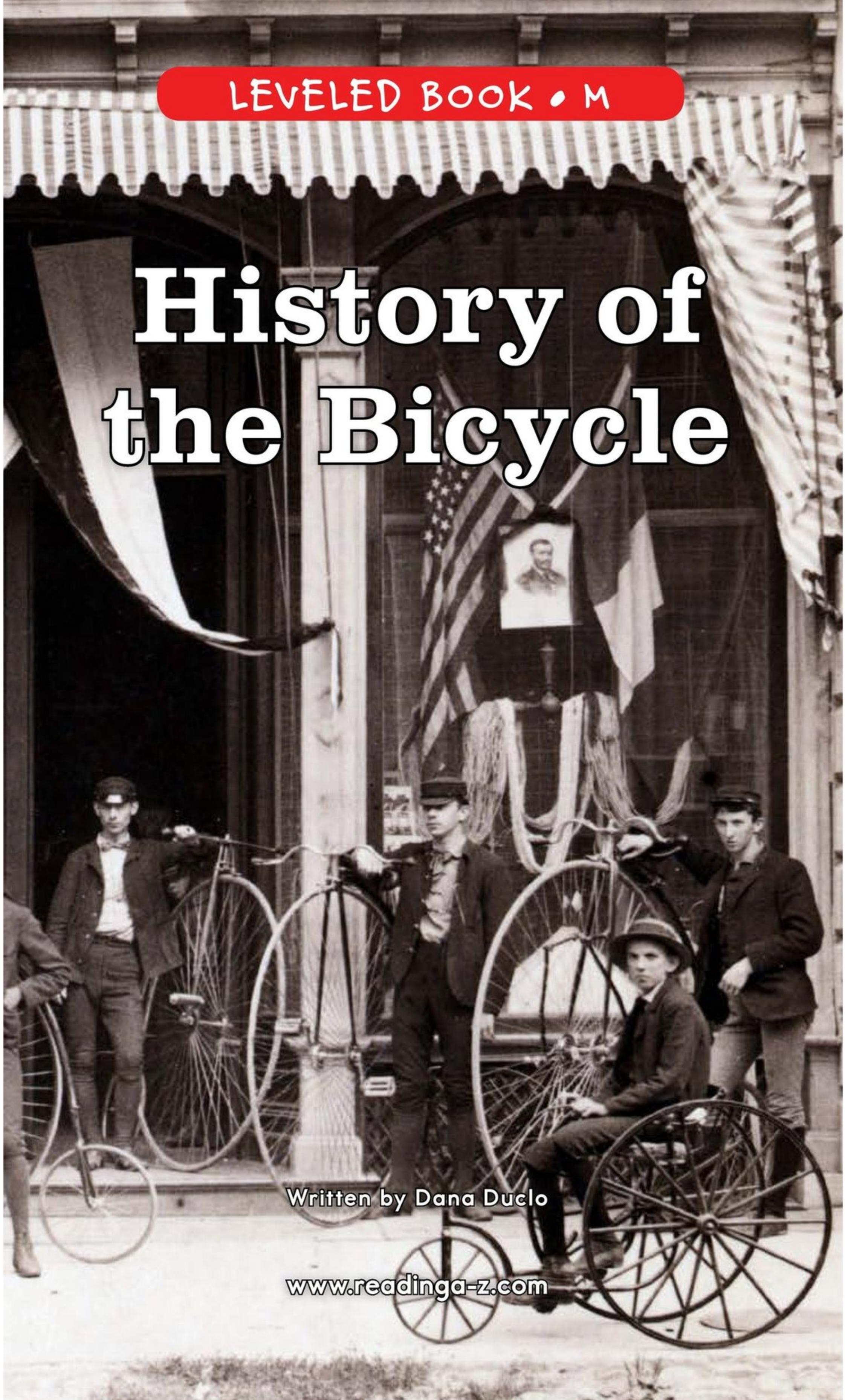


LEVELED Book • M

History of the Bicycle



A historical black and white photograph showing several men in late 19th-century clothing standing with their bicycles in front of a building with a striped awning. One man is seated on a large-wheeled safety bicycle. The scene includes a large American flag and a portrait of a man above it.

Written by Dana Duclo

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Parts of a Bike



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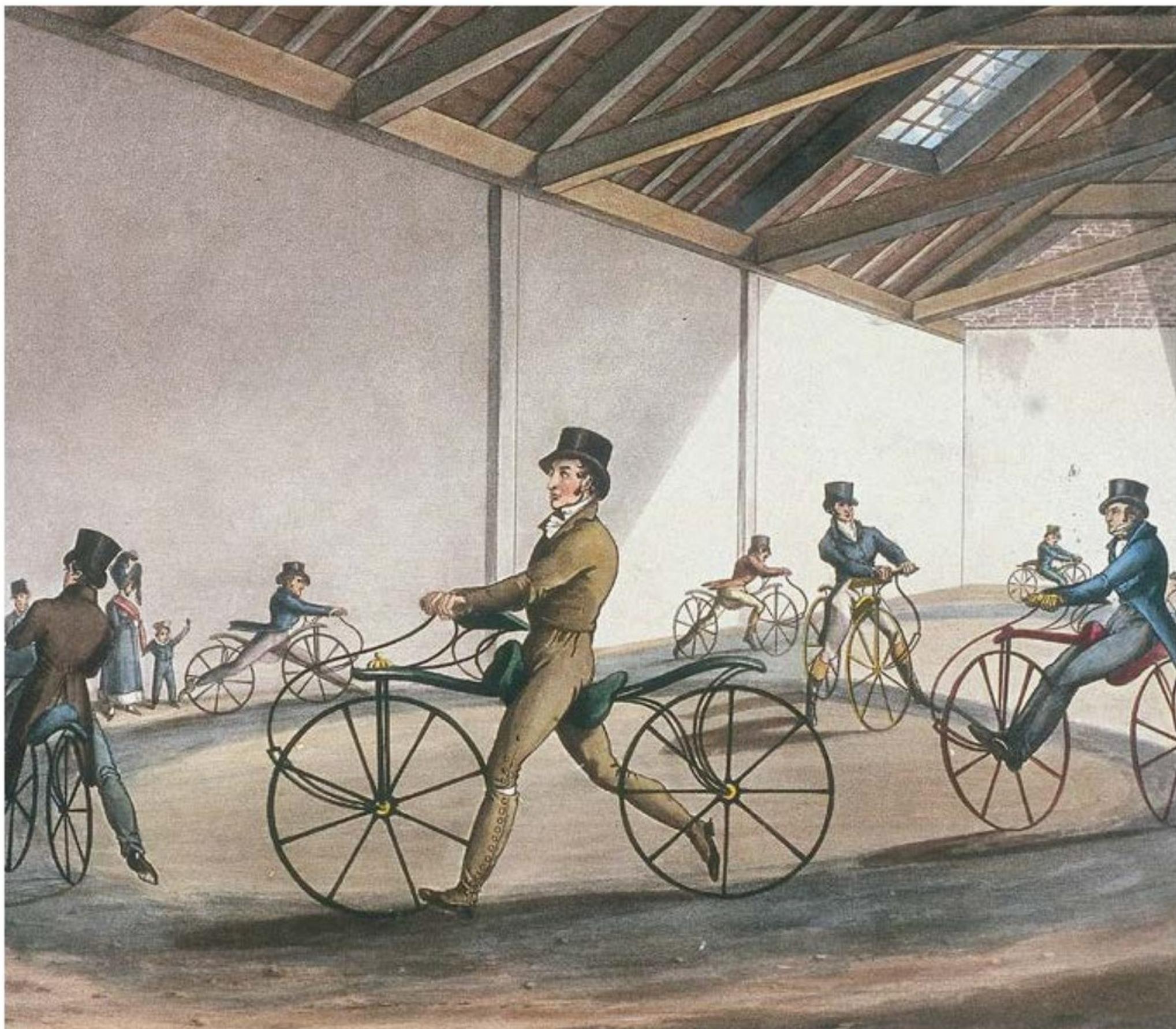


Riding bikes is a popular way of getting around in many countries.

Introduction

People started building **bicycles** in the 1800s. Since then, bicycles have grown more and more popular. Today, more than one billion people around the world ride bicycles.

The **design** of bicycles has changed over time. However, one thing stays the same: two wheels and a lot of fun!



In the 1800s, people took classes to learn to ride the Hobbyhorse, which was also called a *running machine*.

Early Bicycles

Karl Drais built the first bicycle in 1817. He called his **invention** the *running machine*. The **frame** and wheels of this early bike were made of wood. It had no **pedals**. Instead, the rider pushed the machine along with his or her feet.



This modern-day version of an early wooden bicycle shows how the first bike pedals may have worked.

In the years following, inventors made many changes to the bicycle. Around 1840, the first pedals were added to the bike. The pedals turned the rear wheel with cranks attached to long **rods**. Pedals allowed the rider's feet to remain off the ground as he or she rode.



The heavy iron frame and wheels of this bike made the ride so bumpy that it was called the *boneshaker*.

During the 1860s, two French inventors made pedals that turned the front wheel of the bicycle. Their new bike had a heavy **iron** frame and tires made of iron or wood.

The Ordinary

Built in 1871, the ordinary had a tall wheel in front and a small wheel in back. The rider sat on a seat above the high front wheel.



The ordinary bicycle was also called the *penny-farthing*. The penny and the farthing were two British coins of different sizes.



Getting off an ordinary bicycle was challenging. A rider had to leap off the high seat without falling to the ground.

The ordinary moved faster than earlier bikes because of its large wheel. The big wheel also caused problems. It was hard to ride up a hill. It was also hard to get on and off the high seat. Riders often fell forward onto their heads when they tried to slow or stop the bike. All these problems made the ordinary dangerous for the rider.



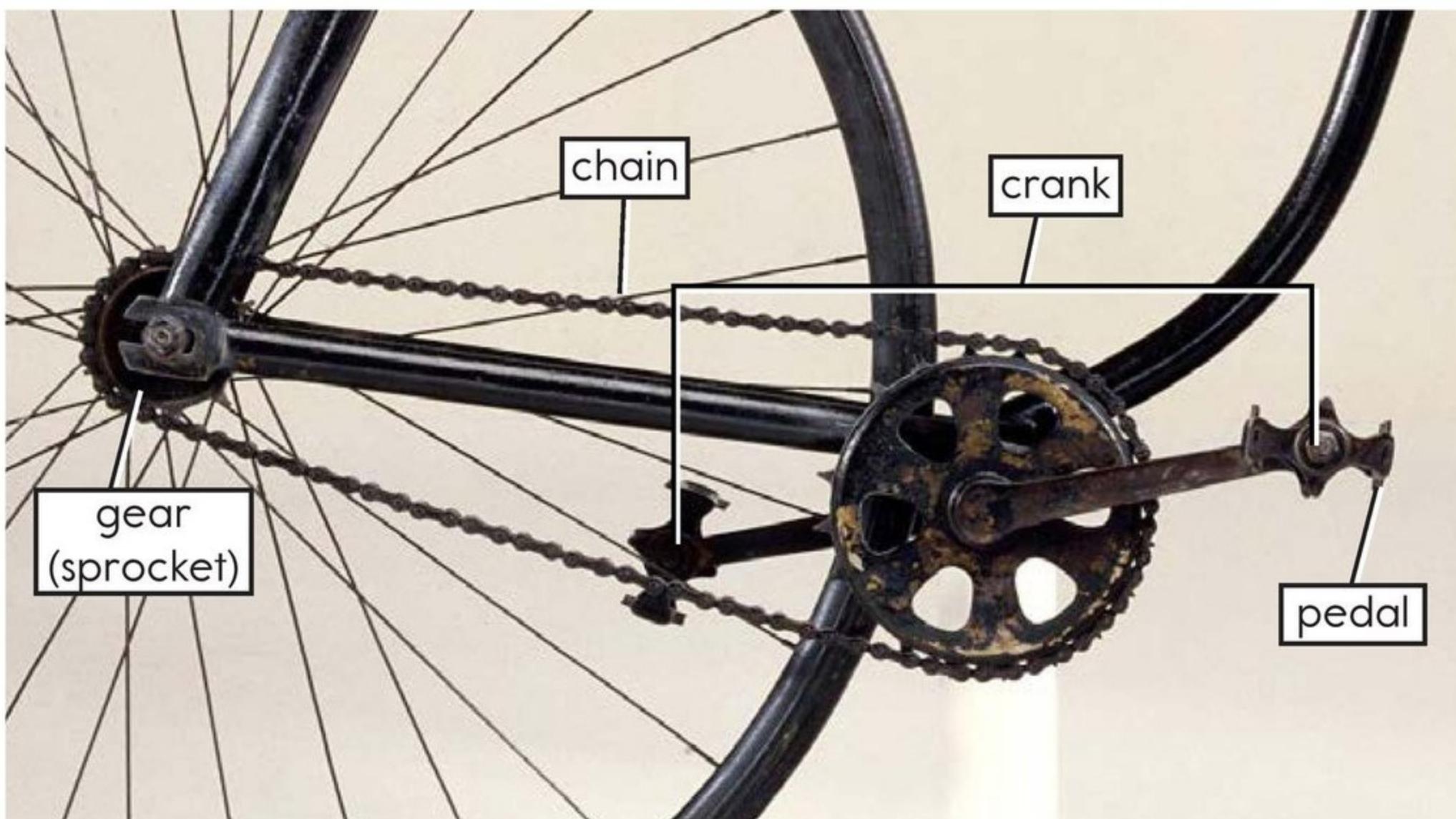
The safety bicycle's design allowed the wheels to be the same size. Combined with rubber tires, this made riding easier, safer, and more comfortable.

The Safety Bicycle

John Starley changed the bicycle in 1885 with the Rover safety bicycle.

This bike looked similar to the bicycles of today. Most safety bicycles moved on two wheels of about the same size. A low seat between the wheels made the bike safer and easier to ride.

The first safety bicycles had solid rubber tires. Later, air-filled rubber tires were added to the design. They made for a much less bumpy ride!

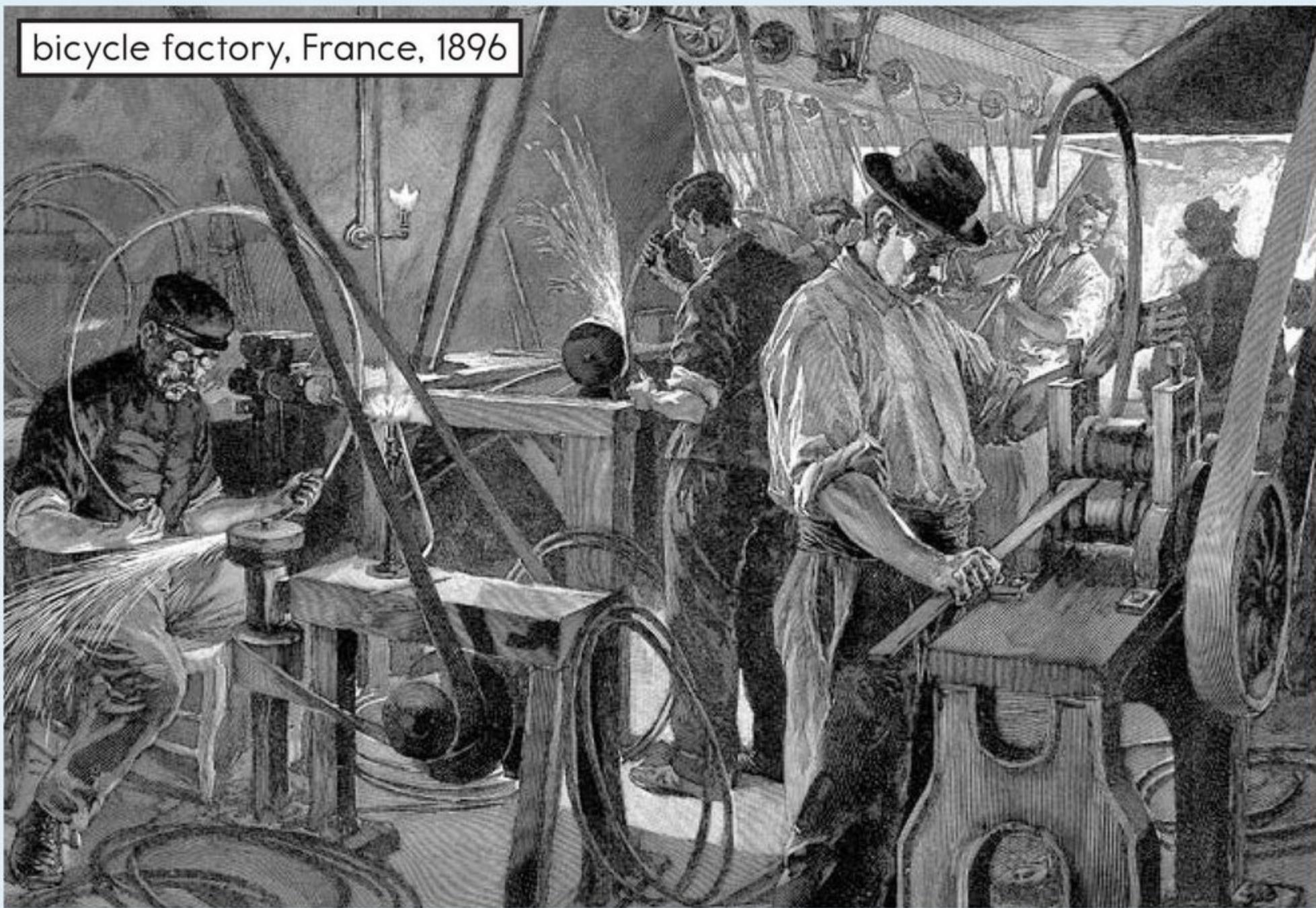


The system of connecting two gears, or sprockets, with a chain required less energy from the rider.

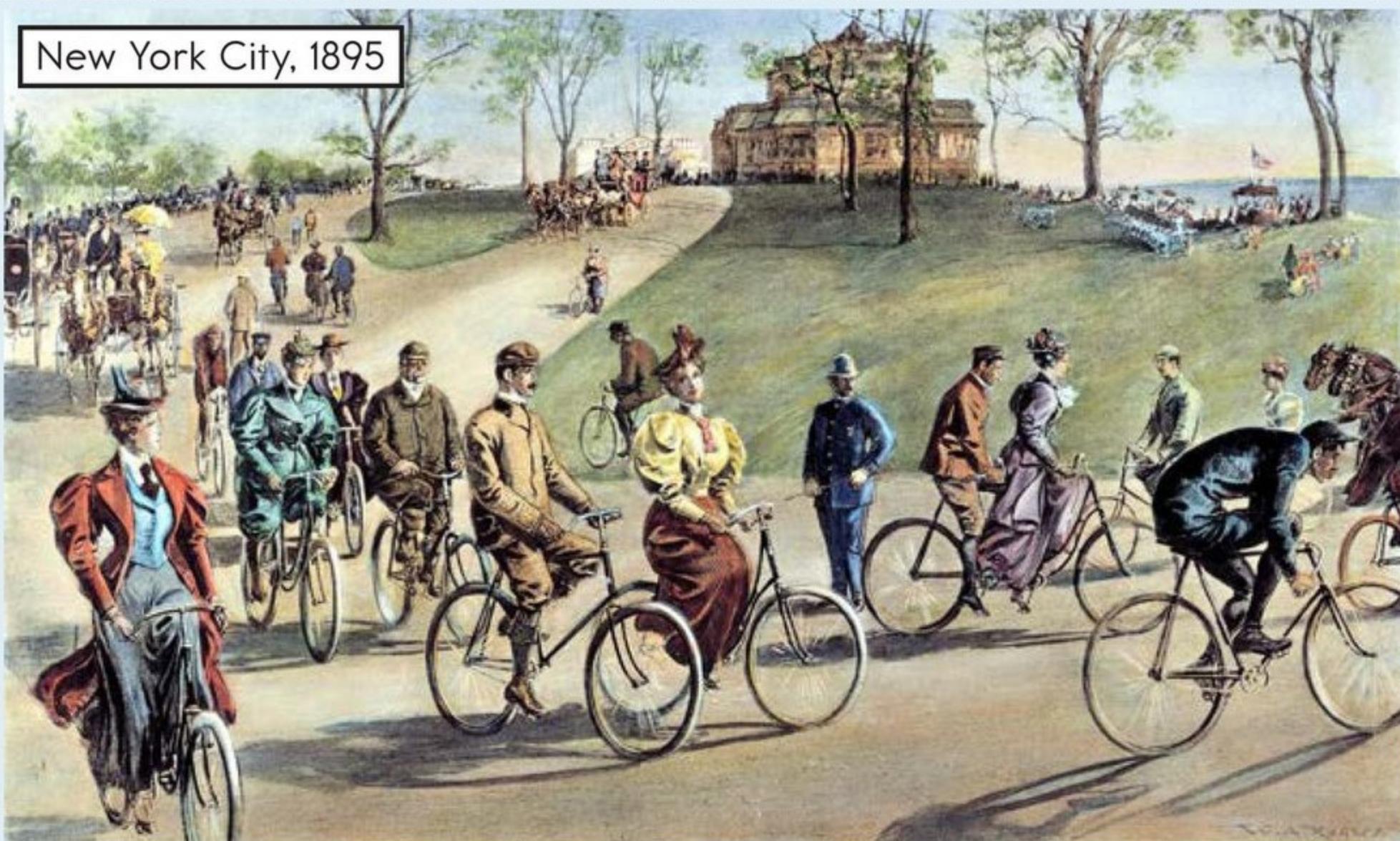
The safety bicycle used a **gear** and **chain** system. A chain connected gears on the back wheel to another gear attached to the pedals. Riders pushed the pedals to turn the back wheel and move the bike. Different-sized gears made it easier to pedal uphill, downhill, or on flat roads.

Safety bicycles were less dangerous and more comfortable than earlier bikes. Because of this, more and more people began riding bicycles.

bicycle factory, France, 1896



New York City, 1895



The Golden Age of the Bicycle

In 1885, hundreds of bicycle factories existed in the United States. By 1900, over ten million people in the country owned bikes. These years became known as the Golden Age of the Bicycle. The Golden Age ended in the early 1900s, when factories started to produce inexpensive automobiles.

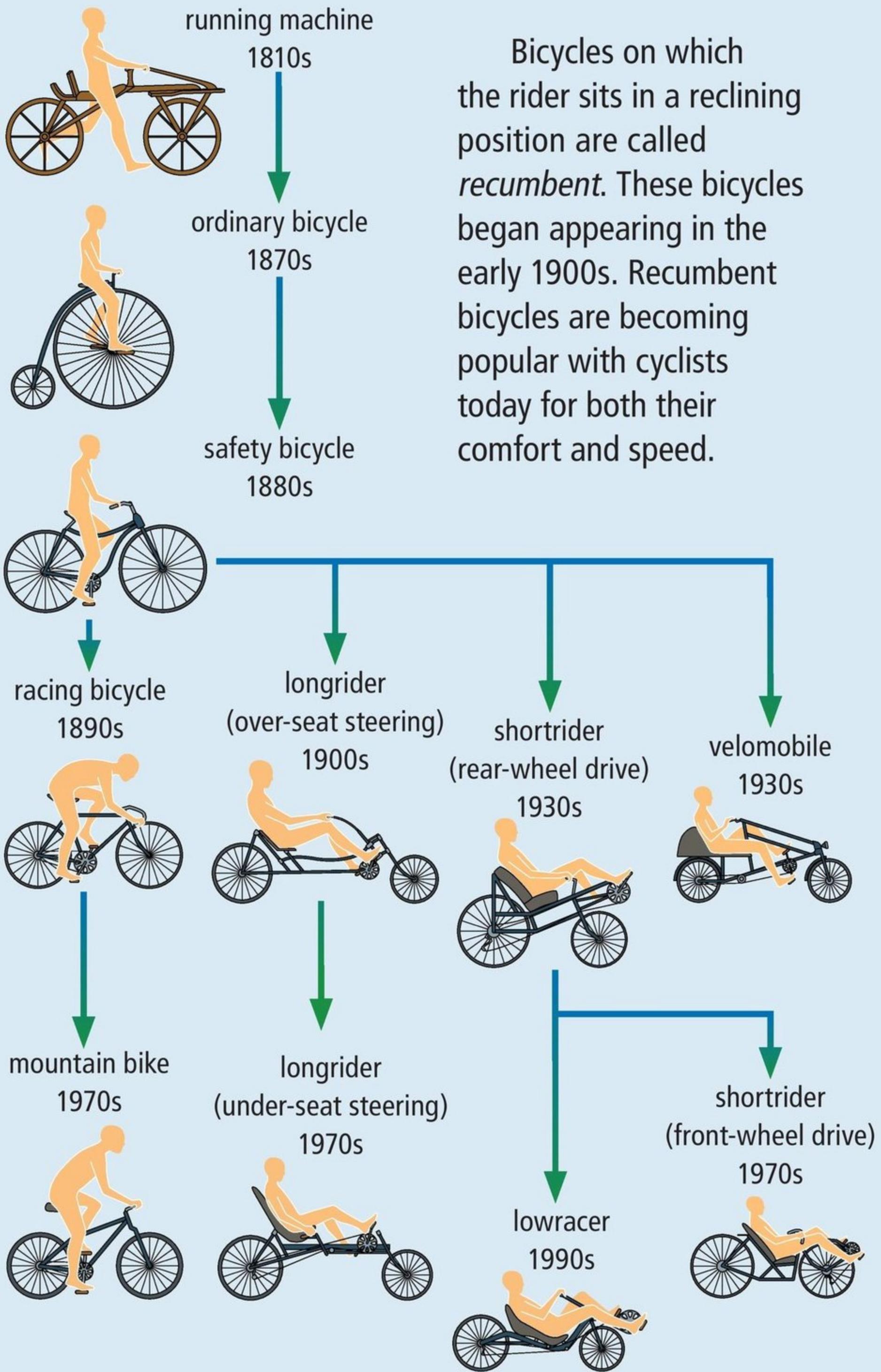


The Copenhagen Wheel can replace the back wheel of most bikes. A motor inside it provides extra power so riders can travel for long distances or up hills.

The Future of Bikes

Today's bikes have the same basic form as the safety bicycle. However, over the years, the design has changed many times. New **materials** make bikes stronger, faster, and lighter than before.

The Bicycle: A Time Line





The Swiss Army Bike has an electric motor that charges by plugging it into a wall socket. The bike also folds up.

Every year, people invent new ideas for bicycles. One inventor has designed a bike to ride over both land and water. Another has plans to make a bike from old plastic. Still another hopes to build one out of cardboard. The design of bikes will continue to change in interesting ways. Who knows what bikes of the future will look like?

Glossary

bicycles (n.)	two-wheeled vehicles that people ride by pushing pedals with their feet; bikes (p. 4)
design (n.)	a plan that shows how to build, make, or assemble something (p. 4)
frame (n.)	a structure that gives strength and shape to an object (p. 5)
gear (n.)	a toothed wheel that is part of a machine (p. 11)
invention (n.)	a new device or process (p. 5)
iron (n.)	a strong, hard, silver-gray metal (p. 7)
materials (n.)	objects that are used to make things (p. 13)
pedals (n.)	parts of a bicycle that are pushed by one's feet to make the bike move forward (p. 5)
rods (n.)	thin, straight, smooth poles or bars, especially those made of metal (p. 6)

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Front/back cover: Men pose with ordinary bicycles and tricycles around 1865.

Title page: Young bicycle messengers are ready to go to work in 1908.

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