

# THE HISOTRY OF THE BICYCLES



# Types of bicycles



Mountain bicycle



Town bicycle



Folding bicycle



Cruiser bicycle



Road bicycle



BMX bicycle



Compact bicycle



Monocyce



Tandem bicycle

# THE HISTORY OF THE BIKE

## The Electric Bicycle

First invented in 1891 but not in mass production until the 1990s, it runs with the aid of an electric motor reaching speeds of 20mph.



START →



## The Draisine

Simply just the frame and wheels, The Draisine was a two-wheeled vehicle designed for the rider to glide along or walk with.

## The Mountain Bike

Gears were introduced to The Mountain Bike giving them the ability to take on more challenging terrain.



## Brakes & Freewheel

The rear wheel no longer needed to move at the same speeds as the pedals, along with the invention of cable-calliper brakes.



## The Safety Bicycle

This version of the bike saw the return to riding with two wheels of the same size, which left the high-wheel designs extinct.



## Sources

[pedalinghistory.com](http://pedalinghistory.com) | [edition.cnn.com](http://edition.cnn.com) | [mudsweatngears.co.uk](http://mudsweatngears.co.uk)



## The High Wheel Tricycle

High Wheel Tricycles were a lower height compared to The Penny Farthings, making them much easier for women to ride in dresses.

## The Velocipede

Pedals were added to the front wheel of The Velocipede and it was nicknamed 'the boneshaker' due to its rigid and uncomfortable ride.



## The Penny Farthing

The large wheel was used on The Penny Farthing when manufacturers found that more distance would be covered on each rotation, but unfortunately it was prone to accidents.



# THE BICYCLE

Today, the bicycle is the primary transportation of the human race.

About 1.6 billion bicycles are in use throughout the world.

Hundreds of millions of bikes are manufactured every year to meet the continuing demand for cheap wheeled transport.



This is the first bicycle design developed by cave people back in the day. – LOL !!

Note the highly efficient use of the 2 legs for both making the bike and person move as well as being used for a friction braking system !!

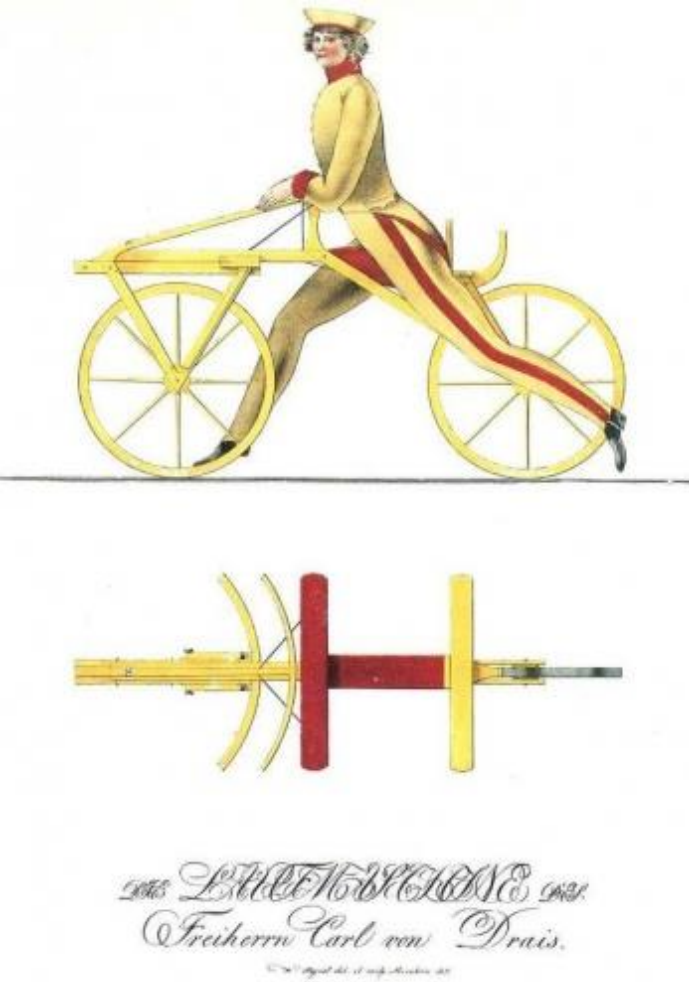


The first widely recognized, two-wheeler adult bicycle in actual use was the pedal-less Celerifere, later renamed the *Velocifere*.

A toy of the French nobility in the 1790s, designed by Comte de Sivrac.

The rider propelled themselves by kicking the ground with their feet, but you could not steer this bike.





Running machine designed in 1817.

It is regarded as the first design of the bicycle with handlebars to steer it, but it didn't have any pedals, gears, or brakes and was used a lot for downhill racing.

The first pedal propelled 2-wheel vehicle was designed and built by Kirkpatrick MacMillan, a Scottish blacksmith.



Willard Sawyer in Dove, England successfully manufactured a range of treadle operated 4-wheel vehicles and exported them worldwide in the 1850s.



# THE VELOCIPEDE

Ernest Michaux added cranks to the *Draisienne* two-wheeler in 1855 and created the **Velocipede**.

It was rather uncomfortable to ride and that is how it got its other name - **boneshaker**.

It was the first bicycle to have a brake.



# 1867

## The First Motorcycle

In 1876 Sylvester Howard Roper attached a two-cylinder steam-engine to a bicycle and the world's first motorcycle was born.

In 1885 Gottlieb Daimler strapped a gas engine to a wooden bicycle and the world's first gas powered motorcycle was born.

If it weren't for the invention of this gas-powered wooden gadget 124 years ago, we might still be getting around by horse and buggy.





## The Penny Farthing

This bike was first known as the 'High Bicycle' and was invented in 1871 - only rich people could afford these bikes.

It became known as 'The Penny Farthing' because the wheels were like the small and large coins.

People would often fall off head first!

## THE HIGH WHEEL TRICYCLE – THE 1880'S

While the men were risking their necks on the high wheels, ladies, confined to their long skirts and corsets, could take a spin around the park on an adult tricycle.

These machines also afforded more dignity to gentlemen such as doctors and clergymen.





## The Safety Bicycle

In 1885, British inventor John Kemp Starley designed the first "safety bicycle" with a steerable front wheel, two equally-sized wheels, and a chain.

It was called the safety bicycle because it was much safer than the Penny Farthing. Modern bikes are very similar to this one.

With four key aspects (steering, safety, comfort, and speed), the Safety Bicycle became very popular in the middle and late 1890s.

In 1898, Chicago immigrant Adolph Schoeninger with his **Western Wheel Works** significantly reduced production costs, and thus prices so his "**Crescent**" bicycles became affordable for working people, and massive exports from the United States lowered prices in Europe.



## 1888 - Pneumatic Tire

The use of a pneumatic tire was first added to the bicycle by a veterinarian by the name of Dunlop who was attempting to give his sick child a more comfortable and less bumpy ride on his tricycle.

Now with the use of the tricycle and the pneumatic tire, comfort and safety could both be contained in the same machine.



## 1902 - INDIAN MOTORCYCLE

This was the first year of production of a motorcycle for the Hendee Manufacturing Company that was designed by a bicycle racer by the name of Oscar Hedstrom.

This machine had 1 and 3/4 horsepower and sprocket-and-chain drive and shows the gradual change from the bicycle to the motorcycle.



## 1920 - KID'S BIKES

Just after the First World War, manufacturers appealed to the desires of children to have a motor rather than a bicycle by combining parts of automobiles and motorcycles to bicycles for a "classic" design.

These designs were the heaviest and flashiest of all the bicycle designs to date.



# **MOST BICYCLES ARE MADE IN CHINA**

The People's Republic of China today produces over 60% of the world's bicycles.

86% of the bicycles sold in the US are imports from China.

However, cycle use in China is decreasing sharply, down to 20% of all trips, compared to 33% in 1995.



Most of the electric bike manufacturers are based in China now.

# BAMBOO BICYCLE



Bicycles designed for the Olympics have been extensively designed to be as light and as strong as possible, as well as keeping air resistance to a minimum.



# ELECTRIC BIKE OR E-BIKES



They offer an environmentally friendly, affordable, efficient, and fun way to get around.

They have integrated electric motors and batteries, and most are governed to a top speed of 20 miles per hour.

They get a range of 20-35 miles per charge.

# A ELECTRIC FOLDING BIKE



# AN ELECTRIC BIKE WITH A REAR HUB MOTOR





A MID-DRIVE ELECTRIC MOUNTAIN BIKE

# A DOWNTUBE MOUNTED BATTERY





**REAR-MOUNTED BATTERY**

**Compact / Folding** (Dahon  
boost)



**Hybrid** (E+ Schwinn )



**Mountain** (E+ bike)



**Recumbent** (Giant Revive Spirit)



**City / Cruiser** (Urban Mover 55)    **Dirt** (Mongoose CX200)



Tricycle (Trike) (Ezee Carro)



Road (Cytronex Cannondale Super Six)



Tandem (Pedego Tandem)



Pocket (Daymak E-F2)



Chopper (CB Chopper)



# FUTURE BICYCLES

**The Cube Urban Street Bike Concept** gets rid of the seat tube and upper sections of the standard frame in favor of a three-piece system that has the back wheel attached only via the axle.

Because of it, this model is significantly lighter (therefore much faster) and way sexier than what we are riding today.



Bayerischer  
Staatspreis für  
Nachwuchsdesigner  
2008

Exhibition

2008

CUBE Urban Street Concept Diploma

## **The Furious Sports Bike**

Concept by Nenad Kostadinov

What makes this design unique and thoroughly futuristic is the onboard computer, which displays a range of data about the ride such as speed, location, and calorie consumption.



## Chris Boardman's **Intelligent Bike**

The British Olympic gold medalist and Tour de France stage winner has designed a bicycle with a solar-powered back-up motor, an onboard computer, a fingerprint security scanner, and wheels without spokes.



# HUBLESS BICYCLE CONCEPT BY JOHN VILLARREAL



## **The Wire Bike Concept**

by Ionit Predescu is another design that sheds weight to increase speed.

It does so by using a suspension frame system instead of the traditional bike frame.

Like a suspension bridge, the weight on the bike helps sustain the structure's form and stability.

The solid pieces of the bike will be made of carbon fiber and the cables will be of light Kevlar.





# FOLDING BICYCLES



A-ONE Animation



## **The Eco 07 Bike Concept**

by Victor Aleman

it is designed to be completely disassembled and fit into a container about the size of a briefcase.

It also looks good.



## THE DICYCLE



This unusual bike is still in the conceptual phase, but if it ever goes to production, you'll sit in between two giant wheels that can reportedly transport you directly across land and water without a hitch.

Designed by the Amsterdam based firm GBO, the boat-bike hybrid would be perfect for the canals and wetlands of the Netherlands.

# RIMAC'S NEW GREYP G12S ELECTRIC BIKE

It combines the best features of a motorcycle and a bicycle.

It has a set of powerful batteries, new suspension and a spectacular design.

It has chunkier shock absorber and only one disc brake instead of the former's twin setup.

The redesigned chassis, built using strengthened steel tubes, makes room for the various modifications in the bike's electrical components.



# UNICYCLES



# RECUMBENT BIKES

It places the rider in a leaned back riding position, which can feel very comfortable.

The legs stretch out in front of the rider to pedal.

The handlebars sit either above the lap or on the sides next to the lap.

The rider sits horizontally rather than vertically as they would on a standard upright bike.

This ergonomic seating position improves comfort by distributing the rider's weight over a larger area.





A LONG WHEELBASE RECUMBENT BIKE WITH OVER  
SEAT STEERING



A SHORT WHEELBASE RECUMBENT WITH DIRECT STEERING

# THE TRIKE

One of the most popular recumbent designs is the trike.

These are recumbent bikes with three wheels instead of two.

The main benefit trikes offer over bikes is stability and safety because it has 3 wheels.

Recumbent trikes are also a great choice for people with reduced mobility or certain disabilities.



# SOME FUN BICYCLES AND OTHER WHEELED VEHICLES !!!



Lots of funny pictures at [www.SurferSam.com](http://www.SurferSam.com)











FABIAN MATZERATH/WFP/Getty Images





























