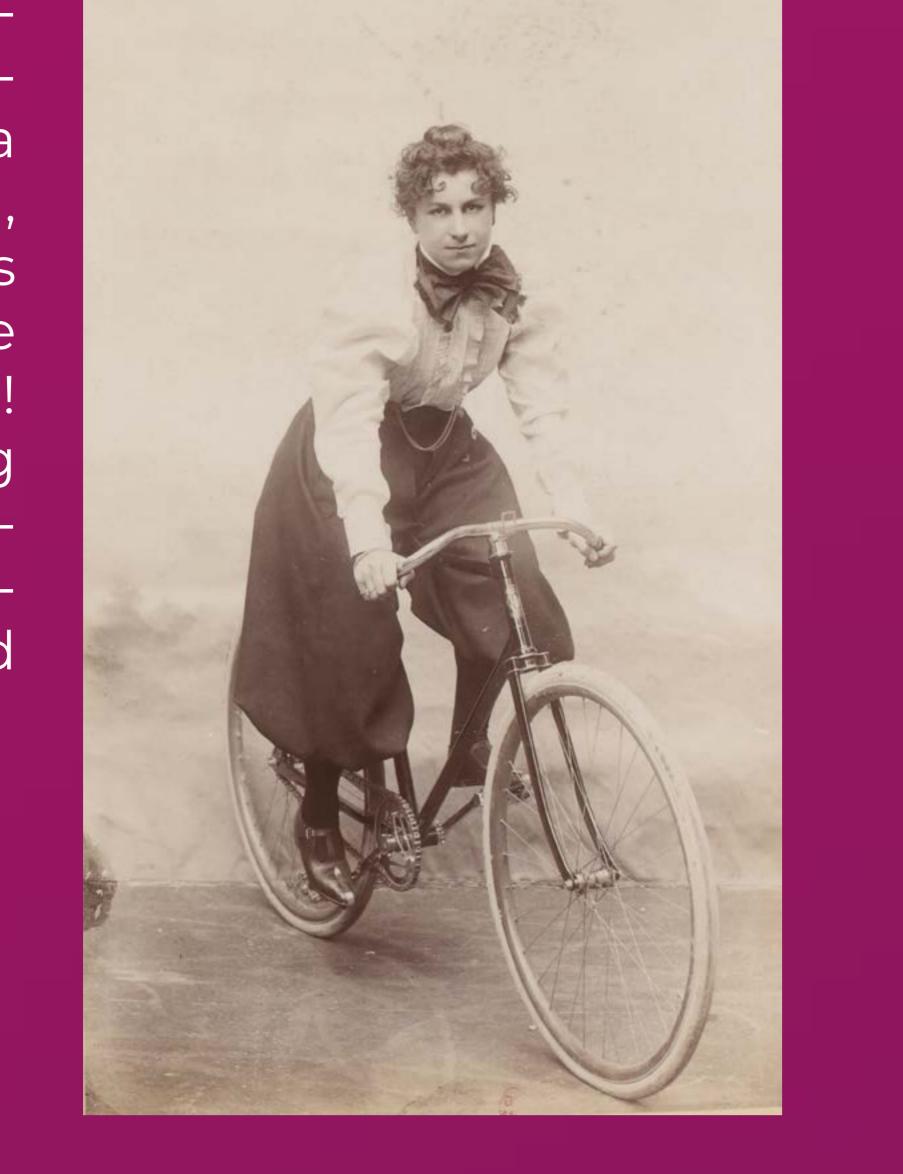
Merry Djo, the sprint cyclist on her bike, circa 1898. Collection Jules Beau, tome 6, image 58 © BNF Gallica

In 1884, John Kemp Starley invented the modern safety bicycle with a chain-driven rear wheel, two similar-sized wheels and central pedals. The modern bicycle was born! Women began cycling and it became instrumental to their emancipation. Fashion evolved to suit female riders.



BICYCLE

Fig. 138. — Tricycle De M. Trouvé.

cerpt from Physique et chimie populaires by Alexis Clerc, 1881-1883, vol. 2 © Musée Electropolis

Electric tricycle by Gustave Trouvé, ex

Gustave Trouvé was the engineer behind countless inventions powered by electricity. He presented the world's first electric vehicle in his Paris studio: a tricycle! He adapted and improved the little electric engine by Siemens. It was powered by electricity from the accumula-

ELECTRIC TRICYCLE BY GUSTAVE TROUVÉ



Louis-Guillaume Perreaux steam velocipede, 1870, Musée départemental du Domaine de Sceaux © CD92/ Château de Sceaux – Museum. Photographed by Thierry Ollivier

Louis-Guillaume Perreaux, a mechanical engineer, patented the first high-speed steam-powered velocipede in 1868. Its single-cylinder engine had a steam generator that used an alcohol burner and a water pump that powered the burner from the tank

#### PERREAUX STEAM VE-LOCIPEDE

1868

countryside alike.

THE INVENTION OF TWO (OR THREE!) WHEELS

Bicycles were invented in the early 19th century. They soon

chains. The first bike races attracted crowds of spectators

from 1860 onwards. Around 1900, up to a million people

rode bikes and they became widespread in the city and

became popular in the second half of the 19th century

with technical innovations such as pedals and power

#### REITWAGEN BYGOTTLIEB DAIMLER

Daimler Reitwagen, 1885 © Mercedes-Benz Classic

The Daimler «Reitwagen» (riding wagon) or «Einspur» (singletrack) was a motorised dandy horse designed by Gottlieb Daimler and Wilhelm Maybach in 1885.

This prototype was one of the first motorcycles with a gasoline internal combustion engine. Daimler's son used one to complete a 3km journey with a top speed of 12km/h (7.5pmh). The engine overheated and the saddle caught fire!



# STEAM-POWERED PENNY-FARTHING BY LUCIUS COPELAND

Lucius Copeland was an American engineer who built one of the first steam-powered bikes in 1884. Copeland adapted a small steam engine to fit a penny-farthing (high wheeler). The prototype could cover 1km in 2.5 minutes. It stored enough water and fuel to run for one hour. Its top speed was 24km/h (15mph).



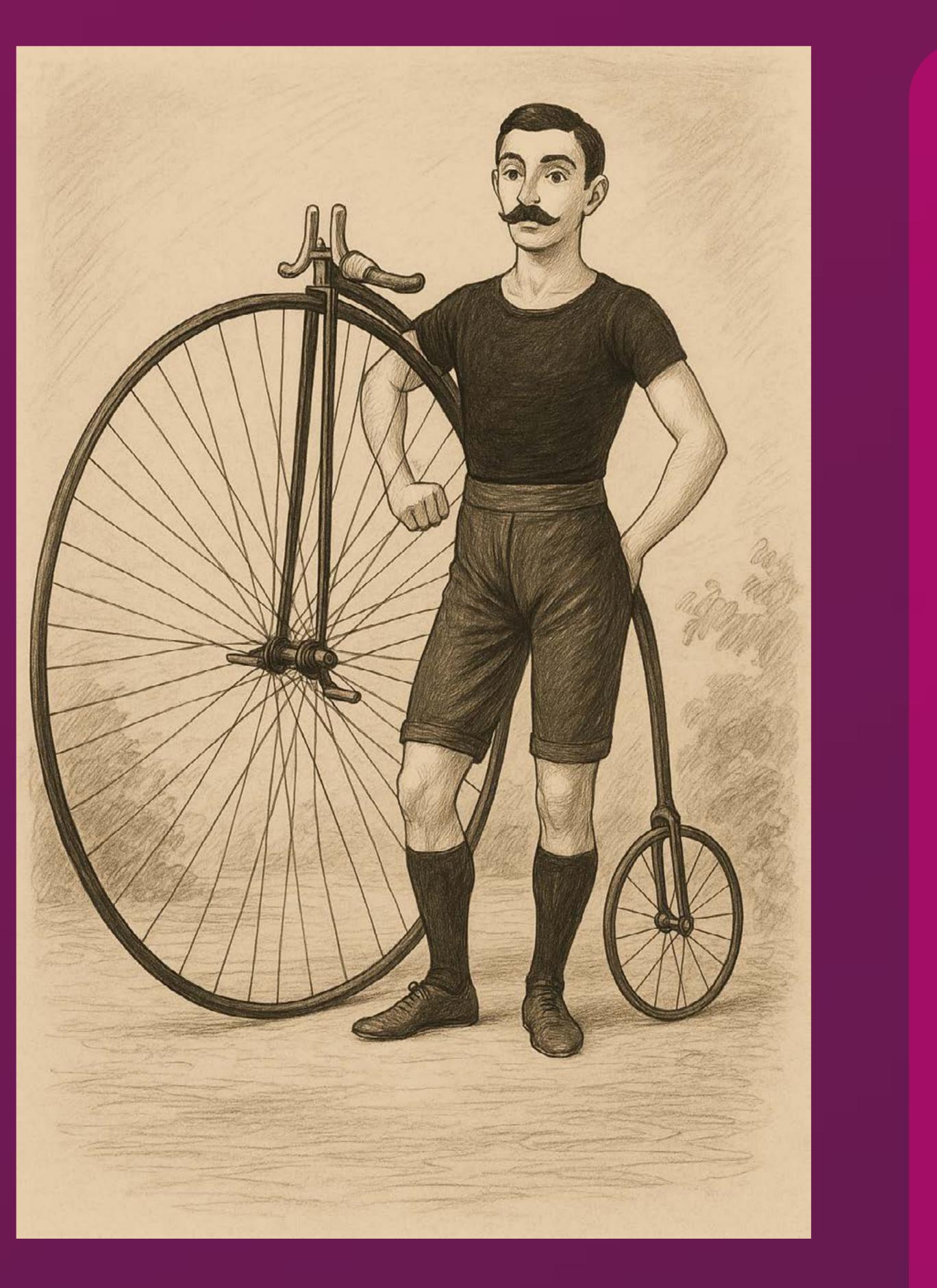
### TRICYCLE



M. Hermet, sprinter on a tricycle, 1894. Photograph by Zulimo Chiesi © BNF Gallica

ne tricycle was a safer alternative to e penny-farthing and fashionable in e 1880s.

It was a huge success and particularly popular among women.



The penny-farthing was invented in the

late 1860s with its signature big front

wheelandlittlebackwheel.Itwasprimarily

It was relatively popular between 1870

and 1880. The Englishman James Starley

may have improved the bike, but it

remained quite dangerous and the cause

of countless accidents.

designed for racing and achieving speed.

### THE ANCESTORS OF MOTORBIKES

With the development of engineering and engines powered by steam, electricity and petrol throughout the 19th century, it was a matter of time before someone put an engine on a bicycle. The first motorised bicycles

#### ROPER STEAM VELOCIPEDE

Sylvester Howard Roper, a car manufacturer and pioneer, designed the first motorised bicycle in 1867. The Roper velocipede had a powerful twin-cylinder steam engine fuelled by charcoal.



Roper velocipede, circa 1869 © Division of Work and Industry, National Museum of American History, Smithsonian Institution

#### MICHAUX VELOCIPEDE

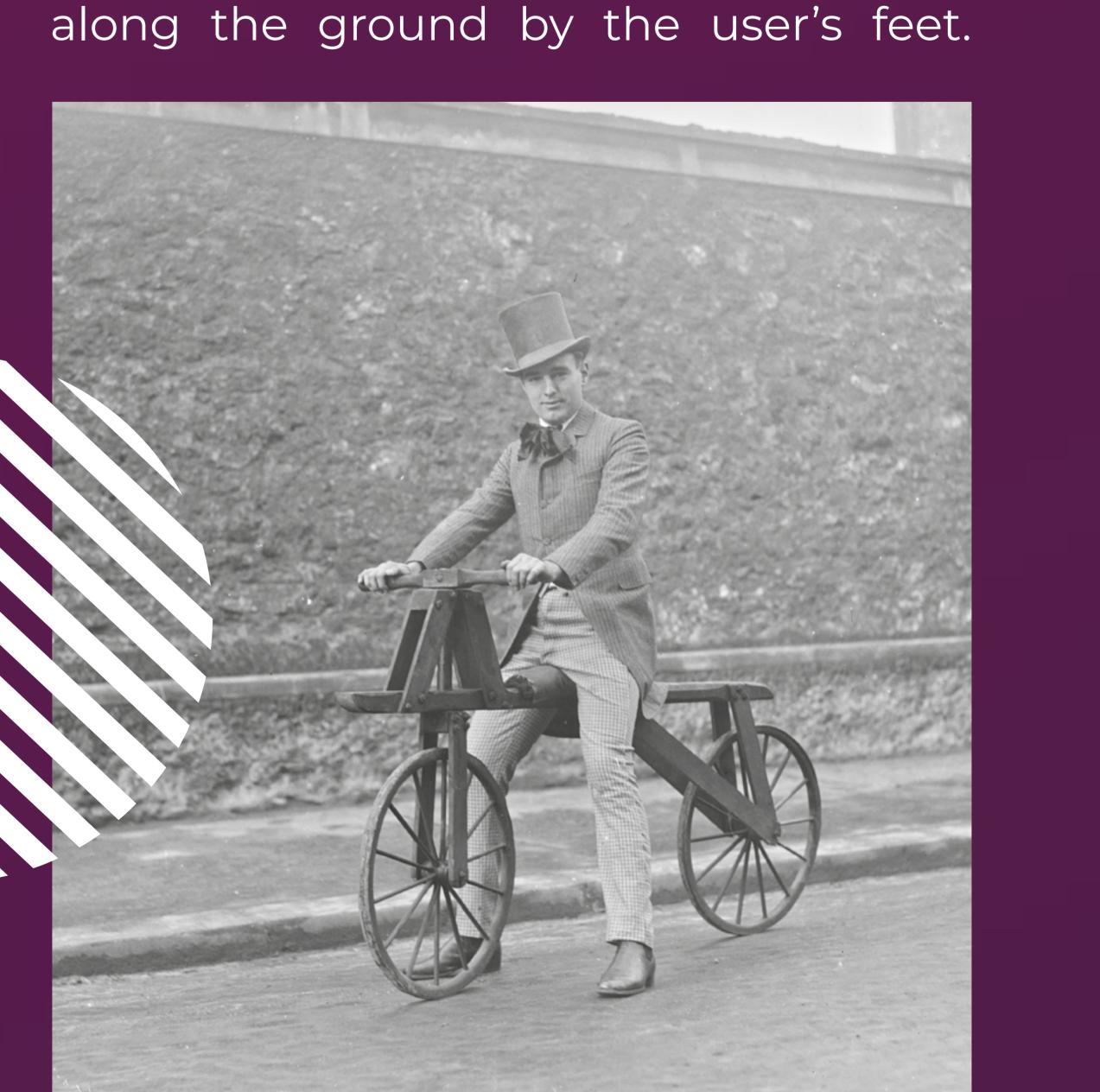
Pierre Michaux and his son Ernest got the idea of putting a pedal on the front wheel of a penny-farthing in 1861. The velocipede, commonly known as the Michaudine, was born.



Roper velocipede, circa 1869 © Division of Work and Industry, National Museum of American History, Smithsonian Institution

#### DRAISINE

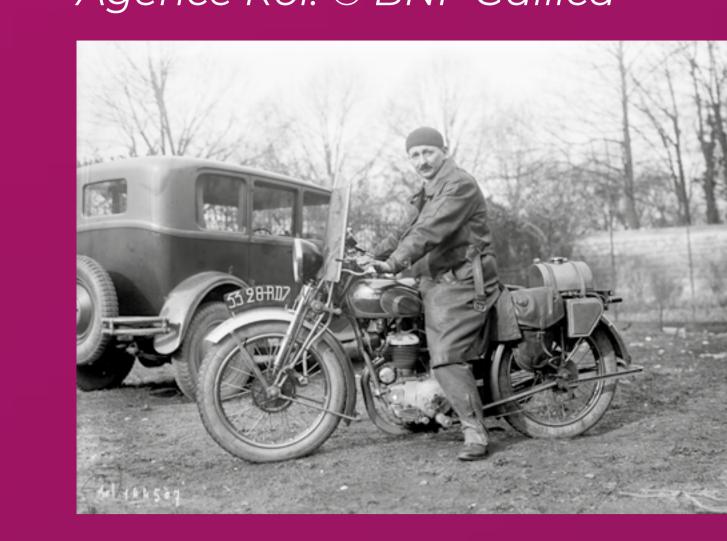
The invention of the dandy horse by Karl Friedrich Drais von Sauerbronn in 1817 marked the dawn of bicycle history. The German inventor's Laufmaschine («running machine») was a two-wheeled vehicle pushed



Dandy horse at the transport retrospective, Grands Boulevards Festival, Paris, 1932. Agence Rol © BNF Gallica



Jacob on a Motobécane in 1930. Agence Rol. © BNF Gallica



otobécane was founded in 1924 vided additional comfort

features, as the name suggests. The brand made its mark on the French market during the interwar period.

It is still one of few French motorbike brands to survive after the 1960s.

Motobécane was taken over by the Japanese company Yamaha in 1985.

10TOBÉCANE

The Gnôme et Rhône brand merged two companies specialising aircraft rotary engines. The end of World War I and the fall in military orders forced the company to diversify its range of motorbikes. The brand bought the English motorbike company ABC Motors' licence in the early

## GNÔME & RHÔNE

1920s. It made the motorcycles better and more

### MOTORBIKE

Naas and Bernard on a Gnôme et Rhône ABC during the motorbike weigh-in at the 1924 Tour de France. Agence Rol. ©



turer for countless brands. Alcyon had its first 1897 as, «Les fils de Peugeot frères». 1905 and 1910.

#### ALCYON

903

Ravelli on a Peugeot motorbike at a race in Gaillon in Alessandro Anzani (1877-1956) on an Alcyon motorbike du-1911. Agence Rol © BNF Gallica ring the Hydra Cup at Parc des Princes in 1905. Agence Rol



1810 and specialised in steel. They manufactured a variety ly-sur-Seine and built bicycles. He decided to of goods. Armand Peugeot founded the «Société Anomotorised them and joined forces with the nyme des Automobiles Peugeot» car company in 1896 Swiss company ZL, a car and engine manufac- whilst his nephews went into bicycle manufacturing in

Family-run Peugeot was founded in the Doubs area in

racing successes with the legendary Italian The first Peugeot motorbike was unveiled at the Paris rider Alessandro Anzani (1877-1956) between Fair in 1901. The lightweight vehicle was called the «Motobicyclette».

#### PEUGEOT

1898 

Bonnard on a Werner motorbike competing in the motorbike Tour de France, May 1905. Press agency © BNF Galli-



engine to a bicycle in 1897.

brothers of Russian origin who fitted a small

The motorised bicycle was sold in 1898.

Herbert Osbaldeston Duncan (H.O.D.), penny-farthing world champion in 1883, photographed in 1896 on a De Dion-Bouton tricycle, postcard, early 20th century © Puteaux council archives, 2Fi1218.

> De Dion-Bouton was a ded in Puteaux when Count Albert De Dion joined forces with Georges Bouton, an entrepreneur and engineer. huge success at home and

#### THE PIONEERS OF MOTORCYCLING

The piston engine made its mark at the turn of the 20th century. Motorcycle companies designed and sold more and more reliable models. The brothers Eugène and Michel Werner trademarked «Motocyclette» (moped) in 1897. The term described a bicycle fitted with an engine and soon became a commonly used name.

DE DION-

1888

#### MOTOCYCLETTE RAVAT



Ad for Ravat mopeds and motorised bicycles, 1927. Collection Lemoine

#### MONET & GOYON

Monet & Goyon was founded in 1917 in Mâcon by Joseph Monet, a watchmaker's son who built aeroplanes and rotary engines, and Adrien Goyon, the heir to a rich Mâcon family. It started out specialising in making vehicles for disabled Great War veterans. They motorised a bike with a 4-stroke engine fitted by the back wheel. The Autowheel engine hails from Britain and fits any bike. The first models were the Vélauto, an ancestor of the Mich scooter, and Moto-Légère (light motorbike).

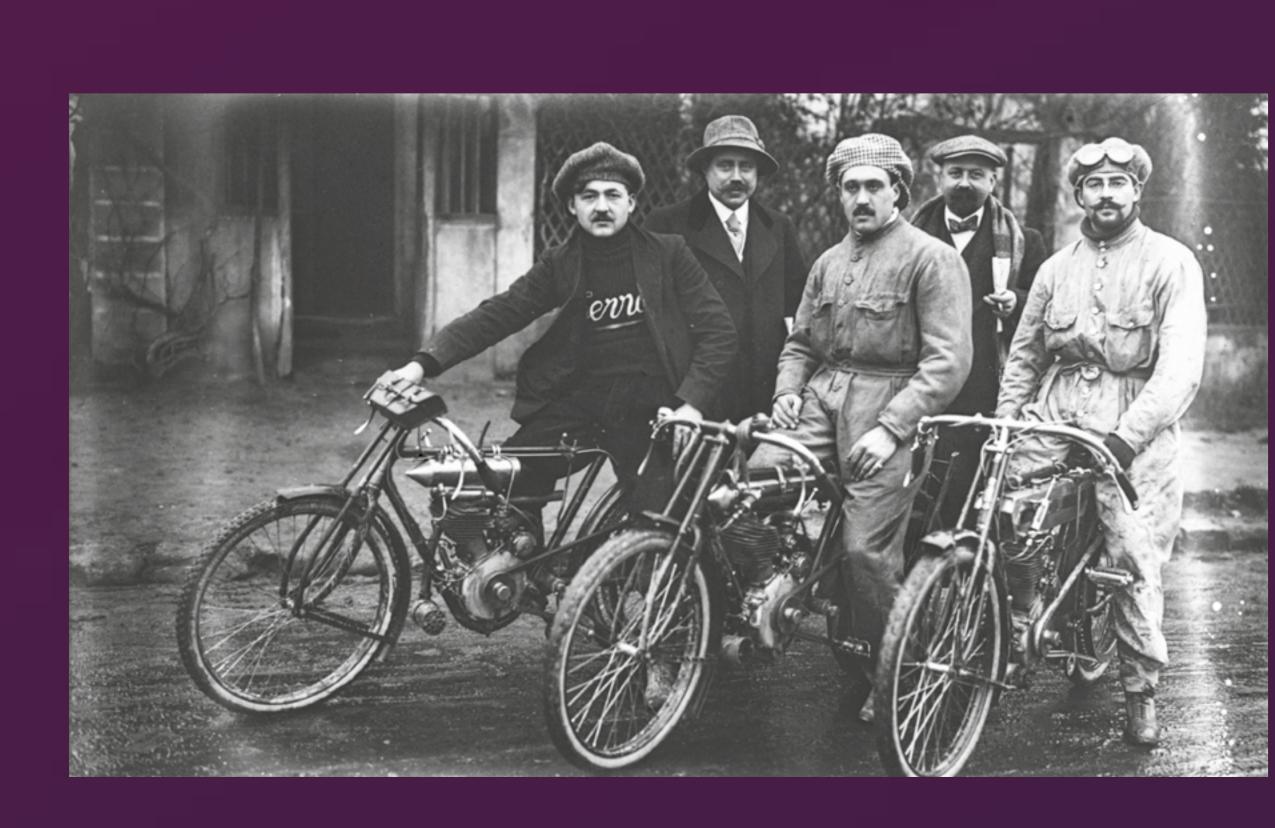


«A chacun sa machine. Monet & Goyon Constructeurs Mâcon» Mich poster, 1922. © BNF Gallica

#### TERROT

German-born Charles Terrot founded a machinery factory in Dijon in 1887 where he made looms. The factory started making bicycles in 1890. It began experimenting with motorising them using De Dion-Bouton engines in 1900-1901.

ItbecamethebiggestFrenchmotorbikebrand in terms of its range, quantity and quality. Terrot remained in business until it merged with Peugeot in 1959.



Gometz-le-Châtel coastal race, Terrot motorbike team in 1912 © BNF Gallica

### GILLET MOTOR-

René Gillet designed a small engine on the front wheel for a bicycle in 1897. It was the start of a real manufacturing success. After much trial and error, he perfected his motorbikes and trademarked his brand in 1905. Hebuiltsingleandtwin-cylinderengines. The brand competed in countless races and even built side-cars.



René Gillet catalogue, 1913 © Club René Gillet

#### VELOMOBILE BY FÉLIX MOTORBIKE BY HIL-The French engineer Félix Théodore Millet (1844-1929) designed a motorbike very similar to the modern motorcy-& WOLFMÜLLER

The brains behind the first mass-produced motorbikeweretheaviationpioneerAloisWolfmüller and the engineer Hans Geisenhof. Their partner, Heinrich Hildebrand, provided the company with substantial funds. They chose a piston engine after testing a steam-powered bicycle. After initial trials, they designed a twin-cylinder engine in 1892. The bicycle frame didn't work, so they de-

signed a chassis that was patented in 1894 steam machine.



Velomobile by Félix Millet, 1893. Inv. 16241-0001 © Musée des Arts et Métiers-Cnam, Paris/ photo J-C Wetze







cle. He filed a patent for his five-cylinder radial (rotary) pe-

trol engine that he fitted to the back wheel of a bicycle. He