

## Karl Drais



born 29.4.1785 in Karlsruhe,  
died 10.12.1851 in Karlsruhe.

### Short Biography

Karl Drais, baptised as Karl Friedrich Christian Ludwig, Freiherr (= baron) Drais von Sauerbronn first was a forest officer employed by the grand duchy of Baden. Later he became off duty whilst retaining his salary and did start a career as an inventor. Next to others, he did invent a *device to record piano music* on paper, then a *stenograph* using 16 characters, two *four-wheeled human powered vehicles* and on top of all, the two-wheeled *velocipede*, also called *Draisine* or *hobby-horse*, which he presented first time on **June 12<sup>th</sup> 1817** in Mannheim.

This was the first vehicle requiring to keep balance whilst using it as a key principle. It was equipped decades later by Pierre Michaux with pedals to become the modern bicycle and further down the road, the automobile invented by Carl Benz. For his inventions, Grand Duke *Carl* awarded Drais a pension and appointed him as a professor for mechanic science. His experiments with small rail-road bound vehicles did contribute to the railroad handcar, having even today the German name *Draisine*.

Drais was a fervent democrat, supported the wave of revolutions that swept Europe in 1848, dropping his title and the aristocratic "von" from his name in 1849. After the revolution in Baden had collapsed, Drais became mobbed and ruined by royalists. After his death, Drais's enemies systematically repudiate his invention of horseless moving on two wheels.

## The new Biography

A new biography of Karl Drais, being the inventor of the velocipede was compiled by Professor Dr. Hans-Erhard Lessing based on intense recherche in the archives. Drais now has been identified as a talented and engaged young man, becoming a fervent democrat in 1849, quite the opposite as been remembered as a figure of ridicule for the last 150 years.

Karl von Drais was born in Karlsruhe, capital of Baden, at April 29th., 1785 being the son of the senior civil servant Karl Wilhelm Friedrich Ludwig, Baron von Drais and Ernestine Christine Margaretha, born Baroness von Kaltenthal. The family may not have been rich, but it was highly influential and Karl's godfather was no less a figure than Carl-Friedrich, the Grand Duke of Baden, who dedicated him for a career in forest administration later.

Karl Drais went to school in Karlsruhe, finalised the Lyzeum in 1800 and moved to Pforzheim, joining a private school of forest administration owned by his uncle Friedrich Heinrich Georg von Drais. Offers for young forestry officers were rare. Therefore Drais did park himself in 1803 studying Mathematics, Physics and Architecture at university of Heidelberg until 1805. He then became a member of forest administration of Baden, but cancelled this career later to teach and invent.

The father became the prime judge of Baden and the family moved to Mannheim in 1810. A year later Karl Drais went off duty whilst retaining his salary and moved to Mannheim, too. Next to others, he did invent a *device to record piano music* on paper (1812), two *four-wheeled human powered vehicles* (1813/14), the second of which he did present in Vienna whilst the congress carving up Europe after Napoleon's defeat, published papers on complex mathematical equations and on top of all, did invent the two-wheeled *velocipede*, also called *Draisine* or *hobby-horse* (1817).



Inventing his vehicles Drais took consequences of sequence of poor harvests starting 1812. Finally a tremendous volcano eruption (Mount Tambora in Indonesia, April 1815) ejected so much ash into the atmosphere that it did snow in Europe in summer 1816 and crops failed. Horses were slaughtered for lack of food even for people.

The velocipede therefore was a high potential alternative to horse-based traffic. Thursday, **June 12<sup>th</sup> 1817** did see his legend first ride from the centre of Mannheim towards Schwetzingen using Baden's best road. After 7.5 kilometres (half the distance), he turned at the *Schwetzingen Relaishaus* and headed home. The round trip took him little more than an hour, but may be seen as the big bang for horseless transport.

However, he was not able to market his invention for earning money. Being a civil servant of Baden, even being paid without providing active service, it was almost impossible to head a private enterprise. At least, in absence of a patent administration, he was given a decree protecting his invention for 10 years by younger Grand Duke Carl in 1818, became appointed as a professor for mechanic science and awarded a pension.

Roads were so rutted by carriages that it was very inconvenient to balance for long. Velocipede riders took the plains sidewalks and, no need to say, moved far to quick, endangering the life and limb of pedestrians. In consequence, authorities in Germany, Great Britain, the USA and even in Calcutta did ban the use of velocipedes, which ended it's vogue for decades.

In 1822 Karl Drais travelled to Brazil, working as a surveyor. Returning to Mannheim in 1827, he did invent a *stenograph* using 16 characters. After his father died in 1830 Drais fell from favour and was mobbed by jealous rivals.

Surviving a murderous attack in 1837 he lived from 1839 to 1845 in the village of *Waldkatzenbach* in the hills of *Odenwald*, about 30 miles distance. In this period he experimented in Karlsruhe with a foot-driven human powered rail-road vehicle – therefore even today the term *Draisine* is well-known for the railroad handcar. Finally Karl Drais did move back to his place of birth Karlsruhe.

Drais was a fervent democrat and supported the revolution in Baden, dropping his title and the aristocratic "von" from his name in 1849. After the revolution had collapsed, Karl Drais was in a very poor position. The royalists tried to have Drais certified as mad and locked up.

His pension was confiscated to help paying for the occupation by the Prussian troops. Karl Drais died penniless on December 10<sup>th</sup>, 1851 in Karlsruhe.

*Dr. Gerd Hüttmann*



German postal stamp set "Historic bicycles in Germany from 1817 to 1925" in remembrance of the 200. anniversary of Karl Drais birthday (Federal Republic of Germany, 1985)

#### Literature:

Hans-Erhard Lessing, *Automobilität Karl Drais und die unglaublichen Anfänge* MAXIME Verlag, Leipzig; 2003, 528 pages and reams of figures, EUR 32,- ISBN 3-931965-22-8 published in German language

See also: Mick Hamer, *Histories: Brimstone and bicycles*, NewScientist.com news service, 29 January 2005

Karl Drais – the new biography

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