

## NOBODY SHIED AWAY FROM «INVENTING A BICYCLE»

Two hundred years ago – on February 17, 1818 – in England a patent was registered for design of a self-propelled machine, a prototype of a modern bicycle. The author of the invention, the German Baron Karl Friedrich Christian Ludwig Freiherr Drais von Sauerbronn, had demonstrated his first scooter a year before, and since then the popularity of a

«machine for walking» was steadily increasing. By the end of 19th century, 1000 people applied for their bicycle patents in France, 2400 – in England, 4000 – in the USA! The simplicity of the idea won over everyone. And in every new detail, willing or not, the genius glimpsed. Especially if you take a good look at it.

**Keywords:** bicycle, scooter, railcar, von Drais, history, world legends, patents.

Of course, all well-educated people know the proverb: «reinvent the wheel». Most often it is used from the obvious irony and skepticism in relation to those who were going to hit the others with a revelation, but in fact repeated or slightly improved something, which had been discovered a long time ago by their predecessors.

The paradox, however, is still in the fact that even two hundred years after the recognition of invention of a bicycle by Karl von Drais, and this fact is formalized by the patent, numerous legends continue to spread that make a lot of confusion in the chronology of events and infinitely expand the list of persons, according to various predominantly anonymous sources, involved in the fate of more and more new bicycle «discoveries».

Judging by the information on the Internet, in England, a survey on the most outstanding technological discovery of mankind for the past two hundred years has been carried out recently. The result is terrific: in the absolute margin from the others was a bicycle, which received more votes than the Internet and the internal combustion engine combined. And do we have to clarify now, what remarkable historic date do we mark?

At one time, our journal in a series of publications on the history of transport equipment (boat, sailboat, steamer, locomotive, car, airplane, trolley bus, etc.) dedicated a special article to «a car for walking» (S. Kozlova. *Cycle as Mirror of Greatness and Simplicity, World of Transport and Transportation*, 2009, No. 3, pp. 172–178). Therefore, on the current round anniversary we will limit ourselves to only the most general strokes specifying some pages of the great bicycle saga.

• The future inventor Baron Karl von Drais was born and died (1785–1851) in the city of Karlsruhe, Germany. In 1803–1805 he studied architecture, physics and agriculture at Heidelberg University. Serving then as a chief forester of the Duke of Baden,

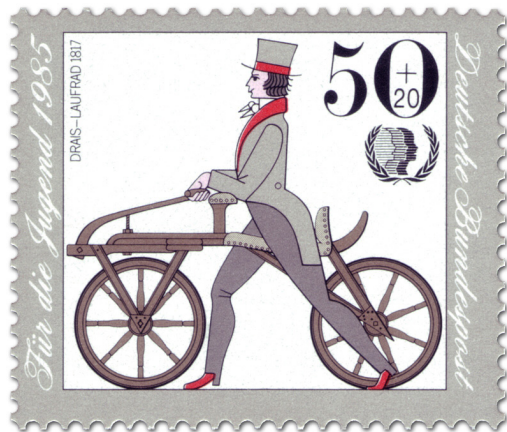
he rode along the roads of the estate on a sitting wooden scooter, to which he attached a steering wheel and thus facilitated and accelerated his movement with the help of wheels, pushing with his feet from the ground. In other words, the Baron «made fast feet» – it was no accident later that in France the design received the name «vélocipède» (Latin *velox* – fast; *pes* – foot), and it sounds like that in Russian till now.

• In 1817, Karl Drais received the first public recognition of his offspring, not particularly thinking about it: he took a distance from Karlsruhe to Kehl of 50 km in four hours on his «machine for walking», which was regarded as a quite good result. True, it so coincided that after that he lost his job in the forestry. And he became ... a professor of mechanics in Mannheim. And the change of classes has benefited inventiveness. On February 17, 1818 the Baron officially registered the first patent for a bicycle. It is this date that should be considered the birth time of a remarkable two-wheeled car, and not April 5 of the same year, when von Drais demonstrated his mechanism in Paris (which some «biographers» of the bicycle are prone to give out as a starting point), neither we should focus on even more dubious options, figures, but also names, countries, and even frank falsification.

• For the sake of justice, it should be noted that one more vehicle invented by Karl Drais was a railcar that started everything from the same manual-driven scooter, but its name did not appear at the moment when it seemed that there was a reason to call the initial fruit of the senior forester a «draisine». The term that has existed so far in the Russian language has been preserved exclusively with respect to a trolley mechanically moved along the rails by means of a manual drive. This design was created by von Drais after fifty years, closer to the end of life and in the near to the present kind worked on the railway since 1839.

Let's not forget the other: the baron invented a typewriter (a five-line template for the notepopists) and a meat grinder (!) – the last thing is the same everyday thing in every family, as ... It's scary to write – like a bicycle!

• To fundamentally share the idea of a bicycle «on two wheels» with the muscular force of motion and the idea of «self-wheeled carriages», that is, carriages more reminiscent of certain prototypes of cars and follow first of all not to confuse dollars to donuts. Neither Kazan project of Leonty Shamshurenkov (1752) nor the self-propelled carriage of Perm Efim Artamonov (1801) – with written testimonies or without them – could claim the right to «reinvent the wheel» because of the wrong category of transport in which the designer intended to show his worth. The same thing happened in Germany with Stephan Farffler and his three-wheeled self-propelled machine (1680), in France with a similar design called «selerifer» (1690s). In short, «fast feet» found their real contour with von Drais and now remained only to put these feet, full of worries, on pedals, that twisted the wheels.







• The stage with appearance of pedals is undoubtedly revolutionary in the history of a bicycle. Scotsman Gavin Dalzell, who put a pedal on a front wheel in 1836 (hence rapid and disproportionate growth of a front wheel in comparison with a rear), released a rider from having to push off the ground with the feet. The instability of such a design in the middle of the century was partly compensated by the appearance of brakes – they were invented independently by craftsmen in Germany and France.

• Another and also independent of Drais design was a pedal, but a rear wheel bicycle of another Scotsman Kirkpatrick MacMillan (1839–1840). He improved the von Drais model: pedals pushed a rear wheel, with which they were connected by metal rods

via connecting rods. A front wheel was turned by a rudder, a driver sat between it and a rear one on a special place (seat), and all this together with its outlines and layout of elements was very much like the familiar silhouette of a modern bicycle masterpiece.

• Mass production of a new popular form of personal transport began in 1864, when the Lyonian industrialists brothers Olivier assessed a car of the still young Pierre Lalman and, in alliance with coach master Michaud, launched a model that resembled very much those known to us today, including a metal frame. According to one of the versions, ostensibly, that was Michaud who came up with the present name for the device «bicycle».

Compiled by Natalia OLEJNIK ●

