

Aurel PERȘU

(26.12.1890 – 05.05.1977)



Aurel Perșu has the merit of being among the first experts worldwide to have studied the use of aerodynamic shape of moving bodies in cars.

He was interested in this field since 1920. The study and research work brought the young graduate of the Technische Hochschule from Berlin-Charlottenburg to the conclusion that the car coachwork should be shaped as a half of a falling water drop.

The car designed by Persu had a building shape resembling to a helicopter of our days, with the largest part in front where the passenger seats were placed. The engine was to be put in the rear where the space was much limited. In order to reduce air resistance to advance, the wheels were introduced inside the coachwork. At the time, all cars had wheels outside the coachwork, with strongly underlined wings.

Based on his research work, Eng. Aurel Persu builds in 1923 the first automobile with an adequate aerodynamic shape, which he patents in Germany. On September 19, 1924 he receives the Inventor Patent No 402683. Following 120.000 km endurance tests, his invention is also patented in other Western countries.

After many laboratory calculations and experiments, he came to the conclusion that the ideal shape of a car, a moving vehicle, is the form of a droplet of falling water, the ideal aerodynamic form. He has reached 0.22 aerodynamic coefficients which are still difficult to reach today. He built the car in 1922-1924, with his own money, in Germany.



Figure: The original automobile of Aurel Perșu
(donated fully functional in 1961 to the [Dimitrie Leonida Technical Museum](#) in [Bucharest](#))

To be noted that, based on the diminished distance between the rear wheels Persu scraped the need to introduce a differential in transmission, so that a high speed could be used while driving through turnings. Ford and General Motors plants declared their interest in buying the Patent but did not commit themselves to build cars based on the Patent (all the cars are presently built based on that aerodynamic principle), so that Persu refused the bids.

Eng. Aurel Persu, Technical mechanics professor at the Polytechnics School in Bucharest delivered a well-documented scientific paper before the Romanian Academy, entitled "The right aerodynamic car", including scientific data of his invention.