

## PERSONALITIES OF THE SCIENTIFIC UNIVERSE: Petrache Poenaru



### Petrache

**Poenaru** was born on 10 January 1799, in Banesti village in Valcea county, not far from Balcesti. He completed his secondary education at the school near Obedeanu church, between 1811 and

1818. Petrache Poenaru was the nephew of the vornic (Justice of Peace) Iordache Otetelesanu, the one who played an important part in the development of schools in Craiova. Since 1818 he worked at the Bishopric office in Ramnicu Valcea, while between 1820 and 1821 he taught Old Greek at Metropolitan Church School in Bucharest. In the year 1821 Petrache Poenaru was Tudor Vladimirescu's secretary during the revolution. That was a public position, his activity being linked to pen and inkpot.

### Engineering studies

Though after Tudor Vladimirescu's defeat his soldiers were hunted and beheaded, Petrache Poenaru manages to escape and in 1822 he wins a scholarship to study at the Technical School in Vienna and Berlin. Here he gets acquainted with a number of new technical instruments of that time: calipers, micrometers. In 1826 he receives a French scholarship and completes his studies at the Ecole Polytechnique in Paris in the field of topography and geodesy.

On 25 May 1827, he obtains the French patent 3208 for "*a portable endless pen, which fills itself with ink*". This invention started a revolution in the field of writing instruments, contributing to creating a device used even nowadays by millions of people. Poenaru's fountain pen was eliminating the scratches on paper and the unwished dripping of ink and it presented solutions for further improvement of components in order to provide a steady ink flow as well as the possibility of pieces replacement.

On 27 October 1831, while in England, he travels by train, thus being the first Romanian who uses this means of transport inaugurated just one year earlier between Liverpool and Manchester. "*I made this trip by a new means of transport, which*

*is one of the wonders of the industry of our century. Twenty carriages connected with one another, filled with 240 persons are simultaneously drawn by a single steam machine*".

### Contributions to organizing the education

Petrache Poenaru returns to Tara Romaneasca (Wallachia) in 1832 and is appointed teacher of physics and mathematics at Sf. Sava in Bucharest and since 1833 he becomes the head teacher of this school. In the same year he contributes to the setting up of the special courses of superior mathematics, geodesy, mechanics, architecture, agriculture and sylviculture in Wallachia. He creates two classes of engineering and provides them with manuals and equipment. In 1837 he translates and publishes in Romanian the first course of "*Geometry*", and 1841 the course of "*Algebra*". In the same year he publishes, in collaboration, "*the French-Romanian Vocabulary*" in two volumes. On this ground, Petrache Poenaru is mentioned even today as a francophone countries supporter in Romania.

In 1838, in his capacity as General Manager of Schools of Wallachia, a high official position, he establishes the rural public schools of Muntenia region. It is worth remembering that these schools were to be abolished by the reactionary regime set up after the defeat of the Revolution of 1848. It seems that always, present days included, school as an institution was not loved by the profiteering rulers. Does history repeat itself?

Petrache Poenaru got directly involved in equipping the schools of Craiova. Thus, in 1837 he donates to the Private Boarding School for Girls in Craiova, the present-day Elena Cuza National College, a set of maps - Europe, Asia, Africa, America, Australia - as well as 20 books on "*Cours complet d'education domestiques pour les filles*".

On 20 October 1850 he was assigned as member of the National Leading Council of Schools, having as task to supervise the way in which the Schools, Regulations of Tara Romaneasca are observed, a document signed by prince Barbu D. Stirbei on 17 October 1850 and which stipulated the establishment of a "*Faculty of exact sciences with 3 sections: for topographers; bridges and highway engineers; architects*". As a result of Petrache Poenaru's direct involvement in the courses of the School for Bridges and

Highways, the present-day “Politehnica” University in Bucharest starts its courses in January 1851. After the Romanian Principalities unification, Petrache Poenaru fully participates in the public life and designs the text of the “*Public Education Law*” of 1864.

### **Petrache Poenaru and the engineering activity**

In 1836, on Petrache Poenaru’s initiative, the first systematic meteorological observations are organized in order to determine the air temperature, pressure and humidity.

The Decimal Metric System is also introduced in Tara Romaneasca owing to Petrache Poenaru who in 1837 works out the first Romanian draft bill on this subject which had been discussed between 1834 and 1836 within the legislative bodies of the country. It was a partial victory – the introduction of the Decimal System of Prince Serban’s stanjen (fathom) in 1836 and the battle was long, until 1864 when this system was legalized. Reasons were found, including the one that in Wallachia there were not enough engineers, though Petrache Poenaru had started, at the *National School*, courses of *Theoretical and Practical Mathematics* meant for the topographical engineers.

A similar reason was also brought in 1857, on taking over the telegraphic lines by the Romanian operators: the Romanians’ incapacity to provide this service. In this domain, Petrache Poenaru’s competence and notoriety was also called for. In his capacity as President of an examining board, he organized a rigorous examination which proved the Romanian operators’ ability to provide this service in Tara Romaneasca.

On 8 September 1847, the first bridge over the Olt river was inaugurated in Slatina and became actually operational on 15 December. The technical and administrative solution leading to the building of the bridge was given by Petrache Poenaru and Ioan Em. Florescu.

In order to underline the complexity of Petrache Poenaru’s activity, I remind that in 1849 he publishes a paper on sericulture, “*Advice for growing mulberry trees and breeding silkworms*”, preceded by publishing the periodical “*The village primary school teacher*” starting on 1 October 1843. As member of the *Technical Commission* of the Internal Affairs Department, starting from 5 March 1850, Petrache Poenaru was a supporter of introducing the machines in the activity of Wallachia. On the proposal made by the Technical Commission on 8 April 1854, a dredger was

purchased from Paris in order to clear the garbage from the Dimbovita river. He hurried the setting up of a brick factory in 1858 but he did not forget to mention that they “*should not leave puddles, but fill them with garbage*”. Another example: making all the bricks of the same type. On March 1858 he said: “*an analogy should prevail, that of length towards width, plus a half finger place or a narrow space so that, within the work the length should cover the two widths placed with the small interval between them. Only in this case, the walls surfaces will be plane surfaces for any wall thickness*”.

### **Recognition**

In 1841 he was elected Dolj county deputy. On 10 September 1870 he became a member of the Romanian Academy. The official welcome was scheduled for 8 September 1871 but, Petrache Poenaru being ill, the reception speech, entitled “*Gheorghe Lazar and the Romanian School*”, was delivered by his friend Gheorghe Sion.

He passed away on 2 October 1875, at the age of 76 and bequeathed a social work whose effects are apparent even nowadays. His descendants also followed his example. I refer to his great – grand daughter, the writer Alice Voinescu (1885-1961), born in Tr. Severin. A few schools in the country bear the name “*Petrache Poienaru*”. One of them is school no.9 in Craiova. On the bust pedestal, placed in the school playground, it reads: “*TO AGA PETRACHE POENARU 1799-1875 THE ROMANIAN SCHOOL ORGANIZER*”. He received the title of Aga (police prefect) in 1834.

*Column written by professor eng. Gheorghe Manolea PhD, University of Craiova, Doctor Honoris Causa of Technical University of Moldova from Chisinau*