PUBLIC WORKS AND THE IMAGE OF SPAIN IN THE TRAVEL LITERATURE (XVII-XIX CENTURIES)

Daniel Crespo Delgado, Alfonso Lujan Díaz

This paper deals with the role of the public works in the construction of the image of Spain in the Modern Age; to do so, it will be used such an important source as the travel literature.

From the XVIII century, public works have been considered as a sign of progress. They have been a way to measure the progress or the delay of a country; however, sometimes it has also happened the other way round: the opinion given of a country has influenced the analysis of their infrastructures. This piece of work explores the opinions of the travellers about the public works and the interesting connections between their opinions and their idea of Spain.

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THE ROYAL MILITARY ACADEMY OF MATHEMATICS OF BARCELONA (1720-1803). MATHEMATICS FOR ENGINEERS

M. Rosa Massa Esteve

In this paper, the author deals with the engineering education at the Barcelona Royal Military Academy of Mathematics in the eighteenth century. Through the analysis of the mathematical course, prepared by the director, Pedro de Lucuce, which was launched during 40 years in this Academy, the author shows some features of the treatment of pure mathematics, i.e. arithmetic and geometry, comparing them with the courses recommended by Jorge Próspero Verboom, promoter of this Academy.

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FRANCESC SANTPONÇ AND THE GENSANNE'S MACHINE (1802?)

Maria Montava Gadea

Francesc Santponç i Roca (Barcelona 1756-1821) was a doctor from Barcelona. In addition to his medical activity he studied and developed the steam machine technology in early nineteenth century. At that time, the power of the steam engine represented the vanguard among the machines. Engineers and craftsmen had helped to develop this technology with important contributions that tried to solve the problems of these big machines. The fighting spirit of people such as Savery, Newcomen, and Watt drove a promising technology. This was the same spirit that led Santponç to accept in 1804 the challenge of building one of these machines for a textile manufacturer in Barcelona.

This paper investigates a manuscript kept in the Santponç's family archives. The manuscript describes the "simplification" that Gensanne made in a steam engine. The paper offers an analysis of the text, establishing an approximate date of the writing. The study signals that the manuscript is a Spanish translation of a description of the Gensanne's machine published by the French Academy of Sciences. The Santponç text constitutes a highly significant example of his process of learning the steam-engine technology. As an appendix, we offer a transcription of the manuscript.

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THE ARTILLERYMAN ISIDORO CABANYES (1843 – 1915): A LIFE FOR INVENTION

Jesús Sánchez *Miñana*

The Catalan Isidoro Cabanyes, an artillery officer by profession and a freelance, prolific inventor, ranks among the most notable technical minds in 19th-century Spain, but his widespread innovative work has received little attention of researchers, a major exception being his electrically powered

submarine, a strict contemporary of Peral's, which has been included in a number of recent publications dealing with the beginnings of undersea navigation. This paper attempts to fill this void by chronologically reviewing all of Cabanyes's known proposals in such diverse fields as compressed-air traction, production of cheap fuels or design of heavier than air flying machines, with special incidence on his pioneering work not only on the submarine but also on devices to capture and make use of the solar energy. His role as one of the main introducers of electric light in Spain is also stressed. A sketch of his rather plain biography, pinpointed by the successive assignments of his military career, is given. The author hopes to attract the attention of experts in the history of the technologies covered by colonel Cabanyes so that his contributions can be studied in depth and properly credited.

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THE AGRONOMY WORKS OF THE COMPAÑÍA DEL GUADALQUIVIR AT THE FIRST HALF OF THE XIX CENTURY

Ignacio García

The focus of this study is the development of Spanish agriculture innovations in the first half of the 19th century. To this end we have brought together some relevant information about the works of Claudio Boutelou (1774-1842), the agronomy director of the Real Compañía del Guadalquivir, between 1818 and 1842.

This company was created with royal support to develop the navigation of the last part of the Guadalquivir river, taking advantage of some of the economic possibilities of the region, such as mines and agriculture exploitations. After several years of formation in France and England, and of work experience in Madrid and Alicante, Boutelou prompted to provide the company with the knowledge of a new kind of engineer: the agronomist. With his help, some innovations, such as the use of steam machines for the water works, and new kind of plants coming from overseas regions as Cuba, were tested for the first time in this part of the South of Europe.