Object of the month

jan 2018

Museum Atrium

To open 2018 as the European Year of Cultural Heritage we chose a sample of retorts from the MUHNAC collection.

A retort is a flask-shaped or bulbous vessel made of stoneware, metal or glass, with a neck bent downwards. Retorts (in French “cornues”) were used for distillation, sublimation and decomposition by heat.

Images of retorts can be found in alchemical manuscripts and chemists have used retorts over the centuries in their work and in the illustrations of their books. Lavoisier used retorts in his research and to illustrate the “Traité Élémentaire de Chimie”, one of the most famous publications about Chemistry in the 18th century.

Júlio Máximo de Oliveira Pimentel was a professor of Chemistry in the Polytechnic School of Lisbon (in this building) between 1837 and 1864. He was responsible for the initial installation of the *Laboratorio Chimico* and for the acquisition of a scientific collection of Chemistry. He published the “Lessons from General Chymics and his Principles Applications” including experiences of the Treaty of Lavoisier, some demonstrated during the Practical Work of the 6ª Cadeira between 1850 and 1873.

Pimentel stated: "In the atmospheric air surrounding our globe there is one of the most important elements of nature, (...). This element is oxygen and its immense relevance for the physics of the globe and for most chemical phenomena was revealed to us by Lavoisier’s works (fig.2)”.

During the course of time retorts have suffered some small changes due to the evolution of the chemists’ needs, but maintained the same overall aspect. The biggest change was in the raw material used: the oldest retorts were made of stoneware but later we can find retorts made of china, glass and metal. The metal retorts, like the Seleron retort, a two pieces retort made of iron, were developed for working with high pressure gases.

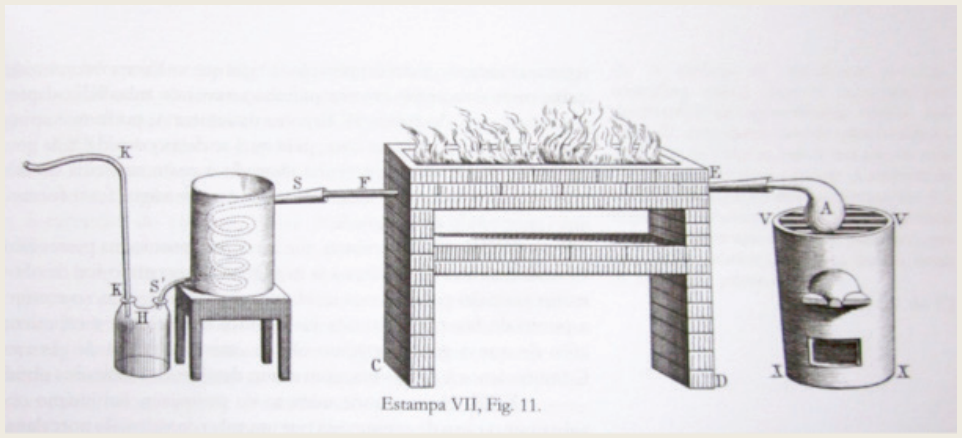

Fig.1 - Experimental assembly of water decomposition (Lavoisier, 1789)

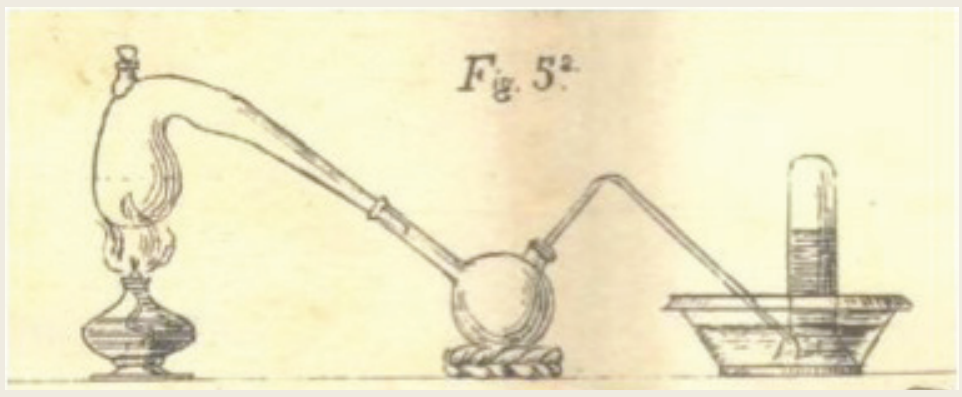

Fig.2 - Experimental assembly for oxigen preparation (Pimentel, 1850)

MUHNAC has an important collection of chemistry equipment, including glassware of the 19th and 20th centuries. We can find several types of retorts that correspond to the images in books and catalogues of this period.

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