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Cesare Minerbi's «Kontinuierlicher Resonatoren-Apparat nach Schaefer E. Zimmermann, Leipzig-Berlin» now part of the Collection of Historical Scientific Instruments of the University of Ferrara

Monday, 6 September 2021 13:00 (20 minutes)

The aim of this research is to reconstruct the past of the «Kontinuierlicher Resonatoren-Apparat nach Schaefer», a particular instrument preserved in the CISFIS –Collection of Historical Scientific Instruments of the University of Ferrara, highlighting the physics behind it.

This CISFIS item consists of a box of four resonators developed by Karl Ludolf Schaefer and manufactured by E. (Ernst? Emil?) Zimmermann in Leipzig-Berlin around 1912. We found evidence that this apparatus had been purchased by Cesare Minerbi, 'Primario' at the Arcispedale Sant'Anna in Ferrara and Professor of Medical Semeiotics, shortly after it was launched on the market. At the end of his long career, he donated the box to the University of Ferrara on 11th March 1950, as it is attested in the «Registro Inventario dei beni infruttiferi di proprietà della R. Università "Italo Balbo, di Ferrara».

The first part of the thesis focuses the attention on resonators as scientific instruments. In order to understand how Schaefer resonators work, the physical principles and the functioning of the resonators before them have been analysed. Great attention has been given to Hermann Helmholtz, the first scientist to 'rethink' resonators as true scientific devices. Schaefer resonators are, in fact, a later refinement of Helmholtz ones.

The second part of the study is devoted to the description and reconstruction of the events concerning the apparatus now part of the CISFIS. We came to the conclusion that these instruments represented a fundamental work tool for Minerbi during his researches dedicated to the development of acoustical diagnostics.

Basic bibliography:

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