TUNING FORKS

Maker, Source: Unknown

Year Made, Acquired: c. 1920

Case: 33 x 6 cm

Markings: 12 tuning forks in total. Two marked S435, V.D. The remaining 10 are marked +1, +2, +3, +05, +5, +8, +14, +27, +20, +30

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Tuning Forks generated constant, sound wave frequencies and were made of highly tempered metal. The above set provided a very small range of frequencies, approximately 1/3 of a semi-tone. A - 435 served as the standard. Such a set would have been ideal for testing auditory discrimination of similar frequencies

Tuning forks were also used to test the upper and lower thresholds of auditory perception. Davis and Merzbach (1975) note the competition amongst 19th century acoustical instrument makers to produce tuning forks that corresponded to the limits of human perception.

In addition to studies in auditory perception, psychophysical laboratories employed tuning forks as standard timing devices. Two of August Kirshcmann's students at U of T cited the use of a Koenig tuning fork in an experiment measuring time-relations (Shaw and Wrinch, 1900). To ensure a continuous frequency signal, the researchers connected the tuning fork to an electromagnetic device. The constant vibrations were then recorded on the kymograph with a Signal Marker.

Rudolph Koenig transformed the tuning fork into an instrument of precision. Many of his forks were used as standards for pitch; Albert Michelson, the American Physicist, used a Koenig precision tuning fork to help determine the speed of a revolving mirror, which was part of the apparatus for measuring the velocity of light.
John Shore invented the tuning fork in 1714. Shore, who was the Lutenist at the Chapel Royal, had been the sergeant trumpeter at the coronation of George I. He first used the "pitch fork," as he called it, in order to tune his lute.

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