

TIMEKEEPERS IN HISTORICAL OBSERVATORIES

Challenges in conservation, restoration and maintenance

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The regulator clocks by J. H. Kessels

In 1822 Heinrich Johann Kessels from Baarlo (near Venlo in the Netherlands), who had worked with Abraham Louis Breguet in Paris, established himself in Altona, the principal port city of the duchies of Schleswig and Holstein and promoted by privileges and preferential treatments in competition with nearby Hamburg. His workshop became the core of chronometer production in Altona and Hamburg.

Kessels supplied numerous observatories in Europe and America with his timekeepers and became one of the most renowned makers of chronometers outside England. The first half of the 19th century saw the founding of several large observatories (e.g. Pulkovo, Dorpat, Athens and Brussels) as well as naval observatories in North America, Russia and Norway. All these institutions needed clocks, and several large-scale triangulations were under way, for which precision timekeepers were likewise indispensable.

Moreover, celestial observations became a fashionable leisure activity in those days. Scientifically ambitious, wealthy people dedicated themselves to astronomy and set up private observatories with often sumptuous, most modern equipment. This habit soon spread from England to the European continent and created additional demand for astronomical instruments and clocks. Kessels received commissions from all over Europe and even the United States, and as a “scientifically knighted” clockmaker he was in correspondence with foremost astronomers and scientists of his time, e.g. Hansen, Bessel, Gauß and Alexander von Humboldt. Twenty-three regulator clocks made by Kessels can be traced in archival sources and literature, of which 15 are extant. They have a characteristic design and distinctive features which his successors also orientated themselves on; he established the ‘Hamburg’ type of observatory clock.

Günther Oestmann (b. 1959) has been trained as a clockmaker and studied history of art and history of science in Tübingen and Hamburg. Since 2017 he is extraordinary professor at Technical University

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