V03461 Pendulum clock
1861
h 139, w 43, d 29
Signed on dial 'A. Hohwü. Amsterdam. Nº. 17.'
By Andreas Hohwü sr., Amsterdam

The director of the Leiden Observatory, Frederik Kaiser, bought this regulator for the new building in 1861. The total costs, including transport and calibration were Hfl 850. The clock was carefully placed against an isolated pillar near the Pistor and Martins transit instrument. The regulator functioned as a master clock for all the other timepieces in the observatory and was set to sidereal time. It ran undisturbed for 13 years and after re-oiling it ran for a further 21 years without stopping. The daily rate of the clock and its dependence on temperature and atmospheric pressure were investigated in detail by the successive directors of the Leiden Observatory. They all praised the regulator, which for a long time was the best in the world. It kept its official status as a timekeeper for the Navy until 1921, when it was superseded by the precise radio signals from the Eiffel Tower in Paris. In 1946 the clock was set up in a sealed glass case, where it read sidereal time.

The clock is still in its original case, although the back of the case is missing. The silvered dial has a central minute hand (0-55, divided in 60 parts). It has a subsidiary dial above the centre for the seconds (0-50, divided in 60 parts) and one below for the hours (0-23).

The movement is weight-driven with a Kessels-type dead-beat anchor escapement, with adjustable pallets and a brass escape wheel. The brass anchor has adjustable steel pallets with jewelled impulse faces. Maintaining power is of the Harrison double-ratchet type. Duration is eight days.

The crutch with its hinged action on the pendulum rod is also a Johann Heinrich Kessels design, as is the pendulum itself. The steel rod of the pendulum is suspended on a knife-edge. The mercury-filled glass vessel acts as the pendulum weight, which has a glass float to prevent evaporation, an invention of George Graham. When the temperature rises the rod expands, as does the mercury, but in the opposite direction. This is balanced so that the pendulum time stays the same. For course regulation there is a regulator disc above the mercury jar and for fine regulation a small conical jar is attached halfway the rod, in which lead shot can be inserted.

Hohwü, Andreas Sr
Andreas Hohwü (1803-1885), son of the clockwork maker to the court Thomas Hohwü, was born in Graasten (Denmark). After education at home by his father, he became an apprentice to Kessels in Altona in 1829 and five years later to Breguet in Paris. He set up his own workshop in Amsterdam on Oudeschans in about 1840 and soon became one of the finest clockmakers in the Netherlands, winning many prices with his clocks. Hohwü made his own chronometers for the Dutch Navy and merchant navy. From 1870 he used parts and works of Kullberg, Mercer and Johannsen from London. With his pupil and nephew Erich Schalekamp he made some 30 astronomical regulators. After Hohwü's death his firm passed on to his nephew Thomas Hohwü, who married his daughter. Later their son Andreas Jr took over the business.

Hans Hooijmaijers, July 2005