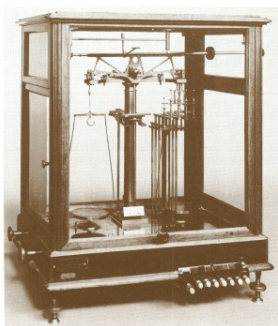


Precision Balance 8



HANS JENEMANN

FIG 1.

This analytical balance was made by A. Rueprecht & Son, in Vienna c. 1890. The gold-plated lattice beam has a length, from knife to knife, of 180mm (7.1"). The straight upper member of the beam is graduated, reading from the centre '0' to 100 on each arm. Thus, by using a 10mg rider weight, it is possible to weigh from 0.1 to 10mg without putting loose weights on the pan. (compare with Precision Balance 2, EQM p563). The rider weight is positioned on the beam by the rod projecting from the right side of the case, and the maximum capacity of the beam is 200g.

When weighing with analytical balances, great problems were encountered using the, so-called, fractional weights, below 1g. They were difficult to handle, being so small, and the frequent opening and closing of the doors of the case disturbed the balance and allowed dust to enter. So, makers of precision balances endeavoured, at an early date, to install systems for the mechanical loading of weights.

Rueprecht made a mechanism for all the difficult small weights, from 10 to 990mg, on the balance shown here, Fig 1, for which he obtained Deutsches Reichs Patent (D.R.P.) No.43846, in 1888.* By using two 10mg, one 20mg and one 50mg weight, it was possible to get every combination from 10 to 90mg in 10mg steps. Similarly, two 100mg, one 200mg and one 500mg weight made

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Abstract

Remarks