

## Precision Balance 5

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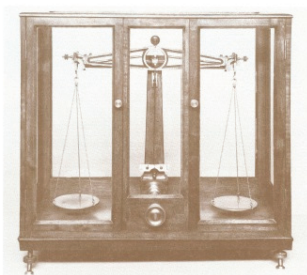


FIG 1.

This is a very beautiful long-beam balance, of high precision, made by Carl Stollnreuther, in Munich c1880, Fig 1. This type of balance was used by officials in the Office of Weights and Measures in Bavaria.

The beam has a length of 240mm (16.5"), and is of lattice form. This design gives the beam a low mass, without reducing the stability appreciably. (The lowest possible mass has always been required for good sensitivity of a balance). Additional strength is given to the open form by vertical members joining the upper and lower arms (they are hidden by the door frames in the picture). The pans, of 110mm (4.3"), are suspended by chains made from connected little balls. Readings on the small graduated arc are shown by the deflections of the long downward-facing pointer (compare with Precision Balance 3, on p.589, 590). The Stollnreuther balance could carry a maximum load of 500g in each pan, and the sensitivity was 1mg. The column is not the usual round form, but is rectangular in section, tapering towards the top.

The dimensions of the case are 590mm long, 250mm deep, and 550mm high (23.2" x 9.9" x 21.6"). The two doors of the case open towards the front for access to the pans - a typical arrangement for old long-beam balances. The rugged base is 17mm thick (0.6"), mounted on a cast-iron frame.

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**Author** Jenemann, H.R.

**Title** Precision Balance 5 [Stollnreuther]

**In** Equilibrium, 1 (1984), pp. 642-643

**Size** 2 pp., ill., 20.8 x 27.8 cm

**Publisher** ISASC International Society of Antique Scale Collectors

**Place** Chicago

**Year** 1984

**ISBN ISSN** 0893-2883

**Abstract**

**Remarks**