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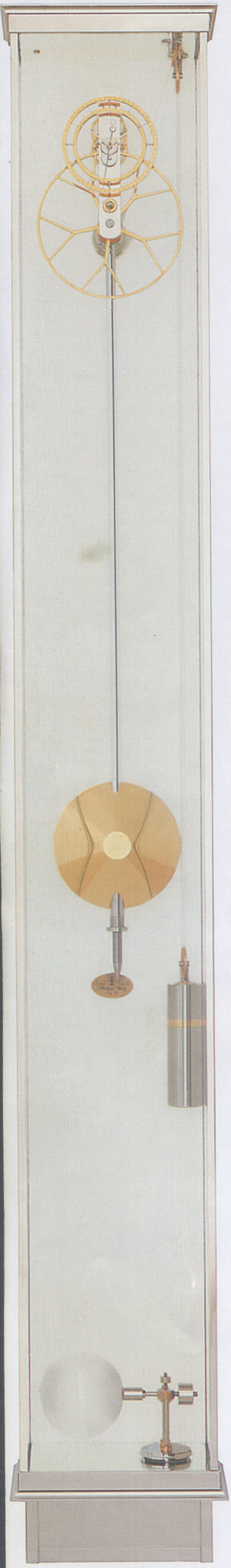

SOMETHING SPECIAL

How Heavy is the Air?

THE TALL (205cm), slender (29.4cm), almost ethereal, glass-cased 'Gramat' by German clockmaker Philippe Wurtz has its essential feature in the bottom of the case, shown in detail on this month's cover.

In pursuit of optimum performance, Wurtz continuously monitors the ***density*** of the air within the sealed case. Barometric pressure, humidity and temperature combine to affect the density and it is this factor that determines the behaviour of the pendulum. The pivoted, evacuated glass sphere seen in the base of the case tends to move up and down with changes in the density of the surrounding air. This motion controls an electrically driven pump in a drawer in the base (see cover) which keeps the density of the air within the case at a constant value.

The finely crafted movement has a four-month duration with a driving weight of only 6Kg. The pendulum (right) is compensated. Suspended on knife edges, it is impulsed by tiny lateral movement of the point of suspension using a patented new escapement. The mechanism will be described in detail in a forthcoming article. ❐