



The iW Guide to JUMPING SECONDS WATCHES

Once the regulator standard, dead-beat seconds indicators tick back into favor

By Michael Thompson

When you see the seconds hand on a nice watch jumping from one marker to the next, do you think “quartz” right away? In nearly every case, you’d be correct, considering the vast majority of wristwatches are battery powered quartz models with that familiar tick-tick-tick seconds-hand motion.

Its once-per-second sound is both satisfying and practical for those who prefer their timekeeping accurate only to the very second. But consider, however, that well before quartz watches and as early as the seventeenth century clockmakers were placing the first seconds hands on clocks. They too enjoyed the per-second certainty of that tick-tick-tick sound and its accompanying visual indication. At that time (1656)

Huygens’s pendulum linked that per-second tick to one arc of the pendulum, a breakthrough that considerably increased accuracy in timepieces.

But when Brits Thomas Tompion and George Graham took accuracy to the next level with the dead-beat escapement in the early 1700s, they made such a display suitable to smaller clocks, and that seconds hand became a required component on any precise timepiece.

Perhaps this is why for centuries many ateliers and watchmaker benches featured such “dead-beat seconds” or “jump-seconds” indicators, usually combined with a regulator display that emphasized the long minute hand, which was separate from the hour and seconds hand. The term ‘dead-beat seconds’ is

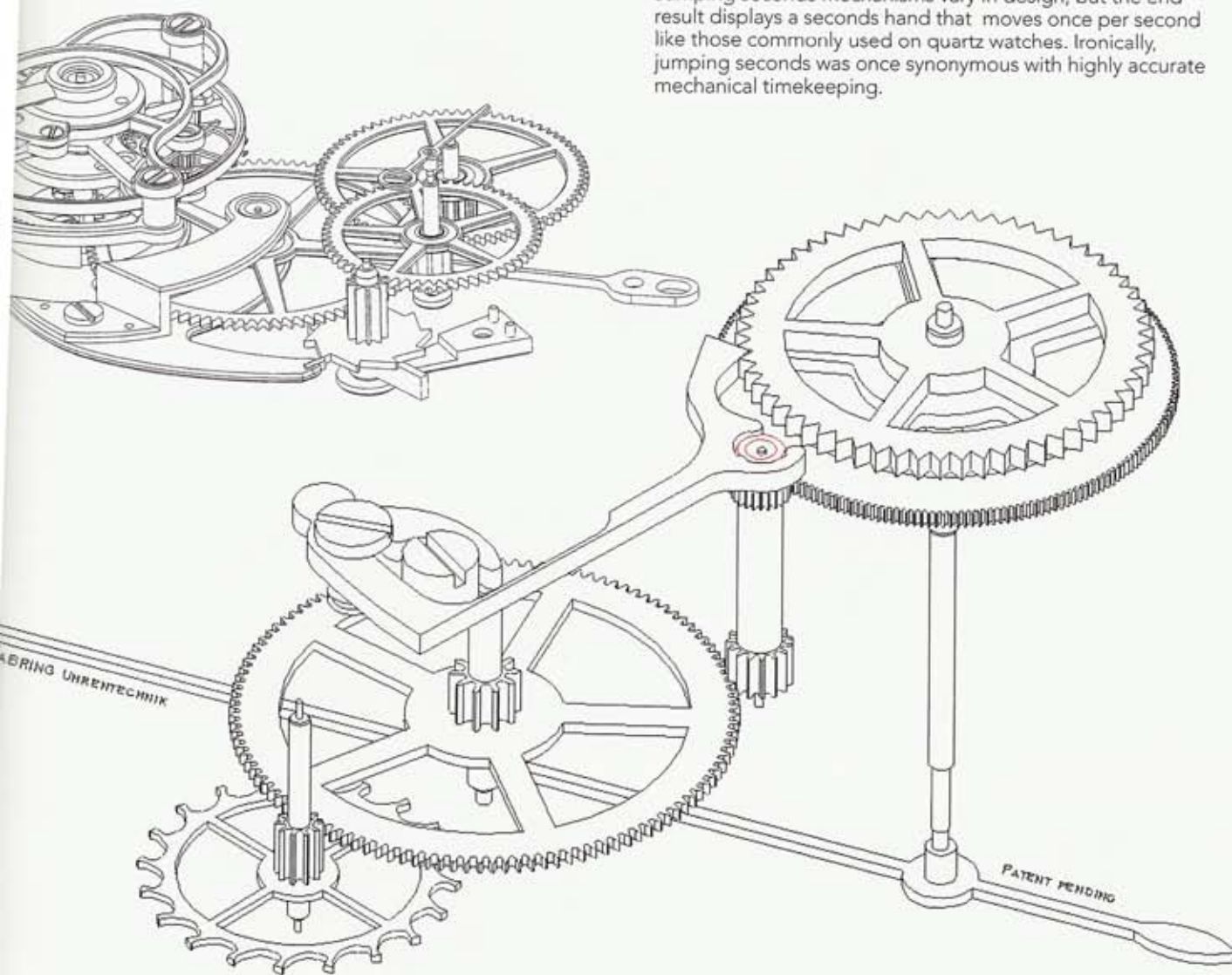
said to derive from the fact that the hand remains dead, or motionless, for as long as the second has not actually elapsed. Thus, the hand indicates that same second even though its exact time has actually passed.

In later years, watchmakers employed varying methods to achieve the desired dead-beat display in a pocket watch, and not all were as accurate as their tall clock role models.

REVISITING THE DEAD

Today most, though not all, quartz models tick in one-second intervals, which became the norm as quartz ascended in the 1970s. You may recall that in the 1950s and 1960s humming electric wristwatches didn’t tick, though Timex

Jumping seconds mechanisms vary in design, but the end result displays a seconds hand that moves once per second like those commonly used on quartz watches. Ironically, jumping seconds was once synonymous with highly accurate mechanical timekeeping.



and possibly several other firms developed one-tick-per-second editions.

Very few mechanical models still emulate the dead-beat display, in part as a reaction to the advent of quartz watches. *But also perhaps because most consumers prefer the sweep action of a mechanical movement with its multiple "ticks" (typically five per second) that propel the hand to appear to float over the dial.* Brands have for years trumped their sweep-seconds displays as an indicator of quality when in fact the jumping seconds display for centuries was the high-accuracy "regulator" standard for clocks as well as certain high-end pocket watches.

Rolex, for one, discovered this apparent consumer preference decades ago,

well before the quartz era. In 1954 the brand discontinued its Tru-beat, which featured a mechanical jumping seconds movement. Today, the Rolex Tru-beat and the few other jumping seconds models, including short-lived editions from Doxa, Panerai and Omega, are collector's items. Enthusiasts point to defunct Swiss movement manufacturer Chezard as a major source of dead-beat calibers for two decades prior to its closing in 1969.

RETURN OF DEAD-BEAT

Yet the allure of jumping seconds remains. In 2001, Panerai presaged the recent interest in jumping seconds when it introduced the limited edition Radiomir Independent, a jumping seconds model with

a Chezard movement. While the most recent interest is especially acute among independent watchmakers, several large high-end firms also offer the feature.

François-Paul Journe kicked off the resurgence of dead-beat seconds in his award-winning 2003 *Fourbillon Souverain*. In recent years, other watchmakers and companies with jump-seconds watches include: Austrian firm Habring2, Lang & Heyne and Sattler in Germany, Dutch watchmakers Tim and Bart Grönefeld and Swiss companies DeWitt, Chronoswiss and Audemars Piguet. On the following pages we show you what these firms offer.

So don't be a dead-beat, jump ahead—to the next page.

Where other jump seconds hands on wristwatches are controlled via a constant force device or gearing connected with another complication, on this One Hertz 1912 the jumping seconds hand is independently powered, geared and operated.



Grönefeld

Followers of independent watchmaking probably learned of Tim and Bart Grönefeld's timepieces shortly after the Netherlands-based brothers presented their first watch in 2008. That model, a tourbillon minute repeater, was audacious enough to get the pair noticed by collectors worldwide. What's more, the watch is said to be the most complicated wristwatch made in the Netherlands.

Last year the brothers introduced their second model, a jumping seconds edition called the Grönefeld One Hertz 1912. The date in the name refers to the year the Grönefelds grandfather qualified as a watchmaker and One Hertz means "one cycle per second," which describes the duration of the jumping seconds hand.

And it's a big hand. Prominent on the clean dial, the seconds hand comprises nearly two-thirds of dial space. The hours, minutes, power reserve display fill in the remaining space. The fourth display, a hand with an S and a W, refers to the setting and winding selector, which is chosen by pushing the crown in, not pulling it out. Both mainspring barrels wind simultaneously from the crown.

Where other jump seconds hands on wristwatches are controlled via a constant force device or other gearing connected with another complication, here the jumping seconds hand is independently powered, geared and operated. And while pocket watches sometimes do feature similar independence, the Grönefelds say their 43 mm One Hertz 1912 is the first ever made strictly for a wristwatch.

One mainspring barrel drives the seconds while another drives the hours and minutes. Friction with this system is guaranteed to an absolute minimum and the complication has no adverse influence on the escapement and freesprung balance. The power reserve indicator at the top of the dead-beat seconds dial keeps track of the sixty hours of autonomy.

The brothers, who also operate a watch retail outlet specializing in independent watches, plan to make only twelve One Hertz 1912 watches.

