



Golden Hands

The magic touch of Roger Smith – a most British watchmaker

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'Watchmaker' is a much-abused term. Even people whose activities are merely limited to changing batteries and straps might call themselves 'watchmakers'. For most of the last 50 years there was only a scant handful of 'real' watchmakers in the world; over the past few years, that number has grown to perhaps a couple of dozen. Roger Smith is a prominent member of this small but distinguished band... not to mention third in a noble horological dynasty harboured by the Isle of Man! We profile his blossoming career, slowly emerging from beneath the shadow of mentor, George Daniels.



(Above) Roger Smith making a dial for one of the limited-edition 'Daniels, London' Co-Axial escapement watches produced for the Millennium. Here, he is using an antique 'Rose Engine' which is used for the peripheral 'barley corn' pattern. The machine is hand operated and requires extreme care and concentration. The pattern produced is built-up from a number of almost microscopic individual cuts and each dial requires several hours' work.

(Previous page) The new 'Series 2' watch by RW Smith has hand-made gold hands and an individually engine-turned solid silver dial. The movement, apart from springs and jewels, is entirely made by RW Smith on the Isle of Man and includes the Daniels Co-Axial Escapement in its original form. Expected to cost £30,000-£35,000 (excl. VAT).

Roger Smith visited BASELWORLD 2005 with the prototype of the 'Series 2' watch that his brand 'RW Smith' is now making on his adopted homeland, the Isle of Man. Although the design is his own, it is based on the Omega 30 mm of the 1960s, which Smith has always admired. It will have a Co-Axial escapement much closer to the original Daniels design.

Not so long ago however, in 1992, Smith had only just completed his first watch - aged 22. Let me repeat that, to let it sink in: he *made* a watch when he was 22. It was a twin-barrel tourbillon pocket watch with a detent escapement. And he made everything except the springs, jewels and glass for the front and back.

True vocation

Real watchmaking is a very special activity and requires a very special person; a prodigy in the same sense as Yehudi Menuhin or Jacqueline du Pré. As a child, clocks and watches fascinated Smith. On completing high school, he undertook

the three-year Horology Course at Manchester City College administered by the British Horological Institute. Graduating in first place in the Institute's nationwide examinations, he was awarded the prestigious Bronze Medal.

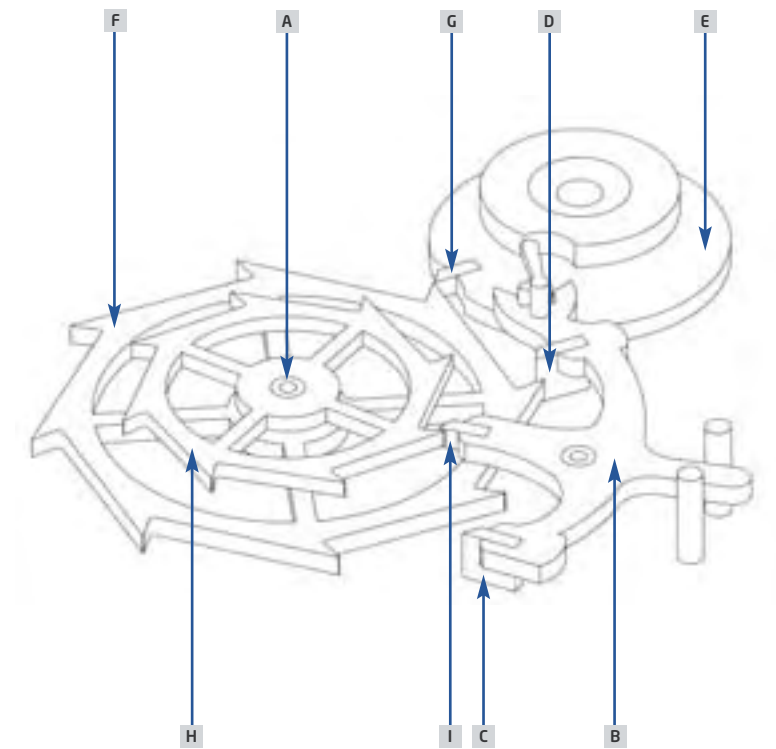
He soon secured a job in the service workshop of the agent for a number of prestige watch brands, but this was simply to make a living. While he was at college, there had been a visit by Dr George Daniels - one of the 'scant handful' referred to above. Handling the famous Daniels 'Space Traveller' watch had inspired him and, realising that it was possible to make such a unique and beautiful object by hand, the young Smith found his true vocation.

Switching to part-time servicing work, he acquired a top-quality Swiss lathe (a Schaublin-70 with most of the accessories) and set up a workshop at home in a corner of his childhood bedroom. Guided by Daniels' book *Watchmaking*, he set about making his first watch - subsequently featured on the covers of the *Horological Journal*.

The Daniels Co-Axial Escapement

Pictured is a line drawing of the Co-Axial escapement used in Smith's new Series 2 watch. Smith uses George Daniels' original design found in his early pocket watches, using two escapement wheels fixed to an arbor (the co-axial - labelled 'A' on diagram) with a standard pinion, instead of the 'extra flat' version adopted by Omega. Daniels' Co-Axial escapement is a low-friction energy transmission system that separates the functions of locking and impulsion, thus reducing wear and tear and effectively eliminating the need for lubrication.

The balance lever (B) has three pallets. The two lateral pallets (C and D) are used for the locking and unlocking positions. The balance roller (E) turns clockwise to unlock a tooth of the escapement wheel (F) from the entry pallet (C). A clockwise impulse to E is induced by a tooth acting on the roller pallet (G). The balance then turns anticlockwise and unlocks a tooth from the exit pallet (D). An anticlockwise impulse to E is subsequently induced by a tooth on the escapement pinion (H), which acts on the impulse pallet (I). The position of the impulse pallet in relation to the teeth of the escapement pinion ensures a quasi-tangential impulse with very little friction. No other escapement offers this advantage.



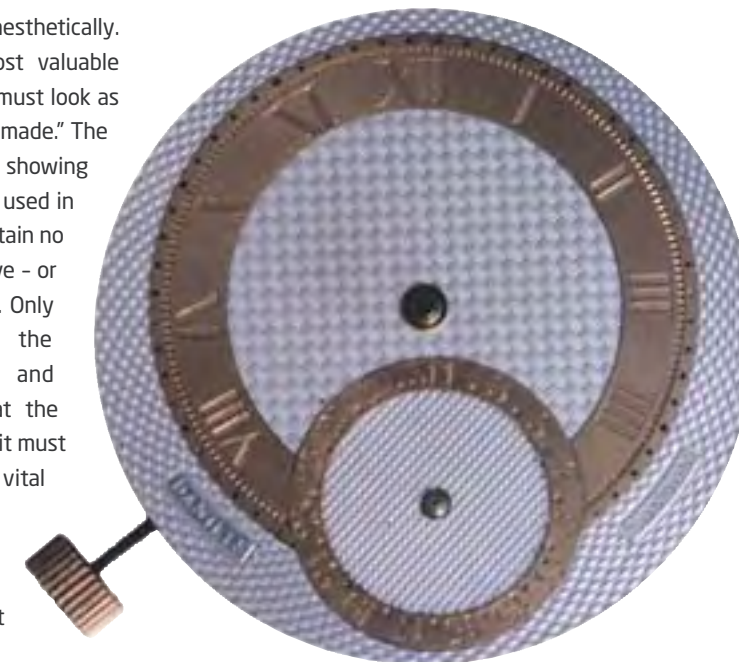
Begotten, not made

True watchmaking is one of the most onerous of disciplines. Not only does it have to run, but it has to keep time reasonably accurately for a number of years without attention. Because a 'one-off' takes many hours to make, it can only be sold profitably to a connoisseur at a high price. It must therefore be a work of art; a masterpiece that the connoisseur will not only be proud to own, but also be proud of as a conversation piece, exciting envy rather than derision.

Smith's watch certainly achieved the first part of these requirements: it ticked, kept time, and he was justifiably proud of it. But when he made a pilgrimage to the Isle of Man to show it to his hero, he was told quite brutally, but necessarily, that if he wanted to progress in this rarefied world, it was

simply not up to scratch aesthetically. He then received the most valuable piece of advice: the watch must look as if it was "begotten and not made." The watch should simply exist, showing no sign of any tool or hand used in its construction. It must contain no flaw visible to the naked eye - or even to a low-power loupe. Only then could it fulfill all the requirements mentioned and enter the market place at the highest level. There is also, it must be said, a more subtle but vital difficulty in knowing how good 'good enough' really is. In the real world, that line has to be drawn - but it must be invisible.

So Smith embarked on his second watch. By this time, he was getting much more remunerative upper-echelon



Partly completed dial of a Millennium Co-Axial. The three different patterns are produced from the play of light on a number of regularly repeated vertical grooves.

Series 2's movement will be the future base for all of Smith's round watches, and was therefore designed to accommodate anticipated complications.

The tourbillon of the 'Daniels, London' compact bespoke movement has a Co-Axial escapement.

restoration work, giving him essential insight into the work of the great makers of the past. 'No. 2' was a triumph - a pocket watch with tourbillon, moonphase and perpetual calendar. This time, in 1998, George Daniels invited him to join him in his workshop on the Isle of Man.

Millennium

In the intervening years, Omega had decided to commercialise the Daniels Co-Axial Escapement and, as part of the deal, Daniels was to have a number of the new movements (in ébauche form) to finish and case-up to his standards, as the 'Daniels Millennium Co-Axial'. Involvement in this project provided a unique opportunity for Smith and he was able to acquire many of George Daniels' skills and develop his own.

Smith became particularly skilled at the extraordinarily demanding technique of 'engine turning'. The engine-turned dial, used extensively by Breguet in the 19th century, has been the mark of fine watchmaking ever since. It was used for the low-number limited editions in Vacheron Constantin's 250th Anniversary watch collections (see Issue 12). Each dial is cut individually. Stamped or machined versions simply cannot compare with the real thing.

The technique involves the repetitive engraving of individual grooves, usually into gold or silver, line by line, to produce a great variety of patterns. This is done painstakingly with a hand-operated machine, often over a hundred years' of age, which must be re-set manually after each stroke. The point where each cut starts and ends is controlled by hand. The slightest error at any stage will be obvious and cannot be repaired - there is no alternative to scrapping the dial and starting from scratch.

The 50-piece Millennium project took three years and after the first year, Smith was able to take on all the work. At the same time, he embarked on watch No. 3 - a commission with a number of unique features, including state-of-wind indicator and 15-second remontoir. Next came a commission for a rectangular tourbillon wristwatch (pictured left). Smith then developed his 'Series 1' wristwatches, in a rectangular case and with retrograde calendar. To enable these to be sold at a more reasonable price (£12,000), train components were bought in from a specialist Swiss supplier, but plates, bridges, case, engine turned dial, and trademark golden scallop-tipped hands were all made in the separate workshop that Smith was developing himself on the Isle of Man.



Roger Smith in a corner of his bedroom in 1992. He had recently completed his first watch at the age of 22.

Series 2

Smith now employs two other watchmakers to assist in the production of his latest 'Series 2' wristwatches. The original form of the Daniels Co-Axial is used, with two distinct escape wheels, rather than an escape wheel plus dual function 'escape-pinion', as used in thinner watches (and in the Omega Co-Axials). Apart from the jewels and springs, the entire movement will be made 'in house'.

Unlike Series 1 (limited to 12 watches) Series 2 will be an ongoing, numbered series. The movement will be the base for all future round watches and was therefore constructed to accommodate anticipated complications, such as an annual calendar or chronograph. To this end, RW Smith is investing heavily in machinery in order to produce the movements. A recently acquired five-axis computer-controlled milling machine will handle most of the components,

enabling RW Smith to focus on finishing the components to the expected high standard. The classic three-pattern, individually engine-turned dials and hand-made gold hands will remain primary features. The client will have a choice of various dial, hand and case combinations. In 25, 50 or even 100 years' time, Smith reassures his customers that any natural deterioration in the condition of the dial and hands can be brought back to the condition in which the watch originally left the workshop.

Following in the footsteps of John Harwood (inventor of the self-winding wristwatch) and George Daniels, Roger Smith is the third in a watchmaking dynasty based on the Isle of Man. Already well established at the age of 35, if he emulates his mentor we have another 40 years of fine watchmaking to look forward to. ○



RW Smith No. 2. Completed in 1998, this watch convinced George Daniels that Smith had understood and benefited from his comments on the first watch. Smith has retained its style of hand-made solid gold hands on all RW Smith watches - distinguishable for their scalloped tips.

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