

B H I Horological *J Journal*



January 2012



Tributes to Dr George Daniels CBE FBHI 1926-2011

Roger Smith FBHI Watchmaker

We all know of George's meteoric achievements in horology but it was suggested that a few personal recollections from my time working with him would give a unique insight into the man himself, and what it was like to train and work with him.

I began my work for George in 1998, and the first 9 months were extremely intensive as he taught me the intricacies of making wristwatch scale components by hand. And I must just say that his tuition throughout had a calmness and clarity that was surprising but very welcome to me, the new boy in the workshop.

One of the tasks that I had to master was the making of hands; not easy, when the only tools available were a piercing saw, a few files and a piece of peg wood for steadying the work. My work was progressing slowly, especially when told that I had to handmake 50 seconds hands, which along with the 50 hour, minute and calendar hands, all had to be hand pierced from a sheet of 0.3mm thick gold and then filed to a width of 0.3mm whilst trying not to bend them. I started, but due to the finesse of the hand I did not get very far, believing that it was an impossible task.

Telling George this, he sat at his bench and put on his glasses, ushering me to bring him the troublesome seconds hand for inspection. George had very large hands and with ease he picked up the seconds hand and deftly slipped it into his pin vice and with the other he picked up a needle file which was swallowed by his shovel-like hand.

What was extraordinary to see was that as he brought the seconds hand to rest on the peg wood, followed by the right, which held the file; there was a fluid change as these rather agricultural looking hands transformed into those of an artist as he began to simply caress the excess metal away. Within



Roger and George.



George and Roger discussing one of Daniels pocket watches over tea and cakes.

half an hour, there sitting before me was a perfect seconds hand, hand finished by George and with a very useful lesson to me.

Another challenge which had to be mastered was engine turning, a trade which watchmakers just do not learn – unless you are George that is. As always the tuition was flawless, but the student again was slow to pick up. I struggled to get a grip on all the processes for some months and as the growing pile of ruined silver test pieces grew into a mountain, George simply ignored me, knowing that all I needed was time and practice, although on occasion he could not help but let out a low growl as he passed, while I sat struggling behind the straight line engine.

Fortunately, I did progress and with my growing confidence, George felt that he could enjoy a couple of weeks away motoring with friends through France in his Itala, leaving me with the task of completing nine dials for his return.

They were completed and I proudly laid them out for inspection. George returned and as usual visited the workshop prior to dropping his bag in at the house.

He sat down – no cursory hellos – put his glasses on and beckoned me to bring him the dials for inspection. He took his time, inspecting each one for the quality of engine turning and fit of the various dial components. On completion he reached for his red marker pen and put a large red cross on 6 of the 9 dials. Putting the pen down he looked over his glasses and said, 'I think, 'Smith of Bolton', you need a little more practice'. And with that 'Daniels London' stood and left the building.

In the past few years it was a real pleasure and honour to be asked by George to work with him again on his Anniversary wristwatch. Several weeks before George's passing I completed work on the prototype and we set a date for its examination. I arrived and, to my surprise and pleasure, George could not find fault with the piece. We sat and chatted about the project for some time enjoying a coffee and one of his favourite Mr Kipling's Bakewell tarts. The forthcoming SalonQP show was discussed and George's participation on the launch night.

All was very cordial and then George's face changed and he asked if I was intending to display just the one piece. I said, with a hint of apprehension 'yes'. George replied saying, 'now come on Roger, this is our chance to show to the world that we

are the best in the world and in business to make watches, and therefore we need to show people a movement so that they can really see the craftsmanship. I think you need to make another movement'.

I attempted to protest, explaining that I still had three of my own watches to complete for the show. George never allowed a trivial problem such as a shortage of time to stand in the way of achieving a goal, and therefore I agreed to complete another movement. The atmosphere calmed and we continued to chat about other matters. Finishing my Bakewell tart I told George that I had better get back to my workshop as my workload had somehow dramatically increased!

I was halfway to the door when George shouted out: 'Roger did I say one movement? You had better make that two – after all people need to see both sides!'

In November, the first public viewing of the completed collaboration Daniels Anniversary prototype wristwatch, along with one of George's early one minute tourbillon, detent pocket watches with retrograde hour, was held at the SalonQP event at the Saatchi Gallery in London. With clients travelling from as far afield as America and Hong Kong, the reaction was yet again phenomenal. It was also a perfect environment to chat freely about George's life and incredible achievements in horology, and there was a huge number of very kind words and condolences.

As for the future for Daniels London, to my great surprise and pride, George has left the entire contents of his iconic workshop to me in order that I can complete his Anniversary watch series and continue to maintain, and if necessary, restore his main body of work. This, in my view, is without doubt the world's most important horological body of work to have ever been created by the hand of one man, comprising some 23 individually handmade pocket watches and 4 wrist watches, as well as the 50 Millennium watches which I assisted him with.

George's philosophy is extremely important and I intend to carry it on through my own work, never compromising quality and individual handwork for speed, mechanical intervention or ease of production. I promised George that I would make sure that he will never be forgotten, and although of course this is impossible, I will be making sure that his legacy of the horological artist craftsman where one man is responsible for the conception and creation of a complete watch from start to finish, is never lost.

Since my very first meeting with George at the age of 18 he has had a profound effect on my life and it has been a great personal honour to be able to share a few select memories from my time spent with my mentor and friend, George Daniels.

Andrew Crisford Master, The Worshipful Company of Clockmakers

In many ways, I felt that I knew George Daniels long before I met him. His book '*Watches*', written with his close friend Cecil (Sam) Clutton and published in 1965 exactly addressed those aspects of the history of watches which interested me most. In the preface, the authors note how the emphasis in watch collecting had shifted from the decorative merits of the case to the mechanical intricacies of the movement. This precisely coincided with my own interest in antique watches and '*Clutton & Daniels*' became my Bible for many years.

On leaving the computer industry in 1973 to concentrate fully on dealing in antique clocks and watches, it was inevitable that I would hear more and more about the extraordinary talents of Mr Daniels. My introduction was effected by Sam Clutton, whom I had met some years earlier through our mutual



George Daniels and Andrew Crisford in the 1908 Grand Prix Itala at Bastogne (Ardennes) in 2002.

interest in Bugatti cars. In those days watch collecting still had the air of a gentlemanly pursuit, and many collectors such as Sam Clutton and George Daniels would regularly wear important watches from their collections and willingly share the pleasure of examining them with like-minded enthusiasts. Thus I was encouraged to introduce myself to George Daniels in the paddock at Silverstone during a Vintage Sports Car Club meeting. No matter that he was stretched out, fast asleep in the back of Clutton's commodious Bugatti saloon. 'Just knock on the window, he won't mind' promised our mutual friend, and indeed he didn't. He seemed happy to study my watch but not before he had taken from his waistcoat pocket a recently completed Daniels tourbillon for me to look at. As I remember, he made some interesting comments regarding my watch and I was practically speechless regarding his. So, after a few minutes each watch was returned to its owner and I retired. He reclined, and immediately went back to sleep. Thus began a friendship based on shared interests and values which was to last for nearly forty years until his death in October 2011.

From then on we met regularly in London, and throughout the next thirty years we enjoyed many motoring adventures, mainly in one or other of George's cars and occasionally in one of mine. Our first trip, together with the late Derek Pratt, was in the 1907 Daimler. We drove from Liverpool to Aberdeen to visit Professor R V Jones, the famous wartime physicist. Later escapades included a hair-raising drive to the Ardennes in the 1908 Grand Prix Itala, and taking the 1929 'blower' Bentley team car to the Nürburgring to race against the best German sports cars of similar age. Winning this race against a team of extensively and expensively restored Mercedes 38/250 cars gave George particular pleasure; not only because his car had been driven from the Isle of Man in order to compete, but because it was in totally original condition, right down to the engraved plaque on the dashboard which read 'Property of the Hon. Dorothy Paget'.

Our meetings always involved lengthy discussions on horology and motor cars but initially this 'information highway' was something of a one-way street. With avuncular patience, George would explain aspects of the working of watches and internal combustion engines. I grew to appreciate his iconoclastic approach to all aspects of practical watchmaking and I always enjoyed his comical ripostes. Whenever a Swiss watchmaker explained at length how to use some complex machine to achieve a certain finish. George would reply, in that inimitable gruff voice, 'well, I normally do that with a piece of cork and a bent nail'.



The first Daniels Watch – a gold and silver one-minute pivoted-detent chronometer tourbillon. Image courtesy of Sothebys.



The Daniels Pocket Watch with pivoted detent tourbillon carriage. Image courtesy of Sothebys.

By 2006, the year of his eightieth birthday, George had completed twenty five superb hand-made watches. Every one had been constructed without assistance and without the use of automated machinery. To celebrate this near super-human achievement, Bobinet and Sotheby's organised the 'Daniels Retrospective Exhibition' at which all his watches were displayed together for the first and probably only time. To quote from the catalogue – '... it is almost beyond belief that one man, working entirely alone, could have created such a wealth of beauty, form and function'.

His energy, determination and long working-hours became the stuff of legend and certainly to see him, well into his seventies, change a wheel on a vintage Bentley by the roadside was enough to exhaust the idle onlooker. Even a few months before his death, and when very seriously ill, he managed, through sheer willpower, to attend a reception in his honour at the RAC. The mighty 'Birkin' single-seater Bentley, holder of the Brooklands lap record, stood proudly in the centre of the rotunda, reunited for the last time with its owner, George Daniels, Master Watchmaker and remarkable friend. 1926–2011. R.I.P.

Kenneth Lloyd Jones BHI President

During the months preceding and following the end of the first decade of the 21st century, the Institute lost two of its most distinguished and inspirational Fellows: Derek Pratt, described by George Daniels as 'horologist extraordinaire', died in September 2009, and George Daniels himself on 21 November 2011.

Already an MBE, George was appointed CBE in 2010 – the only such award ever made 'for services to horology'. Initially self-taught, he later attended evening classes at the Northampton Institute and became FBHI on the basis of his examination results. Over the years he received a number of prestigious horological awards: the Tompion Gold Medal of the Worshipful Company of Clockmakers (1980), the BHI Gold Medal (1981), The Kullberg Gold Medal of the Stockholm Watchmakers' Guild, and the Gold Medal of the City and Guilds of London Institute (1991). He was an Honorary DSc of City University, London, the successor institution to the Northampton Institute, and an Honorary Fellow of City and Guilds. He was President of the BHI during 1980, the year that

he was Master of the Clockmakers' Company.

As his reputation rose he handled increasingly valuable and rare pieces. Throughout his career he stressed the importance of studying each piece carefully so as to learn from it, and it was this that allowed him to write what is probably the definitive book on Breguet. He began his series of hand built watches when he was 40. Each watch is different and was intended to test a new escapement or some other modification. These watches revived an interest in mechanical horology at a time when it seemed that the quartz movement would become supreme.

George Daniels did not gladly suffer fools or timewasters but, from personal experience, he could be a welcoming and generous host. It has been claimed that he was the most influential watchmaker since Abraham Louis Breguet, and that his Co-Axial escapement is the most significant development in horology since Thomas Mudge devised the lever escapement. In the BHI library his bust stands on a bracket near to that of Breguet. Through his books, especially 'Watchmaking', by his insistence on continuing to learn from every piece that is handled or examined, and by the example of his watches, George Daniels has been, and will continue to be, an inspiration to young and would be watchmakers worldwide.

Kilian Eisenegger Directeur Technique Sellita, La Chaux de Fonds

I met George for the first time in 1989, when I was in the watchmaker school in Solothurn. I was working on a marine chronometer with an English detent escapement.

Some years later, I visited him on the Isle of Man, along with my friend Francis Gerz. We were still students at this time, so we travelled mostly by train. When we arrived we spent some days with George in his famous workshop. I was fascinated by his work and we saw a model of the Co-Axial escapement. After a few minutes I understood the advantages of this invention. I asked George why this idea was not industrialised. He told me of his prolonged efforts to convince the Swiss that it was a good idea. I already knew that it is always difficult for an inventor to commercialise an idea – you usually have to find somebody else to do this work.

Back in Switzerland in 1993, when I worked in ETA's R&D

Department, I suggested that the Company should give George's invention a try. My boss Beat Gilomen gave me some time to construct the co-axial escapement on the 2892A2 calibre, in place of the existing 20.3 Nivarox escapement. The 2892 has not much space so I decided to use the slim construction first made by George for a Patek Philippe calibre. He combined the pinion with the smaller impulse wheel. I used the lever to lock the impulse pallets directly. It was possible to take out a patent for this idea. The patent George had was ready to expire and it was important to protect the idea for commercialisation (EPO Patent EP1045297 Kilian Eisenegger).

Beat Gilomen, the technical director of ETA, took the risky decision that we build a prototype based on the 2892A2. I decided to work together with Nivarox for the complicated parts. I was sure that nobody else could build these parts at this time. We soon had the first two movements, which I assembled over the Christmas break. I was very proud that the first prototypes worked and Derek Pratt and I shared a bottle of champagne in celebration.

Returning to work, everyone was sceptical and doubted that the escapement would be reliable. We launched a very demanding test programme in the ETA laboratory, using movements with and without lubrication. During this time George visited the ETA twice to see the results and to give some advice how to make it better. I made a big mistake on the first levers. The lever pallets were too pointed. During a shock, the balance could be blocked. This error was quickly fixed when I replaced the two locking pallets.

Everybody was waiting for an indication that the escapement would work without any lubrication. George told everybody that it would be possible. The problem was that George used petrol in his cleaning machine and this has a small lubrication effect. This point took us two years of testing. It was not possible to use the escapement without lubrication. George and I tried to convince the stakeholders that there were other opportunities for the escapement.

In the mean time I visited George for more than a week on the Isle of Man, with my wife. We worked the whole week to fit the 2892A2 Nivarox Co-Axial parts into another movement, just for fun. At the end of the week the movement worked with the new parts.

In 1999, Omega launched this first generation of Nivarox Co-Axial escapement on the modified 2892A2 calibre, the 2500. George was very happy that finally his idea had been launched.

I then moved to IWC and met George and Derek several times in Solothurn. George twice visited IWC in Schaffhausen.

I now have some ideas for a double Co-Axial escapement which, at the moment, is not commercialised, but that's another story...

François-Paul Journe Montres Journe, Geneva

Dear George,
it is with the greatest sadness that I am paying this final heartfelt homage to you to thank you for having been my source of inspiration, as you have been for so many in the watch industry around the world, and for the profound insight and constant support you gave me during my watchmaking career.

Without you, I would most certainly never have started to make my first watch. You were definitely the foremost watchmaker of the 20th century. It was in 1969, when the mechanical watch industry was dethroned by the arrival of quartz, that you started making your first watch. You were the pioneer; the first watchmaker who showed us the path to

horology as art – a non-utilitarian horology. Subsequent years proved you were right. Swiss horology has emerged from the ashes constructing watches as art and as prestige timepieces. You opened the door of contemporary horology and showed us the path back to authentic watchmaking with innovations, with regard to the grand horological tradition of our great watch masters. You opened the main door; I could only follow in opening others. But the most difficult door to open was definitely the first one.

George, I am proud to have been your friend and I wish to thank you immensely for all the incentive and inspiration you gave me. I can only hope there will be more watchmakers like us, making real horology. When I saw the watch you had made for Sam Clutton, without knowing it, the path for my life was set and, in 1977, I decided to make my first watch. Thanks to your books, *The Art of Breguet*, *Watchmaking*, and others, I have patiently learned how to make a watch on my workbench; you know the rest . . .

I was lucky to meet you on numerous occasions throughout my career, at first during horology reunions in London, during auctions, and again in Basel. It was always a great honour when you came to visit the manufactory I have built in the centre of Geneva.

Thank you dearest George.

David Newman Executor and Trustee - George Daniels Education Trust

George Daniels came into my life just over 49 years ago when he came to me for advice with regards to building a garage at his recently purchased house. The garage was to be used to house his vintage Bentley collection. As a vintage car enthusiast myself this was too good an opportunity to miss - so started years of shared interest driving and restoring cars and motor cycles.

It was perhaps inevitable that I would take an interest in horology. My first clock was a wedding present from George and I was privileged to watch and learn from him in the early



One minute tourbillon watch with Co-Axial escapement and sector for state of winding. Image courtesy of Sothebys.



The Space Traveller.
Images courtesy of Sothebys.

years in his workshop when some of the most important watches and clocks came in for repair and restoration. It was quite normal for the workshop to have a constant flow of horological visitors the likes of Clutton, Quill, Attwood, Hornby, Browne, to name but a few. The kitchen was a hive of horological activity with Breguet, Harrison and other wonderful pieces spread about the table for discussion.

George's horological achievements have been well documented and his visionary spirit and genius will be marked for ever in the history of horology. He will also be remembered for his many horological books and I am pleased to be able to

confirm that many titles will be reprinted in 2012. Daniels London will also continue with the completion of the collaboration watch in Roger Smith's workshop.

It was a great personal privilege for me to accept George's request to be the first Chairman of the George Daniels Education Trust. This has been set up to provide bursaries for students in medicine, engineering, building construction and horology, the main beneficiaries being City University London, The Clockmakers Company and the British Horological Institute. More details of the Trust will be announced in 2012. George's funeral took place on 23 November 2011 at Kirk Christ Church, Lezayre, when over 150 people were present to pay their respects. Roger Smith paid a very moving tribute to George as did Roger Collins, the past President of the Vintage Sports Car Club. The service was conducted by the Reverend Brian Evans-Smith describing George as a fascinating man whose work combined both function and beauty. The horological world was well represented and several of George's magnificent vintage cars were used in the cortege.

I, and many others, have been inspired by George. His intelligence, his passion for learning and triumph on all subjects he tackled has left an indelible effect and I believe those who have had the privilege to meet, work and have the friendship of George, are indeed better people. He has been a very good friend, sadly missed but always remembered.

John Griffiths FBHI
Formerly Curator of Prescott Museum and
Curator of Horology, National Museums
Liverpool

Looking back I realise I first met George Daniels at an AHS meeting in October 1971 when Sam Clutton gave an informal talk on Arnold and Breguet at the Science Museum. Both Sam's and George's collections were on display. Sam invited those who wanted to have closer examination of the watches to visit him at his house in Blackheath. At Blackheath, I saw George's first watch which was then owned by Sam. George was there and I stayed all day – bread and cheese for lunch! It was watches, clocks, cars, aeroplanes and steam engines, a super day and various other young horologists dropped in.

I visited George in Thornsett Road (with the workshop shown in 1st edition of Watchmaking) before I went to work at Hurstmonceux. During my years at Hurstmonceux, George and I spoke on a number of occasions, discussing lubrication, jewellery and adjusting. Hurstmonceux was the only place in the country where mechanical watches were, routinely, being adjusted to pass a rating test. George mentioned he wanted a watch of his testing and I suggested he contact Bill Roseman, Head of Chronometer Section. I moved to the north west and it was not until George and I met at Chester, I found out his watch had been tested with good results.

In 1985, I borrowed three of his watches for the Exhibition, Clock and Watchmaking Today, at Prescott Museum and he, and about 120 others, turned up for the Private View which was opened by Sam Clutton. This was the first time I had seen and handled the superb Space Traveller's watch, a breathtaking piece of design and construction. After this exhibition ended, George invited me to be on the committee that set up the 1987 Horology Exhibition at Goldsmiths Hall. He was my seconder for my application to the Clockmakers' Company, Ray Mellor, the Master, being my proposer.

As well as watches there were the cars. I will not forget tours of the lanes around Hurstmonceux and Upton Hall in a growling blower Bentley or the reverberation of the exhaust of the 12 litre 1908 Itala in the quadrangle of Keble College, Oxford, after George had explained why, because of slow moving traffic, the machine had been fitted with two Kenlow fans and an alternator. It was, however, still hand started and was fitted with decompression levers.

I visited him on the Isle of Man about 2½ years ago, where I saw his large horological workshop and the even larger 'factory complex' for the cars. As expected, everything was beautifully planned and organised.

He was not one to suffer fools but if you asked intelligent questions or made perceptive observations he would discuss things at length. Two people are known to have worked with him, Anthony Randall for about six months and Roger Smith for about for three and a half years, plus the three years more recently on the Anniversary watch.

Andrew Lumsden MBHI, FRS

George was my good friend for 40 years. We met when he stopped by on his BMW as I was tinkering with a Vincent in the street outside my house. He was keen to see the motorcycle workshop that was formerly our front room – with the promise that he would show me his -- which happened to be just around the corner, in Penge. So I invited him in for a cup of tea. As our friendship grew, he convinced me to turn my rudimentary engineering skills to making tools and attachments for his watchmaking machines and, in very recent years, he even trusted me enough to make the barrel arbors of what was to be his last pocket watch. He was a tough customer but the finest teacher – wholly disarming of



George Daniels collecting his CBE.

substandard workmanship but capable of a token grunt when it met his approval. His influence slowly induced an appreciation for mechanical timekeeping, which reached a competence sufficient for me to be honoured with the task of proofing the manuscripts of Watchmaking and All in Good Time. But it was not until reading the autobiography that I fully appreciated George's astonishing accomplishment of rising from a desperately hard childhood to become the finest watchmaker of his, or any generation. Although he was entirely self-made, he gave freely to others to help develop their skills – I have been fortunate to enjoy the finest gift of all, his friendship.

Michele Sofisti,
CEO Sowind Group
Formerly President of Omega

I was President of Omega when the company adopted the Co-Axial escapement and I have very fond and emotional memories of George Daniels. He was a man who has left a great impression on all of those who worked with him. Not only one of the greatest watch creators but a man of great culture and humour with a human touch.

We always had wonderful moments when he visited the factory at Omega or we met elsewhere. Listening to him was a deep immersion in watchmaking in its highest sense – and a lot of fun.

We shared a passion for special cars and my first memory of him was when he came to Omega in Bienne driving his 1929, 4.5 litre Bentley, wearing goggles and dressed as if in an old racing movie. We all looked out of the windows and the surprise was total when we understood who the driver was.

I remained in contact with George for a few years but then, to my regret, lost his address and was very sorry to hear news of his passing. The watch industry has lost one of its greatest interpreters.

