

F.P. JOURNAL

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25 YEARS OF TOURBILLONS

The adventure began in the 1980s, while he was making his watchmaking debut in Paris with his uncle, a renowned restorer of antique horology in the heart of the craftsmen's district in Saint-Germain-des-Prés where a first-rate clientele entrusted him with the finest collections. The young François-Paul was thrilled to be in contact with the beautiful pieces being restored in the workshop, and in a very short time, he progressed in leaps and bounds. He understood that all these geniuses such as Ferdinand Berthoud, Abraham-Louis Breguet, Antide Janvier, were driven by a constant quest for perfection combining technical achievement and pure beauty with timeless aesthetics. These men were not only creative geniuses of watchmaking, but also mathematicians, physicians, astrologers... These exceptional creations did set his own heart beating for years to come with deep-felt horological emotions! He dove into the history of horology, wanting to understand and learn everything.

It did not take the young watchmaker long to realize that his deep desire was pushing him towards this crazy idea – to produce his own Tourbillon watch entirely by hand. In the 70's, the only watch with Tourbillon François-Paul had seen was Sam Clutton's, the very first watch made by George Daniels (19 August 1926 – 21 October 2011), the most important contemporary watchmaker of the 20th century. François-Paul found his calling.



George Daniels 1969 pocket watch "The Clutton".

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BREGUET'S ACOLYTE

by Jack Forster

It's no secret to anyone who's followed his work for any length of time that to F. P. Journe, the work of Abraham-Louis Breguet represents a touchstone not only for beauty in design, but also for technical innovation. F. P. Journe's watchmaking is based on a certain ideal that in many respects has more in common with the heritage of French horology rather than Swiss, with an emphasis on elegance and the projection of an aura of effortless sophistication rather than one on showcasing mechanics and technical achievement for its own sake.

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TOURBILLON CONTROVERSY

by Ian Skellern

The tourbillon was invented by Abraham-Louis Breguet over 200 years ago. Why? to average out positional rate deviations due the gravity in pocket watches. Back in the day, pocket watches were usually carried vertically in a gentleman's pocket and stored vertically at night (either hung or resting on a stand). Pocket watches also had movements lubricated with poor quality animal oils, exaggerating their positional rate deviation.

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EDITORIAL

By François-Paul Journe



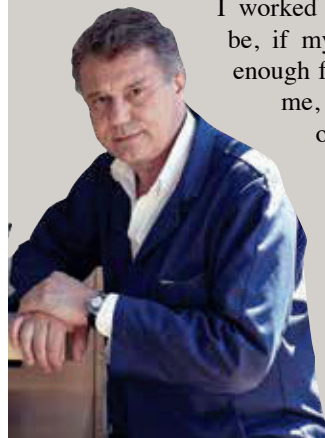
TEMPUS FUGIT...

Who could have imagined? Me!

Writing about my timepieces! And have the privilege of having collectors reading about it! I certainly could not have thought of this back in 1977 when I launched myself into this world of gears, lubricants and complication. Now that I think about it, none any of my relatives or friends would have thought it possible. And certainly no one in the watchmaking world, which probably made me partial to become -and stay- independent.

Many times when asked why I became a watchmaker, I answer that it was because I was a terrible student. It is a joke not because I was an A student (I never was), but -I hope- there was more to it. I always liked mechanical stuff and I cannot recount the times when I dismantled a toy or electronic device and being puzzled that it would not work after I put it back together. Working for my uncle restoring clocks definitely anchored me in the horological history and one day -when I have time - I will try to remember and document all these beautiful 18th century clocks that my uncle and

I worked on. And, maybe, if my company has enough funds to indulge me, buy one or two of these marvels. I always humbly said that the 1st watch I made was to challenge myself. It was not an order



to fill nor something I was trying to make money from. Hey! I still own that piece. Working from George Daniels (may you rest in peace my mentor and friend) 'Art of Breguet' I embarked on trying my hand at making my own tourbillon. I worked whenever I had some free time (nights and weekends) and I sweated for 5 years till the (pocket) watch suddenly came alive. I honestly was not sure it would. Through trial and errors and LOTS of work (remember we were not working with computers and CAD at that time), I achieved it. You would have to be a watchmaker to understand and appreciate the moment when you hear your hard labor endeavor ticking. It is -literally- orgasmic. All of a sudden this noise validates all the work, assumptions, risks that you undertook. At that first tick I knew that this would be my life.

In 1991, I embarked on a new adventure. I realized (late, I know...) that it was easier to wear a wristwatch than a pocket watch. Thus was borne my 1st tourbillon wristwatch. And I did not want to replicate (for those who know me, they know I hate to copy, it is just boring to do the same thing over and over) my 1st movement but come out with yet another movement, this time adding a Remontoir d'Egalite. I take this as a compliment (or at the very least a validation) that we hear now lots of watchmakers talking about the Force Constante. Join the club!

Fast forward 25 years (God it does go fast), and here I am. I don't think I have changed a lot. I know the pictures would prove that I did get some grey hair and a (very) little weight, but I feel the same energy and will to innovate and push the envelope. And now I have people helping me and a great tool with our machinery downstairs, our case and dial maker a short taxi ride away from my desk. I am not nostalgic whatsoever, I just feel proud of what I was able to accomplish and eager for you to see what I have in store for you. I hope I will keep your respect and that I will still be able to surprise you for many years.

Thank you, thank you, thank you.



BREGUET'S ACOLYTE

THE TOURBILLON OF FRANÇOIS-PAUL JOURNE

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Nonetheless, in Journe's work there is technical sophistication and to spare – but it's always integrated with and supportive of the aesthetics of the timepiece as a whole. With that in mind, let's take a look at F. P. Journe's body of work in the making of the tourbillon, as well as the history – and *raison d'être* – of and for the complication. It's natural that F. P. Journe would, as a spiritual heir to the Breguet legacy, take an interest in tourbillons. As is well known, the tourbillon was invented by Breguet – apparently, by the way, out of thin air; there is no known predecessor to the invention, either in the form of a watch or even as an idea in the known horological literature. The patent for the tourbillon was granted to Breguet in 1801 and up until the 1980s there may have been fewer than 800 made. Often regarded nowadays primarily as an exercise in aesthetics, the tourbillon was in fact created as an aid to accuracy.

A watch held in different vertical positions will run at slightly different rates in each

position, so ordinarily, a watchmaker has to laboriously adjust a watch so that there is as little variation as possible. In a tourbillon, the balance, balance spring, and lever are mounted in a rotating cage (often the rate of rotation is one minute, which allows the cage to also function as a seconds hand, although both faster and slower tourbillons exist). This gives a single, average rate for all the vertical positions, which should allow a watchmaker to simply adjust the flat positions to match the single rate for the vertical positions – thus producing a more accurate watch.

The problem with tourbillons is that they add a great deal of mechanical load exactly at the point where a watch is most vulnerable. One of the biggest problems in watchmaking is that by the time energy gets to the escapement, there has been a significant loss of power due to friction, so the gear train is typically constructed so as to keep friction as low as possible. Normally the available power only has to be enough

to keep the balance turning, but in a tourbillon, enough energy has to be available to move the entire cage, with the balance, spring, and lever as well. Part of the reason making a tourbillon was considered a real proof of horological mastery was because it required the ability to make a watch to an unusually high level of precision, as well as the skill to make a tourbillon cage that was as light as possible. This was simply beyond the ability of many watchmakers, and so a tourbillon became not only a sign of technical prowess, but a statement of mastery in watchmaking as well.

With all this in mind, it is remarkable to reflect that F. P. Journe made his first masterpiece – and we use the word here in its original sense of “proof of mastery of a craft” all the way back in 1983. The watch was (and is) a pocket watch, and in many respects, it is extraordinarily reminiscent of the work of Breguet; as well, it is strongly aesthetically connected, through Breguet's

work, to the oeuvre of Dr. George Daniels, another of Breguet's spiritual heirs. Unlike most Swiss watches, the original Journe pocket tourbillon does not use the rhodium plating and jewel-like finish of most high grade Swiss watches.

Instead, the movement exhibits the sober, neat, craftsmanlike gilt finish so typical of Breguet's work with visual accents from the highly polished steel of such elements as the beautifully formed click for the main-spring barrels, and the Maltese cross stop-works. The only other flashes of color are from the painstakingly heat-blued screws (whose very large heads are a definite and deliberate homage to the work of Breguet) and the visible train jewels. In 1983, there were few if any watchmakers, independent or otherwise, engaged in this level of work, and in its stately dignity the original Journe Tourbillon lays claim to both the intellectual and technical heritage of Breguet,



The first F.P. Journe pocket watch completed in 1983



November 1991 (11/91) Mr Journe's completes his 1st wristwatch Tourbillon

and points to a future of rich potential – as well as to the luxury of materials and visual restraint that would be characteristic of Journe's work yet to come.

Over the subsequent years, François-Paul continued to experiment with, and refine, his mastery of some of watchmaking's most sophisticated complications, including the constant force device known as the remontoire d'égalité, which is a type of constant force mechanism, and of the constant force devices that can be added to a watch, the most complex. This invention was first created to improve the accuracy of clocks and was first adapted for watches by none other than John Harrison, in his work to develop a reliable marine chronometer. In wristwatches, they are virtually unheard of due to both their complexity and the amount of space they require. Journe made his first watch – again, a pocket watch – with remontoire in 1986.

We mention the remontoire because it was used for the first time in a wristwatch in 1991 – and it, and the tourbillon, were both incorporated in a wristwatch for the first time in 1991. That watch became known as the Tourbillon Souverain, and was one of the signature pieces in Journe's collection when his firm, F. P. Journe - Invent et Fecit, was launched in 1999.

The Tourbillon Souverain was (and is) a wristwatch like no other and even today,

sixteen years later, there are few watches in existence that represent the same degree of ingenuity. The Tourbillon Souverain was shown by Journe at Basel in 1999 and was an immediate success; it's safe to say that in both design and technical sophistication, it set a new standard for both independent watchmakers and brands alike. The first 20 Tourbillons Souverain were actually creat-



Front and Back of Mr. Journe's Second Timepiece

ed on a "subscription" basis; this allowed Journe to have access to much-needed cash immediately, but it was also another echo of the work of Breguet, whose "souscription" (subscription) watches solved the same problem in the early 19th century.

Why is the Tourbillon Souverain such a remarkable watch? First, of course, are its technical attributes. To place a tourbillon of any kind in a wristwatch had seldom been done prior to the advent of the Tourbillon Souverain; a few Omega observatory chronometers, a handful of Pateks (also intended for the observatory competitions) and rarities like Audemars Piguet's self-winding tourbillon from 1986 were among the very few examples. Not only did Journe manage the extremely technically challenging milestone of placing a tourbillon in a wristwatch, he did so with the addition of a remontoire which rewinds itself once per second, thus supporting a third complication: a deadbeat seconds. The remontoire and tourbillon were both visible through the dial side of the watch, and for good measure, there was an indication of the power reserve as well. To fit all this into a thin, elegant 38mm case had never been done before, and its combination of distinctly French thinness and sophistication with a high degree of complexity, made F. P. Journe a household word in horological circles virtually overnight.

The Tourbillon Souverain is still a pillar of F.P. Journe's collections today – and still one of the most distinguished examples of how Journe's reinterpretation, and fresh vision, of the Breguet legacy have made history once again in the 21st century.



JACK FORSTER
Editor in Chief at Hodinkee.com



REMONTOIR D'EGALITÉ

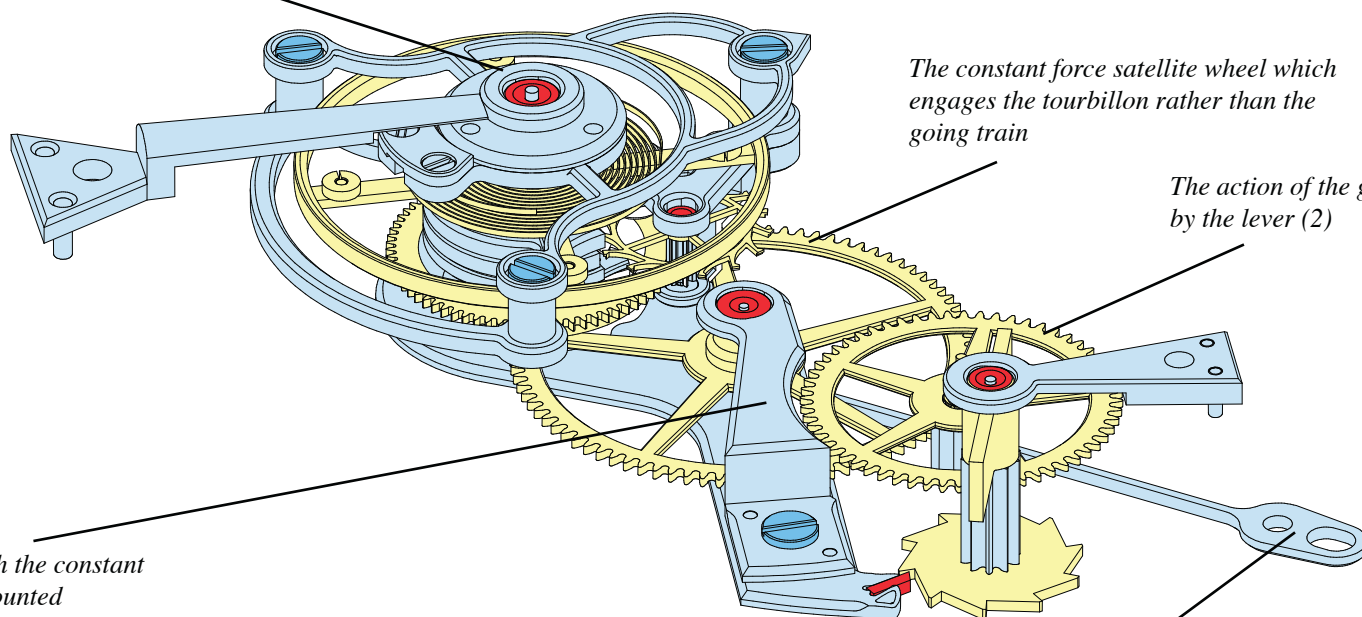
CONSTANT FORCE IS ATTRACTING RENEWED INTEREST AS A MEANS OF IMPROVING THE RATE OF A WATCH, WITH MANY NEW DEVELOPMENTS. THEY TAKE US BACK TO THE DAWN OF TIME MEASUREMENT

It's all because of a curve, the diminishing power of the unwinding mainspring. The force that powers a watch is most irregular. A fully wound spring delivers a lot of energy in the first few hours, levelling off for much of the time that the spring unwinds. Then, with about two thirds of the power reserve used up, the force drops off sharply and comes to an end. However, for a mechanical movement to work properly, the balance must be isochronous, which in theory means that the period of each oscillation must be identical. To convert that into practice - constant amplitude in equal periods - the balance needs nothing to change, especially not the energy it receives.

There are three ways to provide a constant force to the balance. The first uses the fusée to compensate for the declining power of the barrel. The second constitutes a buffer store of energy in a remontoir, and the third equalizes the impulses at the level of the escapement. It's an ancient conundrum. The sages of antiquity noticed that in their clepsydras or water clocks the water ran out faster when the tank was full and the pressure high. They soon set up intermediate tanks to equalize the pressure. In the Middle Ages, long before the invention of the pendulum, the amount of torque was the major issue in the precision of clocks. In those days of primitive metallurgy, it was essential to devise ingenious methods to compensate for the poor efficiency and reliability of the driving springs.



The tourbillon cage draws its power from the spring-blade remontoir



Lever upon which the constant force wheel is mounted

The constant force satellite wheel which engages the tourbillon rather than the going train

The action of the going train is stopped by the lever (2)

The remontoir spring-blade delivers constant energy to the escapement every second



The Chronomètre Optimum features the Remontoire d'Egalité

GEARSHIFT

“The fusée and chain system is designed to compensate for the loss of power by increasing the torque,” is the common definition. Torque is that rather abstract value denoting the leverage of a force causing rotation as in a gear train. It can be increased or decreased by gear ratios. The first example of a fusée seems to go back to 1430 in a clock owned by Philippe the Good, Duke of Burgundy. The device was to endure through the ages to accompany subsequent horological developments. It was soon to be connected to the barrel with a metal chain, which although stiff and badly lubricated was far superior to the unpredictable elasticity of catgut(!). It works like a variable-speed gearbox. When the barrel is fully wound, it pulls the chain off the narrow top of the fusée cone. When the barrel's force has diminished, it takes the chain off the much larger diameter of the base of the cone, thus maintaining the torque through increased leverage. This is the classic constant-force device, being easy to design but difficult to make, for the links of the chain are half a millimeter thick in a wristwatch. Many haute horological companies have adopted this device.

It must nevertheless be recognized that in a good mainspring the power curve remains flat for a long period, which makes the fusée mostly redundant. The system needs big barrels and a lot of force for a limited running time. Therefore, counter balancing its potential advantages. What was essential in the early times is less today.

BUFFER DAM

The most popular way of equalizing the torque works on the same principle as the buffer reservoir of the ancient water clock. The remontoir is a subsidiary power drive that fits in near the escape-wheel. It comprises a blade spring or coiled spring with a lock and release mechanism - effectively an escapement. At regular intervals it stocks up with enough energy to maintain the balance at a constant amplitude. The higher the frequency at which the remontoir spring is rearmend the more constant the torque. It aims to reduce the inevitable friction in an escapement, which for Stephen

Forsey, cofounder of Greubel Forsey is the number one problem. “It's a question of the energy used to operate the remontoir,” he adds. “Every complex system produces unwanted side-effects.” Thus the frequency at which the remontoir is recharged is a matter of choice. Watchmakers usually settle for once a second. The jumping seconds thus produced are an interesting by-product of this option, as in Mr. Journe's Tourbillon a Remontoir d'Egalité and Optimum models. Keep in mind that Mr. Journe was a precursor in that field. His 1991 working prototype already showcased the Remontoire d'Egalité.

COMBINATION

Another way to look at it is to combine the fusée à chaîne with a Remontoire. The use of the fusée leave no choice but to use a remontoir to make it work. Watches with a long power reserve have to be fitted with a very long spring (sometimes more than one). Adding weight constrains the watchmaker to add power which in turn creates more friction. Vicious circle... To the point that if that power was unleashed directly it would break the escapement! Other companies in order to circumvent this issue make their system effective for a portion of the power reserve. The disadvantage of this system is proven when tests prove that the running time would be 25 to 30% longer without the constant-force device. “The problem with this sort of mechanism is the accuracy to friction ratio. If you solve one problem, you create another”.

Finally, another way of thinking to minimize the friction is to use Silicium. Mr. Journe states: “it is the right question but the wrong answer”. Minimizing the friction is every watchmaker's grail. But to use such a fragile part (a part that could shatter -it is glass after all-) with a shock or when an overhaul is needed does not sit well with Mr. Journe. Always looking at perspectives, how could you insure the collector that this part will be available in 5, 10, 50 years? As you may not retrofit these watches with 'common' materials, these watches will end up in a garbage. Mr. Journe offers a different tack to this problem when he created the BEHP (Bi axial Echappement Haute Performance) that does not require any lubricants. The Optimum is the only watch with this patent. And it has the Remontoire d'Egalité.

OVERLOADING THE CAMEL

Controlling energy is a complex and counter-intuitive process. Watchmaking is supposed to progress by minimizing the friction and mass of escapements, and here they are burdened with a complexity of secondary mechanisms. The barrels put into service are huge and none gives more than 100 hours of running time. Yet energy can be managed more economically by straightening the high and the low ends of the torque curve. Mr. Journe has a similar idea. The power-reserve indicator on his Octa watches shows 120 hours, although the movement will keep going for 160.

The ideal mechanical watch would be with a constant force device that is not affected by friction and that is weightless. Short of that, Mr. Journe's Remontoire d'Egalité is still the simplest and lightest. Since 1991... The most difficult thing in watchmaking is evidently simplicity.



DAVID CHOKRON
French watch journalist

Courtesy of Watch Around

25 YEARS OF WRISTWATCH TOURBILLONS

FRANÇOIS-PAUL JOURNE NEVER MADE ANY SECRET THAT THE TOURBILLON IS AN OBJECT OF FASCINATION TO WHICH HE DEDICATED THE FRUITS OF HIS HOROLOGICAL QUEST, CONSTANTLY SEEKING TO IMPROVE ITS CHRONOMETRIC PERFORMANCE.

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Obviously what he learned in watchmaking school did not prepare him for such a massive undertaking. However, this completely crazy project fulfilled his ambitions. Therefore, it was with all his energy, all his heart, all his passion and all his free time that he embarked on the adventure. He began to scribble sketches for his watch, tore them up, started again and yet again. He never imagined that it would take so long and be so demanding, but due to his determination, tenacity, talent and desire to prove what he was capable of, he went to the end of the 'pilgrimage' that lasted five years, until the blessed day when "as if by magic the mechanism came alive on its own after a short winding of the springs." He was totally mesmerized watching its mechanism work. "And he remembers continuing to admire it for almost the entire night."



Front and Back of F.P. Journe's First Timepiece. Tourbillon with détente escapement.

His first pocket watch completed in 1983 was entirely made by hand, with a case in yellow gold and silver guilloché (rumor has it that he did not have enough money to make it all gold), silver dial, Breguet hands, tourbillon movement with detent escapement in gilded brass was the first milestone that heralded a long lineage of exceptional tourbillons.

François-Paul says: "I really feel to have become a constructor in chronometric mechanisms at the age of 25, when I finished my first - all handmade- pocket watch with tourbillon and Remontoire to allow the delivery of the same energy to the balance wheel. It is an amazing undertaking as you don't learn this in watchmaking school..."

"...It was my dream to have a watch worthy of the great horological masters of the 18th century. It was never meant to be sold - and not just a simple watch, but a tourbillon. In the '70's and '80s tourbillons were not the craze they are now. I had to go further in my researches, in order to create watches as beautiful as those made by the great Masters but I had to work tirelessly and acquire a real knowledge of the horological history."

"...In 1983, there were about 10 collectors in the world interested in mechanical haute horology. At the end of the '80's, horology redeveloped and took a new start but the first wristwatch with Tourbillon I had developed in 1991 in my own independent atelier at rue de Verneuil in the St Germain

des Prés district in Paris was not yet to the taste of collectors but a few of them trusted me in commissioning me for unique timepieces which were disappearing when the commissioner came to receive delivery of his watch. Quite soon the great names in the world of luxury and watchmaking called upon me to develop and create innovative movements. I designed and crafted mysterious clocks, the "sympathique" clock, and subtle mechanisms for unique creations."



Front and Back of Mr. Journe's Second Timepiece
Courtesy of Timezone

Upon creating his first wristwatch tourbillon (in 1991) all hand made with a bizarre "hole" located at 11 to host a Remontoire d'Egalité friends started to ask more frequently to commission wristwatches. François-Paul declined the offer as he was thinking to create a series of contemporary watches. Confident, the flurry of sketches starts and a collection of watches start to take shape in his mind.

Over a discussion with a friend, François-Paul found the solution for his lack of finances to develop such a series. Thus was borne the "souscription". This financing system - frequently used in the 18th century- is simple: you prepay for your watch! The making of a series of 20 Tourbillon wristwatches pushed him in no time to the level of great watchmakers.

The 20 subscribers pre-paid half the price upon the order and balance at delivery, It gave F.P. Journe the necessary funds to start his business. They had the choice of a Gold or Platinum case. The famous collectors were also to give him a great visibility amongst the elite of collectors around the world.

1997, the first series of F.P. Journe Invenit et Fecit watches are born and François-Paul Journe presents his first watch at the Basel fair. In 1999, The "slogan" Invenit et Fecit was not a novelty in itself. It was very spread out in the 18th century to differentiate true genuine creations from "assemblers". Now we talk broadly about manufactures not always knowing who



One of the two first wristwatch tourbillon ever sold

1993



Tourbillon Ruthenium (limited to 99 timepieces)

2001

1991

The first Wristwatch Tourbillon.
(Private collection F.P. Journe)



1999

Tourbillon Souverain :
Launch of the first production signed F.P. Journe - Invenit et Fecit.

Detail of the Tourbillon Souscription (9/20)



created the timepiece and who made it. It is somehow ironical to see all prestigious brands today showcasing their tourbillon as the apogee of their collection, when for François-Paul it was the first brick of his horological adventure.

What the souscription unveiled too, in a more personal matter, was François-Paul's character. He soon realized that making over and over the same thing was not his favorite thing. Better to create and then have it reproduced. With funds, and then now watchmakers to assemble his creations, François-Paul launched, in 1999, his eponymous brand, F.P. Journe – Invenit et Fecit, with the Tourbillon Souverain, the first model in the Souveraine Collection and the only wristwatch tourbillon fitted with a remontoire, or constant-force device, a mechanism that has demonstrated the excellence of its chronometric performance for equalizing the force arriving to the escapement and establishes the Tourbillon Souverain as the most accurate on the market.

As soon as 2001, F.P. Journe's reputation got his validation with the first limited edition of 99 Tourbillon Souverain with Ruthenium dial and movement. 99 was such an astronomical number (at that time and still today) that it took almost 2 years to fulfill the orders.

Building brick by brick his "tool" and with money coming in from sales around the world, François-Paul spent CHF 5M in 2004 to purchase machines and know-how so the manufacture could make in house (actually in the basement of the Geneva building) almost all components of the movement. The Tourbillon Souverain Remontoire d'Égalité with seconde morte (dead beat seconds) was born... with a 18k gold movement! Starting in 2004/2005 all movements for all of his timepieces were retrofitted with gold movements. A premiere in the horological world, yet to be matched.

With François-Paul's constant logic, it

needs to be pointed that his goal was not to create a dead beat second system (as it would add parts and therefore lose some accuracy): it is only a natural product of the Remontoire d'Égalité. That same year, the Tourbillon Souverain is awarded the "Aiguille d'Or", the highest recognition at the Geneva Grand Prix d'Horlogerie. It is also awarded Watch of The Year in Japan.

Over the years, François-Paul has never once departed from his fundamental principles. He has made a rule of pursuing the exceptional. To commemorate his 30 years of horological creations, he launched a 99-pieces limited edition wristwatch version of his first tourbillon pocket watch. Presented in 2013, the Historical Tourbillon reprised the same aesthetic characteristics and metals as the original model, a case in guilloché silver sandwiched between two 18K red gold bezels.

The mechanism looks identical to the original piece, but François-Paul's was the first to point that throughout the 30 years he learned quite a lot and through trial and errors -and lots of labor and sweat- he learned not to make the same mistakes again. Two parallel barrels distribute energy to a wheel's train, arranged in the axis of the watch, which runs the Tourbillon revolving in 1 minute. The lateral pallet escapement, which is more compatible with a wristwatch, replaces the detent escapement of the original, and the winding and time setting with a key have now been replaced by the 3 o'clock crown.

2015 is a charitable year as F.P. Journe realize two unique timepieces from its Tourbillon Souverain; the first for the charity gala celebrating the 15th Anniversary of Action Innocence engaging for the protection of children on Internet. The unique version of the Tourbillon Souverain realized especially with a purple dial at the colors of Action Innocence sells for the amazing price of CHF 650'000.- during the May charity auction in Geneva.

Also in 2015, F.P. Journe participates for the first time to ONLY WATCH in order

to support the scientific research to fight against the Duchenne myopathy. A unique watch is created especially for the occasion, the « Tourbillon Souverain Bleu ». It is also the first time ever that a tourbillon is made with a case entirely in Tantalum. This metal has been named as such from the Greek's mythology "Torment of Tantalus" as it is extremely hard to work with. The very astonishing blue chrome dial reflects like a mirror and its color changes according to light. This unique piece has sold for the record price of CHF 550'000.- during the Geneva charity auction at La Reserve.

François-Paul Journe continues: "I believe to be one of the only watchmakers to continue producing watches in the same manner and with the same respect as it used to be done when horology was a science. I marking a point of honour to continue working like our great masters of the 18th

century used to. I am an inventor thus I need to invent, compose, create, innovate in providing continuity to the history of watchmaking. Many of the challenges I set for myself would be difficult to achieve if I depended on large financial groups. I can be proud of being the only Manufacture that makes its movement in solid 18 K rose gold, as gold is even harder than brass. My goal is to preserve the haute horology with the rule "One watchmaker for one watch". In an increasingly segmented industry, only a few watchmakers have the opportunity to create a watch from start to finish and even less are able to follow its destiny. If I only make the same things as everyone else, why bother making them?"

And when you ask candidly what is next from François-Paul, he simply answers: "wait and see".



Tourbillon Black Label limited to two per boutique per year

2006



Unique piece in Tantalum and chrome blue dial made especially for Only Watch

2015



Hand engraved dials (Boutique Exclusive)

2016

2004

Grand Prix d'Horlogerie (Geneva): The tourbillon with gold movement receives the highest distinction



2013

The T30 commemorates the 1st tourbillon made by F.P. Journe in 1983. (limited to 99 timepieces)



TOKYO

IN 2002, F.P. JOURNE WISHED TO EXPAND ITS SALES NETWORK AND OPENED JAPAN AS MANY COLLECTORS EXPRESSED AN INTEREST.



Given the specific distribution system in Japan, F.P. Journe had no option but to open his own boutique bypassing all 'normal' channels of distribution.

Looking actively to find the perfect spot for the 1st boutique worldwide lasted quite long until he got offered a space nestled in one of the most beautiful architectural realisation of spirituality: Mr Tadao Ando in the Minato-Ku district.

Like all of F.P. Journe watches, François-Paul Journe designed entirely the boutique (and all of the ones around the world) including the double staircase.



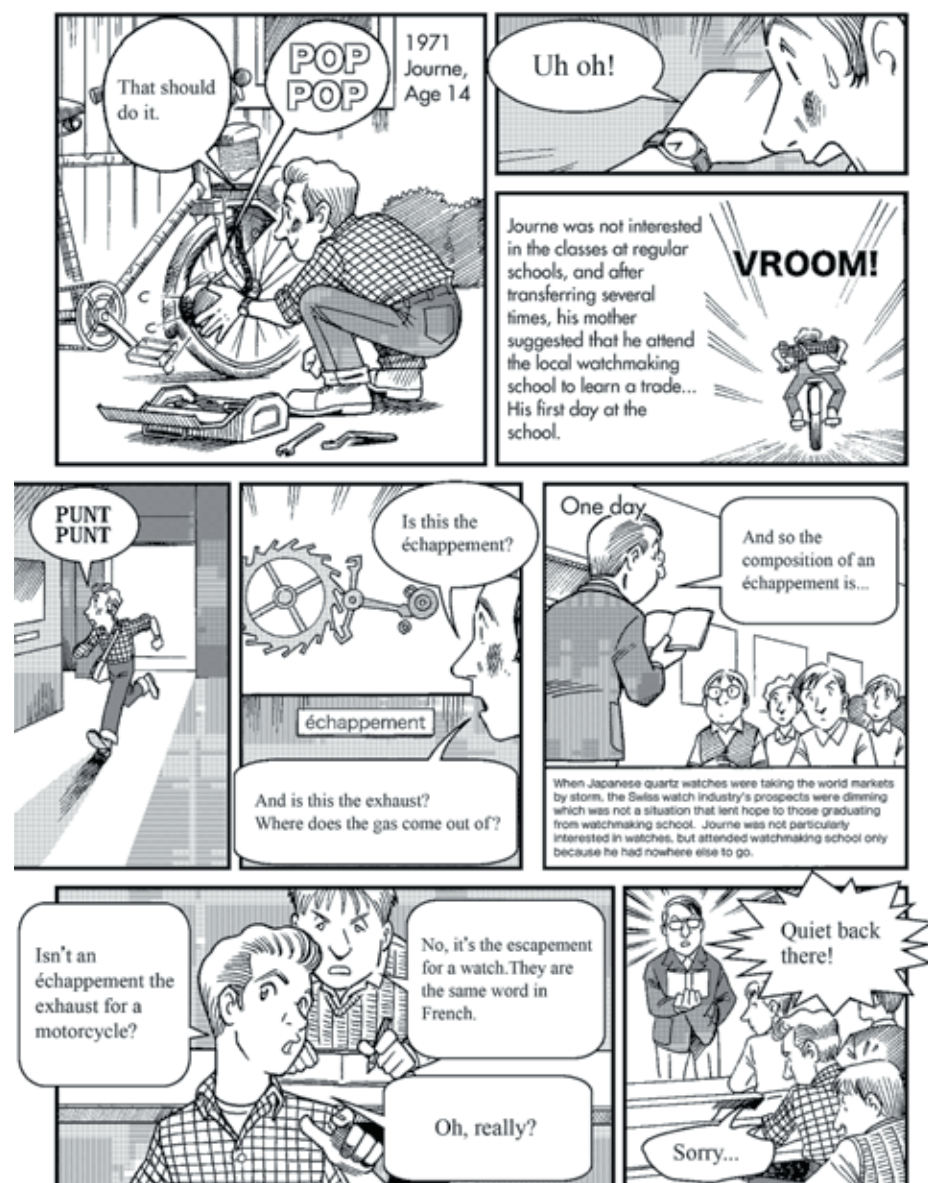
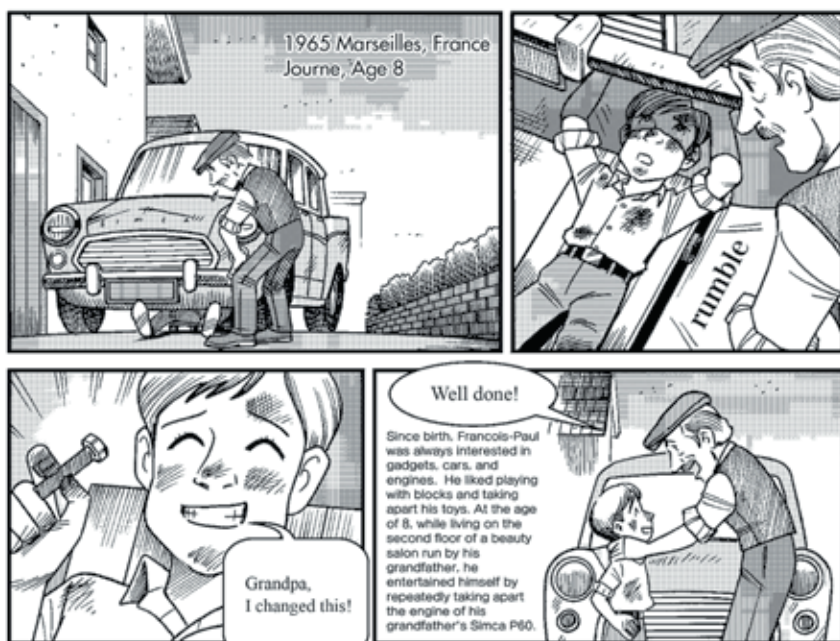
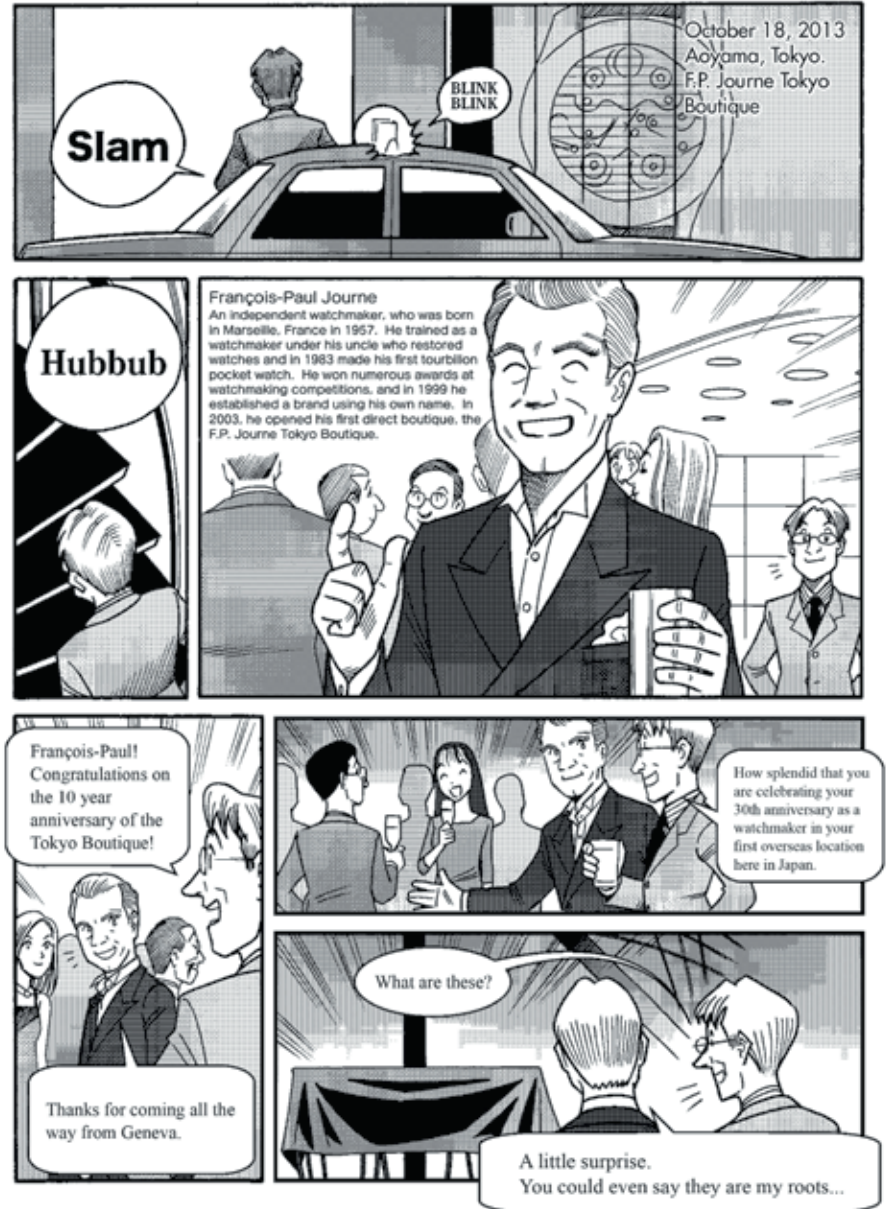
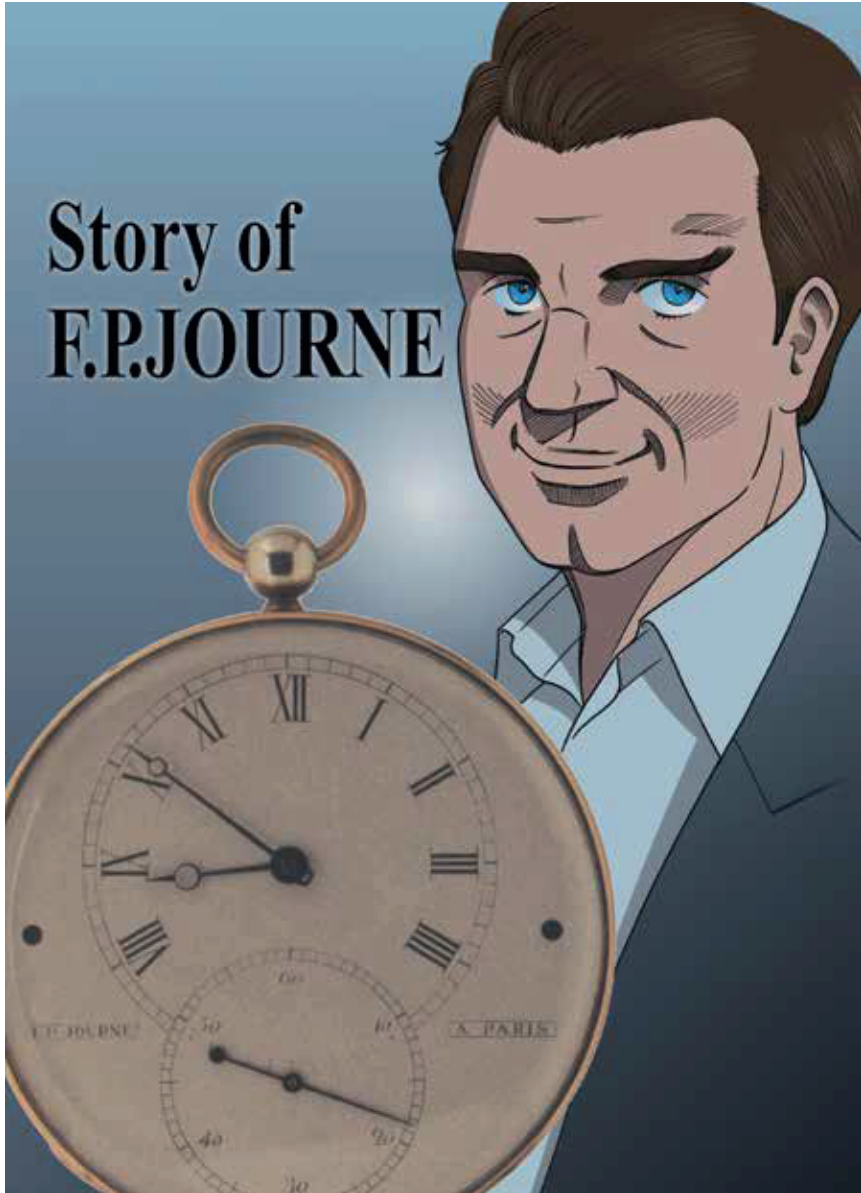
TOURBILLON TITANIUM

To honour the boutique, it is known in the collector's realm that all N.1 watches are sold through the Tokyo boutique. And -once in a while- a limited edition is made. Like the Tourbillon TT, titanium with a titanium cage tourbillon.

Japan is a keen place for François-Paul, he always claims that he could really see himself living in Tokyo. He especially likes the decency, the courtesy and -most of all- the culture of Japanese people along with their thirst of understanding how things work. For one of François-Paul early press conference when he launched the Tourbillon

TN, collectors and journalists had to pass a test set among themselves to see if they qualified to hear François-Paul. Talk about dedication!

IN CERTAIN COLLECTOR'S GROUP, FRANCOIS-PAUL JOURNE IS CONSIDERED AS A WATCH MASTER (A WATCHMAKER'S WATCHMAKER) AND IT IS WITH GREAT PRIDE AND DEVOTION THAT THEY CREATED A SERIES OF MANGA. WE SHOW HERE THE 1ST PART.



TO BE CONTINUED....



The Bibliothèque Jean-Claude Sabrier in the Manufacture's showroom

THE TOURBILLON THROUGH BOOKS

Jean Claude Sabrier was a close confidant of François-Paul Journe, accompanying him through both the early and the later stages of his own stellar career.

Sabrier began his career in the 1960's as a



consultant to the Musée des Arts et Techniques at the Conservatoire National des Arts et Métiers in Paris. He also consulted with museums in Evreux, Rouen, Toulouse, and Blois as well as the now-defunct Time Museum in Rockford, Illinois, USA. In the 1980's he entered the auction house environment, working with Switzerland's Antiquorum and France's Hervé Chayette to organize the first specialized auctions of collectible horology. By 1988, he was a director at Antiquorum, where he was the principal expert writing the auction catalogues.

He was also a book author. His 1994 tome « La Longitude en Mer à l'Heure de Louis Berthoud et Henri Motel » won a Naval Academy prize. In 2006, he co-wrote Steel Time with Georges Rigot, and in 2012 he penned The Self-Winding Watch: 18th - 21st Century.

In addition to authoring and co-authoring articles appearing in numerous specialized journals, he also helped organize and document a number of important exhibitions. He wrote the Evreux Museum watch cata-

logue with Bernard Seneca; he co-authored the MIH's exhibition book on Ferdinand Berthoud and the Tours Museum's « La Dynastie des Le Roy, Horlogers du Roi » with Catherine Cardinal. With Anthony Randall he co-wrote the Time Museum's catalogue of Chronometers, and he was also one of the authors of the catalogue belonging to the 1997 MIH exhibition « Abraham Louis Breguet 1743 -1823, « L'Art de Mesurer le Temps ».

In 2000, Sabrier officially became a consultant to the Swatch Group in charge of historical and cultural heritage. He was also a personal consultant to group founder Nicolas G. Hayek for the purchases of collectible watches for the group's various brand museums. In that capacity, he wrote the catalogue for the 2004 exhibition of historical Breguet watches held in Saint Petersburg called «Breguet in the Hermitage ».

Sabrier was not only a member of the prestigious jury of the MIH's Gaïa Awards, he also received a Gaïa Award in 1977 for his own contributions to the area of historical research.

When they first met 40 years ago in Paris, Sabrier and Journe - 35 and 17 respectively - immediately recognized in each other kindred spirits. Both were irresistibly drawn to the great achievements that constitute milestones in the history of watchmaking as well as the mysteries of the art. This was a profound friendship based on mutual respect, one that F.P. Journe honors and perpetuates by exhibiting this historical library so centrally in his workshop's exhibition space.

When Sabrier's library, comprising an ex-

tensive collection of written horological masterpieces, auction catalogues, and rare historical letters and workbook excerpts, went up for auction on June 15, 2015 in Paris, the F.P. Journe manufacture acquired all 273 lots - almost one thousand books in total.

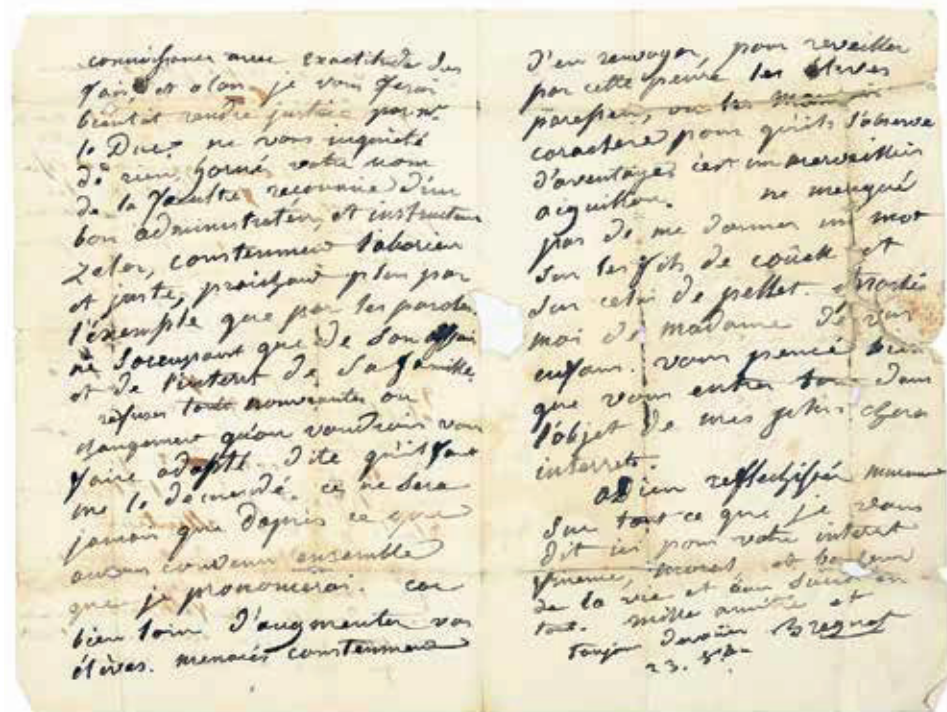
Journe found it inconceivable to think that this collection of printed material could be separated, dispersed, and scattered in any and every direction. Thus, Journe commissioned a generous custom-made cabinet to exhibit the unique library's contents in a place no better suited to holding them: the light and airy exhibition space of the F.P. Journe Manufacture in Geneva.

This library is a testimony to the depth, extent, and pertinence of Jean-Claude Sabri-

er's research on the lives and achievements of the world's greatest master watchmakers. It constitutes a body of work containing crucial technical and historical insights indispensable to understanding these creative men and their achievements.

These printed manuscripts contain veritable treasures, written by the great Masters from the history of horology such as Ferdinand Berthoud, Pierre Le Roy, Antide Janvier, Abraham Louis Breguet, Thomas Mudge, and others.

An excerpt of some of the most exciting printed works includes Ferdinand Berthoud's research notebook from 1756 to 1786 as well as eleven books and essays published between 1763 and 1811. Five printed elements by Abraham



Manuscrit Abraham-Louis Breguet, dated 1812

Louis Breguet include an autographed letter from the man who is hailed as the world's most famous historical watchmaker, a collection of photocopies of workshop notebooks, and other documents. Antide Janvier's works aren't remiss here, either; the collection counts nine essays, manuscripts, and letters by the epoch-making watchmaker. There is also an entire section of the library that originally came from Antide Janvier's own library, which contains works by Berthoud, Le Roy, Robert Robin, and J.H. Magellan to name a few.

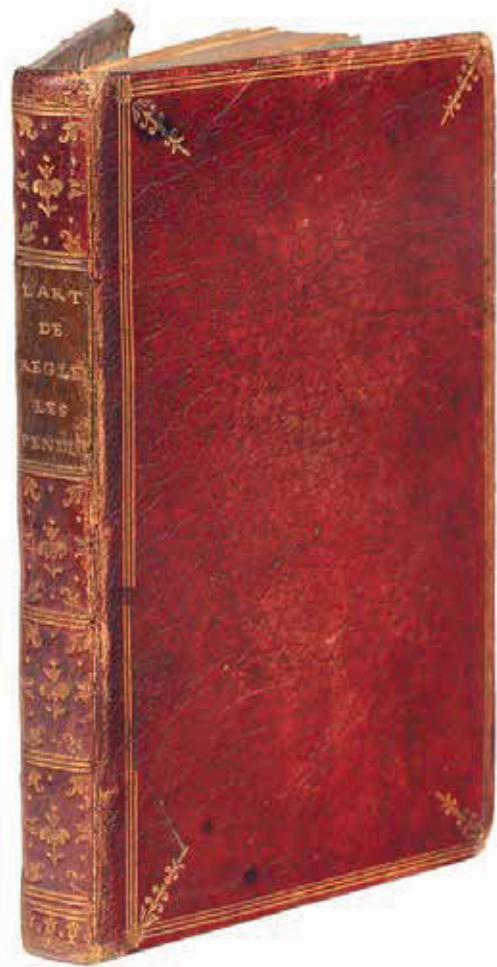
Seven of Le Roy's works take a place of honor in the collection. Louis Moinet's «Nouveau traité général d'horlogerie pour les usages civils et astronomiques» is naturally present - and in two different editions (the second edition from 1853 and the third edition from 1875). Thomas Earnshaw's Longitude, an Appeal to the Public from 1808 can also be found in the collection in A Description with Plates of the Time-Keeper invented by the late Mr. Thomas Mudge, a Narrative.

The collection also includes several tomes

written by George Daniels and his English contemporary countrymen such as Andrew Crisford, Anthony Randall, Richard Good, and Edward J. Dent. Naturally, no such collection would be complete without various works by the German expert on tourbillons and Glashütte, Reinhard Meis.



ELIZABETH DOERR
co-founder QuillAndPad.com,
watch journalist, book author



Ferdinand Berthoud: *l'Art de régler et conduire les pendules et les montres*, 1759





*Historical Tourbillon - T30 - Limited to 99 timepieces.
Commemorating the 30th Anniversary of F.P. Journe first pocket watch.
Not available anymore*

...from Page 1

Observing that the regular functioning of a pocket watch was influenced to a large extent by the watch's position, Breguet concluded that the cause of such variations was due to the effects of gravity on the escapement.

Apparently, it did not occur to him at that time (though it did after) that perhaps these variations were also due the other components in his watch's movement. Breguet constructed watch components to such a high standard that he considered the perfect craftsmanship and pairing of balance wheel and balance spring to be a given. It was eventually discovered that perhaps the more major problem affecting accuracy had to do with inconsistencies in the balance wheel as well as friction. For a watch's operation to be isochronal, that is, to produce a stable rate, the balance wheel must be perfectly circular and poised and the hairspring must extend and contract symmetrically from the exact center of its coil. Breguet's overcoil configuration of the hairspring indicates that he eventually came to realize this. But by this time, was it too late and perhaps commercially unwise to retract his belief in the tourbillon's chronometric brilliance?

Even if the tourbillon did a good job compensating for errors caused by a watch adopting the vertical position for the majority of its life, compounded by poor oil quality, the modern wristwatch shares none of these characteristics. So the question has to be asked, "In the era of modern wristwatches which are a) rarely vertical, b) lubricated with quality synthetic oils, and c) if well designed, constructed and regulated,

will have a positive effect on accuracy. conversely a balance wheel of a smaller diameter will have a negative effect on accuracy." Giulio Papi, technical director and founder, Audemars Piguet Renaud & Papi.



Abraham-Louis Breguet

"For the cage to not influence the amplitude of a watch too considerably, it must have minimum weight. To make it light it must be made as thin and delicate as possible. This requires a great deal of know-how to build. But even if the cage is extremely light, it still takes a lot of energy. So, as a result, the balance has to be made relatively small. If a balance is too small, you don't have a stable watch." Jean Pierre Musy, technical director, Patek Philippe.

But while it appears that the size of the balance wheel is a factor, this doesn't address

the position the modern wristwatch spends the majority of its time in. Indeed, when the escapement is perpendicular to gravity (dial up or dial down), the tourbillon is not only not contributing towards averaging out positional errors, its very existence increases friction, wastes energy and obliges a smaller balance wheel. In fact, it can be perceived as Jean-Claude Nicolet stated in his controversial article for Europa Star, as a parasitical organism.

"The principle of the tourbillon has been developed for pocket watches and its benefits are less powerful – almost non-existent – in a wristwatch." Philippe Dufour

"The flat single axis abraham-louis breguet-style tourbillon makes more sense in a pocket watch than for the wristwatch." Stephen Forsey

While averaging out positional errors (in one plane with single axis tourbillon) is great in theory, the reality is that the increased friction introduced by the additional parts of the carriage usually far outweigh any gains... unless of course they are crafted with truly enormous skill by the likes of, for example, Patek Philippe or Audemars Piguet. But the tourbillon has enormous visual appeal which is why the majority of them are placed on the dial side of the watch. There is something unerringly romantic about the tourbillon. It is very likely to be the reflected glow of past excellence which is responsible for the tourbillon shining so brightly in the collector's eyes today.

ers. Assembled and working, yes; however, well-regulated, unfortunately, generally no.

Tourbillons rule for the moment because they have a strong association with technical and watchmaking excellence; they pirouette and captivate the eye; however, the sheer number of tourbillons on the market today, many by second tier brands you would not normally associate with haute horlogerie, plus the fact that the Chinese are selling ever-better quality tourbillons from \$1,000 a pop, means that sometime in the future, educated consumers may realize that the majority of these emperors have no clothes. Those simply looking for a pretty whirlwind to ogle at should find them available at much more reasonable prices than those masquerading as handcrafted haute horlogerie, while those searching for true horological art will find that, while perhaps chronometrically challenged, the tourbillon will always have a place as a demonstration of skilled horological art and craft.

THE TOURBILLON CONTROVERSY

DOES A TOURBILLON SERVE ANY PURPOSE IN A WRISTWATCH?

show minimal rate deviation through positions, is there any technical justification for a wristwatch tourbillon?" At the heart of the matter is the controversy as to whether wristwatch tourbillon are actually chronometric or if they are simply expensive and complicated energy-wasting devices. We asked the experts, but their opinions seem divided.

"From an accuracy perspective, placing a tourbillon in a wristwatch makes it a worse timekeeper. you have to have a smaller balance, the tourbillon cage is affected by forces every time you move your arm and very few tourbillons on the market today are well-regulated. adding a tourbillon to a precision timepiece is like deliberately breaking your ankle before a 100-meter sprint. adding a remontoir d'egalite is like wearing a splint – it helps; however, you would have been better off without the break in the first place!" François-Paul Journe.

"Yes, a tourbillon has a positive chronometric effect but only when the balance is of a substantial inertia. in general terms, only a balance wheel that is greater than 10mm in diameter, and that beats at a rate of 21'600 vibrations per hour or higher

the more glaring issue related to the position of the balance. The general vertical nature of the pocket watch in Breguet's day was a key factor in the tourbillon's invention as the tourbillon only has a (positive)



François-Paul Journe

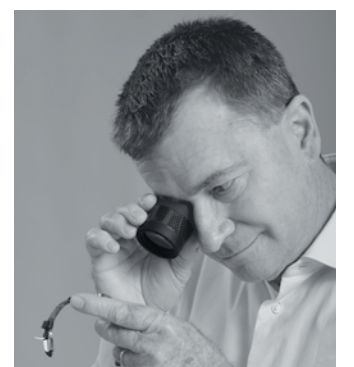
effect when the rotation of the cage / escapement is in the same plane as the force of gravity. A tourbillon has no beneficial effect when the escapement is perpendicular to the gravitational force such as when the watch is horizontal with its dial up or dial down. Unfortunately, this seems to be

"It has to be said however that there are some real pieces of art on the market today which feature a tourbillon – thanks to their superb construction, design and finishing." Philippe Dufour

"Perhaps the tourbillon draws attention since it is a highly visible complication that is much more accessible rather than the minute repeater which has to be activated. the direct association with precision timekeeping is also a plus for the tourbillon. a fine hand-finished tourbillon remains a testament to the fine art of watchmaking." Stephen Forsey

"Why make a tourbillon on wristwatch? because they look good and, done well, are a testament to the skill of the watchmaker. im my opinion, every watchmaker who has made a tourbillon after breguet, including myself, has done so because they look good and/or to demonstrate skill – not to make a better timekeeper." François-Paul Journe.

While many, if not most, of today's tourbillons are certainly expensive, modern manufacturing techniques and high precision CNC machines mean that they can now be crafted and assembled by less experienced (compared to the past) watchmak-



IAN SKELLERN
co-founder of QuillAndPad.com,
photographer and journalist

Courtesy of Revolution

THE “METIERS” AT F.P. JOURNE

SINCE 1977, F.P. JOURNE’S SEARCH FOR EXCEPTIONAL HOROLOGICAL CREATIONS AND UNRELENTING WORK HAVE MADE ITS HAUTE HOROLOGY MANUFACTURE A REFERENCE AMONG THE MOST PRESTIGIOUS OF HOROLOGICAL FIRMS.

Its classified building in central Geneva houses the Manufacture on three floors is a place of tremendous creative activity. Everything has been done to verticalise the production, creating time measurement instruments with authentic in-house calibres combined with the mastering of Métiers d’Art which are un-dissociable from F.P. Journe prestigious watches.

It is just but logical for F.P. Journe to con-

It is very rare to find a watchmaker who designs watches in their entirety. François-Paul Journe indulges all his whims and fancies, since he always “pays the price” – that is, long hours spent at this workbench in order to adapt the mechanism according to the requirements of beauty and balance.

Having these skills internally helps the brand offer a large range of decorative watches. But it helps also in terms of creativity as the creator and craftsmen exchange regularly. This creates a positive environment and opens new perspectives.

Stephane Cornioley, co-director of the Cadraniers de Genève says: “We try to remain humble concerning the product we create, while striving to make it as perfect as possible with high craftsmanship value. We put our whole heart and soul into our work. Over the past 40 years, nothing has changed in the dial making process; but we have explored new approaches with an open mind and thrive with success. Given our common goal, we come as close as possible to near perfection, with an addition to numerous details, sometimes invisible to the naked eye.”

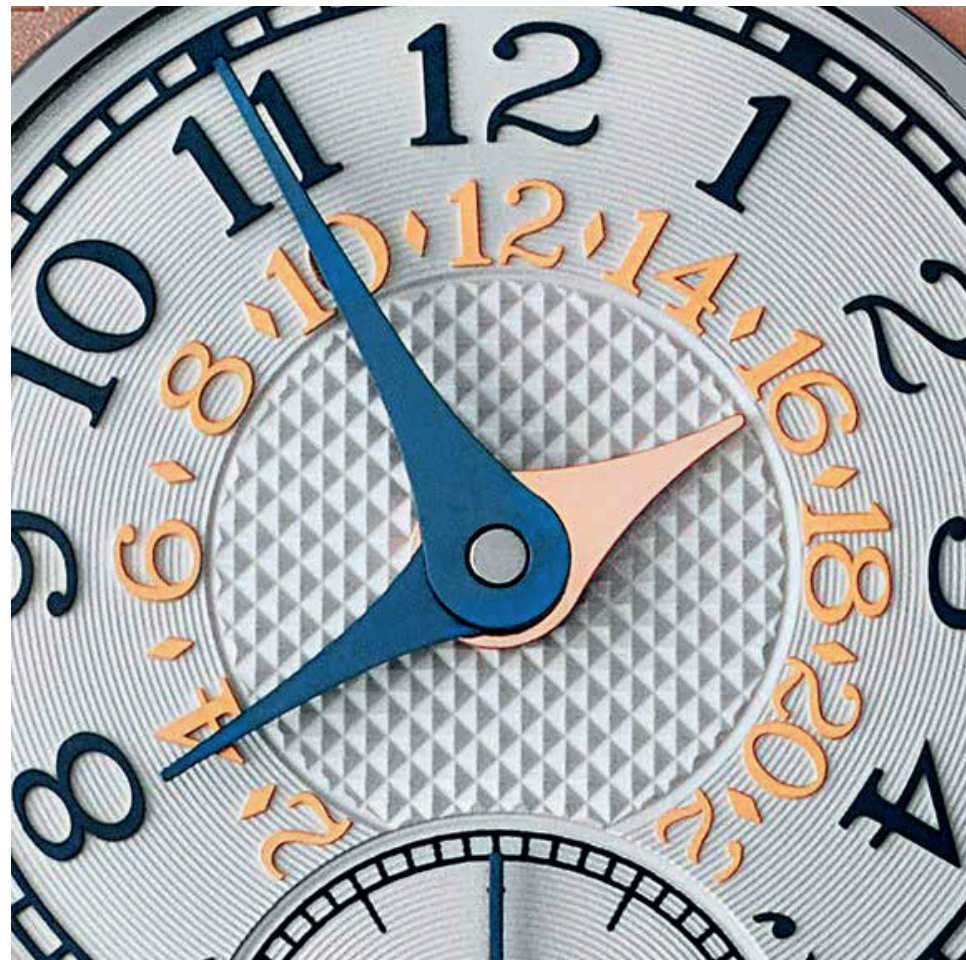
INTEGRATED CHEMISTRY LABORATORY

In order to achieve a uniform and the same color day in day out, Les Cadraniers de Genève opted from the beginning to use only galvanization. Electrolysis offers a more permanent aspect than paint that is used in ‘cheaper’ dials.

Wanting to be able to offer unique colors or dial treatment, the Cadraniers de Genève have created their integrated chemistry workshops where they produce exclusive colors that cannot be found anywhere else. The operator goes to the varnishing station with the exact color specially prepared here, to spray the dial. Everything is filtered with high efficiency and here, the n° 1 enemy is dust.

A typical example is the astounding blue Chrome dial created for the Chronomètre Bleu, matching with perfection the case in Tantalum with its bluish dark grey hue.

Even though most of the process is a highly guarded secret, we may reveal that a first



The track and numerals on the UTC dial obtain a 3D rendering thanks to a specific matter deposit technique

layer of blue chrome is applied on the dial and dried in the oven. 7 layers are applied in a row proving a huge risk of dust being incorporated in the dial and not only risking the dial to be thrown away but the whole operation to be restarted from scratch. The dial is thus prepared in a special dust proof cabin. One may imagine that after all these years, production would be smooth and efficient. To this day, les Cadraniers have a 65% reject on the Chronomètre Bleu dial! Meaning that 65 dials out of 100 end up in the recycle bin. And Stephane Cornioley says that with a sense of pride, as “we used to have 95% reject!”. Again, how could an independent contractor accept to undertake this job...

Another use of galvanization may be seen in the UTC subdial. The numbers and the track are in 3D. This is achieved with a laser galvanization growth, meaning careful layers of matter deposit. To make it even more complicated, is when the 3 metallic colors (Blue, Gold and Silver) are applied

by galvanoplasty. When you apply a color, you need to ‘mask’ (by using a special varnish) all other parts. Then you need to remove that varnish and do it all over again for the second color, and then the third.

An averagely complicated dial requires around 15 different tasks (necessitating, thus, 15 quality control). But Galvanization is just but one process that Les Cadraniers mastered. Because of Mr. Journe constant curious mind, they have been pushed to come up with new techniques and know how:



trol his destiny. A watch has components (made in house since 2004), a dial (the Cadraniers de Genève were open by F.P. Journe in 2004) and a case (the Boitiers de Genève joined the company in 2011). The ferociously independence desire stems from the fear of depending on outside contractors. Just imagine placing an order for 10 cases (at the T-10). Which supplier will stop his production to insert a 10 cases production...?

Les Cadraniers de Genève was the first company to be integrated.



Stephane Cornioley and Tony Billet

The dial is the essential part of the watch, if it is not legible nor aesthetically pleasing, why even make it? Mr. Journe when creating a new timepiece ALWAYS start with a blank page of paper and a pencil to draw the dial. As he states: “I hope I am an enough capable watchmaker to fit the mechanism to the dial. The other way around is nonsensical!”.

The Chrome blue dial





18K red gold F.P. Journe cufflinks
with Jade centerpiece

LAPIDARY

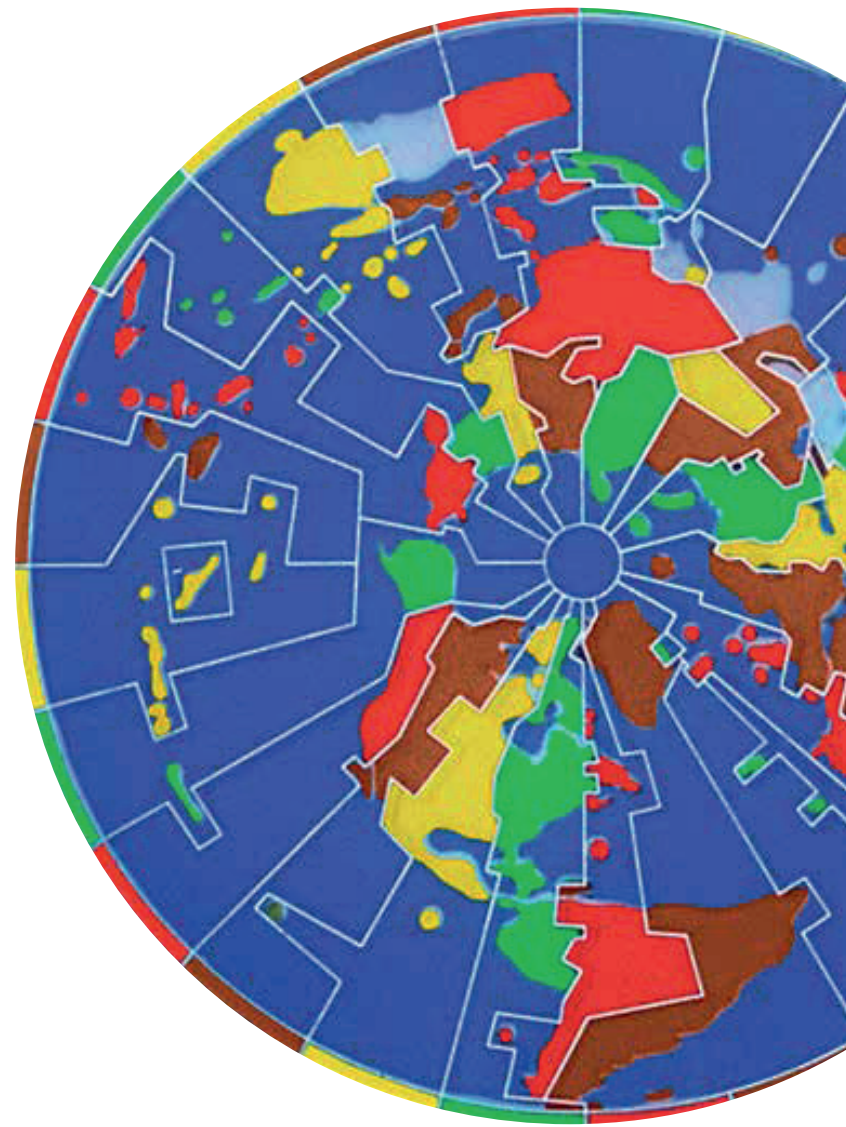
For example, lapidary techniques savoir faire made possible the release of a (very) few Tourbillon with Jade dial. Jade is a rock that is composed of different silicate minerals: Nephrite and Jadeite. Jadeite has about the same hardness as quartz whereas Nephrite is slightly softer, but is tougher (more resistant to breakage) than jadeite. (Note: It was not until the 19th century that a French mineralogist, Alexis Damour (1808-1902), determined that “jade” was in fact two different minerals). The ‘mix’ of these elements make it especially difficult to achieve the thickness necessary to become a dial (0.70mm or roughly 7 times the thickness of a human air).

PRESS IT!

Since the early days, Mr. Journe had opted for a gold 18K dial with a small Silver sub-dial with a “clou de Paris”. This tiny and thin part goes under a 12-ton press. From that (well known) technique, Les Cadraniers created a never seen before dial where the WHOLE dial (18K gold) goes under the press. With this reverse embossed technique, it allows the numerals to be in 3-D. Meaning they are part of the dial, not applied (the 7 would be too small to make it as an applied numeral). After being embossed, the whole dial goes under galvanization treatment and the numbers are -at the end- diamond cut.



The gold numerals of this Chronomètre Souverain
are part of the dial



The UTC North Pole birdview map requires laser engraving on the sapphire crystal and then 4 different color application

ENGRAVED

In 2003, F.P. Journe collaborated with a specialized and particularly talented engraver to produce a series of 5 engraved dials for a unique series of watches celebrating the opening of its Hong Kong Boutique. Two unique patterns have been chosen. The first is a view of New York featuring the empire State Building, the Chrysler Building as well as the Statue of Liberty. The second design is inspired by a symbolic Wonders of the World, the renowned Great Wall of China. When Mr. Journe decided to release a limited edition of engraved dial tourbillon, he was confronted with a major problem. That artist had died a few years back. After a 6 months search Les Cadraniers were able to source a new artist (this time a woman) who makes the engraving all by hand. One may see (with a loupe) slight imperfections, this is what you get by electing not use a machine.



2002. Unique piece. The hand engraved Statue of Liberty. Property of a private collector



2016. The hand engraved Regency. Boutique Exclusive



Silicon Pad

PRINTING

It might look easy to print on a dial but the technique is highly mastered by the specialized craftsmen. The ink is first spread onto the engraved plate; some is then removed, leaving only the exact amount necessary. The pad absorbs the ink and deposits it on the dial. A great deal of dexterity is needed to deposit the precise quantity of ink.

[Gelatin]The gelatin pads are produced here in order to obtain perfect quality. The ink deposit process is carried out under heat lamps, so as to maintain the exact temperature that will maintain the gelatin at the right consistency – not too hard and not too soft. It takes 2 ½ hours at 50° Celsius to dry a silver dial and 1 hour at 100° Celsius to dry a printed gold dials. It is time consuming if we take each operation in consideration from the preparation of the raw gold plate until delivery of the dial. Another feat is the minutiae that is necessary to print the small sapphire crystal disk in the UTC. The world map is a sapphire crystal where the time delimitations have been laser engraved and colors are successively applied on the bottom.

FROM THE PRESS: A.H.C.I.



The AHCI - Académie Horlogère des Créateurs Indépendants (Watch Academy of Independent Creators) was founded in 1985 with the aim of perpetuating the art of independent horology and supporting outstanding watch craftsmen. These independent craftsmen are reinventing the future of watchmaking. The AHCI launched the Young Talent Competition to help raise the next generation of young independent watchmakers by identifying the most talented creations and recognizing their achievements."

Independent watchmaker François-Paul Journe is a member of the AHCI since 1987. For the second year, F.P.Journe is sponsoring the "Young Talent Competition". The AHCI opened this contest to 47 international watchmaking schools in 14 different countries. The entry requirements were as follows:

- To be an apprentice watchmaker or to have completed an apprenticeship after August 31, 2014.

- To have independently conceived and constructed a watch, a clock, or a technical construction.

- To send photos / videos of the watch, clock or technical construction

- To attach a description of the timepiece's characteristics

34 watchmakers and members of the AHCI, from 11 countries, evaluated the most remarkable watch creations. The selection criteria were based on technical achievement, complexity, design and aesthetics. The 2016 winners receive a diploma and a CHF 3,000 grant from Horotec, which will allow them to purchase watchmaking tools. They have the privilege of presenting their creation at the AHCI booth in Basel-world alongside renowned members of the Academy.

ANTON SUKHANOV CLOCK WITH TRIPLE AXIS TOURBILLON

Age 33 - Moscow - Russia
Graduate from Konstankin Chaykin in January 2016

Project

Design, manufacturing and construction of a three-dimensional clock with triple axis tourbillon.

Technical characteristics

Dimensions: 100 mm x 170 mm x 82 mm
Movement: anchor escapement - triple axis tourbillon, tourbillon cages made of titanium, plates and other bridges made of nickel-plated brass, frequency 18000 vibrations per hour, 21 jewels Case: black nephrite, steel, nickel-plated brass, mineral crystal, 5 windows, 4 on the side and 1 on top
Functions: hours, minutes, seconds Dial: silver 999, guilloché, hot enamel (white opal color) Specificities: triple axis tourbillon (inner tourbillon cage turns around in 71.25 seconds, middle tourbillon cage turns around in 114 seconds, outer tourbillon cage turns around in 180 seconds), 8 days power reserve, winding stop device in the shape of Maltese cross.

Testimony

"I made the turning parts (axles, bushings, column, pins) by small lathe with a microscope. I made the cutting of teeth wheels by milling head with an index plate. The milling parts made on CNC machines, followed by manual processing. Bridges cages are made of titanium. Plate and other bridges are made of brass, nickel-plated. The anchor escapement, barrel with a spring, balance wheel, spiral balance spring, and some big wheels were taken from an old Soviet movement and I modified them.

I acquired a stone foundation case of nephrite from stone-cutters, I manufacture metal

parts of the case and produced their installation. The dial was very time consuming, I used the help of three people: separately executed the guilloché, hot enamel and produced print.

The clock has 5 windows (four on the sides and one on the top). Through each of these windows you can see the balance. All windows coincide with the geo-metrical center of the 3-axial-tourbillon. The winding of the clock and adjustment of time will be made with the help through the same opening with different keys."

TRISTAN LEDARD CLOCK WITH LINEAR EQUATION OF TIME

Age 23 - Paris - France
Graduate from Lycée Diderot in July 2015

Project

Invention of a Linear Indication for a Clock with Linear Equation of Time.

Technical characteristics

Dimensions: clock diameter 110 cm, globe diameter 29 cm, construction diameter 36 cm, weight 2 kg
Movement: brass
Dial: brass, blast sanded at the centre and brushed on the outer diameter. Total diameter 110mm, indexes in brass with stainless steel hands
Specificities: hour and half hour chiming, annual calendar, seasons, solstices and equinoxes and astronomical sign display on the clock, and world time on the globe.

Testimony

"For my graduation work, I had to add the equation of time on a movement of Paris. I thus decided to invent a linear indication for the indication of the realization of this complication.

A wheel making a tour in one year supports an equation of time cam. A vertical

feeler-spindle is in permanent contact with the cam thanks to gravity. (On a simple watch, a simple spring would be able to maintain a permanent contact with the cam.) This vertical feeler-spindle contains a cavity and pins and engages a pinion with 10 leaves. This pinion is solidary with a 30 teeth wheel. This last one meshes with a horological toothed rack.

The difference in between the extremities of the cam being only of 10 mm, the indication on the dial would have been too small to indicate 30 graduations. With the new multiplying ratio, the stroke of the horizontal rack is of 30mm. On the wheel that rotates once in a year, I added an annual calendar, seasons, solstices and equinoxes, and an astronomical sign display. Everything has been made with a Schaublin 102 and a Hauser jig boring machine M1.

I bought a classical terrestrial globe, built a cabinet in cherry wood, cut the globe in 2 and cut a round cherry wood plate to place the clock on top. Above the clock is a plastic ring with the engraved hours of the day and the night. In indexing the local hours, one can read the time everywhere in the world."





ANNA-ROSE KIRK THE HORIZON CLOCK

Age 27 - Birmingham - England
Graduate from Birmingham University of Horology in July 2015 with 1st class honours BHI's Diploma of Repair, Restoration and Conservation of Clocks/Watches

Project

Construction of a Horizon Clock inspired by the Swahili Clock and researching Swahili time.

Technical characteristics

Dimensions: height 1m20, 10 kilos Movement: brass and steel Dial: brass with cut out copper centre allowing a view into the mechanism, 25 cm diameter Specificities: circular wall clock, supported by a walnut wooden bracket covered with brass. A single gold plated hand indicates the time which rotates once a day around a 24-hour dial. Blue steel sunrise and sunset indication.

Testimony

"The Horizon Clock was inspired by the 'Swahili Clock' and Swahili time-keeping. In Kenya, Uganda and surrounding countries close to the Equator, the sun rises and sets at the same time every day. The day starts when the sun rises where one o'clock is one hour after sunrise. Sunrise in this part of the world is so consistent that people set their clock by it.

The western way of telling the time has become so universal that it is accepted as the only way of telling the time; however, there are countless other ways, mostly linked to the natural cycle followed by Nature. This concept intrigued me and after further research, I was able to recognize the idea that western time is but a small part of the history of timekeeping and that only 150 years ago, when there was talk of changing to a universal time across the globe, it was declared that: The sun is the national clock. No other clock can supersede it, as it is the one ordained by nature to regulate man's life.

The Babylonians started the hours with the rise of the sun and 'Old Czech time' or 'Italian time' began at the end of dusk or half an hour after sunset, giving workers an indication of how long they had before there was no light to work from. In England, people divided the sunlight hours by 12, meaning that an hour in the winter could be as little as 40 minutes and as long as 1 hour 25 minutes. In all cases, telling the time was completely reliant on the positioning of the sun in the sky. My goal was to portray these concepts and to reconnect timekeeping with the cycle of the Earth's rotation and the cycle of the seasons."



From left to right: Tristan Ledard, Ana-Rose Kirk, François-Paul Journe, Anton Sukhanov

As much as I love watches, I love the people who are occupied with our specialized hobby even more! And while our local group of watch pals organizes relatively frequent and highly convivial get-togethers, there's also something special about finding an excuse to go "on the road" to meet up with friends in places far from home. So, you can imagine that I immediately began scheming about how to route my travels through New York when I opened my inbox one morning several weeks ago to find the message shown below.

Things got even better when I received a note from my friends at the F.P. Journe New York boutique asking me to go through my files and select a few photos of Journe tourbillons that could be exhibited at the event. I naturally found most of my prior images lacking, so I took the opportunity to create some new shots including some with more of an impressionistic flair than my usual highly literal efforts.

friends, I had the opportunity to meet several people whom I had previously known only in their virtual forms through online postings or email correspondence. Not surprisingly, we all hit it off immediately, fueled by both our shared love of horology in general and the particular mania that Journe's work inspires in its devotees.

Near the top of the list of my new friends: the self-dubbed @TheJourneGuy of Instagram fame, known for his encyclopedic knowledge of all things Journe, entertaining memes of Mr. Journe posted online, and extensive collection of different-colored Journe straps that he changes out on his watches on pretty much a daily basis. On this evening, he was double-wristing it with a coordinated pair that included a Chronomètre à Résonance and a Centigraphe.

Since Journe tourbillons were the focal point of the evening, several of us with early Tourbillon Souverains made a point

is that the Journe organization truly values its collectors, I think you're on the right track. While members of the broader collector community and a number of journalists were also in attendance that night, the focus was clearly on celebrating the 25th anniversary of the very first Journe wristwatch in the presence of the brand's loyal owners.

At the end of the day, there's pretty much nothing I would have changed about that evening.

Well, maybe one tiny thing: of the photos that I sent to F.P. Journe, there was one that for me really sang, with a focus on the characteristic Journe winding crown and case construction, an indication of the early-production serial number, and a pensive mood.

It wasn't on display that night, but I'll leave it with you here as my parting shot!

YOU ARE THERE

F.P. JOURNE TOURBILLON 25TH ANNIVERSARY EVENT IN NEW YORK

With the preparation out of the way, all that remained was to wait for the appointed date and hope that my surrounding business commitments would not shift! Soon enough I was in New York and immediately headed for the Journe boutique to see whether anything was afoot there.

I'm delighted I did because I had the good fortune to meet up with Pierre Halimi Lacharlotte, general manager of Montres Journe America and a friend. Pierre treated me to a quick tour of the special display of all of the generations of F.P. Journe tourbillons and finished up with a watch that for me is "The One": Mr. Journe's personal prototype tourbillon from 1991.

I'd seen some photos of this watch before, but never thought that I would have the chance to see it in person, let alone have the opportunity to hold it in my hands and photograph it. I've often said that there are very few watches in the world that I would trade my entire collection for, but this is one of them. So imagine my joy at having it in hand.

My only regret is that I didn't take a shot of the back of the watch; like the back side of the moon, it's something that few have seen.

The primary reason I didn't photograph it was because the reverse of the watch is a completely plain solid case back. The front of the watch is so exciting that it simply didn't occur to me to capture the simple appearance of the other side.

After a pleasant chat with Pierre and other Journe friends at the boutique, it was time to get cleaned up and head for the main event at the roof garden patio of the Gramercy Hotel.

One of the most enjoyable bits of this event for me was that in addition to seeing old

of getting together for some group photos; here the evening's photographer caught us forming up.

And here's a shot that I was fortunate to get, showing early 38 mm Tourbillon Souverains with the full range of dial colors: rose, yellow, and white gold.

But what of the photos that I had sent in prior to the event? Unbeknownst to me, the Journe staff had subsequently extended the photo submission invitation to others, and during the course of the week leading up to the evening reception had displayed the various images at the Journe boutique and polled collectors and other visitors to determine their favorite shots.

The pressure was on! I held my breath as Pierre announced the winners and was delighted to hear my name called out as winner of the "People's Choice" selection for my T30 Anniversary Tourbillon movement photo.

I was also proud to hear that Pierre plans to display the winning photos in his office and even prouder when Mr. Journe congratulated me personally as he's known to be a real stickler when it comes to photos of his beauties.

And as an extra perk, the victors took home a lovely bottle of single malt Dalmore Scotch whisky. Not a bad haul!

A final goodie for each Journe tourbillon owner was a scroll containing a technical drawing of the remontoir mechanism of the Tourbillon Souverain, and Mr. Journe capped off my evening by adding his autograph to mine.

If the sense you're getting from all of this

By GaryG

Gary G is a veteran collector, supporter of independent watchmaking, and friend of the brand.

Courtesy of QuillAndPad.com

F.P. JOURNE

Invenit et Fecit *signs François-Paul Journe; a guarantee of an invention entirely made in our workshops*
"I invented it and made it"



Ref. TN

Platinum or Gold case
18K rose Gold movement
Manual winding

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