

# F.P. JOURNAL

2022 EDITION

## The scientific watch

### Editorial François-Paul Journe

#### *The Calm After the Storm!*

*After the two very bizarre years we have just lived through, and contrary to what one would logically expect, we have made a record number of sales, to the extent that our boutiques do not have enough watches available for sale.*

*After the presentation of the Astronomic in 2019, followed in 2020 by the new Chronomètre à Résonance, we are ending 2021 with a record price obtained at the charity auction for Only Watch with the FFC Blue (4,500,000 CHF), a watch based on an idea by Francis Ford Coppola. The watch required 7 years of development after Francis's original idea was perfected. At the moment it is too early for me to decide on the launch of a commercial series. Our watchmakers already have a great deal of work, and for the time being I have not yet found a solution to this problem.*

*The Chronomètre à Résonance and the Astronomic Souveraine are in production, though for the moment we are unfortunately not able to satisfy the strong demand. When I am asked, as often happens, what characteristics are needed to acquire an FPJ watch; I answer, in my defense, patience! I am sorry about this...*

*But let's all calm down!*

*This year we will present a watch that was needed to complete the Vagabondage series. In 2004 we presented the first V, a series of 69 watches exclusively in platinum. After the great success of the VII, we also produced a series of 68 gold watches, for I wanted to keep the same quantity in platinum - that is, 69 watches. The same was true for the VIII.*

*The new watch is the original Vagabondage in gold, a limited series of 68, reserved in priority for those who already have gold VII and VIII watches.*

*Since we have been quite busy preparing the watches already ordered, we have not yet put the new 2021 watch - the Octa AN - into production. Delivery of that watch will begin soon, however, in the spring of 2022. Due to the extremely strong demand, we had to organize a lottery for the limited series of 99/99-AN.*

*Finally, a new building is under construction in Meyrin; it will house the "Cadraniers de Genève" and the "Boîtiers de Genève", in order to offer them the comfortable environment that their excellent work deserves and requires. It will be finished, and they will move in, in the late spring of 2022.*

*Here I will finish with a phrase I am particularly fond of: As you know, and because I know you appreciate us for who we are, the limited production of F.P.Journe watches will never change - because the excellence of our work requires it.*

François-Paul Journe

#### BEHIND THE F.P.JOURNE FFC BLUE

In July 2021, F.P.Journe unveiled an exceptionally remarkable timepiece as part of the Only Watch 2021 catalogue, the FFC Blue. The timepiece itself was a rather unexpected debut from a brand and watchmaker so focused on a more traditional approach to watchmaking, as for starters, the watch displayed a mechanical hand which displayed time, instead of a traditional dial. In addition, the watch itself, named "FFC", was a collaborative project between F.P.Journe and the legendary American filmmaker Francis Ford Coppola, a name and figure most associated within the film industry and...

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#### *To Our Friend!*

*I met Serge Cukrowicz, better known in the trade by the name GINO, in the early 1990s at the Basel fair. We met after 6 PM (the official closing time) at a cocktail hour at Daniel Roth's stand - it was always a very friendly affair, with many other friends such as George Daniels, Philippe Dufour, and Roberto Carlotti (called "the professor"), all of whom were passionate fans of horology. And we became good friends, little by little. He loved the watch I wore, my first wristwatch (Tourbillon and Remontoir d'Egalité).*

*In 1995 I showed him sketches for my new project - the brand I was launching - and he was immediately enthusiastic. But unlike the other retailers who wanted to represent the brand, he wanted to be a part of it. So of course, when I went around looking for financing, he participated. And since the others did not, there were only 3 of us: Philippe Rabin, Gino, and me! And we were quite happy about it.*

*The company was created in 1999 and until his passing we always worked together in harmony. We traveled the world for our work, and always felt the same joy each time we began a journey, but also every time we got together for dinner or to have a friendly drink. We were intimate friends, as if by osmosis. We were inseparable. His joie de vivre and spontaneity will be missed by all who knew him.*

*Our thoughts are with his family - his wife Radbi and his children Shawn, Gina, and Dylan.*



Gino, François-Paul Journe and Philippe Rabin.



BEHIND  
THE F.P.JOURNE  
FFC BLUE

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THE "MÉTIER"  
AT  
F.P.JOURNE

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YOUNG TALENT  
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BARBIERE-MUELLER  
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# Behind the F.P. Journe FFC Blue

A COLLABORATIVE PROJECT BETWEEN THE  
FINEST OF FILMMAKING AND WATCHMAKING

UNIQUE PROTOTYPE EXCLUSIVELY DEVELOPED FOR ONLY WATCH

In July 2021, F.P.Journe unveiled an exceptionally remarkable timepiece as part of the Only Watch 2021 catalogue, the FFC Blue. The timepiece itself was a rather unexpected debut from a brand and watchmaker so focused on a more traditional approach to watchmaking, as for starters, the watch displayed a mechanical hand which displayed time, instead of a traditional dial. In addition, the watch itself, named “FFC”, was a collaborative project between F.P.Journe and the legendary American filmmaker Francis Ford Coppola, a name and figure most associated within the film industry and never before heard of in the watchmaking world, or even the luxury industry as a whole.

With the FFC Blue’s presentation being a surprise to many, F.P.Journe’s participation once again became one of the most highlighted pieces of the Only Watch catalogue, prompting discussions between collectors and journalist alike. How did such a collaborative timepiece come to existence between two legendary figures of their field and how did François-Paul Journe manage to create such a distinctive mechanical wristwatch that displayed time in the most unusual way, via a mechanical hand?

#### BACKGROUND

The story of the collaboration starts all the way back in 2009, with the launch of the F.P.Journe Boutique in New York City. At the time, Eleanor Coppola, Francis Ford Coppola’s wife, was browsing through the Wall Street Journal Magazine where she came across an F.P.Journe advertisement with a picture of the F.P.Journe Chronomètre à Résonance. Not having much interest in watches, she didn’t understand any of its technical aspects but found the watch quite beautiful that she desired to purchase it at the New York Boutique as a gift for her husband. She proceeded to do so and the purchase was brought to the attention of Mr. Pierre Halimi, the General Manager of F.P.Journe America, who took it upon himself to personally deliver the watch to Mr. Coppola and further explain the timepiece and its technical achievement of acoustic resonance. The watch was hand-delivered in Napa Valley, at Mr. Coppola’s winery estate, “Inglenook”.

While Mr. Coppola is not entirely interested in the technical marvels of watchmaking, he was quite fascinated by the timepiece and grew tremendous admiration for its maker, François-Paul Journe. As a token of his appreciation and gratitude, he sent François-Paul an autographed bottle of wine along with a personal invitation to Inglenook, when time would allow for François-Paul to pay him a visit.

In 2012, François-Paul Journe was in the United States for the Indianapolis 500 and figured to extend his tour to California and pay a visit to Francis Ford Coppola in Napa Valley. The timing worked out well and François-Paul ended up staying a total of 3 days at Inglenook as Mr. Coppola’s guest.

It was during their first dinner that the seed of the FFC timepiece was planted, during a casual conversation that was perhaps not so serious at the time. Mr. Coppola had wondered if François-Paul ever considered making a watch that would tell time via a hand, sort of how people would sometimes count with

their fingers in the old days. While François-Paul thought it would be quite different, the idea was laughably too ridiculous in its challenge, at the time.

As time progressed shortly after his visit, François-Paul found himself revisiting the thought repeatedly, intrigued by not only the complexity of realizing such an innovative watch but more so how rewarding it would be for him to collaborate with one of his personal idols, and further how rewarding it would be for his brand’s public image, which was not as well known in 2012 as it has come to be today.

In the two years following his visit to Napa Valley, François-Paul began to quietly develop the idea of a wristwatch that told time with a hand, although he found it quite difficult to figure out how one could indicate 12 hours with the use of human digits. Initially, the proposed thought was to have two hands in place of a dial, however the proposal was abandoned as he was stuck with working out 12 hours with 10 digits (8 fingers and 2 thumbs), and further found two hands within a small space quite busy and illegible to read.

He thus shifted his attention to designing the timepiece with a single hand. But how can you indicate 12 passing hours with only 5 fingers? Then one morning, he had the idea of using the thumb as 0 or 1, a binary language that increased the possibilities of indication. He informed Mr. Coppola of this idea. Within the week, Mr. Coppola had made and sent him back a video showing a way of indicating 12 passing hours by using 5 fingers.

With the solution of reading time resolved, it was then up to François-Paul to develop the timepiece mechanically and shine a spotlight on the “savoir-faire” of F.P.Journe, doing what others cannot. Mechanically, the movement would have to be developed with an instantaneous gearing mechanism where the indication of time would be read by “on-the-hour” jumps of the digits. The problem with such a mechanism is the power that it requires, which must be plenty and impeccably stable.

In addition, while the timepiece was in the early stages of development, it was always envisioned to be very easy to use, as it was meant to be worn by Mr. Coppola and other film industry friends who may or may not be watch connoisseurs, which meant the watch had to be an automatic watch as it would be more convenient.

By early 2016, François-Paul began to work on the prototype of the watch and the movement was based off his automatic Octa caliber 1300.3, originally launched in 2001 and perfected over the years. The Octa caliber was developed entirely around achieving stable and chronometric performance over a long autonomy and its performance was unmatched as it utilized one single barrel that provided up to 5 days of chronometric performance (160 hours total power reserve) which was a notable indicator that it could withstand the demanding requirements of an automaton wristwatch. At the time, a general concept for the design of the watch was worked up but the details of how the hand would look was still undecided. Over the years, as the prototypes progressed, several proposals for the hand were conceived until ultimately



*François-Paul Journe unveiling the first prototype to Francis Ford Coppola, Paris, December 2015.*

François-Paul decided to make the hand in decorated bronze, as an homage to French barber surgeon Ambroise Paré (1510-1590), named as one of the fathers of surgery and the first man to create an articulable hand.

#### THE FFC BLUE

With the initial project first discussed sometime in 2012, it was quite unexpected that it would only come to fruition in 2021, bringing the total to 7 years in development. It was further by complete chance that the first complete functioning prototype of the FFC would coincide with two significant events; the Octa caliber’s 20<sup>th</sup> anniversary, and the 9<sup>th</sup> edition of the Only Watch charity auction.

With all the roads coming to the same specific point, François-Paul seized the opportunity to present the F.P.Journe FFC Blue as a unique prototype example developed for Only Watch 2021.

Powered by the Octa caliber 1300.3, the movement essentially uses the Octa base without top plate (a unique construction element of the Octa), where the entire complication’s components come together. The end result is a 42 mm case which is large enough to make space for the hand and the rotating minute ring which surrounds the outer edge of the movement, and a mere 10.7 mm thick, making it even thinner than the F.P.Journe Quantième Perpétuel. To achieve such a thin case, François-Paul had to work lightly and with a demanding attention to detail, for surely developing a timepiece of this complexity can easily result in a dense and large movement.

To start, the reliability of the Octa movement provided a tremendous advancement in the complication’s mechanism as François-Paul already had a mainspring that was large and stable enough to power the instantaneous jumps of the mechanical hand. This helped restrain the size of the movement as had the mainspring not been as sufficient, a watchmaker would have no choice but to add additional barrels to the movement making it larger and thicker.

When it came to the hand itself, removing the dial and all the parts required for a traditional 3-hand watch gave way to an empty space beneath the curved sapphire crystal, which was not a lot but just enough to place the hand without increasing the height of the watch. The hand itself is less than 0.2 mm thick and the fingers range in thickness between 0.10 mm and 0.15 mm. As a whole, the hand is hand-engraved and made of oxidized Titanium, as the lightweight nature of the metal

aids with the energy required for the movement of the fingers.

The mechanism for the hand operates similar to that of the instantaneous calendar mechanism of the Quantième Perpétuel, although on a much grander scale. The fingers are all linked through cams, levers, and a spring. Each finger is linked to its own lever and has two cams (one to raise and one to lower). The difficulty was to ensure sufficient power for the cams to achieve an instantaneous movement. This was obtained by means of a spring that is wound in 45 minutes and precisely delivers its full energy every hour.

Alike the Quantième Perpétuel, the movement of the FFC Blue represents the incredible durability, reliability, and performance of the Octa caliber, echoing François-Paul’s words: *“You cannot develop a watch like the FFC Blue without a solid movement. It is a true testament to the renowned performance and craftsmanship of the Octa caliber. Without the Octa, the FFC Blue would not come to exist.”*

#### ONLY WATCH 9<sup>TH</sup> EDITION

In tradition of previous F.P.Journe entries for Only Watch, the FFC Blue is a unique timepiece exclusively cased in a Tantalum case with a blue hand, and represents the first fully functioning prototype of the timepiece. It was auctioned on November 6, 2021, in Geneva, and sold for CHF 4.5 million, breaking the record for an F.P.Journe watch ever sold at auction.

#### THE FUTURE

With the sale of the FFC Blue prototype, the timepiece will eventually join the production line of the F.P.Journe collection in the future. As with any timepiece, significant testing and fine tuning will be done by François-Paul, in addition to training qualified watchmakers, before the timepiece will be ready for the public. Further, as the Manufacture currently makes way for the production of other novelties in 2022, it is currently unclear when the Manufacture will launch the production version of the FFC. However, due to the complexity of the timepiece itself, it is certain that its production will be incredibly limited, among the already limited production of the Manufacture.



**Osama SENDI**  
*F.P.Journe Collector  
and expert*



*Inglenook Rubicon bottle  
2009 Vintage.*

Founded in 1879 by Gustave Niebaum as Napa's first estate winery, Inglenook boasts an illustrious heritage, a renowned legacy of innovation and an outstanding portfolio of award-winning wines that have defined and established Napa as a world-class wine region. It is the largest contiguous estate vineyard on the famed Rutherford Bench, Napa Valley's finest area for producing spectacular Cabernet Sauvignon. The estate vineyards of Inglenook were among the first in Napa Valley to be certified organic in 1994.

From Gustave Niebaum to John Daniel, Jr. to Francis Ford Coppola, Inglenook's three principal stewards have shared a strong sense of vision and an unwavering passion to create distinctly Napa wines that rival the best in Europe. First constructed in 1887, the iconic Inglenook chateau was inspired by the great

chateaux of Bordeaux and faithfully restored in 1997. Gustave Niebaum commissioned William Mooser, a San Francisco architect, to design the great chateau in conjunction with the winery's general manager, Hamden McIntyre.

In 1975, searching for a modest "vacation cottage" in Napa Valley, Francis Ford Coppola and his wife, Eleanor, purchased a portion of what had been the Inglenook estate - Captain Niebaum's home and acreage. The Coppolas soon discover the inherent treasure of what they now own and vow, no matter how long it takes, to reunite all of the contiguous vineyards and to restore Inglenook's esteemed reputation. In the French tradition, they joined their name with Niebaum's and the property became the Niebaum-Coppola Estate Winery.



*Francis Ford Coppola.*

## AFTER DECADES OF WORK AND PASSION, FRANCIS FORD COPPOLA FINALLY ACHIEVED HIS DREAM THE REBIRTH OF INGLENOOK WINERY.

**1978**

The Niebaum-Coppola Estate produces its first vintage of "Rubicon", a red Bordeaux-style blend, named after Julius Caesar's crossing of the Rubicon in 49 B.C., a small step that nevertheless began Rome's civil war, "the point of no return". The Coppola Family makes a commitment to create wines of the quality achieved by Inglenook at the height of its reputation.

**1994**

Although organic farming practices have been in place at the estate since the late 1970's, Niebaum-Coppola receives official certification and accreditation by California Certified Organic Farmers, or CCOF, in 1994. It's one of the first wine estates in Napa Valley to be certified organic.

**1995**

The Coppola Family successfully reunites the original parcels of the estate after a separation of nearly 30 years by purchasing the remaining property of what had originally constituted Inglenook, including its historic chateau. Restoration of the chateau begins along with plans for a courtyard fountain.

**2002**

The Coppolas add to their land holdings by purchasing 60 acres of the neighboring J.J.

Cohn Vineyard - one of the most sought-after properties in Napa Valley - bringing the estate to a total of 1,700 acres.

**2011**

With patient resolve and relentless negotiations over nearly four decades, the Coppolas fulfill the vow they made in 1975 by acquiring Inglenook's name and trademark. Inglenook - land, name, and spirit - is whole once again.

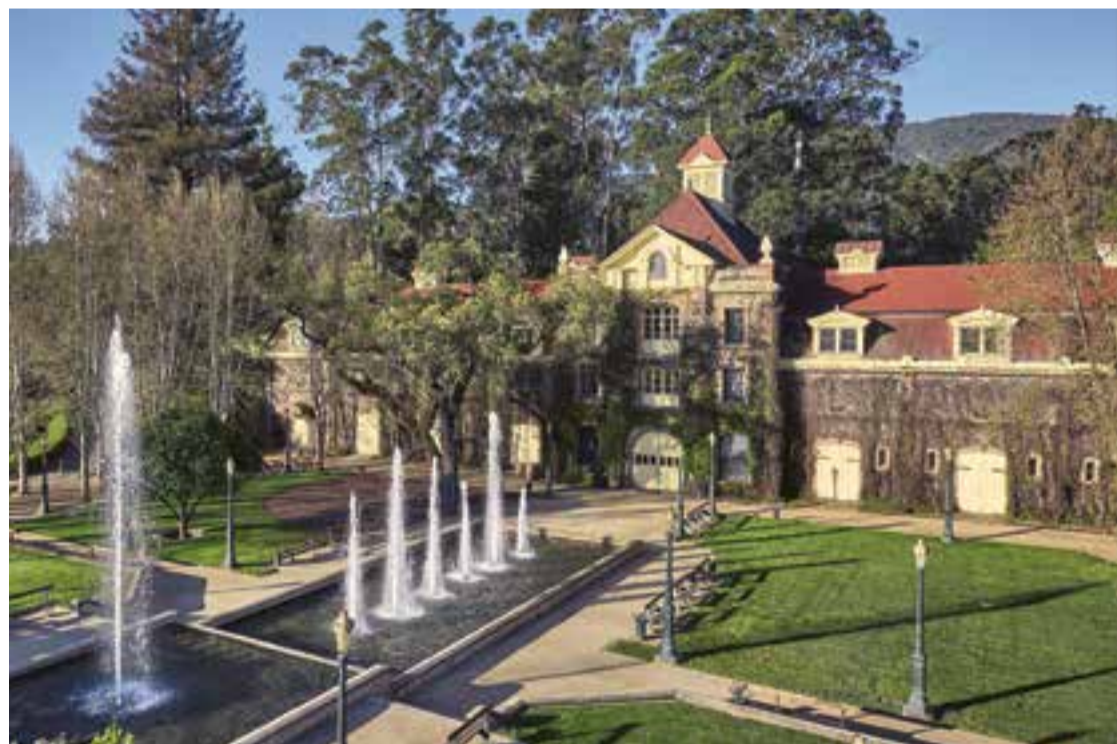
**2018**

Ground is broken to expand the Infinity Caves - used primarily to store aging wines - into a state-of-the-art winemaking facility. The new subterranean winery occupies close to 22,000 square feet, a massive space designed to accommodate 120 fermenting tanks - each one designated for a respective vineyard block - thus allowing the winemaking team to maintain the integrity of each individual block's character.

Such thoughtful attention to Inglenook's continued evolution, once again, honors the standards of its founder Gustave Niebaum.

**2019**

Francis Coppola receives a **Wine Enthusiast Wine Star Lifetime Achievement Award**, commenting that he is:



*Inglenook Castle, Napa Valley, California*

“  
Humbled by this recognition because I'd always entertained the idea of having enough land to grow some grapes and make a little bit of homemade wine to share with friends... Now with 40 years in winemaking, the quality and authenticity of our wines are particularly important because our name is on the label. You can trust that we stand by it.  
”



# Ambroise Paré a French Genius

## (1509 - 1590)

BY CHARLES JOURNE



Ambroise Paré

As the saying goes, Fortune favors the bold. Who could have imagined that the young Ambroise Paré, who came from a modest barber's family and began practicing that profession before he was fifteen in his native village of Laval (300 km west of Paris), would become the first royal surgeon, introducing many important medical innovations?

### THE HAND OF THE APPRENTICE

At the time, barbers dealt with hair, skin, and blood, as well as simple medical treatments. This, however, was not enough for the young Ambroise Paré! He dreamed of greater things. A hard worker with a quick and creative mind, he defied the social constraints of the time and took charge of his own destiny by becoming a surgeon!

Consequently he travelled to Paris, where the renowned Hôtel-Dieu hospital was located. It was one of the most important medical centers in the kingdom. There Paré studied anatomy by practicing on cadavers, learned the correct dosages of medicine, and assisted barber surgeons. For three years (1533-1536), he worked hard, learned a great deal, and was highly respected by his fellow students...

Unfortunately, he knew neither Greek nor Latin, which was inconceivable for a barber surgeon! At the age of twenty-six he failed the examination for a barber surgeon's degree due to his inability to answer a theoretical question, despite the fact that medicine is an empirical art. That did not discourage him, however! He decided to seek advancement through an entirely different avenue: a military career...

### THE HAND OF THE SURGEON

Supremely pragmatic, in 1536 Paré enrolled in the army as a barber surgeon - without having passed the exam - to the French army. He realized this was the best way to seek advancement while serving others. At the time Europe was embroiled in a long war between the two major powers of the day, the kingdoms of France (ruled by Francis I) and Spain (ruled by Charles V).

This experience led Paré to realize that medicine as it was traditionally taught was powerless to heal the kinds of wounds created by the revolutionary new weapons that had come into use. The arquebus was a sort of cannon that was carried on the shoulder, and whose bullets smashed, crushed, and burned victims' bodies... The teachings of the great physicians of antiquity (Hippocrates and Galen) were made obsolete by this new weapon... Paré explained that these new types of wounds should not be treated, as was the custom, with boiling oil followed by the application of a red-hot iron. He understood that after the removal of the bullets, the wound's inflammation had to be reduced by using new sorts of balms and soothing ointments, in order to lessen the risk of septicemia. In 1542 he invented new tools to remove the projectiles. Thus, his creative genius first became noticeable on the battlefield...

His fame grew even more when, in 1545, he published his first book in French: "Les méthodes pour soigner les plaies par arquebuses" (Methods for treating wounds caused by arquebuses). He revolutionized classical medicine, and went even further by rejecting Latin, which was then the language of medicine... He was, in fact, thumbing his nose at the Faculty of Medicine, and was not the last to do so. That same year Francis I died and was succeeded by his son Henry II, who pursued the war with Spain.

During the campaign of 1552 he introduced an innovation that was perhaps his most important and the major source of his medical reputation: "The ligature of arteries and veins after amputation". There would be no more cauterizations or frequent septicemia! Ambroise Paré became the "Father of Modern Surgery"!

Due to the support of Henry II and the nobility, in 1554 he became a royal surgeon and then received the title of Surgeon from the Faculty, which was eager to please the king.

### THE HAND OF THE COURTIER

At court Paré showed himself to be a remarkable strategist, in order to advance the cause of surgery. Nevertheless he was powerless to help when, on July 10, 1559, Henry II's eye was pierced by the lance of Gabriel de Montgomery during a joust held to celebrate the recent peace treaty signed with Spain. Prince Francis II, who succeeded him, confirmed Paré in his functions. Unfortunately, the young king died in 1560 at the age of sixteen, despite the surgeon's best attempts to save him. These two unhappy accidents increased Paré's desire to understand the causes of the two kings' deaths. He carried out autopsies on their bodies - a great innova-

tion - and thus became the father of forensic medicine. This novel practice made a great impression on the Queen Mother and regent Catherine de' Medici. In 1561 she made him first royal surgeon, in the service of King Charles IX (the third son of Henry II).

Ambroise Paré lived during troubled times. The war between France and Spain lasted throughout the first half of the 16th century, ending only in 1559. It was followed by the Wars of Religion between French Catholics and Protestants, which began in 1560. The situation led the regent Catherine de' Medici to suggest that the court become itinerant from January 1564 to May 1566. The idea was that by traveling through the cities of France, tensions and disagreements would be soothed by the presentation of King Charles IX to his subjects. Paré, the first royal surgeon, accompanied the cortege of dignitaries. Far from taking excessive pride in this distinction, he took advantage of the long journey to meet with, and learn from, many barber surgeons, bonesetters, and apothecaries.

### THE HAND OF THE WRITER

The political and religious atmosphere became dire when the Saint Bartholomew massacre occurred on August 24, 1572 in Paris, where Ambroise Paré lived. The situation became even more chaotic in 1574, with the death of Charles IX. He was succeeded by Henry III (the fourth son of Henry II), who confirmed Paré as first royal surgeon and gave him two new appointments: valet de chambre and king's councillor.

Now a sexagenarian, Paré would never again leave Paris. He decided to use his money and influence for the compilation of all the medical knowledge of his time. He wrote new treatises and modernized the older ones, all the while polishing his earlier works. The first edition of his Œuvres was published in 1575, in French so as to be accessible to all. The Faculty, which was not pleased, waged a campaign to hurt his reputation. He nevertheless had the support of King Henry III and thus benefited from a certain degree of protection from their petty acts. His Œuvres were reprinted several times: a 2nd edition appeared in 1579, a 3rd in 1582, and a 4th in 1585, while a 5th appeared posthumously in 1598. His Œuvres comprised twenty-nine volumes with 1228 large illustrated pages. The work is a remarkable compendium of 16th century medical knowledge.

### THE HAND OF THE INVENTOR

Throughout his career Paré was concerned with the well being of his patients. One example of this is his avant-garde attitude to

ward prosthetics. Certain of his inventions were due to esthetic considerations, an artificial eye that fit into the eye socket; a metal nose that was attached by strings, to follow the original shape of the face; ears made of boiled cardboard that were fixed to the existing cartilage.



Excerpt from the book "Les Oeuvres d'Ambroise Paré", tenth edition, 1641.

He also invented artificial limbs, masterpieces of ingeniousness and technical knowledge. His prosthetic arms and legs are so mechanically complex that it would require many pages to do justice to them...

Mention should however be made of his prosthetic hand, with its quasi-horological design. The mechanism of the mechanical hand made the fingers open when a button was pressed, and two springs brought them back to their original position, as if the hand were closing naturally.

The prosthetic devices invented by Ambroise Paré remained important references from the 16th century until the First World War (1914-1918). Paré is considered to be the Father of modern surgery, thanks to his ingenious inventions and observations.



Charles JOURNE  
Historian,  
Specialist of the 19th century  
with a Masters II degree  
from the Paris 1  
Panthéon-Sorbonne University

# Lucky chance, fraud or deception?

BY ANTHONY G. RANDALL

## The trials and tribulations of Harrison's H4



Fig. 1 – H4 chronometer, dial.



Images by the author

Fig. 1 – H4 chronometer, back plate.

What follows is proposed as an attempt to answer an outstanding question relating to the history of chronometry and John Harrison's timekeeper, H4, (Fig. 1). That it was really as good as the results obtained with it during two proving voyages in 1761-2 and 1764, and an official test at Greenwich in 1766/7? Was the technology that was employed sound?

Anyone reading the most recent account of Harrison's life given by Dava Sobel in her book "Longitude"<sup>1</sup>, or the earlier volumes by Humphrey Quill<sup>2</sup> or R.T. Gould<sup>3</sup>, would be left without definitive answers to these questions. More recently, the technology was described in some detail by the author in a series of articles in the Horological Journal. They ap-

peared in the first three months of 2002. The question remains... how well did H4 actually go on a day to day basis?

The official tests were unsatisfactory, to say the least. The results of the first one, the voyage to Jamaica, must have been good - 'too good to be true' - for the Board of Longitude, the official body in charge, who managed to lose them. This followed its inability to organise the test properly, finally sending off H4 by sea in the middle of winter to an island in the Caribbean whose longitude was not even known accurately.

The return journey was hazardous in the extreme, the ship fracturing its rudder in a se-

vere storm and only being saved with its precious cargo in extremis. The second voyage, to Barbados, at least was better organised, with two astronomers sent in advance to determine the longitude of the island. All went well until a dispute arose because the astronomer in charge (Nevil Maskelyne) had a vested interest in an alternative method of finding longitude using the predicted position of the moon against the background of stars (the Lunar Distance method).

A conflict of interest was certainly involved. In spite of this, the voyage was successfully concluded. Four mathematicians were then engaged to calculate the error of H4 in relation to the longitude of the island. The result

of their calculations was recorded on a small piece of paper, still present amongst the Board of Longitude papers (Fig. 2).

It should be borne in mind that these results refer only to the elapsed time between the beginning and end of the voyage. They give no indication of what happened to the rate from day to day, though on both voyages the watch was evidently keeping time on arrival at Madeira.

On each occasion, it predicted the ship's arrival against the estimates of the navigating officers. It is reasonable to assume that its rate remained very close throughout.

### INTRODUCTION BY JONATHAN BETTS

MBE FSA FBHI

*Anthony has kindly asked me to add a few words of introduction, having been associated with this project since its inception. First, I must congratulate him on the creation of the most beautiful timekeeper as part of this project. 'T45', as it is known, is the most exquisitely made and finished clock.\**

*Its performance, in spite of having only one of the familiar features of the developed chronometer (the correct scale of high-energy oscillator with large amplitude and high frequency), shows that H4 was indeed the breakthrough horologists needed in the 1750s to produce a successful longitude timekeeper.*

*Unlike H4, T45 employs Harrison's remontoire in a horizontal orientation, with all pivots lying on their sides. This might have caused greater frictional variations in the output, but does not seem to have affected the clock's performance significantly and the whole project has been very valuable in showing what the design is capable of achieving.*

*Anthony's narrative also provides a much needed reminder of the Harrisons' frustrations at the hands of the Astronomer Royal Nevil Maskelyne, whose 1766 trial of H4 fol-*

*lowing its two successful sea trials was a travesty. Ask any professional watch and chronometer maker today, whose livelihood depended on a fair trial of the performance of their best chronometer, how they would feel if their chronometer were taken from them without notice or preparation, left in a cupboard for several months then, during a trial, subjected to excessive temperature variations on a window sill and being moved into positions for which it was never intended to perform!*

*Sorry, but recent ill-informed attempts to suggest Maskelyne was blameless in this matter are wilfully wrong-headed. With Humphrey Quill's biography of John Harrison now 55 years old, it is high time a fair and well-balanced modern account of his life and work was published.*

*\*T for Tensator, and 4 and 5 for H4 and H5, on which the mechanism is based.*

<sup>1</sup> Dava Sobel, *Longitude*, (London: Harper Collins, 2011).

<sup>2</sup> Humphrey Quill, *John Harrison: The Man Who Found Longitude*, (London: John Baker Publishers, 1966).

<sup>3</sup> Rupert T. Gould, *The Marine Chronometer: Its History and Development*, (various editions).

Computer Names	Difference of Meridians between Baltimore & Barbados	Error of Timekeeper
Cap <sup>t</sup> . Campbell	3. 54. 19,1	0. 00. 41,5
D <sup>r</sup> . Bevis	3. 54. 22,3	0. 00. 33,3
W. Mitchell	3. 54. 12,7	0. 00. 47,3
W. Hart	3. 54. 10,2	0. 00. 54,2

Credit: Cambridge University Library.

Fig. 2 – Copy of the original document, Board of Longitude papers. The two middle columns show the longitude of Barbados in hours, minutes and seconds of arc, firstly as calculated from the work of the astronomers, then as indicated by H4. The right-hand column indicates the error of H4 in seconds of time, represented by the difference between the two middle columns for each mathematician.

Ref: Board of Longitude papers for 19 January 1765, archival ref: RGO 14/5 page 70.

Luckily this original document has survived, giving an average error of H4 of only 39.2 seconds on arrival at the island. Not only was the result remarkable enough in its own right, it was well within the smallest error allowed to win the whole of the Longitude reward of £20,000, stated to be  $\frac{1}{2}^\circ$ , or 2 minutes of time. The members of the Board of Longitude were forced to accept the result, hence the title of this article!

However, believing that watches were incapable of such stable timekeeping, and suspecting that the results may have been some kind of fluke, they wanted to know more about the mechanism of the timekeeper. To obtain answers, they nominated the members of a sub-committee to carry out an examination of the watch and report back the result. It consisted of two of their number and four others who were either instrument makers or practising horologists, backed up by the Astronomer Royal (by then Nevil Maskelyne), the same person who had an interest in and was much in favour of the alternative, astronomical, method of finding longitude.

After six days, the members of the Committee pronounced themselves satisfied and issued a certificate to that effect. The Board of Longitude accepted and was obliged to endorse the certificate, giving authority at the same time for Harrison to receive the first £10,000 of the reward. However, in addition, Harrison was to reassemble the watch immediately and hand it over to a representative of the Admiralty. When the nominated person refused, the watch was to be handed to Larcum Kendall, to estimate to make a copy.

This requirement also fell through and Harrison was finally requested to deposit the timekeeper at the Admiralty. There, it was relegated to a store room, locked up and sealed for the next six months. A more pointless exercise would be hard to imagine, since it would have been of assistance to both John Harrison himself and Larcum Kendall, both of whom had been engaged by the Board to make copies. Finally, the Board woke up and ordered the timekeeper to be sent to Greenwich for what turned out to be its only official land based test, to be conducted by none other than... Nevil Maskelyne.

When Harrison was requested to reassemble H4, he was not warned of the intention to submit it for a land-based test, nor given any opportunity to prepare it. After its six-month sojourn in a cupboard at the Admiralty, H4 duly arrived at Greenwich. Without more ado, it was simply wound and set, and installed in a deal box, glazed on the top and on one side, and screwed to a windowsill in the transit room. Harrison stated in a pamphlet, that the box was 'exposed to the South East'<sup>4</sup>. If so, then the sun would have shone in through the window and could thus have heated the box for a good part of the day. Recent attempts to verify Harrison's remark have been unsuccessful. The thermometer, however, was installed in a shadier part of the room, undoubtedly

giving a misleading reading at the moment of inspection. There was also no record of what happened between visits. The box had been fitted with two locks. One key was in Maskelyne's possession, the other was held by retired seamen of the Royal Hospital. Both key holders had to be present before the box could be opened, as happened on a daily basis for winding the watch, checking the rate against the sidereal regulator and noting the daytime temperature. The times of day when these observations were made were not recorded. If they varied, then this would have made a material difference to the apparent stability of the timekeeper, bearing in mind that it had a not insignificant rate. Nor is it mentioned that at night the observing room might have been opened up to allow observations by the transit telescope. Any drop in temperature that occurred, particularly in the colder months, would also have remained unrecorded.

The test lasted from 6 May 1766 to 4 March 1767, after which the results were published and, as might have been expected, were not good<sup>5</sup>. At the outset, the timekeeper had a gaining rate of about 20 seconds/day, dial up. It was then subjected to four tests where it was inclined at 20° to the horizontal and four more in the vertical positions. It had never been prepared for such positional tests. During the winter months of 1766 to 1767 the weather got very cold, even below freezing on occasions, yet towards the end of the test the rate had recovered to almost the same as at the start.

Whilst not completely useless, this whole exercise hardly provides a fair indication of H4's performance under more favourable and less rigorous conditions, and in particular what might have happened had Harrison been given the opportunity to prepare the timekeeper in the first place. (Fig. 3) shows an example of the rate of H4 (in black) against temperature (in blue) at Greenwich, in dial up position, following initial tests in various other positions. While the temperature remained stable, so did the rate.

The next two graphs, (Fig. 4), show the rate of H4 in December 1766, then in January/February 1767, experiencing extreme conditions for which it was not prepared, and also demonstrating the effect of change of temperature on the rate. For the remainder of 1767 until the end of the test, the rate returned more or less to what it had been at the start.

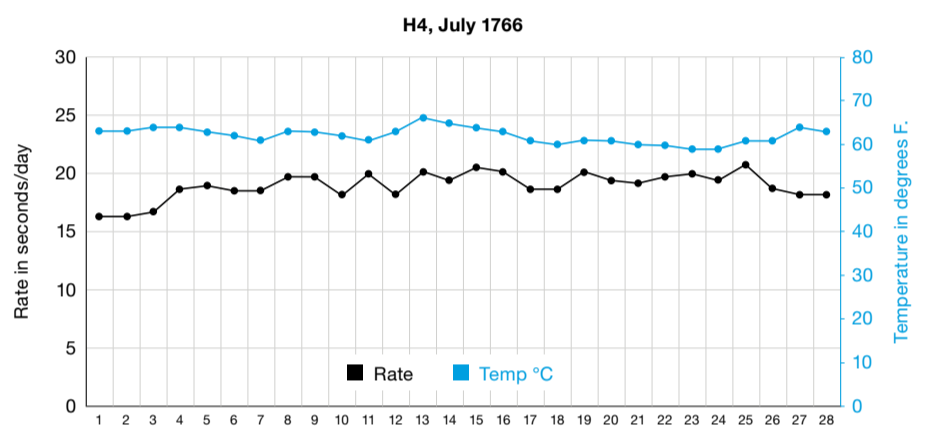


Fig. 3 – An example of the rate of H4 (in black) against temperature (in blue) at Greenwich, in dial up position, following initial tests in various other positions. While the temperature remained stable, so did the rate.

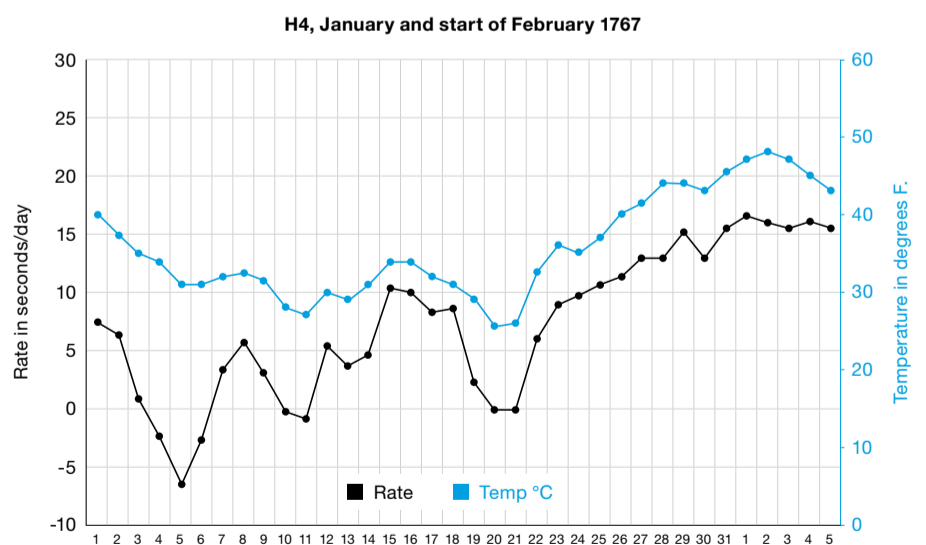
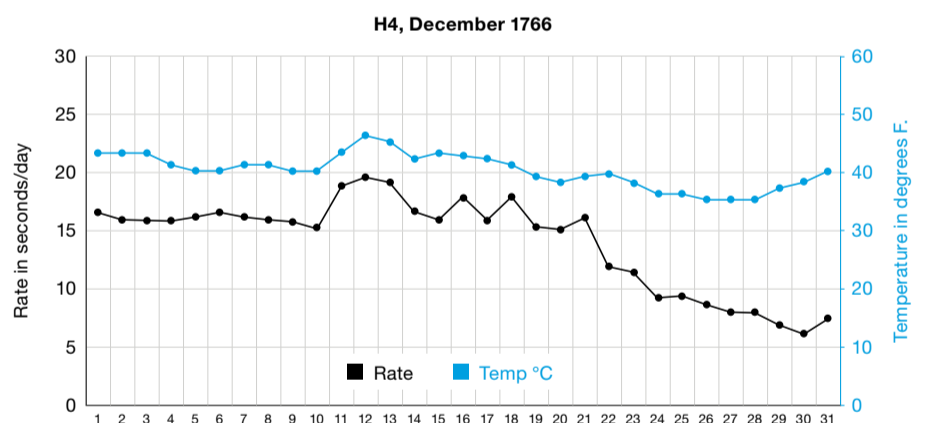


Fig. 4 – Rate against temperature for just over two months. As soon as the temperature dipped in December, the rate followed, but still recovered when the warmth returned, indicating that the amount of compensation was too great. On the Fahrenheit temperature scale, freezing occurs at 32°F.

<sup>4</sup> Remarks on a Pamphlet lately published by the Rev. Mr Maskelyne, under the authority of the Board of Longitude, 1767.

<sup>5</sup> Nevil Maskelyne, Astronomer Royal, *An Account of the going of Mr John Harrison's watch, at the Royal Observatory, from May 6th 1766 to March 4th 1767*, 13 March 1767.



**Fig. 6**  
H5 timekeeper by John Harrison,  
face and back plate.

Images by Clarisa Bruce, courtesy of  
The Worshipful Company of Clockmakers.

When these results were published by Nevil Maskelyne, he included his assessment of the unlikelihood that H4 would have been capable of maintaining its rate constant during a further voyage to the West Indies. His conclusion flew in the face of the results already achieved, and which had been accepted as qualifying for the full Longitude reward. Maskelyne's was, after all, the only official land based test of H4. It is equally useless as an indicative series of results for anyone wishing to know how well H4 was capable of keeping time on land. The records that John Harrison must have kept during the development and testing of his timekeeper unfortunately do not appear to have survived.

#### COMPLETION OF H5

The Board of Longitude had demanded that John Harrison make two more timekeepers similar to H4. He only managed to complete one, known as H5, (Fig. 6), assisted by his



son William. Although dated 1770, H5 was not fully adjusted until 1772. John was by then 79 years old. Unfortunately, by that stage, relations between the Harrisons and the Board had broken down due to new and onerous requirements being imposed for the test of the new timekeeper. In desperation, the father and son appealed to the King, George III, who offered to test H5 at his private observatory at Richmond. This offer must have come as a great relief to both Harrisons. The test was to be conducted in the presence of the King by his resident astronomer Dr Stephen Demainbray, with William Harrison also present, and took place at mid-day each day.

Unfortunately the test got off to a bad start, until the King remembered that a quantity of magnetic lodestones had been stored close beneath the place reserved for the timekeeper. As a consequence, H5 behaved very erratically until the lodestones had been removed. It then recovered. That at least is the story that has come down to us, related by John Harrison's grandson using the name of Johan Horrins, an anagram of his name<sup>6</sup>.

Both H4 and H5 have large balances, about 57 mm diameter, (Fig. 5), and made of steel, hardened and tempered. The magnetic field strength of a lodestone is not great, especially by comparison with modern magnets. Even so, there must have been sufficient strength from a quantity of them to cause H5's moving balance to induce electric currents in the steel and thus act as a braking mechanism. It would appear that the rapid movement did not cause the steel to become magnetised; if this had happened, the timekeeper would have been seriously compromised and the test ruined.

The initial intention was that the test should last six weeks, that being the approximate duration at the time, for a voyage from England to the West Indies. H5's performance was so good that the King asked for it to be extended for a further four weeks, to avoid any possibility of criticism. Dr Demainbray kept a register of the daily rate of H5 during this test at Kew<sup>8</sup>. The last actual entry in the register, taken at 12.00 o'clock, on 29 July 1772, records that H5 was fast by 6.3 seconds and had lost 0.4 seconds in the previous 24 hours.

<sup>6</sup> Johan Horrins, *Memoirs of a Trait in the Character of George III*, London, 1835.

<sup>7</sup> John Harrison and Nevil Maskelyne, 'Notes taken at the discovery of Mr Harrison's Time Keeper', forming part of *Principles of Mr Harrison's Time Keeper with plates of the same*, London, 1767.

<sup>8</sup> King's College London Archives: The George III Museum Collection.



#### Notes Regarding Bringing to Time and Adjusting the Compensation

Figure 5 shows H4's upper plate with the balance cock removed. The bimetallic compensation curb runs horizontally across the middle of the picture. The fixed end is secured to a mounting that allows some positional adjustment. Having passed under the balance and balance spring, the free end carries the two curb pins. These embrace the spring at the point where the slightly curved 'tail' joins the spiral proper. There is no facility to make mean time adjustments such as were incorporated initially, before being abandoned. When asked about this question of bringing to time during the examination of H4, Harrison replied that he loosened the wedge holding the inner end of the spring to the collet and either withdrew the end slightly, or pushed it in deeper before securing it again with the wedge. Adjusting the amount of compensation involved either thinning the bimetal to increase it, or burnishing the bimetal top and bottom to decrease it. Harrison also added that when everything was correctly adjusted, the timekeeper could be taken to pieces, cleaned and reassembled and would go as before, since there were otherwise no adjustments<sup>7</sup>.

In the light of experience, it is possible to add that adjustments made as just described are long, tedious and trying on the nerves, even with the benefit of modern testing and monitoring equipment!

**Fig. 5**



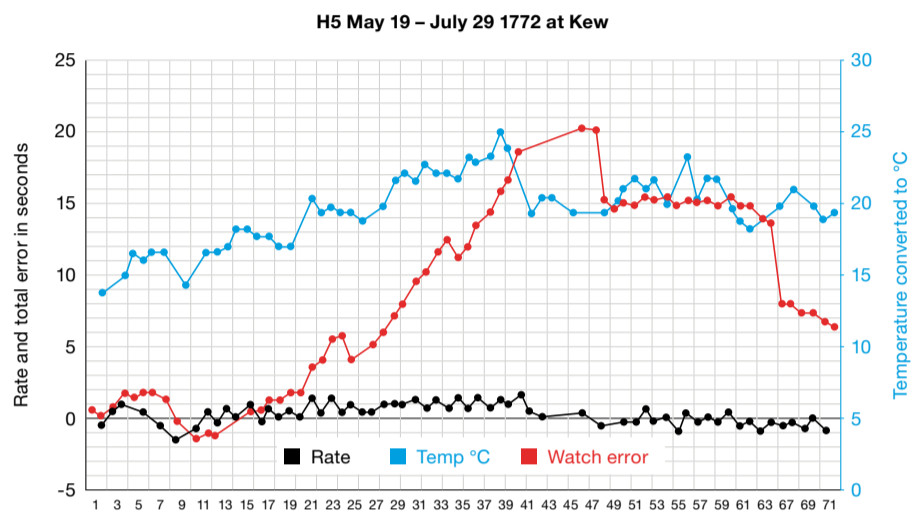


Fig. 7 – Graph showing the daily rate of H5 (in black) during the test at George III's observatory at Richmond during ten weeks. The total accumulated error of the bands of the watch is shown in red and the temperature in blue. Although the daily rate was close, never exceeding two seconds and usually less, either gaining or losing, the maximum accumulated error as shown by the bands still reached just over 20 seconds, before falling back to just over six seconds.

On this page there are some calculations, to include the equation of time and that the regulator clock was 1.8 seconds slow. Beside that, Dr Demainbray has written that the watch was fast by 4.5 seconds. His signature is beneath. That is to say that after 10 weeks continuous going, H5 had gained 4.5 seconds. The daily record starts on 19 May 1772 and the last entry is on 29 July 1772, (Fig. 7).

That concludes the official and semi-official results of the two land-based tests of H4 and H5. They remain all we have to go on except for the two voyages. Is it possible to conclude that there is no question of 'Lucky chance, fraud or deception'? Both timekeepers still exist, so could they be subjected to modern tests? Possibly, although after some 250 years would such tests, always assuming that they were permitted, have any real meaning? H4 has had a good deal of running time whilst on display at the National Maritime Museum, has had parts changed including a broken mainspring and some additional jewellery in order to keep it going. H5 is in much better condition but has been through several hands in order to be cleaned and re-oiled. It still has its original mainspring though, of course, fatigued after some use and suffering the effects of old age.

As an alternative way of answering these questions, why not remake the mechanism and then test it with the benefit of modern means of monitoring? A basic problem remained: no drawings or other record of the dimensions of the parts existed. All that was available was the work published in 1767, *Principles of Mr Harrison's Timekeeper with plates of the same, by order of the Commissioners of Longitude*, prepared for them by Nevil Maskelyne. The

intention at that time was to provide sufficient information to allow other watchmakers to make copies of H4. Unfortunately, *Principles* was and is inadequate for that purpose, the information given being insufficient. Nothing has been done to replace it since.

For many years H4 has been a part of the horological collection at the National Maritime Museum at Greenwich. The official custodian was the Hydrographer of the Navy who had transferred the safe keeping of H4 to

sentinal mechanism in a form not resembling any of the originals but otherwise faithful to them. As a result of this study, my clock incorporating the mechanism, see (Fig. 9), was in a partially completed but running state in time for the Symposium at Harvard University in 1993, in commemoration of the three hundredth anniversary of Harrison's birth. It took a few more years to complete the clock, and a few more still to get the mechanism to run correctly and prove that it could keep time. In parallel, I recorded some of the pro-

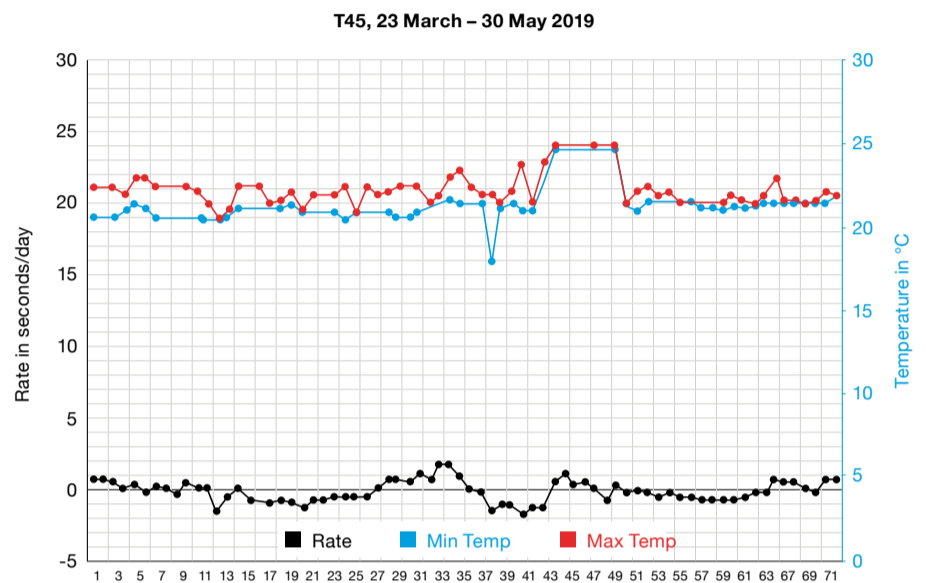


Fig. 8 – Test of the eight-day clock in Figure 9 whose mechanism is based on that of H4 and H5, to compare with Figure 7, during a test lasting 73 days or just over ten weeks.

the Museum. Successive holders of that office have simply refused to allow dimensions to be taken, which is an irony in itself since the timekeeper had been acquired for the nation with the express purpose of allowing anyone who might wish to copy it to gain access to it. The reason for the refusal has been quoted as a fear that inferior copies might be made and sold, bringing the original into disrepute. As far as is known, no copy has ever been made until very recent times. This is not too surprising, given the complexity of the mechanism, the difficulty of making some of the parts - the diamond pallets for instance - and especially the fact that the technology applied to accurate portable timekeepers moved on so rapidly. Following Harrison's demonstration of the optimum specification for the oscillator for a practical chronometer, by the end of the eighteenth century the essential components of the modern chronometer had been developed and finalised, resulting in the availability of relatively cheap and accurate timekeepers in some quantity.

Although the Hydrographer's refusal situation had been in force for many years, a decision was taken in 1983 that the two famous timekeepers made by John Harrison - that is, H4 and H5 - together with Larcum Kendall's copy of H4 known as K1, should undergo a thorough clean and conservation. This was to be done in the workshop of the National Maritime Museum. In this way, an opportunity arose for a careful study and comparison of the three mechanisms, together with the taking of accurate measurements of their component parts. It was the first time that such a thing had ever been done. Although the embargo on making copies was still in force, it did not apply to the remaking of the es-

cesses involved in the aforementioned article series, 'An analysis and Reconstruction of the Mechanism of H4'.

The following graph, (Fig. 8), shows that having recreated the original mechanism and subjected it to a test similar to the one carried out on H5, a similar result can be obtained. From that we can conclude that Harrison's technology, although with significant differences from what developed subsequently, was perfectly sound and thus settle the questions posed at the start of this article. There was simply no question of fraud, deception or lucky chance being involved during H4's two proving voyages. Those unhappy members of the Board of Longitude should finally rest in peace.

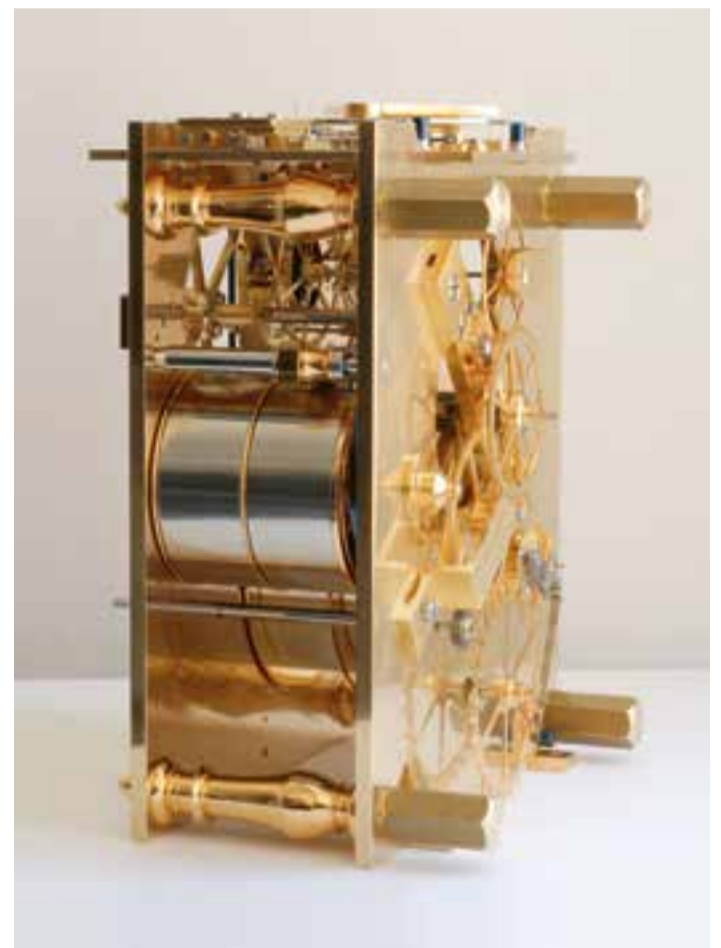


Fig. 9

Harrison's H4/H5 mechanism reconstructed in an eight-day clock with Tensator mainsprings. The component parts from the centre wheel on through the train, copy the originals, although the arbors are extended to correspond with the separation of the plates. The Tensator springs provide an almost constant drive, similar to the fusee system that Harrison used in H4/H5 and include his maintaining power. The reserve of going indication has been added for convenience.



Anthony G. RANDALL  
BSc FBHI



Images by the author.

## Acknowledgements

I would like to give particular thanks to Jonathan Betts for reading the text, making several suggestions, and especially for contributing the introduction. He was also responsible for providing the opportunity to measure and compare the component parts of H4 and H5, and to make a photographic record of the two movements.

I would also like to thank Carl Murray, who made the diamond pallets, and Dr Alexander Stewart for the reference for Figure 2.

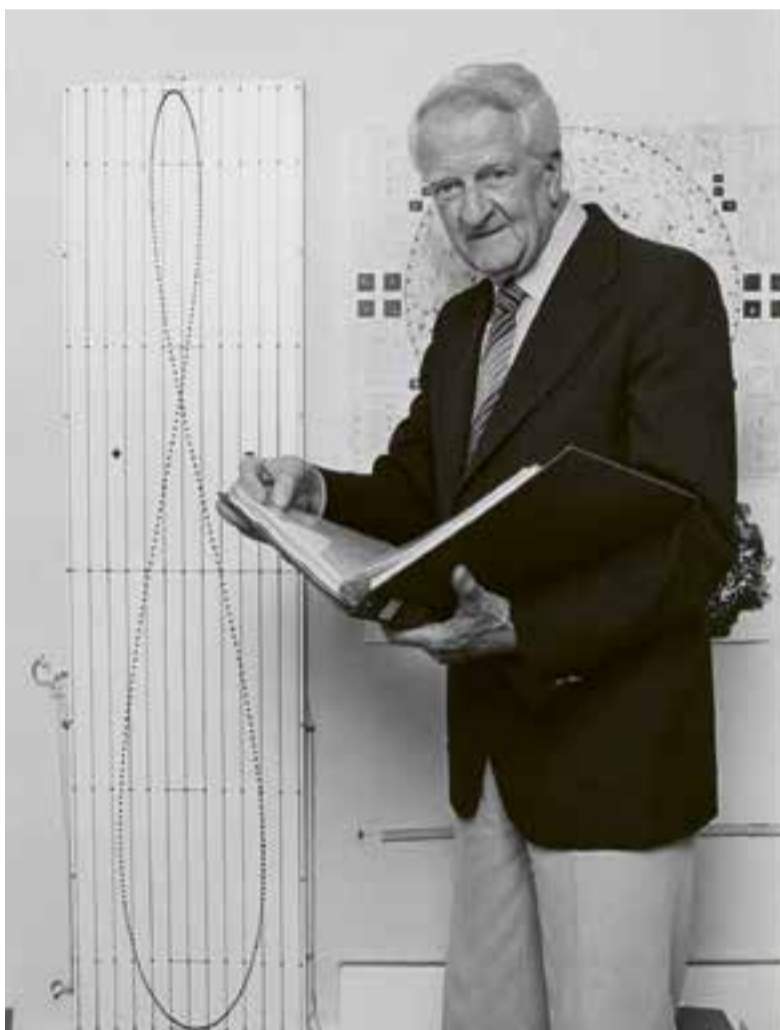
Last but not least to my wife, Anne-Marie, who has helped in so many ways throughout this long project with much patience and forbearance.

Original article published in the Horological Journal in May 2021 and reproduced with the kind permission of the British Horological Institute which is sincerely thanked as well as Sam Law-Bartle, graphic designer, for his precious help.

# The Mindset of the Scientific Watchmaker

BY AUDREY HUMBERT

The scientific watchmaker, as we described in a previous article, is a crossbreed of artist and scientist. From the artist, they borrow the creative mind; from the scientist, methodology. While a contemporary artist engages in a reflexion and produces works that express their sensitivity on the subject, the scientist engages in systematic experimentation with the aim of acquiring knowledge.



Credit: Pierre Bolmer

Xavier Joseph Theurillat, swiss inventor in horology and gnomonics.

The question is to know what characterises the mind of the scientific watchmaker.

## PATIENCE AND RIGOUR ARE CONDITIONS SINE QUA NON

In watchmaking workshops reigns a particular atmosphere, between rigor and calmness. What is the secret of the imperturbable patience of the watchmaker? For many watchmakers installed in the valleys, nature and physical activity seem to act as a catalyst. To spend time in a positive environment that neutralises all negativity is fundamental to attain an inner balance favourable to the watchmaker. Gastronomy is another important element in the life of a watchmaker. Among friends or with family, these are privileged moments during which the latest horological exploits will be evoked. The scientific watchmaker that shares this need for inner balance and conviviality nevertheless distinguishes themselves from fellow watchmakers with numerous other aspects developed into far more heightened traits.



Audrey HUMBERT  
Expert in horology  
and specialist  
in collectible watches

## METHODOLOGY

The scientific watchmaker is characterised by the pursuit of objectives they fix for themselves. They work methodically to resolve horological equations one at a time.

In this quest for constant improvement, they depend upon - though not only - available knowledge. They enrich it with their own conclusions. Restoring antique pieces provides them with solid bases to elaborate their own mechanisms. They confront their ideas with existing solutions, and can therefore anticipate the desired results.

## PERSEVERANCE

Perseverance is another admirable trait of the scientific watchmaker. When confronted with difficulties, they work twice as hard and reiterate their endeavours until they find a solution that answers their expectations. They do not satisfy themselves with intermediary solutions, rather, pursue their work until they attain perfection, if ever perfection there can be.

From the conception of his first travel clock to test the escapement initially invented by Xavier Theurillat, Anthony Randall has brought a succession of improvements to his clocks. Each time, he brought an answer to a lingering problem.



Anthony G. Randall, BSc FBHI.

## A CREATIVE MIND

Renowned watchmakers are often found to be complex people. They lean towards the artist in this sense. In several studies, the creative mind is described as a characteristic that implies a certain number of cognitive processes, of neuronal pathways, and of emotions. The individual gifted with a creative spirit therefore often has more difficulty knowing themselves, due to their structurally more complex personality.

An artist's creativity is at its best when they remain a certain distance from their environment and sees how they can contribute to its improvement. This aspect combined with the previous one strongly impacts the quality of their interpersonal relationships, a consequence that undoubtedly influenced the life of George Daniels, described by some as ruthless, and by others as a gentleman with a brilliant mind. All, however, recognise him for his undeniable talent.

## FROM IDEA TO DESIGN

It is not always easy to perfectly understand a timepiece and grasp all its subtleties at first glance. The fastest and most foolproof way is to receive the adequate explanation from the watchmaker who designed it. In a recent publication, François-Paul Journe explains the path that led him to develop the Centigraphe Souverain. He explains clearly what justifies the choices he made that led him to propose the best version possible of a chronograph that measures 100<sup>th</sup> of a second.

His explanations plunge us into a reasoning carefully elaborated and supported by his observations. Starting from an objective to attain, the watchmaker unites all the elements, one after the other, that will lead to the anticipated result. And when existing solutions do not allow to resolve the equation as established, they innovate.

We now know what defines the mind of a scientific watchmaker. But how is that mindset acquired? Obviously no watchmaking school proposes a course entitled "mindset" or soft skills. On the other hand, passion and an exceptional talent cultivated by relentless work are inscribed in the DNA of the scientific watchmaker.

# Jean-Claude Sabrier Library

## Revue Chronométrique

BY AUDREY HUMBERT

A SCIENTIFIC AND PRATICAL REVIEW DEVOTED TO DEFENDING THE INTERESTS AND THE PROGRESS OF THE ART OF HOROLOGY, PUBLISHED FROM 1855 TO 1914 AND BOUND IN 27 VOLUMES

Founded in 1855 by Claudius Saunier, the *Revue Chronométrique* is a review that today would be called collaborative. In his foreword, Saunier invites all those who wish to share their horological knowledge to do so, as long it is done with the utmost seriousness. The *Revue Chronométrique* is certainly the most captivating book I have ever had the opportunity to examine.

In its pages one finds unexpected and sometimes humorous anecdotes, practical information, problems and their solutions or tentative solutions... The subject of chronometry is, of course, the common thread, with a section being devoted to it, as well as one to escapements (Fig. 1). One follows the development of electric horology and the ongoing progress made in the unification of time.

One picks up useful bits of information, such as, for example, the various customs tariffs applied to horology.

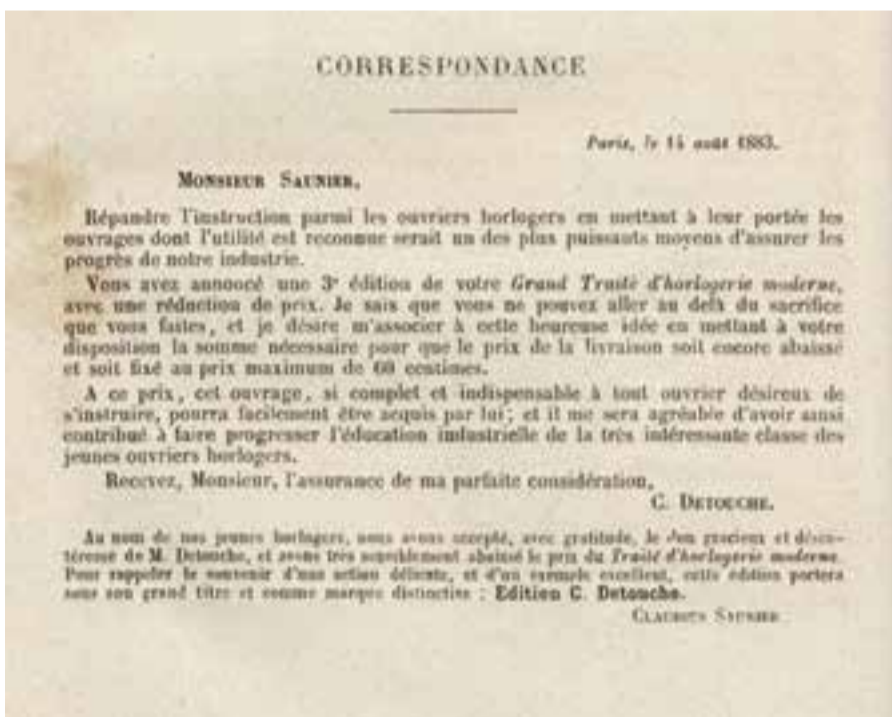
### COMPETITIVE INTELLIGENCE

Since French hegemony was threatened, competitive intelligence was implemented. Switzerland and England were particularly monitored. The relations between the principal horological poles are made clear: among other places, Cluses, Besancon and La-Chaux-de-Fonds are repeatedly mentioned. One notes the names of Adrien Philippe, Édouard Phillips, Louis Berthoud, Urban Jürgensen, Audemars, Frodsham, Dent, Guillaume, etc.

Some readers take advantage of the correspondence section to comment on articles,



Fig. 1  
Brocot escapement, *Revue Chronométrique*, p.136-137, vol. 1



Correspondence from Constantin-Louis Detouche addressed to the author, *Traité d'horlogerie moderne théorique et pratique*, 3<sup>rd</sup> édition called the "Detouche edition", p.VIII.

while others make contributions sharing their work. The exchanges between well-known horologists are fascinating.

### ACCESSIBILITY OF KNOWLEDGE

The review, written as of the mid-19<sup>th</sup> century, is more accessible than older works by Berthoud, Janvier, and Breguet.

Those texts are often hand-written and worded in antiquated language, and the basic horological principals they discuss had not yet been completely defined. For example, the term "constant force" first appears in the 19<sup>th</sup> century, rather than the 18<sup>th</sup> century.

It is thus necessary to take a few precautions in order to avoid faulty interpretation of the texts. Spelling can vary for the same name, giving the impression that one person is in

fact two different individuals. Certain horological terms have since evolved or become obsolete.

The review was published monthly in small booklets that were meant to be bound together to form volumes. In 1914, a subscription cost 6 francs per year (8 francs for those residing abroad). It was not a money-making venture but was rather intended to help spread knowledge.



The escapement of M. Robert (from Sancerre), *Revue Chronométrique*, p.153, vol. 1

### Claudius Saunier French Watchmaker

He was born in Mâcon on 17 April 1816 and enrolled in the Horological School founded in 1830 in his native city. He served his apprenticeship in Switzerland after the school closed in 1836, gaining practical experience and a great deal of technical and scientific knowledge. In 1841 he returned to Mâcon, where he reopened the School of Horology. That school closed again, in 1848.

At that point Claudius Saunier decided to pursue his horological career in Paris. In 1849, he began taking part in the Exhibitions of the Products of French Industry. In 1844, he was awarded a bronze medal for tools he exhibited. In 1855, he published *Le Traité des Échappements et des Engrenages* and created the *Revue Chronométrique*. The Société des Horlogers was founded, at his instigation, on 16 December 1856. According to Constantin-Louis Detouche, Claudius Saunier devoted much of his career to promoting knowledge among horological workers, making important books available to them (see illustration above).

For a complete biography, see *Revue Chronométrique*, Year 42, n° 482, November 1896, p.165.

The principal goal was to help French horology maintain the level of excellence it had previously achieved, in the face of cheaper competition, particularly from England and Switzerland.

A.H. Rodanet took over the direction of the review after the death of C. Saunier, and later, J. Auricoste, who was a member of the Editorial Board.

# Astronomical Horology in the Age of the Smartphones

BY DAVID OHOKRON

Since our telephones offer all imaginable astronomic indications, it is worthwhile to remember the importance of gear trains and the technological journey that allowed us to reach our current state of technical knowledge. For horology is also the memory of traditional gestures and knowledge; it is a formidable cultural vehicle.

We have the world at our fingertips. A tactile screen contains the knowledge of the entire world. It is a complete, interactive encyclopaedia that is capable of calculation. With a smartphone, we can explore the universe in myriad ways. We can learn the rhythms, paths, and positions of the stars that light up our nocturnal horizon. Astronomy, which was long considered the most noble and complex of sciences, has been demystified, rendered obvious. Even Copernicus could not have dreamed of such a thing.



Galileo (1564 - 1642)

## SCIENTIFIC CULTURE

We can have the world at our fingertips. Behind a tactile dial resides a wealth of horological knowledge. Horological science, now perfected, that is interactive and capable of calculation. With an astronomical watch we can examine diverse aspects of the universe. We can determine the rhythms, trajectories, and positions of the stars that compose our nearest night-time horizon - the most important and the most classical. The indication of astronomical phenomena, long the noblest and most complex of all the branches of horology, remains the culmination of complexity and beauty. It is the synthesis of hundreds of years of history, patient research, experimentation and success. Galileo would have wept for joy.

## A REFLECTION OF ITS TIME

The pathway is as important as the goal. It is perhaps less crucial to perfectly trace the trajectories of the stars than to experience the

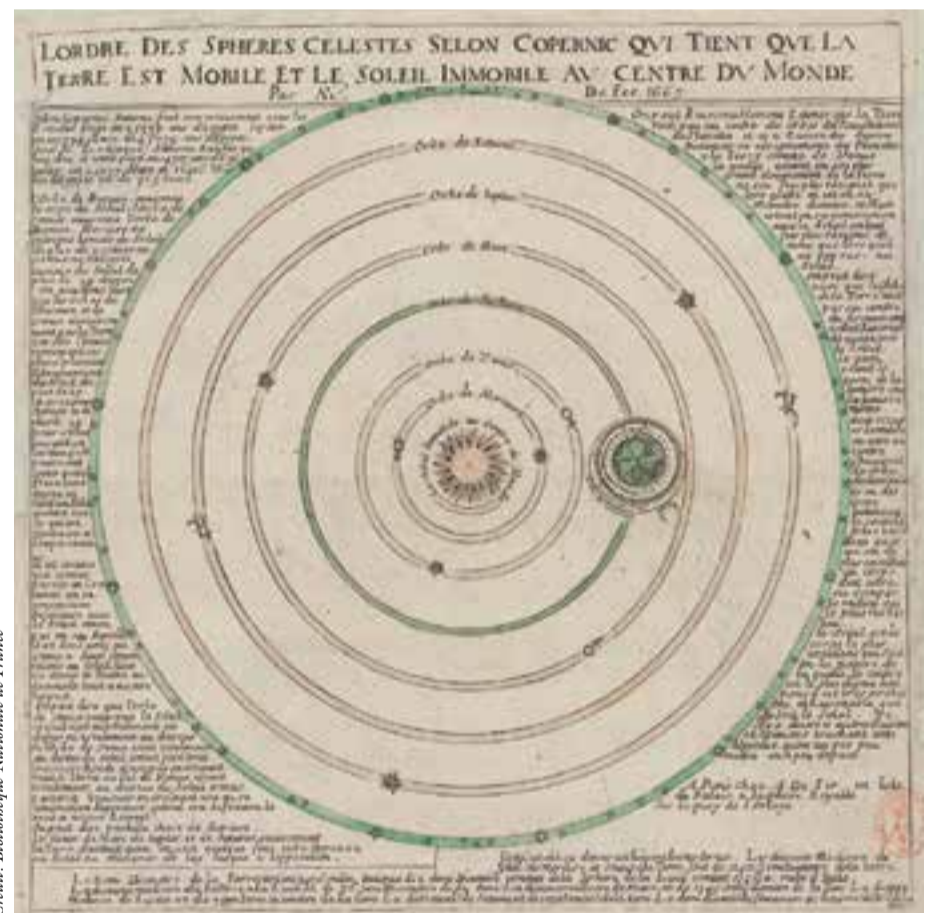
striving for culture and scientific knowledge that astronomy has never ceased to generate. Possessing access to information counts as much as the means that created it. Horological pieces with complications, and particularly astronomical horological ones, move us because they represent a concentration of humanity. They embody the doubts, mistakes, trials and errors of its time, and thus constitute a reflection of the period. During the Age of Enlightenment, the nearly schizophrenic desire to reconcile science and faith, God and mathematics, led to the idea of a divine and supreme architect. Because he produced mechanisms so perfect they governed the entire universe, and so regular they were compared to gear trains, this Creator was considered a great clockmaker.

## BEYOND MESURE

Then, during the 19<sup>th</sup> and 20<sup>th</sup> centuries, the perception of horology changed. Due to its mechanical nature it came to be thought of as cold and unbending. Precision, both in terms of rate and methods of fabrication, came to be seen as the enemy of emotion. Watches were reduced to their capacity of measurement. And yet they could not be further from this



Device showing the Copernican system, ca 1725.  
Credit: Bibliothèque Nationale de France



Credit: Bibliothèque Nationale de France

The order of the celestial spheres according to Copernicus who holds that the earth is mobile and the sun motionless at the center of the world, by Nicolas de Fer (1646-1720), King's Geographer.

strictly metrological definition. A watch, by nature, is warm and alive because it concentrates the essence of the infinite number of hands, eyes, and minds that made it, as well as the research carried out and the care taken during its execution. Subsequently, and perhaps ironically, electronics took on the role of the cold monster that held infinite possibilities but was devoid of meaning and human sentiment.

## THE GOAL IS THE PATH

To teleology, haute horology added epistemology. The smartphone, apps, and modelisation are representative of that science of goals, instantaneous results and ease of use. However, the object that has been invented and fashioned - *Invenit et Fecit* - bears the marks of its long process of development.

This dense mass of human genius embodies the science of "making". This is why the astronomical watch proves the importance of the equation of time, sidereal time, the ephemerides, and humans who turn their eyes to the sky in search of answers.



David OHOKRON  
Journalist specialized  
in horology

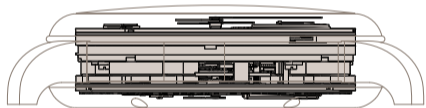
# The Astronomic Souveraine

## A Cosmic Opera

BY VINOENT DAVEAU

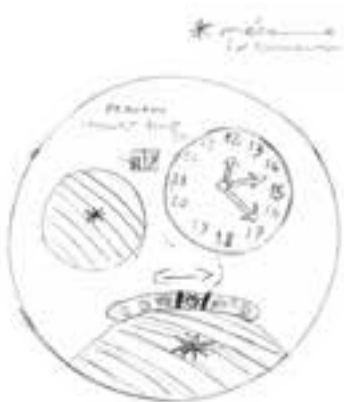
For a long time, the heavens were the most precise of clocks. François-Paul Journe took up the challenge of revealing the full glory of their mechanical logic. He now celebrates their magic with the Astronomic Souveraine, the most complete of all the grand complication watches created by him. Its principal functions deserve a closer look.

This 44 mm diameter steel watch with an 18 carat rose gold manual-wind mechanical movement, which is regulated by a tourbillon with remontoir d'égalité to ensure chronometric precision, may be seen as a veritable ode to the cosmos. Including eighteen functions and rare complications this timepiece, only 13.70 mm thick, was unveiled in 2019 in an avant-première in Tokyo. Today only a



Case in Steel  
44 mm diameter

very small number of examples are produced each year in the manufacture's workshops in the heart of Geneva. The watch is meant to permit poets, sailors, travellers, and astronomers to contemplate the stars for their own personal pleasure, while also allowing them to apprehend time acoustically, according to their desire. We will not here repeat yet again the story of the origins of this project, whose prototype was donated to the 2019 Only Watch sale by F.P.Journe. Everyone knows that this fundamentally scientific garde-temps bears testimony to the close relationship between François-Paul and his son. From its be-



Charles Journe's drawing  
2004

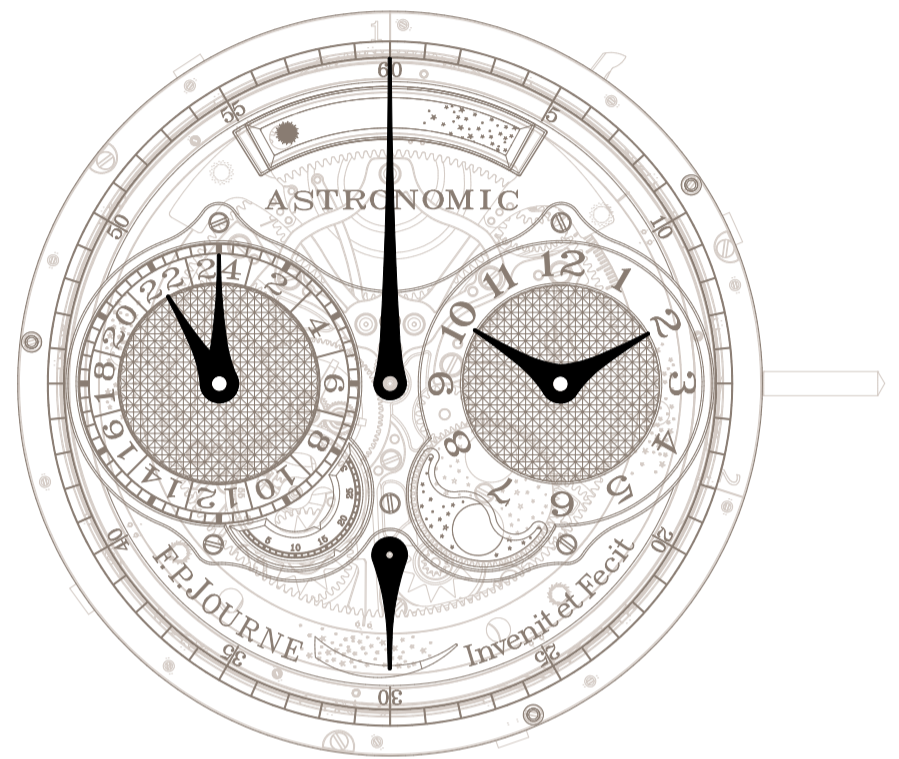
ginings, with the drawing of a dial done by Charles, the project required that his watchmaker father spend over six years in intense reflection before it could be made.

### SIDEREAL SYMPHONY

This garde-temps, inspired by a unique pocket watch with planetarium that François-Paul created in 1987, conveys a great quantity of complicated information. In order to endow it with sufficient autonomy François-Paul finally chose to use a remarkable mechanical calibre with manual winding that employs two barrels - reference 1619.

This was necessary to ensure 40 hours of power reserve for this series-produced instrument. This stored energy, once the mainsprings are fully wound in their respective niches via 34 turns of the crown at 3, is used to power the classic time display as well as the numerous astronomic complications, which - a horological rarity - are all set via the winding crown. And what about the minute repeat? As experts know, the energy necessary to drive the feelers, racks and hammers that command the chimes as the hours, quarters, and minutes are sounded on demand, comes from an additional spring that the user winds when activating the slide with his fingernail.

In all, this reference encompasses 18 functions and complications, with 758 components, not including the case, dials, and hands. However in order to attain this number, each piece of information had to be sequenced. Thus, civil time, as it is usually called, requires four distinct functions. The gilt hour hand that appears at 3 in the "clou de Paris" decorated sub-dial indicates civil time over the course of 12 hours while the blued coaxial hand indicates the time in a second time zone. As for the minutes, they are indicated "universally" by the central hand, which is also gilt. As befitting a chronometer, the natural dead-beat seconds appear on a rotating disc that makes one jump per second in an aperture at 7. Then, since the watch is essentially devoted to cosmic time, the sidereal hours may be read in the 24-hour graduated sub-dial at 9. Invisible at first glance, their duration differs very slightly from mean solar time by a few minutes each day (exactly 4 minutes and 56.56 seconds). This indication, though quite useful for astronomers, measures an angle - in other words, the movement of the celestial vault in a particular location, as compared with the local meridian.



François-Paul Journe's drawing  
2019

### HEAVENS, IT'S LATE

To ensure chronometric precision for this completely novel movement regulated by a tourbillon, the energy provided by the two barrels is transmitted by a remontoir d'égalité, in order to guarantee that the regulating organ is always totally isolated from differences in torque due to the power variations as the indications change. In addition, to make life easier for users this exceptional calibre, 37 mm in diameter and 9.30 mm thick, is provided with an annual calendar with date. In other words, its mechanism allows the date to pass automatically from months with an even number of days to those with an odd number, except for the passage from February to March, which must be manually adjusted. Thanks to its mechanical "calendar memory", which is displayed on the back of the case in order to preserve the symmetry of the dial, the watch shows the daily times of sunrise and sunset in a small aperture at 12. For this purpose, small sliding metal shutters at each of the extremities adjust the length of the days and nights in the delicate semi-circular opening, taking into account the season and the owner's place of residence. The Moon, a pendant to the Sun, is depicted in a hyper-realistic style based on a NASA photograph. It goes through its cycles, sliding with great precision in an aperture near the sub-dials for civil time and the second time zone. Lastly, because the



Vincent Daveau  
Journalist specialized  
in horology



*Astronomic Souveraine  
Ref. AST*

**Specifications of the Calibre 1619**

*Date, annual calendar - Equation of time - Double barrel - "Remontoir d'égalité" - Tourbillon 60 seconds - Minute repeater, strike the hours, quarters and minutes - Small second by disk  
Power reserve - Moon phases in sapphire glass - Hours and second time zone at 3 o'clock - Minutes in the center - Sidereal hours and minutes at 9 o'clock - Sunrise and sunset - Day/Night in sapphire glass  
All corrections by the crown.*

fortunate wearer of this marvellous watch will need to know the state of winding of the two barrels, which offer 40 hours of optimal functioning, François-Paul Journe added a sectorial power reserve indication with pointer, symmetrically placed at 6 o'clock.

**THE POWER OF THE ZODIAC**

The watches of the Renaissance and the 17<sup>th</sup> century, being veritable instruments of power, often accorded great importance to the zodiacal calendar, for in those days no real distinction was made between astronomy and astrology. Here it is combined with the civil calendar whose indications are given by a pointer that appears to be floating on the dial. At a single glance, it shows the date and the adjacent month and zodiac sign for the

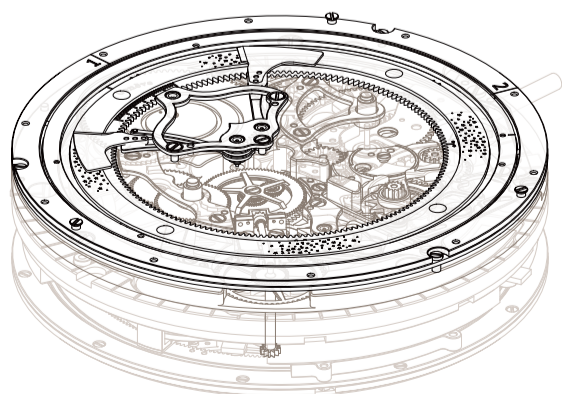
current day. One might think that such a collection of complications would have been quite sufficient, for most of the information required both by civilians and scientists is available on one or the other of the sides of this wristwatch. However there is one further, essential piece of information that is useful for anyone interested in astronomy and sea voyages - the one usually called equation of time. Knowing exactly how useful it is, François-Paul Journe gave it a central position in this astonishing horological creation. Thus one discovers, under the sapphire glass, a long blued-steel hand that indicates the number of minutes that must be added or subtracted from mean, or civil, time in order to obtain true solar time. This enhances the poetic character of the watch, while also serving the cause of astronomers and sailors, who, like

the navigators of the ancient world, wish to calculate longitude at sea using just a marine chronometer and a sextant.

The fascinating and remarkably well-balanced Astronomic Souveraine, which represents the quintessence of technology and miniaturisation as well as forming a kinetic bridge between past and future, is a grand complication watch designed by its creator in order to reveal the intense magic of pure mechanism when it is devoted to science.

Celebrating celestial time, while also offering the choice of solar time, local civil time, or that of any other time zone, this important garde-temps also had to allow its wearer to enjoy a musical indication of time whenever he desired. For, as a passionate connoisseur

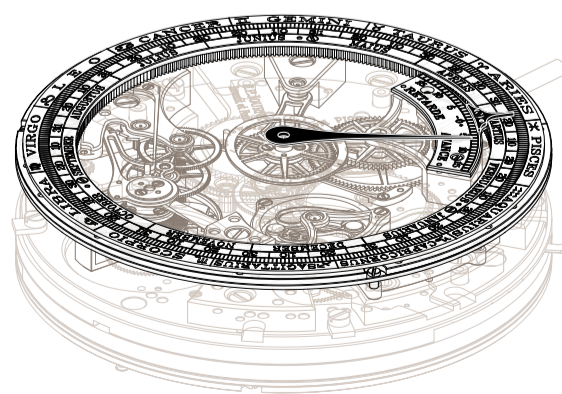
of time measurement, its inventor and maker knows to what extent this means of telling time is historically and indissociably associated with the exercise of power. With this rare musical complication, coupled with the civil time of the place of reference (gilt hands) one can observe, on the watch's back, the flywheel with its inertia weights, whose purpose is to silently regulate the speed of the hammers' strike. To set it into motion, one simply activates the repeat slide located on the left side of the watch. As an homage, the name of astronomer Nicolas Copernicus (1473-1543) who proposed a heliocentric theory of the universe, adorns the back of the reference - a reference that merits all possible superlatives due to the unique approach that governed its conception, and one that is practically unique today.



*Calibre 1619  
manual winding  
18K rose gold.*

*Dimensions  
overall height: 9.30 mm  
overall diameter: 37 mm*

*Number of parts  
758 pieces*



# The Chronometric Trilogy of F.P. Journe

BY OSAMA SENDI



*Calibre 1304  
in 18K rose gold with manual winding,  
total thickness: 4.00 mm.*

In today's modern world of mechanical watches, one cannot argue against the fact that the mere function and need of such watches is obsolete. With the introduction of quartz movements in the 1970's and the advanced methods of timekeeping found on a typical smartphone, the pursuit of perfecting timekeeping through mechanical gearing finds itself rather pointless. The reality of 21<sup>st</sup> century watchmaking is that it is a world of pure art, not so much of function.

However, that was not always the case, and if we were to go back roughly 200 years, we would find ourselves in the 18<sup>th</sup> century, often referred to as 'The Golden Era of Watchmaking'. It was at the height of the 18<sup>th</sup> century where we found horology's most notable names flourish; Breguet, Berthoud, Janvier, Lépine, Le Roy, and John Harrison; to name a few.

Thus, the question arises as to what has changed in the span of 200 years and why was the 18<sup>th</sup> century a remarkable turning point in the history of watchmaking. Simply put, while today one would direct their attention to a smartphone to track the most precise time; in the 18<sup>th</sup> century a clock or watch was the only way with which to tell time. A clockmaker or watchmaker was not simply that, but the 18<sup>th</sup> century placed such a profession at the absolute necessity of civilization's advancement.

One could not possibly solve or work out scientific observations without the use of a precise timekeeper. Horologists at the height of the 18<sup>th</sup> century were not mere aesthe-

tic designers, but they were obliged to be watchmakers and scientists, finding solutions to problems that affected precision timekeeping, opening the doorway to the specialty of "Scientific Watchmaking."

As the centuries progressed, the necessity of pursuing scientific watchmaking declined, and understandably so. To succeed at such a watchmaking genre, one must be able to flush out modern distractions; living and working as if they literally were still in the 18<sup>th</sup> century, identifying problems and solving them. Perhaps the most influential horologist to bring back scientific watchmaking was Dr. George Daniels, who in the late 20<sup>th</sup> century brought back the craft of mechanical watchmaking and reintroduced the art of hand making a mechanical watch, and further improving its functionality with the co-axial escapement.

Indeed, it was George Daniels' work that inspired another young, recent graduate watchmaker in the late 20<sup>th</sup> century, François-Paul Journe. Only in his 20's at the time, François-Paul would go on to study the art of making a timepiece by hand, as compiled by George Daniels' book, and would complete his very first timepiece at the start of 1983, a tourbillon pocket watch.

Inspired by the works of the 18<sup>th</sup> century, François-Paul Journe would build up his entire career under the umbrella of continuing the works of the early masters, following the line of inertia in the history of watchmaking; still working as if a mechanical watch was the only way with which to tell time. With the launch of his brand, "F.P. Journe Invent

et Fecit", in 1999, he further cemented the values of "Chronometry" (the creation and development of precision timekeepers) as one of the pillars of his brand, with some exceptional highlights throughout the course of the brand's history.

## CHRONOMÈTRE SOUVERAIN (2005)

As mentioned earlier, François-Paul Journe heavily draws inspiration from the 18<sup>th</sup> century's age of scientific timekeeping. While today's more modern trends lean towards the development of numerous complications, the 18<sup>th</sup> century focused primarily on marine chronometry, precisely measuring time in its purest form.

The Chronomètre Souverain is perhaps the simplest mechanical timepiece in the F.P. Journe collection, but it further upholds the subtle message that while a timepiece might look simple enough, there comes a challenge in achieving efficiency with something simple.

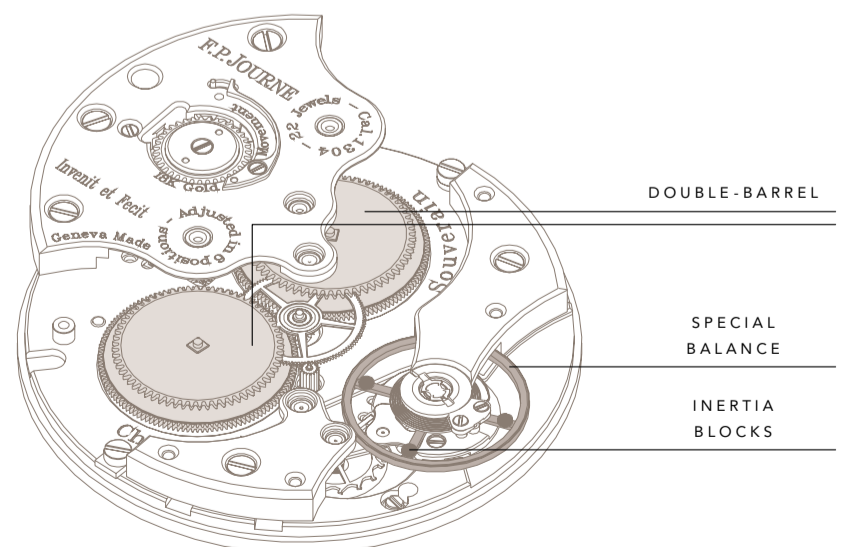
Powering the movement are two barrels which provide around 56 hours of power. One would think that such a result would seem quite poor considering there are two barrels however, the movement's autonomy is not the goal of having twin barrels. There are two ways to mount multiple barrels within a movement. If the barrels are mounted in series one could essentially have two, three, four, or 10 barrels in succession, leading to a longer power reserve. The downside of such an assembly is that, as the power reserve gets longer, and the more barrels are used, it becomes detrimental towards the timekeeping of the watch. This comes as a result of the difficulty in regulating the flow

of energy from the multiple barrels i.e. an inconsistent source of energy.

The barrels in the Chronomètre Souverain are therefore not mounted in series but in parallel. When the barrels are mounted in parallel, the reward isn't a longer autonomy but more importantly, reduced friction (friction is the enemy of precision). By mounting the barrels in parallel, the watchmaker splits the torque on the main center wheel by two, easing the friction on the gear. As a result, the source of energy within the movement becomes incredibly stable, leading to a high level of chronometric timekeeping. In fact, it is due to this simple, yet important, design element that the Chronomètre Souverain achieves impeccable praise for its chronometric performance.

## CHRONOMÈTRE OPTIMUM (2012)

In the late 1980's, François-Paul Journe began to develop the idea of the ideal wristwatch (before the trend of wristwatches); a timepiece that he would make for himself at the time. He envisioned a simple time-only watch with a power reserve indicator, preserving simplicity on the dial (notice the trend of chronometry and simplicity), yet with a movement combining all the ideal recipes that make a perfect chronometer movement. The most distinctive of these elements would be a completely unique escapement that he would develop specifically for this timepiece, his patented high performance bi-axial escapement or 'Echappement BHP'. Since the enemy of precision is friction, the entire development of this movement had one goal, which was to eliminate as much friction as possible. François-Paul achieved his goal by incorporating four key elements in the development of this timepiece.



*The two barrels of this homogeneous movement provide extremely linear energy to the escapement for over fifty-six hours.*



The first of the four elements is the use of twin barrels mounted in parallel. As explained prior, this is a highly effective method to achieve stable power delivery from the barrels of the gear train.

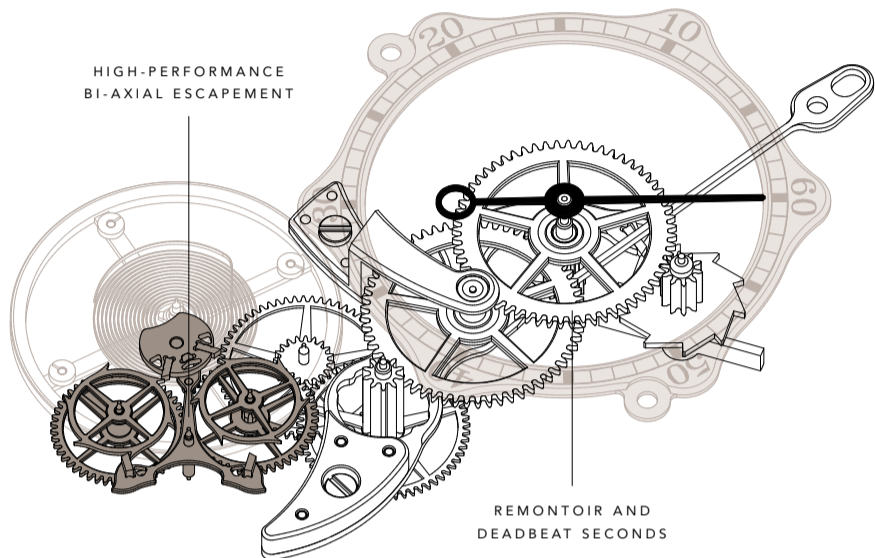
The second element is the addition of his “Remontoir d’Egalité”, a mechanism invented by François-Paul in 1983 for his third pocket watch, and further added to his first wristwatch in 1991. The “Remontoir d’Ega-

The design of François-Paul’s escapement is essentially a mix of Breguet’s “Naturel” escapement, with the Swiss-lever escapement which was self-starting. The result is a patented high-performance bi-axial direct impulse escapement, which is the only one of its kind to start on its own as soon as the energy reaches it.

The fourth element that François-Paul added to the movement lies with the balance spring



**Calibre 1499.3**  
in 18K rose gold with manual winding, total thickness: 4.50 mm.



*The Chronomètre Optimum represents the quintessence of precision for a wristwatch featuring the finest components in the history of horology.*

lité” is essentially an intermediate spring which charges in 1-second intervals, regulating the force as it reaches the escapement, so to keep it always stable. This ensures that the force of energy from the mainspring when it is fully wound is kept the same as it unwinds and weakens.

itself. The Chronomètre Optimum utilizes a Phillips curve with regards to the hairspring, allowing a concentric center of gravity thanks to its three dimensional shape. Such a design element helps the balance spring to ‘breathe’ and achieve better isochronism.

**CHRONOMETRE À RÉSONANCE  
(2000/2020)**

The phenomenon of resonance was first discovered in the history of horology by Christiaan Huygens, a Dutch scientist who invented the pendulum clock in 1656. He observed that when he placed two clocks in proximity, their pendulums would all synchronize.

Later in the 18<sup>th</sup> century, it was Antide Janvier, the great French clockmaker, who first applied the phenomenon into his works. He realized that when two swinging pendulums synchronized, they would achieve a greater precision as their synchronized state would protect them from any outside disturbances.

The phenomenon was further experimented with by Abraham-Louis Breguet, who in the 18<sup>th</sup> century was the first to apply it into pocket watches, in addition to producing two double pendulum clocks.

Not much was spoken about the phenomenon since the 18<sup>th</sup> century until François-Paul Journe encountered one of Breguet’s clocks in the early 1980’s as a restoration project. Fascinated by the phenomenon, he made his first attempt to adapt it into a pocket watch in 1983, which was never quite successful. Determined to not accept defeat, he kept the idea developing in his head before tackling it again in the late 1990’s, though this time in a wristwatch to address the modern trends.

He finally succeeded and in 2000, he presented the F.P.Journe Chronomètre à Résonance as the world’s first wristwatch to adapt the natural phenomenon of acoustic resonance to improve its chronometric timekeeping. So what is resonance and how does it work? In short, when two objects vibrate at the same frequencies and are in close proximity to one another, they will enter into a state of resonance, synchronizing their motion. In the case of a pendulum clock, the pendulums in resonance would naturally have them swing in opposite directions.

In a wristwatch, two balance wheels in resonance will naturally have them oscillate in opposite directions. Being that the two balance wheels are in resonance, if one accelerates in one direction, the other will slow down in the opposite direction, as they both try to come back to a synchronized state. The benefits of

such a phenomenon in a wristwatch are tremendously advantageous. If the wearer of such a timepiece was to move his arm in one direction, the disturbances of that motion are effectively cancelled out due to the two balance wheels cancelling the effects of each other. In a sense, the Résonance wristwatch is the only watch that was purposely adapted to being worn on a wrist.

In 2020, F.P.Journe celebrated the 20<sup>th</sup> anniversary of the Chronomètre à Résonance with the introduction of an entirely new resonance caliber. One must understand that it is quite difficult to achieve resonance within a wristwatch due to the energy transfer within a small movement, in comparison to a clock. Aside from the challenging task of regulating the two balance wheels to a rate not exceeding +/- 5 seconds per day across 6 positions, individually and combined (it’s a pain of a task), it is an even greater challenge to make sure that there is nothing in the movement that would impede the flow of energy to the balance wheels (such as poor oils).

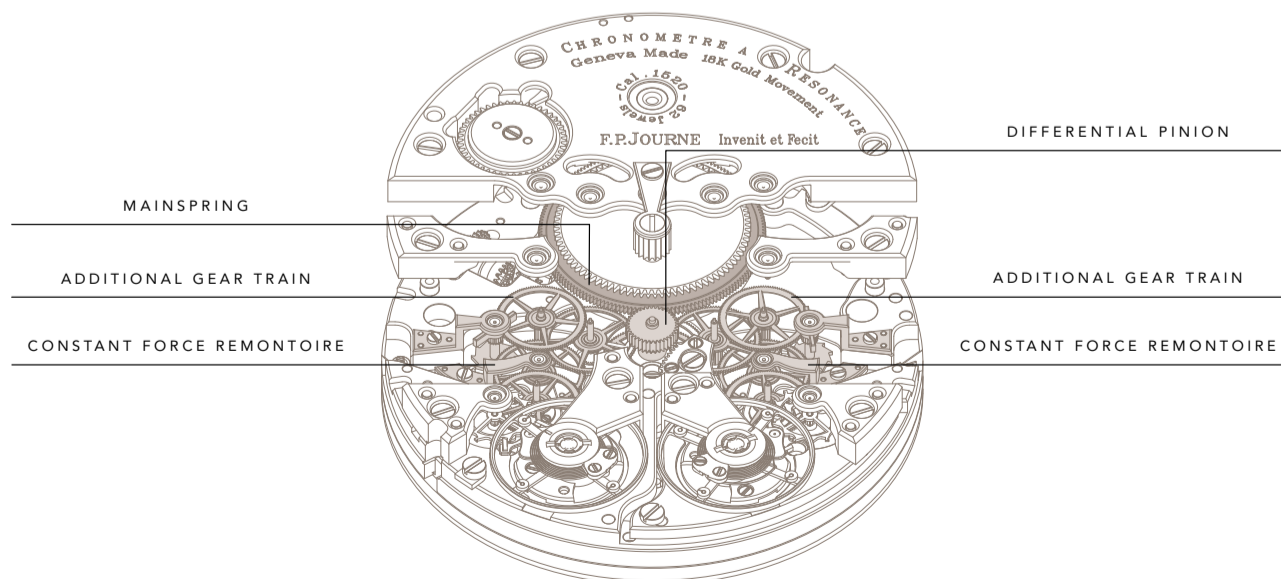
The latest resonance caliber 1520 improves upon the previous firstly by the use of a single barrel powering the two gear trains via a differential, equally splitting power, as opposed to two independent barrels. Furthermore, each gear train has its own “Remontoir d’Egalité”, the constant force mechanism found in the Chronomètre Optimum, ensuring a constant flow of energy to the escapements for the first 28 hours of power (out of 42 hours of total power reserve). These two elements combined aim to ensure undisturbed and equal energy flow to the escapements.



**Calibre 1510**  
in 18K rose gold with manual winding, total thickness: 5.80 mm.

The third element, and perhaps the most important, is that of the escapement, and more specifically the need for lubricants and their volatility. The problem with lubricants is that when they break down, they become a source of friction which leads to a loss in performance. The solution was to eliminate the need of any lubricants, by completely re-designing the traditional escapement.

Inspired by the works of Abraham-Louis Breguet, François-Paul opted to solve the problem by using two escapement wheels. Having two escapement wheels allows you to divide the friction by two, which at the small level of a movement makes a huge difference. By doing so, one does not need any lubrication since the escape wheels are merely only being caressed rather than rubbing against the pallet jewel.



*Utilising the natural phenomenon of resonance, this mechanism has revolutionised the current standards, and offers a degree of precision that has not yet been equalled.*

# Completing the Vagabondage Trilogy

BY OSAMA SENDI



**Carpediem Watch**  
Yellow gold case, 36 mm diameter, revolving dial in guilloché Silver with jumping hours by aperture and minutes indicated by a gold arrow, visible balance in the center of the dial.

Amongst the already limited production of F.P.Journe timepieces lies a trilogy of limited series timepieces appropriately called the Vagabondage, a name derived from the means of telling time by wandering hours. Its story dates back to 1995, when a close friend of François-Paul Journe proposed the idea to him in hopes that François-Paul could develop a unique timepiece for him with a more unusual way of reading time.

It was in 1997 when François-Paul finally presented his friend with the completed project, a unique timepiece with a unique movement in a round yellow gold case, named the Carpediem. The Carpediem featured a dial with a wandering jump hour display around a central exposed balance wheel, powered by an automatic movement.

At the time, aside from being an independent artisanal watchmaker, François-Paul's main work was in developing movements and creating timepieces behind the veil of larger manufactures' names. One of his proposals was a wandering hours wristwatch,

almost mimicking the dial of the Carpediem but now redesigned to be cased in a Flat Tortue case, and with a manual movement. The proposal quickly caught the attention of a leading luxury watch brand who opted to include it in their offerings as a limited collection, before cancelling and leaving François-Paul to take the project, and a recently completed prototype, back to his drawer.

By 2003, François-Paul had already launched his brand, F.P.Journe, and was exclusively creating all his timepieces under his brand name. It was then when the Antiquorum auction house was celebrating their 30<sup>th</sup> anniversary and planned to hold a 30<sup>th</sup> anniversary charity auction. They approached François-Paul in hopes that he would create a unique timepiece for the auction which he agreed to do so, except with one major obstacle; he had to develop something entirely new in only six months.

Seeing it impossible to come up with something new in only six months, he thought to perhaps work on one of his existing projects of the past, in this case the Vagabondage prototype that was cancelled a few years earlier.

For the 30<sup>th</sup> anniversary auction, three unique Vagabondage timepieces were presented, one with a rose gold case, one in yellow gold, and one in white gold; all with brass movements. The timepieces were further engraved around the balance wheel bridge with the occasion of their sale. The unique timepieces sold for multiples of their estimates, despite the slow recognition at the time for a relatively young and growing manufacture.

Following the success of the auction, François-Paul received constant requests to add the model to his production, to respond to a larger audience of collectors and friends. He agreed to do so but with a strictly limited production, as the timepiece was quite a departure from the aesthetics of his works at the time.

Thus, in 2004, the Vagabondage I was the first timepiece of the Trilogy with a limited

production of 69 platinum cases with rose gold movements. In addition, a further 10 cases were made with platinum set with baguette diamonds. The pieces were not engraved with the brand's name anywhere on the dial as François-Paul did not find the writing attractive on the dial, a characteristic he would carry on throughout the entire Vagabondage trilogy.

During the official presentation of the Grande Sonnerie in New York, François-Paul stumbled upon a watch from the Steel Time Collection that had a digital jump hours and minutes which he found rather interesting. It was then that he decided to develop the Vagabondage as a series of models, all with unusual wandering, digital time displays.

In 2010, he released the second of the series, the Vagabondage II, with a digital hours and digital minutes time display. In keeping with the stylistic trademark of its predecessor, the Vagabondage II was cased in the same Flat Tortue case, although slightly larger to accommodate its new movement.

Further, since the brand was more recognized in 2010, François-Paul decided to produce an additional 68 pieces in 6N gold, in addition to the 69 cases he would make in platinum, hoping once again to cater to a now growing community of collectors. Additionally, owners of a Vagabondage I were offered the same serial number for the Vagabondage II, if they were interested in collecting the serials together.

2017 saw the debut of the last of the series, and a world premier, the Vagabondage III, now with a digital hours and digital seconds display, the latter function never before developed in watchmaking due to its demanding complexity. In tradition to the trilogy, the timepiece was once again housed in a Flat Tortue case, with an all-exclusive movement. Following the production plan of its predecessor, the Vagabondage III was limited to 68 in 6N gold, in addition to the 69 platinum pieces. Once again, François-Paul offered first allocations to existing owners of the Vagabondage II, with matching serial numbers.



*Vagabondage I*  
Jumping hours and minutes  
indication by aperture,  
calibre 1504.2 in 18K rose gold,  
manual winding.

Upon the presentation of the third and final Vagabondage, and the completion of the trilogy, François-Paul realized that only two of the Vagabondage models were made in a limited production of 68 pieces in 6N gold. The first Vagabondage was only ever produced in platinum, and never with a gold case, leaving collectors of the gold pieces with a missing piece in their set.

As a result, he decided to complete the gold set of the trilogy with a series of 68 Vaga-

bondage I. With a gap of roughly 18 years since the release of the first Vagabondage, this latest iteration with a 6N gold case is not an exact copy of the first, with some notable, but important changes adapted to F.P.Journe's more modern era.

To start, the movement of the latest Vagabondage I is vastly different, updated to today's modern realizations of F.P.Journe and perfected with the experience of the brand over the past 18 years. As François-Paul says,

“The first Vagabondage can be considered as a prototype at the time. We now have the experience to make a better, more reliable caliber and so the movement is a new and more updated movement compared to the first attempt. The first was calibre 1504 and this new one is 1504.2.”

Further adapting to F.P.Journe's modern standards is the case size itself. Of the three Vagabondage models, the Vagabondage I had the smallest case in comparison to its succes-

sors, as it was developed and released when F.P.Journe's offerings were housed in relatively smaller case sizes. The reworked version in 6N gold now features a larger case measuring 45.2x37.5 mm as opposed to 41x34 mm; with a height increase of 0.9 mm.

As with previous Vagabondage allocations, the latest and final of the series will be sold via application, with a priority given to collectors with matching serial numbers of the Vagabondage II and III 6N gold timepieces.

“The first Vagabondage can be considered as a prototype at the time. We now have the experience to make a better, more reliable caliber and so the movement is a new and more updated movement compared to the first attempt. The first was calibre 1504 and this new one is 1504.2”

FRANÇOIS-PAUL JOURNE

*Vagabondage II (left)*  
Jumping hours and minutes by apertures, small second and power reserve,  
calibre 1509 in 18K rose gold, manual winding.

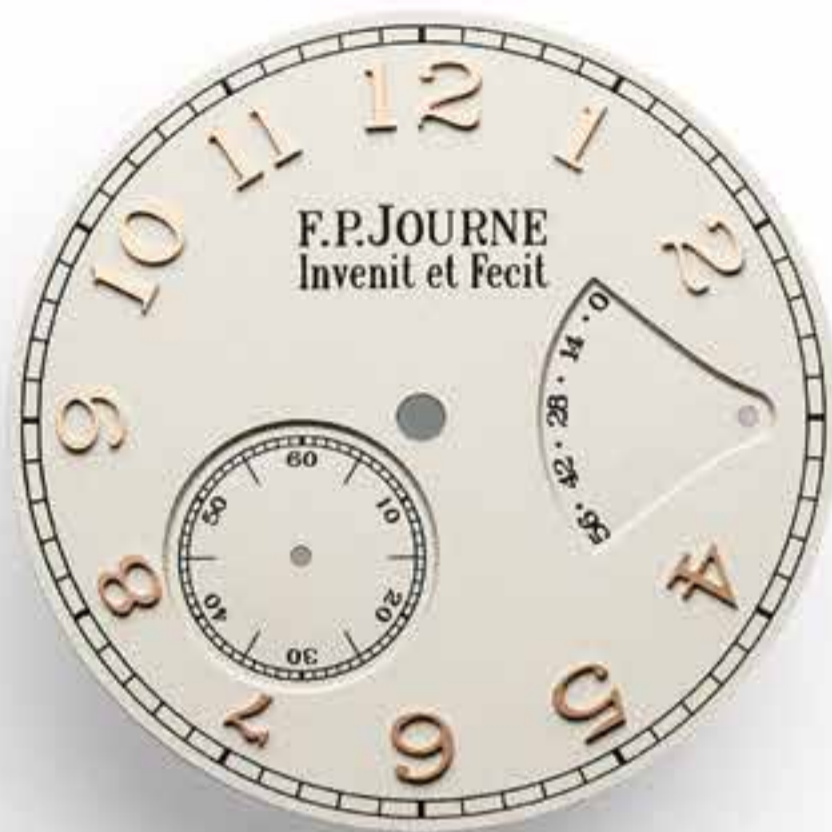
*Vagabondage III (right)*  
Jumping hours and seconds by apertures, minutes by central hand and power reserve,  
calibre 1514 in 18K rose gold, manual winding.



# The "Métiers" at F.P.Journe

## The Art of Applied Numerals

BY OSAMA SENDI



*Dial of the Chronomètre Souverain in whitened silver with applied mirror-polished numerals in 5N gold.*

The process of designing and developing a timepiece takes many years from start to finish. From the moment an idea first plants itself in the mind of François-Paul Journe, it generally begins by addressing a problem and working out a solution, slowly unraveling the technical challenges of the movement and what it would be able to achieve.

Once François-Paul has a general idea of what the timepiece would come to be, his very first step in its creation and development is its design. Unlike the commonly approached method of designing a movement and then dressing it up with a dial and case, François-Paul ALWAYS begins with the dial of the timepiece. To him, the dial is the single most important design element of a watch; rightfully so as it is the very first detail of a watch that meets the human eye.

As a result, François-Paul begins all his watch developments by sketching a dial onto a blank sheet of paper. Since he has already matured the idea in his mind for years, he always sketches with a pen knowing precisely what he wants to achieve. Once the dial of the watch is completed, then comes the major challenge of developing a specific movement that would

bring the dial to life. This method is contrary to others but for François-Paul, it is the most logical approach, especially for a master watchmaker who designs and creates all his timepieces from A to Z. The dial of a watch must portray what lies beneath it, creating a perfect equilibrium and harmonious connection between the dial and the movement.

As important as a dial is to design, so too is its making. Once François-Paul completes his sketches, then comes the challenge of the dial-making ateliers to understand the designer and realize the dial, from its precise texture, depth, hue of its colors, and its various components and delicate natures.

For a small manufacture like F.P.Journe, producing dials for a mere 900 mechanical timepieces a year demands the utmost of care, sparing no room for error. The standards of perfection are incredibly high and as a result, François-Paul has always strived to keep a keen eye on the production of his dials, co-founding his own dial-making atelier "Les Cadraniers de Genève" in 2000, and thus making the production of F.P.Journe dials entirely in-house.

Over the years, "Les Cadraniers de Genève" has grown and improved its own savoir-faire, perfecting and expanding their techniques in the art of dial-making. It is not a mere goal to produce 900 dials but more importantly to make sure that each dial portrays a sense of emotion, expressing a level of appreciation

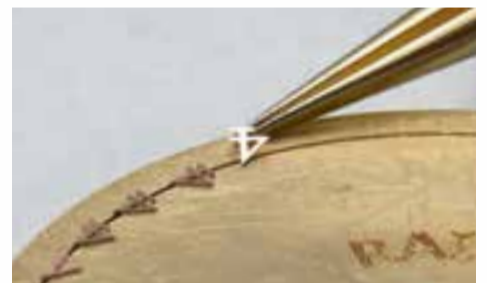
for that which François-Paul has designed and for that which the owner will go on to enjoy and cherish.

### THE ART OF APPLIED NUMERALS

One example of the atelier's exquisite craft can be seen in their use of applied numerals. The Chronomètre Souverain, originally introduced with silver guilloché dials and pad-printed numerals, is also proposed with silver dials and numerals in gold. The numerals are cut and polished with diamond tools and then applied, an entirely in-house process.

The process of making the applied numerals begins with CNC machines, which cut out the numerals from 18K gold. Afterwards, the numerals are mixed with pieces of copper and washed in a special cleaning solution for 30 minutes; a process meant to remove any machining residue from the CNC machines.

Once the parts are washed, they are rinsed and completely dried, before passing through a sifting phase. The artisan must separate the gold numerals from the copper and it starts by using a large sieve to sift the larger pieces of copper. Once the large copper pieces are removed, the artisan then looks through the mix with a keen eye (a loupe) and tweezers to handpick and separate the gold numerals from the mix. Due to the incredibly small size of the numerals, and the deceiving looks of the tiny copper parts, the process can take up



1



2

LUMINESCENT NUMERALS



Centigraphe dial in aluminium alloy with luminescent indexes and numerals.



Positioning of a luminescent numeral on the dial of the Centigraphe.

As mentioned earlier, "Les Cadraniers de Genève" continues to improve upon their own savoir-faire and one of their recent developments is the integration of an in-house 3D Lumi-Blocks department, aimed at creating the luminescent numerals for the lineSport dials.

The process starts with the creation of molds in the shape of the numerals themselves. Once the molds are created, they are filled with the superluminescent material, which acts almost like a silicon and hardens into their respective shapes, before being sanded down to be flush with the mold (ensuring they are all the same thickness).

The artisan then receives the dial which he traces a very, very precise amount of glue to mark where the numerals will be placed. The application of the glue needs to be perfect to avoid excess glue from marking the dial around the numerals. Once the glue is placed, the artisan uses a pad to precisely remove the numerals from their mold directly onto the dial.

The process is quite similar to the pad-printing process also used by "Les Cadraniers de Genève" but instead of lifting paint, the pads lift the numerals and place them onto the glue. Once the glue sets, the artisan checks the dial under a microscope and once satisfied, delivers it to the Quality Control department.

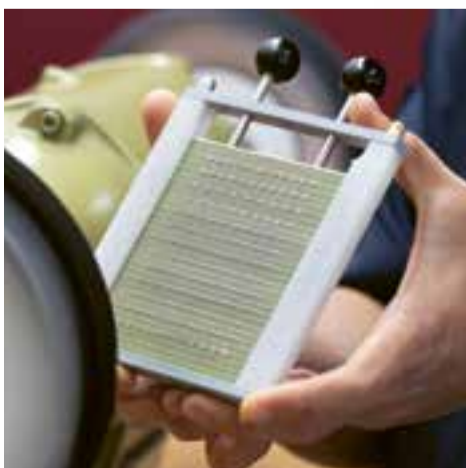
Thanks to Tony and his team.

to two hours, depending on how many numerals are in the specific batch.

After the numerals are all sorted (1), they are then glued (with varnish) onto a brass holder and left to dry for a full day. After the varnish dries, a lathe with a diamond tool polishes the numerals to a flat polish (2), while also removing the layers of varnish that cover the numerals. The artisan uses different diamond sizes depending on the size of the numerals (a set of 1's is thinner than a set of 0's).

After the diamond polish, the numerals are taken back to the washing station where a special solution dissolves all the remaining varnish, over a period of up to three washing cycles. Once all the varnish is removed, the numerals are reorganized and given a final polish (3) before they are placed in sets ready to be mounted onto the dials. Each numeral has a set of "feet" underneath which hold it in place when applied onto the dial. The feet range in diameter between 0.20 to 0.25 mm. An artisan must carefully place each numeral

onto its respected spot onto a dial (4), with each foot placed directly into its respected hole, which is only 0.02 mm larger than the diameter of the feet themselves. Once all the numerals are set, they are secured by bending the feet on the opposite side beneath the dial. The final step is to make sure the bottom of the dial is completely flat, so as to not interfere with the movement components beneath the dial. This is done by sanding down the back of the dial.



Dial of the Chronomètre Souverain in whitened silver with applied mirror-polished numerals in 5N gold.

# Young Talent Competition 2021

Since 2015, the Young Talent Competition helps discover the next generation of most talented young watchmaking apprentices in the world and supports them in their route to independence by identifying their achievements and putting them under the spotlight.

F.P.Journe organizes the Young Talent Competition with the support of The Hour Glass Singapore, luxury watch retailer in the Asia Pacific region. Both Maisons aim to perpetuate and support the art of haute horology and cultivate the appreciation of horological craftsmanship.

François-Paul Journe says: *“It is imperative for me, not only to discover the horological talents of tomorrow but also to secure the continuation of independent haute horology and pass on my savoir-faire with over 40 years of expertise. It is also a real honor to*

*encourage these young talents by sharing my authentic horological knowledge, my passion and my determination on a daily basis. And also to support them as I received support at their age.”*

The jury of the Young Talent Competition is composed of key personalities from the international horological scene: Philippe Dufour, Giulio Papi, Andreas Strehler, Marc Jenni, Michael Tay, Elizabeth Doerr and François-

WITH THE SUPPORT OF:

  
THE HOUR GLASS

## Mario Scarpatetti, the 2021 winner, at the workbench as he constructs his **Kalendar Perpeten** clock with perpetual secular calendar.

The 2021 winner, Mario Scarpatetti, received his award on May 26<sup>th</sup> at the F.P.Journe Manufacture. He received a diploma and a 20,000 CHF grant from The Hour Glass Singapore and F.P.Journe which allows him to purchase watchmaking tools or finance a horological project.

Paul Journe. Their selection criteria are based on technical achievement, the search for complexity in their realization and their sense of design and aesthetics.

*Mario Scarpatetti*  
Winner of the Young Talent Competition 2021.



## Kalendar Perpeten Movement with secular calendar based on his patented invention

**Mario Scarpatetti - 29 ans - Parsonz - Switzerland**  
Graduate from the Zeit Zentrum Grenchen - July 2012

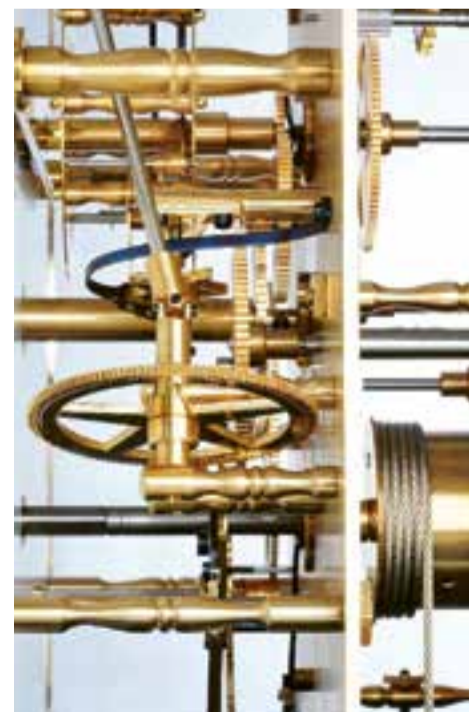
**Introduction:** “The idea for this clock with secular perpetual calendar came up in winter 2016, with a moon ball for the moon phase, and a time equation, wanting the clock movement to have a very long power reserve. The heart of the movement is the perpetual calendar, which automatically corrects even the uneven secular years. Controlled by a wheel that turns once every 400 years, the date needs no correction.

**Brief story about the invention of Mario Scarpatetti’s “secular perpetual calendar”:** In 2013, I made a clock with classic perpetual calendar with a 4-year wheel but something bothered me. The mechanics may be leap years recognize between centuries, but not whether a century or millennium is a leap year or not. I started to think about a mechanism that could recognize whether a century or a millennium has a February 29<sup>th</sup> or not. In 2013, during a train ride, the solution came to me. My idea is to supplement the mechanics of a well-known perpetual calendar with an additional wheel that turns once every 400 years. The greatest achievement is the ease with which this 400-year wheel is switched.

Shortly afterwards, I was asked whether I would make a movement for the drive of a planetarium and I put my sketches in pending. In 2016, I finally found the time to design a clock with my own perpetual calendar. I started milling the first wheels in 2016 and the construction of the large movement lasted until summer 2018. During the production, in March 2018, I applied for a patent for my invention by the Swiss Federal Institute of Intellectual Property relating to a 400-year wheel and its indexing. My 400-year wheel received in 2018 the patent N° CH 00400/18.

**Manufacturing of the movement components:** All parts of the movement, with the exception of four ball-bearings (Kugellager), were traditionally handmade. Most of the parts were made from brass and steel sheets, as well as brass and steel round bars. For the manufacturing of the movement, I’ve made all parts without NC and CNC-controlled machines. The movement can be dismantled into 478 individual parts. It consists of a total of 570 components”.

**Measurement:** Clock: Width 48 cm - Depth 48 cm - Total height 203 cm - Total weight 50 kg. Movement: Height: 42 cm. Dial: Width: 29 cm - Height: 41 cm. Sasselbo stone from Poschiavo (21 kg). **Indications:** Months - moon phases - years / hours - minutes - seconds - equation of time / date - day.



# Results in Auctions

## NEW AUCTIONS RECORDS FOR F.P. JOURNE WATCHES



### *Souscription set N°1*

#### **Phillips – Geneva 5 to 7 November 2021**

Tourbillon Souverain  
38 mm in platinum with yellow gold and silver dial, N°01, 1999  
**Sold 3,539,000 CHF**

Chronomètre à Résonance  
38 mm in platinum and gold with white gold and silver dial, N°001-00R, 2000  
**Sold 3,902,000 CHF**

Octa Réserve de Marche  
38 mm in platinum with white gold and silver dial, N°001-03A, 2003  
**Sold 554,400 CHF**

Octa Chronographe  
38 mm in platinum with yellow gold and silver dial, N°001-03C, 2004  
**Sold 961,700 CHF**

Octa Calendrier  
38 mm in platinum with rose gold and silver dial, N°001-04Q, 2003  
**Sold 937,500 CHF**



#### **Phillips – Geneva** 8 May 2021

Chronomètre Souverain, 40 mm  
in platinum with silver dial.  
N°001-CS, 2005  
**Sold 163,800 CHF**



#### **Phillips – Hong Kong** 5 June 2021

Tourbillon Souverain, 38 mm in 6N gold  
with white gold and silver dial.  
N°542-TN, 2013  
**Sold 3,024,000 HKD**



#### **Phillips – Hong Kong** 5 June 2021

Octa Automatique Lune France-Chine,  
40 mm in platinum with blue dial.  
N°246-AL, 2014  
**Sold 1,764,000 HKD**



#### **Sotheby's – Hong Kong** 13 October 2021

Octa UTC, 40 mm in 6N gold  
with 6N gold and silver dial.  
N°037-UTC, 2011  
**Sold 1,134,000 HKD**



#### **Phillips – Geneva** 5 to 7 November 2021

Chronomètre à Résonance, 40 mm in platinum  
with white gold and silver dial.  
N°150-RT, 2013  
**Sold 289,800 USD**



#### **Phillips – Hong Kong** 25 to 26 November 2021

Chronomètre Holland & Holland, 39 mm in steel  
with steel Damascus pattern dial (7183).  
N°7183-28/28, 2017  
**Sold 1,890,000 HKD**



#### **Phillips – New York** 11 to 12 December 2021

Chronomètre à Résonance, 38 mm in platinum  
with white gold and silver dial.  
N°195-02R, 2001  
**Sold 428,400 USD**



#### **Phillips – New York** 11 to 12 December 2021

Tourbillon Souverain, 40 mm in 6N gold  
with black mother-of-pearl and silver dial.  
N°076-04TN, 2004, Sincere series, limited to 5 pieces.  
**Sold 718,200 USD**

# FOR THE MEMORY OF ENDANGERED CULTURES

## F.P.Journe supports the Cultural Foundation of the Barbier-Mueller Museum

THE FOUNDATION SAFEGUARDS ENDANGERED CULTURAL HERITAGE FROM PEOPLE ON THE VERGE OF EXTINCTION



Indian chief Kararaô.



The Corn Dance.

The Musée Barbier-Mueller Cultural Foundation, created in Geneva in 2010, offers testimony on imperilled cultures around the world with the support of F.P.Journe. It finances anthropological studies carried out among peoples whose beliefs, customs and ways of life are endangered by the social, economic, and climatic changes they face. The results of the researchers' work are then published by the Foundation.

In 2021, several events were held in Geneva to celebrate the publication of the book "The Kararaô of Central Brazil" by Dr. Gustaaf Verswijver, which concerned a subgroup of Kayapo Indians. From 5 to 10 November a photography exhibition, a handcrafts sale, and two lectures (at the Palais de l'Athénée

and the Musée Barbier-Mueller) took place. Doto Takak Ire and Kokoro Mekranoti Re, two Kayapo Indians from the Amazon, were invited to represent their culture. At the first lecture on 9 November, the two men welcomed attendees with ritual chants, followed by a screening of the film Terra Indígena Kararaô, a production of Verthic Hangar Films.

Anthropologist Gustaaf Verswijver gave a lecture presenting his book about the preservation of the language and territory of the Kayapo Indians of the Amazon. The great Kayapo chief Raoni Metuktire, though unable to attend, honoured the guests with a video message. Throughout the evening masterful musical interludes were provided by pianist Paloma Manfugas.

Over the course of four years - from 2015 to 2019 - Dr. Gustaaf Verswijver devoted his attention to the survivors of three Kararaô subgroups that had separated from the other Kayapos in the 1930s. He retraced their history, with its uninterrupted series of scissions and fusions, flight to escape attacks and massacres, and the disastrous consequences of the ongoing encroachment by Brazilian society.

This history does not just tell of the Kararaô's struggle to survive; it also demonstrates the Brazilian state's failure to provide adequate aide and support until the 1970s.

In addition, it reveals the impunity enjoyed by Brazilian settlers (and their patrons) who tried to eliminate the Indians.

As the book shows, there is now an urgent need to come to the aid of the Kararaô, who face many dangers and now number only sixty individuals.

One of the world's largest hydroelectric dams, constructed near their zone of habitation, affects their ability to fish and creates stagnant bodies of water that are sources of various diseases, including malaria. They also suffer due to deforestation and the illegal exploitation of the abundant natural resources of their territories.

Over the past two decades they have succeeded in defending their forest - their source of life, which provides them with food and medicine. But the danger is ever-increasing...

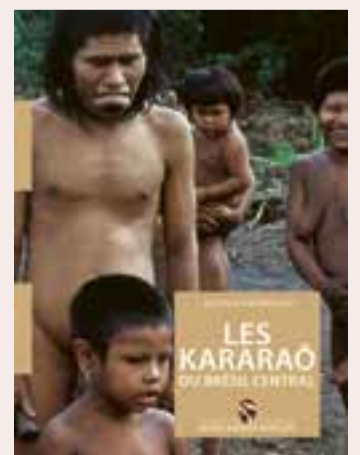


### The Foundation young student scholarship

The Foundation also awards grants to young researchers to carry out anthropological observation missions. Every year, the Foundation entrusts an ethnologist or a student wishing to choose an unusual doctoral thesis subject (on the recommendation of a university professor). The researcher will make a first stay of about one month to become familiar with the people. He will then have a few months to prepare for his second stay which should last between two to three months. He will have one year to present the results of his research for the publication of a small book. A very large number of populations scattered throughout the world have never been visited by ethnologists, anthropologists or qualified historians. After the study of the Gan people of Burkina Faso, the Wan, Mona and Koyaka people of Ivory Coast, the Kalasan Batak people of Sumatra (Indonesia) and the Anir Islands in southern New Ireland (Papua New Guinea), the Foundation focused on the Songsarek Garo of Meghalaya in

northeastern India, Tabiteuea Island in the Kiribati Islands, the Na from Lijiazui on the border of Sichuan and Yunnan in China, the Jiye of South Sudan, the Altaians of the Siberian mountains and the Yaure people of Ivory Coast. The Foundation has published numerous studies, including "The Jamnyo of Jeju, The Women Divers of Korea and Neo-Confucianism, a Dual Mythology" (2019), "The Kuya of Côte d'Ivoire, A Forgotten People of The Forest" (2020) and "The Kararaô of Central Brazil" (2021).

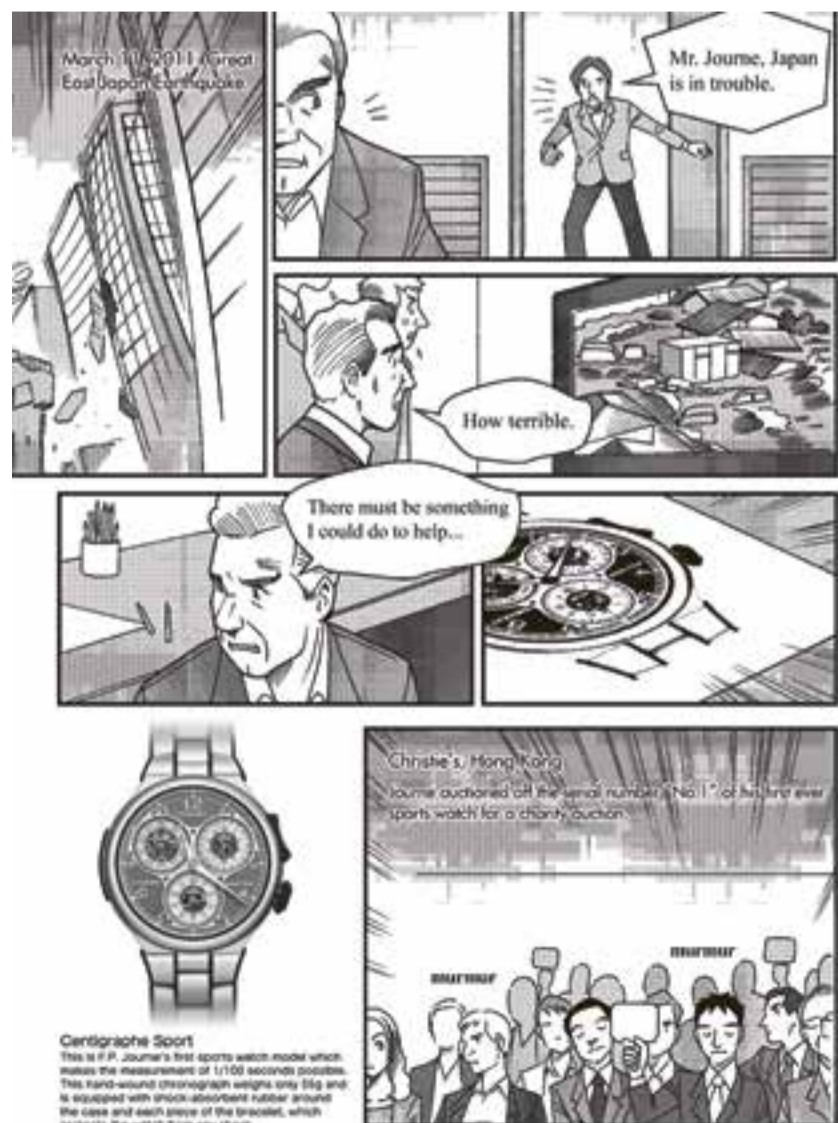
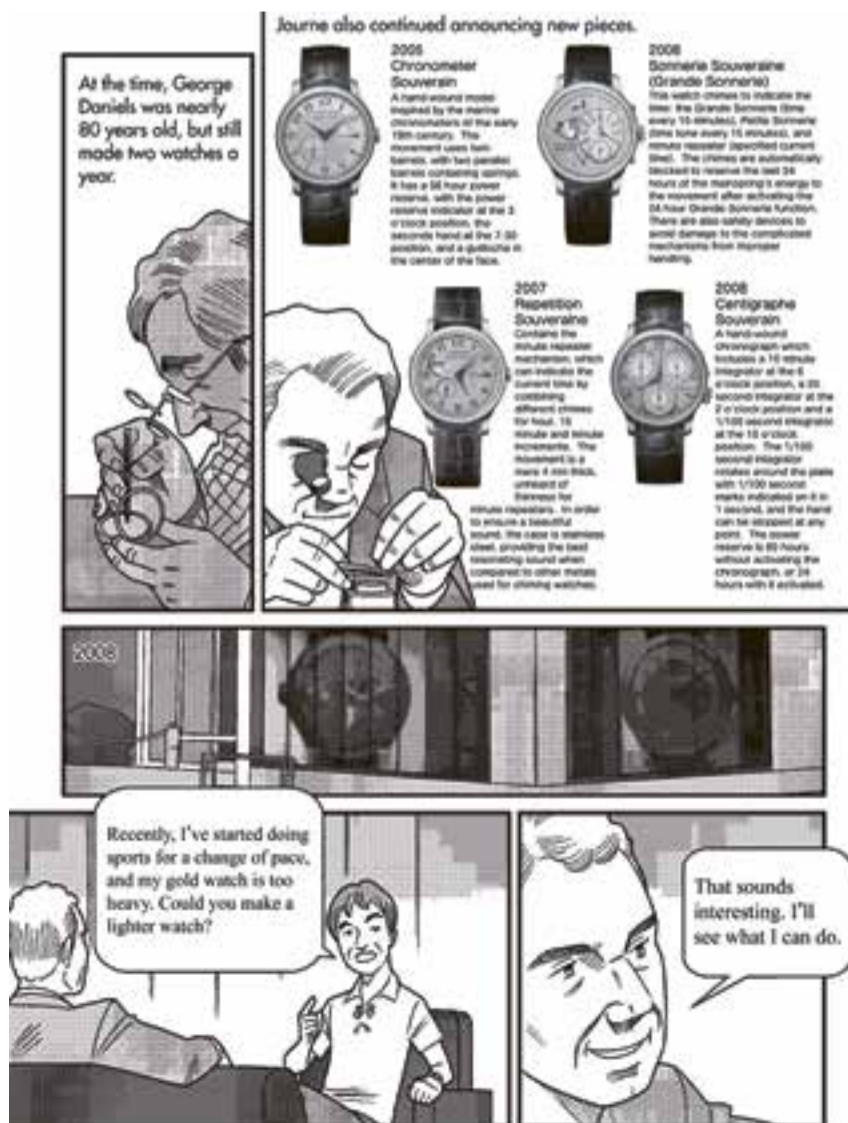
To purchase the book, you can contact the Barbier-Mueller Museum Cultural Foundation in Geneva at: [fondation-culturelle-barbier-mueller.org](http://fondation-culturelle-barbier-mueller.org)





Among collectors, **François-Paul Journe** is considered as **the Watch Master** and it is with great pride and devotion that a Japanese horological fan created a series of mangas

6TH PART



2021

# F.P.Journe around the world in 365 days

## Late Afternoon Aperitifs at F.P.Journe F.P.Journe Boutiques

In 2021, F.P.Journe continued hosting late afternoon aperitifs in its Boutiques. Beginning at 5 o'clock on every first Tuesday of the month, F.P.Journe Boutiques become friendly meeting places and are becoming an essential rendezvous for all watch enthusiasts and friends of the brand.



## Octa Weekend Miami / 26 – 28 February

The Maison F.P.Journe Miami celebrated the 20<sup>th</sup> anniversary of the Octa calibre. Collectors from all over the country came to take part in an exciting and festive weekend. All the participants wore their "Octa" timepiece for the occasion.



## 1<sup>st</sup> Anniversary of the F.P.Journe Club 51 Lounge Mexico City / 11 March

The F.P.Journe Lounge celebrated its 1<sup>st</sup> anniversary. Loyal clients and lovers of fine horology got together for an afternoon at Club 51, celebrating life, friendship, and good health.



## Holland & Holland Day New York / 23 May

F.P.Journe and Holland & Holland invited F.P.Journe collectors to a day of shooting at the Ten Mile River Preserve Club. The exclusive partnership between the two manufactures began in 2017, when they together created a unique piece showcasing the best of their respective know-how - the Chronomètre Holland & Holland.



## Young Talent Competition Geneva / 26 May

F.P.Journe organised the Young Talent Competition with the support of The Hour Glass, a luxury horology retailer in the Asian Pacific Region. This year the prize went to the talented young Swiss watchmaker Mario Scarpatetti, for his Kalender Perpeten, clock. Movement with secular calendar based on an invention he patented. He received a certificate and the sum of 20,000 CHF, which will allow him to purchase watchmaking tools or finance a horological project.



## F.P.Journe Golf Cup Geneva / 6 June

F.P.Journe organised his 8<sup>th</sup> Golf Cup at the prestigious Geneva Golf Club, with the Greensome, Stableford type of play. Two lineSport models, the Chronographe Rattrapante and the Automatique Réserve, were on display for the occasion. At the close of this remarkable competition, F.P.Journe awarded prizes to the winners in several categories.



## Souscription N° 1 timepieces Exhibition Los Angeles / 8 – 10 July

The Phillips auction house exhibited the five Souscription N°1 timepieces at the F.P.Journe Boutique in Los Angeles. For three days, collectors and friends of the brand were able to discover these extraordinary pieces before they were sold at auction in Geneva.



## F.P.Journe Annual Summer Party Geneva / 9 July

F.P.Journe held its traditional summer party as usual, bringing together the personnel of the F.P.Journe Manufacture, the Cadraniers and Boitiers de Genève, and that of the F.P.Journe Boutique in Geneva. A "Summer Time" dinner with a colour scheme of white, beige and blue was held on the terrace of the "Chez Maman" restaurant. Sarah Höflin, ambassador of the "élégante by F.P.Journe" and acrobatic skiing Olympic champion, was also part of the celebration!



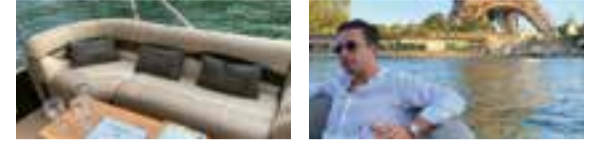
## Prix Solo artmonte-carlo - F.P.Journe Monaco / 14 – 17 July

At the *artmonte-carlo* contemporary art fair, F.P.Journe awarded the Prix Solo *artmonte-carlo* - F.P.Journe, which went to the Nathalie Obadia Gallery for Guillaume Leblon's work "Oiseaux du paradis". Since 2016, the fair, which attracts both well-known professionals and art enthusiasts, has become an important event due to its discerning selection of contemporary artists. The next event will be held in July 2022.



## Aperitif Cruise on the Seine Paris / 28 August

The F.P.Journe Paris Boutique organised an aperitif cruise on the Seine. Friends of the Manufacture took part in this summer cruise while enjoying the 44°N, a gin made in the "Côte d'Azur".



## Ladies Time Los Angeles / 14 October

The F.P.Journe Los Angeles Boutique held its first evening devoted exclusively to ladies. Wives of collectors and lovers of fine horology were invited to discover the diamond-set Divine, as well as the élégante collection by F.P.Journe. For the occasion, guests enjoyed a tasting of the "Belle de Brillet" cognac, known for its pear notes. It was an evening full of excitement and discoveries, which the Boutique will repeat in the future.



## A Tasting Evening - Petrossian Caviar Miami / 14 October

The Maison F.P.Journe Miami and Petrossian hosted an intimate tasting event showcasing three exceptional caviars: Royal Ossetra, Royal Daurenki and Royal Baika. For over a century, the Petrossian family, with its traditional ancestral know-how, has demonstrated its values based on craftsmanship and the art of caviar.



## International Salon of Haute Horology - SIAR Mexico / 19 – 21 October

During the SIAR (Salón Internacional de Alta Relojería), F.P.Journe showed his creations at the F.P.Journe Club 51 Lounge. For 3 days, the city of Mexico welcomed collectors who had come from all over Latin America to participate in this important event for lovers of horology.



## GPHG Exhibition 20 Years of the Aiguille d'Or Geneva / 22 October – 14 November

Each year, the Geneva Grand Prix d'Horlogerie salutes the excellence of contemporary horological creations, thus contributing to horology's influence all over the world. On its 20<sup>th</sup> anniversary the GPHG reunited, for the first time, the twenty exceptional timepieces that won the Aiguille d'Or. F.P.Journe was therefore well represented with the Tourbillon Souverain (2004), the Sonnerie Souveraine (2006), and the Centigraphe Souverain (2008).



## Only Watch Auction Geneva / 6 November

After the success of Only Watch 2019, F.P.Journe can now boast of a new world's record that of the most expensive F.P.Journe watch sold at auction. The FFC Blue, developed specifically for Only Watch based on an original idea by Francis Ford Coppola, "Invenit", and "Fecit" by François-Paul Journe, sold for the sum of 4,500,000 CHF.



Final Bid	CHF
LOT 22	4,500,000
	EUR 4,261,996
	GBP 3,628,430
	USD 4,929,399
	HKD 38,365,155
	YEN 561,645,000
	RUB 332,566,450
	CNY 31,525,959

## End of the Year Party New York / 12 November

The F.P.Journe New York Boutique held its traditional end-of-the-year party, with a surprise guest. François-Paul Journe, who had come especially for the occasion, shared a festive and enjoyable moment with the brand's invited guests.



## Luoxo - Retrospective of the Chronomètre à Résonance Hong Kong / 13 November

F.P.Journe and LUOXO organized an event devoted to the Chronomètre à Résonance and its evolution over the years. Stephen Luk, General Director of F.P.Journe Hong Kong, presented the emblematic model to the members of the exclusive community of watch aficionados in a private salon of the Wong Chuk Hang quarter.



## End of the Year Party Los Angeles / 14 – 17 November

In the presence of François-Paul Journe, the F.P.Journe Los Angeles Boutique celebrated the end of the year by organizing a pétanque tournament, lunch at the Hillcrest Country Club, aperitif evenings and an intimate dinner for its collectors.



## Grande Réserve Evening Paris / 9 December

Once again, the F.P.Journe Paris Boutique hosted an event in the library of the La Réserve Hotel alongside 6 other exclusive artisanal brands, Daniel Levy, Philippe Atienza, Daniel Bernard, Serge Amoruso, Point Plume and Cos d'Estournel. Each brand showcased its special skills, allowing the clients of each brand to discover the talents of the others.



# F.P. JOURNE

## Invenit et Fecit

*“I invented and made it”*



Ref. RM - Répétition Souveraine  
Ultra-slim minute repeater  
Manual winding movement in 18K rose Gold  
Geneva made

### The Boutiques

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