



VACHERON CONSTANTIN
GENÈVE

Les Cabinotiers Westminster Sonnerie
Tribute to Johannes Vermeer

A bespoke single-piece edition
A masterpiece of Haute Horlogerie
and Craftsmanship

ARchet 2018-2019

Les Cabinotiers Westminster Sonnerie – Tribute to Johannes Vermeer


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Overview

Horological virtuosity:
Calibre 3761

The “Geneva” enamel
miniature technique

Engraving and sculpture

A sense of the exceptional
pervading every detail

Sum-up

Technical data

- A pocket watch made by the Les Cabinotiers department according to the client's wishes.
- A new in-house Grande Sonnerie Westminster movement, Calibre 3761 with tourbillon regulator
- A meticulously engraved case of which the bow is adorned with two hand-sculpted lion heads.
- An officer-type cover featuring a miniature enamel painting by enamel expert Anita Porchet of *Girl with a Pearl Earring*, a work by Johannes Vermeer.

Geneva, September 27th 2021 – A project first undertaken in 2013, the Les Cabinotiers Westminster Sonnerie – Tribute to Johannes Vermeer pocket watch is a bespoke creation brilliantly combining the watchmaking and artisanal skills of Vacheron Constantin. It is equipped with a new in-house movement, Calibre 3761 with Grande Sonnerie and tourbillon, specially developed by the team of watchmakers who designed the Reference 57260 watch. The craftsmanship adorning this timepiece is equally extraordinary. The case is hand-engraved on its bezel, back and sides using various artisanal techniques, as well as topped by a bow adorned with two hand-sculpted lion heads. The officer-type caseback is stunningly enhanced by a miniature enamel reproduction of Vermeer's famous painting *Girl with a Pearl Earring*, created by enameller Anita Porchet.

Les Cabinotiers is a department in its own right within the Manufacture Vacheron Constantin, dedicated to creating single-piece editions. Following in the footsteps of the Geneva master-watchmakers known as *cabinotiers* in the Age of Enlightenment, the team took up the challenge of giving substance to the dream of a passionate collector who wanted a pocket watch that was technically and aesthetically exceptional, reflecting the noblest traditions of 18th century Haute Horlogerie.

Stemming from over 266 years of expertise and eight years of development, the Les Cabinotiers Westminster Sonnerie – Tribute to Johannes Vermeer pocket watch embodies art and beauty, exceptional mechanics and technical mastery. This creation fulfils the most secret expectations of a collector for whom “*passion consists in always seeking that which is theoretically impossible to obtain*”, a collector whose love for single-piece edition led to this project involving eight years of cooperation with Vacheron Constantin. This adventure, brimming with challenges, research and constant exchanges, has given rise to a veritable masterpiece of Haute Horlogerie.



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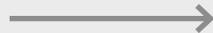
The Les Cabinotiers Westminster Sonnerie – Tribute to Johannes Vermeer pocket watch is powered by a new 806-part manual winding calibre, regulated by a tourbillon and comprising Grande and Petite Sonnerie Westminster chimes, coupled with a minute repeater.

Within the range of watchmaking complications, Grande Sonnerie models have always enjoyed a special aura, not only because of the inherent complexity of these mechanisms striking several gongs, but also because of the musical qualities required.

Vacheron Constantin and Grande Sonnerie watches

Grande Sonnerie watches have a centuries-old tradition within the Maison. Among the oldest timepieces preserved to date, the first travel clock housing such a complication dates back to 1820. When it comes to pocket watches, the oldest model with Grande and Petite Sonnerie in the Vacheron Constantin private collection is dated 1827. It was followed by several timepieces equipped with such mechanisms, some of them representing landmark creations endowed with an array of extremely sophisticated complications, such as the “Packard” presented in 1918 or the King Fouad I watch completed in 1929. More recently, the world’s most complicated pocket watch, Reference 57260, was presented in 2015 on the occasion of the Maison’s 260th anniversary, affirming the expertise of the Maison in the realm of exceptional watchmaking.

“I had long dreamed of having a real Westminster chime pocket watch in my collection striking five gongs with five hammers, featuring a Grande and Petite Sonnerie and adorned with miniature enamel.” Such was the thinking of the client who commissioned this model, leading to the creation of Calibre 3761 measuring 71 mm in diameter and 17 mm thick. It is regulated by a tourbillon majestically enthroned on the lower part of the movement, visible through the caseback and performing one full revolution per minute. The tourbillon is driven by a 2.5Hz balance (18,000 vibrations per hour). The Westminster chime with which the movement is equipped with one of the most complicated striking mechanism to build, as it requires a sequence of five gongs struck in perfect harmony by their respective hammers controlled by four racks. In wristwatches, Grande Sonnerie (grand strike) mechanisms are usually operated by a single rack, mainly for reasons of miniaturisation. The four rack and snail solution, with four racks for the hour and quarter chimes and one rack for the minute repeater, enhances the sequencing of the melodies and, as an added subtlety, enables different melodies to be played when passing the quarters.



1. Travel clock (Ref. Inv. 10709) – 1820
2. Pocket watch Grande and Petite sonnerie (Ref. Inv. 10715) – 1827
3. Pocket watch created for James Ward Packard (Ref. Inv. 11527) – 1918
4. Pocket watch gifted to His Majesty Fouad I (Ref. Inv. 11294) – 1929



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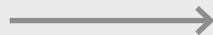
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The Westminster chime

The term ‘Westminster chime’ refers to the world-famous bells of Big Ben, the British Tower of Parliament in London: a four-bar melody consisting of four notes played at different frequencies. In “Grande Sonnerie” mode, the watch chimes the quarters in passing, with the hour repeated at each quarter, meaning three bars of the Westminster melody followed by five single notes for 5.45 am. In “Petite Sonnerie” mode, it strikes the quarters at each change of quarter without repeating the hours; and at each change of hour, it strikes the fourth quarter – “the carillon” – as well as the hours. The strikework can be activated at any time by means of the slide on the side of the watch. The watch then functions as a minute repeater that chimes the quarters, minutes and hours in sequence. The selector switch positioned at 9 o’clock thus offers three possible modes.

In “Sonnerie” (strike) mode, the watch is automatically activated each time the quarters change, like a clock. In “Night Silence” mode, a special feature specifically developed and adapted to this 3761 calibre according to the time zone chosen by the customer, the alarm is deactivated between 11 pm and 9 am, thus saving energy as well as ensuring peace and quiet at night. The third and last “Silence” mode completely suspends the striking mechanism. A second selector, positioned between 10 and 11 o’clock, serves to switch from Grande Sonnerie to Petite Sonnerie as preferred. The two barrels ensure an autonomy of approximately 16 hours for the musical mechanism in “Grande Sonnerie” mode and 80 hours for the time indications, with stable torque guaranteed until the end of the power reserve.

Calibre 3761 is equipped with a centripetal strike governor ensuring perfect regularity of the musical sequences, of which the notes must be both distinctly audible and pleasing to the ear. The system is characterised by a pair of weights whose very special shape has been optimised so as to generate a kind of “engine-braking effect” – by centripetal force – on the regulator’s pivot axis, thereby evening-out the energy released by the barrel. This unique and original device is also perfectly silent. In another special feature regarding the flow of time, the calibre houses a double-wheel system with clearance adjustment. Given the size of the hands, in order to avoid any potential jerking of the seconds hand positioned at 6 o’clock, such a mechanism ensures its smooth flow thanks to a system based on two coaxial toothed wheels linked by a spring serving to eliminate gear play.



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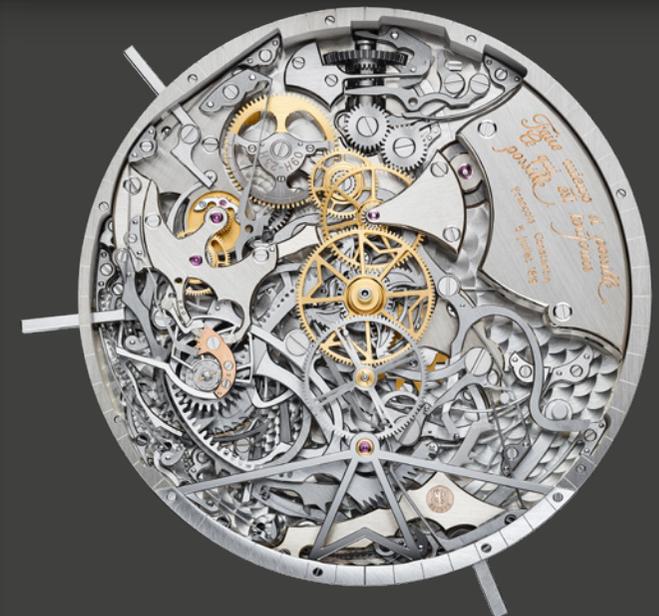
From exceptional finishing to delicate assembly

Representing the sum of rare talents, this Les Cabinotiers model demonstrates high standards and attention to detail in terms of movement finishing. All the components are thus hand-finished – from the completely engraved balance bridge to the bridges buffed with diamond paste to achieve a mirror-polished finish, as well as the galvanic treatment of the plates adorned with Côtes de Genève and featuring a soft champagne colour – creating an overall effect evoking the noblest watchmaking traditions.

The work on the ratchet wheel and the two barrel wheels is an excellent example of these meticulous tasks. The wheels first underwent surface treatment in the form of sandblasting and then sunburst finishing, before the teeth were glazed on all five gear portions. This type of finishing consists of chamfering the teeth and giving them a mirror-polished finish on the flat parts, a skill formerly used in watchmaking and that the Maison is committed to preserving. A week of patience and meticulous care was needed to decorate these three components.

The tuning of the gongs also requires a perfectionist’s spirit. First tested before being cased-up, they are shaped in such a way as to obtain the right note for each of them. This inevitably requires touching up with a file to achieve a perfect sound. There can however be surprises once the chiming mechanism is cased up. On this model, two of the five original gongs had to be replaced for the sake of harmony. By modifying the steel alloys, the sound of the two new gongs acquired a more crystal-clear entirely in tune with the other three.

This “tuning” of the Grande Sonnerie thus requires several successive casing-up procedures, since the mechanism has to be removed for any adjustments during the “trial runs” of the mechanism. These are indeed not the only elements of the assembled movement that undergo retouching during these various phases, which is why the latter take place even before the case is decorated. An additional difficulty with this single-piece edition was that it was impossible to case up the entire finished movement and part of the final assembly had to be done directly inside the case. Given the level of finishing and decoration of each component, including the case, as well as the fact that any handling manipulation could potentially impair the quality, the ten operations involved in fitting the calibre – which had to be removed the same number of times for retouching – followed by the final assembly required an uncommonly deft touch. In the end, a very small team of specialised watchmakers conducted the making of this Calibre 3761, from the development, manufacturing and finishing of the various components to the final assembly and casing-up of the movement.



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The client expressed the wish that the cover of the officer-type caseback should feature a miniature enamel painting by enameller Anita Porchet. The work chosen was *Girl with a Pearl Earring*, painted circa 1665 by Dutch artist Johannes Vermeer. Above and beyond the challenge of reproducing the work of a great master, the size of the 98 mm-diameter surface implied additional difficulties. This size of watch, corresponding more to that of historical carriage watches than to a pocket model, requires a degree of dexterity all the more accurate in that the slightest irregularity is glaringly obvious.

The result is reminiscent of the grand miniature enamel painting tradition in which Geneva came to specialise. Acknowledged since the late 16th century for its production of high-quality enamels, Geneva in fact lent its name to several terms referring to the quality of the work of its craftsmen. “Geneva enamels”, a term commonly used since that time, refers to painted enamels covered with a flux known as the “Fondant de Genève”. This technique consists of adding a final transparent and colourless protective coating to the layers of vitrified enamel, thereby giving brilliance and depth to the artist’s work. This invention greatly benefited the timepieces of the period, which were subjected to repeated friction as pocket watches.

Only a few rare master enamellers still master these techniques. One need only think of the fact that a single layer of enamel on the young girl’s oriental turban requires at least two weeks of work given the size of the model. The colour palette is similarly complex, notably including a composition of seven shades to obtain black, as well as 20 or so firings in the kiln required to stabilise the colours. In all, seven months of intermittent work were necessary to bring this portrait to life. The research and development work – notably relating to the pigments and enamels to be used – began in 2018 and the final result was completed in 2020.

While the decoration of watches and clocks using the various enamelling techniques strongly contributed to the reputation of the *Fabrique de Genève* which encompassed all the watchmaking and jewellery trades in the 18th century, the term “Geneva enamels” refers above all to enamel miniature painting. This process consists of painting colours – based on metallic oxides ground to powder and then mixed with an oil-based binder – onto a layer of white enamel coating a copper or gold leaf base. Much like in gouache or oil painting, the master artisan then applies colours to a canvas, enabling a meticulous depiction – these days under a binocular microscope – of even the smallest details. After each phase, the colours are stabilised by successive firings in the kiln, with no chance of touch ups.

The main watch dial is Grand Feu enamelled in an eggshell colour with blue enamelled Roman numerals.



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The style of the engravings adorning the case was carefully studied by Vacheron Constantin’s engraver in order to blend harmoniously with Vermeer’s painting. After several proposals and discussions with the client, she chose a main ornamental theme composed of acanthus leaves running along scrolls and flowers with a pearl heart. This motif echoes the theme of The Girl with the Pearl Earring with its classical and feminine decoration.

The talents of Vacheron Constantin’s master-engraver have created a visually striking result. Her work began by outlining the decor using a scribe. She then proceeded to create a champlévé effect by flat-hollowing around the motifs, creating volume and depth by carving them with a burin. Observation and analysis of the pattern is essential to understand the volumes before cutting into the metal. To keep the rhythm and flexibility of the acanthus leaves along the accompanying line, the curves must be stretched. The facets and stripes are then cleaned and polished. This work requires time and patience. Polishing is indeed a delicate operation to find the right balance between the shimmer of the metal and the volumes of the sculpture which lose their dynamic appeal if they are too rounded. In order to accentuate the shadows and to add details to the leaves and flowers, slender hollow lines are made on each of them using the fine line engraving technique involving incising or hollowing out the material. The last operation, the point-by-point hand-chasing of the background, accentuates the contrast between the matt chased champlévé surface and the polished motifs. This operation improves legibility and highlights the decoration by its shimmering appearance. Chasing creates a decoration or a texture by striking the material, unlike engraving and sculpture which involving removing material.

The adornment of the case middle is further emphasised by a double ‘pearl’ border, a reference to the painting by Johannes Vermeer. The creation of this border begins with an even distribution of engraved squares running around the bezel and caseback. Then the engraver transforms these squares into half-beads using a beading tool with a spherically hollowed tip leaving an imprint serving to form the half-beads of metal. Handling this instrument requires a steady, rhythmical touch. The small 0.8 mm beads are then polished by hand using a brush coated with diamond paste. The effect must be regular, while maintaining the personal deft touch that gives life to the result thanks to similar yet unique reflections. This beaded or ‘pearl’ decoration that was particularly in vogue in the early 20th century requires peerless mastery and dexterity.

Like an extension of this delicate craftsmanship performed on the case middle, the bow is a work of art in itself with its two roaring lions. At the client’s request, these three-dimensional ronde bosse sculptures are inspired by classical statues. Incredibly realistic, sculpted in a block of gold, they embody a rare degree of mastery. Before working the material in its raw state, the Vacheron Constantin engraver made several 3D prints to determine the right volumes that would enable her to express her art. To craft the lions’ heads, which are similar yet not identical in terms of their manes, she drew with a tracing point the outlines of the two profiles, from the front and from above. It is above all a question of understanding the volumes of the head in three dimensions, before starting the sculpture, which gradually makes her lose the previously traced reference points. The head of the animal must be imprinted in her mind as an infallible reference point throughout the process in order to give it life and character. Observation and precision are essential in creating such an animal sculpture whose expression can be totally distorted by an excessively strong touch.

The engraver first used a milling cutter to rough out the material and then several burins for increasingly fine and accurate work. The details of the satin-brushed, matt and polished textures were obtained using specific tools, some created for the occasion. A total of five months of extremely meticulous craftsmanship was required to engrave and sculpt the various elements of the pocket watch.



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In the interests of safety, particular attention was paid to the design of the hinged officer-type caseback. An internal mechanism inside the case facilitates access by enabling the user to half-open the caseback by pressing the crown-integrated pusher. A cone-shaped titanium pin serves as the hinge, concealed by gold screws, while a spring using approximately 90° of the case angle slows down the closing of the enamelled and engraved caseback.

The extraordinary length of the hands – the minutes hand is 35 mm long – is also a challenge, particularly when it comes to finishing the polished surfaces and ensuring an even surface. To enhance lightness, they are made of pfnodal, an alloy of copper, nickel and tin, and then gilded.



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A project first undertaken in 2013, the Les Cabinotiers Westminster Sonnerie – Tribute to Johannes Vermeer is a bespoke, single-piece edition incorporating the full palette of skills cultivated by Vacheron Constantin, from Haute Horlogerie to the decorative arts. It is equipped with a new in-house movement, Calibre 3761, specially developed by the team of watchmakers responsible for the Reference 57260 watch. This 806-part manual winding calibre with tourbillon regulator features Grande and Petite Sonnerie Westminster chime mechanisms coupled with a minute repeater. Grande Sonnerie have always enjoyed a special aura among horological complications, not only because of the inherent complexity of these mechanisms striking several gongs, but also because of the musical qualities required.

The officer-type caseback cover features a miniature enamel painting, finely crafted using the Geneva technique and reproducing the *Girl with a Pearl Earring*, a work by Dutch painter Johannes Vermeer dating from 1665. Above and beyond the challenge of reproducing the work of a great master, an additional difficulty lies in the small size of the 98 mm-diameter support. The case sides are graced with hand-engraved friezes composed of acanthus leaves and tulips, accompanied by a “pearl” rim, while the bow is adorned with two roaring lion heads carved from a block of gold.

Stemming from over 266 years of expertise and eight years of development within the Les Cabinotiers department, the Les Cabinotiers Westminster Sonnerie – Tribute to Johannes Vermeer fulfils the expectations of a collector for whom “*passion lies in always seeking that which is theoretically impossible to obtain.*”



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REFERENCE	9910C/000J-B413
CALIBRE	3761 Developed and crafted by Vacheron Constantin Mechanical manual winding 71 mm (3 1/2”) diameter, 17.05 mm thick Movement power reserve: approximately 80h Strikework power reserve (Grande Sonnerie mode): approximately 16 hours 2.5 Hz (18,000 vibrations/hour) 806 components 58 jewels Hallmark of Geneva certified timepiece
INDICATIONS	Hours, minutes, small seconds Tourbillon, minute repeater, Westminster carillon
CASE	18K 3N yellow gold, engraved with acanthus leaves on the case sides and with tulips and “pearl” decor on the bezel and the caseback Bow sculpted with two lion heads Officer-type cover, Grand Feu miniature enamelling depicting Johannes Vermeer’s <i>Girl with a Pearl Earring</i> painting, hand made by Anita Porchet 98 mm diameter, 32.60 mm thick
DIAL	Grand Feu eggshell-coloured enamelling Blue enameled numerals Golden pfnodal hands
PRESENTATION BOX	Les Cabinotiers model exclusively developed for this timepiece

Single-piece edition
“Les Cabinotiers”, “Pièce unique”, “AC” hallmark engraved on caseback





Founded in 1755, Vacheron Constantin is the world's oldest watch Manufacture in continuous production for over 265 years, faithfully perpetuating a proud heritage of watchmaking excellence and stylistic sophistication through generations of master craftsmen.

At the pinnacle of Haute Horlogerie and understated elegance, the Maison creates timepieces with unique technical and aesthetic signatures, and an extremely high level of finishing touches.

Vacheron Constantin brings to life unparalleled heritage and a spirit of innovation through its collections: Patrimony, Traditionnelle, Métiers d'Art, Overseas, Fiftysix, Historiques and Égérie. It also offers its discerning clientele of connoisseurs the rare opportunity to acquire unique and bespoke timepieces by means of its "Les Cabinotiers" department.

#VacheronConstantin
#OneOfNotMany


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