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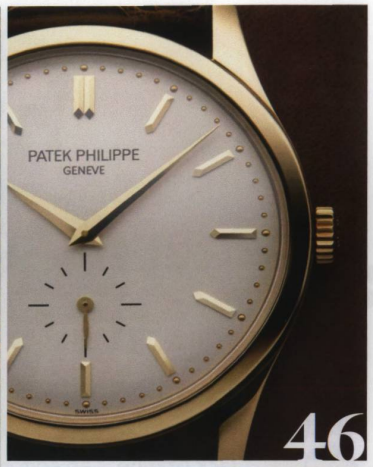
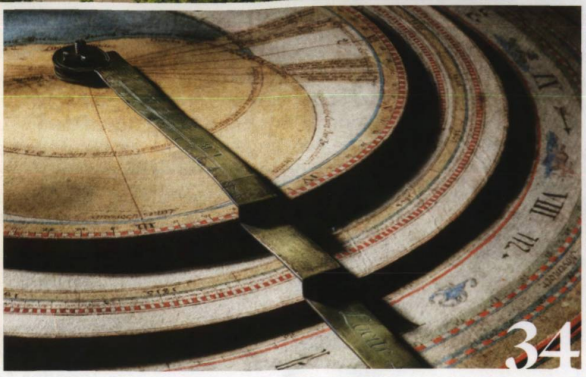
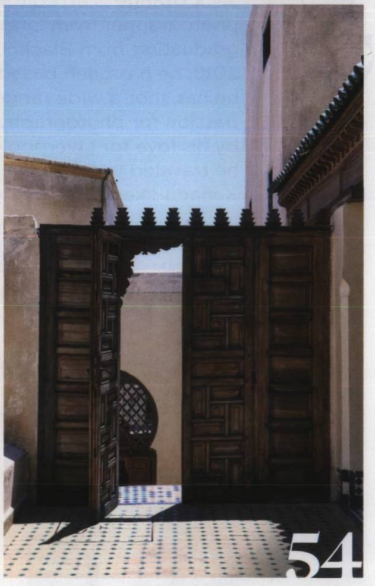
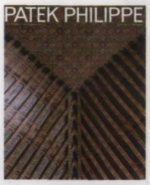
Contents









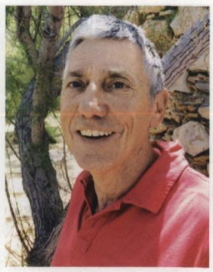
Volume IV No.8 2019

Cover: Kasia Gatkowska traveled to Fez, Morocco, to photograph the Khizanat al-Qarawiyyin library, recently restored by the Toronto-based architect Aziza Chaouni. Colorful geometric patterns are painted on the slanted wooden beams and ceiling of the auditorium room at the library to dazzling effect

Contributors

Jack Grange is an editorial and commercial photographer from Lincoln, England. Since graduating from Blackpool College of Art in 2010, he has been based in London, where he has shot a wide range of projects. His passion for photography is superseded only by his love for Liverpool FC. For this issue, he traveled to Sri Lanka to document the Xanadu-like palace of Sigiriya (page 40).

With color theory, lighting, and styling, **Sharon Radisch** creates photographic work that's sculptural and graphic, while keeping a slight sense of whimsical mystery. Having lived in America and Europe, she draws inspiration from different languages, cultures, and even architecture. Turn to page 5 to see adroit model staircases through her lens.



A journalist and editor of special issues at the Paris-based monthly *Connaissance des Arts*, **Jean-Michel Charbonnier** has written about European painting and Asian and tribal art, and has a passion for the architectural and artistic heritage of the Arab world. On page 54, he tells the story of an ancient library in Fez.

Based in west London, the photographer and director **Richard Foster** specializes in luxury still lifes. He focuses on form, and is renowned for bringing attention to unexpected details, using light and the way in which light shapes each element to show the innate beauty of an object. He does this to great effect on page 18 with Patek Philippe's new grand complication, the Alarm Travel Time Ref. 5520P.

Now an independent design consultant and lecturer, **Sarah D. Coffin** was for many years a senior curator and head of product design and decorative arts at the Cooper Hewitt, Smithsonian Design Museum. There, she was responsible for numerous exhibitions and acquisitions and their accompanying catalogs. On page 5 she discusses some model staircases that were donated to the museum.

The Polish, Amsterdam-based photographer **Kasia Gatkowska**'s fascination with architecture began in her 20s, working as an interior stylist and designer; she's convinced good design creates a sense of serenity and joy. Traveling the world is "an inexhaustible source of inspiration" for her. See her splendid photographs of a library in Fez on page 54.

The Berlin-based writer **Christine Eichel** wrote her PhD on the philosopher Theodor Adorno. She was later the head of culture for the magazines *Cicero* and *Focus*. Christine has published numerous novels and non-fiction titles. Her book about Beethoven is due out this fall. On page 12 she looks at the role photography played in the work of Gustav Klimt and his muse Emilie Flöge.

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Flights of fancy

With its roots in the Middle Ages, the apprentice craftsman system in France required makers to learn from masters, traveling the country on tour. The skills acquired and perfected were then showcased in models where the finest work was made in miniature

STORY *Sarah D. Coffin*
PHOTOGRAPHS *Sharon Radisch*

The extraordinary creations of miniature staircase models by master craftsmen are the very essence of precision. Elegant upward sweeps of fine woods were created as masterworks by French craftsmen called *compagnons* or by their protégés to gain acceptance into the meritocratic guild-like system called *compagnonnage*.

These miniature gems were cherished not just by their makers but by the maker's family and the compagnonnage itself, and they were so safely protected that their existence wasn't widely known. The pieces have only recently become collectible as they didn't emerge onto the market until well into the twentieth century, when those considering selling were too distant to have known the maker. That's why these objects can mostly be seen at units of the group's still active teaching workshops or in French museums devoted to the crafts, such as the Musée du Compagnonnage in the city of Tours. A superlative collection was at the core of a model room at the Cooper Hewitt,

Smithsonian Design Museum in New York, generously donated by influential American collectors, the late Eugene and Clare Thaw.

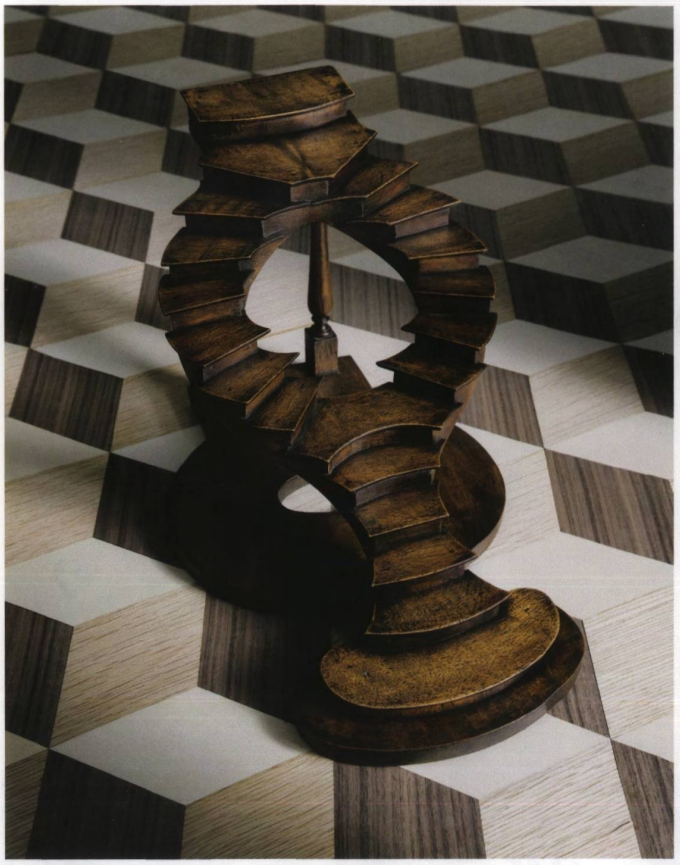
Staircase models have found their way into the homes of eminent European and American designers as well. The fashion designer Bill Blass was one such collector; in his domed openwork model (page 7) a double staircase spirals to a landing, then reverses to reach the balcony. Seeming effortless, it demonstrates the assurance of a maestro. Though Renaissance in style, this piece is more likely to be from the mid-nineteenth century. These models weave together a number of skills including draftsmanship and carpentry, turning, veneering, and, sometimes, inlay work.

The compagnonnage movement dates back to the Middle Ages, but it wasn't until just before the French Revolution that the figures in this underground group emerged more visibly, using nicknames because they were at risk of arrest. They were a challenge to the established, rigid guild system, where craft workshops were passed down through generations only to those with a royal warrant or noble patronage. Compagnons, conversely, were awarded their mastership based on skill and dedication, a meritocratic system offering the chance to learn a craft and join a guild in exchange for hard work and sometimes exhausting travel.

An aspiring compagnon must complete a "tour de France" in which he might study with one master to achieve a particular facet of his profession, often for a couple of years, then move to the next. As such, design drawings for these staircases often show not just their date but the city where they were drawn. Apprentices lived in a *cayenne*, a cross between a dormitory, workshop, and collection museum, and, cunningly often a restaurant too, masking the activity behind it. The modern system still features a couple of cayennes with restaurants, but they no longer need to hide. Once freed from the anti-government connotations, the compagnons celebrated by taking to the streets during parades, often hoisting large models of immense prowess.

Today, compagnonnage is a mentoring network covering trade qualifications for craftspeople from upholsterers to plumbers to pastry chefs to winemakers to mechanics and so on. The vocations were marginally different in earlier years, but the degree of challenge was consistent from the start. When it came to young men becoming masters of woodworking (women weren't accepted as apprentices until the twentieth century and then only into some of the disciplines), all learned design drawing and geometry and then studied specifics depending on whether the aim was to be, say, a carpenter (more roof-building skills) or a cabinetmaker. Levels of difficulty rose with each stage, and a trainee had to showcase

Previous page: the deft achievement of the early *compagnon* leader Agricol Perdiguier. Self-supporting as if by magic, this model remains a "must-achieve" for successive compagnon masters. This page: one stair splits into two and happily converges again. In planed, carved, veneered, and turned cherry, its ellipses are so elegant that the maker proudly signed this example with his compagnon name, Ugen. Opposite: the mid-19th-century piece owned by Bill Blass. In walnut and beechwood, with a tiny landing and domed balcony



Opposite: a mind-boggling, Escher-type extravaganza, where staircases curve up to a landing, then reverse direction as they continue. In planed, bent, and carved pearwood with brass wire and turned bone, pillars ensure stability where, in life, walls might be. Above left: a calmer piece in walnut and in the French style, this almost has the voluptuous sweep of a woman's bustle and draping hemline. Above right: a complex, self-supporting double spiral in what the French called the "English style," with silky, polished veneering under the stairs

what he'd learned before he could move to the next location, which is where, for woodworkers, the miniature staircase came in. A wide, sweeping flight in an illustrious home has for centuries been a sign of prestige. These tiny versions showed what a craftsman could achieve on a grander scale.

To be taken on in the first place, an apprentice produced an "acceptance work," a basic supported structure. He then began his tour, building as he went, and at the end of it embarked on his qualifying masterwork, which might take years. If recognized as a master, the compagnon was expected to (and would want to) make structures of increasing complexity, for pleasure and to promote himself professionally.

Many of these staircases were made to exhibit mastery of a specific design problem; one such piece is the glorious, spiraling staircase created in the 1820s by the early compagnon leader Agricol Perdiguier. His challenge was to conjure something self-supporting and elegantly proportional, displaying advanced cabinetry skills. The piece seen on page 5 would have been the result of meticulous drawings of the balance, curvature, and detailing, sketched as a plan (seen from above) and as elevations (viewed from the side). Another staircase (above right) features an unsupported double helix with veneering under the stairs. More physically complex examples might involve a staircase that splits into two, each spiraling, then comes together again. In lush cherrywood, the piece on page 6 is a cabinetry masterwork; the newel posts, while adding structural support, aren't even technically necessary and aren't in the original drawing. A variant version (above left) has the single, double, single format but with the upper steps supported by columns; though the design may be simpler, it is made of honey-colored walnut veneer, showing a love of the wood by its maker.

The considerable influence of the compagnons outside their own schools can be seen in a double-tiered staircase model (page 8) that closely resembles the life-size staircase in a Robert Adam house in London's Portman Square. Adam was a Scottish neoclassical architect who was active during the mid-eighteenth century, and the way the posts on this model are set in to support the size, indicating where a supporting wall might be, suggests this was intended for an architect of his era. The piece's complexity and subtle mix of ivory and veneered wood with brass railings shows a sensibility typically found in compagnonnage models, suggesting it may have been made by a compagnonnage-trained master.

Each flight of fantasy showed a virtuoso ascending in his profession, and this proud tradition of handcrafted excellence lives on today. The skills of compagnons may well be called upon to help rebuild Notre Dame, a grand canvas for the master artisans. ✦

Ref. 4910/10A

This year marks the twentieth anniversary of the launch of the Twenty~4® collection. Tracey Llewellyn considers how the original model paved the way for a whole new approach to women's watches at Patek Philippe

Launched in 1999, the Twenty~4® began life as a brief to create the ultimate women's wristwatch, made to the highest standards and to complement casual and formal wear. Taking design cues from the art deco-inspired Gondolo, the Ref. 4910/10 was launched in diamond-set steel (an unusual combination at the time), marrying elegance with modernity. With a 25.1 mm x 30 mm case, water resistant to 30 meters, the watch offered three dial options – Forever Black, Eternal Gray, and Timeless White – with Roman numerals at twelve and six o'clock, diamond indexes, white gold hour and minute hands, and a crown set with black onyx.

With precision, quality, and beauty as its prime goals, the Twenty~4® was powered by the Patek Philippe E15 quartz movement comprising 57 parts and six rubies. The aim was to demonstrate that the company could not only produce the most technically innovative timepieces but also the most desirable and beautiful ones. Importantly, the watch was to be accessible, priced at the more affordable end of Patek Philippe's range.

The symmetrical case was thin and cambered, and the steel bracelet was an example of the exquisite craftsmanship associated with the manufacture, all elements providing a perfect fit to the female wrist. Above all, the watch had a strong identity; it was an immediate hit and earned its place as

With the Twenty~4®, Philippe Stern was keen for the company to "commit time and energy to become a major player" in the ladies' watch market

one of Patek Philippe's top-selling pieces during the following two decades.

From its earliest days, Patek Philippe considered women's watches as important as men's, creating dedicated pocket, pendant, and wristwatches. Some of the company's main historical and technical milestones appeared in pieces that were made for ladies, such as its very first wristwatch, made for Countess Koscowicz of Hungary in 1868, and its first striking wristwatch, a 1916 five-minute repeater in a 27.1 mm platinum case. By the mid-twentieth century, however, the company was known primarily for traditional men's watches.

The Twenty~4® was designed to reestablish a connection with women. Philippe Stern, then company president, explained, "We are planning to strongly reinforce our presence in the ladies' watch market. I feel that, in terms of prestigious traditional brands, there is plenty of room for a contemporary, fine-quality watch...Therefore, we will commit time and energy to become a major player in this market. With the Patek Philippe Twenty~4®, the emphasis will be on beautiful and modern styling."

To that end, the dedicated Twenty~4® advertising campaign, shot by the photographer Glen Luchford and featuring the model Bridget Hall, established the watch as a quality piece for modern, independent women who were buying their own timepieces, and, in doing so, it rewrote the perception of Patek Philippe as a brand.

The Twenty~4®'s success led to a rapid expansion of the collection. The first rose gold version, Ref. 4910/11 with a Chocolate Dream dial, launched at Baselworld in 2000. A year after came the smaller 22 mm x 26.3 mm Ref. 4908, comprising four versions in rose or white gold. In 2003 the Haute Joaillerie Ref. 4910 with a satin strap arrived alongside another Haute Joaillerie version, the Ref. 4909/50; both references were available in rose or white gold, and the latter had a manually wound movement.

As the company's reputation as a manufacturer of watches for both men and women spread globally, the brand became more relevant to women. As a result, new collections such as Patek Philippe's first sport-chic watch in diamond-set steel, the Aquanaut Luce Ref. 5067, which launched in 2005, proved a huge success.

With a steadfast belief in ladies' watches, Thierry Stern, the company's president since 2009, was quick to acknowledge women's interest in complications. The Ladies First Chronograph, Ref. 7071, powered by a new in-house movement, CH 29-535 PS, launched in 2009 and was followed by the Ladies First Split-Seconds Chronograph Ref. 7059 and the Ladies First Minute Repeater Ref. 7000 in 2011, as well as the Ladies First Perpetual Calendar Ref. 7140 in 2012. Among these headline grabbers there have also been various moon phases, Annual Calendars, and Travel Time models for women.

However, in October 2018 Patek Philippe made one of the biggest statements on its commitment to this market. A self-winding version of its premier women's timepiece was introduced: the Twenty~4 Automatic. Still recognizable thanks to its instantly identifiable bracelet and the immaculate craftsmanship, this new model was totally reimagined for a new generation of watch buyers. Twenty years on, Thierry Stern recognizes that the market is more mature and wants to have the option of a mechanical watch, specifically a self-winding one.

With slimness a priority, the movement is caliber 324 S C, one of Patek Philippe's thinnest and most accurate. As the caliber is round, so is the 36 mm case. The watch, in steel or rose gold, displays hours, minutes, and center seconds, and has a date window at six o'clock. Arabic numerals replace the original indexes, and the diamond count has increased to 160 on the bezel, with an option for setting on the lugs, bracelet, and crown – a clear indication that, despite its new technical heart, the Twenty~4 retains an ultrafeminine soul.

And while the Twenty~4 Automatic is a natural extension to the collection, the original model remains a groundbreaking and timeless watch with an enduring popularity that ensures its ongoing position as the leading lady of Patek Philippe.

The Twenty~4® opened up a whole new market to women who were buying their first Patek Philippe. In 1999, the tagline for the debut ad campaign (above) read, "Who will you be in the next 24 hours?" demonstrating that the watch was suitable for use in each area of a woman's busy and multifaceted life

PHOTOGRAPH: COURTESY OF LEAGAS DELANEY

STORY *Christine Eichel*

PICTURE PERFECT

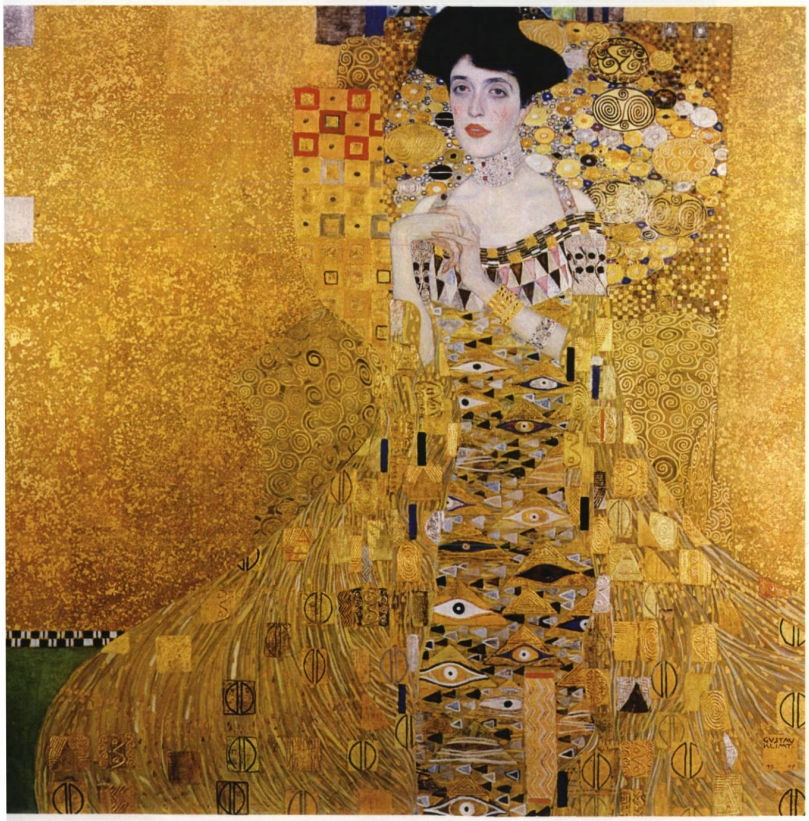
When the Austrian artist Gustav Klimt met the fashion designer Emilie Flöge in the early 1890s, it was a formative moment in his career. Their collaboration included a set of revolutionary photographs that would come to shape the style of Klimt's most famous paintings

Gustav Klimt's portraits of women have lost none of their almost hypnotic radiance. Even now, some one hundred years after the last one was painted, the viewer is fascinated by the contrast between the splendor of sumptuous fabrics and the semi-obscured faces that could have been photographed through a soft-focus lens. Sensuality impinges on adornment; delicately painted skin tones encroach upon rigorous geometry.

Klimt adopted these beguiling contrasts as his artistic signature. More surprising, though, is that he also chose to introduce the relatively new medium of photography into his work – a technological advance that had sparked fierce debate over the future of

painting. "Who will paint in future when the Daguerreotype voraciously gobbles up every image on earth?" the magazine *Der Humorist* asked anxiously in 1839, the very moment when the French government had presented Louis Daguerre's groundbreaking invention to the world at large. Everywhere, photography was seen as a threat to the traditional art of painting. Why bother with brushes and paints if reality could now be reproduced to flawless perfection? At the time, no one suspected that painting would not only survive any technological innovation but that art and photography would very soon embark on an intimate relationship.

Paradoxically enough, in the cultural hothouse that was Vienna in the mid-nineteenth century, when there began an almost insatiable demand for works of art, photography became all the rage. Prominent artists such as Hans Makart, painter to the aristocracy, seized the opportunity to make himself better known by producing sketchpads, pattern books, or reproductions of his own paintings.



Previous spread: Emilie Flöge poses for Gustav Klimt in 1906, wearing a summer dress that the pair designed together (left). His 1902 *Portrait of Emilie Flöge* (right), depicts her as an elegant woman swathed in a dazzling dress of her own design. The viewer can almost feel the fabric's sumptuousness. Above: in Klimt's 1907 *Portrait of Adele Bloch-Bauer*, his subject wears a golden dress made up of striking rectilinear forms. Opposite: in 1906, Flöge modeled a summer dress designed by Klimt and a necklace once owned by the artist Kolomon Moser. As a subject, her face is partly obscured while the garments, much as in Klimt's paintings, are exaggerated

The alleged rivalry between photography and painting was no longer a topic for argument. At last, there appeared to be a technological aid that enabled artists to visualize their ideas more clearly and to put them into practice and develop them more efficiently.

Gustav Klimt was among the first to become aware of the new medium. As a student at the k.k. Kunstgewerbeschule (or the University of Applied Arts Vienna, as it is now known), he came upon the idea of subsidizing his meager grant by painting portraits. What could be more logical than to paint from photographs? There would be no need for studio sittings, thus saving both painter and model considerable time. Besides, success was certain. With a photo at hand, the client could say exactly how she or he expected to appear. The result was a photographically exact likeness with additional artistic value for the client, and the painter collected a rapidly earned fee.

Initially, it was this kind of practical consideration that persuaded Klimt to use photography, and even as an established artist, these earlier experiences encouraged him to continue this practice. For example, for his ceiling paintings at the new Burgtheater he used photos of friends and family members striking appropriate poses as a reference for the later paintings. Other key works, such as portraits of the court actor Josef Lewinsky and the composer Joseph Pembaur the Elder, were painted after the subjects had been photographed. Less widely known is the fact that many of Klimt's nude drawings were based on photographs. Klimt bought a large number of the extremely popular boudoir shots – an inexhaustible source of studies, sketches, and intimate representations of the naked female form – from the painter and photographer Otto Schmidt.

However, with the passage of time Klimt discovered many more subtle aspects of photography when, in 1892, Karl Schuster, a photographer renowned throughout Vienna, became a near neighbor. It was a stroke of luck. Little by little, Klimt acquainted himself with the technical aspects of photography, such as camera manipulation, lighting, and image cropping. Eventually, he began taking photos himself. It was a paradigm shift. Now he was able to create images expressing his ideas and then use them as a template for the entire painting and not simply for details. And at this point, there appeared on the scene a woman who was to play a major role in the development of his new aesthetic: Emilie Flöge.

Klimt met Flöge in the early 1890s. The self-assured young woman became a long-term partner, who serenely tolerated his numerous love affairs. Together with her two sisters, she ran a haute couture salon, decorated throughout in elegant black and white with some floors covered in gray felt, much in vogue at the time. For her high-class clientele, Flöge designed dresses inspired by those she had seen on her visits to the fashion strongholds of Paris and London. For herself, she favored so-called reform dress, long, loose-fitting garments with nothing to restrict movement and no need for a corset (the fashionable torture instrument of the period). If nothing else, it was through Flöge that Klimt discovered his penchant for exquisite fabrics. Soon he, too, was making clothes for his companion: flowing, floor-length gowns, part queenly regalia,

It was through Flöge that Klimt discovered his penchant for exquisite fabrics. Soon, he was making clothes for his companion

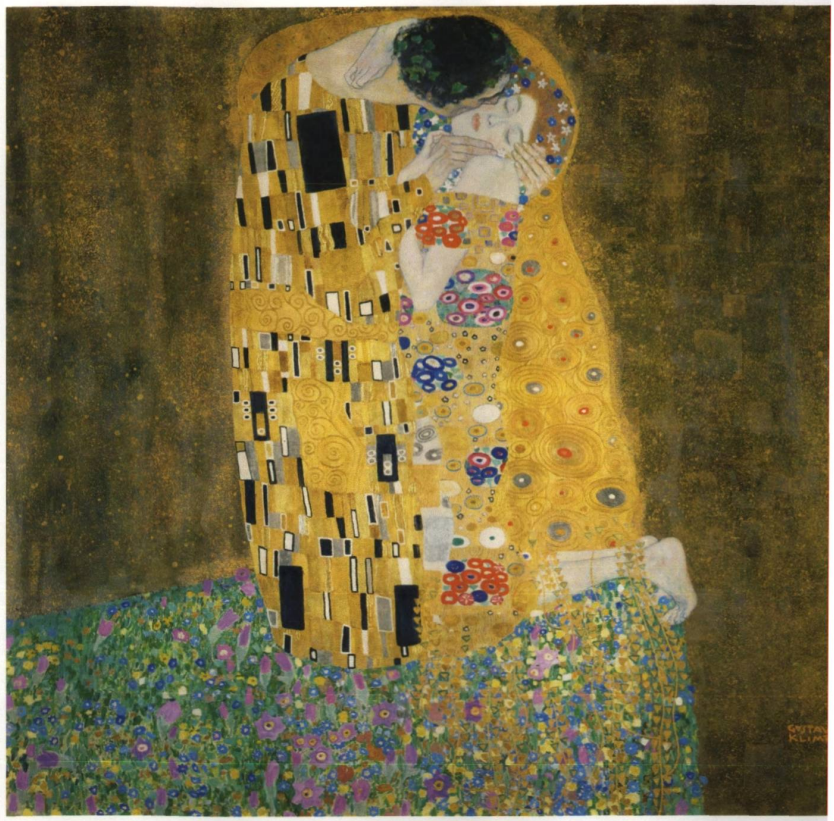
part elegant fancy dress. He gave her high collars, frills, and flounces, embellished with appliqué ornaments. As he did in his friezes, he adorned these gowns lavishly, using a wide variety of materials – mother-of-pearl, semiprecious stones, fragments of broken mirror, even upholstery tacks.

But most importantly he photographed Flöge wearing his own creations. And, as if all this were not unusual enough, he encouraged his muse to pose in the open air. At a time when fashion photography was confined to ateliers and studios, this was just as revolutionary as the impressionists' *plein air* paintings. For the most part, Flöge posed for Klimt's photographs in the garden of his studio and sometimes during their trips to Lake Attersee. What is immediately striking is how the camera focuses on the essentials. There are no exaggerated poses, no interior decor to distract the viewer's attention. The photographic view concentrates on the subject, whose clothes become independent protagonists taking on lives of their own.

These photographs were to shape the style of Klimt's portraits of women. Whether depicting Emilie Flöge or Adele Bloch-Bauer, he had found his own unique visual language. Images caught on camera, especially those in black and white, are quite unlike those perceived by the human eye. Their effect is purely representational. Consequently, the three-dimensionality of the subject becomes the two-dimensionality of a flat surface. In Klimt's paintings we encounter this idiosyncratic effect, which he creates by foregoing the use of perspective in his representation of clothing and background. All this is part of a process enabling the artist to incorporate the surrounding decor in all its splendor, with floral patterns, geometric forms, and inlaid mosaics.

More gentle and poetic than a whisper, the subject's face and hands stand out against the backdrop. It is the tension between the human form and the more opulent mise-en-scène that once again focuses attention on the sitter. The less we see of her, almost hidden amid the exuberant ornamentation, the more intensely we sense her fragility and the more we are moved by her, even today. ✦

Translated by Isabel Varea-Riley



Opposite: a photograph that Klimt took of Flöge in 1906. She is enveloped in a sea of pattern, while her face and hands fade into the background, devoid of any exaggerated pose. Above: Klimt and Flöge took frequent summer vacations at Lake Attersee in Austria. They are shown (circa 1910), in the garden of Villa Oleander, where they often stayed. Flöge is wearing a loose-fitting, floral-patterned reform dress. Top: the artist's 1907 painting *The Kiss* is probably his most recognizable. It is thought to be based on the couple

PHOTOGRAPHS: GETTY IMAGES

CROSSING BORDERS AND BREAKING BOUNDARIES

STORY
Pierre Maillard
PHOTOGRAPHS
Richard Foster

With its dual-time-zone system and 24-hour alarm, the new Ref. 5520P is the perfect travel companion. It is a grand complication in every sense of the term; the mechanism is extraordinary – innovative, useful, and technical in the extreme – yet its elegant, legible dial is refreshingly intuitive. So how did the specialists at Patek Philippe create such an impressive complication?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When Patek Philippe unveiled the Calatrava Pilot Travel Time Ref. 5524 in 2015, the purists raised their eyes to the heavens, shocked that the manufacture would have the temerity to bring out an aviator-style watch. "It's not Patek," came the cry. But the wind soon changed. For one thing, the doubters realized that Patek Philippe had solid historical antecedents in this field, notably its two 1936 *siderometers* or hour angle watches (these are used to help pilots calculate their position). For another, they witnessed the public's wholehearted approval of a limited edition of this Calatrava Pilot line, the steel Ref. 5522A with its "simple" three-hand display, presented at Patek Philippe's *The Art of Watches Grand Exhibition* in New York in 2017. The doubters reversed their opinion.

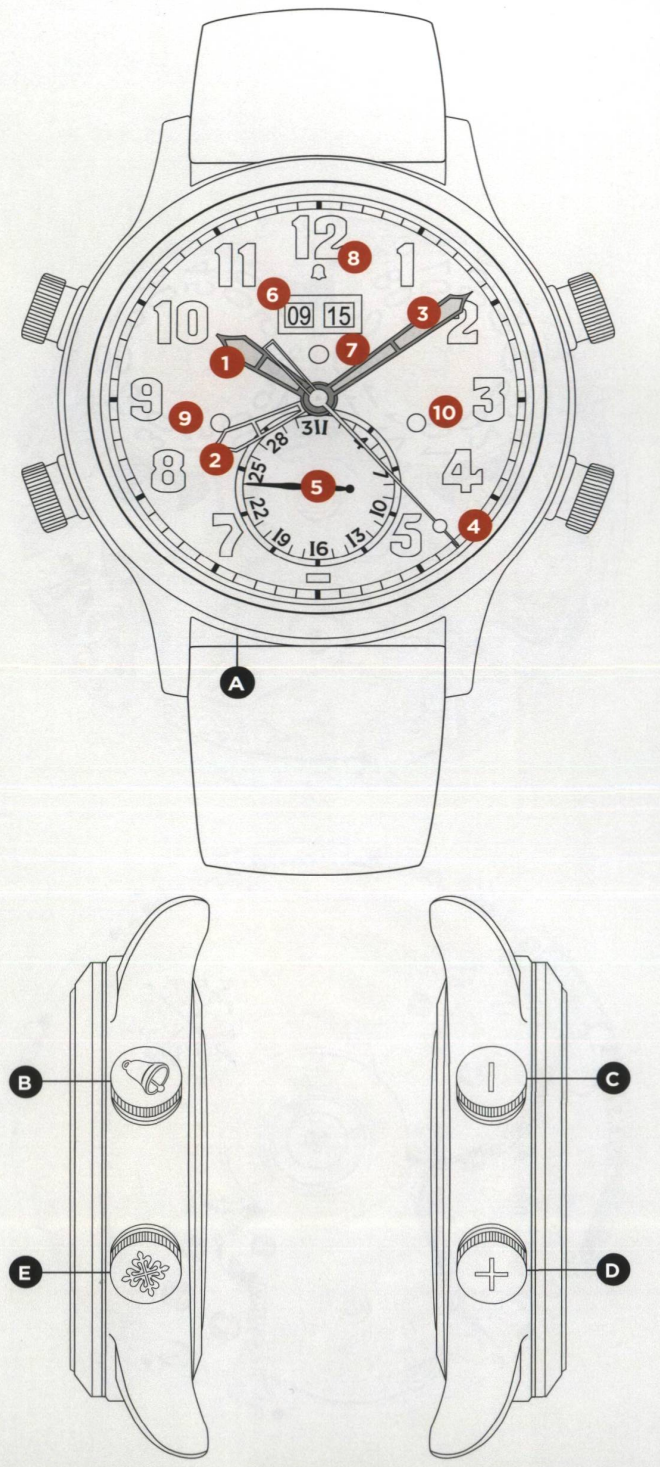
In short, watch lovers have embraced the Pilot style's bold lines and rigorous legibility, which has been reinterpreted by Patek Philippe with the intention of bringing the modern traveler a reliable, accurate timepiece endowed with a second time zone. Women have their own version – the Ref. 7234 – which launched in 2018.

No doubt it is one of the privileges of an independent family-owned firm such as Patek Philippe to be able to proceed in this way, innovating instinctively without having to bow to the choices imposed by marketing. That is certainly true of this new Pilot line.

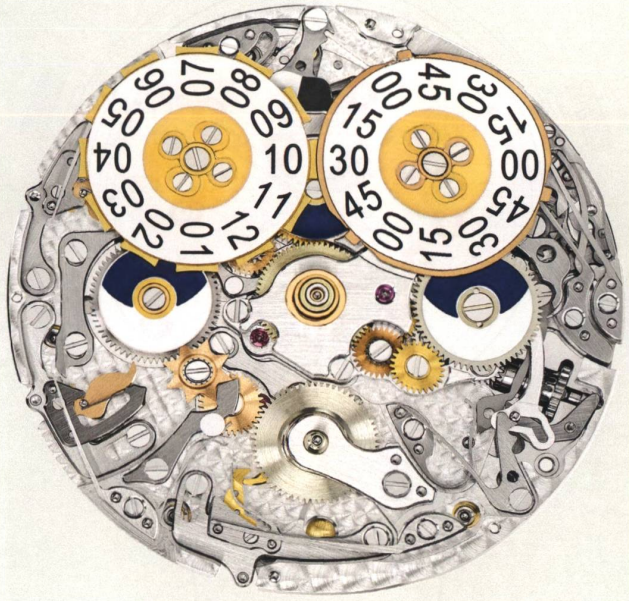
A COMPLICATED BRIEF

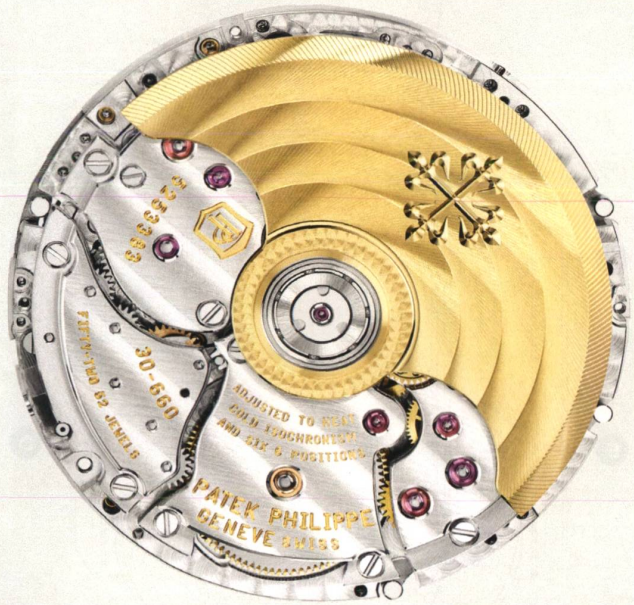
For the Ref. 5520P, as well as pursuing the adventurous spirit of the aviator style, Patek Philippe's engineers and watchmakers were charged with the mission of conceiving and developing a new alarm mechanism and combining it with the Travel Time dual-time-zone system. This alarm would be synchronized with local time, which sounds logical but was a formidable technical challenge since it had to be possible to set the alarm time mechanically over 24 hours instead of the usual 12. (Usually, an analog alarm can only be set on a 12-hour basis, but for this timepiece much thought went into the way the system works, and as a result a 24-hour format was chosen to make the alarm function as practical as possible.)

Furthermore, to optimize the thinness and thus the elegance of the watch, the brief also specified an integrated movement rather than one fitted with an additional plate that, though easier to create, would have increased the height. Another imperative was that this new grand complication had to be simple to operate, intuitively functional, and protected against incorrect handling. It was no easy task and it called for more than five years' development work, during



Opposite: a sapphire crystal display back reveals the refined architecture and exquisite finishing of the Ref. 5520P's movement, caliber AL 30-660 S C FUS. This page, top: the watch's dial displays a plethora of information in a useful, easy-to-read design. Features, as indicated by the numbers circled in red, include: 1. hour hand for local time; 2. hour hand for home time; 3. minute hand; 4. seconds hand; 5. date; 6. alarm time display; 7. alarm day/night indication; 8. alarm on/off indication; 9. day/night indication for local time; 10. day/night indication for home time. A. shows the date corrector. Above: the three pushers (which feature patented safety locks that can be unlocked by a quarter turn) are used as follows: B. turns alarm on/off; C. adjusts local time backward (in one-hour steps); D. adjusts local time forward (in one-hour steps). Each pusher is embossed with a motif: there is a Calatrava cross for the crown, a bell for the alarm, and a plus or minus symbol for the two local time pushers. E. the three-position crown has four functions – winding the alarm (clockwise); winding the movement (counterclockwise); setting the alarm time (in 15-minute steps); setting the time (with balance stop)





The self-winding caliber AL 30-660 S C FUS measures 31 mm in diameter and 6.6 mm in height. The movement, which comprises a total of 574 parts, is equipped with a Gyromax® balance featuring a Spiromax® balance spring in Silinvar® (a silicon derivative). The unique properties of this silicon material and the patented geometry of the hairspring enable the REF. 5520P to deliver a rate accuracy of -3/+2 seconds per day, in accordance with the Patek Philippe Seal. The alarm mechanism has its own separate spring barrel and features a mechanism that blocks the winder if the alarm is set to "on," preventing the crown from turning while the alarm is sounding. The hour and minute disks (see top) allow for the digital display of the alarm time, which is set in 15-minute increments; the strike train triggers with 30-second accuracy. There are three day/night disks (for home and local time and for the 24-hour alarm). The alarm and date are both synchronized with local time. Above: the central rotor in 21k gold is decorated with circular Geneva stripes. The bridges' edges are polished and chamfered; one, decorated with a pierced Calatrava cross, covers the centrifugal governor. This is Patek Philippe's first striking watch that is water resistant (up to 30 m)

The movement is a work of high mechanics, housed in a refined case and concealed behind a face whose features give nothing away

which the manufacture filed four patent applications – and those were for the alarm alone.

The choice of the case that would house the new generation self-winding caliber AL 30-660 S C FUS became obvious only toward the end of the research and development phase. In view of its success, and its very nature as a globetrotter's watch, the aviator-style Pilot model seemed tailor-made.

POLITE DISCRETION

At first glance, no one would suspect that the new Alarm Travel Time REF. 5520P, with its pared-down, no-nonsense air, was a true grand complication. This discretion on the part of a work of high mechanics, housed in a refined case and concealed behind a face whose features give nothing away, is emblematic of the Geneva manufacture's love of restraint. Think, for example, of its tourbillons, which are not visible on the watch dial. It is a form of politesse. And yet, come a little closer and penetrate some of the mysteries of the watch's functionality and you will soon realize that this is a particularly complex creation.

The timepiece has two center hour hands: one, skeletonized, indicates home time; the other, solid, displays local time at the wearer's current location. When the owner is at home, the two hands are perfectly superposed. Each hand is paired with a day/night indicator in a small round aperture that changes from white to blue. To adjust the local time, you simply use the dedicated pushers at eight and ten o'clock to move the hand either clockwise or counterclockwise in one-hour increments. The analog date on the subsidiary dial at six o'clock is synchronized with the local time and changes automatically when the hour hand for local time is moved forward or backward past midnight.

What is new and original is the alarm, whose indications are arranged in the upper half of the dial. It, too, is synchronized with the local time. For optimum

1936
Movement No. 170 383
Case Ø: 56 mm

1936
Movement No. 170 381
Case Ø: 55.3 mm

2015
Ref. 5524G
Case Ø: 42 mm

2017
Ref. 5522A
Case Ø: 42 mm

Above, left to right: pilots once used *siderometer* watches to determine their position according to the stars. They could calculate their exact longitude and latitude by means of a radio signal, a sextant, and a siderometer. The two jumbo-sized 1936 examples shown here are held in the Patek Philippe Museum. In 2015, the company released its first modern Pilot-style Travel Time watch, Ref. 5524 in white gold, and a limited edition New York Grand Exhibition steel Pilot model, Ref. 5522, was released in 2017

convenience and legibility, the alarm time appears as a four-figure digital display in a double aperture with a day/night indicator. Adjusting the alarm time is a simple matter of pulling the crown – which is set into the case flank at four o'clock – halfway out and turning it in either direction in 15-minute steps. When questioned on this point, Philip Barat, the head of watch development at Patek Philippe, revealed all the complexity that this operation conceals. "This caliber comprises 574 parts. Compare that with a minute repeater, which has around 340 parts. If we had gone for a digital display with five-minute steps, we would have required a large additional set of gears, which would be difficult, if not impossible, to fit into a caliber that was designed to be slim. Furthermore, for purely mechanical reasons, the accuracy of the alarm would have been limited to plus or minus two-and-a-half minutes, whereas with the fifteen-minute steps, we have perfect accuracy." These are the almost unfathomable mysteries of high mechanics. (For readers who are interested to learn more on this subject, there is a special video at patek.com, narrated by Philip Barat.)

Once the alarm is adjusted, it can be activated or deactivated by a pusher set into the watch flank at two o'clock. A small bell-shaped aperture directly below twelve o'clock on the dial turns white when the alarm is on and black when it is off.

STRIKING BEAUTY

Unlike most alarm watches, which produce a buzzing noise, the Alarm Travel Time strikes with dignity on a classic gong that circles the movement and is attached directly to the caseband. At the pre-set time, a hammer similar to that of a minute repeater (visible through the sapphire crystal display back) strikes the gong for up to 35 seconds (or about 90 blows). A centrifugal governor assures the regular and sustained striking cadence. A separate spring barrel, independent of that of the movement, supplies all the energy for the alarm's needs. The spring barrel must be fully wound for the striking work to go into action. This complex mechanism is governed by a column wheel (for which a patent has been filed) that controls all of the various functions, each of which was designed for optimal user-friendliness.

Another mechanical feat lay in making this functionality completely secure. The owner of this watch will never run the risk of damaging the movement

2018
Ref. 5524R
Case Ø: 42 mm

2018
Ref. 7234R
Case Ø: 37.5 mm

2019
Ref. 5520P
Case Ø: 42.2 mm

This page, left to right: in 2018 two more Travel Time models were released, in rose gold – the large Ref. 5524 and the medium-sized Ref. 7234, each with dual-time-zones, a home and local time day/night indicator, and local date display. The newest addition is the 2019 grand complication Ref. 5520 in platinum

by incorrectly handling it. The alarm mechanism is always aware of the state of wind of its spring barrel and will only signal "on" if the barrel is fully wound. The user is free to cross into another time zone or set a new alarm time while the alarm is sounding, as the mechanism will instantly set the alarm to "off."

One last technical detail: the Alarm Travel Time is Patek Philippe's first water-resistant striking watch, and its owner will particularly appreciate this feature when traveling to countries that have a humid climate.

Unlike most alarm watches, which produce a buzzing noise, the Alarm Travel Time strikes with great dignity on a classic gong that circles the movement

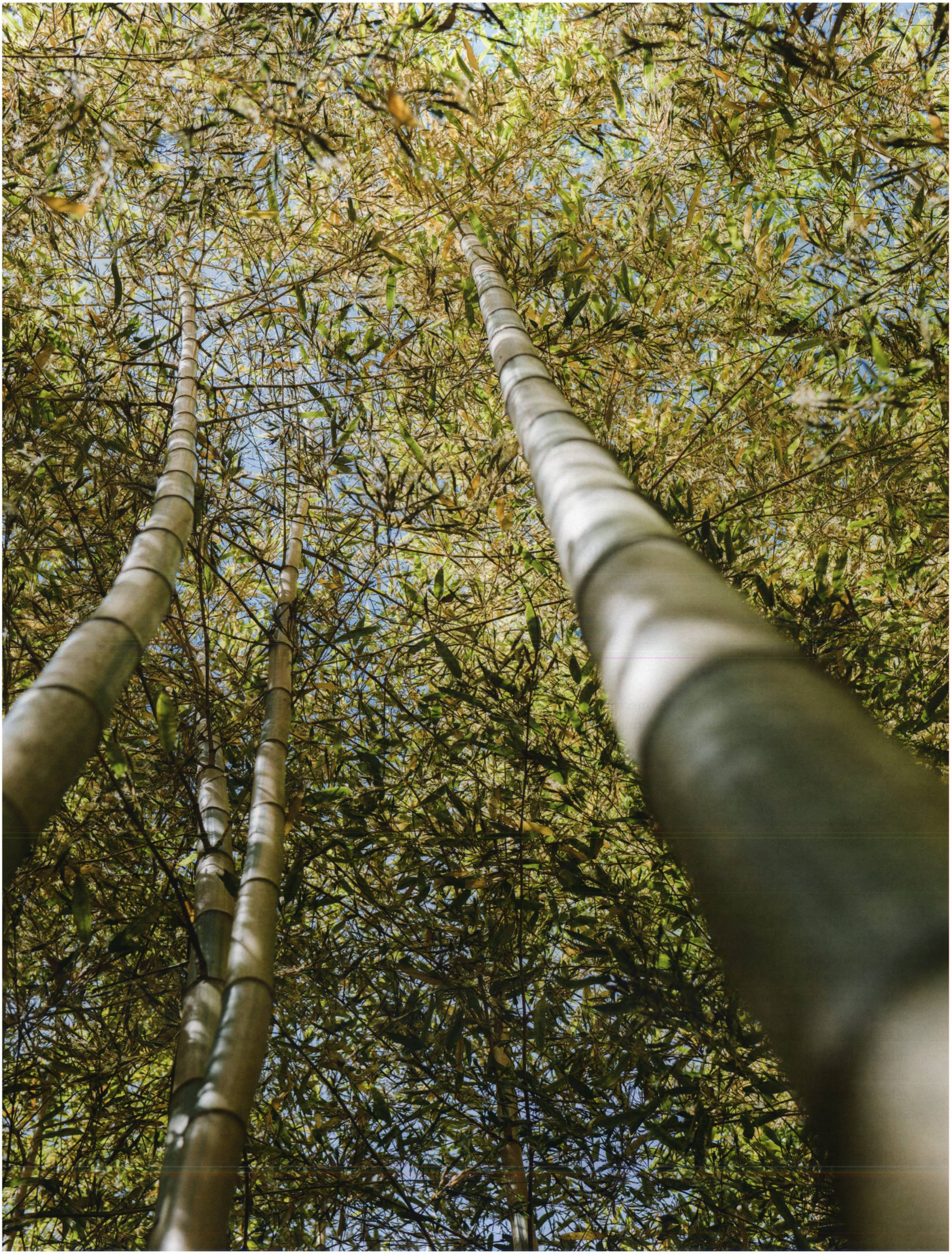
IMMEDIATE, INTUITIVE READABILITY

The Alarm Travel Time conceals all its complexity and mechanical ingenuity behind an ebony black sunburst dial, featuring large applied Arabic numerals in white gold with a Superluminova® coating. Each indication stands out on this elegant background and is instantly identifiable. Optimized visibility adds to the displays' immediate, intuitive readability. The pushers for the alarm and Travel Time functions are embossed with relevant symbols. The fine, flat sapphire crystal glass covering the dial improves the sonority of the alarm, whose acoustic performance is very like that of the manufacture's renowned minute repeaters.

The case, 42.2 mm in diameter and 11.57 mm high, is cold-formed from a blank of platinum, using a high-tonnage press, and its appearance echoes the Pilot style's pure lines. With a sleek, slightly beveled bezel and slender integrated lugs, the Ref. 5520P retains almost the same dimensions as the pioneering Calatrava Pilot Travel Time Ref. 5524G of 2015.

And while the style of this new model focuses on legibility and its function is useful and practical, inside we find an innovative new grand complication mechanism. Combined, these elements deliver a time-piece the frequent traveler will covet. ✦

Translated by Barbara Caffin



The flowering of genius

STORY *Christopher Stocks*
PHOTOGRAPHS *Bruno Suet*

A plant nursery located in a small French province is home to some of Europe's earliest imports of Japanese bamboo. The place is still in use today, and one of the original species that was cultivated there has just flowered for the first time in more than a century

The croaking of frogs is the first thing you notice. We're in the lush southwest of France, in the little village of Le Temple-sur-Lot, midway between Agen and Bergerac. This is prune country, a gentle landscape of pasture, woods, and orchards, stocked with plums, cherries, and hazelnuts. It's a quiet, undramatic region, well off the tourist trail, and it would have been even more cut off in the nineteenth century before the advent of cars and high-speed trains. Yet on this well-watered spot in 1875, a local landowner opened a nursery that would introduce new plants to Europe and America from the world's farthest corners and inspire one of the greatest artists of his time.

Joseph Bory Latour-Marliac came from a prosperous local family that had amassed

***Phyllostachys bambusoides*, from which "Castillonii" (left and above) derives, flowers roughly once every 120 years. Surprisingly, all the plants flower at around the same time, wherever they are in the world. This evolutionary trait is thought to ensure the survival of the species, since no number of predators could possibly devour the vast seed quantity that is produced in a year. After flowering, the plants die**

extensive land around Le Temple and Granges-sur-Lot (where Latour-Marliac was born and his father was the village mayor). Though their origins were provincial, they spent winters in Bordeaux, which was a cultured and cosmopolitan city, and the young Latour-Marliac would have been exposed to the latest ideas and fashions. In 1847, his parents sent him to Paris to study law, but he arrived just as the storm clouds of the 1848 revolution were gathering, and the 17-year-old found himself in the middle of what was, to all intents and purposes, a civil war.

With his studies cut short, he returned to the peace and safety of his provincial roots, where he helped run the family estate, studied horticulture, and, in 1852, married Alida Gonnère, setting up home in a house in Le Temple-sur-Lot. In 1875, close to his residence, he opened the commercial plant nursery that was to make his name. It stood (and stands) on a 10-acre site dotted with freshwater springs and edged by a tributary of the Lot river.

By this time, Latour-Marliac was corresponding with a wide range of leading nurserymen and horticulturalists, and he had built up a notable collection of hardy bamboos. In this he was a true pioneer. Though French gardeners might take bamboo for granted today, in the late nineteenth century it was still a rare and exotic import. The opening up of trade between Japan and the West following the Perry Expedition of 1853 led to a craze for all things Japanese across France and many other countries. *Japanism* had a huge influence on artists such as Monet, Degas, and Van Gogh, as well as on architecture and the decorative arts, not to mention horticulture.

Writing toward the end of the nineteenth century, the British gardener and author Algernon Bertram Freeman-Mitford rhapsodized about the revolutionary effect that Japanese bamboos had had on Western gardens, "[They] have added to our borders, our shrubberies, and more especially to our wild gardens, a wealth of beauty which a few years ago would have been deemed beyond the craziest dreams of the enthusiast."

The plant nursery is dotted with freshwater springs and edged by a tributary of the Lot river

As one of the earliest importers of these bamboos to Europe, Latour-Marliac built up a roster of wealthy clients, including the Comte de Noailles in France, the Rothschilds in the UK, and the Vanderbilts in the United States. Freeman-Mitford acknowledged that it was "above all M. Latour-Marliac of Temple-sur-Lot" whose energy and enterprise established that "even if we may not hope to see our bamboos grow to the huge dimensions which they attain in their native countries, there are many the hardiness of which is proof against our severest winters."

Latour-Marliac was a prolific letter writer, and as his biographer Caroline Holmes notes, "the Latour-Marliac archives are filled with scientific enquiry often laced with chatty correspondence." His entrée into high society seems to have been via a local grandee, the Comte de Castillon, whose family were major landowners around Agen. The Count was one of Latour-Marliac's early bamboo customers, but he clearly went on to become a friend, and Holmes details the breadth of their correspondence, in which, among other things, "they discussed

Opposite: "Castillonii" bamboo still grows around the borders of the Latour-Marliac plant nursery in Le Temple-sur-Lot. Joseph Bory Latour-Marliac can be seen at the nursery in the image, c. 1895, below (sitting far left), presiding over his hardy water lilies, which were created by crossing the white variety with wild varieties that he sourced from North America and beyond. The palette of his hybrids ranged from yellow to fuchsia to deep red. Bottom: an illustration and photograph showing the unusual variegated stems of the "Castillonii" species

growing bamboo shoots for the table, they swapped roses, French beans, discussed persimmons, prunes, children and religion."

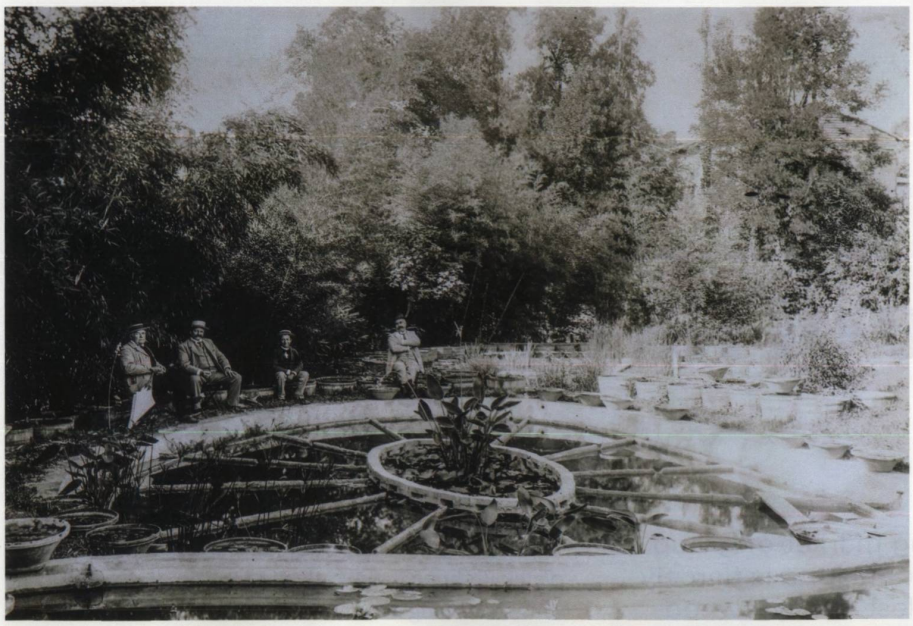
Arguably the most beautiful of Latour-Marliac's introductions was the variety that in Japan is known as *kinmei-chiku* or golden brilliant bamboo. A form of the Japanese timber bamboo *Phyllostachys bambusoides*, it is unique in that both its leaves and stem are brilliantly variegated. And it has one other remarkable feature: it only flowers roughly once every 120 years.

As was common at the time, Latour-Marliac gave his Japanese introductions Western names. He must have thought hard about the one for *kinmei-chiku* bamboo. In the end he called it "Castillonii," in honor of the Count, whose support had done much to establish Latour-Marliac's reputation.

Yet bamboo was only the beginning. From the start, Latour-Marliac had sold aquatic plants alongside bamboo, digging a series of decorative pools in which to grow and display them. One plant in particular obsessed him: the water lily. Up until his time, water lilies in Europe were white, but new species had been discovered in North America and the Far East, and by crossing those Latour-Marliac was able to create a range of brilliantly colored hybrids hardy enough to grow outdoors. In 1889 he exhibited them at the World's Fair in Paris, and they caused almost as much of a sensation as the newly built Eiffel Tower. Overnight, Latour-Marliac became a famous nurseryman, and the orders flooded in.

One customer was to give Latour-Marliac's water lilies lasting fame. Claude Monet had seen the display at the World's Fair, and when he began creating his water garden at Giverny, he placed an order for water lilies from the nursery. These were the subject of his last and greatest paintings, *Les Nymphéas*.

Latour-Marliac died in 1911, and the business stayed in his family until 1991. In 2007 it was acquired by a young American called Robert Sheldon, who, by dint of hard work, good contacts, and an entrepreneurial approach (he teaches entrepreneurship in Paris), saved the nursery from ruin. Today its 65 cultivation pools are full of water lilies again, but Latour-Marliac's first love has not been forgotten. Fringing the edge of the site are magnificent stands of tall bamboo, and among them is a variety whose vividly striped stems make it instantly recognizable as "Castillonii." This year, for the first time in 120 years, it flowered: a fitting commemoration of a remarkable man. ✦



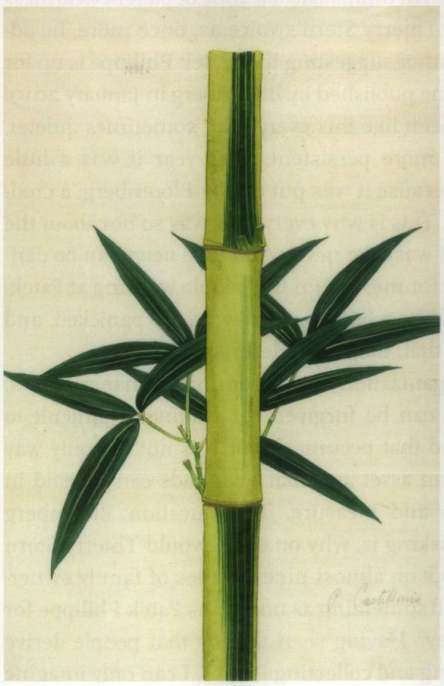


ILLUSTRATION: RHS LINDLEY COLLECTIONS

STORY *Nicholas Foulkes*
PHOTOGRAPH *Frederic Aranda*

In a league of its own

Among a growing market of group ownership, Patek Philippe is fiercely proud to be the last family-owned independent watch manufacturer in Geneva. In his tenth year at the helm, Thierry Stern believes independence is what makes the company unique

"At a time when profound changes are taking place in the Swiss watch industry, and also in the relationship between the retail jeweller and his main watch suppliers, we at Patek Philippe once again reaffirm our independence as a family business, which neither maintains nor contemplates any links with the emerging Swiss watch industry 'concentrations.'

"We cherish our independence. Just as the typical Patek Philippe jeweller cherishes his.

"Together with him we have developed over the years a relationship based on give and take, on independence and interdependence."

These emollient words were not spoken in 2019. No. They appeared in a brochure called *A Declaration of Independence* that Patek Philippe sent out to its retail partners 45 years ago, in 1974. Then as now, the industry was in the grip of profound change, and, then as now, Patek Philippe is defiantly not for sale. "It has been like this for as long as I can remember, certainly more than thirty years." An unmistakeable tone of patient weariness creeps into Thierry Stern's voice as, once more, he addresses a rumor suggesting that Patek Philippe is up for sale, this time published by Bloomberg in January 2019.

"It has been like this every year, sometimes quieter, sometimes more persistent. This year it was a little different, because it was put out by Bloomberg, a credible source. This is why everybody was so hot about the news, but it was fake news. And fake news can be dangerous, not for me, but for the people working at Patek. There are those who are afraid, who are panicked, and I don't like that, they don't deserve that."

As an organization that disseminates financial news, Bloomberg can be forgiven for finding it difficult to comprehend that pecuniary worth is not the only way of valuing an asset and that dividends can be paid in satisfaction and pleasure. The question Bloomberg should be asking is, why on earth would Thierry Stern turn his back on almost nine decades of family ownership and sell something as unique as Patek Philippe for mere money? Having seen the joy that people derive from wearing and collecting Pateks, I can only imagine

"I can make whatever I want and work with whomever I want, and that allows us to create what we believe is right," says Thierry Stern

the euphoria that comes with owning the company. Every morning, Thierry Stern wakes to find that he is in charge of one of the most desirable brands in the world, designing and making some of the most sought-after watches. As president, he can bestow the pleasure of purchasing one of these pieces on whomever he chooses. Which watch-lover would trade that? The world has many billionaires, but there is only one Patek Philippe.

"For me, it's quite clear. It's not a matter of money. If you have a brand like Patek, I think you are richer in terms of knowledge, in terms of beauty. I prefer to be rich in that way. I enjoy creating beautiful watches, and there is no price you can put on that."

As well as deriving immense personal satisfaction from Patek Philippe, Thierry believes that independence is best for the watches. "I can make whatever I want and work with whomever I want, and that allows us to create what we believe is right. I do not have anybody who will push me to create something that is too commercial."

Nor is the obverse true. A financially focused group might well have discontinued the Golden Ellipse, which, under Thierry, has enjoyed a renaissance. And it would have almost certainly ended production of the polychromatic enamel dome clocks. "Dome clocks were always well-known, but there was a time when we didn't sell many. However, we continued to produce them, so that the people making them were able to maintain their know-how – we are talking about a maximum of fifteen or sixteen clocks per year. Today, demand is much higher, but I do not have enough people who can make them.

"I grew up looking at my grandfather's and my father's dome clocks; if we were to stop making them, it would be like removing a piece of the heart of Patek. It's something that's so deeply anchored in the family. We enjoy making them; I just don't like selling them. The year I became president, I kept one for myself."

As well as safeguarding tradition, Thierry believes that independence gives him the freedom to take risks. "In order to create something that nobody expects, you have to take risks, and the beauty of being independent means you can." He listens to trusted members of his board and specialists within the company, of course, but he does not have to listen to focus groups or convene meetings to decide what is and what is not a Patek Philippe.

"If I decide it's a Patek, it's a Patek. My goal is not only to continue the company; my objective and my responsibility is to make sure it evolves, so sometimes I have to make pieces that are totally different. It was

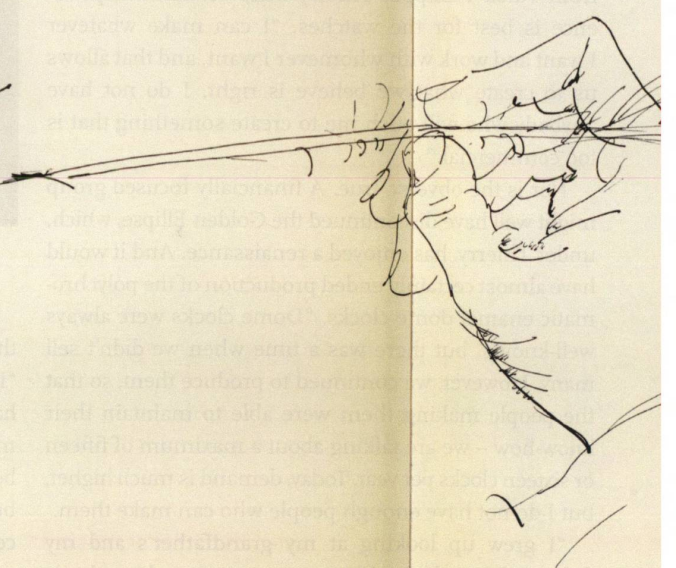
At a time when profound changes are taking place in the Swiss watch industry and also in the relationship between the retail jeweller and his main watch suppliers, we at Patek Philippe once again reaffirm our independence as a family business which neither maintains nor contemplates any links with the emerging Swiss watch industry "concentrations."

We cherish our independence.
Just as the typical Patek Philippe jeweller cherishes his.

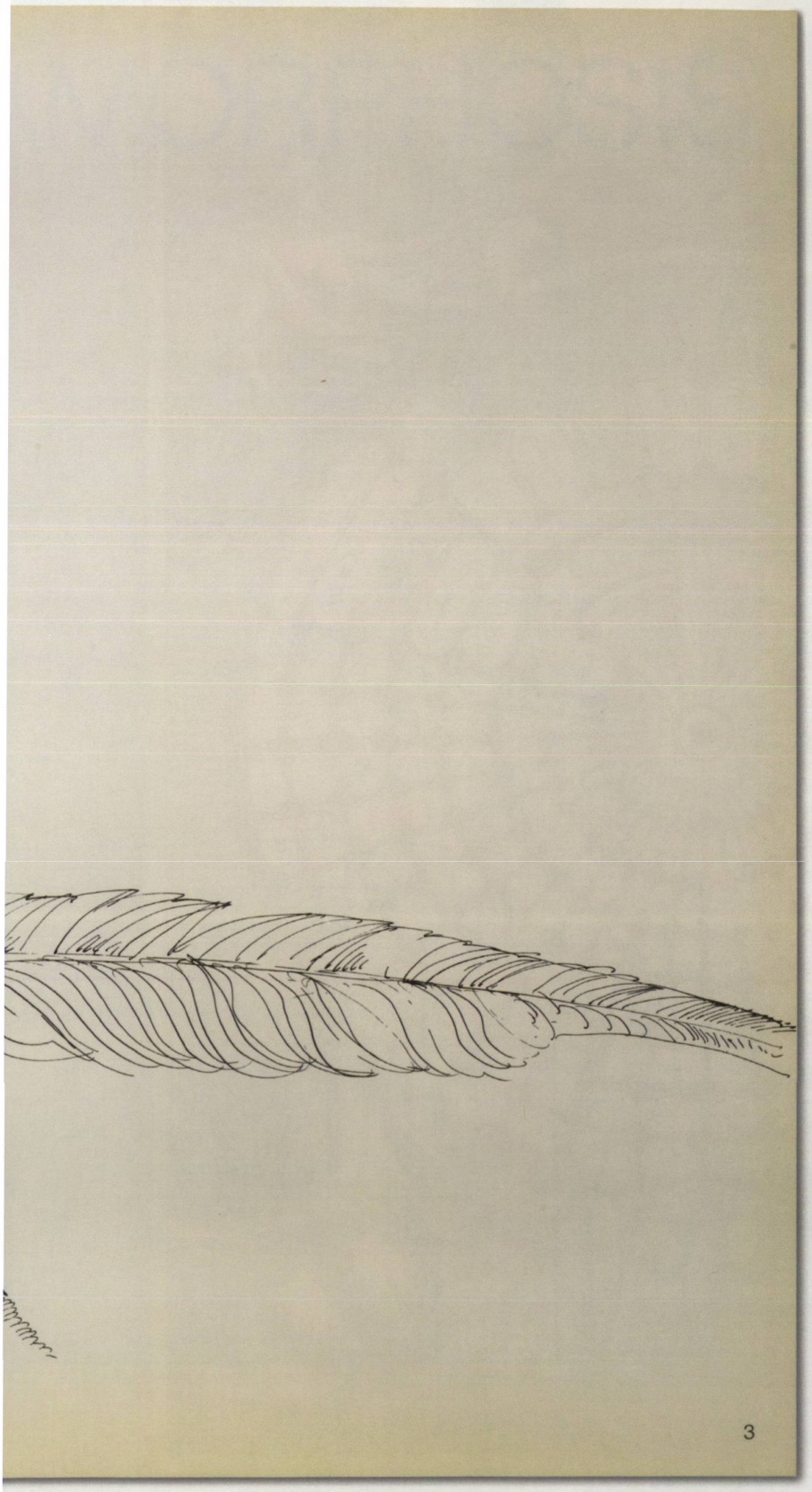
Together with him we have developed over the years a relationship based on give and take, on independence and interdependence.

On the following pages we shall consider our product and distribution policies. Important as such topics are, they are outweighed by what to us is the most important single element in the success of Patek Philippe: the special bond we have been able to forge over the years with the jewellers who represent us throughout the world.

Patek Philippe



A DECLARATION OF INDEPENDENCE



Previous spread: Thierry Stern, who took over the reins as Patek Philippe's president in 2009, is understandably proud of the success of his business, which has been run by the Stern family since 1932. Left: an original copy of *A Declaration of Independence* is held in the company's archives. It was released in 1974 to remind retailers of the company's core values during a testing time that witnessed the quartz crisis as well as luxury watch brands being sold in department stores

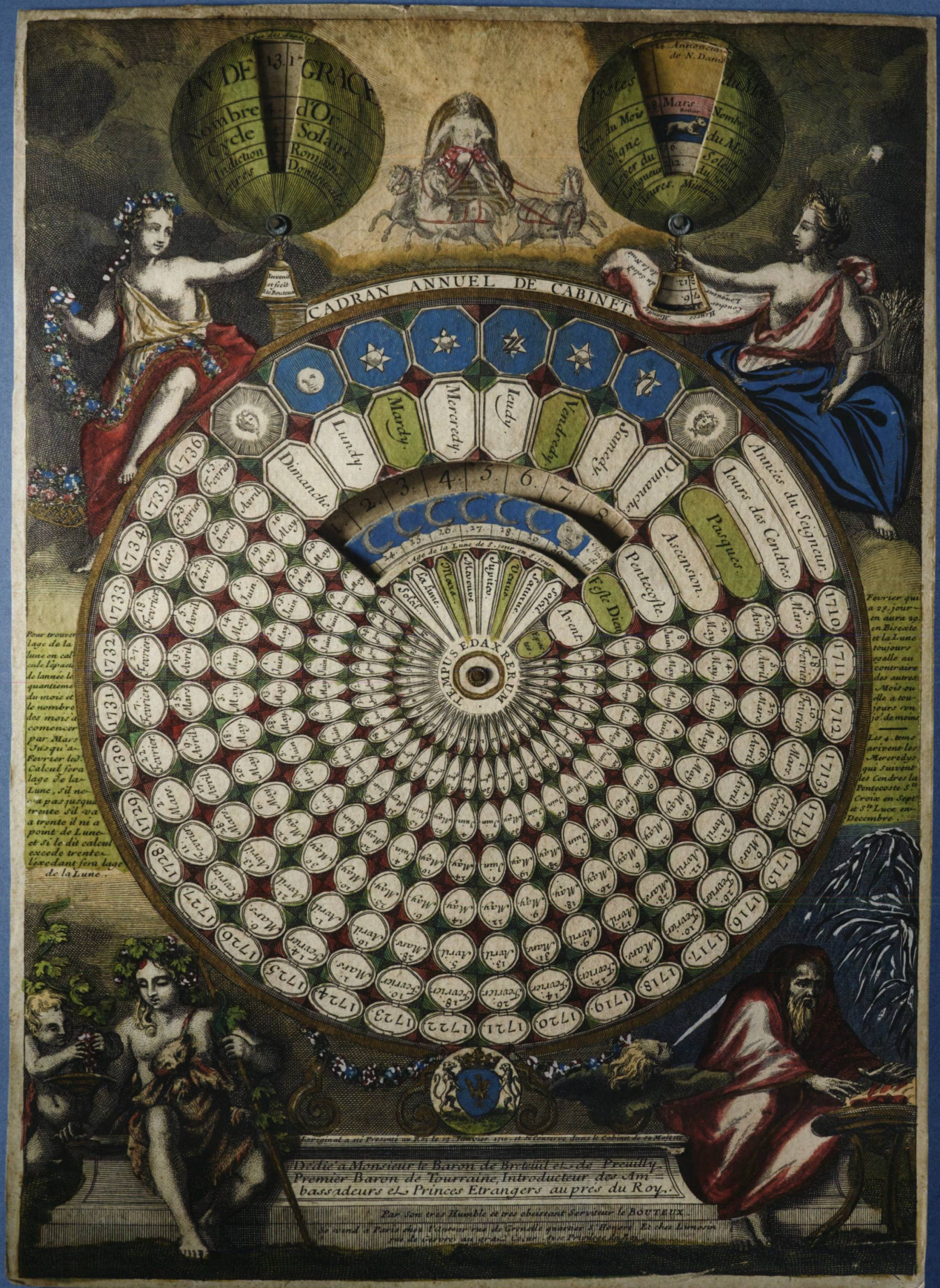
the case with the Nautilus more than forty years ago, with the Twenty~4®, with the Aquanaut, and with many others...We have to surprise people but with the same spirit of beauty, elegance, and quality. And I don't have to listen to anyone saying, 'Oh no, don't try it, it's too risky.'"

Just as there was no one to tell his father not to spend almost a decade making the Calibre 89, so there is nobody to tell Thierry not to construct the new Plan-les-Ouates building. "It's a risk. We are talking about more than half a billion Swiss francs, not a small amount, so you had better believe in your brand when you do that. And I'm not afraid because I trust Patek Philippe and I trust the people working here. So is it really a risk? I don't know." He pauses to ponder the question. "The risk would be to not invest."

In the new building there is a space dedicated to rare handcrafts, a particular passion for Thierry as they were for his grandfather, Henri, who employed the fabled Madame Rohr solely to perpetuate the tradition of Geneva enamel painting. "We keep them because we love them," he says of such skills. "It's as simple as that.

"It is not absolutely necessary to our survival but it shows our very strong commitment to beauty. If Patek Philippe doesn't keep the knowledge alive, who will? As long as people are able to do it, we will carry on with it. And, more important, I think, is our duty to train the new generation, so that they can, in time, teach others. But this is not a must, in terms of business. If Patek Philippe were in a group, I don't think this would continue in the way that we do it now, because it's too expensive, takes too long, and it's very complicated. It wouldn't be appropriate if you were part of a group and wanted to please your shareholders. No doubt they would prefer to have a bit more Nautilus!"

He laughs, but his features soon transform into a mask of thoughtfulness. "But when you look at those beautiful pocket watches made with marquetry, enamel, or engraving...they are part of the history of Patek. Maybe they should stay in the museum, so that everybody can see the result," he says, and then gives a fatalistic shrug. "But sometimes you also have to do some business..." At last, a sentiment Bloomberg will understand. ✦


CADRAN ANNUEL DE CABINET.
Dimanche
Lundy.
Mardy.
Mercredy.
Jeudy.
Vendredy
Samedy
Dimanche
Annees du Seigneur
Jours des Cendres.
Pasques.
Ascension.
Pentecoste.
Feste Dieu
Avent
TEMPUS EDAX RERUM
Dedié à Monsieur le Baron de Breteuil et de Preuilly,
Premier Baron de Tourraine, Introducteur des Ambassadeurs et Princes Etrangers auprès du Roy.

STORY *David Rooney*
PHOTOGRAPHS *John Short*

Revolutionary instruments

Long before the digital age, rotating paper instruments known as volvelles allowed the user to compute myriad data, offering solutions to scientific problems of the medieval and early modern age. Only a few delicate and fascinating examples have survived

"With an almanack and a watch, one could, from three hundred leagues away, say with accuracy what he was doing." So claimed Louis de Rouvroy, the Duke of Saint-Simon, of his godfather, King Louis XIV. For France's so-called Sun King, calendrical order ruled his life and that of his court. Those close to him used calendars to glorify the king's image as the ruler of time itself. It would be no surprise, therefore, to find that during his last years, the king kept an exquisitely detailed perpetual calendar close at hand in his personal cabinet.

It was no ordinary calendar. The king's device (see opposite), which covered the years 1710 to 1736, contained a circular rotating dial showing the phases of the moon, new moons, the age of the moon, and the dates of the month. Two smaller dials provided information about the year, solar cycles, months, zodiac signs, feast days, and the length of the day. Sadly, the king would only be able to use this prized instrument for five years before his death in 1715.

These rotating paper disks were known as volvelles, from the medieval Latin *volvella* or *volvellum* meaning "to turn," and they were used from the fourteenth century to calculate the movement of the stars, the dates of lunar eclipses, or the patterns of the tides without recourse to extensive tables of numbers. Such devices, called "paper instruments" by the German maker Georg Hartmann in 1544, were hybrids of books and the scientific instruments of brass, wood, and ivory that have survived in greater numbers. Volvelles brought the universe to order and, it was believed, helped predict the future. Today, paper volvelles are rare, owing to their fragility, and highly prized by collectors as very early types of analog computing devices.

Perhaps the most famous and desirable example of the volvelle-maker's art was Petrus Apianus's sumptuous 1540 publication *Astronomicum Caesareum* (or *The Emperor's Astronomy*), described by the historian Derek J. de Solla Price as "the most luxurious and intrinsically beautiful scientific book that has ever been produced." In this spectacular hand-colored publication, which took approximately eight years to produce, a total of 83 volvelles impart complex information about the position and movement of celestial bodies, as well as astrological quantities and the means to find

King Louis XIV treasured his perpetual calendar with 3 movable volvelles, which was made for the years 1710-1736. Certain dignitaries at his court received copies, such as the example shown (left), owned by Louis Nicolas Le Tonnelier de Breteuil, an officer of the royal household and father of the mathematician Émilie du Châtelet. The hand-colored engravings are highlighted with gold and silver

the dates of Easter and Passover. Without the volvelles, such calculations would need to be made by hand, which was a lengthy and difficult task. The book historian Sten G. Lindberg has commented that volvelles were "what the slide rule became and what the pocket calculator is now for our scientists."

Apianus, a contemporary of Nicolaus Copernicus, was an astronomer and printer at the University of Ingolstadt, Bavaria, and soon gained a reputation for the quality of his work on geography and cartography. He came to the attention of the Holy Roman Emperor Charles V, who paid for the printing of the *Astronomicum* as well as granting Apianus three thousand golden guilders, appointing him court mathematician, and offering him a knighthood, such was the high status of his paper masterpiece.

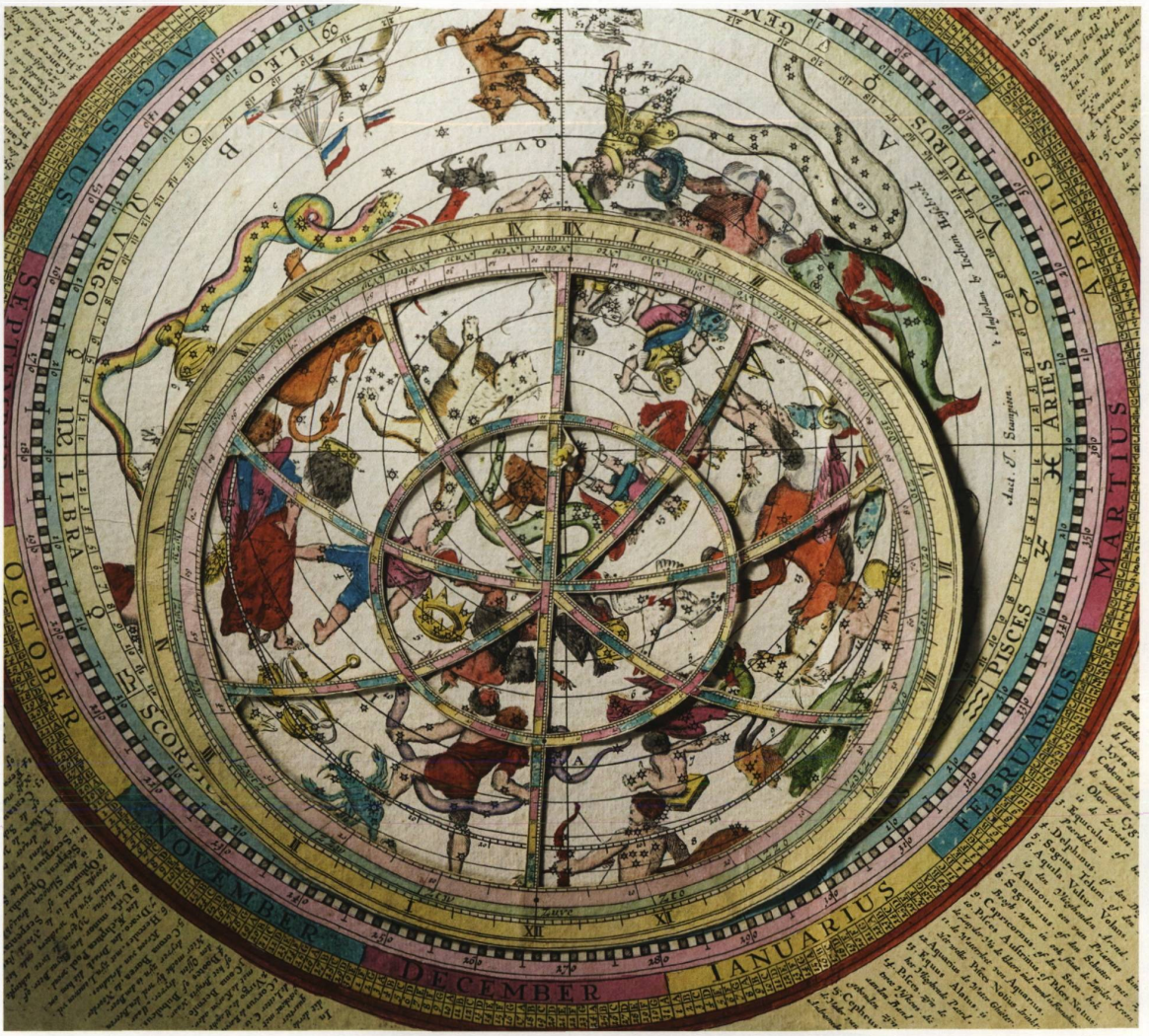
The *Astronomicum* may have been the high-water mark in the age of paper instruments, yet it also came at a remarkable period of transformation in our understanding of the cosmos. It represented the earth-centered view of the universe, which had held power since ancient times. Yet, in 1543, just three years after Apianus's book was finished, Copernicus published *De revolutionibus orbium coelestium*, which proposed a sun-centered solar system that eventually came to displace geocentrism and pave the way for modern astronomical models.

However, the Copernican revolution did not mark the end of volvelles. These multipurpose devices combined carefully designed scientific mechanisms with often elaborate and richly detailed art to make artefacts that were both beautiful and useful, and they were applied to the most intractable problems of the age.

For centuries, navigation at sea had been a problem for maritime nations keen to expand their empire and profit from global trade. The navy that ruled the waves could rule the world, and during the late seventeenth century, astronomers mapped the stars in ever greater detail in the service of astronomy and navigation. Such work entered the public domain with volvelle star charts

Right: before the invention of the sextant, an astrolabe was used to observe and calculate the position of celestial bodies. This manuscript version, made around 1800, consists of a circular base plate, 3 paper volvelles, and a brass radius pointer. Below: *Astrolabium* (c. 1575) contained 8 large woodcut diagrams on paper, each featuring several layers of intricate rotating parts. It complemented Leonard Thurneisser's *Archidoxa* and was said to enable the user to predict her or his fate or natural disasters

PHOTOGRAPH: HARRY RANSOM CENTER, THE UNIVERSITY OF TEXAS AT AUSTIN



Left: a star chart (c. 1722) by Jan Jansz Stampioen the Younger. The disk can be moved to indicate the part of the sky visible at any date and time, and to make calculations about the Netherlands (Stampioen's home)

such as the finely detailed and colored chart and calculator by Jan Jansz Stampioen the Younger in the Netherlands. By the eighteenth century, national competitions with lavish cash prizes had yielded a raft of promising new techniques and technologies linking astronomy, instrument making, and horology to solve the so-called "longitude problem," with the British clockmaker John Harrison completing his masterpiece, known as *H4*, in 1759.

In England, in 1767, the Astronomer Royal at the Royal Observatory Greenwich began publishing the annual *Nautical Almanac*, which contained tables of calculations to aid the practice of astronomical navigation at sea. The following year, in France, the astronomer and science popularizer Jacques-François Dicquemare published his "cosmo-plane," a giant wall-mounted volvelle comprising three concentric disks, each one lavishly engraved and mounted on board. Designed in part to solve problems in maritime navigation, the device included information on the sun, solstices, equinoxes, seasons, the zodiac, standard units of measurement, and magnetic declination, together with maps of the four continents and numerous tables. Dicquemare dedicated his instrument to Jean-Antoine Nollet, a favored lecturer to the French aristocracy.

As devices capable of astrological prediction, volvelles had long been as familiar in medical contexts as in navigational ones. Astrology was particularly important in the medical tradition that followed the death of the Swiss physician Paracelsus in 1541, in which the planets were believed to influence the body and its "humors." Yet the role of zodiacal predictions in the practice of medicine was nothing new. An English work of about 1482 included a volvelle that

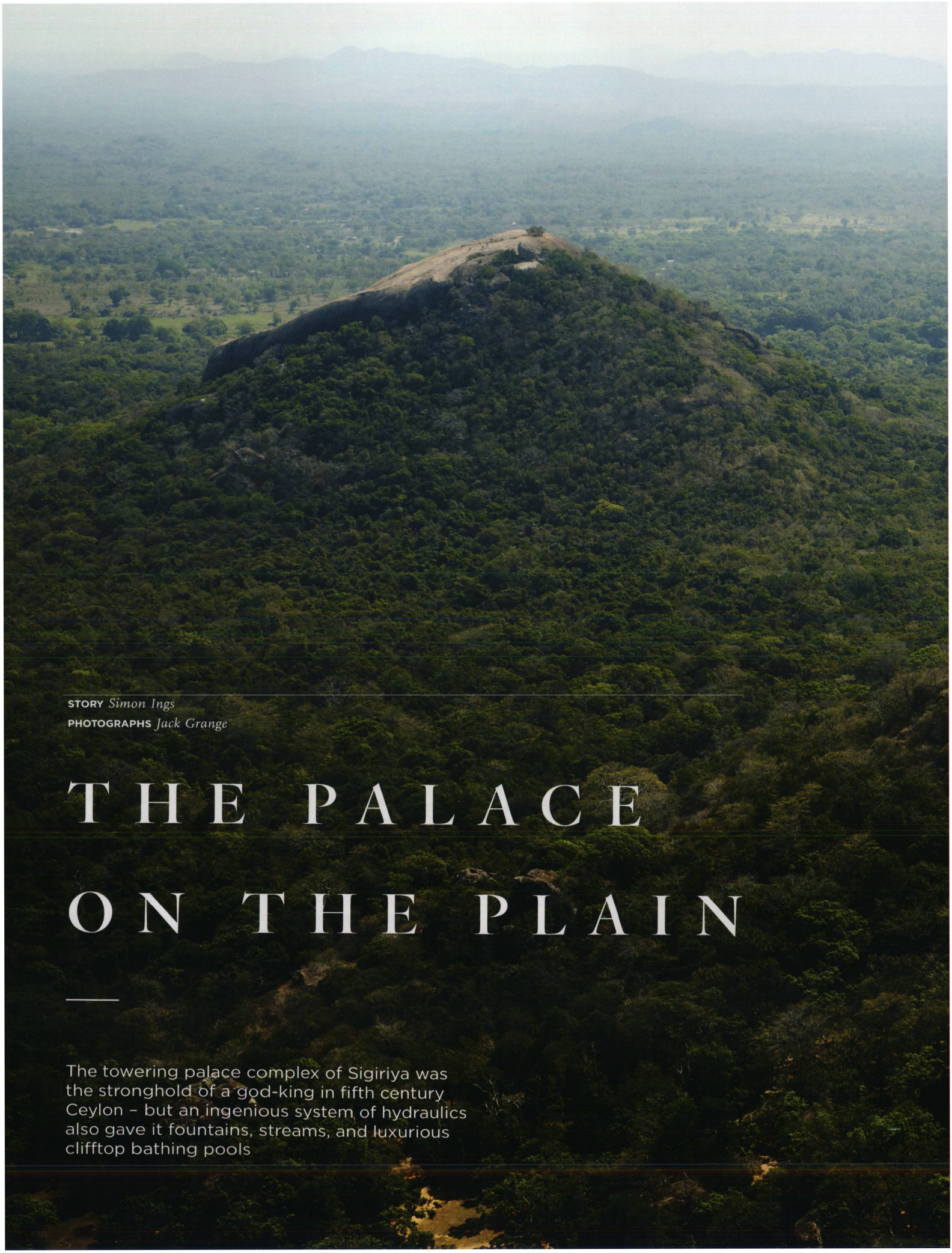
Below: the "cosmo-plane" (1768) was a huge wall-mounted instrument used to aid navigation at sea. Right: a detail from 1540's *Astronomicum Caesareum* by Petrus Apianus, which has been referred to by the astronomer Owen Gingerich as "the most spectacular contribution of the book-maker's art to sixteenth-century science"

Volvelles were both beautiful and useful, and they were applied to the most intractable problems of the age

could be set to the sign and degree of the zodiac for any given day and used to predict the most effective time for medical treatment. By the late sixteenth century, physicians were required by law to find the position of the moon, using a volvelle, before operating on a patient.

One of the most extravagant astrological-medical treatises to employ volvelles was the second edition of the German scholar Leonard Thurneisser's major work, *Archidoxa*, published in 1575. Thurneisser was the personal doctor of the Elector of Brandenburg, and became noted for his medical treatments, astrological calendars, horoscopes, and talismans to ward off evil. In *Archidoxa*, he claimed that the reader could not only understand the power of the planets and stars but could predict the future. Eight large woodcut diagrams on paper, each comprising several layers of vividly hand-colored volvelles, accompanied the treatise.

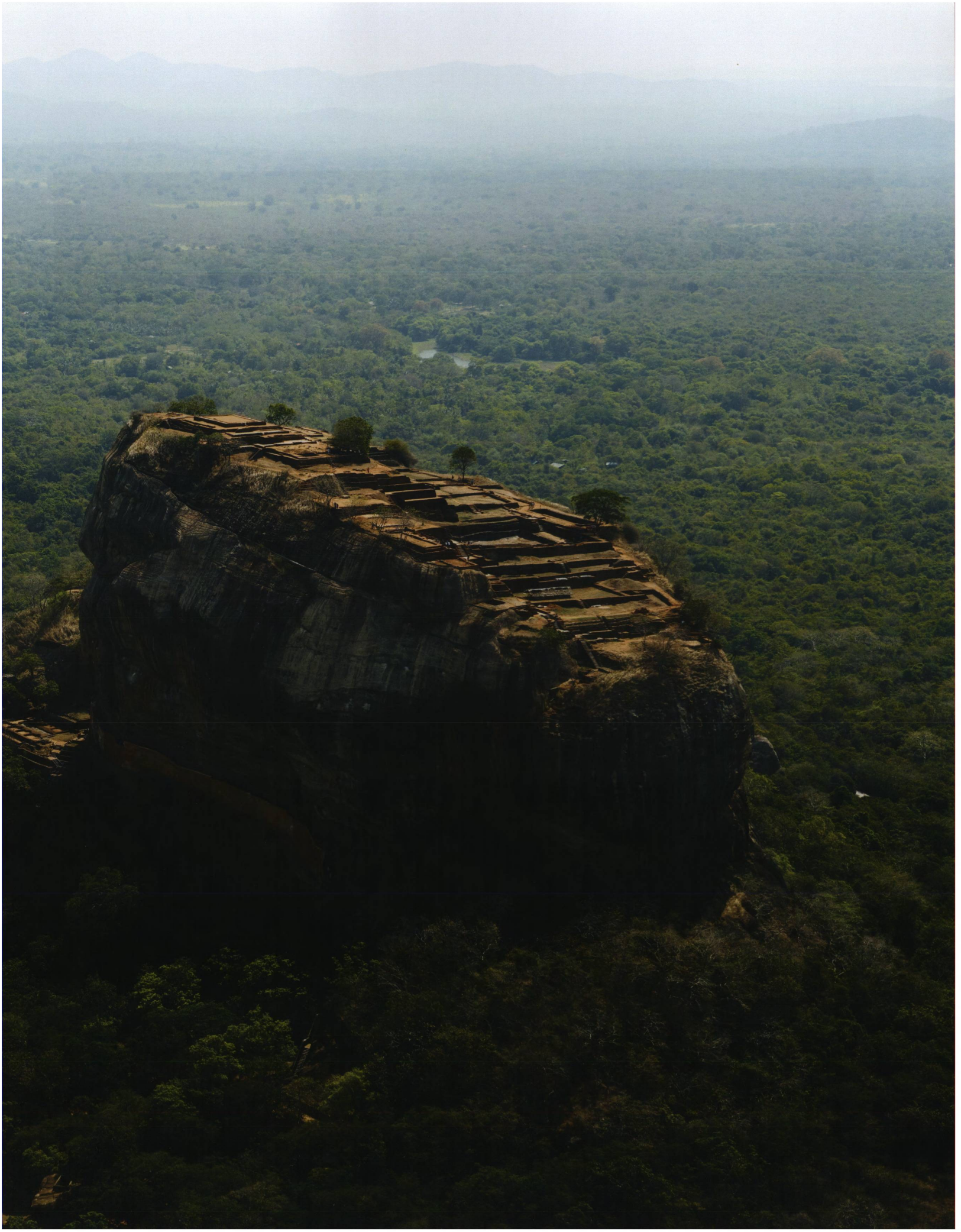
The success and proliferation of volvelles relied on close relationships between writers, artists, mathematicians, engravers, printers, bookbinders, and publishers, as well as access to the high-quality data that underpinned the accuracy of these paper instruments. It would be easy to dismiss them as secondary to the instruments in wood and metal that we know today, and it is true that they were often playthings for the privileged. However, they wielded great power, and, in their day, commanded the highest respect from monarchs, aristocrats, and scholars. Science conferred status, and prediction of future events was in great demand among those whose position might be at risk. Knowledge was power, and these beautiful, spectacular volvelles were instrumental in holding onto it. ✦



STORY *Simon Ings*
PHOTOGRAPHS *Jack Grange*

THE PALACE ON THE PLAIN

The towering palace complex of Sigiriya was the stronghold of a god-king in fifth century Ceylon – but an ingenious system of hydraulics also gave it fountains, streams, and luxurious clifftop bathing pools



From the brief account of it given in the *Mahavamsa* (Sri Lanka's ancient chronicle), we learn that the citadel of Sigiriya, which floats, painted and plastered to resemble a divine cloud, above the surrounding plain, was built for a king who fancied himself a god. In these secular times, try thinking of the fortress instead as the ultimate model village, a working miniature of the country it governed and the cosmos on which its legitimacy depended.

Its founder, Kasyapa, the eldest son of King Dhatusena, was excluded from the succession because his mother was a courtesan. In AD 473 he conspired with Migara, the commander of the king's army, to steal the throne. Worse, he killed Dhatusena, entombing him alive in the wall of a reservoir. The rightful heir, Kasyapa's younger brother Moggallana, fled to India.

The annal-keepers could not forgive Kasyapa's patricide, and they reduced the construction of Sigiriya to the actions of an embattled royal pretender, who retreated from the legitimate capital in Anuradhapura to a remote fastness of his own fantastical design.

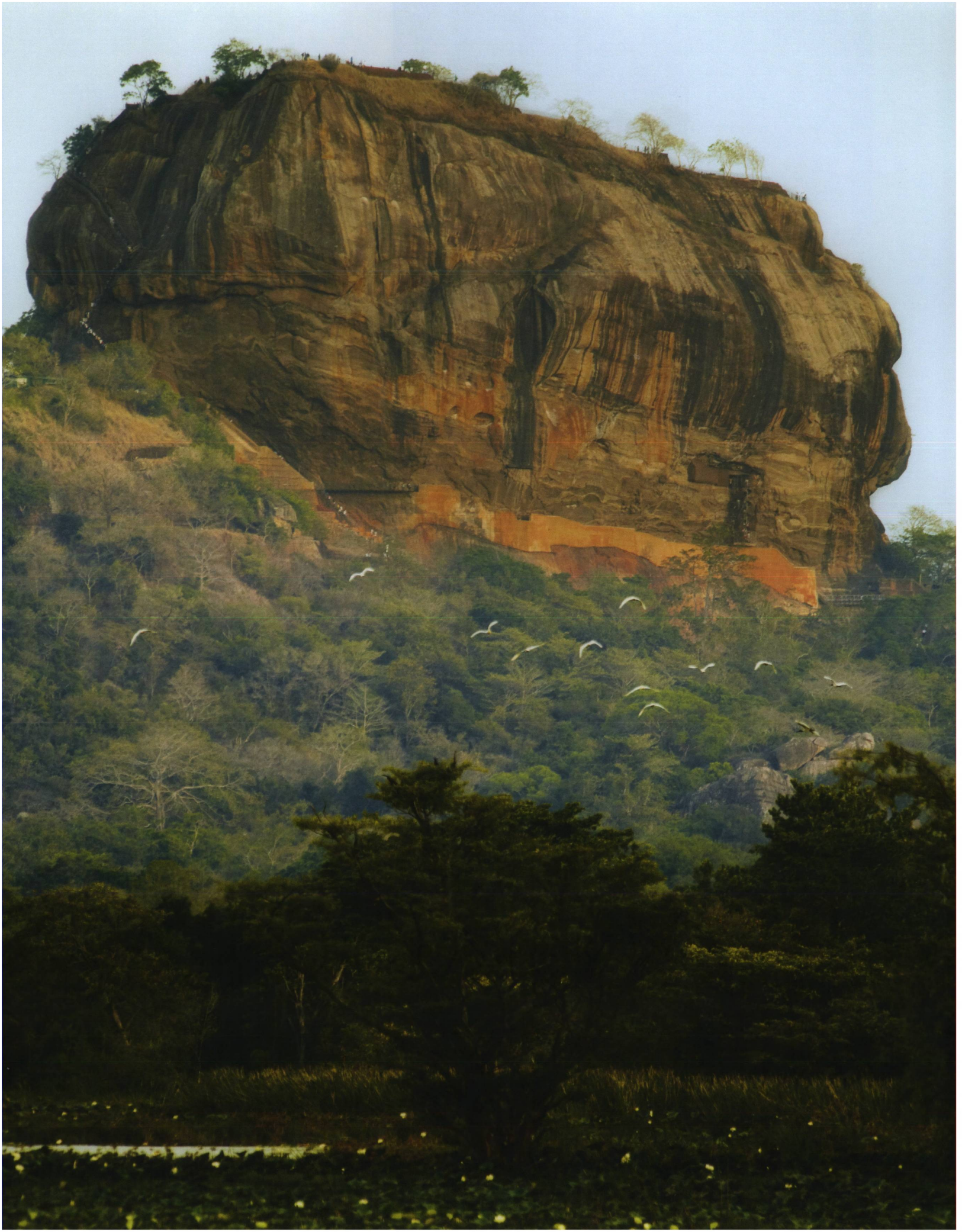
Except that Sigiriya isn't exclusively a defensive structure. Its moats are wide, but so are its roads and gateways, and its pavilions, which seem to rise from the water of the gardens, were built there so that people could prepare themselves for bathing, not battle.

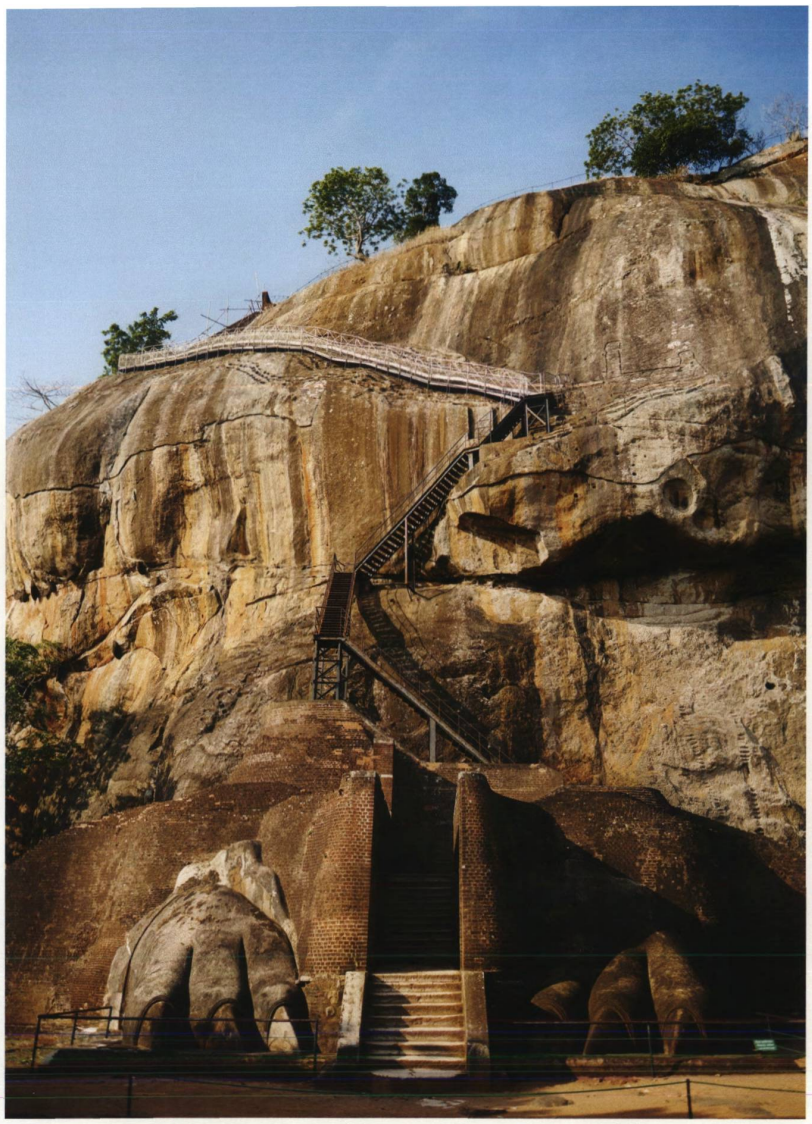
Eighteen years later, Moggallana returned to declare war and reclaim his kingdom. Imagine Kasyapa's surprise when, during a charge of war elephants, Migara once again betrayed his king and sounded the retreat. Lethally exposed, Kasyapa ended his reign as decisively as he had begun it, slicing his own throat.

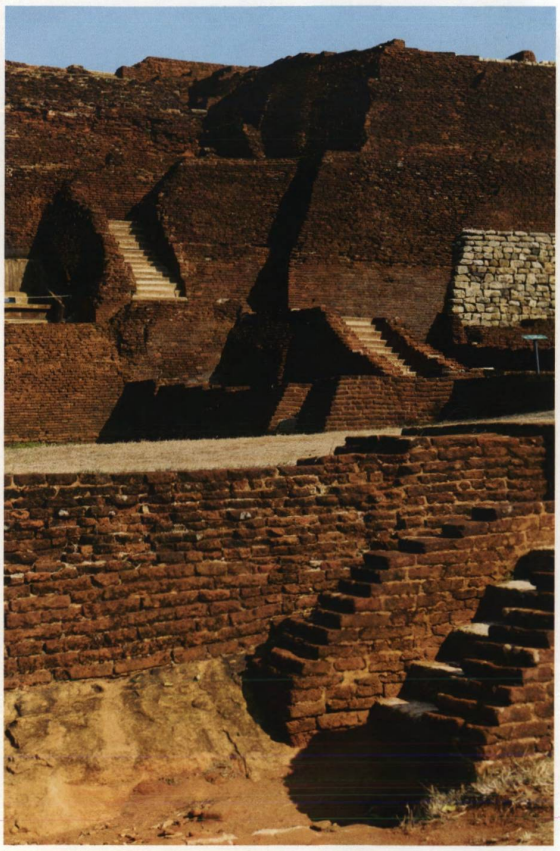
Sigiriya, about 90 miles northeast of the commericial center, Colombo, sits at the heart of Sri Lanka's dry zone. To grow rice, the original settlers' staple food, on a plain with no lakes that sees rain only between mid-October and January, meant working out ways to store and manage rainwater. The settlers dammed streams and rivers, constructed reservoirs and canals. It's only if you dig and hit the abutments of local reservoirs that you grasp how established this region is. Many villages around Sigiriya date back to the first millennium BC.

Innovatively developing this original irrigation didn't just make Kasyapa's kingdom rich; it made his new city possible, and then it made it beautiful. The technical expertise behind the complex hydraulics he

Capitol hill: the vast edifice that holds the hidden city soars skyward (previous pages and right), birds scattering up from trees below. For the ancient builders, conservation was paramount, and the lush, constructed lakes that surround the rock provide water for crops and wildlife. Sun-scorched by summer, the gardens (above) at the rock's foot still manage, miraculously, to hold deep clear water, delivered by a system that could rival modern networks







established at Sigiriya resulted in the small metropolis at the foot of the rock; in water gardens; in shallow, winding artificial streams and fountains; in cisterns and bathing pools and waterfalls. Sluices were arranged so that the four major bathing pools located here in the lower royal compound, which were surrounded by tropical trees bursting with bright blossoms and gorgeously plumaged birds, could be filled to different depths. If a water feature ever needed repair, it could usually be isolated while water continued to supply the rest of the garden. No pumps; no windmills. Gravity and water pressure are the only motive forces here, harnessed by a design of unreal precision. One of the canals leading away from the complex descends just six inches to the mile.

Sigiriya is a marvel with a meaning, a reflection, in brick, marble, and plaster, of the way the land itself has been imaginatively irrigated. Two snaking streams emerge from what appear to be natural springs (in fact, they're powered from cisterns filled by runoff from the rock). The water disappears into deep, narrow chambers, building water pressure to power fountains set in formal, canalized channels. These channels in turn feed pools, and the pools feed yet more pools. It's the kind of engineering that, on a much larger scale, has helped keep Sri Lanka fed and alive.

As the ground begins to rise from the city at the base toward the central rock itself (formed from the magma of an extinct volcano and 656 feet higher than the surrounding jungles), so the symmetry of these gardens falls away, and the path detours around huge boulders. What looks like tiny steps and honeycombs of holes are in fact the footings of brick walls, timber columns, beams, and terraces, for this sheltered spot was once a gradually ascending path, a visual cacophony of bowers, boulder gardens, and grottoes, inlaid floors and swings and seats, painted caves and pavilions.

And, from the fourteenth until about the nineteenth century, this is where your journey would have ended: at a vertical rock face, not unclimbable but overgrown and confusing and, if you were of a mind to believe such things, infested with demons.

Demons weren't the rock's only denizens: with a spyglass it was always possible to make out, far above, the remains of what, said the British civil servant John Still, writing in 1907, "appears to have been a gigantic

The huge paws of the lion (above, left), which once gave the rock its name. Beyond them, flights of steps lead heavenward to the royal palace. Opposite: gardens and rooftop pools with dizzying views for the king, his immediate court, and no doubt his ladies; high in the air were also dancing terraces, drinking-water tanks, and the king's granite throne and audience chamber. On the plain below, elephants no longer used as war beasts roam free, drawn to the spot for its cooling waters

picture gallery...the largest picture in the world, perhaps." This band of frescoes, painted across the western face of what's called the "Lion Rock," was about 460 feet long and 130 feet high. Of the five hundred figures depicted there, 15 survive, sheltering in a natural depression, 15 indescribably beautiful, graceful, life-size women who may be the queens, daughters, and servants of the royal court, performing the role of celestial ladies attending upon their god-king. Or they may be priestesses. Or they may be concubines.

Alick Murray, exploring the site in 1889 for the Public Works Department of what was then Ceylon, lay flat on his back on a precarious gantry 160 feet in the air to copy the figures he could glimpse. His sketches proved influential. In 1895 Harry Charles Purvis Bell, Ceylon's first commissioner of archaeology, was told to begin full-scale excavation and preservation of the site.

A passage was found running inside a parapet wall and leading diagonally up the rock face to a platform directly beneath the summit. This long "mirror wall," its plaster burnished to a high sheen with beeswax, would have glowed in the light of torches at night. The platform to which it led was mounded with trash. Weeks of excavation uncovered two gigantic paws. The garbage that the archeologists had been throwing over the mountainside was in fact the pulverized remains of a vast brick and plaster lion.

Entry to the plateau at the top of the rock lay between the lion's paws; Kasyapa and his closest court walked into the lion's maw to climb the last steps up to their sky palace. Bell reached the top to find it engulfed in undergrowth. Burning it off revealed a royal complex that stretched to the very edge of the plateau. There were cisterns to gather rainwater, ornamental pools, bathing pools, the remnants of pavilions, and a huge throne carved out of the granite. How was water conserved and kept fresh at this height? With astonishing ingenuity. The vista reveals Sigiriya in its entirety as an unmatched combination of urban planning, water engineering, horticulture, and arts, which is why, in 1982, it was declared a UNESCO World Heritage site.

Finally, stand at the summit, and Sigiriya's last secret is revealed. The geometry of the gardens, extending westward from the rock, is too big to grasp from the ground. Here, high above the level of the plain, the gardens come clear. They have been mapped out so that their lines and symmetries meet exactly at the granite throne.

Kasyapa was his kingdom's spring and fountainhead, and he designed this rock, standing as it does on the region's main watershed, so that all the country's precious streams seem to flow from him. ✦

A FINE LINE TO FOLLOW

Patek Philippe's reputation as a maker of complications can overshadow what is arguably its most important range of watches: the simple Calatrava models. Nicholas Foulkes traces their lineage all the way back to 1932, when the Stern family first acquired the company

At Patek Philippe the distillation of the personal timepiece to its quintessential characteristics has a name: the Calatrava. It is the purest form of wristwatch: circular, with hours and minutes, perhaps seconds, maybe the date. It is the sort of thing that a child might draw when asked to depict a watch.

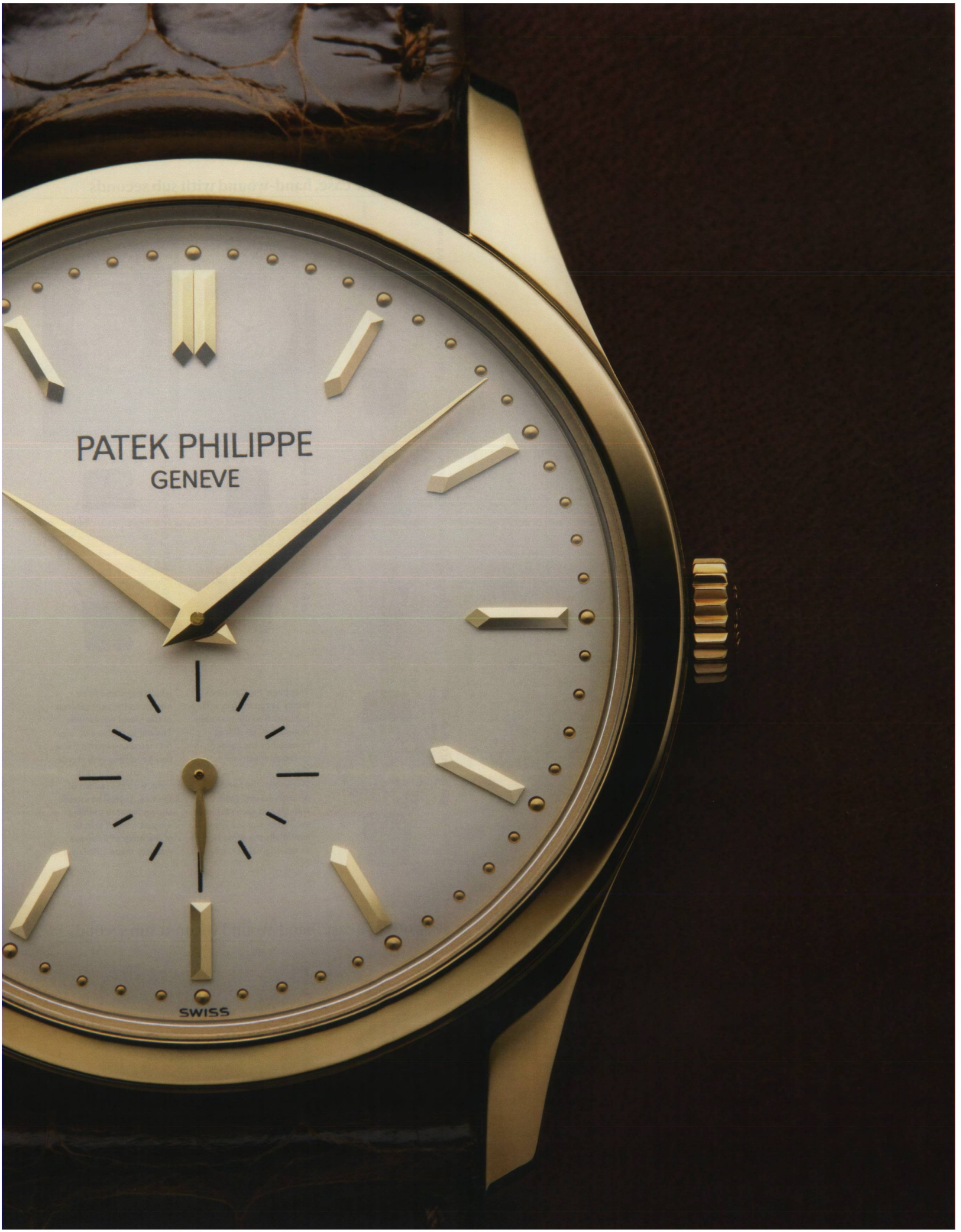
Compared to virtuoso grand complications, the Calatrava is easy to take for granted, but it is as much a Patek Philippe as star timepieces such as the Nautilus Perpetual Calendar Ref. 5740/1G or the astonishing Grandmaster Chime Ref. 5175. While some complications may grab the limelight, Patek Philippe remains that rare thing – an independent watch brand active and successful in all categories, including women's watches, men's dress watches, complications, sports watches, jewelry watches, and, of course, watches that showcase rare handcrafts. In this context, the significance of the two- or three-hand watch for the house of Patek Philippe is immense. It is Patek at its purest, and its role in the marque's history is pivotal.

When the Stern family assumed control of Patek Philippe in 1932, the company was on the verge of collapse. Bad debts from Latin America and the economic effects of the Great Depression had thrown the business into turmoil, and similar turmoil was evident in the collection.

Until the arrival of the Sterns, it is fair to say that Patek did not appear totally committed to the wristwatch. The company manufactured them, but in a manner that suggests management viewed them as a distraction from the serious business of creating the pocket watches that had built the reputation of the firm around the world.

Wristwatch calibers were disparate, with *ébauches* sourced from suppliers such as LeCoultre. And the wrist-worn timepiece

PHOTOGRAPH: RICHARD FOSTER


PATEK PHILIPPE
GENEVE
SWISS

was considered by some to be a frivolous fashion. The models of the 1920s were characterized by a heterogeneous array of esoterically shaped cases, as if the new arrival needed to distance itself from the staid, circular pocket watch.

But the Sterns and their technical director, Jean Pfister, realized where the future of the personal timepiece lay and that the company needed to bring the excellence evident in its pocket watches to the wrist. So, in 1932 Patek presented its vision of the future under the now famous reference number 96. These were some of the first new watches issued under the ownership of the Stern family, establishing the system of defining models by a reference number. Two years later, Patek further demonstrated its faith in the wristwatch by equipping the Ref. 96 with a brand new in-house caliber, the 12-120.

The Ref. 96 was clear and unambiguous in its design: a round case with a sober bezel that encircled a dial of elegant simplicity; the hours marked by batons or numerals; a small sub-dial at six o'clock indicating the passing seconds. The Ref. 96 set out exactly what a wristwatch should look like and the way it would continue to look throughout the twentieth and into the twenty-first century. In terms of case diameter, the essential visual purity of the hallowed Ref. 96 is continued to this day with the Ref. 5196 (the clue is in the last two digits).

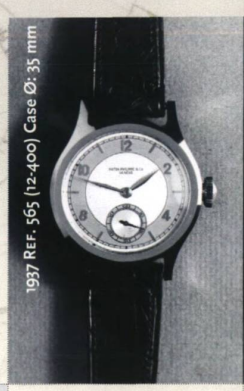
The genius of the Ref. 96 can also be appreciated by looking at today's auction catalogs. These watches are bought and worn with the same pleasure as they were when they left the factory almost 90 years ago. And though the term was not in use during the 1930s, these watches have proved themselves future-proof.

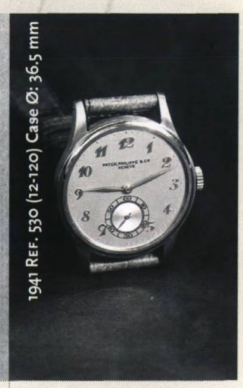
"The vintage market is where so many young people buy their first Patek, and very often it is a Calatrava," says Thierry Stern, Patek Philippe's president. "So in that sense they are in competition with new ones. It's quite funny when you think about it," he laughs. "I am my own competition."

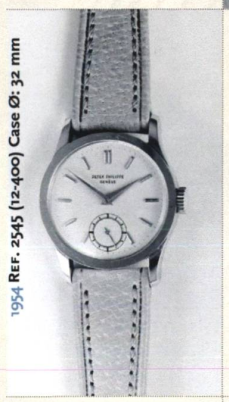
The Ref. 96 is a watch that Thierry associates with his grandfather Henri's era, but

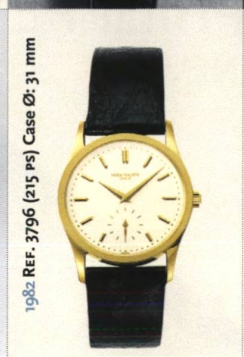
Ref. 96 style case, hand-wound with sub seconds


1932 Ref. 96 (12-120) Case Ø: 30.5 mm

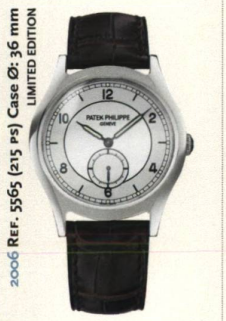

1937 Ref. 565 (12-400) Case Ø: 35 mm


1941 Ref. 530 (12-120) Case Ø: 36.5 mm


1954 Ref. 2545 (12-400) Case Ø: 32 mm


1982 Ref. 3796 (215 PS) Case Ø: 31 mm

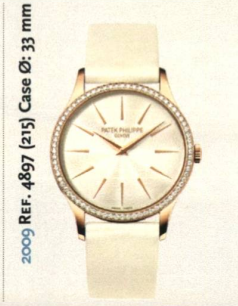

2004 Ref. 5196 (215 PS) Case Ø: 37 mm


2006 Ref. 5565 (215 PS) Case Ø: 36 mm LIMITED EDITION

This page: the Calatrava family began in 1932 with the launch of the manually wound Ref. 96. It was powered by the caliber 12-120 and featured sub seconds at six o'clock. Since then, the hand-wound versions (with or without sub seconds) have evolved in size but kept essentially the same design as the original Ref. 96, which has come to be known as the very essence of the round wristwatch. The name "Calatrava" was first used to describe these two-hand time-only classic round wristwatches in 1982, with the launch of the Ref. 3796. The models shown in these timelines are just a small selection of the array of Calatrava watches made since 1932

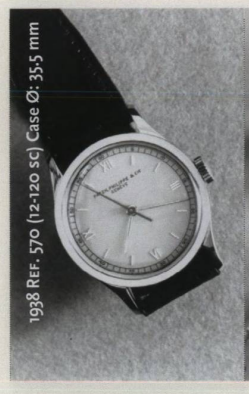
Ref. 96 style case, hand-wound without sub seconds


2006 Ref. 4896 (16-250) Case Ø: 33 mm

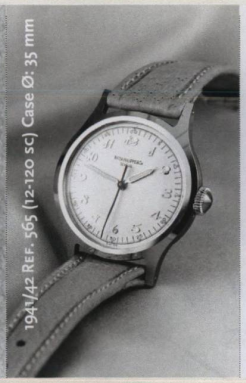

2009 Ref. 4897 (215) Case Ø: 33 mm

Ref. 96 style case, hand-wound with sweep seconds

1934 Ref. 96 SC (12-120 SC) Case Ø: 30.5 mm



1938 Ref. 570 (12-120 SC) Case Ø: 35.5 mm



1941/42 Ref. 565 (12-120 SC) Case Ø: 35 mm

1954 Ref. 2555 (27 SC) Case Ø: 32 mm

Left: in 1934, the Ref. 96 was given sweep seconds, beginning a sub-category of hand-wound versions, the first one being Ref. 96 SC. That model also featured an attractive sector dial. The incredibly popular Ref. 570 with sweep seconds, released in 1938, remained in production for 30 years

Self-winding

1953 Ref. 2526 (12-600 AT) Case Ø: 35.5 mm

1988 Ref. 3992 (240) Case Ø: 33 mm

1994 Ref. 5032 (240) Case Ø: 36 mm

2000 Ref. 5107 (315 S C) Case Ø: 37 mm

2000 Ref. 5032 (240) Case Ø: 36 mm
LIMITED EDITION

2005 Ref. 5118 (315 S C) Case Ø: 37 mm

2005 Ref. 5296 (324 S C) Case Ø: 38 mm

2010 Ref. 5297 (324 S C) Case Ø: 38 mm

2012 Ref. 5123 (215 PS) Case Ø: 38 mm

2013 Ref. 5227 (324 S C) Case Ø: 39 mm

2017 Ref. 5522A (324 S) Case Ø: 42 mm
LIMITED EDITION

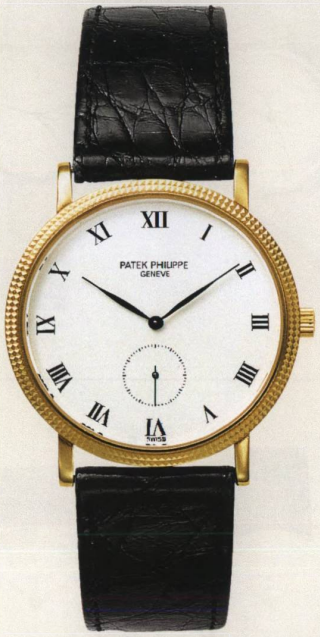
Above: the Ref. 2526 was the company's first self-winding wristwatch. It was fitted with the caliber 12-600 AT. Later automatics fitted with the caliber 315 S C introduced a date window and sweep seconds to the automatic line; those are both defining features in many present-day models, such as the Ref. 5227, which is powered by the self-winding caliber 324 S C and features a sapphire crystal display back protected by a dust cover with an invisible hinge

Clous de Paris

1934 REF. 96D (12-120) CASE Ø: 30.6 mm

1972 REF. 3520D (177) CASE Ø: 32 mm

1985 REF. 3919 (215 PS) CASE Ø: 33.5 mm

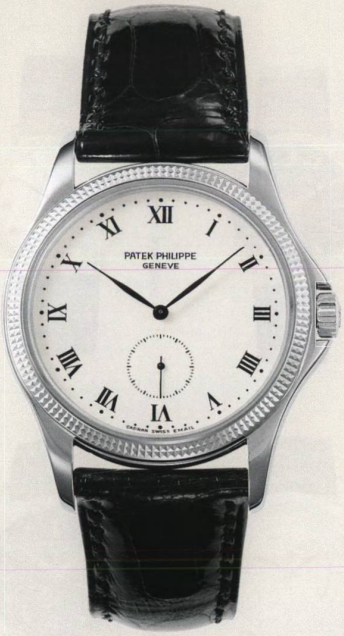


1987 REF. 4819 (E15) CASE Ø: 25 mm

1988 REF. 4820 (E15) CASE Ø: 25.5 mm

1991 REF. 4809 (16-250) CASE Ø: 25 mm

2000 REF. 5115 (215 PS) CASE Ø: 35 mm

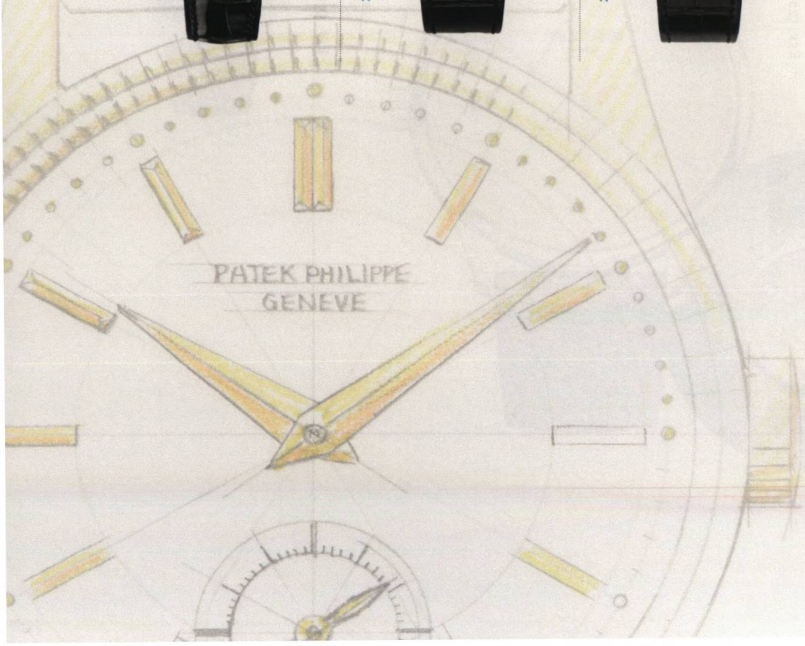


2001 REF. 5120 (240) CASE Ø: 35 mm

2006 REF. 5119 (215 PS) CASE Ø: 36 mm

2009 REF. 5116 (215 PS) CASE Ø: 36 mm

The Clous de Paris bezel is the essence of Patek Philippe style. When used on Calatrava models, the intricate guilloche work brings depth to the bezel's otherwise plain surface. Some early REF. 96 models featured decoration on the bezel, such as the Clous de Paris design seen on the REF. 96D (top left)



The Calatrava may be complicated to realize, but it should always appear as if the task was effortlessly simple

Officer's-style case

1989 REF. 3960 (215) Case Ø: 33 mm LIMITED EDITION

1991 REF. 4860 (16-250) Case Ø: 26 mm

1997 REF. 5022 (215 PS) Case Ø: 33 mm

2001 REF. 5053 (315 S C) Case Ø: 35.5 mm

2006 REF. 4959 (215 PS) Case Ø: 31 mm

2013 REF. 7200 (240) Case Ø: 34.6 mm

2015 REF. 5153 (324 S C) Case Ø: 38 mm LIMITED EDITION

2016 REF. 7200/200 (240) Case Ø: 34.6 mm

2017 REF. 7200/50 (240) Case Ø: 34.6 mm LIMITED EDITION

Above and left: Officer's models are characterized by a hinged dust cover at the back and their straight strap lugs and screws. The first Calatrava Officer's model, REF. 3960, was released for Patek Philippe's 150th anniversary in 1989, while limited edition models were launched at the London and New York watch exhibitions in 2015 and 2017 respectively

Caliber 240 PS

1991 REF. 5000 (240 PS) Case Ø: 33 mm

1997 REF. 5026 (240 PS) Case Ø: 33 mm

2005 REF. 6000 (240 PS C) Case Ø: 37 mm

2017 REF. 6006 (240 PS C) Case Ø: 39 mm

In 1991 the company created a highly distinctive timepiece, the REF. 5000, which featured the ultra-thin self-winding caliber 240 PS with sub seconds in an unusual spot at four o'clock. This distinctive style lives on in the REF. 6006, created the same year that the caliber 240 celebrated its 40th anniversary

each generation has its Calatrava. "For my generation, I would say it's the REF. 3919, I remember my cousin receiving one on his 20th birthday. That was the iconic watch for my generation, with the Clous de Paris bezel, very simple, very thin."

But by his own admission, Thierry is more interested in looking forward than back, and for him the Calatrava remains the watch of the future, as it was for Henri's generation. "My grandfather would have enjoyed experimenting with the different colors and finishes we have today," he says.

It is the concept of the Calatrava as an expression of modernity that most inspires Thierry about this simplest of Pateks. Take the hinged-back, straight-lugged Officer's case. "I think it's a beautiful case. I always liked this type of watch, but now I would like to reinvent the Officer's case for the 2020s. It has to keep its style, otherwise it's not an Officer's watch anymore, but to keep it fresh I have to adapt it; that's the challenge. It may take me one, two, three years, but I will find the definitive design. I have some ideas already. Some are crazy, some a little bit less so, but the Officer's case should remain in the collection."

Besides, Thierry has already had notable success with the hinged caseback of the REF. 5227. "When I showed the watch to my father, he didn't realize that there was a double back, because it was so perfectly done. It was complicated and challenging

12-120
Movement Ø: 27.07 mm (1935)

27 SC
Movement Ø: 27 mm (1949)

16-250
Movement Ø: 16.3 mm (1970)

215
Movement Ø: 21.5 mm (1974)

12-600 AT
Movement Ø: 27.07 mm (1953)

240
Movement Ø: 27.5 mm (1977)

324
Movement Ø: 27 mm (2004)

and took a long time to perfect, because the aim was to have something very thin and discreet. But I'm happy. When your father is a top professional in the field and looks at a watch and doesn't realize that it has a double back – well, that's quite cool!"

And therein resides the character of the Calatrava: it may be complicated to realize, but it should always appear as if the task was effortlessly simple. "The style should remind us of a simple movement, and if there is one piece that is important when talking about the Calatrava today, it is the Ref. 5115, a new model with an enamel dial. At the time, this was a very important piece for us; it was the first time that we had a model with an enamel dial in the collection in such quantity."

In designing the dial of a Calatrava, all details, however apparently insignificant, are crucial. It would be disingenuous in the extreme to suggest that a complicated watch designs itself, but the more information a timepiece generates, the more need there is for sub-dials, apertures, hands, and indexes, their positions dictated by the caliber. By contrast, a time-only watch leaves no place for the designer to hide, as, undistracted by tachymetric scales, moon-phase displays, calendrical information, or chronograph sub-dials, the wearer's eye mercilessly detects the smallest infelicity.

The Calatrava family has featured numerous movements. Above, top row (L-R): the first hand-wound Ref. 96 was fitted with caliber 12-120; caliber 27 SC was utilized for its center seconds function; caliber 16-250 is found in hand-wound time-only models such as the Ref. 4860; and caliber 215 (available with or without sub seconds) features the Gyromax® balance. Bottom row (L-R): caliber 12-600 AT, Patek Philippe's first automatic movement, debuted in 1953; in 1977 came the ultra-thin self-winding caliber 240; and the newer caliber 324 has been used in automatic models such as the diamond-set Ref. 5297 with date and center seconds. Opposite, top: a 1986 ad for the Ref. 3919 (left), which ran from the mid-'80s to mid-'90s; an extract from the company's 1989 150th anniversary brochure, featuring the Officer's Ref. 3960 (right). Bottom: two 1950s ads in black and white

"The toughest part of a Calatrava is the dial," Thierry explains. "The case is not a problem: I know how to design a Calatrava case. I grew up with them. But a good dial is very complicated, because the Calatrava should be simple, and how can you innovate when the dial has to stay simple?

"A good example is the Ref. 5227. I made forty or fifty types of dial. There were so many prototypes that it took a long time to narrow them down to just two. But that's where you can see the importance of tiny details, the kind of details that many people won't even be able to detect. I changed some color very slightly, maybe added a single dot, maybe just moved the name of the Patek Philippe logo by less than a millimeter.

"Each part has to be perfect, because with the Calatrava the first glance is enough to spot if it's good or not. It's hard to explain, but when your eyes look at something, your brain registers the details.

Sometimes I don't even know why; it's just a feeling. I look at it, and it feels peaceful. That's maybe the thing that I like with the Calatrava. The dial has to look peaceful."

Peaceful but not dull.

"I have to create many other pieces, but the Calatrava is not something that I will put to one side; we already have two new projects for Basel next year," Thierry explains. "The direction that I have chosen for the new Calatrava is to make a watch to fit the wrist of a younger generation. It was interesting to work on that, to understand that I am not wearing the old Ref. 3919 so much anymore because it's a little too small and, perhaps, because the design is beginning to show its age. The target for the new one is really to encourage the younger generation to wear the Calatrava. And I think they will."

Has Thierry Stern created the perfect Calatrava for the next generation of his family? We will have to wait to find out. ✥

Opposite: the reading room. The main bookshelves are through a door to the left, and the request desk is just behind the photographer. Gentle light is admitted through semi-screened and recessed windows. Below: the rarest books are kept in the basement away from heat and natural light, in order to avoid damage

STORY *Jean-Michel Charbonnier*
PHOTOGRAPHS *Kasia Gatkowska*

The secret scriptures

There is an ancient, venerable library in Morocco, but it is surrounded by mysteries. Was it founded by a woman, the girl who established the adjoining mosque? And why, after recent renovations, is it still a guarded sanctum? Now another woman, the architect who brought the building back to life, says that this closed book deserves a bright new chapter

On Place Seffarine, the beating heart of the medina in Fez, the din from the craftsmen working their metals is constant. Seated in front of the stalls, they hammer out trays, perfume burners, teapots, and pans in copper or brass, creating a spectacle that never fails to delight tourists making their way to the Tanners' Quarter. The noise forces guides to raise their voices. "We are now standing in front of Khizanat al-Qarawiyyin, the oldest library in the world, founded by a woman in the ninth century," proclaims one, pointing to an impressive horseshoe-shaped arcade that opens onto the square. But there is no chance to go inside; only bona fide students and accredited researchers may enter this venerable center of learning, which abuts the Al-Qarawiyyin mosque, the country's most prestigious religious building. The library's opening to the public, announced in 2016, has still to become reality.

"This heritage belongs to everyone," insists the architect Aziza Chaouni. "It should be accessible to Fassis [the ancient families of Fez], Moroccan visitors, and foreigners." Based in Toronto, Canada, Chaouni grew up in Fez, and in 2012 she was entrusted by the Moroccan ministry of culture with the library's restoration. A subsidy from Arab Bank, a Kuwaiti institution with solid roots in Morocco, set the project in motion. The rehabilitation of the medina, on UNESCO's World Heritage list, has gained momentum over the past decade as part of a major face-lift also taking in bridges, *fonduks* (old caravanserais), souks, and palaces. Certain polluting activities have had to be moved out of the historic center. "The ministry

Treading lightly: an Arabic book, left, containing a manuscript on the *hadith* – the holy words of God or the Prophet Muhammad. The illustration on the left-hand page depicts the sole of the Prophet's shoe. Deeply reverent, the illumination was painted in 1204; the details are crystal clear, the colors are vibrant, and the gold still shimmers

originally contacted me to diagnose the situation," says Chaouni. "I had to assess the problems and define the work that needed doing. The library project was given to me some time after that." And in this instance, it may be that the singular history of Al-Qarawiyyin worked to Chaouni's advantage.

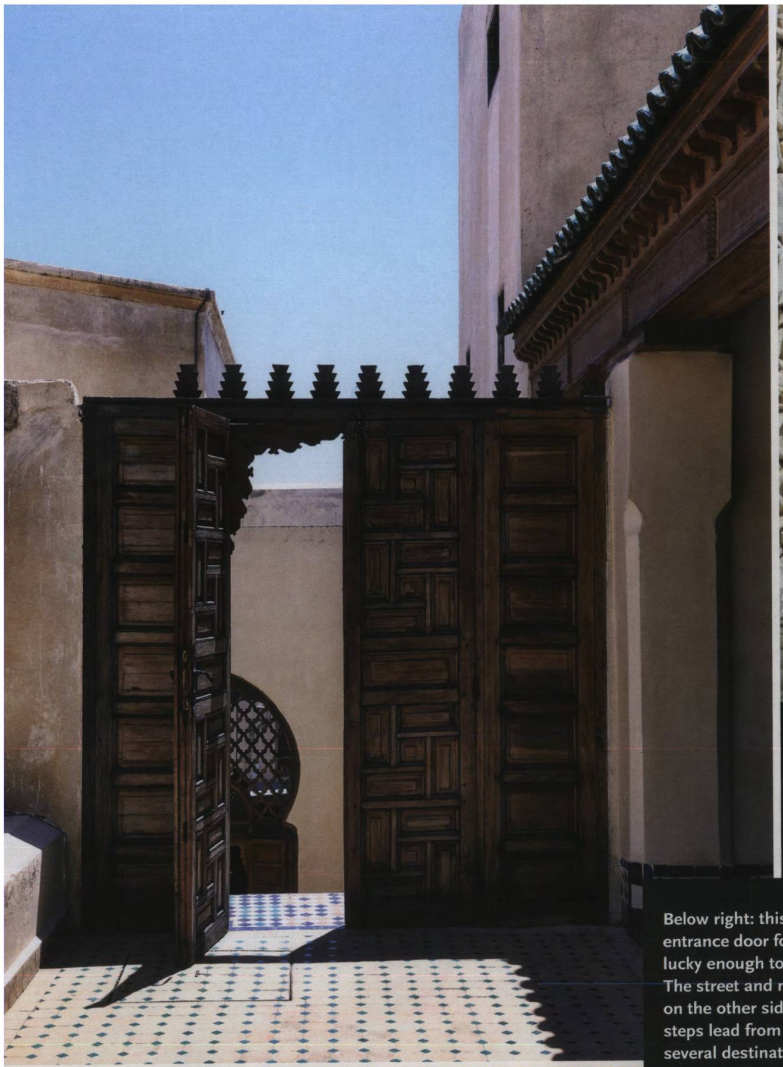
The story begins in the ninth century, when Fez was founded and became capital of the Idrisid dynasty (AD 788-974). The city consisted of two settlements separated by the Jawhar river. On one bank was the "Andalusi" city, named for refugees who came from Cordoba during a period of political and religious strife; on the other, the "Kairouanese," named for exiles from Kairouan in present-day Tunisia – hence the modern name Qarawiyyin. According to tradition, it was pious Fatima al-Fihri, the daughter of a rich Tunisian merchant, who founded the Qarawiyyin mosque, while her sister Maryam founded the Andalusian one. This is the generally accepted story, but it has recently been challenged by the historian Chafik T. Benchekroun, at Toulouse-Le Mirail University. He notes that the first recorded reference to this female founder does not appear until the fourteenth century and only in the work of an author known for rewriting the history of Fez on the basis of legends and oral history.

The mosque's archives were lost in a fire in 1323, but a discovery in the 1950s suggests another possible origin: a foundation post above the old *mihrab* (the niche in the wall showing the direction of Mecca) bears an inscription indicating that the mosque was built in AD 877 by one of the children of the emir Idris II.

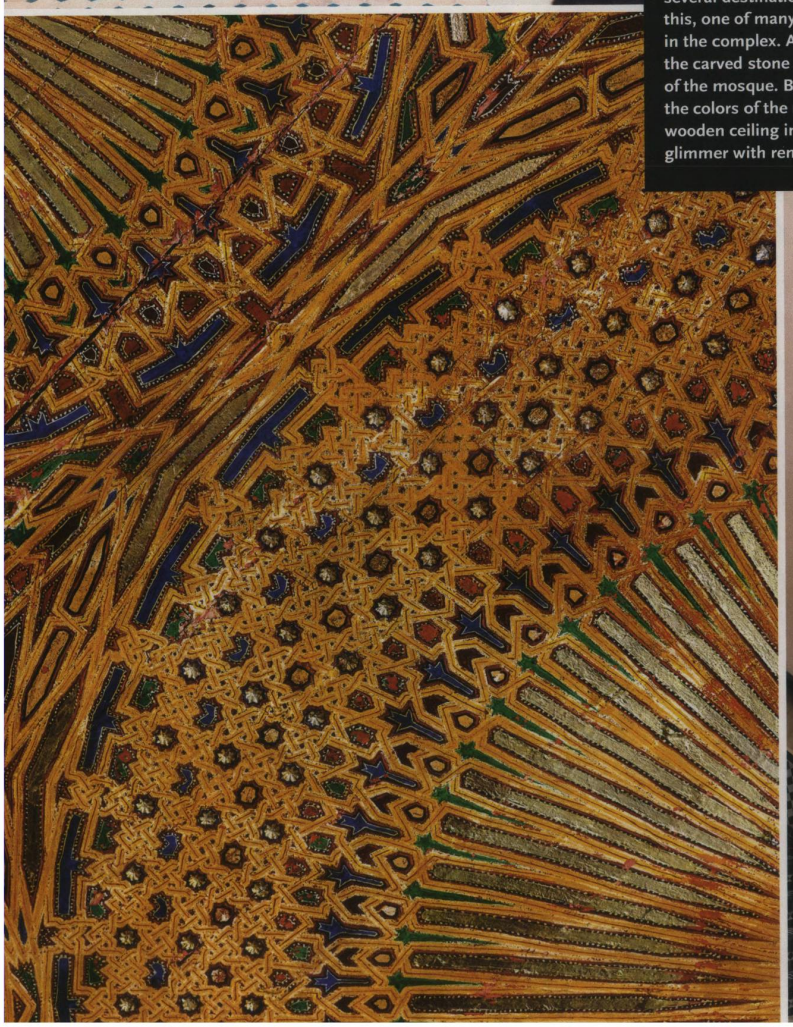
Whatever the truth, expanded, recast, and embellished under different dynasties, gaining in prestige as in size, the building became a place of worship and teaching, a "mosque-university" where masters drew students from the Maghreb (North Africa) and Al-Andalus (Islamic Iberia) but also from sub-Saharan Africa and the Orient.

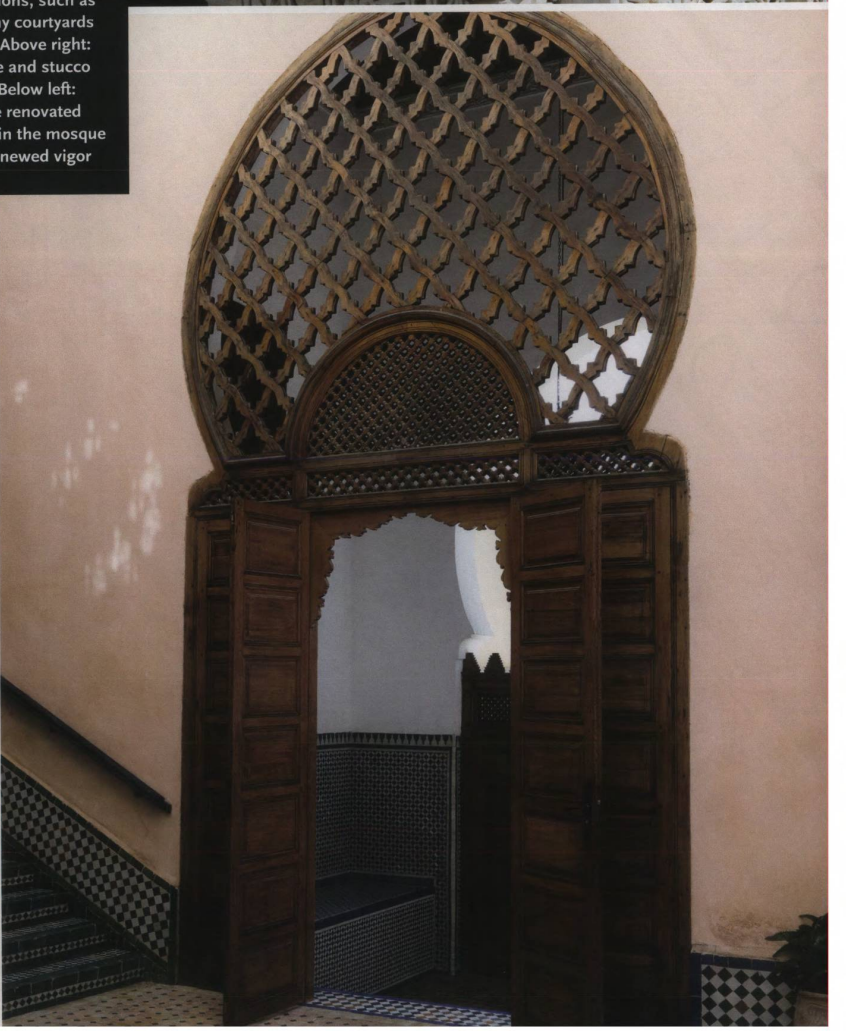
How did the library itself begin? In the early days, the collection of Korans to be used for reading and chanting was kept in a cupboard near the mihrab. In a space that changed location over the centuries, the clergy also kept manuscripts relating to the *hadiths* (the words of God and the Prophet); jurisprudence; grammar; astrology; and other disciplines taught at Al-Qarawiyyin. Tomes donated by sultans or their families, by rich individuals or by scientists, were assembled under a deed of endowment, which made it possible to offer possessions to religious institutions or bodies in the public interest. It was the Marinid sultan

Whatever the truth, embellished under different dynasties, the building became a place of worship and teaching



Below right: this is the entrance door for those lucky enough to be admitted. The street and medina bustle on the other side. Above left: steps lead from that door to several destinations, such as this, one of many courtyards in the complex. Above right: the carved stone and stucco of the mosque. Below left: the colors of the renovated wooden ceiling in the mosque glimmer with renewed vigor





Opposite: geometric patterns dazzle on the ceiling of the auditorium at the library. This page, near right: the prized 9th-century Koran written on camel hide. Far right: the 14th-century historian Ibn Khaldun's *Book of Lessons*, donated and signed by the author

Abu Inan who, in 1349, founded the study library. Over the entrance, an inscription informs us that he "created it to encourage – may God further his efforts – the quest for knowledge, its manifestations, and its mastery and dissemination." He also hoped to "facilitate the work of those who desire to study, to copy, to read, and to collate the works that it contains." It was "forbidden that anyone should move the books from the library in which they are placed." But other donors did allow loans, and manuscripts disappeared. Al-Qarawiyyin's registers list books sold by borrowers, requested from their heirs, and sometimes even retrieved.

One of the library's most precious works is a copy of the *Book of Lessons*, donated by its author, the great historian Ibn Khaldun (1332-1406). On one page, Khaldun even specifies the duration for which the work may be loaned: a month. Among the 4,000 or so manuscripts (and 24,000 printed books) in the library, there is a Koran from the ninth century, written on camel hide; the only existing copy of a treatise on medicine by Ibn Tufayl dating from the twelfth century; and a tenth-century treatise on jurisprudence, originating in the fabulous library of the Umayyad caliph of Cordoba, al-Hakam II, who is said to have amassed some 400,000 works.

An inscription above the entrance informs us that the library was created "to encourage the quest for knowledge"

The outstanding collection in Fez was neglected for years, left to insect attacks and almost inaccessible, as is clear from an early twentieth-century inventory. In 1940, under the French protectorate, new buildings were erected on the initiative of Mohammed V, but it was only in 2004 that the first real restoration work was carried out.

Still, "all they did was fill in the cracks," says Aziza Chaouni. Eight years later, the building she examined was in a parlous state, its books ravaged by damp. "Water flowed from the roofs of the mosque onto those of the library. During the work we were doing, we discovered the tributary of a river under one building. It had to be safely channeled, but this work ate up a good chunk of the budget." The architect also created an underground laboratory for the restoration of the manuscripts; fitted solar panels; redesigned the heating system for the reading room; and returned the courtyard fountains, decorated with ceramics, to working order.

Though work concluded in 2016, the exhibition room and café have yet to open to the public. But impassioned Aziza Chaouni continues to fight for her dream, which is to bring this most venerable seat of learning into the modern world. ✥

Translated by Charles Penwarden

Philippe Stern, the honorary president of Patek Philippe, reflects on a pioneering complicated piece in his prized collection at the company's museum – the world's first ever perpetual calendar wristwatch

The early days of the wristwatch were a period of great creativity for Patek Philippe, as can be seen with the first Calatravas and many of the art deco-style timepieces on show in the Patek Philippe Museum in Geneva. But our manufacture was not intent solely on developing new designs; it also achieved renown as a pioneer in the field of complicated wristwatches. The finest example in that respect is the first known wristwatch with a perpetual calendar.

This timepiece has an intriguing history, which we can reconstruct by studying the historical records we hold that document all of Patek Philippe's creations since 1839. Its movement, No. 97 975, appears for the first time in September 1898 with the note, "Perpetual calendar and moon below XII, date at the center, days of the week at IX, months of the year at III." However, the timepiece that we are examining here positions the moon at three o'clock, the day at twelve o'clock, and the month at six o'clock. Furthermore, the mention of a "pendant and oval ring" in our notes does not correspond to the timepiece in question.

All becomes clear, however, when we learn from the annotations made after 1898 that this piece, designed originally as a women's pendant watch, was transformed in 1925 into a men's wristwatch. In the process, the crown moved around from its initial place at twelve o'clock to three o'clock, and the perpetual calendar displays pivoted by a quarter turn to twelve o'clock and six o'clock. In fact, the first wristwatches were often converted pocket watches or pendant watches; indeed, that practice inspired one of Patek Philippe's great design classics, the Officer's-style wristwatch.

Movement No. 97 975, built on an *ébauche* made by Victorin Piguet in the Vallée de Joux, has a compact 12-ligne (27.07 mm) diameter well suited to a wristwatch. It is equipped with a straight-line lever escapement, a compensating balance, and a Breguet overcoil spring. Its distinguishing feature is the perpetual calendar mechanism's instantaneous jumping action, so complex that it is rarely seen.

The white enamel dial is a textbook example of elegance, balance, and legibility. Gilt hands make the perpetual calendar indications clear at first glance. The *poire* (or pear-style) center hour and minute hands are in blued steel. The date claims pride of place, with a large sweep center hand that points to the numbers 1 to 31 inscribed in red on the dial's perimeter, which takes into account months of varying length and February 29 in a leap year. The day and the month, in French, appear in sub-dials positioned symmetrically at either end of the vertical axis. Two slightly larger sub-dials on the horizontal axis display small seconds and moon phases, at nine o'clock and three o'clock respectively. Above the moon-phase dial, a scale from 0 to 29.5 indicates the age of the moon (the number of days that have elapsed since the last new moon).

Every element adds to the clarity and finesse of the whole piece, from the large Dauphine Arabic numerals to the two railroad-track scales to the four sub-dials, which seem to stand proud of the hour numerals

Completed in 1925, this is the first known perpetual calendar wristwatch. The jumping calendar display, which includes a center date hand and indications for the day and month on sub-dials at 12 o'clock and 6 o'clock respectively, changes instantaneously. The watch's bezel is decorated with a ring of black enamel, and the lugs, which were added to the original case, are notable for their elongated shape and decorative engravings

The perpetual calendar mechanism's instantaneous jumping action is so complex that this feature is rarely seen

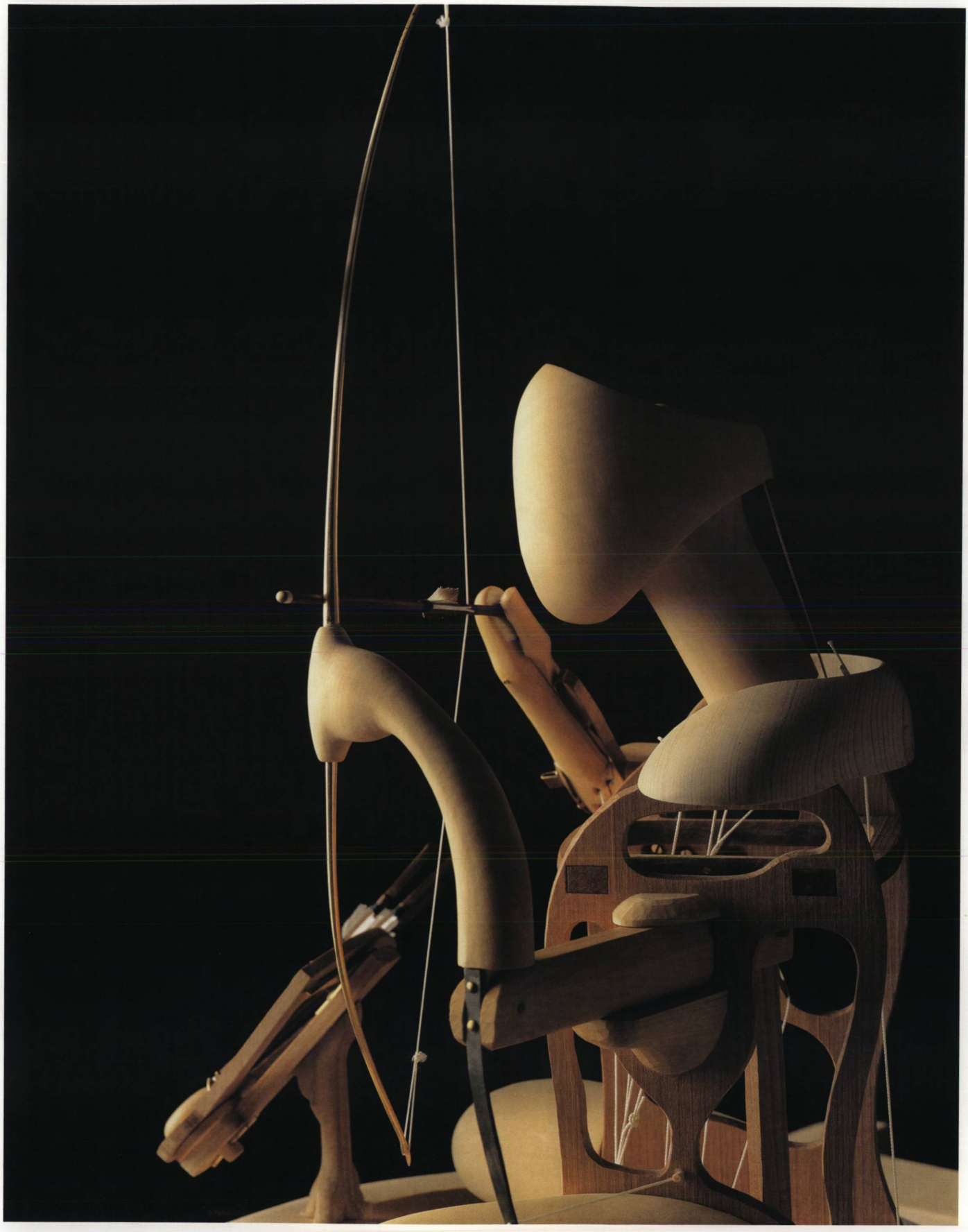
and overlap them slightly. The 34.4 mm round case, No. 222 033, was made in rose gold and regilded in 1925. The bezel features a fillet of black enamel set into the metal for a touch of originality.

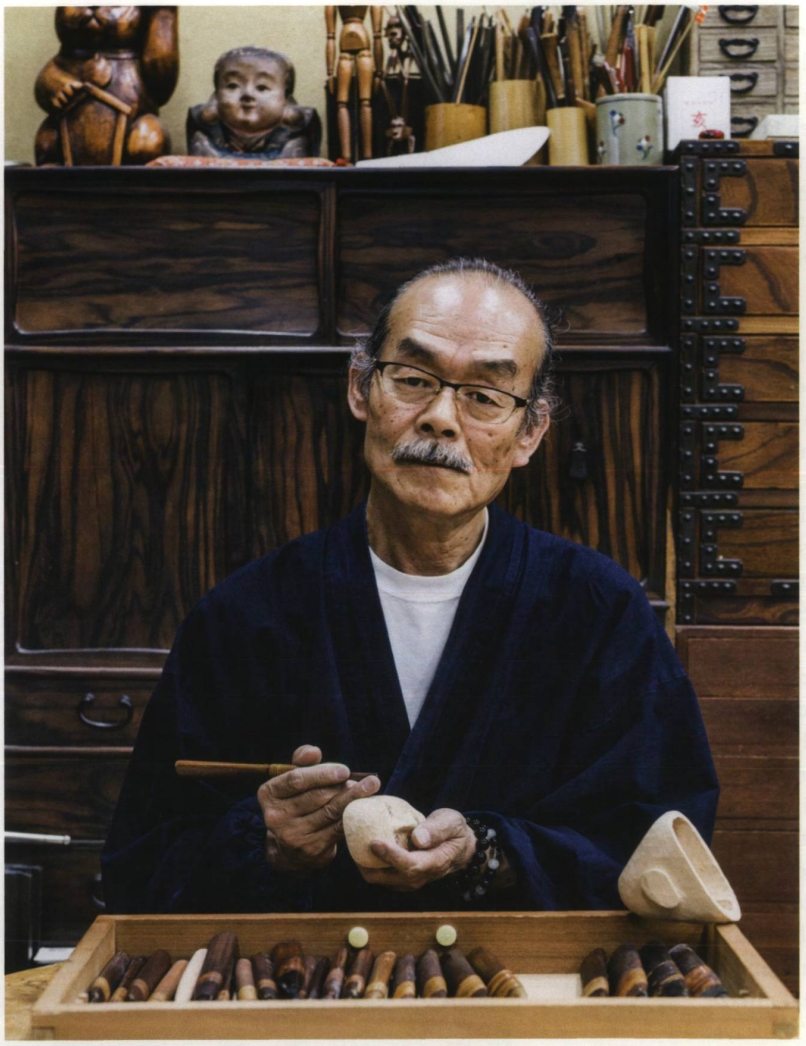
As if to underline the importance of this first perpetual calendar conceived for the wrist, Patek Philippe endowed it with large, elongated lugs that are engraved with a foliate motif. With its enameled dial and bezel, the piece is a splendid example of the rare artistic crafts that are so dear to our manufacture and that we strive to perpetuate in order to be able to pass them on to future generations.

Dating from 1925, this watch was the only one of its kind at the time. It was not until the early 1940s that production began on a series of perpetual calendar chronographs, the legendary Ref. 1518, as well as another serially produced model offering the perpetual calendar alone, the Ref. 1526. Since then, the complete perpetual calendar, with its automatic date display that takes into account the varying length of months (including February 29 in a leap year), has made its mark as one of our most emblematic grand complications.

I am happy to say that on visiting the Patek Philippe Museum in Geneva, one may discover two milestones in the history of this highly prized grand complication: the first perpetual calendar pocket watch, built in 1762 by the English maker Thomas Mudge (the subject of my piece in the last issue of *Patek Philippe* magazine) and this 1925 model, the first perpetual calendar wristwatch, signed by Patek Philippe. ✥

Translated by Barbara Caffin





STORY *Noriko Miyamura*

The mechanical wooden figure slowly notches an arrow to its bow, takes aim, and shoots. Its head moves slightly, and the tension of a target shooter comes over its blank features. The beautiful curves and fluid movements stir the imagination of the spectator; the interlinked internal mechanisms draw the eye...

Archer on a Boat is a *karakuri ningyo* automaton created by the industrial designer Shunji Yamanaka in collaboration with the ninth-generation karakuri dollmaker Tamaya Shobei. Captivated by the structural beauty of Shobei's creations, Yamanaka conceived of one that would have its "skeleton" deliberately on display; he was responsible for the design while Shobei constructed the doll, including its mechanisms. *Archer on a Boat* was among a number of "skeleton" automata – which blend futuristic looks with traditional beauty – to be shown in America and Europe as part of an exhibition curated by Yamanaka entitled *Prototyping in Tokyo*.

Karakuri automata were first developed in Japan about four hundred years ago and could be considered the progenitors of robots. As well as admiring Shobei's craftsmanship for his approach to construction and design, Yamanaka was impressed by the way in which he used the Edo-period techniques in his pioneering mechanisms.

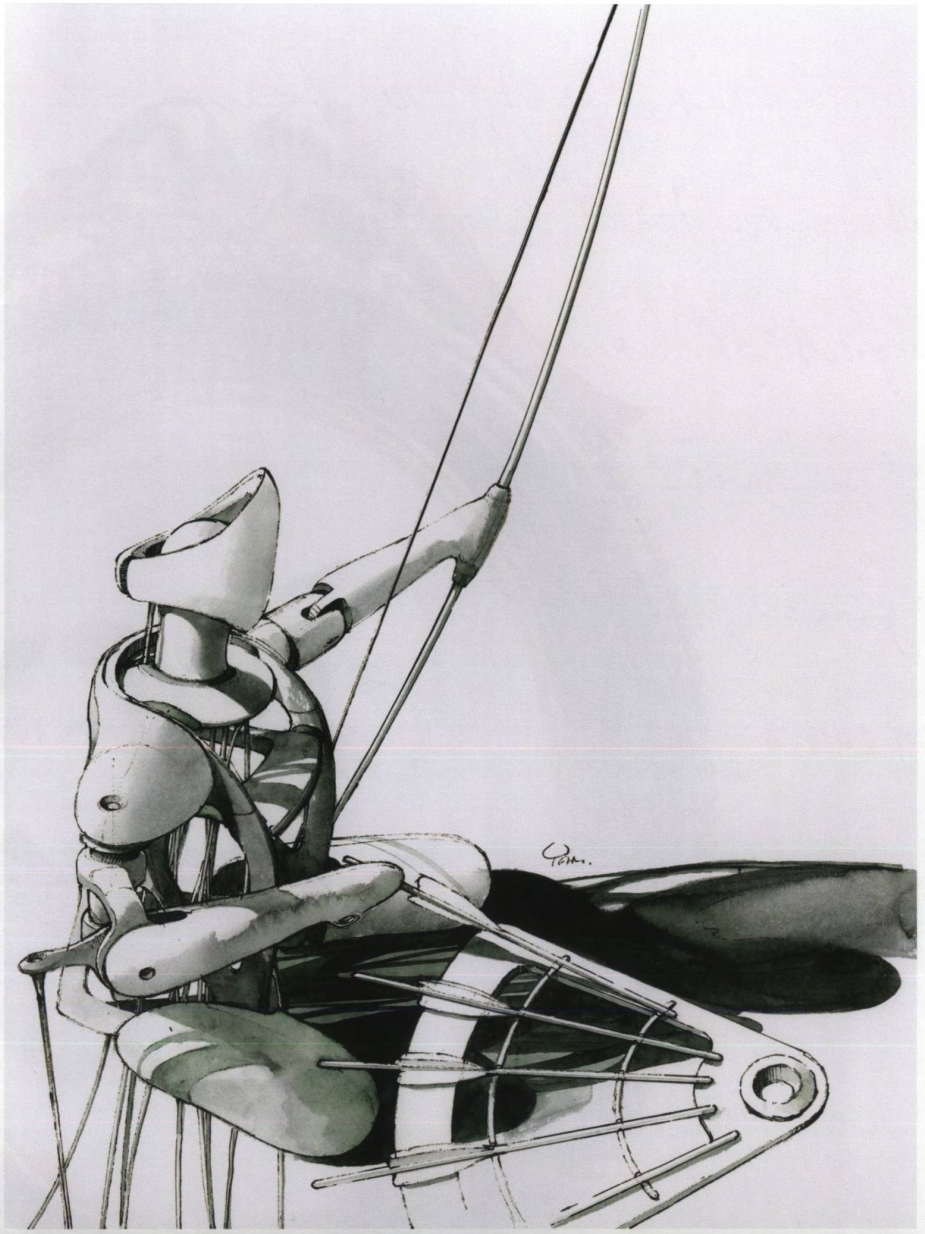
Tamaya Shobei's family has been making traditional-style karakuri dolls since 1733 and is the last family to carry on this craft. At his workshop in Nagoya, Shobei repairs and restores older karakuri dolls and creates new models. "I think that what makes these dolls especially interesting is those sleight-of-hand moments that amaze the spectator with their dexterity," he says. "What is most important is how skillfully, how precisely made the mechanisms are."

In Japan, traditional dolls are seen by many as sacred beings inhabited by spirits. Early models had limited movement, but after Japanese clockmaking developed, using the technology learned from imported clocks, more elaborate mechanisms evolved. In the latter half of the seventeenth century, the culture of Japan's unique karakuri automata blossomed: they became attractions in religious festivals or beloved toys, or they featured in theatrical presentations. People were amazed to see dolls that could write words or climb steps. Notable types include "parlor trick dolls," such as the tea-serving doll, that could move using wooden cams and metal or whalebone springs, and "float trick dolls," which were mounted on shrine festival floats and operated by people sitting underneath pulling strings.

The prototype of Yamanaka and Shobei's automaton was one called *Archer Child* made in 1820 by Tanaka Hisashige. Aside from having replaced several springs with rings, the modern version faithfully reproduces the original's technology.

Shobei himself had made a facsimile of the original *Archer Child*, and when Yamanaka saw it in action, he was inspired to make a sketch that became the basis for the new skeleton automaton. "The sketches themselves had movement, which I found very exciting; I wanted to try my hand at making a doll with that beautiful form," says Shobei. But once he began, he found he could visualize the whole work based on just a few of the sketches and he was able to make the finished piece by eye.

As when making a traditional karakuri doll, the process began with the most important part, the face. After that, Shobei was able to gauge the dimensions and volume of the body in proportion to the head and judge the proper size and shape of each



Tamaya Shobei IX (shown on page 63) is Japan's only living *karakuri ningyo* master from an unbroken lineage. Shobei assumed his ninth-generation title in 1995 after an apprenticeship led by the seventh-generation Tamaya Shobei, who began training him at the age of 25. *Archer on a Boat,* the karakuri doll (shown below and on page 62) was originally envisioned in sketches (see right) by the designer Shunji Yamanaka, then carved and constructed by Tamaya Shobei IX. The piece is based on an 1820 Edo-period model, *Archer Child* (shown opposite), made by Tanaka Hisashige

of the other parts in turn. The biggest challenge was the boat's railings. "I worked hard to get the proper curve and shape. If the wood is of poor quality, the pieces will eventually warp, so I carved them from high-quality hinoki cypress that I had aged for many years." Different wood is used to match the function of each piece so that the doll can maintain its condition for decades or even centuries. "I've always used a soft wood such as cypress for the face, but I chose boxwood for the skeleton's bone-like hardness. The nose protrudes somewhat so that it will cast a shadow. That way, when you move it, it can change expression the way a Noh mask does, relying on light and shadow. I had a wonderful time thinking about each little detail," says Shobei.

As well as working on new technically challenging pieces, he has been restoring a model created by the first-generation Tamaya Shobei, which was damaged during World War II. "The roots of the craftsmanship that brought post-war Japan's machine industry to fruition can be found in the karakuri doll," says Shobei. The Chubu region at the center of Japan's main island, Honshu, where the Shobei workshop is located, is still home to many automata produced by craftsmen who vied to outdo each other in mechanical innovation. Even now the area remains the center of Japan's machine industry, with Toyota based there.

And in recent years, the sturdy, simple mechanisms of karakuri dolls have been put to use in the most advanced factories as energy-efficient and economical options. It seems that Edo-period technology, the starting point of machines, is being reevaluated as an old source for new ideas. ❖

Translated by Jay Rubin

PHOTOGRAPHS: YUKIO SHIMIZU/COURTESY OF JAPAN HOUSE
CHRISTOFFER RUDQUIST TOYOTA COLLECTION SKETCH BY SHUNJI YAMANAKA/COURTESY OF JAPAN HOUSE

STORY *Nicholas Foulkes*

Yours faithfully

Antoine Norbert de Patek traveled extensively on business during the mid-1850s, but he kept in regular contact with his wife via a series of letters. Sometimes he resorted to elaborate measures to shield her from the dangers that he was facing, as correspondence in the Patek Philippe archives reveals

So dramatic were the events of Antoine Norbert de Patek's 4,500-mile, 86-day tour of the United States of America during the winter of 1854-1855 that I can imagine them as a feature film.

Emboldened by his success at the Great Exhibition of 1851 in London, where Queen Victoria and her Prince Consort Albert acquired Patek Philippe watches, Patek next set his sights across the Atlantic. But, rather than a new world of business opportunities he found that he had arrived in the wild, wild West.

The Atlantic crossing had been tempestuous; however, the giant seas of the North Atlantic were but an overture for the discomfort and danger that the 42-year-old Antoine Norbert de Patek would encounter on his arrival in America in December 1854.

New York had yet to become the decorous city celebrated in the novels of Edith Wharton. Instead, it was the corrupt and dangerous hometown of Boss Tweed, filled with roaming bands of thugs and "celebrated" by Martin Scorsese's *Gangs of New York*. "This badly organized country is crawling with dangers," read a typical letter from Patek back to Geneva. He checked into his hotel at noon, dined at five o'clock, and was robbed before bedtime: "The doors to four bedrooms were picked, including mine...our bags were cut open, everything made of gold was stolen." His letters give the impression of a city drowning in a perpetual crime wave: "Twenty-five thousand dollars in gold were stolen from one of the leading banks in New York, ten thousand dollars' worth of diamonds were stolen from Mr. Tiffany." Fire was another hazard; his hotel's gas tank exploded, and on Christmas Eve five nearby houses burned down.

Patek left New York as soon as he could, managing to sell just nine watches in Philadelphia but none in Washington, D.C., before moving south to Charleston, where his train was delayed because of a derailment. When he switched from railroad to riverboat for the journey to New Orleans, his steamship ran aground and remained stuck for three days. New Orleans was a commercial disaster, so he decided to make for St. Louis, and en route his boat collided with another steamer. It could have been worse; he watched three others sink.

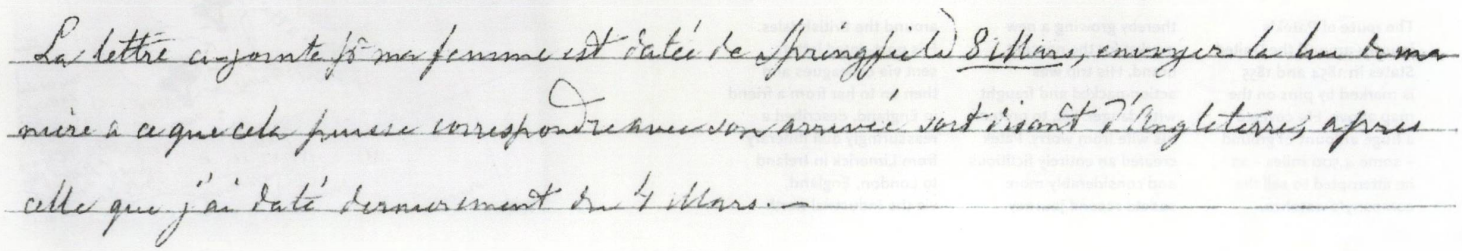
He had hoped to accomplish the journey from St. Louis to Chicago within a day but was halted by a blizzard for "four days and three nights, sunk deeper with every moment into ten to fifteen feet of snow."

The cinematic potential of this disastrous trip is abundant, but were it ever filmed, a conscientious director would need to intercut these scenes with calmer ones depicting a civilized journey around the British Isles.

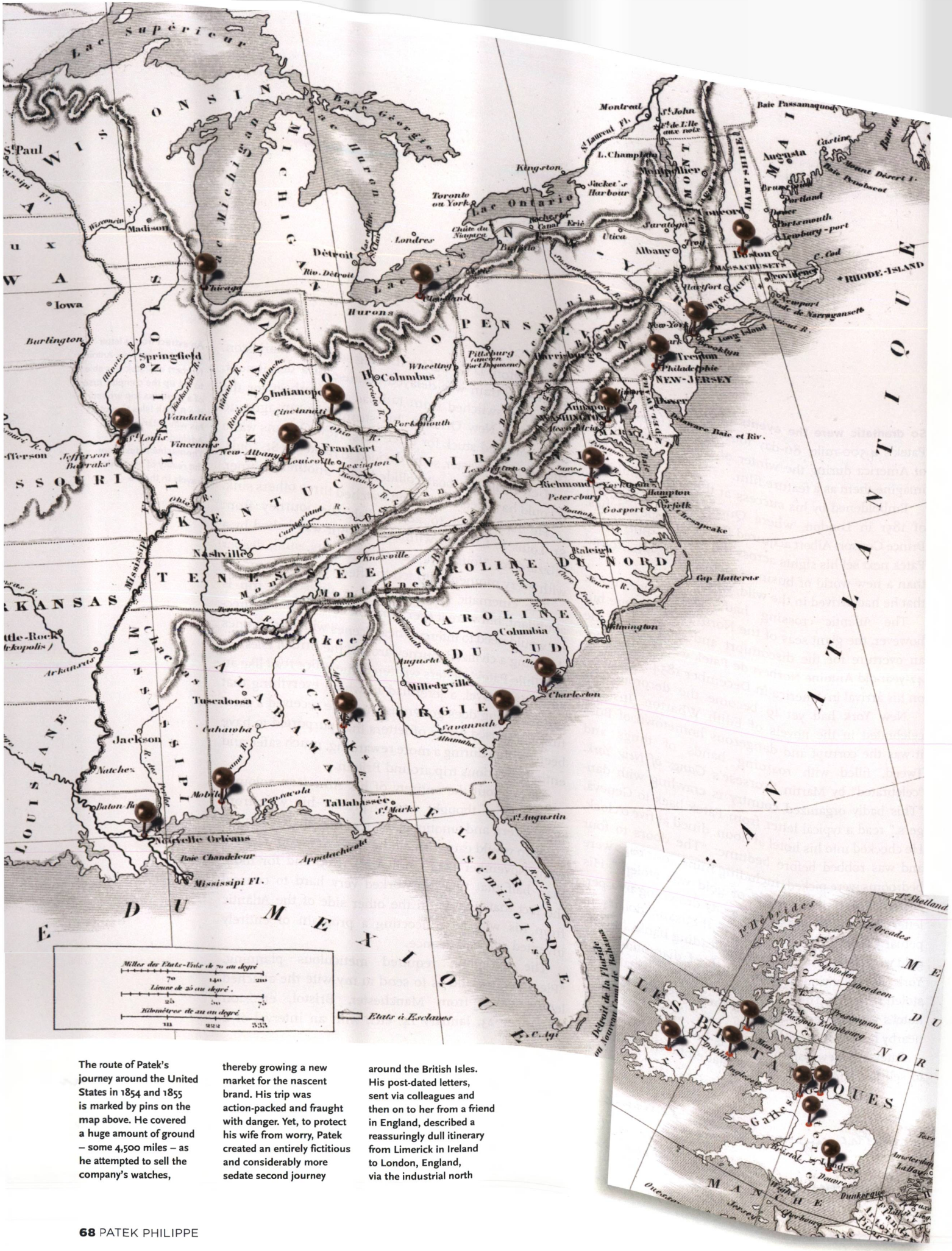
While Patek's letters written to the office read like an adventure novel, a jeremiad in which everything that can go wrong does go wrong, his wife received a carefully composed series of letters that purported to have been written during a more rewarding, much safer, and entirely fictitious trip around Britain.

Throughout the entirety of his American sojourn, Patek's chief thought was to protect his wife from the concern and emotional distress that such a dangerous trip would cause. In all, he was away from Geneva from November 1854 until April 1855, and for more than half that time he worked very hard to conceal the fact that he was on the other side of the Atlantic from his wife by concocting a program of entirely invented correspondence.

The deception required meticulous planning. "Please be so kind as to send to my wife the attached letters dated from Manchester, Bristol, etc.,...on December 23, January 14, etc., with an interval of a


La lettre ci-jointe fs ma femme est datée de Springfield Illinois, envoyez la lui de ma
part à ce que cela puisse correspondre avec son arrivée soit disant d'Angleterre, après
celle que j'ai datée dernièrement du 4 Mars.

An extract from a letter (below) shows how Antoine Norbert de Patek was able to set up the complex ruse of a business trip around the British Isles to protect his wife, Marie-Louise Adélaïde Elisabeth Thomasine Patek, from the reality of his perilous travels in the US



The route of Patek's journey around the United States in 1854 and 1855 is marked by pins on the map above. He covered a huge amount of ground – some 4,500 miles – as he attempted to sell the company's watches, thereby growing a new market for the nascent brand. His trip was action-packed and fraught with danger. Yet, to protect his wife from worry, Patek created an entirely fictitious and considerably more sedate second journey around the British Isles. His post-dated letters, sent via colleagues and then on to her from a friend in England, described a reassuringly dull itinerary from Limerick in Ireland to London, England, via the industrial north

During his visit to New York, Antoine Norbert de Patek stayed at the St. Nicholas Hotel on Broadway. The gaslit building was considered a marvel of modern luxury at the time

good month from the date they were actually written," he wrote to colleagues, with instructions that letters to his wife be sent to a friend in England who would then forward them on to Madame Patek.

The letter illustrated on page 67 is typical of the correspondence Patek maintained with his office. In among commercial details he issues instructions about another letter he has enclosed: "The attached letter for my wife is dated March 8, send it to her in such a way so that it may correspond with its so-called arrival from England, after the last one I dated March 4."

As he made his trip down the eastern seaboard of the US, before venturing through South Carolina, Georgia, Alabama, and Mississippi, then up to Chicago via St. Louis and Illinois, through Indiana, Ohio, and Pennsylvania, returning to Europe from the port of New York, Madame Patek traced a very different journey on her atlas. As far as she was concerned, he had sailed from Liverpool across the Irish Sea to Belfast, Dublin, and Limerick, then crossed back to visit Bristol and Leeds before returning to London via Birmingham (England, not Alabama). As a result of this intricately wrought deception, Madame Patek believed that her husband had traveled 1,500 miles, whereas his actual journey was three times as long and across a vast ocean.

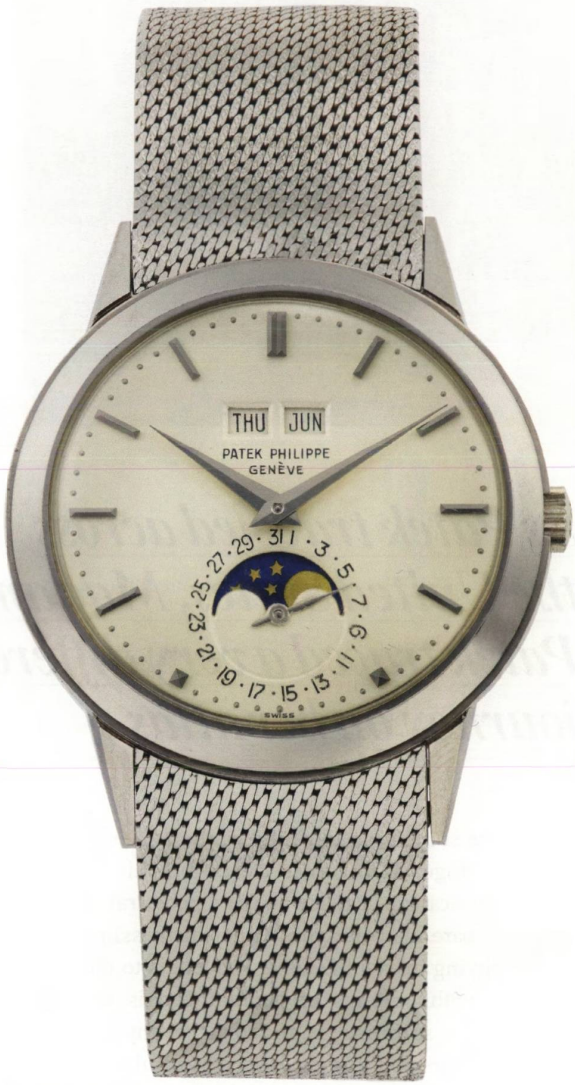
As Patek traveled across the United States, Madame Patek traced a very different journey on her atlas

There is something touching in the selflessness of this subterfuge; as becomes clear from his account of the America trip, Patek was not a good traveler. He does not spare his colleagues either his pessimism or his self-pitying martyr-like tone. His letters to them are peppered with portents of doom: "God is the only witness to my suffering...," and to dispel any lingering doubt, "I assure you this journey is dreadful."

In order to lessen the burden of worry to his wife, Patek deliberately denied himself the much-needed pleasure of the sight of her familiar handwriting on an envelope. How satisfying it would have been for him to share his misery with the woman who shared his life and how comforting it would have been to receive a letter from home. ✥

Auctions

Once again, the vintage market reigned strong during spring's auction season. Simon de Burton's salesroom highlights include a piece passed down from a grandfather to his granddaughter and another that was produced to commemorate a milestone in Patek Philippe's history



US$1,155,000 | CHF1,141,700

The famous phrase, "You never actually own a Patek Philippe. You merely look after it for the next generation," from the firm's award-winning advertising campaign, could certainly be applied to this REF. 3448, which was bought new in 1969, kept by the original owner until his death (aged 94), and then passed down to his granddaughter.

One of only 6 examples of the model to have appeared at auction in white gold with a matching white gold bracelet, this piece was offered in immaculate unrestored condition, the only sign of its 50 years of age being the beautiful ivory patina of its once pure white enamel dial. Sold at Christie's, New York, June 6, 2019

US$494,200 | CHF500,000

One of Patek Philippe's most impressive groundbreaking technical achievements is the world's first perpetual calendar chronograph made for series production, the REF. 1518, which launched in 1941. This yellow gold piece is especially covetable due to the presence of the words "Fab Suisse" beneath its moon-phase display. Rarely seen, this detail indicates that the watch was originally made for the French market. This 1950 example is described as one of the "best preserved" REF. 1518s to have been offered for sale. Sold at Sotheby's, Geneva, May 12, 2019

US$529,700 | CHF536,000

Patek Philippe launched the REF. 1436 split-seconds chronograph as far back as 1938. It was the firm's first serially produced chronograph model to feature the split-seconds function (which allows elapsed time recording of multiple events) and was made in small numbers, with fewer than 9 rose gold examples known to have survived. What makes this particular piece even rarer is the original exquisite pink dial, which features the seldom seen long-form signature, "Patek, Philippe & Co." Sold at Phillips, Geneva, May 11, 2019

US$312,500 | CHF310,700

Created to mark the inauguration of Patek Philippe's new Plan-les-Ouates manufacture in 1997, the REF. 5029 combines classic looks with exceptional horological prowess. Its automatic movement features a minute repeater, for which the firm developed a new highly acoustic steel alloy to ensure sound clarity. The mechanism can be seen by opening the hinged back of the Officer's case. Just 30 examples of this reference were made – 10 in rose gold (as seen here), 10 in yellow gold, and 10 in platinum. Sold at Sotheby's, New York, June 4, 2019

US$247,100 | CHF250,000

Patek Philippe's enamel dial wristwatches are admired by collectors for their status as true horological artworks, and many enthusiasts are drawn to seek out companion pieces in the form of the manufacture's similarly decorated desk clocks. This unique gilt brass and cloisonné enamel example, "La Nature," features a dial painted with a cubist-style scene that depicts women among richly colored foliage, while the side panels show woodland birds. Highlighting the investment potential of a Patek Philippe, this piece fetched more than double the lower end of the pre-auction estimate and almost 10 times the original 1989 sale price. Sold at Phillips, Geneva, May 11, 2019

US$872,000 | HK$6,845,000

The REF. 2499/100 perpetual calendar chronograph with moon phases was produced in 4 series over a 35-year period (from 1950 to 1985). Only 349 examples were made, and this 1983 yellow gold model from the fourth series is one of the few created entirely in-house by Patek Philippe. Carefully serviced and cleaned in 1987, the watch had been safely locked away since the dawn of the millennium, and save for the case's slightly tarnished appearance (characteristic of being stored away), it was virtually as-new. Sold at Christie's, Hong Kong, May 27, 2019

US$968,700 | CHF980,000

The REF. 2497, introduced in 1951, not only represents a masterclass in horological aesthetics but it was technically groundbreaking for the time. The first perpetual calendar wristwatch in the world to feature a center seconds display (rather than seconds being recorded on a sub-dial), it was in production until 1963, during which time fewer than 200 examples were produced. Only around 20 were cased in rose gold, including this 1953 version, which was preserved in superb original condition despite being 66 years old. Sold at Sotheby's, Geneva, May 12, 2019

US$150,000 | CHF149,100

The tourbillon mechanism was invented more than 200 years ago in order to counteract the detrimental effects of gravity on timekeeping. In later years, Patek Philippe entered its meticulously engineered tourbillon models into observatory competitions, where their accuracy was measured with the watch being placed in different positions over extended periods. This 1922 yellow gold example received prizes in chronometer pocket watch contests in 1924, 1925, and 1926, before being offered for sale in 1927. Sold at Sotheby's, New York, June 4, 2019

Collector's guide

The approximate production date of a REF. 570 can often be determined by the company name that appears on the dial. During a period of transition in the late 1940s, the name on the dial switched from "Patek Philippe & Co" (or "& Cie") to "Patek Philippe"

Each gold baton was hand-riveted to the dial in a labor-intensive process (the same process used today), which was undertaken by the dial makers Stern Frères

In the 1950s most models had a plain oversized crown, while later models, such as this one, usually had an embossed Calatrava cross on the crown

Antoine Gerlach SA was the main casemaker responsible for creating the REF. 570's elegant case, as well as the REF. 96's, in white or yellow gold; it also made this version in platinum

The REF. 570, originally launched in 1938, featured subsidiary seconds and was fitted with the caliber 12-120. Later versions, such as this 1961 piece with center-seconds, utilized the caliber 27 SC

As well as having a large-for-the-time case diameter (sizes ranged from 35 mm to 36.5 mm), the REF. 570 features a wide 20 mm lug width

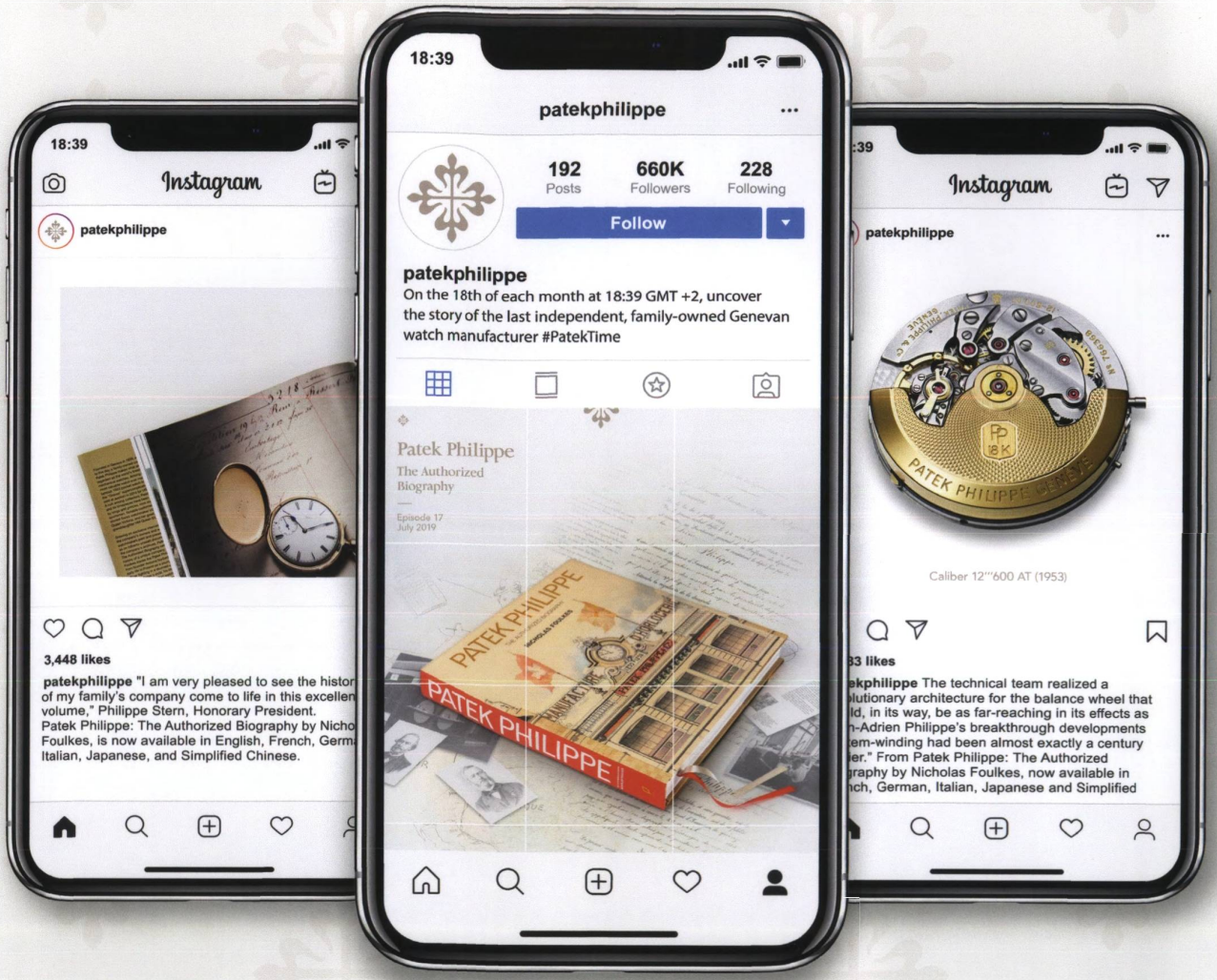
STORY *John Reardon* | ILLUSTRATION *Nabil Nezzar*

Patek Philippe's core aesthetic for a twentieth-century dress watch was defined by one model in particular: REF. 570. Compared to its sibling, REF. 96, the 570's diameter, which ranged from 35 mm to 36.5 mm, was considered large when the watch launched in 1938; its flat bezel made it seem larger still on the wrist, allowing the time to be read easily while retaining elegance. The understated design became the blueprint for a classic dress watch in the Swiss luxury watch industry.

Though the 570 is sometimes underappreciated for its simple three-hand display, the diameter, design, and the definition of its case and lugs make it the ultimate expression of Bauhaus design in a wristwatch, where form elegantly follows function. In production until the mid-1970s, the number of case, dial, and movement variations can be daunting to new enthusiasts, but it is those nuances that make the watch enjoyable to study and wear for new and seasoned collectors. Versions were made in yellow, white, or rose gold, as well as platinum and steel, and the simple shape has framed numerous dial designs by Stern Frères that feature details such as a two-tone face or Breguet, baton, or Roman numerals.

The way the watch has aged and been cared for over time greatly affects its value and collectibility. Each time a 570 case is polished, its shape subtly changes. An unpolished model, as illustrated above, has a crisp definition to the bezel and lugs and retains the original case proportions from the day it left the factory. The raised enamel logo is often highlighted on an untouched and unrestored dial, and the finish develops a color that cannot be replicated. The holy grail for a 570 collector is to find a piece that has been left in a drawer for decades. But while prices continue to rise for well-preserved versions of this vintage timepiece, whose DNA lives on in the Calatrava line today, one can still find a quality example at a surprisingly reasonable price. ✦

PATEK PHILIPPE
GENEVE



DISCOVER PATEK PHILIPPE ON INSTAGRAM

On the 18th of each month at 18:39 Geneva time (in reference to the year the company was founded), Patek Philippe releases a new episode on Instagram. Twelve posts reveal either the details of a timepiece, a moment in Patek Philippe's history, or a story about the company.
Search for @patekphilippe and #PatekTime

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