

500 YEARS | 100 WATCHES



500 YEARS | 100 WATCHES

ALEXANDER BARTER | DARYN SCHNIPPER

PRESTEL

MUNICH • LONDON • NEW YORK



Chas. Frodsham

LONDON

010822

SWISS MADE

916

916

CONTENTS

INTRODUCTION	6
16TH CENTURY	12
17TH CENTURY	28
18TH CENTURY	78
19TH CENTURY	130
20TH CENTURY	186
21ST CENTURY	266
GLOSSARY	280
NOTES	286
BIBLIOGRAPHY	290
ACKNOWLEDGEMENTS	293
ABOUT THE AUTHORS	294
IMAGE CREDITS	295
WATCHES ON PUBLIC VIEW	297
INDEX	299

FRONTISPIECE. Stamped CK, Germany, circa 1575. Gilt-brass clock-watch with alarm and astrolabic dial (see pp. 20–23).

OPPOSITE. Charles Frodsham & Co., London, 2018. Twenty-two-carat gold wristwatch with Daniels double-impulse chronometer escapement (see pp. 276–77).

INTRODUCTION

To the 'Change after office, and received my watch from the watchmaker; and a very fine [one] it is ... But, Lord! to see how much of my old folly and childishnesse hangs upon me still that I cannot forbear carrying my watch in my hand in the coach all this afternoon, and seeing what o'clock it is 100 times; and am apt to think with myself: how could I be so long without one.

Samuel Pepys, 13 May 1665

Watches have fascinated and captivated their owners throughout history. They are more than time-telling machines: their design and decoration have been used for countless generations to project their owners' tastes and status. The most personal and useful of gadgets, prior to our era of the ubiquitous mobile phone, the watch was widely regarded as an essential daily accessory. Wildly inaccurate upon its first appearance in the early sixteenth century, in the space of some 250 years it became possible to produce precision watches that could keep time to within a few seconds a day. This allowed the watch to play an increasingly important role in maritime navigation and scientific research.

It was the invention of the mainspring in the mid-fifteenth century that ultimately allowed the clock to be miniaturized and made portable. While early spring-driven clocks would generally have been transported small distances within an owner's home, perhaps from hall to bedchamber, a truly portable timekeeper that could be kept about the person had an obvious attraction. Although watches may have been made before the end of the fifteenth century, none from this period has survived. The earliest extant watches are ascribed to the early sixteenth century and one of the first to be dated is inscribed with the year 1530; it was made for the German Lutheran reformer Philipp Melanchthon (1497–1560) and attributed to the maker Peter Henlein (c. 1480/85–1542) from Nuremberg.¹ This is in all likelihood the city where the watch was born. Very soon afterwards, or perhaps simultaneously, makers in Northern Italy and France also successfully transformed the clock into the watch. Watchmaking spread to the Netherlands and Flanders, to Switzerland and the independent city state of Geneva. In England watchmaking appears to have begun during the second half of Elizabeth I's reign, probably just before the 1580s. Largely precipitated by the arrival of skilled craftsmen fleeing religious persecution

in France and the Low Countries, watchmaking in England would grow steadily during the next century and would come to dominate the industry during the eighteenth century, before losing its crown to Swiss and American manufacturers during the nineteenth century.

The pomander case was among the earliest chosen to house a watch movement (see pp. 18–19); indeed, Melanchthon's watch, mentioned above, is one such example. Pomanders were familiar to many and were carried by the rich through the acrid streets of the sixteenth century to help ward off unpleasant smells. As such, pomander-form watches would not have looked quite so extraordinary and alien when hanging from the neck, despite the peculiar mechanical clanking noises emanating from within. Early watches usually had a bow or hoop through which the watch could be suspended from the owner's neck, as well as feet or a steady flat base to allow it to be placed on a table and used as a portable clock. Usually cases were of considerable depth to accommodate the fusee (see illustration p. 15), a conical device that helped to compensate for the varying power of the mainspring as it unwound. Some of the earliest watches were of drum form; these, with their high sides, were an impractical shape to suspend from the neck. Such pieces therefore did not have provision for hanging and were most likely kept within a pouch or purse that was affixed to the belt or around the neck. As an alternative to the fusee, the stackfreed (probably invented around 1530²) helped precipitate the appearance of German watches with slightly slimmer, cylindrical cases. Although this case form would begin to dominate, the stackfreed itself was no match for the fusee; it was never adopted by the French or English and quickly became obsolete, slimmer fusees being a far superior solution.

Much is made of the fact that early watches were fantastically inaccurate, had to be wound twice a day and reset each time using a sundial or clock, and were

OPPOSITE. Benjamin Hill, London, circa 1665 (see pp. 54–57).





OPPOSITE. Jehan
Cremsdorff, Paris,
circa 1650 (see pp. 48–51).

objects more of status than utility, but the fact remains that the convenience of being able to carry time made the watch much more than a mere novelty. One of the most useful aspects of both the portable clock and the watch was the ability to be used as an alarm. Such alarms could be separate, detachable modules mounted above the watch or clock dial, set so that as the hand reached the allotted hour, it moved an arm positioned above it to trigger the release of the alarm mechanism, thereby sounding its bell. Alarms were, early on, also integrated into the mechanism of some watch movements (see pp. 20–23). Together with so-called clock-watches which struck the hour, alarm watches were one of the earliest forms of complication watch. Throughout the centuries, watches would become increasingly important aids to research, especially in the realms of science and navigation. Although their true worth as scientific aids would not be fully realized until the advent of precision watches in the eighteenth century, watches incorporating complex astronomical dial indications could already be found two centuries earlier (see pp. 20–23).

France quickly came to dominate the early period of watchmaking, the quality of their production rapidly outstripping that of their rivals in Germany. And it was not just in the construction of their movements that the French excelled. Watches were expensive objects that were available only to the elite. It is therefore unsurprising that early watches were often highly decorated. During the seventeenth century, as the use of watches became more widespread among the rich, their style of decoration became increasingly varied. In France, the invention and mastery of new enamel painting techniques led to the production of sensationally and exquisitely decorated watch cases (see pp. 40–41). In many instances the watch was a status symbol, which at its most extreme could assume a jewel-like appearance, both literally (see pp. 32–33) or by virtue of the exceptional quality of its decoration (see pp. 48–51). Watches could be semi-devotional pieces, decorated with religious scenes (see pp. 38–39) or shaped in the form of crucifixes (see pp. 44–45); they could be formed as flowers (see pp. 42–43), animals or skulls (see pp. 46–47).

The introduction of the balance spring in the mid- to late 1670s marked the first great milestone on the path to precision watchmaking (see pp. 60–63 & 64–67). Its effect was immediate, transforming a well-made watch from a machine that almost casually marked time³ to a reliable timepiece suddenly capable of keeping its rate of accuracy to within two minutes per day. A minute hand, rarely seen before the balance spring's introduction, quickly became a standard indicator. The traditional use of a single

hand, which made one revolution every 12 hours, meant that there were no hard-and-fast rules or long-standing traditions governing the manner in which minutes should be displayed on a watch dial. Following the balance spring's introduction, novel means of displaying hours and minutes together could be found (see pp. 74–77 & 84–85) before the standard configuration of concentric hour and minute hands became the accepted template.

During the seventeenth century, most 'complication' watches comprised calendar and astronomical indications and/or alarm and striking mechanisms. The end of the seventeenth century saw the introduction of the first repeating watches and the eighteenth century would witness a range of important innovations, including the first mechanized perpetual calendar watch (see pp. 102–05) and the first watch with a detached lever escapement (see pp. 106–07) – an invention that would eventually transform the watchmaking world and become the dominant form of mechanical watch escapement, right up to the present day. Development of the precision watch accelerated in England and France during the second half of the eighteenth century. In England John Harrison's remarkable fourth marine timekeeper, a watch known as H4, demonstrated that highly accurate watches were not only possible, but could also solve the problem of how to calculate longitude and thereby transform navigation at sea (see pp. 96–99). Following Harrison's H4, the first watches with chronometer escapements were developed (see pp. 112–19), leading to a new age of precision timekeeping, a field in which the English would become dominant. By the end of the eighteenth century, the finest chronometer watches by makers such as John Arnold could be accurate to within two or three seconds per day.⁴

As Geneva's rise as a centre of watchmaking gathered pace at the beginning of the nineteenth century, the mechanical prowess of the city's watchmakers was matched by the exceptional skill of its case makers, decorators and enamellers. Demand for luxurious watches grew in the markets of the Near and Far East, and Swiss makers were spurred on to produce ever more elaborate, complex and beautifully finished watches. Watches with extraordinary automated scenes were combined with musical movements, creating staggering displays of ingenuity that included figures apparently dancing on tightropes (see pp. 144–45), birds rising from within watch cases to sing and flap their wings (see pp. 160–63) and automaton scenes displaying multiple actions (see pp. 152–53). During the first quarter of the nineteenth century, the cases of these watches were often decorated with polychrome enamel painted scenes of the most exceptional quality (see pp. 158–59).



LEFT. Breguet, Paris, retailed by Recordon, London, 1808 (see pp. 138–43).

Established in Paris towards the end of the eighteenth century, Abraham-Louis Breguet helped transform watch design with a highly distinctive and enduring aesthetic that echoes down to the present day. Breguet's many inventions, quality of production and workshop organization led to enormous success and won him an enviable reputation; he was a watchmaker to European aristocracy, kings and emperors. Breguet is also renowned for producing the first highly complicated watch, the so-called Marie Antoinette (see pp. 166–69). Ultra-complication watches would soon become used by other watchmakers to demonstrate their superior skill and prowess. A selection of these watches is shown throughout this book, including Leroy No.1 completed in 1904 (once the most complicated watch in the world) (see pp. 192–95), Dent's Ultra Complication from 1904 (see pp. 196–99) and Patek Philippe's Supercomplication watch made for Henry Graves Jr, completed in 1932 (see pp. 216–19).

As the nineteenth century progressed and machinery and mass-production techniques became more advanced, the availability of the watch to a wider proportion of society began steadily to increase. Swiss and American manufacturers led the way into the modern era, to the detriment of the English, whose watches had once been the envy of the world. During the First World War, the wristlet or wristwatch proved its worth for the first time, and by 1934 twice as many wristwatches as pocket watches were being exported from Switzerland.⁵ The rise of the wristwatch

coincided with the highly creative Art Deco period and the 1930s would witness the arrival of many of the twentieth century's most iconic wristwatch models. As the century progressed, wristwatches were created for specific tasks, both professional and leisure-focused: they were used to assist in flight navigation and to time a variety of procedures and sporting events. Wristwatches were waterproofed, battle-hardened for the military and protected from magnetism for scientists. At the end of the 1950s, the introduction of the first series-produced wristwatches with electrical impulses acted as an early warning of the shockwaves that would convulse and decimate the traditional mechanical watchmaking industry a decade later, when the first commercially available quartz wristwatches were released to the market. Despite the predictions of many that the ready availability of cheap, exceptional-at-timekeeping quartz watches would destroy the mechanical industry, the 1980s would see a revival of interest in the watchmaker's art. This was partly driven by an entirely new collectors' market specifically focused on vintage wristwatches. Vintage wristwatch collecting grew dramatically during the 1980s, reaching feverish levels by the late 1980s. Meanwhile, manufacturers were increasingly focused on the production of interesting and unusual complication watches that both met rising demand and demonstrated their skill and prowess. For older firms, models based on heritage pieces also became an important part of their catalogues. These approaches were demonstrated to best effect by Patek Philippe,

who in 1989 celebrated their 150th anniversary by releasing a range of heritage-inspired models and modern complication wristwatches, several of which were made in limited editions.

By the end of the 1980s, with the arrival of new and innovative brands and a renaissance in the fortunes of many heritage brands, the future of the mechanical watch seemed assured once again. The 1990s would witness a dramatic increase in both the variety of watches offered by the major manufacturers and the diversity of pieces available. By the start of the new millennium, more books and magazines devoted to watches were published, related editorial content in newspapers and magazines was increasing, and advertising by the major players was significantly expanding, all of which helped to further the appeal of the luxury watch. During the 2010s the demands of a more discerning and questioning buyer (largely advanced by the easier dissemination of information online) encouraged the leading brands to bring more and more of their production processes and components in-house. While experimenting with new materials and processes and vying with one another to produce the most alluring and captivating complication watches, many manufacturers have also reissued new versions of popular and iconic heritage models – the latter sector driven by the continuing expansion of the vintage watch market. A significant development in the last few years has been the rise of so-called independents: highly skilled

watchmakers who work alone or in small workshops producing very limited numbers of watches each year. George Daniels (see pp. 256–59) blazed a trail for the modern, independent watchmaker as early as the 1970s. His introduction of the first new practical watch escapement in over 200 years (the co-axial escapement, patented in 1980) was instrumental in demonstrating that watchmaking, despite the threat of the electronic watch, would continue its unceasing evolution. The rise of the independents has today reached a crescendo that serves to demonstrate the ceaseless appeal of the mechanical watch.

Over the course of our combined 70+ years of working in the antique and vintage watch business, Daryn and I have been lucky enough to handle and view some of the most extraordinary timepieces made during the last half millennium. Some have stood out because of their technical innovation, others because of their aesthetic design or by virtue of their exceptional state of preservation. Some have had fascinating stories and others have been made by remarkable and passionate craftsmen who have altered not just the development of the watch, but the course of history itself.

Selecting only 100 watches from a 500-year period is certainly a challenge. Our selection criteria was not solely based on showing the most valuable, well-known or important watches (although many of the pieces you will find on these pages fit within these categories). Instead, we have chosen watches that we admire and are intrigued by; we hope that you are too.

RIGHT. Rolex,
Geneva, circa 1970
(see pp. 248–49).





10.30–1.30. Unknown maker, Germany, circa 1530–40 (see pp. 16–17).

1.30–4.30. Jacques de la Garde, Blois, circa 1550 (see pp. 18–19).

4.30–7.30. CK, Stuttgart, circa 1575 (see pp. 20–23).

7.30–10.30. Unknown maker, Augsburg or Nuremberg, circa 1580 (see pp. 24–25).

16TH CENTURY

I.D.E.P

France, possibly Blois

Circa 1525–50

Diameter 43mm, height 34mm

A small and early gilt-brass drum timepiece

Arguably as much a watch as it is a clock, this early sixteenth-century timepiece is of unusually small size – indeed, the late horologist and collector Winthrop Edey (1938–1999) suggested that it was the smallest known Renaissance drum clock.⁶ Being spring- rather than weight-driven, the timepiece could be freely moved from place to place. Although there is no pendant ring to allow a rope or ribbon to be attached, its maker must have intended it to be a personal timekeeper that could be kept about the person – its size meant that it could easily be secreted in a bag.

A drum timepiece of similarly small size appears in Hans Holbein the Younger's portrait of Georg Gisze in the Gemäldegalerie, Berlin. Dated to 1532, the portrait provides a useful approximation for the date of our timepiece. Gisze was a successful and rich Hanseatic merchant, and many of the objects within the painting are loaded with symbolism and meaning: clocks and watches of course represented the passage of time, but the inclusion of such a technologically advanced item as a portable clock in the early sixteenth century also spoke volumes about the owner's education, tastes and wealth.

The timepiece illustrated here has two iron plates to either side of the movement that are held together by twin stacked baluster pillars that are riveted to the backplate and pinned to the front plate. There is a steep, conical brass fusee that is connected to the great wheel. A small, hinged door to the side of the case opens to reveal the fusee – a practical aperture by which to check the state of wind (the power remaining

in the spring-barrel). Some parts have inevitably been replaced: for example, the dumbbell-shaped foliot would originally have had T-shaped ends, the single hand was once gilded and sported a shorter tail, and the second wheel and ratchet wheels have both been replaced with brass wheels. Interestingly, however, the original contrate wheel is steel with brass teeth. As European clockmakers discovered that less wear resulted from brass parts interacting with steel parts, wheels came eventually to be made entirely of brass. This clock was therefore constructed during a transitional period when the use of brass was beginning to be introduced to wheelwork. A clock also made in Blois, formerly in the collection of the Time Museum,⁷ contained similar steel wheels with brass teeth.⁸ The inside of the timepiece's base is stamped I.D.E.P, and although the mark has not been identified, it is possible that this indicates it was made by a member of the De Posey family of Blois – later members of this family included the clockmakers Jacques and Isaac.⁹

Although it is worn in places, the case's gilding appears to be original and, together with its finely engraved decoration of strapwork arabesques and knotwork, a sense of the rich vibrancy it would have projected in the sixteenth century can be vividly imagined. The gilded dial is similarly decorated and includes an outer chapter ring engraved with Roman numerals for the hours, interspersed by star-form half-hour markers. As there is no cover to the dial, the time can be traced in the dark by feeling the position of the hand and matching it to the hours; each of the latter has a raised touch pin beneath it to aid the reading.

OPPOSITE ABOVE.
A single hand indicates the time; raised touch pins at the hours can be felt in darkness. A door to the case side allows inspection of the fusee.

OPPOSITE BELOW.
The large conical fusee is visible between the two movement plates; the steel contrate wheel with brass teeth is shown to its right.



ACTUAL SIZE



UNKNOWN MAKER

Germany

Circa 1530–40

Diameter 54mm

A gilt-brass tambour-cased watch

One of the earliest watch forms, the tambour-cased watch was a more squat version of the drum clock. Unlike the drum clock, this style of watch was fitted with a protective hinged lid above the dial. Such covers were usually decoratively pierced and engraved in a manner that allowed the time to be read when the lid was closed, thereby ensuring that the dial and its hand were protected from accidental knocks and contact during wear. The gilt-brass dial has concentric chapter rings, the outermost with Roman numerals running from I to XII o'clock, the inner with Arabic numerals from 13 to 24. Above the hours, trefoil-form apertures have been cut into the lid to reveal each of the Roman and Arabic hour indexes. To the base of the case, four heart-form motifs are chased and engraved with a symmetrically arranged foliate design. The movement has a verge escapement with foliot and gut line fusee.

A small hoop fixed to the top of the watch allows it to be suspended from the neck via a ribbon. A portrait of a gentleman dating to c. 1558 and attributed to the Florentine artist Maso da San Friano (Tommaso Manzuoli, 1532/6–1571/5) illustrates another early tambour-cased watch with a similar hoop attachment to which a light blue ribbon is attached;¹⁰ the watch's key is also shown suspended from the watch in the painting.



ABOVE. Movement backplate with winding square to the lower left. The foliot (which acts in the same manner as a balance) has T-shaped ends.

LEFT. The decoratively pierced cover protects the dial while still allowing the time to be read. Four heart-form motifs are chased and engraved to the case back.



ACTUAL SIZE



ATTRIBUTED TO JACQUES DE LA GARDE

Blois, France

Circa 1550

Height 78mm, width 61mm

An early gilt-metal hour-striking clock-watch in the form of a globe engraved with a map of the known world

Spherical watches were among the first shapes of watch to appear, with those in the form of pomanders among the earliest in this category. Peter Henlein of Nuremberg (c. 1480/85–1542), the first person known by name to have made a watch, is believed to have produced watches in the form of pomanders. Pomanders were used to carry scented material that would help mask unpleasant smells and were believed by some to ward off plague and pestilence. Globe-form watches are closely related to pomander watches and are often similarly decoratively pierced. The watch illustrated here bears similarities to two other globe watches that can be found in the collections of the Louvre, Paris, and the National Maritime Museum, London. Both the Louvre and Maritime Museum watches are signed by the French maker from Blois Jacques de la Garde, the former being additionally engraved with the year 1551.¹¹ De la Garde was active before 1551 and from 1578 until 1580 was watchmaker to King Henri III of France. He died before 1583.¹² In common with the present watch, the Maritime Museum's globe is engraved with a map of the known world.

Unsigned, the movement of the watch illustrated here has a verge escapement, steel pillars and a typical French long fusee for the going and striking trains; the count wheel for striking is concealed beneath the dial. The gilded dial is composed of a revolving central disc engraved with a blazing sun motif. A small steel 'bug' of floriate form is attached to its edge and indicates the hour on a fixed outer chapter ring that is divided into 24 hours, running twice from I to XII. Engraved on the gilt-brass globular case, a map shows the known world of the mid-sixteenth century and is clearly marked with lines of latitude. Europe, South America, Antarctica and Africa are relatively realistically rendered; however, North America is joined to Asia and Russia, a confusion that is consistent with maps of the 1550s. Simple latches around the centre of the globe secure the hinged top in place and the movement is bayonet-fitted into the case via a blued steel latch. Pierced decoration to the top of the globe allows the sound of the bell to be more easily emitted. A ring is attached to a short pendant from which the watch may be suspended using a cord or chain, but its broad rimmed foot also allows it to be conveniently placed on a surface to act as a table clock. Although the bell has been changed, the watch is generally in remarkable condition for its age and still retains the original leather-covered outer protective case with tooled decoration.



LEFT. A bell mounted to the back of the movement is struck each hour. A long fusee can be seen between the two spring barrels.

RIGHT. Mounted to the globe's foot, the dial is divided into 24 hours. Time is indicated via a 'bug' attached to a central rotating disc.





STAMPED CK

Germany, possibly
Stuttgart

Circa 1575

Diameter 119mm

A very large gilt-brass hour-striking clock-watch with stackfreed, alarm and astrolabic dial

During the sixteenth and seventeenth centuries, complex watches, clocks and scientific instruments were highly desirable objects. Such machinery not only acted as tools to further learning but, for the wealthy, were also aspirational trophies that demonstrated their owner's status and education. Portable instruments were particularly coveted and this sophisticated watch would therefore have been greatly prized by its sixteenth-century owner. When correctly wound and set, the watch would not only display the current time but also show the position of the zodiac and the location of multiple stars and constellations. In addition to its astronomical and time displays, this watch strikes the hour and incorporates an alarm – a gilt-brass disc mounted to the back of the movement allows the alarm's time to be set. The iron movement has a verge escapement and, in common with other early German watches, rather than a circular balance, a foliot similar in shape to a dumbbell is fitted. Like other German watches of the period, this watch also incorporates a stackfreed. Used in place of a fusee, the stackfreed consists of a cam-shaped wheel attached to the spring barrel with a tension spring acting on the camwheel; this was an attempt to equalize the power of the mainspring to compensate for the latter's weakening force as it unwound. Without any compensation for the mainspring's varying strength, the watch's going train would run fast when fully wound and increasingly slowly and weakly as the spring unwound.

The most arresting feature of this watch is clearly its astronomical dial. A chapter ring at the edge of the dial is calibrated with Roman numerals running twice from I to XII with touch pins above and half-hour divisions marked between each hour. The long double-ended central hand indicates the time upon the chapter. Abutting the hours, the rete (a skeletonized rotating disc) is engraved to its edge with the months and their corresponding dates. The shorter moon hand to the centre marked *AD * Lunati* to its length points to the month and date – the base of this hand indicates the age of the moon on the rete beneath, which is calibrated from 1 to 29/S. An aperture within the base of the moon hand reveals the moon phase, which is engraved on the disc beneath. The rete is further engraved with the signs of the zodiac within a circle as well as a selection of constellations and visible stars, which have flame-form pointers to indicate their position on the plate beneath, known as the tympan. The tympan is calibrated with terrestrial lines of longitude and latitude; these form a grid upon which the position of the stars marked from the horizon to the zenith at 50 degrees latitude may be seen.

Many early German watches are unsigned and others, such as this, were simply stamped with the initials of their makers, not all of whom have been identified. The backplate of this watch is stamped 'CK' within a shield, a mark which appears to be similar to one found on a watch from the Fränkel Collection (now at the Horological Museum in Le Locle, Switzerland). The Fränkel watch, in addition to its CK stamp, has a stamp in the form of a horse, which is the town mark of Stuttgart in Germany.

OPPOSITE. The double-ended central hand indicates time. A shorter hand marked 'AD Lunati' points to the month and date – the base of this hand shows moon age. Further indications for zodiac, constellations and visible stars are given by the rete and tympan.



OPPOSITE. Movement backplate. Alarm time is set via the off-set central gilded discs. The large recessed gilded ring is the count wheel for hour strike. The stackfreed cam with its spring and roller are seen top right. The disc marked 1-8 moves the arm of the hog's bristle regulator.

RIGHT. Hybrid horse/dragon locking gate visible to movement side. When closed, the bell can be seen through the columns of the case side.

BELOW. An elaborate pierced cover is hinged and secured over the dial.



UNKNOWN MAKER

Augsburg or
Nuremberg, Germany

Circa 1580

Length 200mm

A gilt-bronze combined powder-flask and watch in the form of a section of antler, cast and chased with hunting scenes

By the late sixteenth century, the powder flask had become an essential part of the firearm-user's equipment. Firearms were of course not solely used on the battlefield and were also prized tools for the huntsman. Often referred to as the sport of kings, the hunt played an important part in the nobleman's life and presented a potential avenue to further power and influence. As such, a nobleman's wardrobe and accessories played an important role in the projection of their wealth and ambition. Not only would this powder flask have impressed by its intricate, gleaming decoration, but it would also have provided its owner with the means to astonish his hunting party as he turned it over to reveal the time. During a period in which the portable watch was still a rare, luxury item, this was state-of-the-art gadgetry unashamedly nestled within an ostentatious, albeit functional, *objet d'art*.

A number of similarly decorated powder flasks are known. Two examples in the collections of Waddesdon Manor and the Wallace Collection have near-identical hunting scenes to those on the flask shown here.¹³ However, this powder flask is exceptional for the integration of a watch within the design. One of the earliest applications of a timepiece as an accessory within an otherwise unrelated object, a reserve to the back of the flask contains the watch, its dial protected by a hinged openwork cover secured by a hook at 12 o'clock. The watch's movement is of drum form with a verge escapement and gut line fusee. There is a gilt-brass dial with an outer chapter ring for Roman numerals marked from I to XII, above which are raised touch pins. An inner chapter ring displays Arabic numerals from 13 to 24 and there is a single gilded hand. Rings to each side of the flask meant that it could be attached to a sling or belt and suspended around the shoulder or waist.

Most likely produced in Augsburg or Nuremberg, the flask's gilt-bronze body is decorated to the front with cast and chased hunting scenes. It is likely that the metalworker based his designs on prints by the Swiss-German artist Jost Amman (1539–1591). At the top of the scene a castle is shown in the far distance; a stag

followed by several animated hunting dogs appears above a vignette of a hunter striking a bear with a spear while hunting dogs also attack. Further scenes beneath display a variety of wild animals in bushes and trees. On the right are two men, one with a lantern to attract the ducks while the other waits with a large net to catch the oncoming birds. Engraved arabesques and scrolls to the flask's back surround the watch's reserve. Mounted to the top of the flask, a spring-loaded nozzle controls the release of the gunpowder.

LEFT / BELOW. Watch movement removed from its case – the large balance can be seen mounted to the back. The back of the power flask is chased with hunting scenes.



RIGHT. A spring-loaded nozzle to the top of the powder flask controls the release of gunpowder. The watch is mounted beneath a simple grille-form cover.



PIERRE CHAPELLE

Bordeaux, France

Circa 1595

Width 46mm

A large gilt-metal oval verge watch

Pierre Chapelle is known to have been active in Bordeaux in 1593,¹⁴ and the style of this watch would suggest that it can be dated to within the few years following this. The watch is very plain in design and although such restraint was not uncommon during this period, it reinforces the watch's primary purpose as an object of utility rather than merely a decorative curiosity. A broad gilded oval dial plate has a circular chapter ring with basic indications for hours and half-hours. Raised touch pins beneath each hour mean that, in conjunction with the hand, time can be felt via the user's finger at night. Two catches beside 9 and 3 o'clock may be pinched inwards to release the movement from its case; the whole movement with its dial is then easily removed. Four small rectangular 'tags' protrude from the edge of the dial plate and these fit into notches cut at the edge of the case, thus providing stability and ensuring that the movement is positioned correctly within the case. An elaborate S-shaped balance cock that is decoratively pierced and engraved with scrolling flowers sits above a large, flat, steel two-arm balance. Adjacent to the balance, a ratchet and click allows the set-up of the mainspring and has a similar decorative cock above it. The movement incorporates a verge escapement with a large crown wheel, a fusee and gut line, and rather handsome turned baluster pillars.



LEFT. Movement side view. The gut line can be seen wrapped around the spring barrel; this connects to the fusee behind. Seen at the image's centre is the verge escapement's crown wheel.

LEFT. Movement backplate with irregular balance cock above a simple two-arm balance. An adjacent ratchet wheel is for mainspring set-up.

RIGHT. The Roman numeral chapter ring has markings for half-hour divisions and touch pins beneath the hours. Steel catches beside 9 and 3 o'clock allow removal of the movement from its case.





10.30–1.30. Richard Bowen, London, circa 1660 (see pp. 52–53).

1.30–4.30. John Fitter, Battersea, circa 1665 (see pp. 58–59).

4.30–7.30. Jehan Cremsdorff, Paris, circa 1650 (see pp. 48–51).

7.30–10.30. Benjamin Hill, London, circa 1665 (see pp. 54–57).

17TH CENTURY