

Henry Sully's Life Story - Chapter 2 London

By Robert St-Louis, Ottawa, Canada, August 2022 – All rights reserved

SULLY IN LONDON (1694 to 1705-6) - Draft

The records of the Clockmaker's Company of London indicate that young Henry Sully was apprenticed under the well-known watch/clockmaker Charles Gretton of Fleet Street from October 23, 1694 to April 2, 1705. Sully was then 15 and a half years old, and must have found the sights, sounds and smells of London a radical change from the small provincial town in Somerset where he had been born and raised.

HISTORICAL CONTEXT

In 1694, England was ruled by William III and his wife Mary. She died of smallpox in December at age 32, leaving William as the sole monarch until his death in 1702, when he was replaced by Queen Anne who reigned until 1714, and then replaced by George I.

Before the last Great Plague 1665-66, which was soon followed by the Great Fire in 1666, London's population has been estimated at around 350-400,000. The rebuild and recovery brought the population of the bustling capital up to around 600,000 by 1700. The famed architect Christopher Wren rebuilt many of the ruined London parish churches, as well as his crowning achievement, the rebuilding of St Paul's Cathedral, completed in 1708.

In France, the revocation of the Edict of Nantes by Louis XIV in 1685, caused the exodus of a large population of French protestants (Huguenots) to other countries on the Continent. Many of these, who were often craftsmen, settled in England with their families.

In the late eighteenth century, notable English institutions were formed, including: the Bank of England, the British East India Company, and Lloyd's of London. Eighty per cent of England's imports passed through London, as well as 69% of its exports, and 89% of its re-exports. London was known as a great trading and redistribution center in Europe.

The wealth that circulated among the ruling class and financial circles created a great market for the refined products from craftsmen such as clockmakers. The period from roughly 1650 to 1750 is referred to as the "golden age" of English clock and watchmaking, as horologists around London reigned supreme, regarding the quality and value of the fine timepieces produced and exported all around the world. Not only had the invention of the pendulum for clocks (Huygens 1650) and balance spring for watches (Huygens again, 1675) revolutionized the way that timepieces were produced, greatly improving their inherent quality and accuracy, but numerous legendary makers were producing watches and clocks of the highest caliber: Edward East, Thomas Tompion, Daniel Quare, Joseph Windmills, Joseph Knibb, to name just a few.

CHARLES GRETTON

While not regarded as quite on the same level as the legendary names just listed, Charles Gretton (1647/8 – 1731) was a fine and prolific clock and watchmaker who plied his trade for many years in close proximity to many of the illustrious English horologists. He originated from Claypole, in Lincolnshire, where his parents had married in 1624¹. His father was a husbandman making a living from the land. Like Sully was to do thirty-two years later, Gretton traveled to London where he was made apprentice to Clockmaker Lionell Wyth in 1662, though he was to complete his training under Humphrey Downing, whose shop was not affected by the Great Fire of 1666. He became a freeman of the Clockmakers' Company in 1772, and started his first business on Fleet Street shortly thereafter.

The figure below is a fragment from Rocque's 1746 map of London, where Radage (2016) has marked in red the location of Charles Gretton's property and long-time business location, called "The Ship", on Fleet Street. Interestingly, Ram Alley, located on the other side of Fleet Street, was where the renowned seventeenth century watch-clockmaker Edward East (1602-1695) had initially established his business. Thomas Tompion held a property on Water Lane, at the far right of the map detail.

Gretton played a prominent role in the Clockmakers' Company. He became a steward in August 1684, an assistant in the Company in April 1688, its youngest warden in 1698, and in 1700, was given the highest role, that of Master, for a year. Gretton continued attending meetings of the Company in the years that followed, and was nominated occasionally for Master until his death in 1730. Gretton was also heavily invested in his community, as churchwarden, common councilman, and governor at two hospitals.

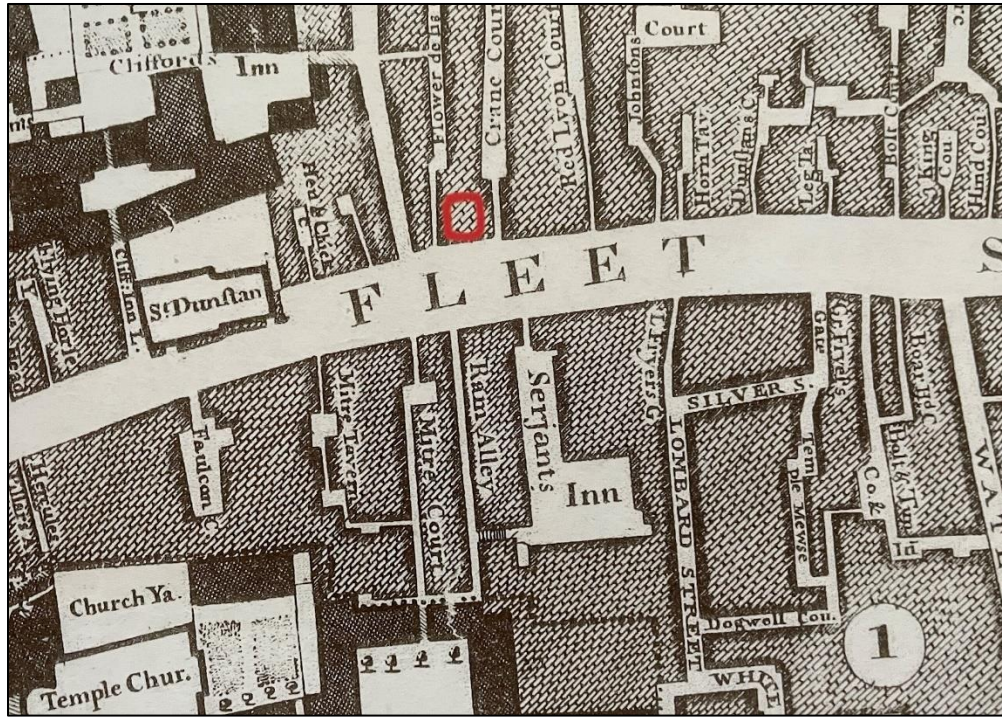
Gretton was very successful in his business and became a wealthy man, owning at the time of his death at least nine properties. In 1701, after young Sully had been with him about six years, Gretton donated 50 pounds to the Clockmakers Company, to be used to fund the apprenticeships of orphans of deceased clockmakers. This suggests that he would have been particularly supportive of a talented and dedicated boy from Somerset, in agreeing to take in Sully as an apprentice, possibly even at a reduced fee if his family did not have sufficient means.

During his long business life, Gretton trained at least eight apprentices, who either overlapped or succeeded each other. Henry Sully was the second to last of Gretton's apprentices, overlapped by Joseph Antram (1682 – 1723). Like Sully, Antram had also traveled a good distance to reach Gretton's shop in London (120 miles, from Hilton in Dorset). He completed his apprenticeship in 1704 (two years after Sully) and was freed in 1706, at which point he launched a successful career as a clockmaker in London.

In addition to Sully and Antram, two of Gretton's other apprentices came from provincial towns and had to travel to London: John Garnett (from Bigley, Yorkshire, 220 miles from London), and Henry Barrett (from Shrewsbury, Shropshire, 170 miles from London). Four of Gretton's eight apprentices therefore came from villages and towns quite distant from London, and this was not

¹ Readers desiring more information about Charles Gretton's origins, life and times, are strongly recommended to consult the definitive work *Through the Golden Age* (2016) by Dennis and Laila Radage, and Warner Meinen.

uncommon for other clockmakers (Edward East and Thomas Tompion, for example, had also come from afar to be trained in London). There had to be a way for these boys to get accepted ahead of time by a London clockmaker as an apprentice, though just what this mechanism was has not been discovered at this point in this research.



SULLY'S APPRENTICESHIP

How Sully's apprenticeship in Gretton's workshop on Fleet Street was arranged is anybody's guess, but possibly a family member or friend residing in London could have approached clockmakers on his parents' behalf, inquiring about apprentice openings. Another possibility is that Somerset Parishes were known to initiate apprentice indentures to a master, usually a member of a livery company in London, so perhaps the Parish of Stogumber recognized young Sully's potential and made the connection with London, and with Charles Gretton in particular.

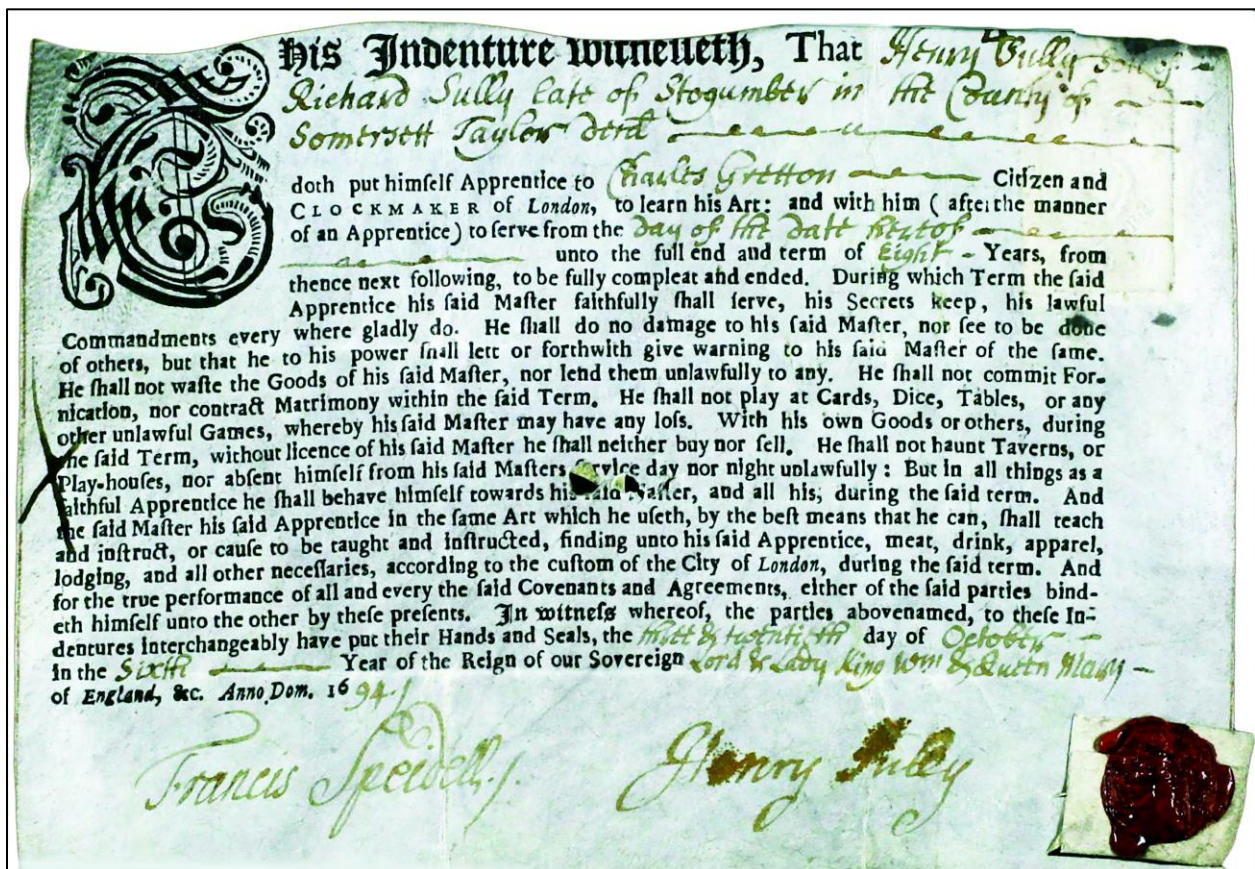
There also exists a remote possibility that the Duke of Somerset (who we know Sully met as he was completing his apprenticeship, around 1703) may have helped to champion the bright young man from his county, in moving to London to learn a trade.

Although there were numerous clockmakers working in various Somerset villages and towns at the time (Bellchambers, 1986), Bristol being the most noteworthy, there was a clear advantage to being trained in one of the well-known London shops. Many famous English clockmakers had also made the journey from the provinces to London for their own apprenticeship (Edward East and Thomas Tompion are two notable examples from among many others). Charles Gretton himself, to whom Sully was apprenticed, had made the hundred-mile journey from his birthplace

in Claypole Lincolnshire, to be apprenticed in London under a certain Humphrey Downing from 1662-72.

Sully would likely have arrived in London sometime before October 1694, probably accompanied by a family member (an older brother perhaps), in order to be able to secure the apprenticeship through a legal document as was the practice. Apprenticeships in clockmaking typically would last 7-8 years, and the master would provide room and board to the apprentice. The parents of the child would have to pay a certain amount upfront to the master clockmaker, which necessitated the legal agreement and signatures. The fee charged for an apprenticeship was usually around 20 guineas.

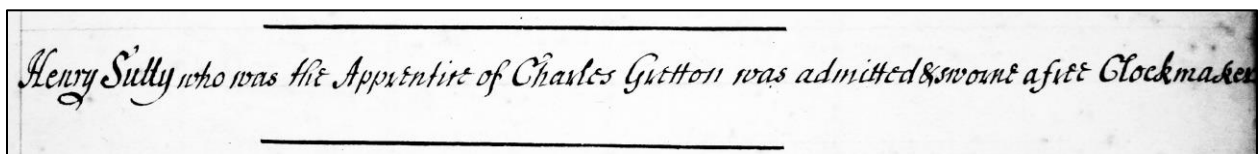
As Radage (2016) recalls, the Gretton family was visited by severe grief in December, only two months after Sully had joined their household as an apprentice. During that month, Gretton lost a daughter, buried on the 11th, his wife of seventeen years was buried on the 23rd, and a son on the 29th. Possibly an infectious disease resulted in these deaths, but young Sully survived. Gretton was to remarry in 1700, and again in 1711.



The facsimile above of Henry Sully's indenture document² establishing his apprenticeship under Charles Gretton of London, indicates that Henry's father Richard was already deceased by the time this document was signed, on 23 October 1694. Also, Richard Sully is indicated to have been a tailor in Stogumber, Somerset, which clarifies that Henry was the son of a skilled worker who likely owned a shop in the village. The financing for young Sully to travel to London and to pay for the eight-year apprenticeship costs thus would likely have come from the family tailoring business.

At the bottom of the indenture document, one can see Sully's recognizable signature (later documents showing the same style), which appears to have been blotted rather messily. Henry was likely nervous at signing a commitment for the next eight years of his life. The other signature, Francis Speideth, does not yield any useful information when researched, so he was possibly a clerk at the Clockmakers' Company of London office, witnessing the young apprentice's signature. The indenture is an established form where spaces have been left for filling out the personal details. A red wax seal served to authenticate the document in the Company's records.

Below is a facsimile (from Radage, 2016) of the record in the Company's records stating that Sully had been freed and admitted into the Clockmaker's Company on 2 April 1705. A fee of 20 guineas was required to obtain the freedom. Sully would have saved this money during the three years that he spent working for Gretton as a journeyman, following the completion of his apprenticeship in 1702.



During his apprenticeship under Gretton, Henry would have learned about tool making, watch and clock making, and repair work. From initially working on simpler tasks such as filing, he would have progressed to increasingly more complex tasks, eventually becoming competent in making escapements and other sensitive parts, and "finishing" the timepiece to make sure it ran well and accurately. Apprentices probably progressed along their innate abilities, as well as their desire to learn, work, and excel at their tasks. The master would assess his employees' capabilities and give the more complicated tasks to those better able to accomplish them successfully.

In his future writings on horology, Sully demonstrated a great mastery of the breadth and depth of the subject, so he was no doubt a very keen student and driven to perfect his craft. His friend the great French "horloger" Julien LeRoy, a very skillful watchmaker himself, wrote about Sully in 1737 (*Règle artificielle du temps*):

² The author is indebted to Dennis and Laila Radage, and Warner Meinen, who in their formidable book "Through the Golden Age, Charles Gretton – Clock & Watchmaker", Vancouver, 2016, provide some useful documents and information pertaining to Gretton's numerous apprentices, including Henry Sully.

“...he could have lived in restful abundance, had he had more taste for his fortune, than for the perfection of his works ... he showed me some of his tools, made with great care ... he would frequently visit me and we would talk about our Art [horology], about which I found he had great abilities, as he would sometimes come to repair watches of the Duke of Arenberg or of his friends”.

Two years after Sully arrived in London, one of the great English clockmakers, Edward East, died after a long life (1602-1696) and career. East had been one of the founding members of the Clockmaker’s Company, of which Sully’s master Gretton was a member and would become its Master in 1700. In 1694, Gretton had already been an established practicing clockmaker for over 20 years, had established himself on Fleet Street in 1678, and undoubtedly had many wealthy customers in and around London. Young Henry may have met some of these people when they came to the shop to buy a new timepiece from Gretton, or to get one repaired. He may also have accompanied one of the more senior workmen (perhaps Gretton himself) in visits to some of the affluent customers’ houses to service a clock or return one that had been repaired in the shop.

During his long apprenticeship and journeyman employment under Gretton, Henry Sully also quite likely got to know some of the illustrious horologists with shops nearby, and in particular the apprentices and workers employed by them. One can imagine him sharing ideas and lessons learned with them, over a meal and an ale at lunch or supper in a nearby tavern after work.

Many years later, when Sully had been asked in 1718 to startup a horological factory in Versailles, he had gone to London to entice roughly sixty workers to join him in this endeavor, and the many contacts he had made while working and residing on Fleet Street would have facilitated his task. This story will be told in detail in a later chapter of Sully’s life story.

In his review of Radage’s 2016 book devoted to Charles Gretton³, George White writes: “[one] begins to wonder whether Gretton’s obviously successful business in Fleet Street was in fact a manufactory of clocks and watches at all. Might it not have been a major retail outlet instead, purchasing its stock from a host of other makers?” The same question can be posed of other seventeenth-century watch/clockmakers. A contemporary document quoted in Radage’s book states that Gretton “hath kept a publick Watchmakers Shop for above 20 yrs and sold great quantities of clocks both at home and abroad”, and White notes that the word ‘made’ is “interestingly absent”.

Whether or not young Sully was trained in a shop that actually manufactured ‘great quantities’ of clocks and watches, he would have had to learn all aspects of watch/clockmaking in order to “finish” (fine tune) clocks and watches prepared for sale, and to service and repair the ones that customers would regularly bring back for service. Although the majority of clocks and watches brought into Gretton’s shop for service would have been of English manufacture, no doubt there were also many timepieces originating from the Continent needing service, and the repair staff⁴ would have been able to work on those as well.

³ Antiquarian Horology, ...

⁴ Radage (2016) estimates that 3 full-time workers were needed in Gretton’s shop to repair watches and clocks on an ongoing basis. Repairing watches was a skill that Sully often fell back upon for a livelihood during some parts of

[In a later chapter of the story dealing with Sully's involvement in 1715-16 with Parisian watchmaker Julien LeRoy to devise a "watch of a new construction", it appears that Henry was relying on LeRoy to provide him insights into how to best construct this watch. Whether this might suppose that his actual watch-making experience with Gretton was limited, is simply conjecture. He actually commissioned the Frenchman to build the new watch design for him (what we would call today a "prototype"), which he would later present to the Académie Royale des Sciences to great success. At the time, Sully was a single parent, having lost his first wife to illness a few years before, and having three or four children to care for. It may well have been more expedient for him to ask LeRoy, a recognized master craftsman, to build the watch for him in his well-equipped workshop].

AFTER THE APPRENTICESHIP

After the long apprenticeship was over, the young clockmaker would become a "Freeman", needed to spend two years as a "journeyman" under a master-clockmaker, and then present his "masterpiece" (either a clock or watch) to the authorities of the Clockmaker's Company, who would judge the work and if acceptable, would allow the journeyman to become a full-fledged "master-clockmaker" which allowed him to open up a shop, and put his name on the timepieces he would sell to customers. Wikipedia indicates (without documented references) that Sully spent an additional two years as a journeyman. Possibly, he was saving money for his future plans. He was finally "freed" by the Company in 1705.

In 1766, writing in Diderot and D'Alembert's Encyclopédie, the great Swiss/French horologist Ferdinand Berthoud wrote about the subject he knew intimately:

"We place a child in a watchmaker's shop, to stay there eight years and occupy himself to carry out instructions and make some horological parts. If at the end of this [apprenticeship] he is able to make a movement, he is deemed to be very skillful. He often does not know, however, the use of the work he has done. He presents himself with his know-how to the master's assessment: he makes, or gets made by another, the master-piece prescribed to him, is received master, opens up shop, sells watches and clocks, and calls himself an horloger [watch/clockmaker]. We can consider it a miracle if a man, thus trained, ever becomes truly skillful.

We commonly call 'horlogers' those who practice horology. But we need to distinguish between the horloger as defined earlier, and the 'artist' who masters the principles of the art: they are two different people. The former practices horology in a general sense, without having basic notions, and calls himself horloger because he works on a part of this art. The latter embraces this science in all its aspects: we could call him a 'mechanical-architect'; such an artist does not only concern himself with one part, he draws up the plans for watches and clocks or other machines that he wishes to build. He determines the position of each part, their directions, the forces that must be used, all the

his life, as we shall see in later chapters. Whether that means he worked more on the manufacturing or the repair side of Gretton's business, is not possible to say.

dimensions: in a word, he builds the design. As to the execution, he chooses workers who are able to execute each part.”

It is clear, from the life story that follows his apprenticeship, that young Henry Sully was not only very skillful, but belonged to what Berthoud referred to as the “artist” class of watch/clockmakers, and that he became a “mechanical-architect”, as he described it.

In Règle... (1737) LeRoy writes:

“Having just finished his apprenticeship with Mr. Gretton, London watchmaker, where he had made fine progress and earned a good reputation, [Sully’s] naturally elevated genius, aimed at lofty goals, turned his mind to the Longitudes. A few machines he had made in this vein gave him the courage to go show them to Mr. Newton”.

In fact, in 1703, just after he had completed his apprenticeship, Sully took the bold move to go meet the legendary English architect Christopher Wren⁵, rebuildier of 52 churches after the London fire of 1666, and at the time about halfway through the construction of his masterpiece, St. Paul’s Cathedral. Wren was also an astronomer, mathematician and physicist, and it is probably for those reasons that young Henry desired to meet with him. In Sully’s own words, written in 1726:

In the year 1703, the late Sir [Christopher] Wren, judging me worthy of making a useful attempt toward the measurement of time at sea, gave me a fine recommendation to this effect. I asked to see the Duke of Somerset [Charles Seymour, the 6th Duke]⁶, who received me very graciously, and instructed me to address myself on his behalf to Sir Newton, to explain my views to him, which gave me the great honour of being known by this great man, who gave me insights that I needed, being at the time just a young man of 23 years; he encouraged me in my plan [to develop a marine clock], and gave me a favourable testimony. Following this, the Duke of Somerset tried to engage Lords Sommers⁷ and Hallifax and others to join him, to create a fund, which would engage me to apply myself entirely to this research, which was at that time my one and only goal, but this attempt did not succeed. I nevertheless applied myself to it using my own resources,

⁵ Sir Christopher Wren (1632-1723) was an English anatomist, astronomer, geometer, and mathematician-physicist, as well as one of the most highly acclaimed English architects in history. He was accorded responsibility for rebuilding 52 churches in the City of London after the Great Fire in 1666, including what is regarded as his masterpiece, St Paul's Cathedral, on Ludgate Hill, completed in 1710. (Wikipedia) In addition to his remarkable architectural achievements, Wren also created many mechanical and scientific inventions in the areas of astronomy, physics, optics, and was an active member of the Royal Society.

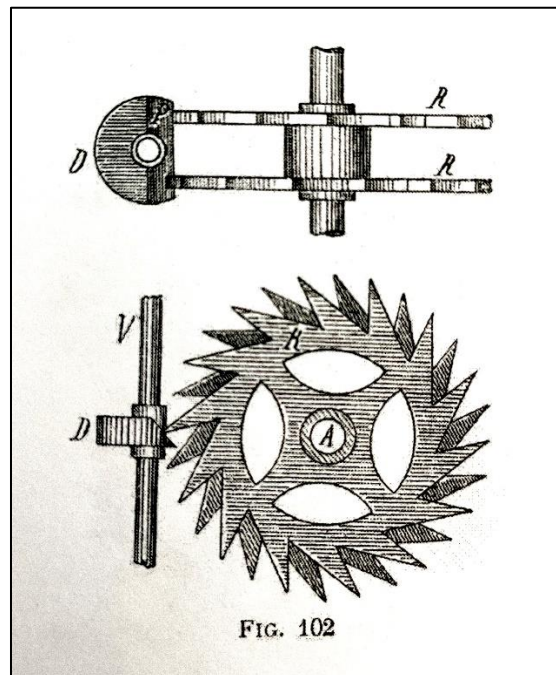
⁶ Charles Seymour, 6th duke of Somerset, (1662-1748), was a British statesman during the reign of Queen Anne. He was educated at Trinity College, had married a great heiress in 1682, and was named Master of the horse by Queen Anne in 1702. He was nicknamed “the Proud Duke” and Macaulay described him as "a man in whom the pride of birth and rank amounted almost to a disease".

⁷ Lord John Somers (1651-1716) was Lord High Chancellor of England under King William III and was a chief architect of the union between England and Scotland achieved in 1707 and the Protestant succession achieved in 1714. He was President of the Royal Society from 1698 to 1703. (W)

which became known in London among ingenious persons: the late Mr. Flamsted⁸ and Mr. Hudson, who assisted the wise astronomer in his observations, and who is presently Professor of Mathematics in the School of Christ [Christ College] in London, and of the Royal Society, were among those people.

Clearly, Sully had been thinking about other things than ordinary watches and clocks, during the long period of time he spent learning the craft in Gretton's workshop. The idea of making a marine clock able to measure longitude at sea, took hold of his imagination quite early, and was emboldened by his meetings with the great men Wren and Newton. At that time, Newton was putting the finishing touches on his influential book *Opticks*, published in 1704. He would be knighted by Queen Anne two years later for his notable achievements to date, and had just started his 24-year tenure as President of the venerable Royal Society. When they met, Newton showed young Sully a watch of his, which featured an unusual escapement by the French watchmaker Debaufre⁹, consisting of dual escape wheels resting on a diamond disk with an inclined plane. This watch made a great impression on Sully, who was to remember it and borrow some of its concepts, many years later, when he was designing his marine clocks in France.

Below is a diagram of the Debaufre escapement, from Charles Gros "Échappements d'horloges et de montres", Paris, 1913.



⁸ John Flamsteed (1646-1719) was an English astronomer and the first Astronomer Royal, at the newly created Greenwich Observatory. He spent almost 40 years observing stars and producing a catalogue of almost 3,000, published after his death. (W)

⁹ Two brothers, Pierre (1689-1722) and Jacob Debaufre, had worked in London with the ingenious swiss mathematician and astronomer Nicolas Faccio (1664-1753), who had found a way to pierce ruby stones for use in watchmaking.

LeRoy continues, in Règle (1737):

“It was also on that day that [Sully] lost his restful life; the praise and encouragement given to him by this illustrious philosopher awoke in him such a passion, that he believed that everything that tended to perfecting the art of horology, would bring him closer to his quest for discoveries”. [LeRoy goes on to say that] “it’s easy to say that such a search has not to this day improved the financial standing of a clock/watchmaker born without means”. [He adds that he believed that] “this motive was what enticed him to leave England for Holland, where he spent some time and learned French and Dutch languages, then went to Vienna where he learned German”.

Sully must have been an engaging, bright, confident and well-spoken young man, and seems to have made a favourable impression on Wren, Newton, and several other famous London men. As mentioned earlier, he may have initially met some of these gentlemen when they visited Gretton’s shop, or in visits to their homes to repair one of their timepieces. The ability Henry had to ingratiate himself to men of power and influence continued throughout his life, both in England and on the Continent.

It is not known for certain at this time whether Sully did open a business once he had completed his apprenticeship and journeyman period. However, Clockmaker’s Company records indicate that a young man named Samuel James started an apprenticeship under Sully in 1705. This apprenticeship did not complete as Sully left London in the next year or two, and nothing is heard from young James again. To set up one’s shop required capital (for tools, supplies, rent, etc.). One can assume Sully did not come from a rich family in Bicknoller Somerset, so he likely would have had to borrow money had he wanted to set up his own shop and store in London.¹⁰

In an issue of *Antique Horology* in 1973 appeared a letter from a reader about a very rare watch he had found signed by Sully. This watch must have been made during the short period that Henry Sully was a practicing watchmaker in London, prior to him venturing off to the continent. The collector went on to describe the watch thus: *“Sully’s clock-watch with its finely engraved balance cock, full striking mechanism, Egyptian pillars, fusee, engraved barrel and count-wheel has a verge escapement and is either late 17th century or early 18th century and is certainly the equal of any Tompion movement for detail. Sully’s piece has been authenticated by the British Museum and is his only known surviving clock-watch. It goes to show that a bargain can still be had for a few pounds.”*

This rare watch movement¹¹ may in fact have been Sully’s “master-piece”, the one he would have submitted to receive his Freedom and be allowed to practice business as a master-watchmaker. Or it may have been one of a few watches he may have produced after setting up his own business, where he would be allowed him to put his name on the timepieces he

¹⁰ A historian (Harris 2017) recently suggested that perhaps Sully decided to leave England and go to the Continent in order to escape from some debts he had incurred in London. There is no evidence that this was in fact the situation.

¹¹ Donated to the British Museum by Italian horological writer/collector Giuseppe Brusa in 2006

produced. The British Museum provide a thorough description of the watch movement on their website (collection number 2006,1209,1):

Movement of a verge clock-watch.

Circular gilt-brass plates with three Egyptian pillars and two baluster pillars. The going train is powered by a mainspring house in a gilt-brass barrel with tangent-screw set-up mounted between the plates. Fusee with chain and standard stop-work. Four wheel going train, the centre wheel solid and the third and contrate wheels with four crossings. The third wheel and contrate pinion are recessed into the front plate and bear in a separate riveted-on v-shaped bridge. Verge escapement with a crown wheel running between a riveted potence and riveted counter-potence, the latter with an adjustable screw bearing (the screw not original). Polished steel balance, the three crossings arranged asymmetrically in one half to allow clearance for the going train winding square which passes inside the rim of the balance. Spiral balance spring with 'Tompion' geared regulator, the silver index calibrated I-VI and the units divided to quarters. Pierced and engraved balance cock with foliate scrolls and strap-work and a mask at the junction of table and foot.

Striking train powered by a fixed gilt-brass barrel with engraved decoration on the visible side. Six wheel train of solid wheels, the last a weighted pinion. The third wheel is recessed into the front plate and runs in a separate riveted-on v-shaped bridge. Striking for hours only controlled by a silver count-wheel mounted on the back plate.

Dial missing, but the dial plate remains. Hands missing. Case missing. The spring for the striking detent (gate) is broken and partly missing.

Diameter: Diameter: 37 millimetres (back plate) (back plate)

Diameter: Diameter: 43 millimetres (dial plate) (dial plate)

Height: Height: 9.20 millimetres (between plates) (between plates)

What is known with certainty is that by the summer of 1707 (just two years after being Freed by the Clockmaker's Company, and having taken an apprentice under him), Sully had left London and was living in The Hague, Holland, where he was married to a woman named Anna (or Anne) Horton. They baptized their first of several children there, a daughter, on August 21st. It cannot be determined presently whether Henry had married Anna in England, or in Holland. They had four children together.

Whatever the reasons that compelled him to leave England and go seek opportunities on the Continent, it is probably safe to say that Sully's bright, inquisitive mind, would have made it impossible for him to envision returning to bucolic Somerset and spend the rest of his life selling and mending clocks and watches in some provincial shop. His destiny lay elsewhere, his ambitions were bold, and a sense of adventure urged him on to new lands, possibly following the trail of legendary Christian Huygens. The story continues in the next chapter.