

(The Metropolitan Museum of Art, n.d.)

LONGCASE EQUATION REGULATOR

ca. 1752

French Rococo

Ferdinand Berthoud – Balthazar Lieutaud

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History of Interiors I – Fall 2019

TIMELINE

Social & Political Events

Year	Event	Discussion
Date:	Event:	Discussion:
1679-1684	“Rococo debuted in interior design when engraver Pierre Le Pautre worked with architect Jules Hardouin-Mansart on the Château de Marly (1679-1684), and later at Versailles in 1701 when he redesigned Louis XIV's private apartments” (Seiferle, 2018).	“Le Pautre pioneered the use of arabesques, employing an s-shaped or c-shaped line, placed on white walls and ceilings. He also used inset panels with gilded woodwork, creating a whimsical, lighter style. Le Pautre was primarily known as <i>an ornemaniste</i> , or designer of ornament, which reflects the popular role at the time of artisans and craftsmen in developing the highly decorative style.” (Seiferle, 2018)
1715	Louis XV becomes Dauphin at the age of 5 after the death of his family in 1712. (Encyclopaedia Britannica, 2019)	“Although Louis had been popular as <i>le Bien-Aimé</i> (the Well-Beloved) in his youth, he had gradually earned the contempt of his subjects.” (Encyclopaedia Britannica, 2019)
1723	“Since France was the artistic center of Europe, the artistic courts of other European countries soon followed suit in their enthusiasm for similar embellishments.” (Seiferle, 2018)	“The Duke was known for his hedonistic lifestyle, and Rococo's aesthetics seemed the perfect expression of the era's sensibility. Taking the throne in 1723, Louis XV also became a noted proponent and patron of Rococo architecture and design.” (Seiferle, 2018)
1745	“The workshops at Sèvres produce costly objects such as small sculptural figures, tableware, vases, clocks, and plaques with brilliant ground colors, delicate enamels, and gold borders and scrollwork.” (The Metropolitan Museum of Art, 2003)	The royal emblem fleur-de-lis was first seen at the workshops at Sèvres.

<p>1752</p>	<p>Longcase Equation Regulator is designed and constructed by Ferdinand Berthoud and Balthazar Lieutaud. (The Metropolitan Museum of Art, n.d.)</p>	<p>“The trunk of Lieutaud’s case swells just above the base, enclosing a shaped opening to show the pendulum. The curved outline of the case is not only in keeping with the rococo style popular in the mid-eighteenth century but also highlights Berthoud’s cutting-edge technology of the time.” (The Metropolitan Museum of Art, n.d.)</p>
<p>1753</p>	<p>“His skill as a clockmaker quickly became apparent, and in 1753 he was awarded the title of Master Horologist by special decree of the Council of King Louis XV.” (Foundation Haute Horlogerie , n.d.)</p>	<p>“Henceforth, Ferdinand Berthoud devoted himself to perfecting his art and to the development of precision clocks, at a time when European courts were in competition to master the calculation of longitude.” (Foundation Haute Horlogerie , n.d.)</p>
<p>1756</p>	<p>“Louis XV allows the pottery at Vincennes to manufacture porcelain bearing the royal fleur-de-lis emblem; pleased with its output, he later moves the factory to Sèvres (1756), near the château of Madame de Pompadour.” (The Metropolitan Museum of Art, 2003)</p>	<p>After the success was seen with the royal fleur-de-lis emblem, reproduction of it was moved to the factory in Sèvres. This event made the emblem more assessable to the château Madame de Pompadour</p>

CONSTRUCTION TECHNOLOGY

Regulator – “A stationary clock of great precision. It usually has a seconds-beating, compensated pendulum, whether of the gridiron variety or some other variety, such as the mercury-filled jar, that adjusts to changes in temperature that would otherwise affect the length of the pendulum. Some have specially designed escapements, as well” (Vincent, 2003).



(The Metropolitan Museum of Art, n.d.)

Veneer – “The technique of veneering, used before that of marquetry, consists of sticking sheets of precious woods onto the structure of a piece of furniture” (LaChiusa, 2005).

Marquetry – “Pattern made by setting contrasting materials into a veneered surface. The resultant decoration is flush and level. Usually, the material set in is finely

grained, interestingly colored woods, but tortoiseshell, horn, metal, and mother-of-pearl are also used” (LaChiusa, 2005).

Bronze – “An alloy of copper and tin,” the brass was used mostly in gilding for the application on this furniture piece. (Kisluk-Grosheide, 2008)

Brass – “A yellow alloy of copper and zinc” (Lexico, 2019)

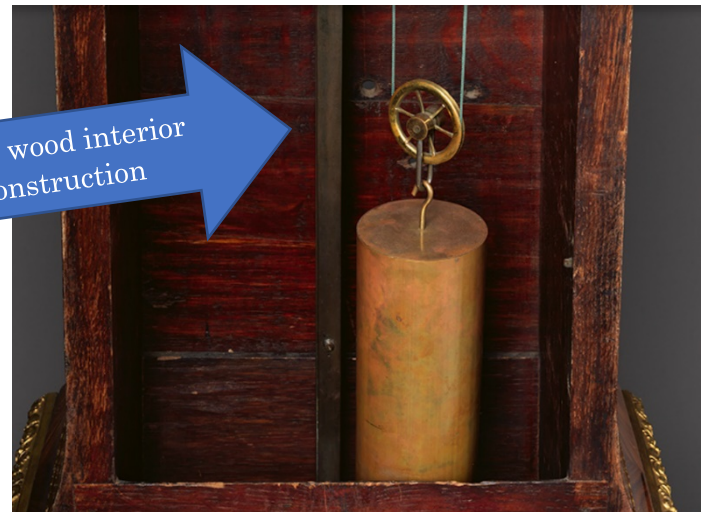


(The Metropolitan Museum of Art, n.d.)

French Rococo – Longcase Equation Regulator



(The Metropolitan Museum of Art, n.d.)



(The Metropolitan Museum of Art, n.d.)

PARIS, FRANCE – GEOGRAPHICAL FACTORS

France, once known as the French Republic, is a country that is located in northwestern Europe (Encyclopaedia Britannica, 2019). Known as one of the world's oldest nations, it is the source of rich culture and society. "France has also played a highly significant role in international affairs, with former colonies in every corner of the globe... France has long provided a geographic, economic, and linguistic bridge joining northern and southern Europe. It is Europe's most important agricultural producer and one of the world's leading industrial powers" (Bernard, Bisson, & Popkin, 2019).



(Bernard, Bisson, & Popkin, 2019)

“After the death of Louis XIV, the French court moved from Versailles back to their old Parisian mansions, redecorating their homes using softer designs and more modest materials than that of the King’s grand baroque style. Instead of surrounding themselves with precious metals and rich colors, the French aristocracy now lived in intimate interiors made with stucco adornments, *boiserie*, and mirrored glass. This new style is characterized by its asymmetry, graceful curves, elegance, and the delightful new paintings of daily life and courtly love, which decorated the walls within these spaces.” (Trapasso, 2013) The effects of the noble families moving back into their Parisian mansions, created a domino effect that assisted in creating the French Rococo style in France, among many other contributors in the art community.

FURNITURE DESIGN

During the 1700s, design and architecture in France were blossoming into new forms of art. The development of the Rococo style began during the 18th century with the use of asymmetry (Seiferle, 2018). Porcelain was the head of the Rococo styles at the beginning of the century (Savage & Friedmann, 2019). After porcelain, bronze and goldsmiths’ work is highly seen among the art during the Rococo period (Savage & Friedmann, 2019). The use of curves, porcelain flowers, and bronze stalks and leaves were greatly seen in the construction of clocks (Lexico, 2019).



(The Metropolitan Museum of Art, n.d.)

“Veneering with rare woods reached its height, and decorative marquetry, often elaborately pictorial, was practiced” (Savage & Friedmann, 2019). “French domestic clocks with long pendulums such as one with a movement by Ferdinand Berthoud made use of the improved timekeeping properties of the steel and brass gridiron pendulum invented in England in the 1720s. The clock, made about 1768–70, also incorporates a system of gearing using Berthoud’s own variation on the kidney-shaped equation of time disk for indicating the annual irregularities of solar time, a device he published in 1763 in his *Essai sur l’horlogerie*” (Vincent, 2003). The popularity of these features and components of the Longcase Regulator made this product an example of true craftsmanship and beauty of the Rococo Era. The properties of the design help diversify the piece compared to others because of the collaboration between the two craftsmen (Vincent, 2003).

SUMMARY DISCUSSION – THE WHY AND HOW

Balthazar Lieutaud

Lieutaud, born around 1720 and died on May 10, 1780, was a master at his craft. Deriving from a long line of family tradition, Lieutaud was a master cabinetmaker and guild master. His father and grandfather were both cabinetmakers. (La Pendulerie, 2019) His specialty was base in parquet pendants and regulators. Building pieces of luxury furniture, this was something he did regularly. Throughout his career Lieutaud provided pieces to the royal court of Paris. Consistently collaborating, he worked with watchmakers Ferdinand Berthoud and Jean-Joseph Lieutaud, and bronziers’ Phillippe Caffieri and Charles Grimpelle (Betts, 2019). “One of the most important Parisian cabinetmakers of the Louis XV period and the early Neoclassical period...” (La Pendulerie, 2019).

Ferdinand Berthoud

Berthoud, born on March 19, 1727 in Switzerland and dying on June 20, 1807 in Groslay, France, was a “horologist and author of extensive treatises on timekeeping” (Betts, 2019, p. 147). Beginning his journey under an apprenticeship with his brother, Berthoud found a love clock work and sought further study after in Paris (Betts, 2019). Berthoud was seen as influential in the horological community because of his many works and publications on his studies throughout his life.

Becoming involved in solving the problem of determining longitude at sea, he meticulously worked and studied the parts and pieces to create works that would greatly benefit the nautical community. He created “... a number of reasonably practical marine clocks, partly based on instruments previously constructed in expensive and delicate prototypes...” (Betts, 2019, p. 147). It was not until 1752 when Lieutaud and Berthoud collaborated on the “Longcase Equation Regulator” which can now be seen in the Metropolitan Museum of Art in New York City, New York. This particular piece of artwork/furniture/accessories is unique because of the shape and collaboration that was a part of its creation. (The Metropolitan Museum of Art, n.d.)

Through the collaboration between the two craftsmen it is clear how the furniture piece was constructed through its era and techniques. S-shapes and c-shaped lines are featured throughout the entire piece (Seiferle, 2018). These elements created the whimsical, lighter style that is class to the Rococo Era.

The technology that went into constructing the piece was extraordinary for when the piece was assembled by Berthoud and Lieutaud. Using such techniques as intricate marquetry, gilded bronze, veneer, and more.

Designed in the craftsmen's home country of France, birthplace of the Rococo Style, the piece recognizes many attributes to its geographical location. During this time many artisans were under rule of King Louis XV and because of this factor, design changed through France. Shapes and applications of materials started to change and with this climate the Longcase Equation Regulator was born in 1752 (The Metropolitan Museum of Art, n.d.).

Throughout the end of the French Rococo period and through the beginning of the Neoclassical era, Balthazar Lieutaud and Ferdinand Berthoud made a dramatic impact on not only the design community in France but through the nautical community as well. Through the use of materials such as: wood veneer, bronze, and brass, the craftsmen constructed luxury pieces of artwork that now live in a museum.

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