Julien Le Roy and his four sons

An important horological family in eighteenth century France

Presented by Robert St-Louis (*www.timetales.ca*)

Member of NAWCC Chapter 111 (Ottawa)

Presented to Chapter meeting on March 26, 2023

Overview

Julien Le Roy and his family

- *Family origins*
- *Socio-historical context*
  - *Overview of French watch-making*
- *Julien Le Roy's upbringing in Tours*
- *Move to Paris (marriage and start of business)*
- *Highlights of Julien's life and career*
- *Four sons*
  - *Education*
  - *Career choices*
  - *Achievements*
- *Examples of their work*
- *End of the family line*

French horological history

Watches originated in Italy, Germany, France mid 1500's

In France: Paris, Blois, Lyon were main centers

France was the leading nation in horology (quality, sales)

Eventually would need to compete with London and later, Geneva

1675: Huygens invented balance spring for watches

1685: Revocation of Edict of Nantes resulted in exodus of Huguenots from France (to England, Germany, Geneva, etc)

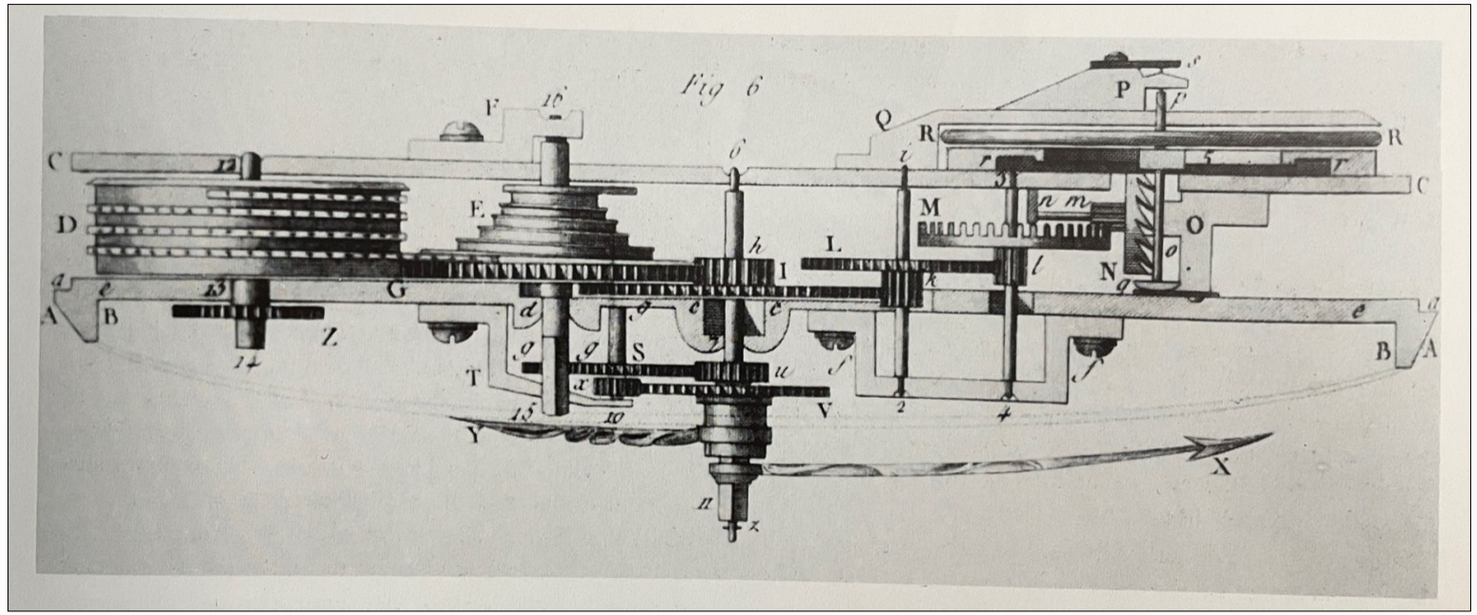
French domination declined, London rose

- East, Tompion, Quare, Graham (Golden Age in England horology)

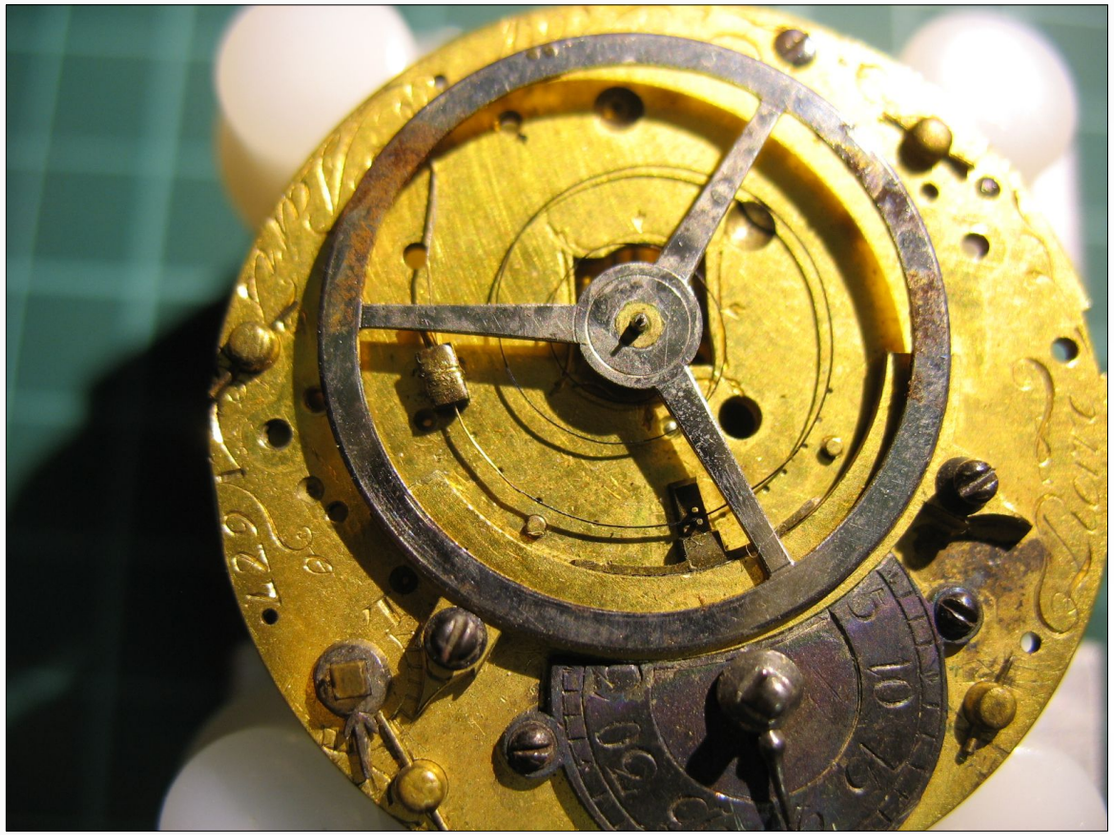
By 1700, french watchmaking was at a low point

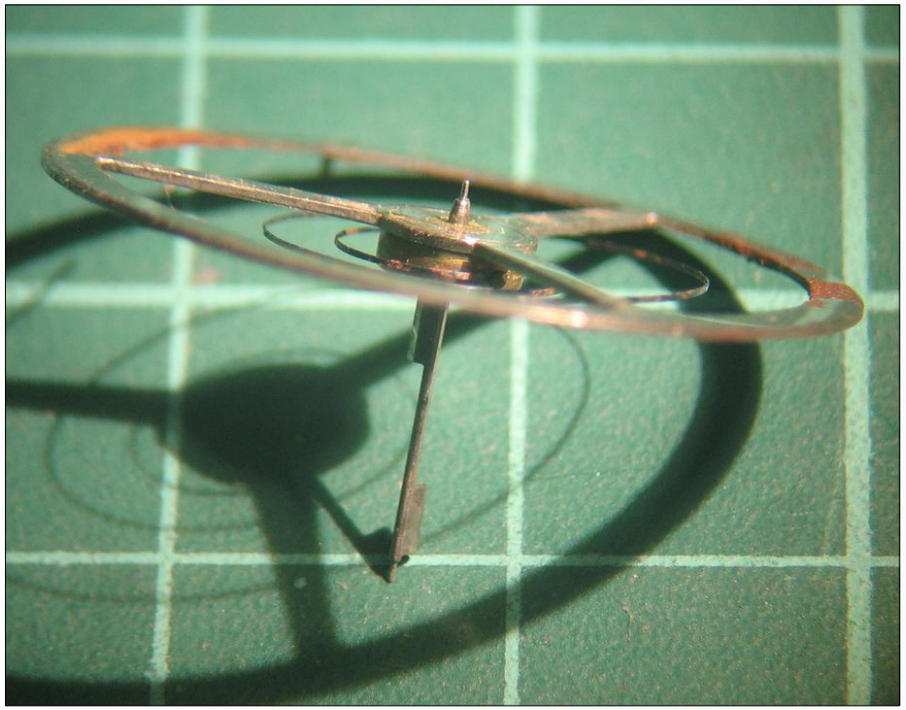
Gamot Paris ca. 1650

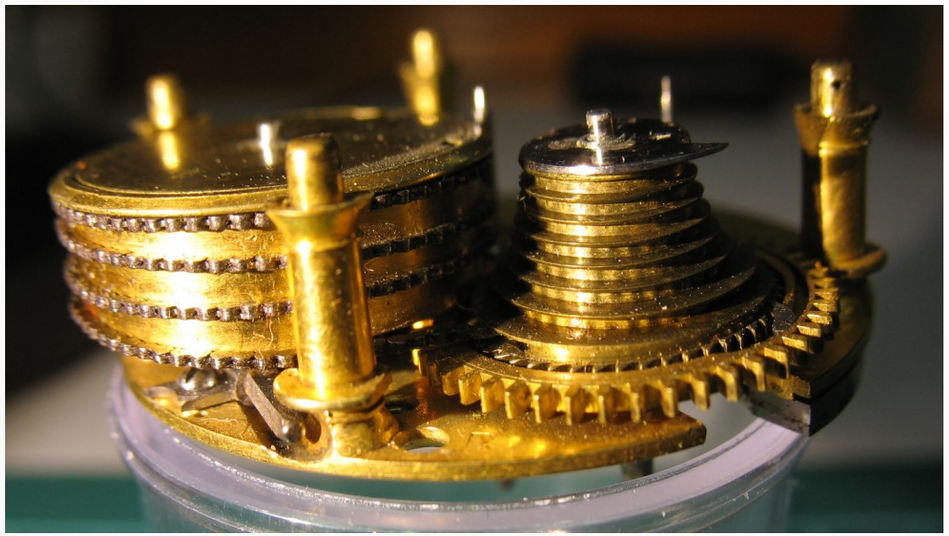
Two French watches ca. 1700

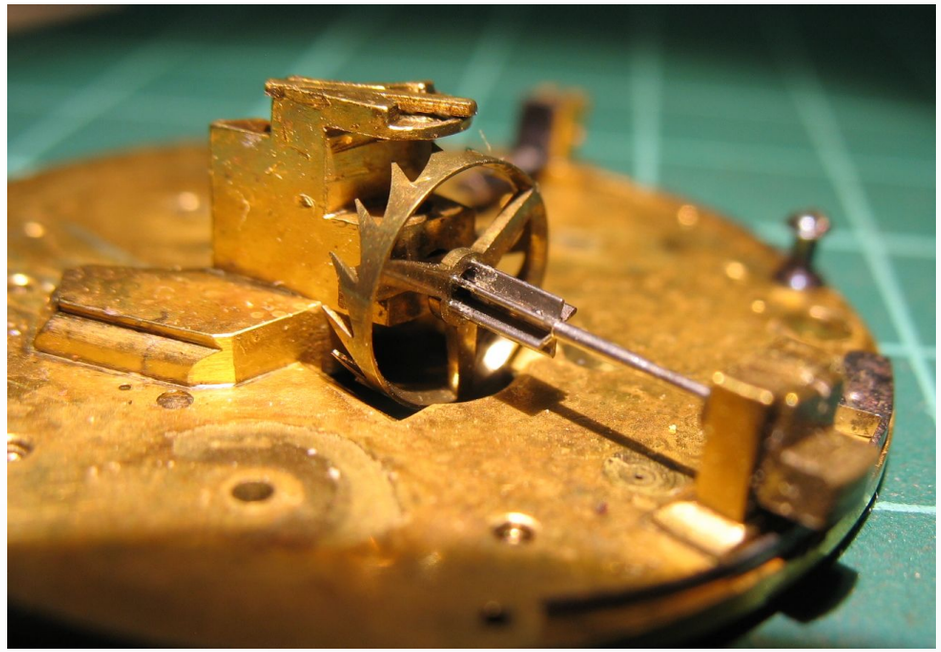


Verge watch movement



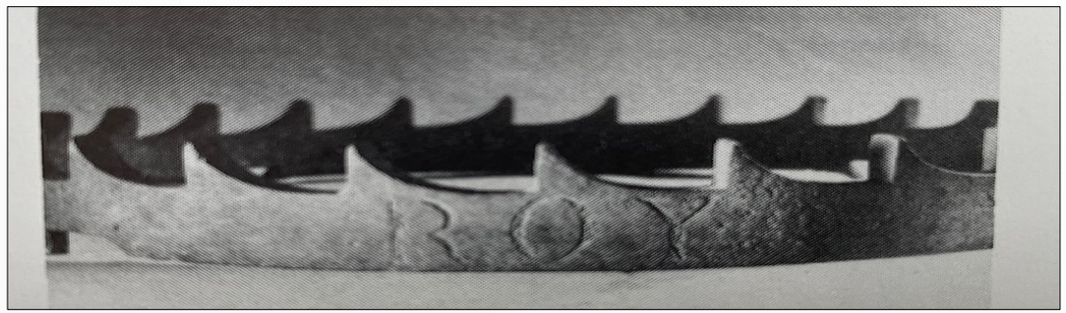






Le Roy family origins

- *Originated in Paris – Nicolas: maitre cadranyer 1550*
- *His son David moved to Tours in 1587 (240kms SW Paris)*
  - *Became "horloger du roi"*
  - *Two sons, grandson Pierre-Julien*
- *Pierre-Julien was also horloger and had 2 sons*
  - *Julien (1686) and his brother Pierre-François (1687)*
  - *Both trained by their father in Tours*
- *Julien moved to Paris first, in 1703*
- *Followed there by his brother in 1721*

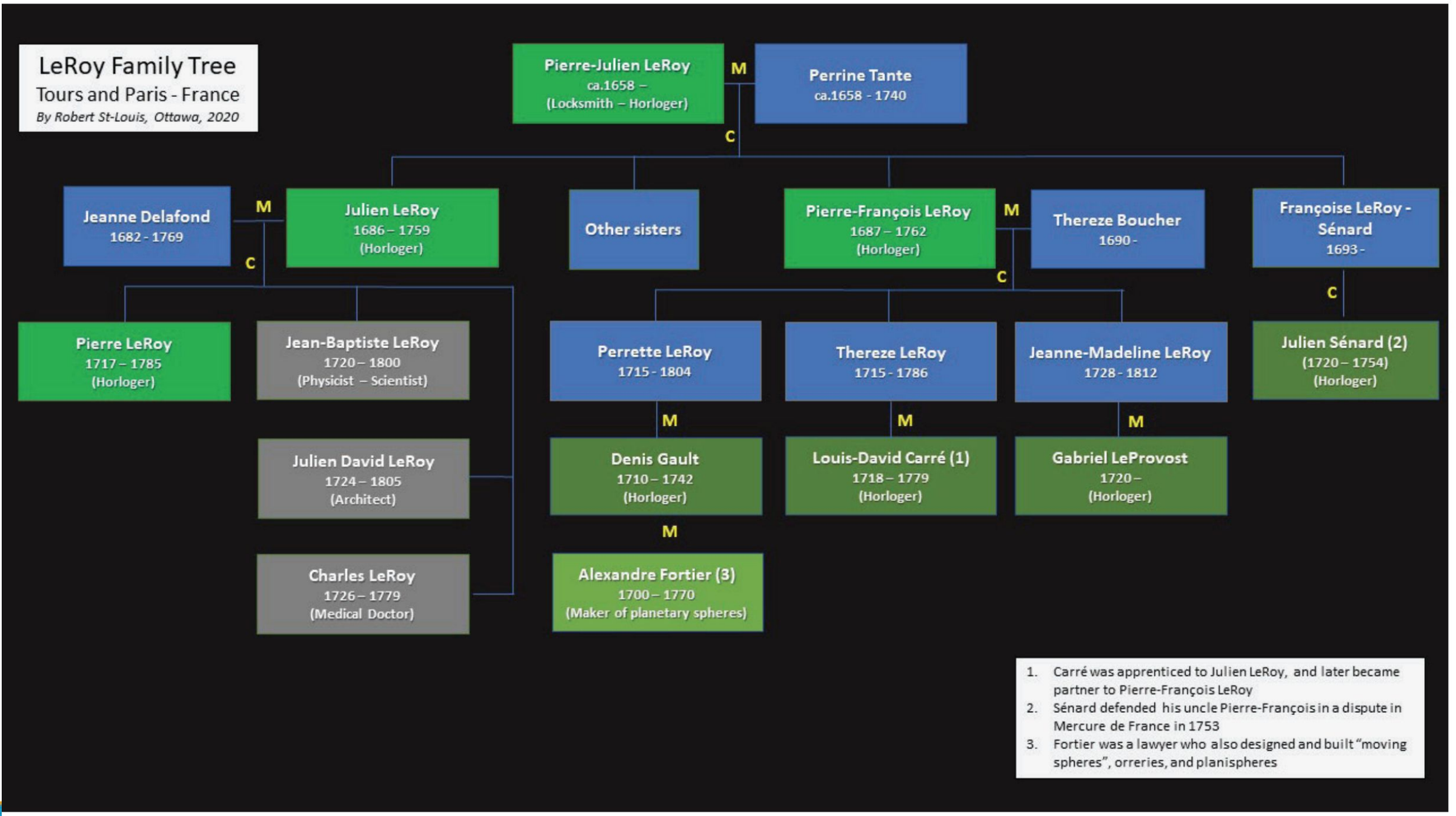


Crown wheel Tours Cathedral
1698 (Pierre Julien Le Roy)

LeRoy Family Tree

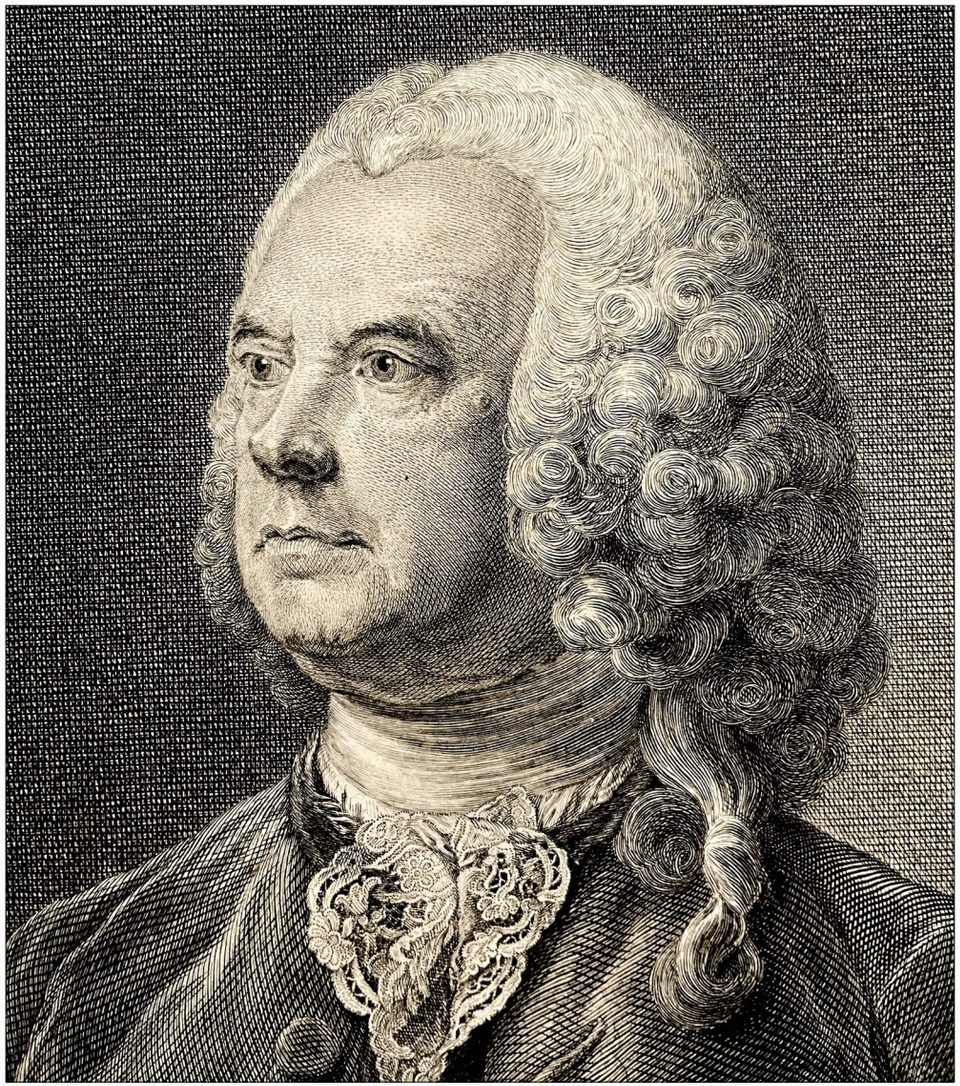
Tours and Paris - France

By Robert St-Louis, Ottawa, 2020



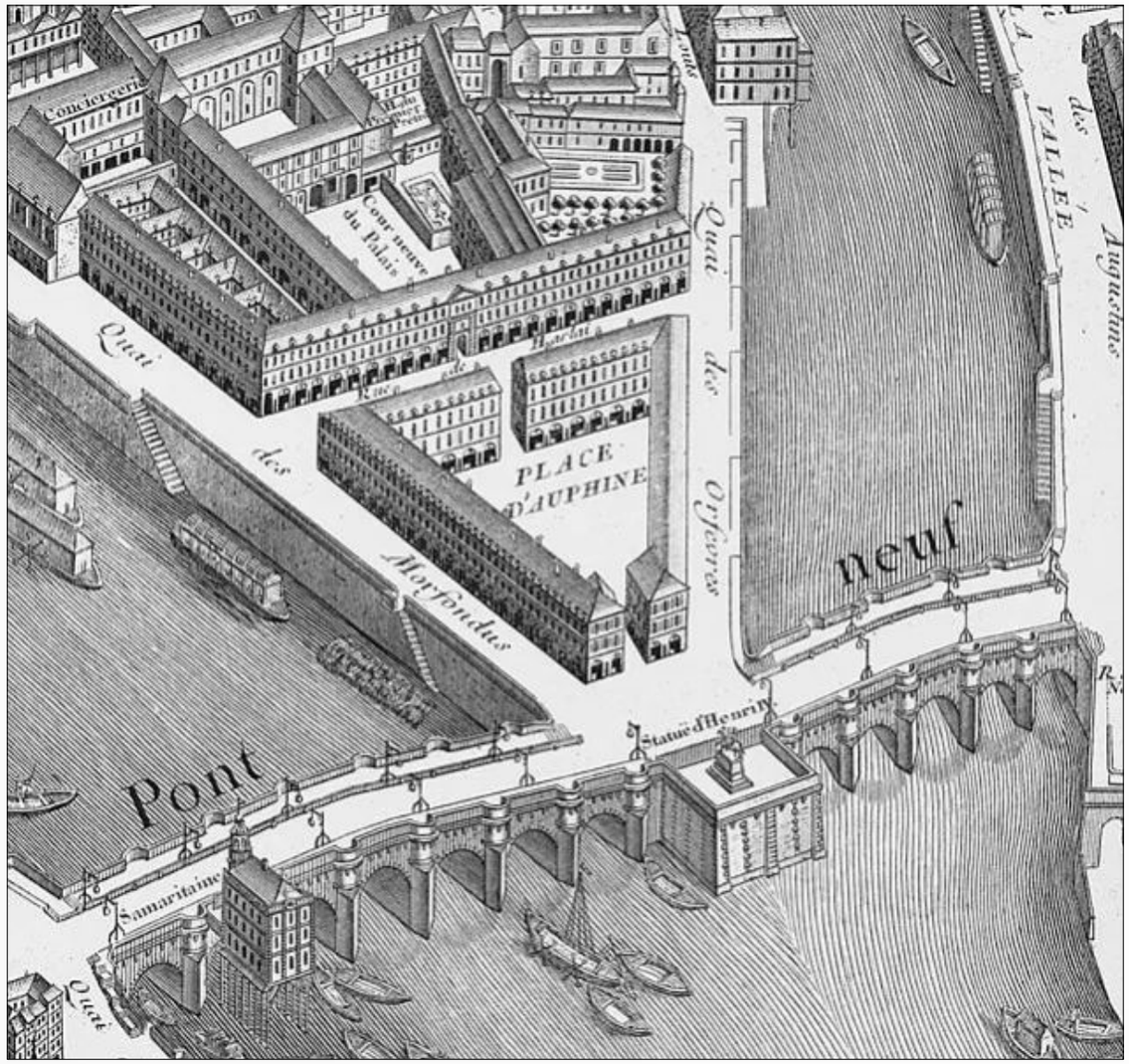
1. Carré was apprenticed to Julien LeRoy, and later became partner to Pierre-François LeRoy
2. Sénard defended his uncle Pierre-François in a dispute in Mercure de France in 1753
3. Fortier was a lawyer who also designed and built "moving spheres", orreries, and planispheres

Julien Le Roy



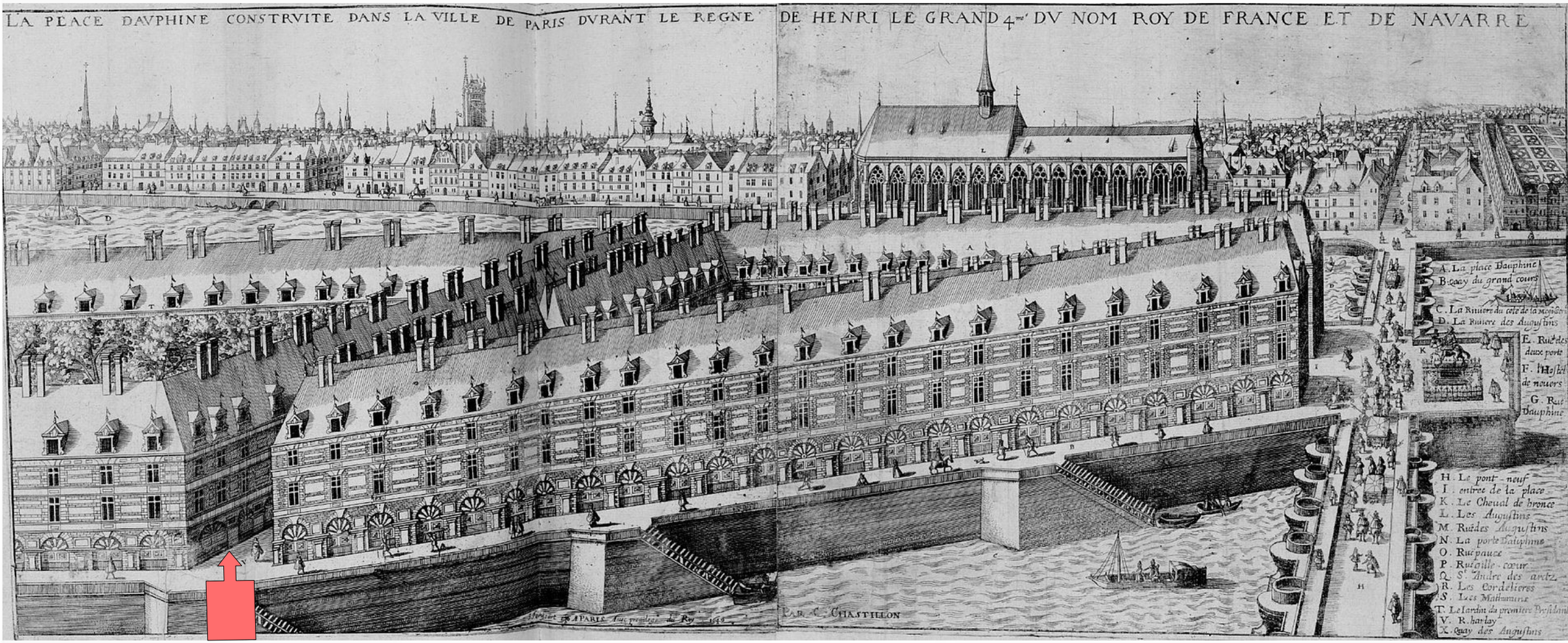
- Born in Tours in 1686, died in Paris in 1759
- Trained by his father in horology
- Precocious, curious, passionate as a boy
- Built first timepieces by age of 13
- Sent to Paris at 17 to work with and learn from great watchmakers there (Le Bon, others)
- Quickly earned reputation for his knowledge and skill
- Accepted by the Guild at 28 (1714) and married one year later
- Had four sons, only the eldest (Pierre) followed in the family tradition
- Produced fine watches, clocks, sundials, & tower clock movements
- Became the greatest and most respected *horloger* in Paris, loved by his workers
- Declared *Horloger du roi* in 1739
- Created many innovations and improvements
- Well read, ensured great education for his sons
- President and treasurer of *Société des Arts*
- Led a profitable business for over 40 years
- His stature in Paris rivals that of Thomas Tompion in London

Julien Le Roy



- Established his shop and dwelling on Rue de Harlay
- In the prosperous Place Dauphine area on Ile de France
- Near Pont Neuf crossing the Seine
- Close to Sainte-Chapelle and old palace
- Notre-Dame de Paris a few blocks away
- Église Saint Barthélemy was the family church
- Tradesmen in luxury items ran their business there
    - Jewellers, goldsmiths, silversmiths, sculptors, horologists, glassworkers, etc.
- Many other notable horologists there over the years
    - Martinot, Le Noir, Baillon, Balthazard, Joly, Berthoud, Romilly, Lépine, Breguet, etc.
- Affluent parisian clientele (aristocrats, courtiers, politicians, business men, judges, etc.) could easily shop there for watches and clocks, or get them serviced

Another view of Place Dauphine



Rue de Harlay

A later view of Place Dauphine (1865)

Julien Le Roy Cartel clock ca. 1730 (Regency Style)

Société des Arts – 1718-? ; 1728-1740

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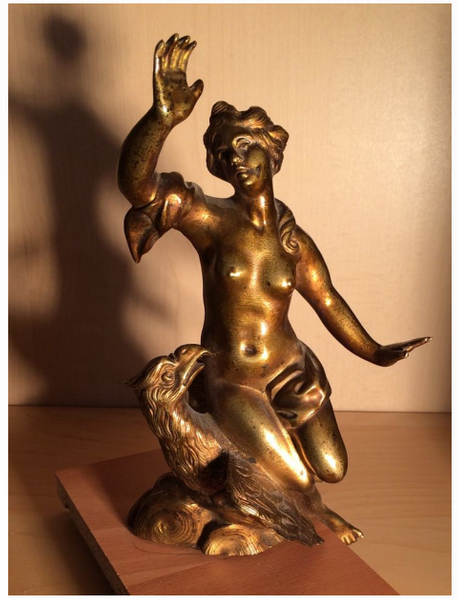
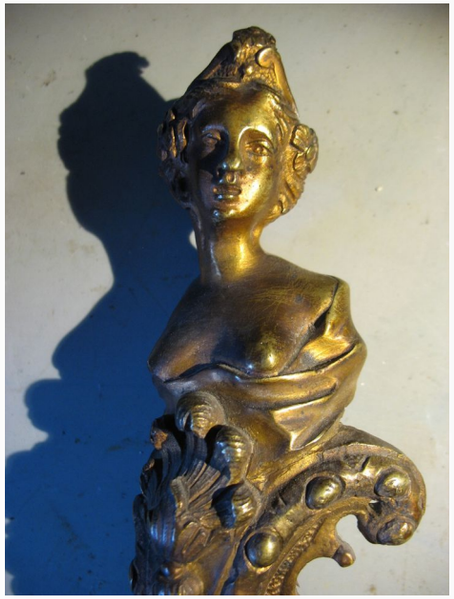
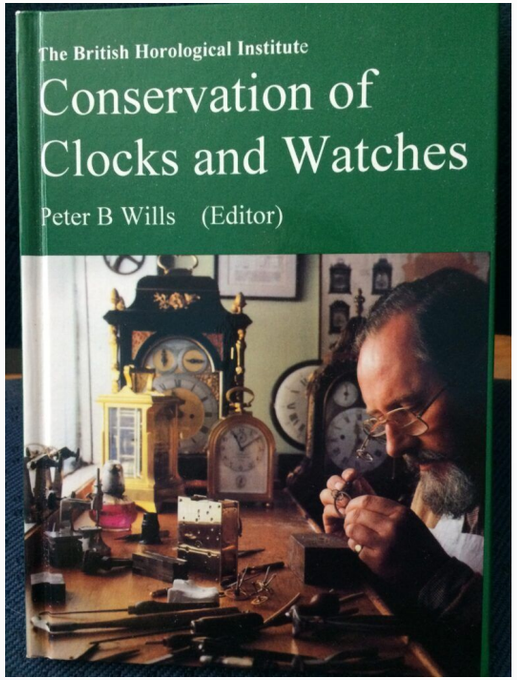
Ceto: Goddess of sea monsters

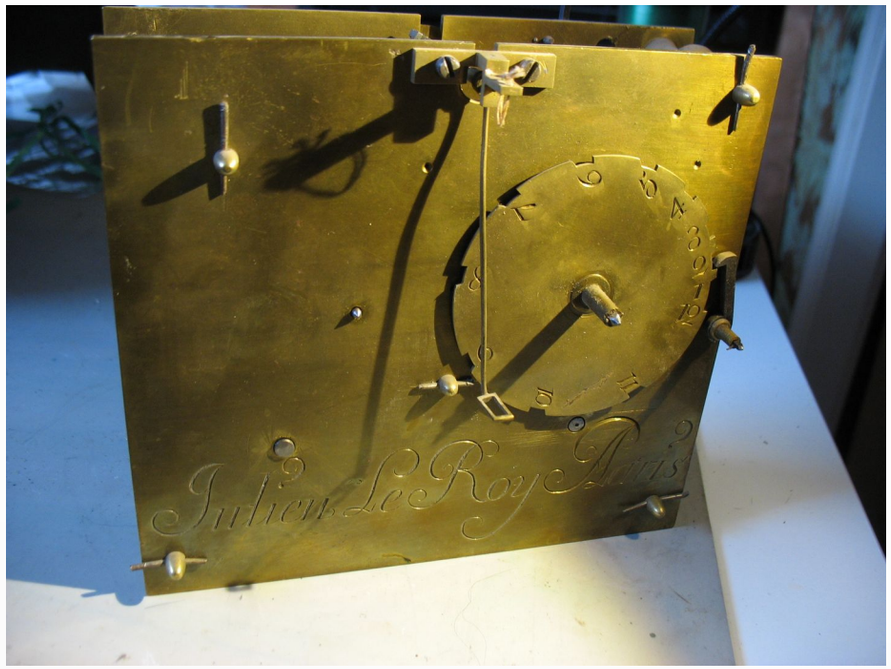


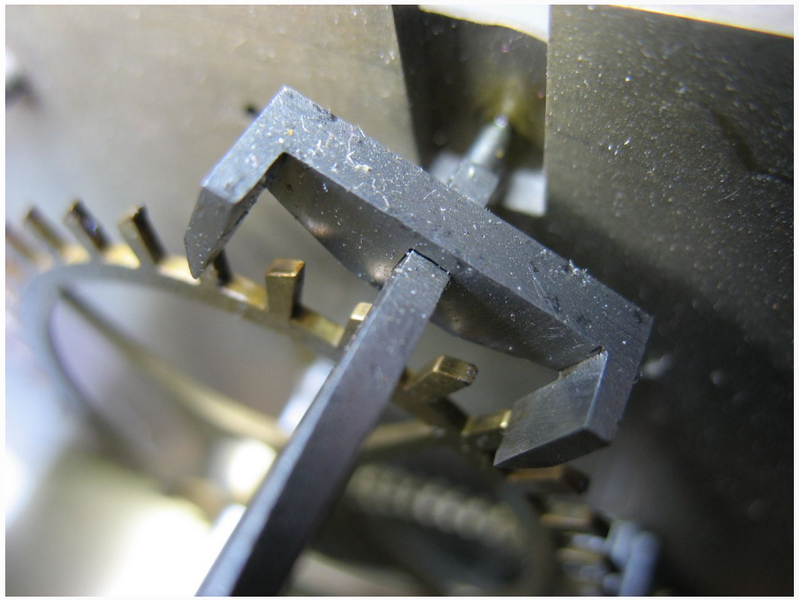
Hebe & Eagle



Espagnolette







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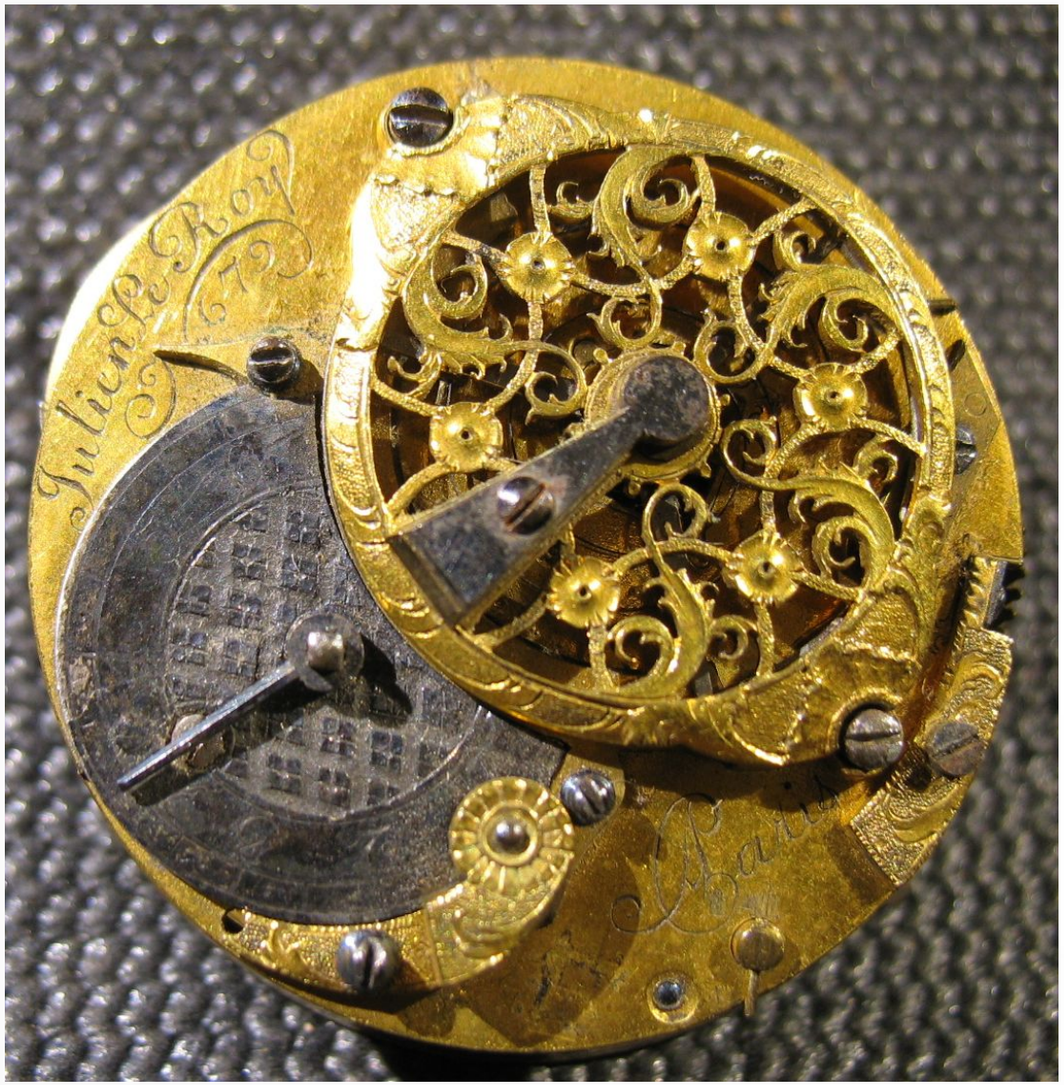
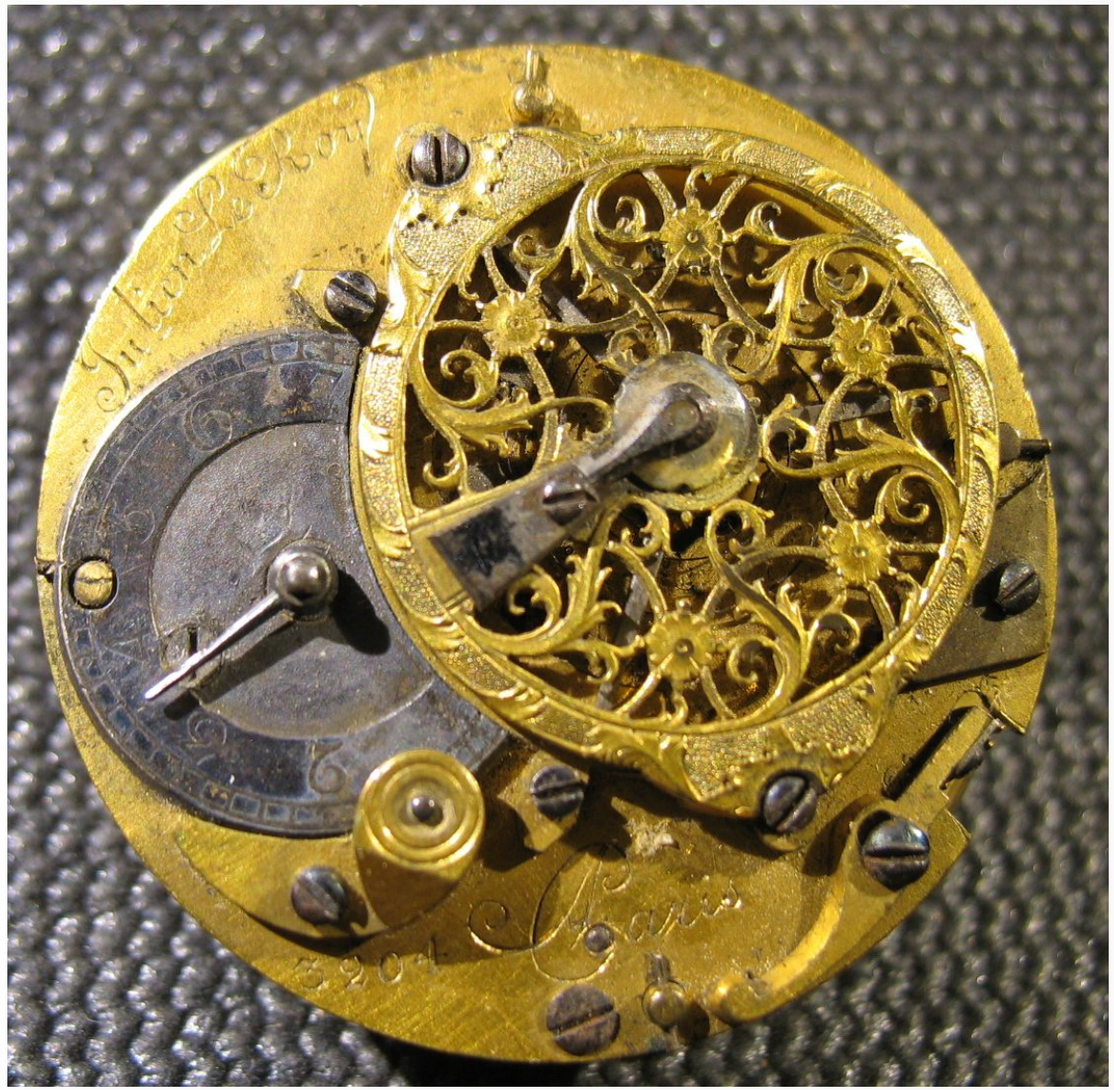
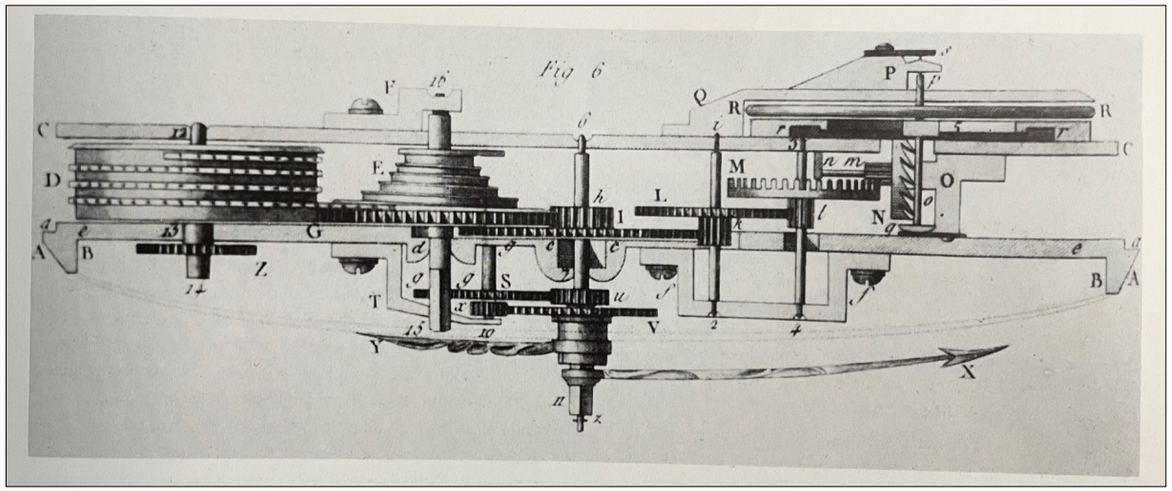
Julien Le Roy: *very consistent quality and design, about 100 watches per year*

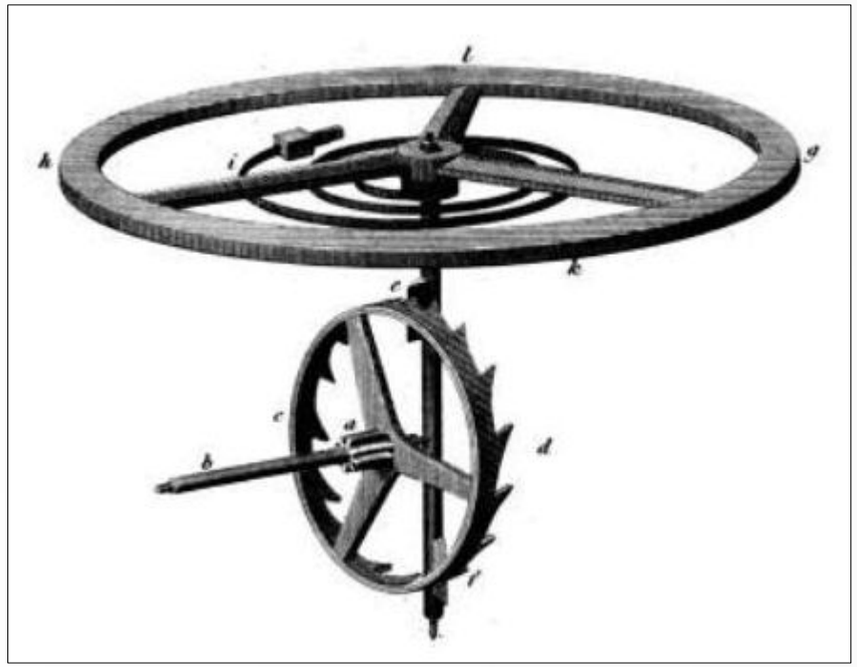


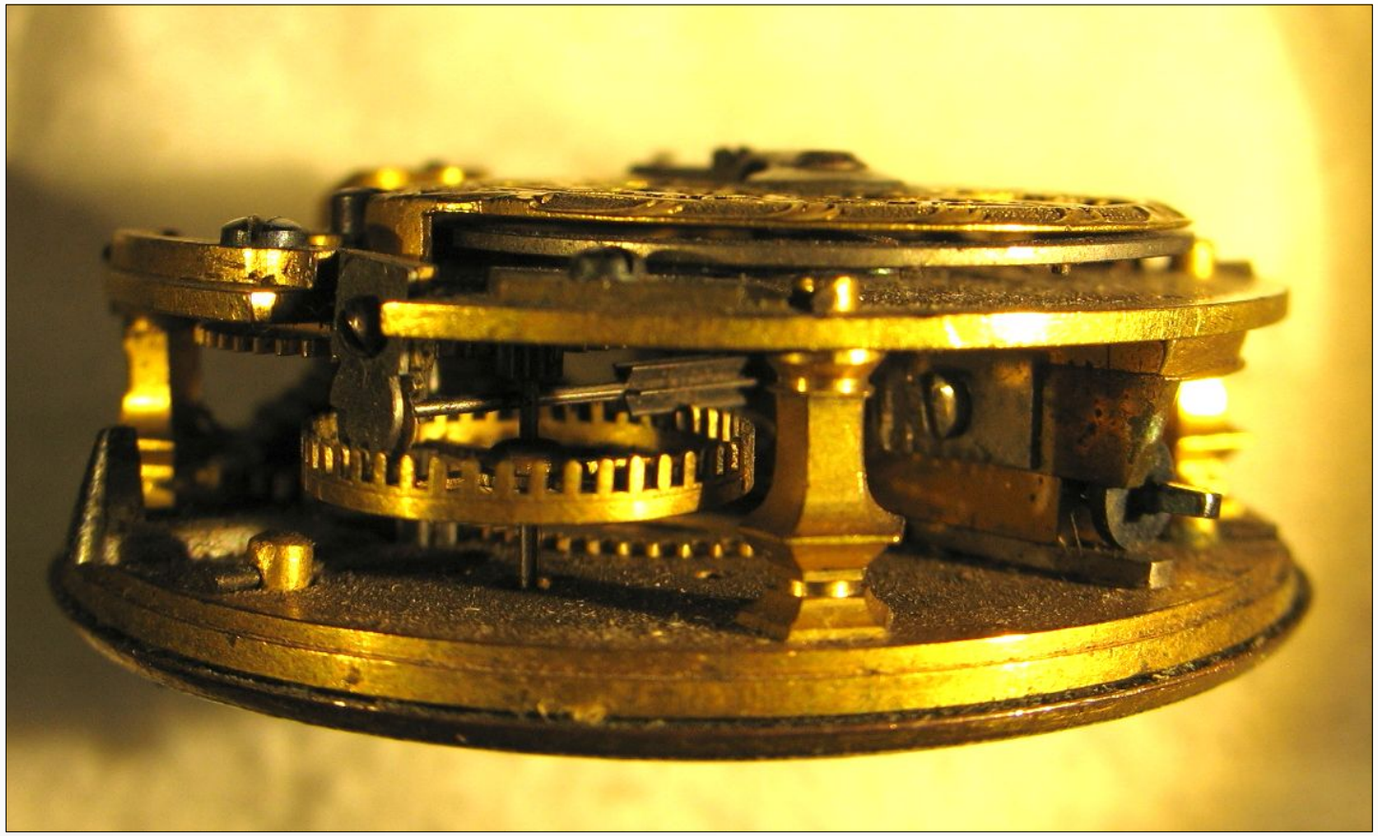
Julien Le Roy watch movement
No. 679 ca. 1730-35



Julien Le Roy watch movement
No. 3204 ca. 1755







Julien's innovative potence allowed adjusting the crown wheel and the verge flags without dissasembling the entire watch.

Other innovations by Julien

- Capillary oiling of pivot holes - jointly with Henry Sully (1679-1728)
- “Horizontal” design of tower clock movements – simpler to construct & maintain
- Steel cockerel on the balance cock of watches
- New designs for repeating watches
- New designs for alarm clocks (mechanism on the outside of the plate)
- New types of sophisticated portable sundials
- Clock with equation wheel to display solar time and mean time
- Precision astronomical clocks for scientific research

- Julien openly shared his innovations with other *horlogers*, which led to France once again becoming a leading horological nation

Julien's four sons:

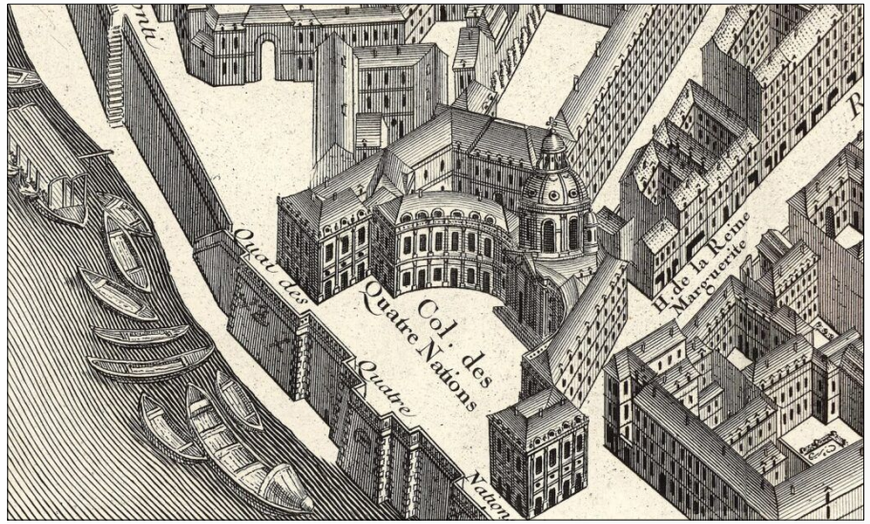
*- **Pierre** (1717-1785) horologist*

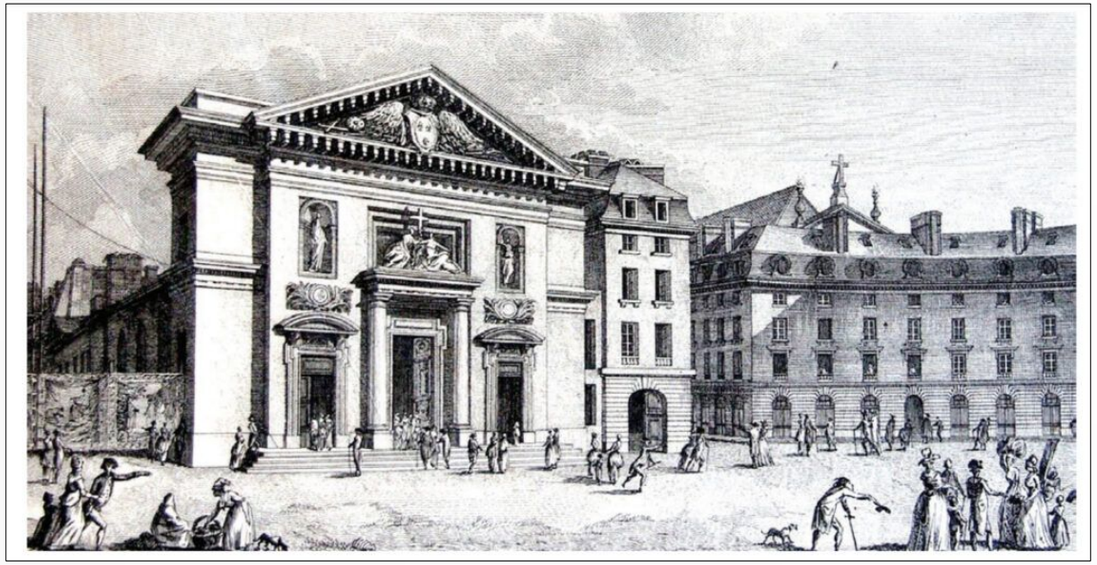
*- **Jean-Baptiste** (1720-1800) physicist, academic*

*- **Julien-David** (1724-1805) Architect, historian, inventor*

*- **Charles** (1726-1779) Medical doctor, professor*

. All four baptised at Eglise Saint-Barthélemy, Paris
. All four educated at: College des Quatre Nations and College d'Harcourt





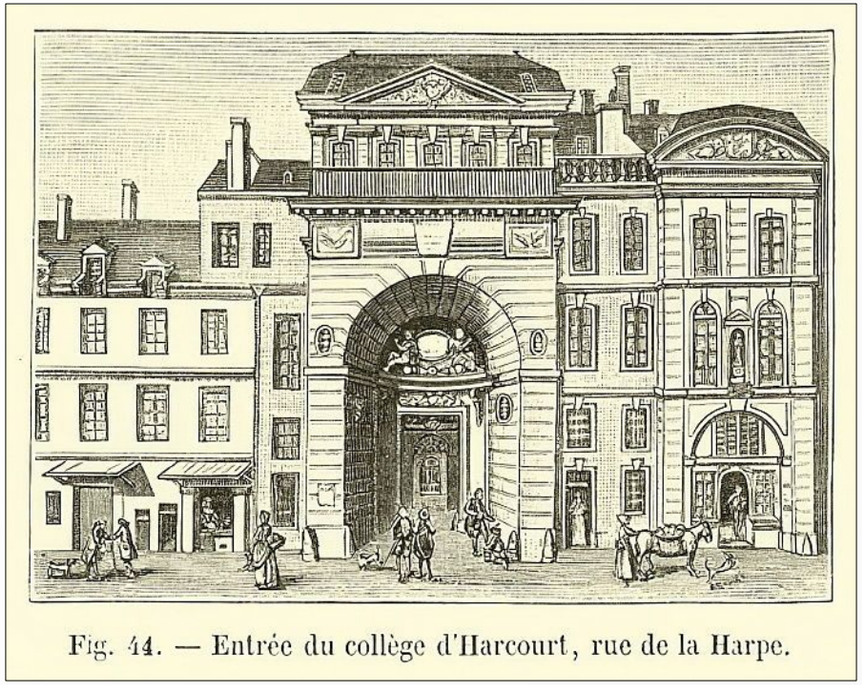


Fig. 44. — Entrée du collège d'Harcourt, rue de la Harpe.

Julien's four sons:

Contrast with Julien's brother Pierre-François who had three daughters

Julien also financed travels of his sons, notably Julien-David (Rome, Greece)

Paid for his younger son Charles's relocation to Southern France (Montpellier) to attend university there

Each made a mark in the Age of Enlightenment, in their respective discipline and career of choice

Uncommon for four sons of an horloger to achieve so much, three of them outside traditional family business

Each son had multiple interests and areas of competence

Julien undoubtedly proud of them all

No surviving male offspring from any of his sons, so the family line ended with them

Jean-Baptiste Le Roy

Born in Paris 1720, died in 1800

He may have worked in father's shop until age 30

Then became interested in "natural philosophy" (later called "science")

Became a member of the *Académie Royale des Sciences de Paris*

Resided at *Galeries du Louvre*

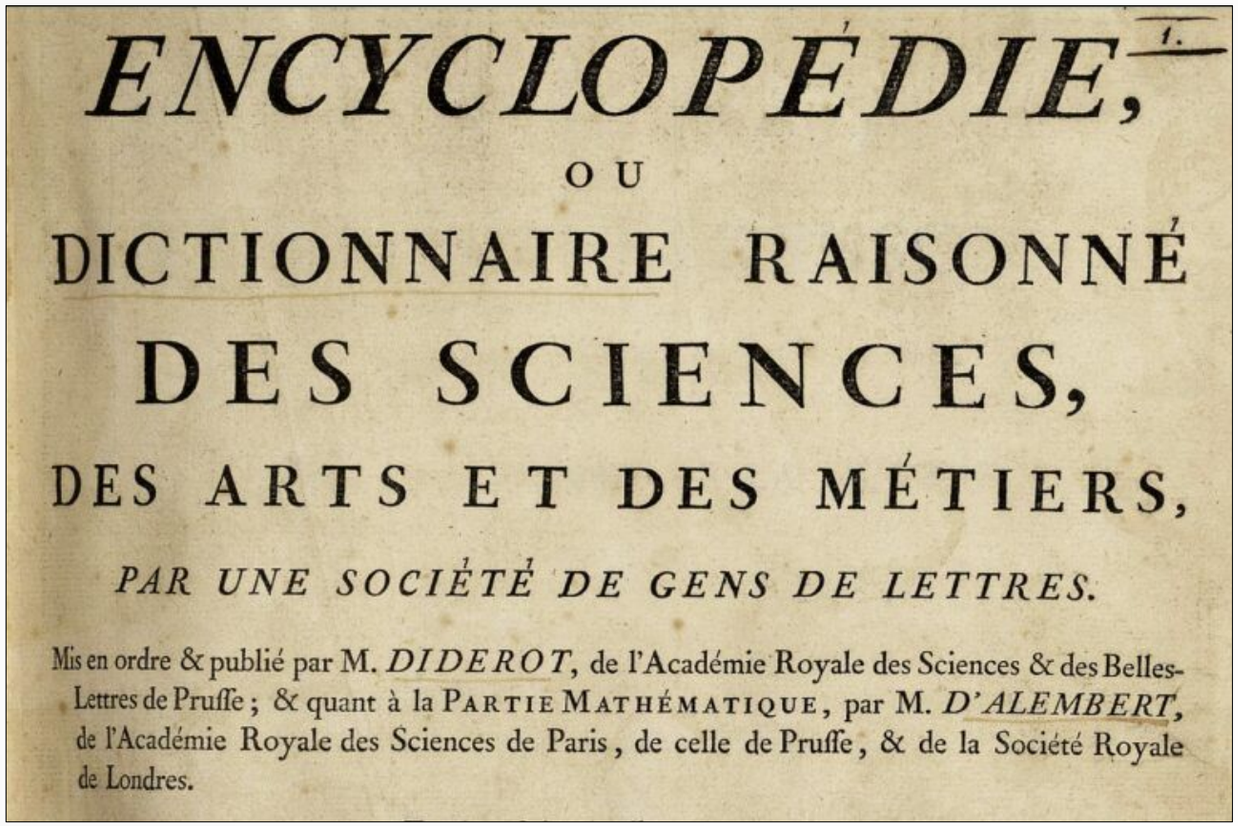
Developed a friendship with Benjamin Franklin (ambassador 1778-85), lengthy correspondence

- Shared interests in lightning, hot air balloons, etc.

Had one son who died age 7

Wrote at least half of horological articles in *Dictionnaire raisonné* of Diderot and D'Alembert

Invented "fusée renversée" design in 1760



ENCYCLOPÉDIE,

1.

OU

DICTIONNAIRE RAISONNÉ

DES SCIENCES,

DES ARTS ET DES MÉTIERS,

PAR UNE SOCIÉTÉ DE GENS DE LETTRES.

Mis en ordre & publié par M. DIDEROT, de l'Académie Royale des Sciences & des Belles-Lettres de Prusse; & quant à la PARTIE MATHÉMATIQUE, par M. D'ALEMBERT, de l'Académie Royale des Sciences de Paris, de celle de Prusse, & de la Société Royale de Londres.

Denis Diderot

Jean Le Rond
D'Alembert

Most comprehensive description of all Sciences, Arts and Trades

. Written by many authors

. Published between 1751 and 1772

Published by Jean-Baptiste Le Roy in *Histoires de l'Académie des Sciences* (1763)

une fusée renversée, & cette Montre remplit parfaitement mon attente.

Fig. 1.

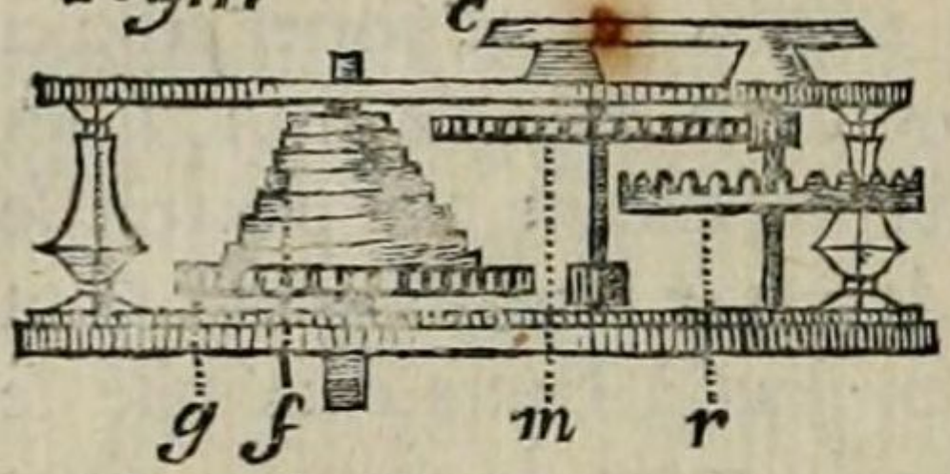
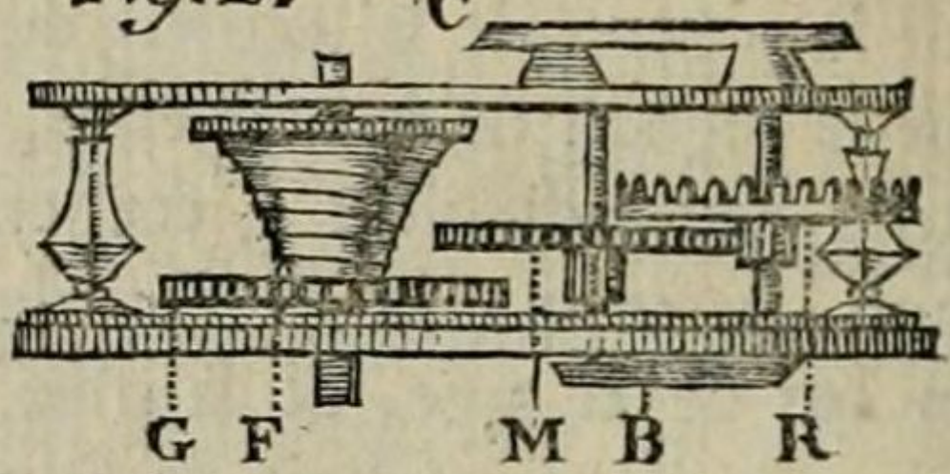


Fig. 2.



Dans la *figure 2*, on voit *la fusée renversée* en *F*, la grande roue en *G*, la petite roue moyenne au-dessus en *M*, la barrette

Left – traditional layout

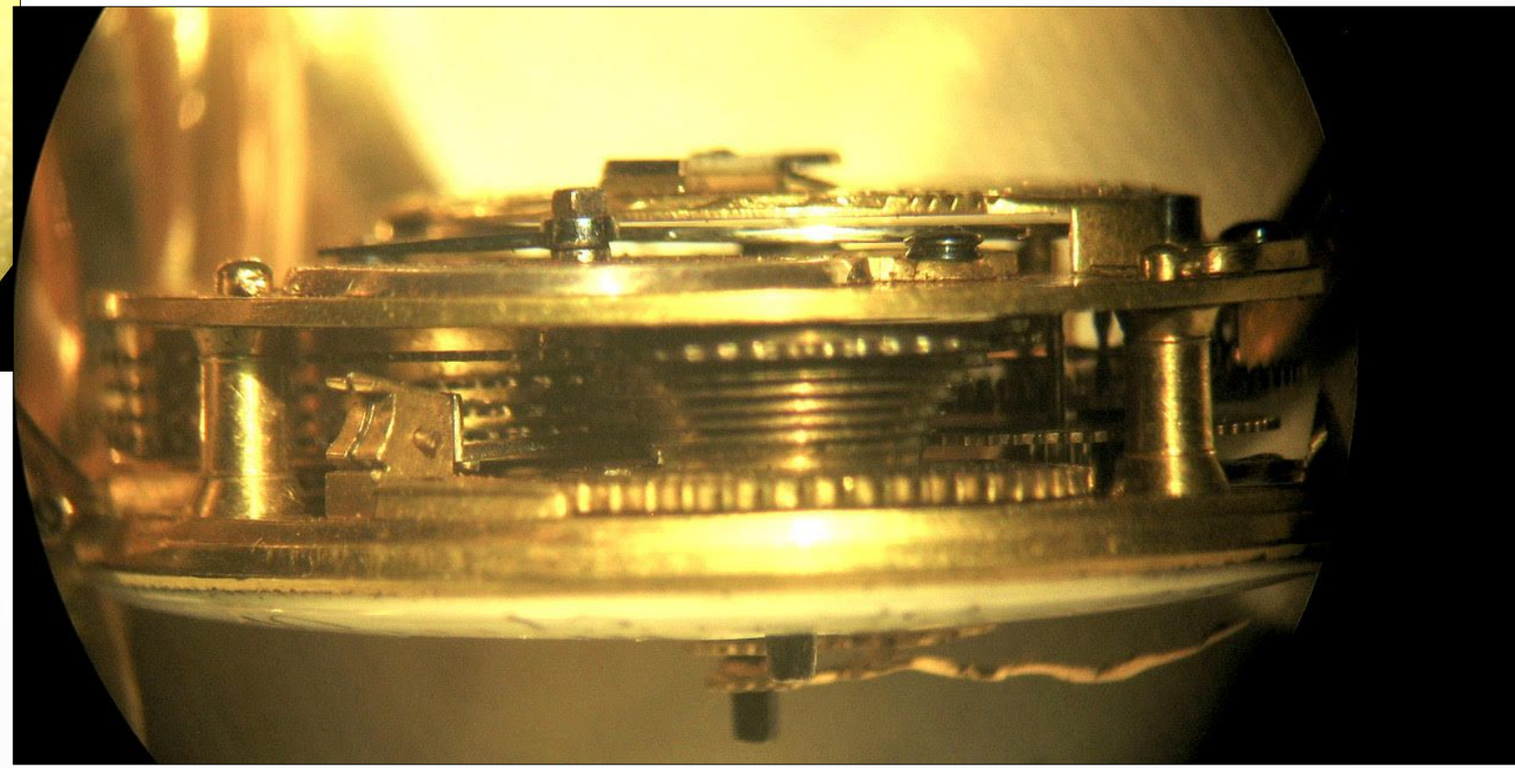
Right – fusée renversée layout

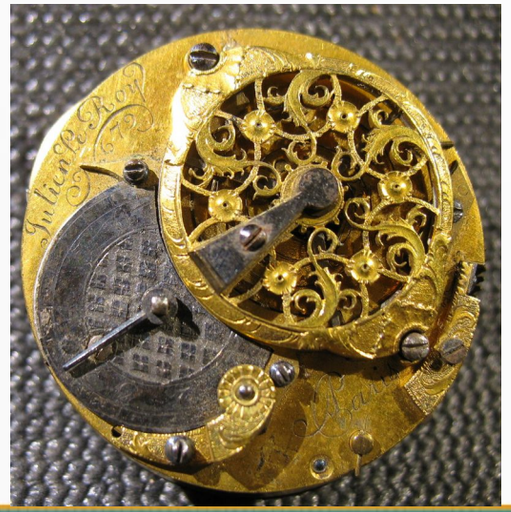
Julien Le Roy watch no. 4529 ca. 1771-2

. Workshop then headed by Pierre

. Note: “ J L R ” in balance cock filigree

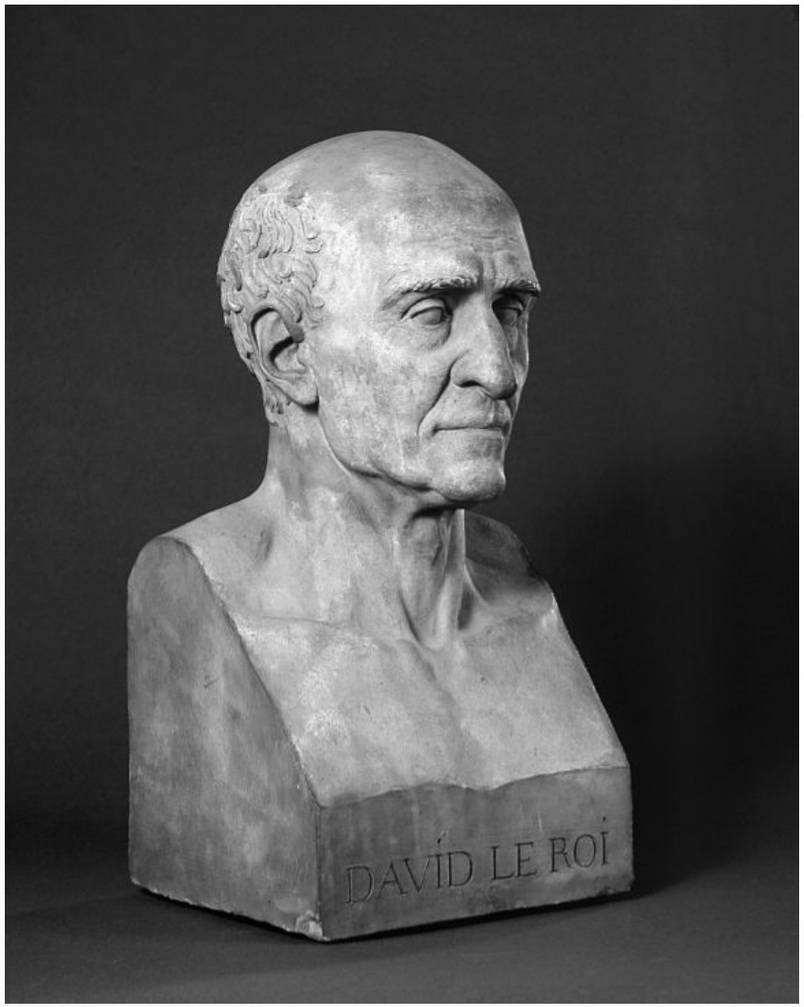
. Note: Jean-Baptiste’s *fusée renversée* design





No.679
ca.1730-5

Julien-David Le Roy



Born in Paris 1724, died in 1803

Studied architecture at *École des Arts*, then at *Académie royale d'architecture*

At 25-26, won prizes in architectural designs

1751-54 in Rome, reputation as arrogant

1755 travels in Greece, measuring and sketching old neglected temples

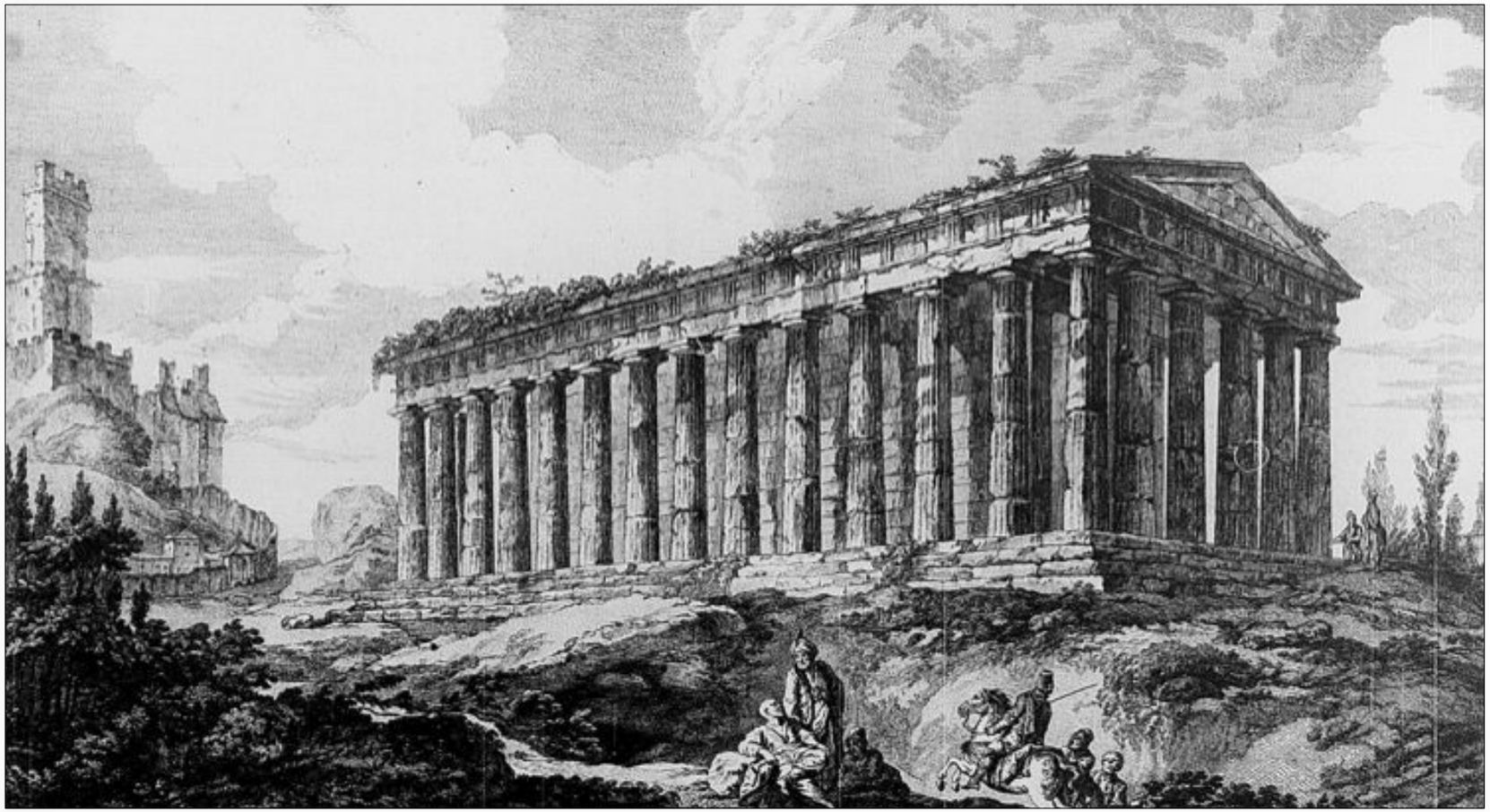
Wrote his famous book, hired top engravers

Book published in 1758, triumphant acclaim

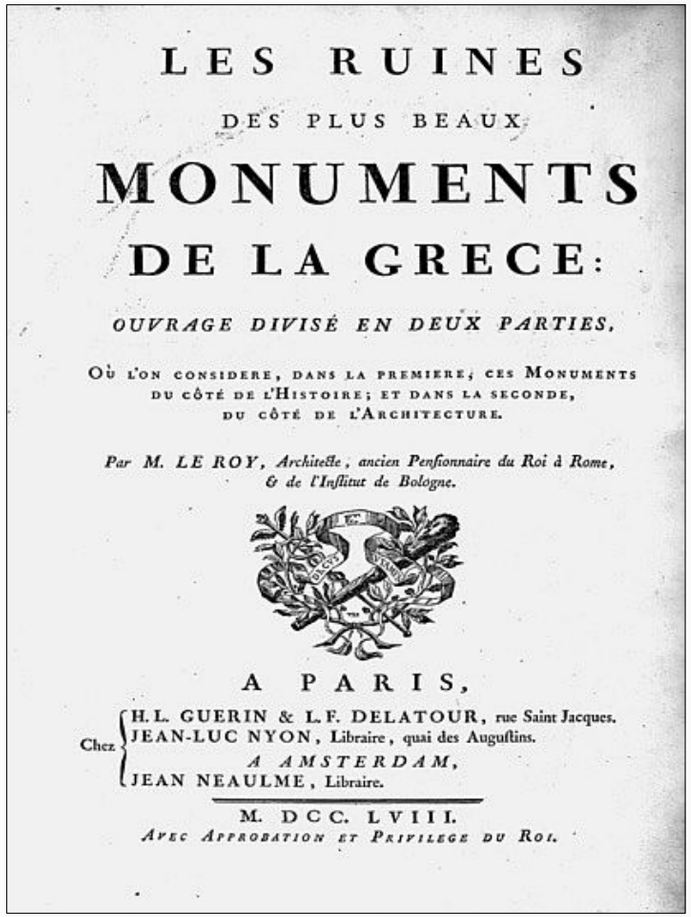
Second, expanded edition in 1770

David described objects of wonder and beauty, and the poetry of architecture

Julien-David Le Roy



Temple of Theseus in Athens



LES RUINES

DES PLUS BEAUX

MONUMENTS

DE LA GRECE:

OUVRAGE DIVISÉ EN DEUX PARTIES,

Où l'on considere, dans la premiere, ces Monuments du côté de l'Histoire; et dans la seconde, du côté de l'Architecture.

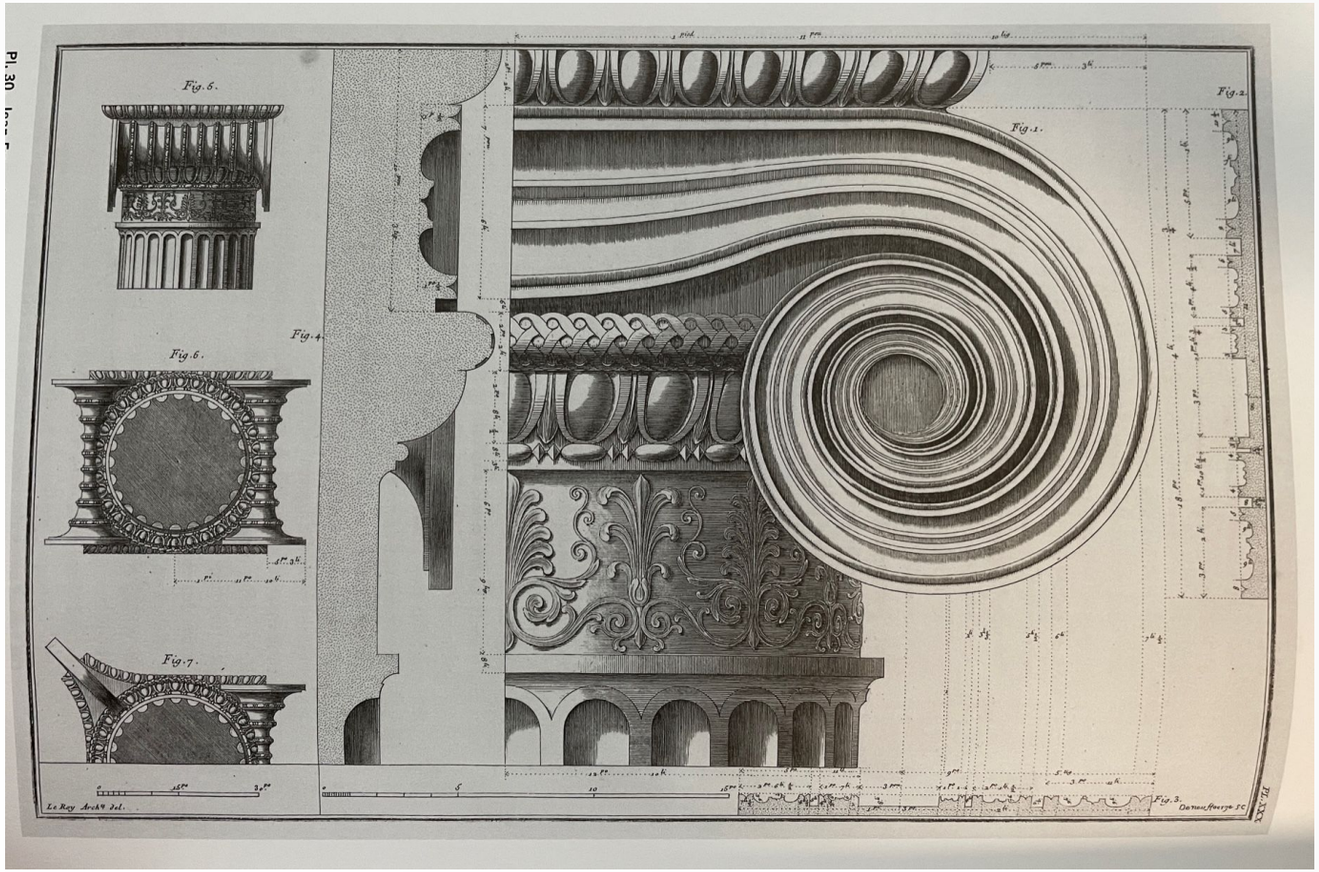
Par M. LE ROY, Architecte, ancien Penſionnaire du Roi à Rome, & de l'Inſtitut de Bologne.

A PARIS,

Chez { H.L. GUERIN & L.F. DELATOUR, rue Saint Jacques.
JEAN-LUC NYON, Libraire, quai des Auguſtins.
A AMSTERDAM,
JEAN NEAULME, Libraire.

M. DCC. LVIII.

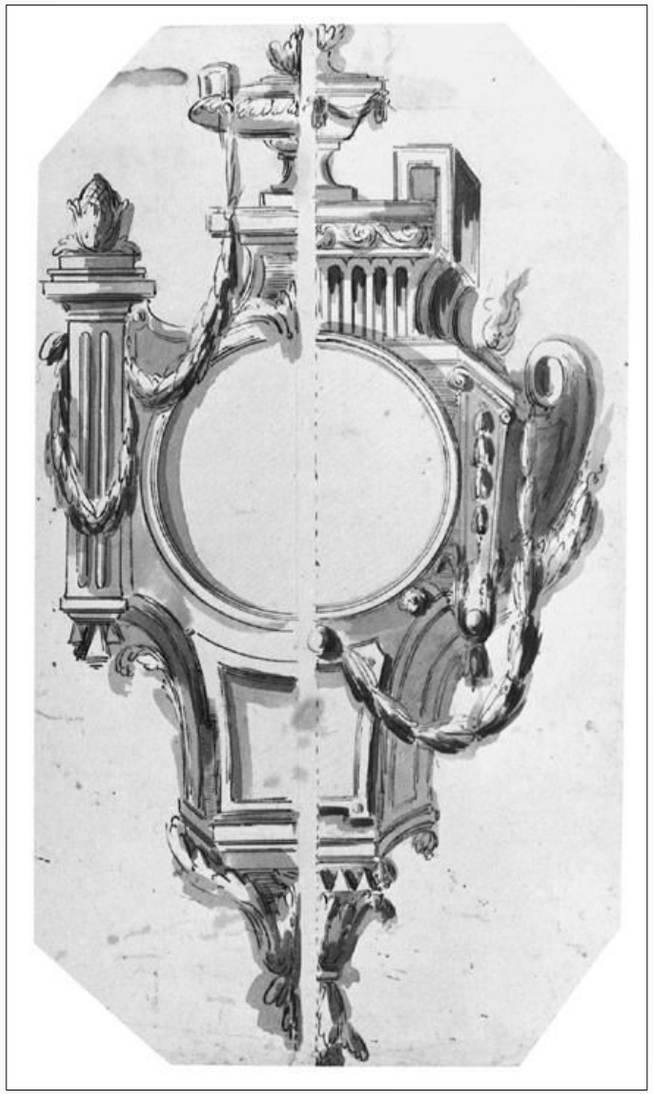
Avec Approbation et Privilege du Roi.

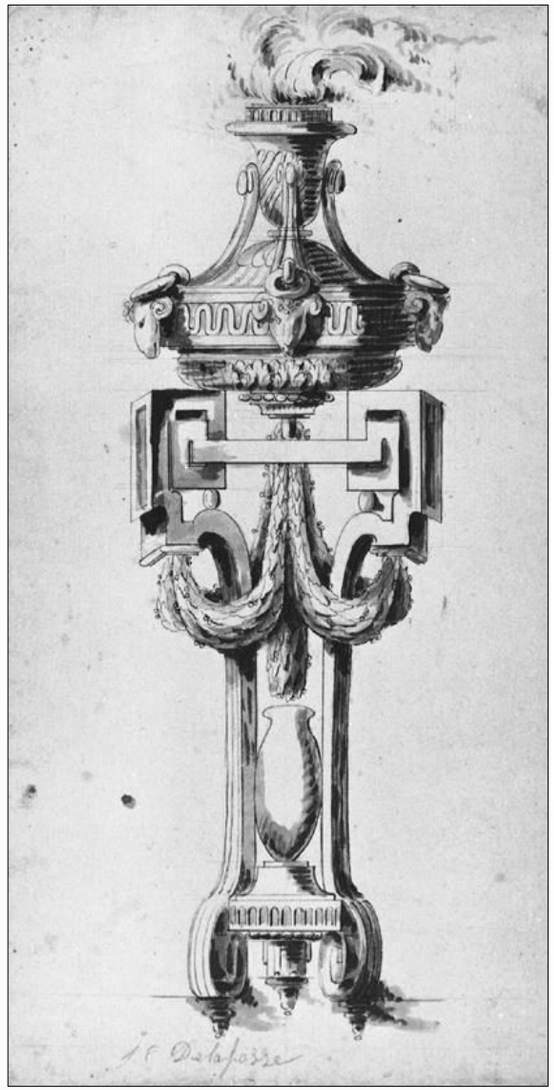


. Le Roy's "crude" drawings were re-drawn by Louis-Joseph Le Lorrain , then engraved by Jacques-Philippe Le Bas (finest engraver for views)

. Le Roy's measurements were painstakingly exact

Le Roy’s book helped inspire use of neo-classical themes in art under Louis XVI





Charles Delafosse (1734–1789)

Nicholas Antoine Le Nepveu (1735–1795)
Cartel clock (Louis XVI) ca. 1770-80

Less is known of Julien-David's last 35 years of life, after publication in 1770

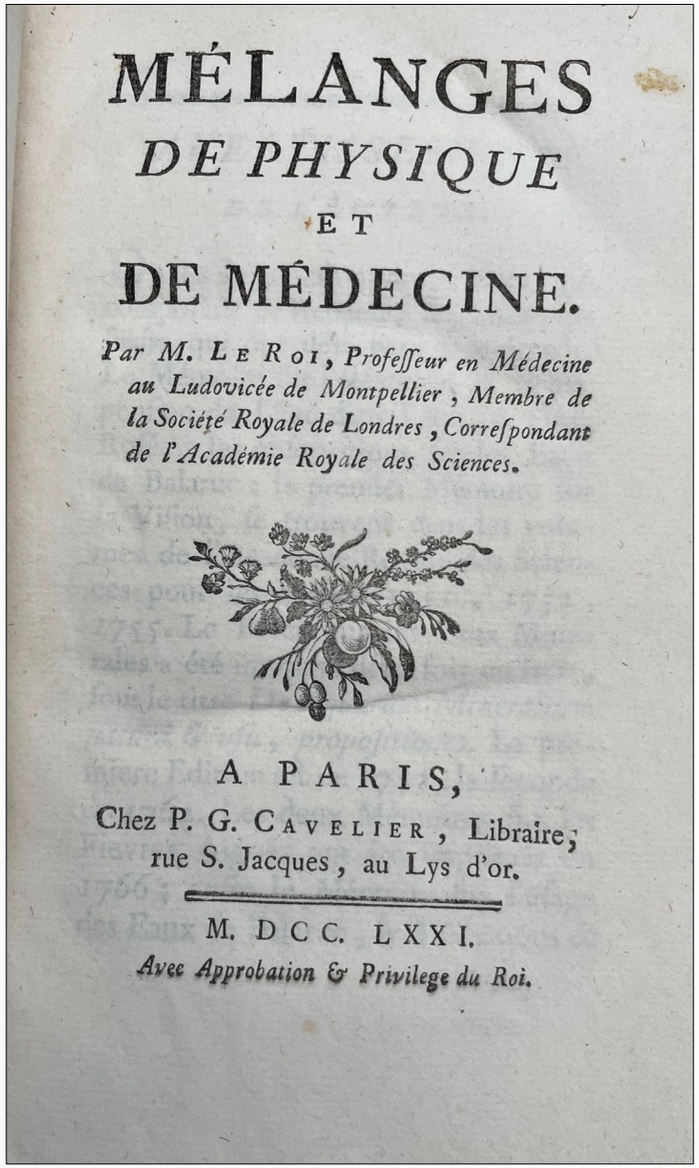
- Acted as guide to Samuel Johnson and Mrs. Thrale in their trip to Paris in 1775
  - They visited his brother Pierre, who showed them his longitude clock
- Lengthy correspondence recently published with Marquis de Voyer
  - Acted as architectural consultant on the latter's luxury country and Paris homes
- Dedicated his life to teaching at *Académie royale d'architecture*, where he was also historiographer
  - Lived in a small apartment near the Louvre
- Elected to the *Académie royale des inscriptions et des belles-lettres*
- Developed an obsession late in life for ancient vessels
  - Wrote two books on the subject of vessels and sails of the ancients
  - Obtained funding to build a sea-going ship based on ancient designs
  - The "Naupotame" made a rousing arrival in Paris in 1787
- Students commemorated his death in 1803

Julien-David's students had a medal struck in his honour

"*Voted by the architects his students*"

Reverse shows his *Naupotame*, a Greek column, and an architect's dividers

Charles Le Roy



MÉLANGES
DE PHYSIQUE
ET
DE MÉDECINE.

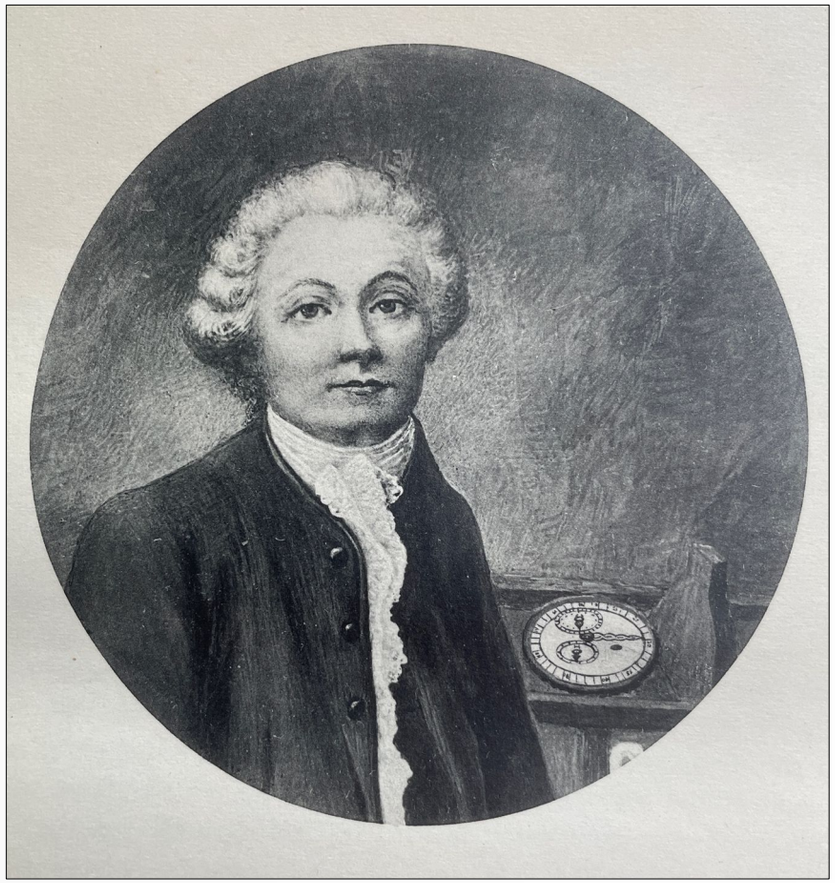
Par M. Le Roi, Professeur en Médecine au Ludovicée de Montpellier, Membre de la Société Royale de Londres, Correspondant de l'Académie Royale des Sciences.

A PARIS,
Chez P. G. Cavelier, Libraire, rue S. Jacques, au Lys d'or.

M. DCC. LXXI.
Avec Approbation & Privilege du Roi.

- Born in Paris 1726, died 1779
- Of fragile health as a child, moved to Southern France
- Studied medicine at Montpellier University
- Took "Grand Tour" of Italy during all of 1750
- Became a professor of medicine at Montpellier
- Wrote two books on medicine
- Also a physicist: wrote about evaporation, mineral waters, other natural phenomenon
- Member of Royal Society in London
- *Mélanges de Physique et de Médecine*, published 1771, Paris
- Investigated healing some illnesses by electricity
- Returned to Paris in 1777 into a lucrative medical practice for affluent patients
- Diagnosed his own illness and died there soon after

Pierre Le Roy



From miniature portrait by Noemi Philastre

Born in Paris 1717, died 1785 Viry-sur-Orge

College-educated like his 3 brothers

Trained by his father in his shop

. Took over his father's business from 1759

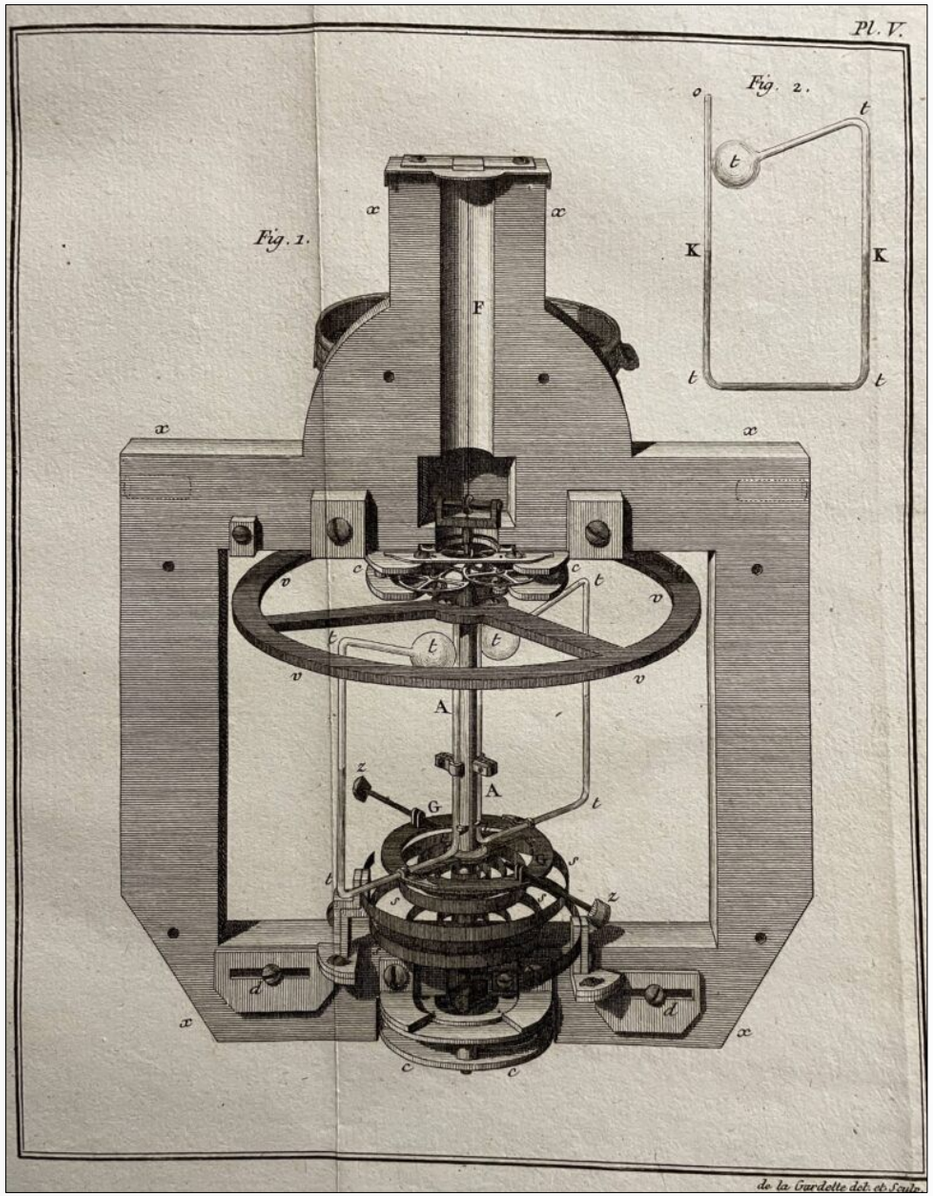
. Continued signing timepieces "Julien Le Roy"

Author of several memoirs and books

Very thoughtful and creative horological inventor

Lavenarde (watchmaker) in 1907:

"*modest, quiet worker, without patronizing and protecting influence, guided by the works of his father, gifted with a rare genius, using his talents, fathered marvelous things*"



Pierre's marine timekeeper, cutout view

Some of Pierre's horological inventions include: duplex and detent escapements, compensation balance, isochronous balance spring

Solved the Longitude Problem in France, probably inspired by Julien's old friend Henry Sully d.1728

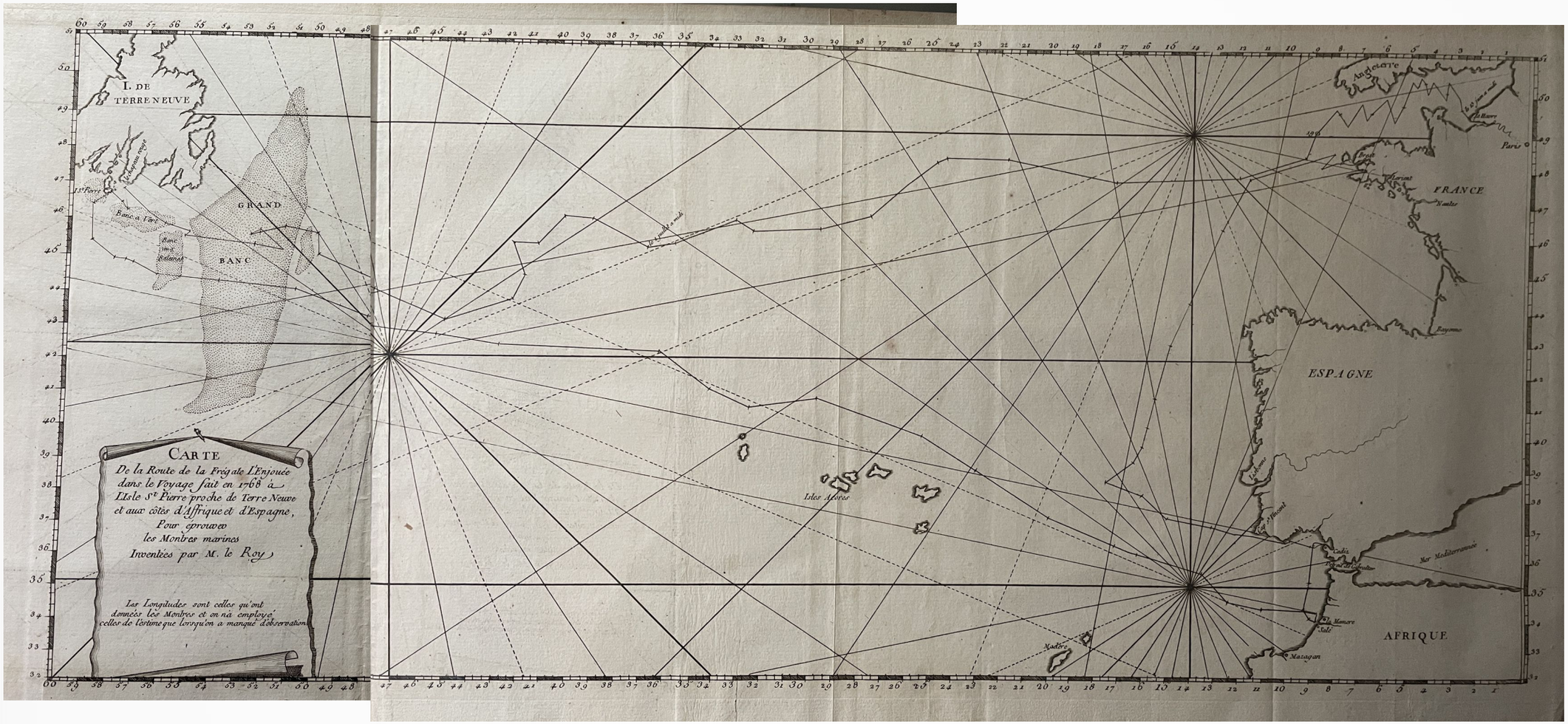
Designed his marine chronometer, in quiet isolation, over a period of almost 20 years

Participated in its sea trials in 1767-68, during which he was at sea for over five months

Awarded double prize by the Académie as a result

However his competitor, Ferdinand Berthoud, who better promoted his own work, would be chosen to supply chronometers to the French Navy

Pierre became distraught, closed down the family shop in 1773 and retired to a country home



Lengthy 1768 ocean voyage to test Pierre Le Roy's two marine timekeepers (A & S)

. On the frigate *L'Enjouée*, along with astronomer Jean-Dominique Cassini

. From France to Isle Saint Pierre and back by Africa to France (161 days total)

. *Longitude errors at St.Pierre (watch A, 46 seconds of arc; watch S, 42 minutes of arc)*

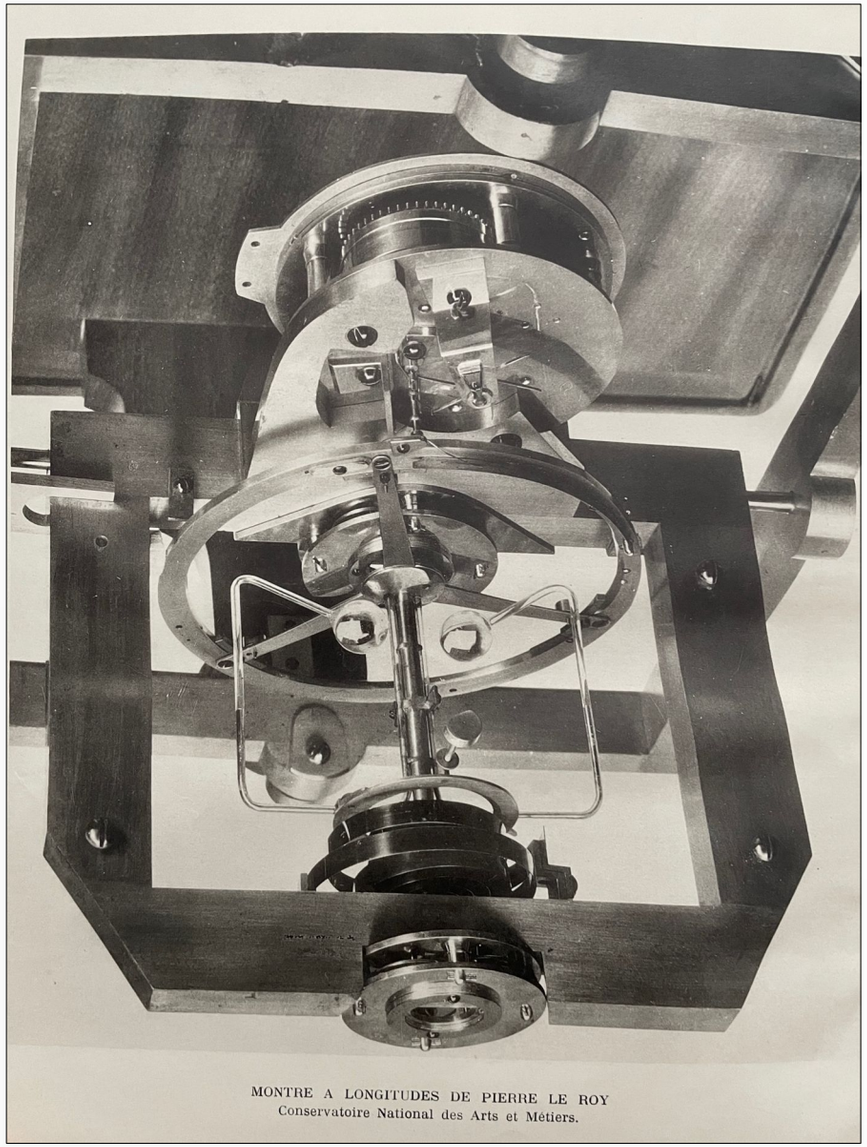
. *Longitude errors at Cadiz (watch A, 2 degrees 44 mins.; watch S, 1 degree 23 mins.)*

Casini Delineavit.

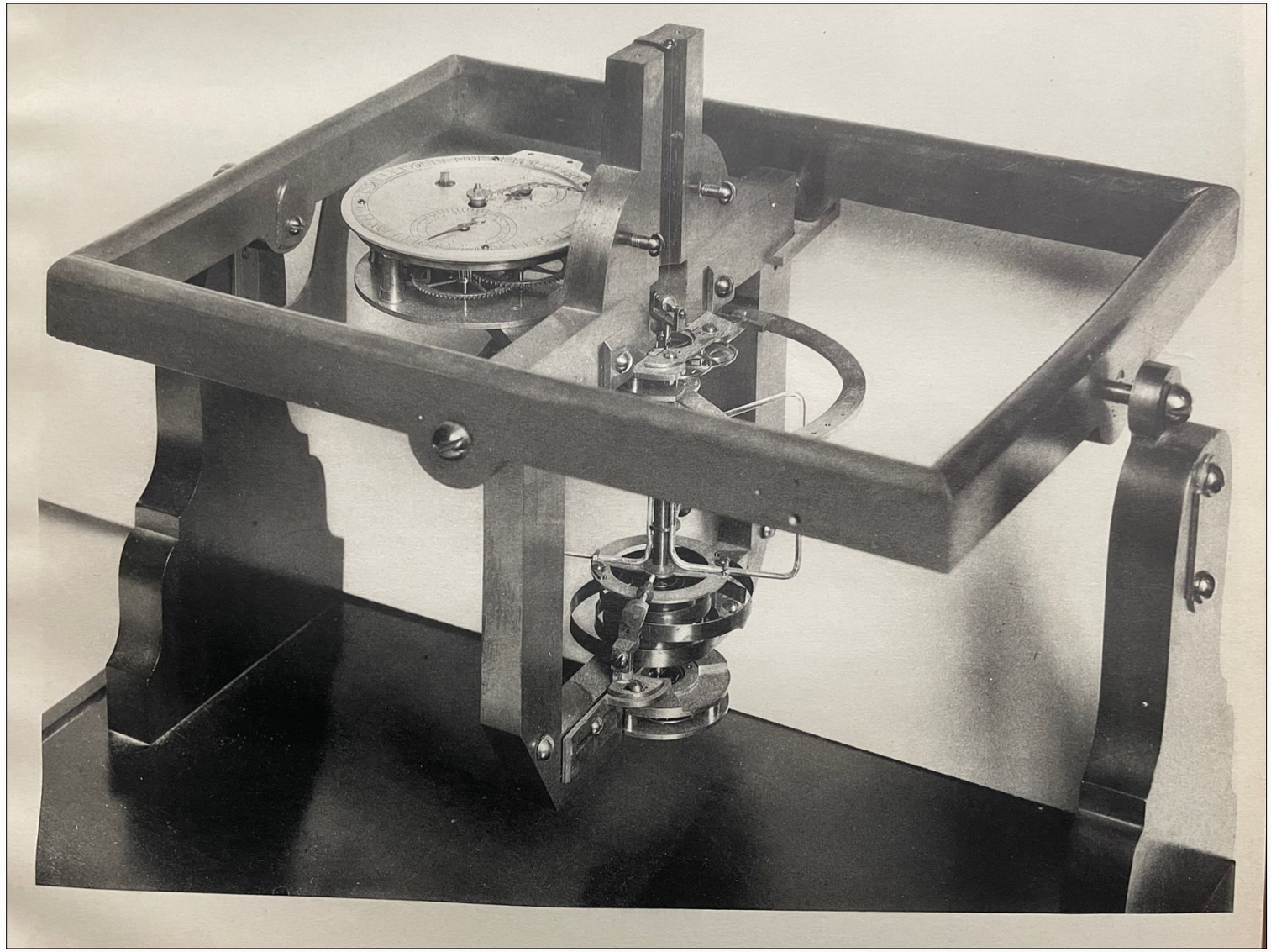
Vue de la Rade de L'isle de S.t Pierre proche de Terre neuve

Pierre Le Roy: Marine Timekeeper, preserved at *Conservatoire National des Arts et Métiers*

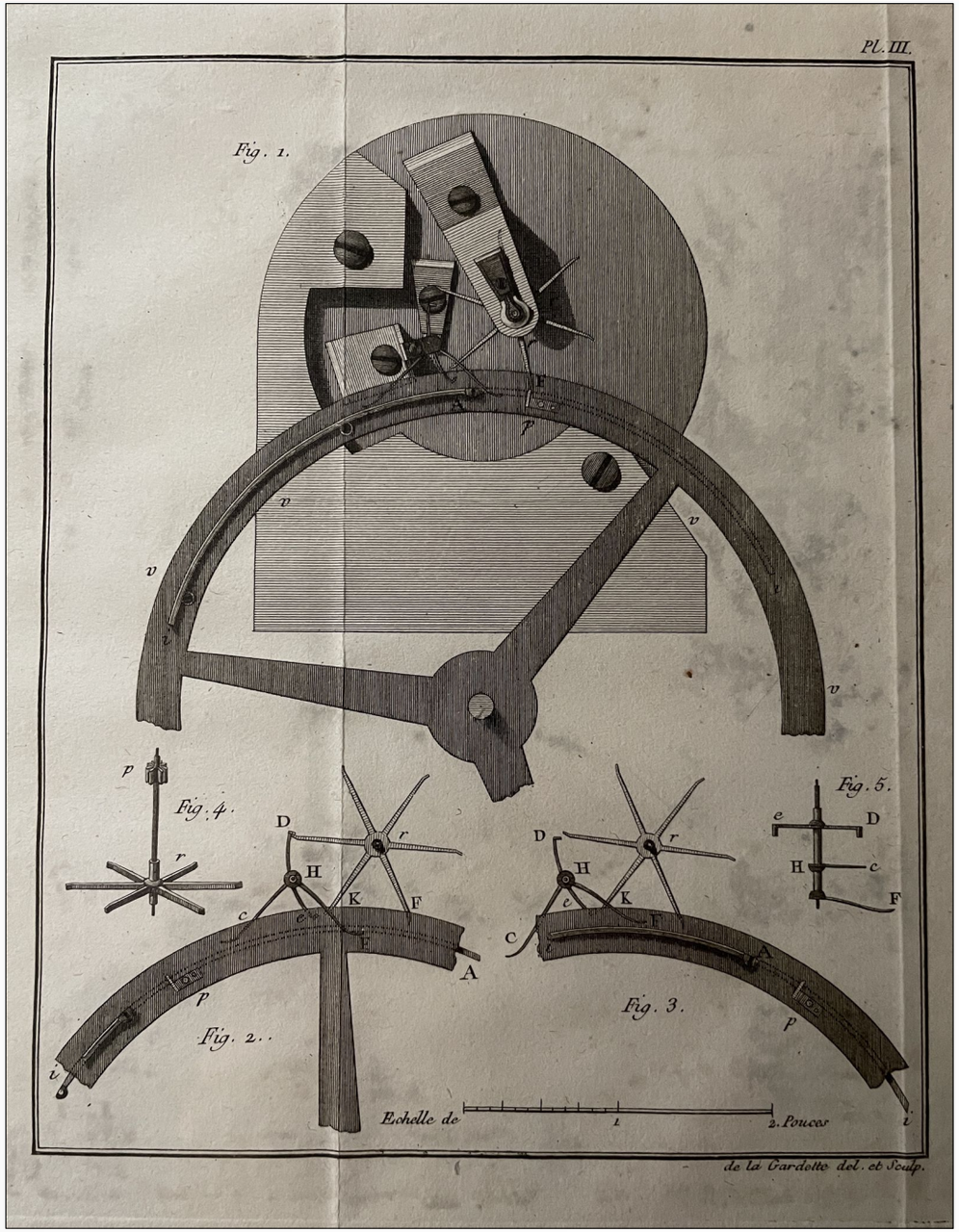
"*Possibly an experimental model, of great fragility*" (Catherine Cardinal)



MONTRE A LONGITUDES DE PIERRE LE ROY
Conservatoire National des Arts et Métiers.



Robert St-Louis 2023



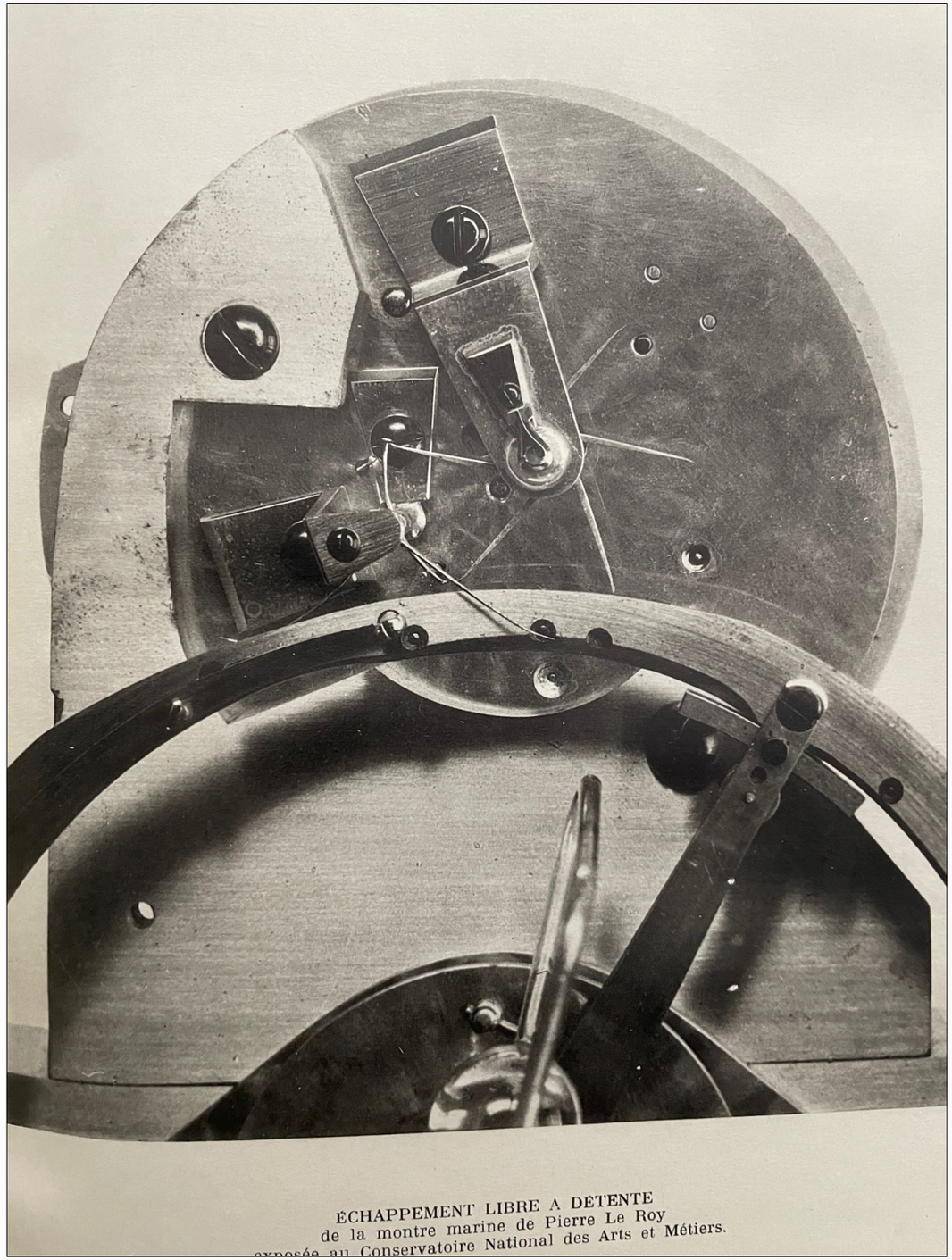


Diagram and actual detached escapement in Pierre Le Roy's marine timekeeper

Pierre Le Roy – Viry sur Orge (1773-1785)

. Photos taken by Paul Ditisheim ca. 1940
. House is where Pierre lived out last 12 years
. Thought and wrote about light, the universe
. He is buried at the church that he attended
. Inventory after his death included non-working dusty clocks in a closet

"*For having found longitude using an ingeniously crafted mechanism, but abandoned as soon as it was born,* [John] *Harrison received 500,000 French francs, and ships were put at his disposal for testing his timepieces. As to the French man of genius [Pierre LeRoy], who sacrificed 20 years of his life, and his personal fortune, to bring to his country yet another glory, his reward consisted of a thin medal. And if this desultory reward wasn't insulting enough, almost a century after the death of this great artist, a few men of passion and scientific probity must still fight to extract his memory from the darkness where some have tried to bury him*."

- Claudius Saunier, Revue Chronométrique of 1862 (p. 416)

"[Pierre] *Le Roy attacked the problem from an entirely different standpoint, and obtained his results not by nullifying defects, but by eliminating them. The difference in their machines is fundamental – Harrison built a wonderful house on the sand; but Le Roy dug down to the rock. (...) Le Roy's timekeeper was an entirely new departure, and the credit of having designed and constructed the first modern chronometer is entirely his, and his alone.*"

- Rupert T. Gould, The Marine Chronometer, 1923

"Pierre Le Roy, shy, a little obsequious in his manners, and sometimes even tactless towards great men, nevertheless fills us with the sympathy and admiration one feels for the intellectual creator who does not want to humble himself and bow down in order to give value to his work."

- Ditisheim, Reverchon, Lallier, Pierre Le Roy et la Chronométrie, 1940.

ÉTRENNES
CHRONOMÉTRIQUES,
OU
CALENDRIER
POUR L'ANNÉE BISSEXTILE
M. DCC. LX.
CONTENANT
Ce qu'on ſçait de plus intéreſſant ſur la diviſion & la meſure du TEMPS.
Par M. LE ROY l'aîné, Horloger du Roi, de l'Académie Royale d'Angers.

A PARIS,
Chez L'AUTEUR,
DESAINT & SAILLANT, rue Saint Jean de Beauvais.
PRAULT pere, quai de Gêvres.
NYON, quai des Auguſtins.
LAMBERT, à côté de la Comédie Françoiſe.

M. DCC. LX.
Avec Approbation & Privilége du Roi.

Rare book published by Pierre Le Roy in 1760

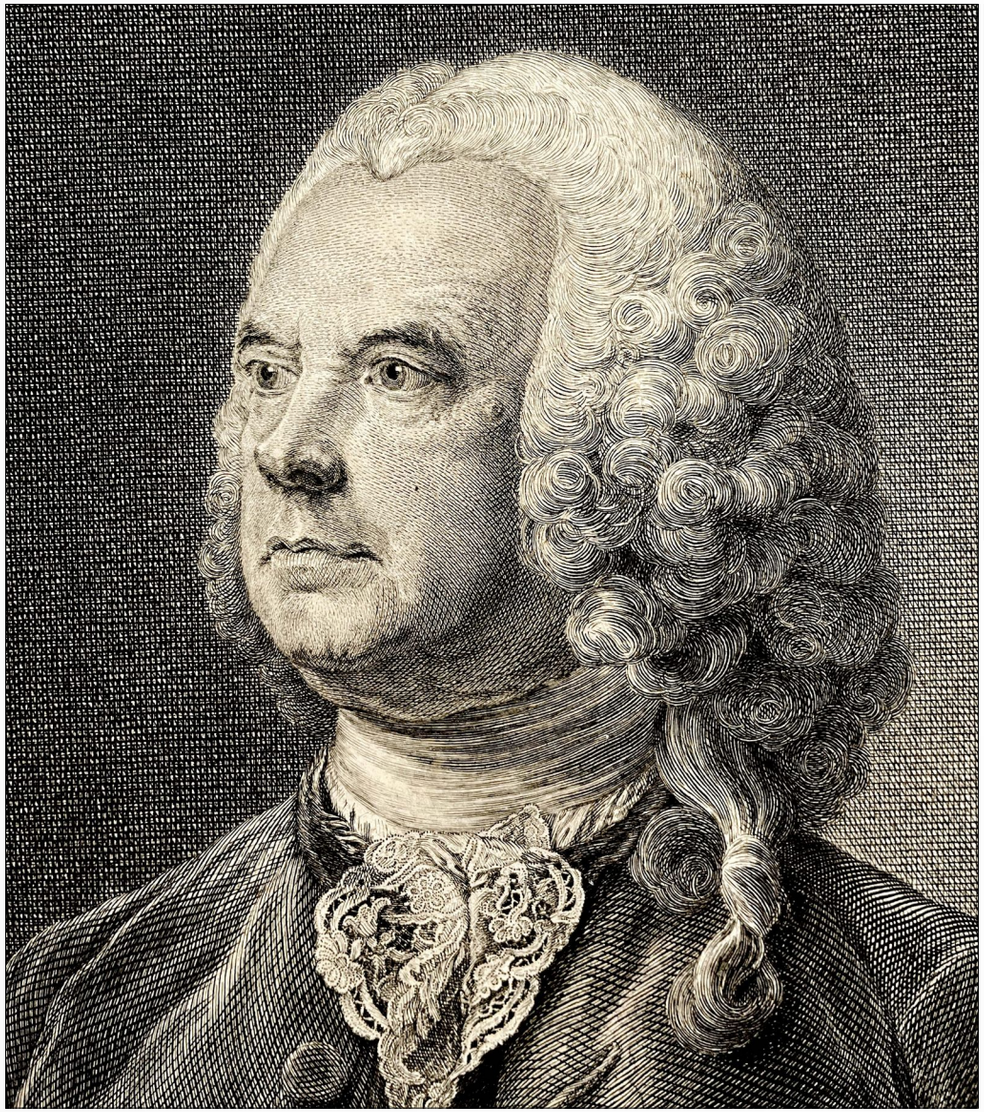
. Contains great wealth of horological information in a small size

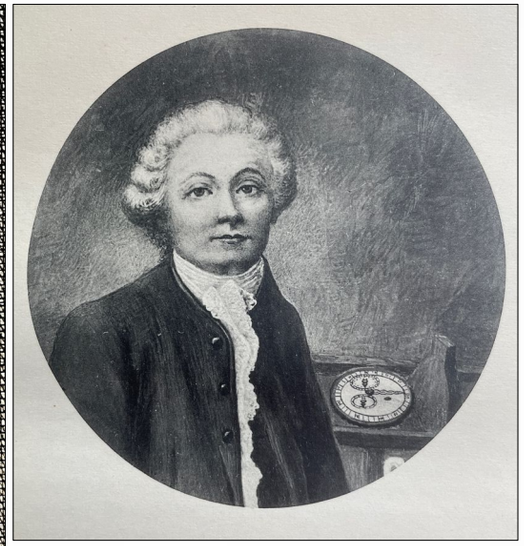
In a Eulogy to his recently departed father Julien, Pierre wrote:

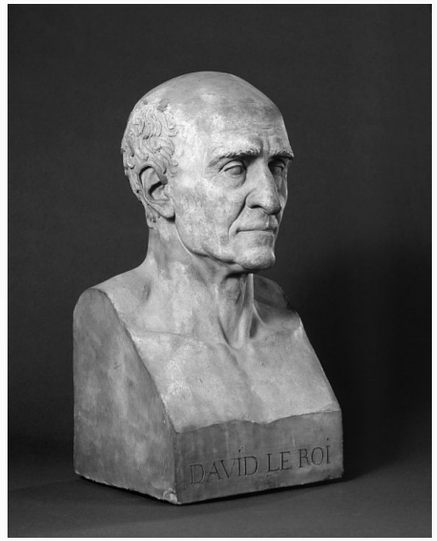
"If the famous artist whom we now regret has enriched horology by his works and his knowledge, his generosity toward those who under his direction cultivated this field, has contributed just as much to its perfection. I call upon all those who knew him : never was a man more accessible, more communicative, more lavish in sharing his knowledge. (...)

After such a conduct, should we be surprised at the sight of workers in tears that followed his funeral procession? Should we be astonished to have heard them say, in whispers, that they had lost their support, their comfort, their father?"

Julien Le Roy and his four sons



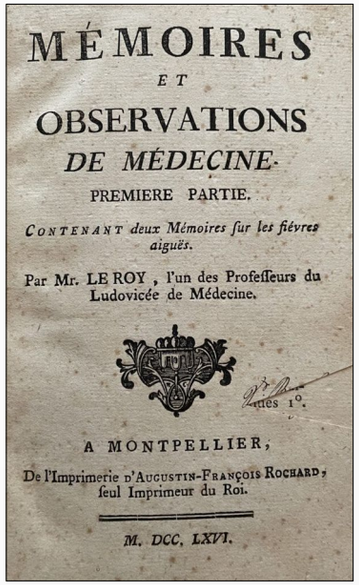




Thank you for your attention.

Merci de votre attention.

- Robert St-Louis www.timetales.ca



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A MONTPELLIER,
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