

# The Traveling or Carriage Clock and the Coach Clock

By Osvaldo Patrizzi



*Unsigned, French, circa 1550.*

*Gilt brass and steel single-hand traveling clock with elongated fusee and cat-gut, verge escapement, steel two-arm balance, hour-striking and alarm. Dim: 14 x 8 cm.*

**W**hat is a Traveling clock, a Carriage clock, and a Coach clock, and what is the difference between them, since they have the same function?

The aim of this article is not so much to offer new information to specialists, but rather to explain and clarify the subject to a general public, providing a background for the upcoming sale of the historically important Le Bon clock, featured in the April sale.

We know for certain that in order to function correctly, a watch, whether worn on the person or intended for traveling, had to include an autonomous moving force (the main spring). This was originally a helicoidal spring, and later a spiral (main spring). It had to possess enough autonomy to guarantee a sufficiently long duration of timekeeping, and to allow it to be transported while maintaining a relatively constant moving force. It is not particularly relevant to this article to determine whether the first to adopt the spring as a moving force for a horological object was the architect Filippo Brunelleschi (1377-1446), quoted in Vasari in 1410, Jean de Paris, watchmaker to Louis XI, or, according to the Germans, Peter Henlein (c. 1480-1542).

It does, however, seem to me to be essential for a detailed analysis of the origins of traveling clocks, to understand the difference between the names used to identify the various types of clocks, and to review, in this manner, their history. In order to remain accurate, it is necessary to take into account the many appellations used in the horological jargon and the various interpretations given in the past. The latter often derive from translations of historical documents, and offer descriptions that are often extremely brief, which only creates uncertainty. I would also like to emphasize the fact that horology is a mathematical and geometrical science, despite the many various interpretations of the product throughout the centuries. Though it is sometimes enthusiastically interpreted in too idealistic a manner, it always remains strictly logical. The few known horological "curiosities" are anomalies which give credit to the true inventions, the discoveries of which make the field even more fascinating and surprising.

Let us go back to the beginnings of portable horology. The first travel clocks emerged around 1400 : these early traveling clocks were referred to as simply *l'horloge de voyage* in French. It goes without saying that a traveling clock must function when it is being transported from one place to another. It is equally evident that the name *pendulette de voyage*, in the French language, could only be used after 1657, that is after the invention of the pendulum by Huygens, who published his work in a book called "Horologium". All agree, whether it be the French or English horologists, that the modern Traveling Clock, or Carriage Clock, began in 1798, when A.L.Breguet sold his first carriage clock, or *pendulette de voyage* to General Napoleon Bonaparte, a few weeks before his departure for the Egyptian campaign. (See Antiquorum "The Art of Breguet", April 1991, lot 10)

### The Early Traveling Clock

Traveling clocks were known as early as the 15th century, and often appeared in paintings alongside important people. Such traveling clocks, with the same characteristics but of course more sophisticated and more technically developed, remained in use until the early 19th century.



*N. Morel, Paris, circa 1530.*

*Small hexagonal gilt brass traveling clock with alarm, movement with elongated brass fusee, and verge escapement with steel two-arm balance, in original tooled fitted leather box. Dim.: 11,2 x 6,9 cm.*



General Napoléon Bonaparte  
(1769 - 1821)

From the beginning, the movements of watches and clocks were generally made with a verge escapement, one that distributes the force to a foliot, or to a circular balance. The spring furnishes the energy necessary for the watch mechanism to run autonomously for a few hours.

The technical aspects of a pendant watch and a traveling clock were more or less the same; they only differed in size and shape. In my opinion, the elements which differentiate the two types of instruments are the dimensions and the use for which the watchmaker intended them.

A traveling clock, in addition to the correct shape, had to have a carrying case allowing access to the dial and which afforded easy reading of the hour, even during travel. It was thus protected by a case fitted with a little door which opened easily, or, more practical still, a small window whose opening allowed the reading of the desired information without endangering the instrument. The carrying case had to have a supporting handle and sufficient space between the case and the dial so that the hands could function freely and the clock not be hindered. However, the original carrying cases, whether in leather or in leather-covered wood, were easily subject to deterioration, and it is extremely rare today to find a traveling clock in its original case. Most traveling clocks were made with a striking feature and/or alarm, as these clocks also doubled as table clocks.

Another important discovery was that of the balance spring, in 1675, whose implications were to lead to the further development of portable timepieces. These performed almost as well as the pendulum clock, the only difference being that the latter remained immobile.

### The Modern Traveling Clock or Carriage Clock

The evolution of the traveling clock brings us to the "modern traveling clock" or the carriage clock, which as stated can be dated to approximately 1796. This first example, Breguet's no. 178, was completed that year and sold to Napoleon in 1798. The clock, 11 cm. high, can be considered an archetype of the genre, because it features certain characteristics not found in older clocks. In short it differed from the others by its technical and practical innovations.

A.L. Breguet's incomparable genius can be seen in the optimal use of forms and space, always of great importance to him, as well as in the technical innovations and the complications which he included, with his usual elegance. Breguet's keen horological vision is evident in every detail. Although many of these details are not obvious, it is nonetheless true that they encouraged the further development of this horological genre. The fashion ended around 1930, as the public lost interest in such costly, and, from a practical point of view, useless instruments. Whether by coincidence or consequence, it happens that the decline of the traveling or carriage clock came about as the wristwatch was becoming universally popular.

This clock, no. 178, is the first in a series of three. All are characterized by new features concerning the case, the dial, and the movement.

#### The case

The case, in chased and gilt bronze, exemplifies the pure lines and the simplicity of the period of transition between the French Revolution and the Directory. For the first time, all of the clock's panels are in glass - on all 4 sides and on the top. This characteristic will be found several years later, in the clocks made by Paul Garnier (1801-1869), an eminent horologist who specialized in carriage clocks.

#### The dial

For the first time, the entire front surface is used for the dials, which allows greater legibility of the various types of information. The dial plate also becomes a decorative element, enriched by engine-turning or engraving which outlines the contours of the cut out calendar apertures. The dial is always protected by a small glass door which when opened allows the adjustment of the hands, of all the calendar indications and the moon phases, as well as the winding of the movement.

Previously, the dial indications had generally been given either auxiliary dials, or concentrically placed with the hour and minute hands. The result was, however, not easily legible. It was also a source of technical difficulties, due to the great precision necessary for the coaxial arbors of the different hands. The superimposition of the hands made their adjustment a delicate and complex operation.

Breguet's use of the entire surface of the dial plate also allowed him to add other indications, by means of further windows or graduated sectors. Another important innovation was the use of revolving cylinders for the calendar indications. These would become one of the characteristics of Breguet's work, and would be adopted by his successors.

*Breguet, No. 178.*



**The movement (Breguet No. 178)**

The movement shows the first signs of a later development which was to increase precision, reliability, practicability, and the esthetic aspect : the adoption of the horizontal escapement.

This important event in horological engineering took place only a short time after the creation of this clock. The horizontal escapement would be fitted into clocks with exterior architectural characteristics and movements similar to those of the clocks shown here.

Another important innovation was the disappearance of the pull-cord previously used to arm the quarter repeating mechanism. In this model, the

repeating mechanism is activated by means of a piston which, with its pushing action, winds the mechanism's spring and frees the striking lever.

The mechanism, with its indication of all the calendar information by means of revolving cylinders, at once innovates and enriches the display dials, making it possible to construct more highly complex mechanisms which are independent of the going train, with minimal consumption of energy.

These grand innovations found in this carriage clock would make the clocks' functioning astonishingly reliable and would afford greater precision.



*Lépine, Horloger du Roi à Paris, No. 4085, circa 1788.  
Eight day-going gilt brass carriage clock with hour and quarter striking, virgule escapement,  
and vertical balance and cock in the back plate. Height 21 cm.*

*(Right) Jump, London, circa 1910.  
Silver "hump-back", eight day-going, astronomic  
carriage clock with moon phases, in its original  
Morocco fitted case.  
Dim. 15,5 x 11,8 cm.*



*(Left) Breguet, No. 4768, Sold to Princess  
Bagration on October 26, 1837,  
for the sum of 3'500 francs.*

*Small gilt bronze carriage clock with quarter-repeating,  
platform with lever escapement, two-arm cut bimetallic  
compensation balance with gold and steel screws,  
alarm and triple calendar.  
Dim. 13,5 x 9 cm.*



### The Coach Clock

The coach clock probably originated in Germany toward the first quarter of the 17th century. It took the form of a large pendant watch, except in extremely rare cases. It was round and had a pendant with a large bow, to support its weight as it hung from the carriage walls. In the beginning of the 18th century, this pendant evolved, becoming what was called a gimballed pendant, which alleviated the pressure of the watch's own weight, diminishing the oscillations that, on bumpy roads, could interfere with its correct functioning. It always had a protective leather case, with or without openings for the dial. One of the typical characteristics of the coach clock was that it had a striking mechanism, which at the beginning sounded only the hours, later becoming more complex with the addition of the quarter hours. Quarter repeating mechanisms appear early in the 18th century. The alarm was another typical characteristic. The production of this type of timepiece was particularly concentrated in the cities of London and Paris and in Friedberg, Germany. Especially in Friedberg, there was a flourishing horological industry that had already existed for many decades, and where complete coach clocks and *ebauches* were made for the local market and export. There are a few examples whose mechanisms and outward appearance were very different from those produced in the above-mentioned cities; they were those signed by Italian horologists, thus lending credence to the idea that this type of object had its moment of glory in Italy as well.

The coach clock's complications and the sumptuous decorations embellishing the ample surfaces of its cases made it a particularly costly instrument. While most of the early coach clocks had gilt bronze cases,

latter ones were usually of silver, these cases and movements so richly decorated that the coach clock has always been considered a true work of art. Like the traveling clock, it was also used as a table clock or as a bedside clock. It was thus used in the home, generally with sculpted wooden or metal bases specially designed to hold it and to optimize visibility, and was often decorated so as to harmonize with the interior decoration of the room.

The home use of the coach clock must have inspired certain horologists to create models which at first glance resembled table clocks but which could also be used in carriages.

This is illustrated by a gilt bronze clock of the *tete de poupée* type, signed by *Le Bon à Paris* which was made circa 1710 (pages 72-73). This clock is an interesting subject for discussion. Its shape and size would indicate a traveling clock, or *pendulette de voyage*. The watchmaker, Mr. Le Bon, however, considered it and labeled it a coach clock, or *horloge de carrosse*. It measures 27 cm. high, and was intended to function either with a pendulum, when placed on a table, or with a balance regulator when used in a carriage. This is clearly indicated by the words *carrosse* and *repos* visibly incised on the small dial on the back of the case. The lever hand, which is manually adjusted, indicates the engagement of the pendulum as regulator for home use, or the balance





△ (Left) Carl Schmidt, Germany,  
circa 1585.  
Large gilt metal single-hand, hour-striking  
two-train coach watch with concealed dial.  
Diam. 70 mm.

△ Pierre Drouynot A Poitiers,  
circa 1650.  
Gilt brass single-hand, hour-striking, three-  
train coach watch with alarm, in original fitted  
traveling box. Diam. 90 mm.





regulator for travel.

This intelligent contraption, which permitted, by means of a lever, to change from balance to pendulum, thus afforded greater precision to the clock.

The importance of this timepiece can be seen by the splendid chasing of the mercury-gilt bronzes, and the white enamel dial embellished by a delicately painted enamel decoration, adding to its elegance. The quality and originality of the movement are particularly striking. The plates are of the same shape as the case and the moving force of the going train is transmitted via a fusee and chain, which is very unusual for a French clock. The clock strikes the hours and half hours, and like many French clocks, its duration is of 8 days.

It must originally have had a leather-covered wooden carrying case, which has unfortunately been lost over the years, with a large handle so that it could be hung from a hook in the carriage. This is an exceptional piece of great historical and technical interest, because it proves beyond the shadow of a doubt the multi-functionality of this type of horology in France.

An extremely rare example of a multi-functional clock, but resembling more of a traveling clock than a coach clock, was that made in England by the very famous Thomas Tompion; it too was fitted with a pendulum and balance regulator, and is preserved in the British Museum (another similar one is in a private collection).

John Paulet, another English horologist known for his traveling and coach clocks, made certain examples with solid silver cases, dating from the first quarter of the 18th century. His were also in the form of the traveling clock, but some of these had the gimballed pendant, typical of the coach clock.

The important difference between the Le Bon clock and the English ones, in my opinion, is that the latter are primarily traveling clocks, with a form characteristic of that of the table clock, with a handle on the top which allows it to be moved if so desired, whereas the Le Bon clock, although it possesses the typical characteristics of a French table clock, was considered by its maker to also be a coach clock.

The birth of the traveling clock gave rise to the carriage clock, but today these two terms may be used interchangeably. The coach clock on the other hand, is more strict in its definition, as evidenced in the article. And even though horology is an exact science in itself, we create the anomalies, such as the Le Bon clock, which animates the world of horology and stimulates the collector.



