



A Brief History of the Art of Enameling

Part II:

Painting on Enamel

By Osvaldo Patrizzi



Above left and right: Gilt brass single-hand clockwatch signed Pierre Delande à Paris, circa 1600, with Limoges enamel panels. Dim: 70 x 40 mm.



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The history of painting on enamel had its origins in central France, in the regions of Loir-et-Cher and Eure-et-Loire, and continued later in Geneva. From the very start, this technique influenced not only the decorative aspects of the pendant watch, but also its dimensions, thereby transforming it into an objet d'art. From an instrument for measuring time, it was transformed into a complementary and fashionable work of art. The result was that the watch entered the realm of the creative arts, and painting on enamel became consecrated as one of the major art forms.

Blois, the capital of the region of Loir-et-Cher, was the preferred residence of the Kings of France during the 16th century. It was there that they held their états généraux, and it was in Blois, during the Conseil of 1588, that Henri III ordered the assassination of the Duc de Guise. Blois was also the residence of Empress Marie-Louise, Napoleon's wife, during the Regency of 1814.

The fact that for over a century, the kings of France centered their activities in the region comprising Paris and Blois, led to a remarkable concentration of artists and specialized artisans in the city and its surrounding regions. Some came from Paris, many others from other cities in France. These people greatly contributed to the rich cultural and artistic life of the city. The Edict of Nantes, granted by Henry IV in 1598, was

another major event which led to the presence of many Huguenot artisans in Blois, thus encouraging, among other things, the development of the horological arts and related professions. The edict recognized the right of Protestants to exist as an organized group, according them all rights guaranteed by the State, whether legal, political, or military, and created the conditions necessary for these artisans to work safely and confidently, as well as to exercise their religion. This extremely dynamic context afforded the ideal atmosphere in which the art of painting on enamel could evolve and develop.

As was stated in our article on enameling published in the preceding "Vox", the history of decorating with enamel and its technical evolution covers several millennia. The "revolution" which came about through

the invention by Jehan Toutin of “painting on enamel” is dated by E. Develle in his book “Les Horlogers Blesois” at approximately 1628. The technique of applying enamel to metal or to other materials began originally with the process of depositing in predetermined receptacles the various colored oxides. One color was applied and fired at a time, beginning with those that melt at the highest temperatures and ending with those that melt at lower ones, care being taken that they did not mix, which would have created blemishes when the piece was fired. This was the method used for cloisonné enamels, champlevé enamels, and translucent or opaque *ronde bosse* enamels.

Other techniques and schools, such as that of Limoges, consisted in the figures’ being executed in superimposed enamels of different colors, generally no more than two. The colored oxides were finely pulverized in a mortar and mixed with the correct quantity of distilled water. They were then deposited on a plaque which had been previously prepared, generally with



Above and below: Single-hand pendant watch signed Goullons à Paris, circa 1640. The Blois school enamels, possibly by Christophe Morlière, depict “The Virgin and Child” and “The Adoration of the Christ Child in the Manger” after engravings by Simon Vouet. Diam. 68 mm.



a ground of white enamel in the case of scenes with many colors.

For scenes painted in *grisaille*, the ground was usually prepared with black enamel, which in turn was covered with tin oxides (white enamel). This could also be reversed, preparing a white enamel base, covered with black, depending if the desired effect was to be a light or dark tonality. The design was executed with a sort of small rake which removed the oxide from the design, thereby leaving the various figures in relief, the desired details within the same color range.

Once the design was completed, the piece was placed in the oven, or kiln. For scenes in *camaieu*, the background was generally painted brown, reminiscent of sanguine drawings.

This technique is called “painted enamel” (and is not to be confused with the technique of painting on enamel which we will discuss later) because of the manner in which the oxides are applied, which is similar to the technique used in monochrome painting.

As I mentioned in the preceding “Vox”, among the artists who specialized in this technique, and who made Limoges’ reputation, were the Limosins, the Penicauds, and the Reymonds.

Toutin's invention revolutionized the "alchemy" of enamel work, bringing it closer to that of oil painting, in which colors are juxtaposed, superimposed, or used in a "pointillistic" fashion, to give volume to a subject. This technique, or rather, this art, is quite rightly called "painting on enamel".

The technique of painting on enamel is extremely complex and difficult, because the object must be fired many times, once for each additional color. The result is superb, with a perfectly smooth surface, unlike objects executed with the Limoges technique, which resulted in an irregular, undulating surface. The effect could be either brilliant or delicate, depending on the placement and choice of colors. The scenes were rendered three-dimensional by means of a natural perspective, created because lighter colors appear to emerge, and darker colors to retreat. With "painted enamels", however, this effect was obtained only

Above and below: 20K gold and painted on enamel pre balance spring, single hand pendant watch signed Simon Hackett, London, circa 1635, with Blois school enamel attributed to Henry Toutin. Diam. 53 mm.

when the figures in the scene were perfectly reduced, thus being more dependent on the optical effect created by the proportions than on the effect of perspective created by the contrasting colors. "Painting on enamel" is thus clearly in no way inferior to oil painting on canvas, with the added "bonus" being that enamel is eternal.

It was in the workshop of the goldsmith Jehan Toutin that the technique of painting on enamel was born. From a family of artisans, born in Châteaudun in 1578, Jehan Toutin subsequently settled in Blois, where he worked as a goldsmith. (Develle found him mentioned in a document from 1604).

After the death of his father, Toutin returned to Châteaudun, where he married Elisabeth Merault in 1609. In addition to his work as a goldsmith, he was famous as an engraver as well; several plaques which bear the punch mark "Chateaudun 1619", preserved in the cabinet des estampes, are attributed to him. Although he remained in his native city, Toutin retained close contacts with Blois, where his brother Josias worked as a goldsmith. In 1622 he moved for some time to Paris, and devoted himself to the decoration of watch cases. In her book "La Montre, des origines au XIX siecle", Catherine Cardinal quotes a very interesting document from 1623: that year, a judgment of the Baillage du Palais de Justice of Paris confirmed and maintained the seizure of a number of "montres et horloges" belonging to Jehan Toutin, master goldsmith. The confiscated goods were to be divided equally between the King and the Garde-Visiteur of the corporation of watchmakers, who had been charged with the confiscation. Raillard, who publishes an excerpt from the sentencing, does not specify who this Garde-Visiteur was, nor does he say whether the confiscated goods ended up in Paris,



both of which seem likely. This important document shows to what point Toutin, several years before he discovered the means of painting on enamel, was involved, not only with the making of watch cases, but also with the commerce of horological pieces, even to the point of trasgressing the law.

The rigid corporate restrictions in vigor placed strict limits on the fabrication and commerce of clocks and watches, and the legal problems cited above probably encouraged Toutin to make a name for himself by some other means, seeking to improve the technique of decoration on enamel, in which he was well-versed.

He succeeded, as is proven by the fame he acquired and by the significant change caused by his invention, not only in the field of horology but also in that of decorative objects and jewelry.

His ingenious painting technique was characterized by a wide range of colors obtained with various oxides, which he vitrified at different temperatures.



It may have been Toutin or one of his many disciples, such as Christophe Morliere, Pierre Chartier, Dubie, or Isaac Gribelin, known as a peintre et orfevre.

The "Journal des Savants" of September 14, 1676, p. 118, announced: "A Frenchman named Toutin, goldsmith in Châteaudun, has succeeded in painting both with ordinary enamels and with transparent ones, and discovered in 1632 the means of painting portraits with transparent and opaque enamels as well-executed as those in oils, and also historical scenes, which have the advantage of possessing a striking brilliance and whose colors never fade."

In the Gazette des Beaux-Arts of May 1893, M. Falize explained it succinctly: "From the beginning of the 17th century, a new type of enamel superseded the enamels of Limoges. Jehan Toutin, rather than modeling in white the copper plaques, and covering them

Above and below: gold and painted on enamel pre balance spring, single hand pendant watch signed Jehan Augier à Paris, circa 1640, with Blois school enamels. The scene depicts "The Holy Family with Palm" after Laurent de la Hyre. Diam. 56 mm.

with colors which tended to be dark, executed perfect miniatures of polychrome enamel on small gold plaques, previously primed with white enamel."

The Abbot Bordas said largely the same thing in his "histoire du Comte de Dunois", explaining the result but not the way in which it was achieved. "Until now, only transparent enamels were known, along with very few opaque colors, such as black and white, rose, and only a handful of others.

Toutin began by painting his works using the technique he knew thoroughly, then devoted himself to painting with non-transparent enamels composed of opaque colors of various types. Thus he was able to execute a multitude of subjects usually inaccessible to traditional enamel painters, those that can be done with oil colors". This explanation makes clear the artistic impact and the change brought about by the technique invented by Toutin. He preferred to work on a 21 or 22 carat gold surface. A preliminary uniform layer of enamel, almost always white and always opaque, was placed on it. This layer served as the background.

The colors which were then superimposed on it stood out against this background, with great strength and brilliancy.

In this way he was able to obtain an extreme precision of line, a great delicacy and absolute uniformity, with no lumps or depressions. This uniformity of the surface lent itself to portraits and jewelry. The Toutin workshop, which also created works on black backgrounds, thus was able to confer status and credibility to the new art, thereby refuting the claim of certain critics of the time, who had complained that the method was only adapted to painting on light backgrounds. From both the decorative and practical points of view, the invention of "painting on enamel"

Thus the highly resistant enamel gave perennity to the scene, with its brilliant colors, which was not the case for the miniatures executed in oil-based paints, with their tendency to fade over time. Whether technique or art, it had become possible for enamel painters to compete with the painters of miniatures on parchment so much in vogue at the time. Toutin was able to achieve with enamel everything that artists working with oil paints could do.

To a certain degree, for works of certain dimensions, this was true for the Limoges enamellers as well, but only for a handful of extremely skilled artists.

The fact that painting on enamel had taken the place of Limoges-type enamels was already known, and is confirmed by another document quoted by Develle, dated 15 February, 1631. In it one learns that Nicolas Lemaindre, Horloger de la Reine, was very well paid for seven watches whose gold cases were *emailles de figures*. The name of the artist who painted the cases is not known.

influenced the style and decorative impact of watches. The "bassine" form was created in order to enhance the spectacular effect of the scenes.

Whether closed or open, this form was called "bassine" because of its curvature, which could be more or less accentuated, and was reminiscent of the curvature of a bowl, or "bassine" in French.

The case featured no angles or junctures, it was smooth, its cover was also meant to be decorated with enamel. Both the inner and the outer surfaces of the cover were painted with subjects related to the main scene of the case back.

Inside were landscapes, countryside scenes, ruins, or gardens, which delighted the watch's owner each time he performed the delicate operation of winding the watch. Artistic subjects of such delicacy, richness, and variety had never been seen before in horology.

It is therefore no wonder that the new art was so well received by a cultivated, rich, and fashionable public.

Among the most remarkable, and, in my opinion highly important, innovations of Toutin (and strangely enough, one of the least talked-about), is the tremendous evolution in the style of watch dials.



The dials used until then, in silvered or gilt metal with incised numbers, or in champlevé enamel, and often difficult to read, were replaced by enamel dials.

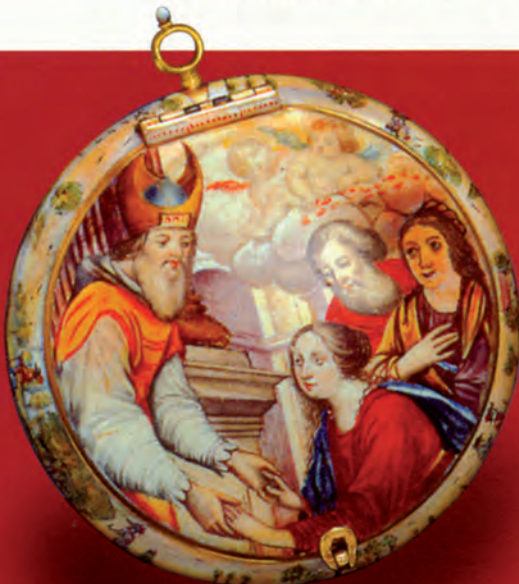
The first of these, enamelled in white with painted numbers, appeared in Blois around 1625.

The hours marked in this fashion so as to stand out from the background were highly legible; in addition, the free space in the center of the dial could be painted with a detail of the case decoration.

This refined touch at once increased the functionality, beauty, and value of the watches, while creating a pleasing overall harmony.

Dials with painted on enamel numbers had evolved technically toward the end of the Louis XV period (1728-1775): the dials were no longer hand-painted, the numbers were applied onto the white enameled plaques by means of serigraphy.

Until they were influenced by photographic procedures at the end of the 19th century, the serigraphic techniques remained unchanged for many years. The graphic design of the dial was influenced by fashions in iconography similar to those which regularly influenced the decoration of the cases.



This page: Large "bassin femée" 20K gold and painted on enamel pendant watch signed F. Baronneau à Paris, circa 1640, with Blois school enamels depicting scenes from the life of the Virgin Mary. The scene on the back of the case, right, is taken from an engraving by Aegidius Rousselet after a painting by G. Stella. Diam. 64 mm.



This stylistic evolution, however, came to its conclusion without radically changing the design of pocket watch dials and later wristwatch dials. It is significant to note that even today, after 370 years of invention and evolution, when a watch manufacturer wants to produce a prestigious limited series of wristwatches, it often designs them with enamel dials. Toutin had many students, among them two of his four sons, who also became enamel painters: Henri (born 1614) and Jean II (1619 – aft. 1660).

No signed works of Jehan Toutin have been found to date, but several pieces are attributable to him. If works of the father or the two sons Henri or Jean are compared to those of their best disciples, it becomes clear that not all their work was of excellent quality. They may have been too busy and successful to devote a great deal of time to all their commissions, and the quality of the painting occasionally suffered.

Many of their works feature pictorially static scenes, with few colors and in which white predominates. The profiles of the figures are outlined in black to accentuate the contrast with the rest of the design. These were techniques that the most reputed of Blois' "painters on enamel" did not use. This was the name



that was used in Blois to define these artists. The works of the Toutins can be defined in terms of the effects they produce, as compared with the works of Morlière, *peintre tous genre*, Gribelin, who specialized in portraits, Charrier who excelled in floral subjects, and Robert Vauquer, student of Morlière, the best of the painters of mythological or religious scenes.

The latter painted superb scenes, among the best executed in the "mannerist" style. It has been said, though it remains to be proven, that Jean Petitot and Jacques Bordier, the famous Genevese miniaturists, learned the art of painting on enamel in the workshop of Jehan Toutin. Toutin's invention fascinated all the aristocratic courts and upper classes of Europe.

The *montre d'art de Blois* and the jewelry and objects created in these enamels excited the aristocracy of the continent, creating a new fashion which in turn encouraged the rise of new artists and new techniques.

The fashion of "painting on enamel" spread rapidly, being particularly appreciated in Augsburg, Germany, where the horological industry flourished.

In Italy, and especially in Sicily, the Bruno family of Messina, goldsmiths over several generations, applied

Above: Large 20K gold and painted on enamel pre balance spring, single hand "bassine fermée" pendant watch signed Auguste Bretonneau à Paris, circa 1640.

The painted on enamel scenes are attributed to Isaac Gribelin and represent St. John the Baptist and a lamb with a cross and a ribbon inscribed "Ecce agnus dei", and King David playing his harp. Diam. 65 mm.



Below: 20K gold and enamel "bassine fermée" watch signed Dennis Champion à Paris, circa 1660, with enamels attributable to Robert Vauquer. They depict scenes from the story of "Theagenes and Chariclea" from the "Aethiopica" by Heliodorus of Emesa based on a series of roundels painted in oil on copper by Charles Poerson (1609-1667). Diam. 49,5 mm.



This page and facing page , bottom left: Large 20K gold and painted on enamel single-hand pendant watch with "bassine fermée" case, signed Johan Oldnburg, Hamburg, circa 1650.

The enamel scenes, executed in Germany but influenced by the Blois school, depict Peace and

the seven Cardinal Virtues: the front cover shows the alliance between Peace and Justice; the inside cover Fortitude and Wisdom; the back cover an allegory of Charity; and inside the back, Hope and Faith.

On the dial is Temperance pouring wine into a goblet. Diam. 62 mm.

this new technique to the decoration of jewelry and goldsmith work. It was much appreciated in Spain, where the Aragonese domination of the island encouraged commerce with the Iberians.

One of the Brunos in particular, Giuseppo, was a remarkable "painter on enamel". This is proven by the exquisitely decorated case of a pendant watch, (facing page, above right) entirely painted on enamel. This piece, one of the oldest known to the present day, was made not in Blois, but in Sicily. Its cover figures the port of Messina. This piece, executed with exceptional bravura, is today in the Patek Philippe Museum. The watch exemplifies the finest work utilizing painting on enamel, and not only the painting on the relatively flat surface of the top and bottom of the case (which is very slightly curved), but also painting on the relief technique, in the (*ronde bosse*) or (*rehaussé*) work. This refers to the "rounded" or scalloped enamel of the same technique. He has decorated the outer borders of the case with a motif of intertwined painted on enamel flowers. This motif, which was later to be one of Bruno's favorites, was used to decorate the works of goldsmithery and jewelry made in 17th century Sicily.

The "rehaussé" enamel decorating the case band was also destined to hide the juncture between the bottom plaque and the band. This method of assembly was often adopted by first generation case painters, so that the case would not become deformed during its various firings.

It is evident that the knowledge and techniques of the time did not allow all goldsmiths to make a perfect "bassine" case of medium to large size, all in one piece. This characteristic can be seen in the work of the Blois artists Morlière and Vauquer, and in the work of German artists until the third quarter of the 17th century.

Painting on enamel in Germany was influenced by the evolution of the art in France. Many of the watches sold in Europe had cases made in Blois or Paris. This supremacy lasted until French production declined, which coincided with the commercial success of Genevan products. Another of the causes of this decline was no doubt the various *lois somptuaires* imposed by Louis XIV, which forbade the making of luxury objects in precious metals. These laws imposed severe limits on the expansion of goldsmith

20K gold and enamel
 "bassine fermée" pendant
 watch decorated with
 scenes from the lives of
 St. Francis of Paola and
 the harbor of Messina.

The enamels are signed
 by Giuseppe Bruno, a fa-
 mous goldsmith and pain-
 ter on enamel working in
 Messina. Diam 47 mm.



work in France, and consequently painting on enamel as well.

In Germany certain artists have left us highly important works of painting on enamel, made in Augsburg or Nuremberg.

These, always of the "bassine" type, were more massive and thicker than the French ones. Some were form watches (see the sale "Antiquorum in Love", Nov. 1997), some had scenes painted on all four parts of the case. Mythological, religious, historical, and philosophical scenes then in fashion often celebrated the virtues of the ideal woman (see pp. 32-33).

The colors, made with metallic oxides, were probably the artist's most carefully guarded secret. This can be deduced from the fact that no two artists were able to achieve similar tones. When vitrified, these colors differed from those of the French school, the German school resulting in much more intense colors, creating scenes which were perhaps more spectacular, but certainly less elegant. When French enamels are compared with German ones, it becomes clear that it was not pictorial skill which was lacking, but rather the diverse tastes of the public for whom the scenes were

created. Many experts are reluctant to pronounce certain painted on enamel cases housing German movements as being of German origin. It is true that often the most famous watchmakers of Hamburg or Berlin ordered cases for their movements in France.

It is also certain that goldsmith work and painting on enamel were highly developed in central Europe, and that the followers of Durer were certainly not lacking in pictorial skill. In Germany, great progress had been made in the art of producing dials with painted numbers, and since the "alchemy" of the painting was the same there, it is certainly possible that the art of decorating cases in painting on enamel had reached similar levels!

Another characteristic which often distinguished the German cases from French ones, and later from Genevan ones, was the type of metal used for the support. To my knowledge, it is very rare to find Blois or Geneva pieces painted on enamel on silver, whereas this is fairly common in German works.



*20K gold garnet scallop-shaped pendant watch with painted on enamel dial, signed Wilhelm Peffenhauser Augsburg, circa 1640.
Dim. 42 x 22 mm.*

*20K gold and enamel diamond-set pre balance spring watch in the form of a heart, signed Johann Martin Augsporg, circa 1675. The painted on enamel scene on the back depicts the Madonna and Child with Saint Elizabeth and the infant St. John the Baptist, after a painting by Giulio Romano.
Dim. 42 x 33 mm.*



In addition to the masterpieces created for a sophisticated and demanding clientele, many pieces were intended-- even in Geneva-- for a much less exacting public. These pieces were less costly and were "painted on enamel" on copper. Executed from the late 17th century to approximately 1730, they were mainly intended for Dutch, Spanish, and Italian markets.

After about 1670, the "bassine" form pendant watch, even in smaller dimensions, was produced in small quantities and only for watches of very high quality.

This form, which was fashionable for over a half century, was abandoned in favor of a new type of watch. Much rounder, this watch's large dial was more legible, a fact which was to revolutionize its use in the future. This watch was no longer intended to be worn as a pendant, but at the waist or in the pocket, as the *montre oignon*.

The pocket watch was to know a very rapid commercial development, and not just in France. Its popularity was due in part to its being fitted with a balance spring, invented in 1675 by Christian Huyghens (1629 -1695), and subsequently adapted to watches.



20K gold and painted on enamel crucifix watch signed Johannes van Ceuken Hague, circa 1680. The finely painted on enamel scenes of the passion and the crucifixion, are by Pierre Huaud the father. Dim. 56 x 41 mm.

This invention afforded a surprising precision, along with a great sturdiness which was due to the size of the watch.

The grand era of the Blois enamels ended with this new fashion. Most of the new watches were no longer designed as a suspended jewel, highly decorated for the world to see, but hidden away in a pocket, forfeiting its decorative significance. It had become a practical instrument used for the measuring of time. However, this discreet trend will not dominate for long two generations later will bring the return of the highly visible, decorative fashion accessory, known as the chatelaine watch. With the chatelaine watch, we will see the return of enamels in all forms and in all of their splendor.



The end of the history of painting on enamel, with the advent and supremacy of works created in Geneva, will appear in the next Vox.