Papier-mâché tiles in Catalan Modernista architecture

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Abstract

This paper presents one of the most unusual techniques identified in the study of Catalan Modernista architecture: the cladding of walls and ceilings with papier-mâché tiles produced by the Hermenegild Miralles firm. These tiles are similar in appearance to Valencian ceramic tiles, from which they took their designs and surface finishes. The company's catalogue included a full range of finishes based on contemporary experiments with glazed and enamelled ceramics, such as golden hues, reliefs and incisions.

The product catalogue claimed that the papier-mâché tiles were patented, so the technique was closely linked to the firm that marketed it. As far as we know, the tiles were on the market for a rather short time: the catalogue which we have discovered dates from 1894 and the latest examples of the tiles' use are from 1905. We have found them in works by Antoni Gaudí and Josep Puig i Cadafalch, among others.

Because of the importance of the buildings in which these tiles were used and the architects who designed them, we consider that this was not a one-off invention but rather one that, for a certain period of time, offered rich formal possibilities and was simple to install. The new product met a demand for sensory expression and attractive cladding materials. It was inexpensive, lightweight and easily mouldable, so it allowed daring and highly expressive solutions that were affordable for more people.

Introduction

Hermenegild Miralles was a bookbinder with a graphic arts workshop. In 1892 he decided to produce papier-mâché tiles that he had patented. From today's perspective, Miralles' proposal could appear strange or anecdotal, but if one considers it in context, it can be understood why a material like this was completely feasible in the interiors of turn-of-the-century buildings, not only from the manufacturer's standpoint but also from those of the architects and of the customers themselves. Accordingly, this paper seeks, firstly, to present the role of late 19th century interior claddings in context. Secondly, it will describe the formal characteristics and materials of Miralles' tiles and the special features of their installation process. Lastly, it will give some examples of how this material was perfectly suited to the demands set for interiors at that time.

The importance of interiors at the turn of the century

Catalan architecture at the turn of the 19th and 20th centuries, like much of the architecture designed in the rest of Europe, devoted special attention to interiors. These were spaces in which new ideas were tested - ideas resulting from experimentation that drew from highly diverse sources of inspiration, giving rise to a new modern language (which is precisely why it was qualified as modernist). As of the year 1900, these ideas would become increasingly novel. At the same time, however, depending on the purpose or function of the room involved, the interiors reflected the use of conventional or exotic stylistic languages that were not an end in themselves but rather aimed to help define the character of the room and were consequently of expressive value. Historical styles were used in some rooms with greater or lesser freedom because the aim was to enhance the rooms' expressive capacity.

At the same time, a key feature of these interiors was their sensory quality. Indeed, this effect had become exceptionally intense at that time, having acquired a truly explosive power. This sensory richness was provided by claddings, with their chromatic and luminous interplays. In some interiors colour was expressed through finishes or media of a highly diverse nature, including different surface treatments and changing luminosity. Taken as a whole, these features created a spectacle of great chromatic wealth and a variable perception of colour, with reflections and shining effects, and sparks of light that gave a unique quality to each space. The chromatic intensity of these interiors also stemmed from the great variety of materials used, which provided rich and changing colours and contrasts.

Chromatic perception was strengthened by the interplay of light. Surfaces clad with velvets, iridescent fabrics or glossy finishes were quite common. It should also be added that an integral part of the richness of the rooms was the highly intense use of tactile resources, such as real or illusory reliefs that were achieved through the use of embossing and textured claddings.
The drawing describes the installation process of tiles © Photo: Biblioteca de Catalunya.

This sensory quality could also be provided by the perception of movement derived from ornamental forms or the apparently random or casual arrangement of furniture. Also common was the use of large-leaved plants, which are of course living beings that grow, change and move with the air, increasing the perception of movement and of a flowing space. Likewise, a large number of objects were frequently arranged in a state of studied disorder, lending a highly dynamic appearance to interiors in this way.

The expressive and sensory wealth described above depended on the availability of appropriate material resources. The aforementioned effects could only be achieved if a) there was an industry that provided the necessary materials, such as floorings, claddings, wallpaper, fabrics, etc.; b) if the traditional techniques were revitalised, including such resources as stucco, sgraffito, stained glass and wrought iron, among others, so that they could meet the architectural demands of the late 19th century; and lastly, c) if there was a range of artists and craftsmen who understood the formal demands and took an active part in their renewal.

Likewise, it should be kept in mind that the wish to enjoy the expressive and sensory effects of interiors as described above was not exclusively limited to the upper classes at that time. It was also shared by the petite and moyenne bourgeoisie, liberal professionals, intellectuals and artists. The quality, values and satisfaction provided by rooms were very important factors for the upper and middle classes. The means at their disposal marked the difference between them. The homes of the haute bourgeoisie contained exceptional, exclusive items, while those of the petite and moyenne bourgeoisie featured standardised, industrially produced objects.

In the final decades of the 19th century, industry improved its performance with the introduction of furnaces, presses, extruders, etc. Industrial processes had been undergoing development throughout that period, leading to the appearance of new claddings and to the updating of existing ones. Bringing to bear their ingenuity and their capacity to experiment and to find novelties and new patents abroad, some industrialists developed new architectural materials and techniques. These produced results of extraordinary richness that were, moreover, accessible to more people. The papier-mâché tiles patented by Hermenegild Miralles should be considered within this context. These tiles, as will be seen, could provide claddings that were either clearly inspired by historical sources or reflected newer languages, and all of them had great sensory capacity.

The papier-mâché tiles of Hermenegild Miralles

The papier-mâché tiles were mainly intended for wall claddings and wainscots in interiors although, as will be seen, they were also used to clad ceilings and the spaces between beams. In appearance they were similar to Valencian ceramic tiles and their patterns and surface finishes were based on ceramic tile models. Papier-mâché, a low-cost, lightweight and easily moulded material, lent itself well to daring and highly expressive solutions that were also accessible to a broader range of people.

To get a better idea of this material, it would be of interest to present the information that has been gathered from the publications and press advertisements issued by the firm Hermenegild Miralles itself. In 1894 it published the catalogue Azulejos cartón-piedra. Patente de invención en España y el extranjero. Nuevo elemento para la decoración. Arrimaderos, frisos, artesonados, muebles, etc., etc. No se rompen, son ligeros, impermeables y baratos (Papier-mâché tiles. Invention patent in Spain and abroad. New decorative element. Wainscots,
friezes, coffering, furniture, etc. Unbreakable, lightweight, waterproof and economical). The cover was designed by Josep Pascó (1855-1910), who was a regular designer for one of the most emblematic firms in Catalonia at that time, Casa Escofet, which manufactured hydraulic floor tiles.

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Just as the catalogue stated, the papier-mâché tiles were a material made of three different types of cardboard, closely bonded under hydraulic pressure. Both sides of each piece and its edges were varnished to achieve a glossy appearance and to waterproof the item. The majority of tiles produced measured 20 x 20 cm. Thanks to the information obtained by Quiney (2005) from Miralles’ various patents, we are acquainted with some of the aspects of the production process, which help to provide a better knowledge of the material. This information is transcribed below:

“The patterns are printed on paper by means of photography, lithography, phototyping or other processes, with the use of greasy inks; transfer can also be carried out by decalcomania. The body of the tile is made of cardboard, which is cut to the appropriate dimensions; then, once carefully squared, it is submerged in a hot mixture of asphalt, spirit of turpentine and rubber dissolved in benzene. On removing the tiles from the bath, they are allowed to dry in a suitably adjusted oven.”

Wainscots were the most common application, and for this reason many of the models in the catalogue were conceived for this purpose, although it also includes tiles for ornamental borders and friezes. The firm also advertised the possibility of producing some pieces expressly for the individual customer. The installation process is described in detail in the catalogue and a drawing is included to make it easier to understand.

To install a papier-mâché wainscot, the first thing to do was to attach a horizontal wooden moulding at a height of 20 centimetres above the floor, and another moulding identical to the first one, at the top of the planned wainscot. Both mouldings should have a small recess to accommodate the vertical slats to which the papier-mâché tiles would be nailed. Two types of slats were used: one, measuring about 2.4 centimetres, was to form the base for the vertical joints of the tiles, while the other type, measuring 1.4 centimetres, was designed to support the centre of the tiles and prevent them from sagging. Both the tiles and the slats were attached with nails. Each tile was attached with eight nails – three on each side and two in the middle. The tiles were placed into position, starting at one corner, a vertical incision being made on their backs so that they could be bent to form the edge. According to the firm, any carpenter with a bit of skill could install them. In the skirting board at the bottom, the 20-centimetre space that was left beneath the moulding was painted with glue-size paint in a deep colour so that, just as is stated in the catalogue, it could be scrubbed without damaging the pieces.

The advantages adduced by the firm in comparison to the ceramic wainscots with which the papier-mâché tiles competed were the latter’s ease and speed of installation, in addition to the fact that they were unbreakable and lightweight (120-150 grammes per tile). This reduced the cost of carriage and prevented damage occurring in transit, while allowing them to be removed and re-installed. Furthermore, their price was low in relation to their superb appearance. The fact that these tiles were an economical material was strongly emphasised by both the manufacturer (who stated on the catalogue cover that these tiles were “lightweight, waterproof and cheap”) and in the reviews published on some of the exhibitions in which Casa Miralles took part. Moreover, according to the catalogue, the tiles could be purchased at ordinary shops. On the last page of the catalogue it is stated that the tiles could be found at “the leading wallpaper retailers, which can carry out the installation, give details of prices and provide any information that may be requested”.

The models appearing in the only catalogue known to us, dating from 1894, are clearly representative of the ornamental forms produced in Catalonia in the 1890s. They are quite complex designs, ranging from those inspired by late Medieval forms (as with the selfsame cover of the catalogue signed by
the decorator Josep Pascó), to patterns of Oriental inspiration, giving special importance to the designs inspired by the Alhambra in Granada. There is an abundance of geometrical and enchained designs and patterns of Mudejar inspiration. As mentioned, they are models that clearly draw their inspiration from the ceramic tradition from which they also took their finishes, such as metallic reflections, ridged patterns, etc.

Thanks to the information obtained from Quiney (2005), it is known that the artist Carles Llobet i Busquets (1857-1927), who came from the field of stage scenery, began to cooperate with Casa Miralles in 1896. He drew and painted the lithography designs, for the firm, becoming draughtsman-director in 1897. This fact is of great significance as it helps us to understand the formal evolution of Casa Miralles’ designs, which came to be used in important and even renowned projects in the early 20th century, as mentioned below.

Interiors clad with papier-mâché tiles

Casa Miralles issued a publication presenting the most emblematic works in which its materials had been installed. It was produced to boost the product's prestige. It shows that there were papier-mâché wainscots at the Gran Hotel Colón, designed by the architect Andreu Audet in 1902, at the Hotel Terminus, by Josep Puig i Cadafalch, at the Café Torino, on the ceiling of the main hall by Puig i Cadafalch and also on the ceiling of a room by Antoni Gaudi (1902); and lastly, at the Palace of the Marqués of Alfarràs. Moreover, the use of papier-mâché tiles is also documented in different rooms of the Casa Vicens, designed by Antoni Gaudi (1852-1926). We will now look at some of these interiors to determine the links between the products created by Casa Miralles and the values inherent to the Catalan architecture of the time. The varied examples presented by the rooms that have been identified reflect, some of the ways in which interiors were understood at the turn of the century, as discussed above.

Firstly, the rooms in the Palace of the Marqués of Alfarràs clearly reflect Islamic inspiration, reproducing interior spaces based on the architecture of Al-Andalus.

This is the same interior design proposed for the Miralles company stand at the 1900 Paris Exposition. It is known that this space was designed by Carles Llobet and it may therefore be assumed that he also designed the Alfarràs Palace's interior and the project for a hotel dining room presented in the publication discussed here. These interiors feature some of the skirting boards of Arabic inspiration that appear in the catalogue of 1894 and were also displayed at the 1900 Exposition in addition to many other elements, such as ornamental borders, friezes, etc. The pictures of the Alfarràs Palace that have been preserved demonstrate the evocative intention behind these interiors, whereby the claddings express an exotic culture considered very attractive at that time. The chosen historical style helped to define the character of the rooms and provided great chromatic and luminous richness. Geometrical interplays, ornamental borders and the polychromy characteristic of Islamic architecture are to be found in abundance in the wainscots, the wall claddings and the ceilings which, together with carpets, tapestries and other objects, provide great sensory richness.

The other interiors appearing in the publication reflect the highly diverse sources of inspiration characteristic of Modernista architecture. They include the halls and guest rooms of the Gran Hotel Colón and the Hotel Terminus designed by Andreu Audet (1868-1938) and by Josep Puig i Cadafalch (1867-1956), respectively, as well as the main room of the Café Torino and its decorative designs, also by Puig i Cadafalch. In these interiors, the historical references have been left aside and the sinuous shapes of the claddings and the furniture are new forms inspired by the most international elements of Art Nouveau. The sensory effect imparted by the floor coverings, walls, garlands, ceilings and many other objects are a source of pleasure in themselves, generated through a new language inspired by shapes taken from nature. The claddings produced by the Miralles Company express this new language to perfection, surpassing even the examples seen in the catalogue. The walls in all these interiors were designed to include a skirting board, a background wall and an ornamental border. This may be seen in a great many interiors dating from this period, in which this three-part arrangement shows that the wall is understood as a cladding and has lost any tectonic reference. Hence, the cladding materials supplied by companies, as in this case the Miralles tiles, drew their inspiration from textiles.

Lastly, mention should be made of the interiors of the Casa Vicens, designed by Antoni Gaudi. Here a unique use is made of the papier-mâché tiles since they are for an isolated project
which, according to the dates of the work carried out on this house, is prior to the time when Miralles’ claddings began to be commercialised. The house project dates from 1878, the work began in 1883 and was completed in 1885, 1886 or 1889, according to the various studies conducted on the undertaking. Be that as it may, regardless of the completion date, it may be affirmed that the interiors were fitted before the first Miralles patent, which dates from 1892. This is an interesting fact, since it could mean that Hermenegild Miralles and Antoni Gaudí tested the new material together and experimented with its possibilities before it came onto the market. Indeed, Miralles and Gaudí maintained a relationship that went beyond the specific project of the Casa Vicens, as is shown by the fact that Antoni Gaudí designed the wall surrounding Miralles’ property in Sarrià.

At the Casa Vicens, three rooms feature papier-mâché claddings: they are found on the ceilings and specifically in the spaces between the beams of the dining room and a first-floor bedroom, and on the walls of the smoking room. The walls of the dining room and the bedroom feature two continuous strips that reflect their conception as a cladding (derived from a textile design), while the beamed ceilings, unrelated to the wall, are more or less freely inspired by traditional architecture. The smoking room, for its part, is a very clear example of the evocative role of exotic and far-off styles and their expressive capacity. Indeed, these rooms are clearly a precedent of the examples which, as we have seen, were subsequently to be created.

On the basis of an unpublished study by Xavier Bizar (1998), we have been able to delve deeper into some of the specific aspects of the arrangement and installation of the papier-mâché tiles in these rooms. In the spaces between the beams in the bedroom there are some papier-mâché plaques with a design inspired by plant forms. This is apparently identical to that found in the dining room but, on studying the arrangement of the latter, some notable differences may be observed. The design of the dining room ceiling is intended to produce a visual illusion through the overlay of two materials. Indeed, under the appearance of a continuous design of elements featuring cherry leaves and cherries executed in relief, what was really done was to resolve the space between the beams with ceramic pieces, which is the same solution one finds in certain other rooms. Leaves and cherries of compressed cardboard were then placed on top of them.

In the smoking room, the Miralles tiles are to be found on the upper section of the wall, above the ceramic wainscots. Their lower section rests on a horizontal wooden slat that follows the wainscots. The tiles are nailed to a set of vertical slats (a system also found in the 1894 catalogue). In this case, however, the pieces are arranged in a singular fashion, being installed diagonally, so that the joint does not coincide with the slats.

The wall of the smoking room recalls another of Gaudí’s works, which was to be carried out years later: the Café Torino or, more specifically, its Arab room, since the main hall, as previously mentioned, was designed by Puig i Cadafalch. The ceiling of this room, which was clad with papier-mâché tiles, showed close affinities with the wall at the Casa Vicens. Both were composed of a single piece in relief, which is repeated to provide a sense of continuity that confuses the perception of boundaries and, in the case of the room at the Café Torino, it is carried through onto the walls themselves. This is a formal solution that Gaudí would also apply to the hydraulic floor tiles intended for the Casa Batlló and finally installed at the Casa Milà. Years later, in 1908, these same hydraulic tiles would be produced for the general public by the firm Escofet. They are another example of an industrial material which, like the Miralles tiles, offered suitable formal qualities to meet the expectations of the turn-of-the-century architecture and was accessible to a much wider public.

Document sources:


Bibliographical references:


Quiney, A. (2005) Hermenegildo Miralles, arts gràfiques i enquadernació (Barcelona: Biblioteca de Catalunya)


1 Thanks to the study carried out by Aitor Quiney, it is known that the invention patent is no 12,868, applied for on 9 January 1892. This patent would be supplemented and further developed in new patents applied for in 1899 and 1900.

2 This is the most widely commented example in literature. García Espuche, A. El Quadrat d’Or. Centre de la Barcelona modernista, p. 293. Casanova, R. “Gaudí i els seus col·laboradors: artistes i industrials a l’entorn de 1900”, op. cit. p. 261. SALA, T. M. “Interior de Gaudí”, op. cit. p. 40.

3 It is not known with certainty whether this is the palace of the Marquis of Alfarràs at Carrer Ample, which is no longer extant, or another palace of the marquis located in Horta. The gardens of the latter palace have lent the name of Labyrinth to the whole property. See: Sobrequés i Callíco, Jaume (dir.) Historia de Barcelona. Barcelona, Enciclopèdia Catalana, Vol. 8. “El desplegament de la ciutat manufacturera”, p. 173.