

Maribel Rosselló

Universitat Politècnica de Catalunya (UPC)

maribel.rossello@upc.edu

PAPIER-MÂCHÉ TILES IN CATALAN MODERNISTA ARCHITECTURE

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 firm Hermenegild Miralles. 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 works 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 simple installation. 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. As seen from today, 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 the 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 in context the role of interior claddings in the late 19th century. Secondly, it will describe the formal characteristics and materials of Miralles' tiles and the special features of their installation, and lastly it will give some examples of how this material was perfectly suited to the demands set for interiors at that time.

Importance of interiors at the turn of the century

The Catalan architecture of the turn from the 19th to the 20th century, like a large part of the architecture designed in the rest of Europe, devoted special attention to interiors. These were interiors in which new ideas were tested – ideas resulting from experimentation that drew from highly diverse inspirations, giving rise to a new modern language (which is precisely why it was qualified as *modernist*). As from the year 1900, the novelty of these ideas would grow in intensity. At the same time, however, depending on the use or function of the room involved, the interiors were resolved by the use of conventional or exotic stylistic languages that were not an end in themselves but rather aimed to help to 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 what was sought was to enhance the rooms' expressive capacity.

At the same time, sensoriness is also a key feature of these interiors. Indeed, it had become exceptionally intense at that time, coming to acquire 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 highly diverse nature, including different surface treatments and changing luminosity. Taken as a whole, these features led to a great chromatic wealth and a variable perception of colour, with reflections and shines, and with sparks of light that singularized each space. The chromatic intensity also stemmed from the great variety of materials, which provided rich and changing colours and contrasts.

The 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 by means of embossing and textured claddings.

This sensoriness could also be provided by the perception of movement derived from ornamental forms or the arrangement of furniture in a way that appeared casual or random. 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 studied disorder, lending a very dynamic appearance to interiors in this way.

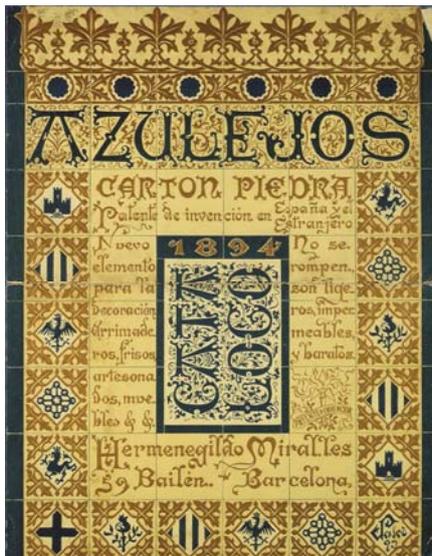
This expressive and sensory wealth described above depended on the availability of appropriate material resources. The aforementioned effects could only be achieved if *a*) there was an industry that provided the necessary materials, such as floorings, claddings, wallpaper, fabrics, etc.; *b*) if the 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 capacity of interiors as has been described above was not limited to the upper classes alone at that time. The *petite* and *moyenne bourgeoisie*, liberal professionals, intellectuals and artists also wished to participate in it. The quality, values and satisfactions provided by rooms were very important for the upper and middle classes. The available means marked the difference between them. The means were exceptional and singular in the homes of the *haute bourgeoisie*, while they were systematized through industrial supply in the *petite* and *moyenne bourgeoisies'* homes.

In the final decades of the 19th century, industry improved its processes (furnaces, presses, extruders, etc.), which had been undergoing development throughout the course of that period. This new situation led 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 made new materials and techniques available to architecture, allowing the achievement of results of extraordinary richness that were moreover accessible for 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 of clearly historical inspiration or claddings that reflected newer languages, all of them had a great sensory capacity.

The papier-mâché tiles of Hermenegild Miralles

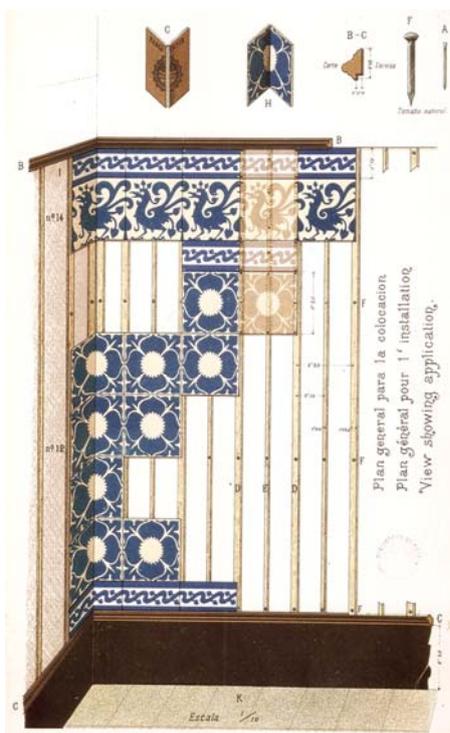
The papier-mâché tiles were mainly intended for wall claddings and wainscots in interiors although, just as will be seen, they were also used to clad ceilings and the space between beams. In appearance they were similar to Valencian ceramic tiles and their patterns and surface finishes were based on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



1. The cover of the catalogue, 1894 (photo: Biblioteca de Catalunya).

and its edges were varnished to achieve a glossy appearance and to waterproof it. Tiles of 20 x 20 cm were most commonly produced. 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.”¹



2. The drawing describes the installation process of tiles (photo: Biblioteca de Catalunya).

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 decoration article. 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 the Catalonia of those times, Casa Escofet, which manufactured hydraulic floor tiles.

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

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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 customer.

The installation process is described in detail in the catalogue and a drawing is included to make it easier to understand the process.

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 conceived 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 begin to be installed at one corner, making a vertical incision on their back 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 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; the fact that they were unbreakable and lightweight (120-150 grammes per tile), reducing the cost of carriage and preventing damage under transport while allowing them to be removed and re-installed; and their low price in relation to their excellent appearance. The fact that these tiles were an economical material was strongly emphasized by both the manufacturer (stating on the cover of the catalogue 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 shops selling wallpaper, which can do the installation, give prices and provide any information that may be requested".

The models appearing in the only catalogue that is known to us, 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 was the selfsame cover of the catalogue signed by the decorator Josep Pascó), to patterns of Oriental inspiration, lending a special importance to the designs inspired by the Alhambra of Granada. There is an abundance of geometrical and enchainéd 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.



3. Several models from the catalogue 1894 (photo: Biblioteca de Catalunya).

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, for which he drew and painted the lithography projects, becoming draughtsman-director in 1897. This fact is of great importance for an understanding of 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. This publication 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 the year 1902; at the Hotel Terminus, by Josep Puig i Cadafalch (1903); at the Café Torino, in the ceiling of the main hall by Puig i Cadafalch and also in the ceiling of an interior room by Antoni Gaudí (1902);² and lastly, at the Palace of the Marquis of Alfarràs.³ Moreover, the use of papier-mâché tiles is also documented in different rooms of the Casa Vicens, designed by Antoni Gaudí (1852-1926).



4. Interior of Palace of Marquis of Alfarràs, Barcelona. It's a great example of papier-mâché tiles (photo: Biblioteca de Catalunya).

We will now look at some of these interiors to determine the ties between the products of Casa Miralles and the values inherent to the Catalan architecture of the times. The interiors that have been identified reflect, through diverse solutions, some of the ways of understanding interiors at the turn of the century, as discussed above.

Firstly, the interiors of the Palace of the Marquis of Alfarràs are rooms of clearly Islamic inspiration which reproduce spaces based on the architecture of Al-Andalus.

This is the same interior solution that is proposed for the stand of the Miralles company at the Paris Exposition of the year 1900. It is known that this space was designed by Carles Llobet and it may therefore be assumed that he was likewise the designer of the Alfarràs Palace's interior and of the project for a hotel dining room that is presented in the publication we are dealing with here. In these interiors one finds some of the skirtings of Arabic inspiration that appear in the catalogue of 1894 and that were also displayed at the Exposition of 1900 in addition to many other elements, such as ornamental borders, friezes, etc. The pictures of the Alfarràs Palace that have been preserved allow one to observe the evocative intention of these interiors, whereby the claddings express an exotic culture that was found to be very attractive at that time. The chosen historical style helped to define the character of the rooms and provided a great chromatic and luminous richness. Geometrical interplays, ornamental borders and 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 a great sensory richness.



5. Interior of Gran Hotel Colón by Adreu Audet. The skirting is made with papier-mâché tiles (photo: Biblioteca de Catalunya).

has been observed in a large part of the interiors from those times, 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, draw their inspiration from textile forms.

Lastly, mention should be made of the interiors of the Casa Vicens, designed by Antoni Gaudí. Here a singular 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 works began in 1883 and they were completed in 1885, 1886 or 1889, according to the various studies conducted on them. 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, together, Hermenegild Miralles and Antoni Gaudí tested the new material and experimented with its possibilities before it came to be commercialised. 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.

The other interiors appearing in the publication are resolved by means of forms of highly diverse inspiration which characterise 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 Cafè Torino and its decoration project, 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 Art Nouveau. The sensoriness imparted by the floor coverings, walls, garlands, ceilings and many other objects are a source of sensory enjoyment in themselves, which they provide by means of a new language inspired by shapes taken from nature. The claddings produced by the Miralles company take up this new language to perfection, even beyond what may be seen in the catalogue. In all these interiors, the walls are resolved on the basis of a skirting, a background wall and an ornamental border, just as



6. Interior of Hotel Terminus by Josep Puig i Cadafalch (photo: Biblioteca de Catalunya).

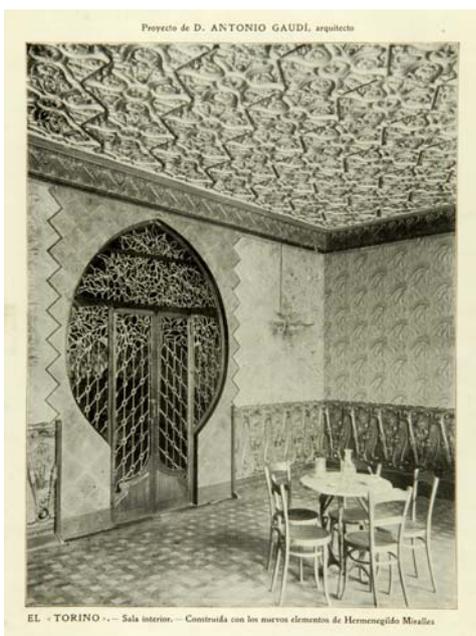


7. Smoking room of Casa Vicens by Antoni Gaudí. The walls are covered with papier-mâché tiles (photo: Arxiu Mas).

arrangement of the latter, some notable differences are observed. The solution of the dining room ceiling seeks to produce a visual illusion through the overlay of two materials. Indeed, under the appearance of a continuous solution of pieces with reliefs of cherry leaves and cherries, what was really done was to resolve the space between the beams with ceramic pieces, which is the same solution one finds in some other rooms, and then leaf sprouts and cherries of compressed cardboard were placed on top of them.

At the Casa Vicens, three rooms feature papier-mâché claddings: 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. Specifically, in the dining room and the bedroom the wall is resolved with two continuous strips that manifest its conception as a cladding (according to a textile conception), while the beamed ceilings, unrelated to the wall, are inspired more or less freely 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 to be subsequently carried out.

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 solution is apparently identical to that found in the dining room but, on studying the



8. Interior room of Café Torino by Antoni Gaudí. The walls are covered with papier-mâché tiles (photo: Biblioteca de Catalunya).

In the smoking room the Miralles tiles are to be found on the upper part of the wall, above the ceramic wainscot. Their bottom part rests on a horizontal wooden slat that follows the wainscot. The tiles are nailed to a set of vertical slats (which is a solution that is also found in the catalogue of 1894). In this case, however, the pieces show a peculiar arrangement since they are installed diagonally, meaning that the joint does not coincide with the slats.

The wall of the smoking room evokes another of Gaudí's works which was to be carried out years later: the Café Torino or, more specifically, its interior 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 resolved with a single piece in relief, which is repeated to provide a continuity that confuses the perception of boundaries and, in the specific case of this room at the Café Torino, it carries onto the walls themselves. This is a formal proposal that Gaudí would also apply to the hydraulic floor tiles that were to be used in the Casa Batlló and that ended up being

installed at the Casa Milà – the same ones that, years later, in 1908, would be produced for the general public by the firm Escofet. These hydraulic tiles 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 that was moreover accessible for a much wider public.

Footnotes

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. CASANOVAS, R. “Gaudí i els seus col·laboradors. Artistes i industrials a l'entorn de 1900”, *op. cit.*, p. 261. SALA, T. M. “Interior(s) 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: SOBREQÜÉS I CALLICÓ, Jaume (dir.): *Història de Barcelona*, Barcelona, Enciclopèdia Catalana, Vol. 5. “El desplegament de la ciutat manufacturera”, p. 173.

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