

Design and structure of decorative wooden flooring sets in manor houses

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Abstract: *Design and Structure of Decorative Wooden Flooring Sets in Manor Houses.* The study presents the sets of historical decorative wooden floorings that have been preserved until today in manor houses in South-eastern Poland. Their design is characterized by drawings of the tiles' (panels') patterns, direction of fibres, kinds of wood as well as the kinds of sections of the components forming the tile design. Moreover, drawings of the interior layout and of the tile placement within the rooms were elaborated. The structure of floors and of the flooring panels was also investigated.

Keywords: flooring, panel, tile, structure, design, manor house

INTRODUCTION

Flooring is a valuable element of antique interiors. Since the baroque era, it was given high aesthetical importance. In Poland it was manufactured mostly of wooden boards. Sometimes tiles were placed on those boards, at first they were placed in parallel to the walls, and afterwards – diagonally. In palaces and castles of South-eastern Poland we may find complex layouts of decorative patterns with rosettes and bordures, made of many different wood species; and in manor houses – simple geometrical motifs made of one or two wood species.

Manor houses changed owners during their history, they were temporarily inhabited, they would fall into ruin and be renovated, losing their original flooring sets [Rozanska, Tomusiak, Beer 2011]. For this reason, the few original flooring sets that have been preserved and that have not been subject to restorative measures are a source of information on the design and structure of decorative antique wooden flooring.

SITE SELECTION

The sets of antique decorative wooden flooring chosen for research come from manor houses in Przewrotne, Tarnowiec, Bieździedza and Falejówka. These manor houses contained complete, preserved sets of wooden flooring that had not been subject to restoration yet. Thanks to that, it was possible to determine the original flooring layers, their structure and manner of preservation.

The ash and pine flooring set of the Przewrotne manor house is the oldest one, probably original, installed at the same time when the building was constructed, about 1823. Complicated relations among the manor house's inhabitants – the fact that at least two families lived there simultaneously – caused numerous changes of the interior layout and damaged the flooring in some of the rooms. The floors that were preserved until today are located in the Hall and in a room next to it in the frontside part of the building, as well as in the gardenside rooms [Dwór Przewrotne (Przewrotne Manor House) 1980, 1984].

Another building included in the research is the manor house in Tarnowiec, dated to the 1830s and, as the previous one, built in the style of Polish late classicism. It includes a preserved set of oak and oak and ash tile floorings within the rooms of the garden side. The

history of the building, as well as the design, structure and state of preservation of the flooring (among others, traces of insect infestation on fragments of the flooring in a room that after the war was used as a grain depot of the municipal cooperative) show that the floors date back to the 1830s [Szczepaniak 2010, Bosak 2004, Dubiel 1994].

In the remaining sites it is more difficult to determine the age of the flooring.

A set of antique oak-pine tile flooring has been preserved in five rooms on the first floor of the manor house in Bieździedza. The fragmentary flooring preserved on the ground floor is made of oak parquet planks. The floors were made before the year 1910, when the building was renovated; however, their design, structure and state of preservation suggest that they may even date back to the end of the 18th century, when the building was modified [Barczyńska, Obrębka, 1975, Reiss 1977, Bosak 2000].

Similarly, in the case of oak floorboards forming a herringbone pattern and of oak tile flooring in the Falejówka manor house, their construction is related to a building modification, referred to with the date “1924” that was preserved on the dormer façade. As the refurbishment involved mostly the adaptation of the attic for bedrooms (the roof was elevated and a wooden knee wall was added to the bricked ground floor), the modifications of the interiors did not affect the rooms on the ground floor. Therefore, the ground floor flooring may be potentially even older and date back to the 19th century. [Bosak 2002, Śnieżyńska-Stolotowa, Stolot 1982].

FLOORING DESIGNS

In the flooring set of the Przewrotne manor house, tile flooring (627x626) with a simple design of frame and filling (Fig. 1) was installed only in some of the rooms – in the Hall and in the room located next to it, on the left. Analogical tile floors appear in the rooms at the extreme end of the gardenside, on the right. They were complemented by parquet planks organised in the herringbone pattern in the representative rooms of the garden side of the building. The square tiles have frames made of ash and the centre made of pine wood. There are interesting differences in the fibre direction of the central elements. In a lateral room on the left side of the Hall, there is a flooring whose tiles have centres filled with two triangular pine elements, with diagonal fibre layout. Moreover, in the Hall, the tile centres are filled with two boards, with fibres placed in parallel to the two sides of the tile. The representative Living Room located on the axis, behind the Hall, was provided with flooring made of parquet planks organised in the herringbone pattern, made of ash wood. The lateral rooms of the gardenside part, on the right side of the Hall, have flooring made of oak parquet planks, with the same size and layout.

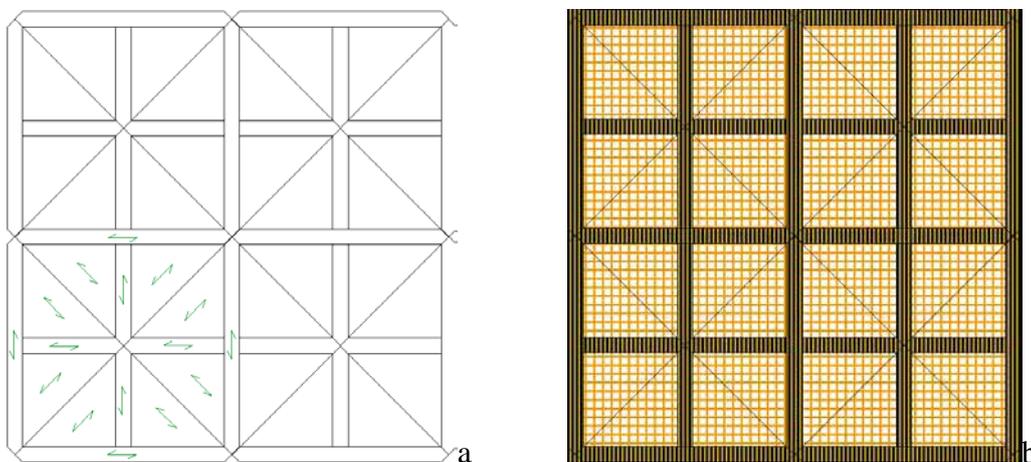


Fig. 1. Tile flooring fragment (4 pieces) from the Przewrotne manor house: a – design with fibre direction, b-wood species (ash-*Fraxinus* sp., pine-*Pinus* sp.)

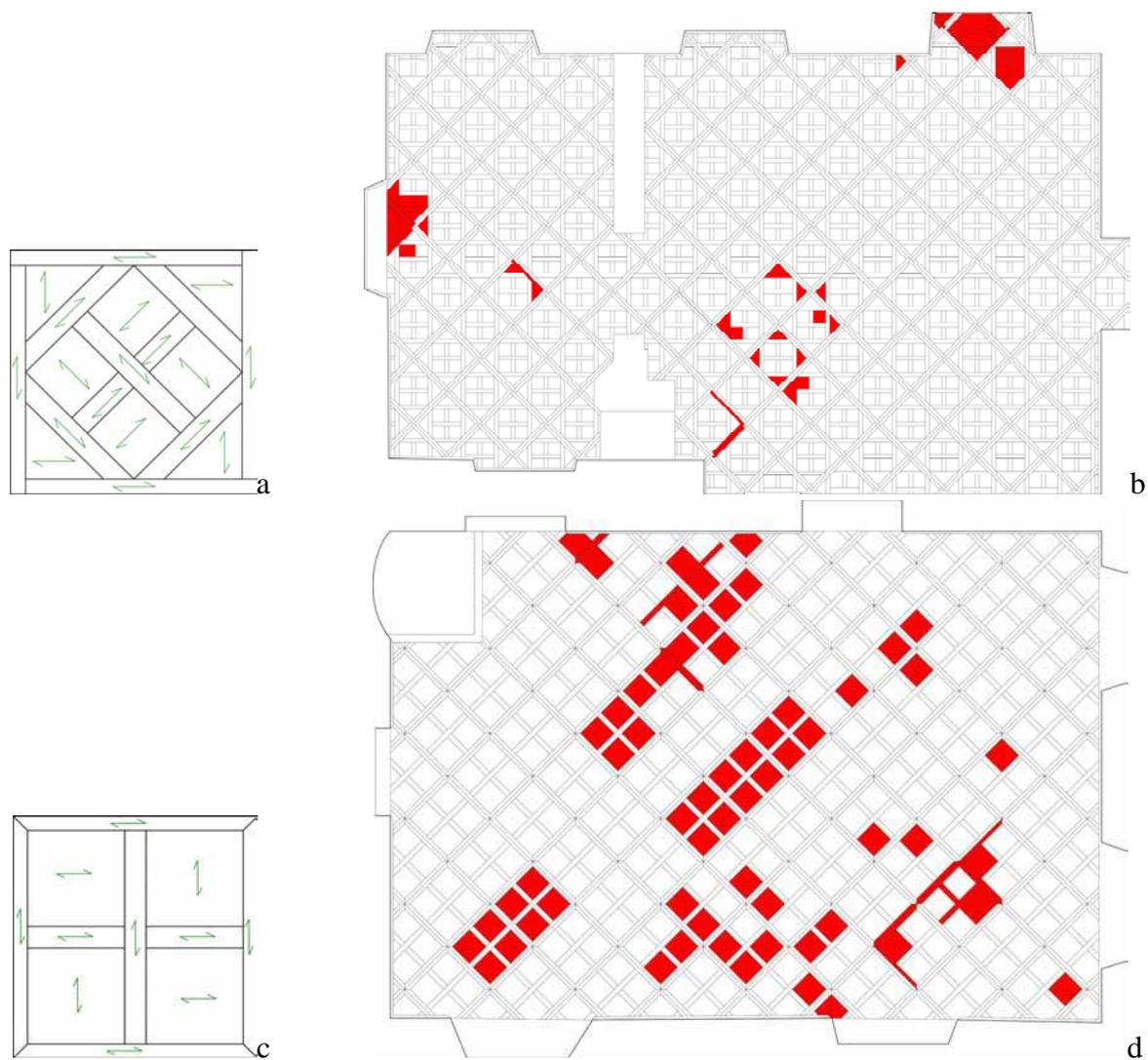


Fig. 2. Tarnowiec manor house: a – tile pattern in the Rooms no 1, 2 and 6 (oak-*Quercus* sp.); b – tile layout and state of tile preservation in Room no 1; c-tile pattern in the Room no 5 (oak- *Quercus* sp., ash-*Fraxinus* sp.); d-tile layout and state of tile preservation in Room no 5

The flooring set from Tarnowiec, consisting of floors from four gardenside rooms and the right corner room of the frontside part, has more varied designs. Rooms no 1 and 2 placed at the left extreme of the gardenside part and Room no 6 at the end of the frontside part on the right, have flooring tiles with the dimensions of 645 x 645mm and Versailles pattern (Fig. 2a). It was inspired by the baroque flooring of the Luis XIV palace in Versailles, consisting of a square frame filled with a square motif oriented diagonally in respect to the frame and divided with battens into four fields. In Tarnowiec, the tiles are placed alternately, rotated by 90 degrees in respect to the adjacent tiles (Fig. 2b). Room no 4 has flooring with the same design and a bit smaller tile dimensions: 580x580mm. Here the tiles are also placed alternately, rotated by 90 degrees. Flooring tiles in the Room no 5, at the extreme end on the right, have a simple design of a oak frame with the centre divided into four ash squares by a oak cross motif (Fig. 2c). These are the biggest of the tiles, with the dimensions: 765 x 765mm. The adjacent tiles are rotated by 90 degrees in respect to one another (Fig. 2d).

The flooring set of Bieździedza has the same tile pattern manufactured in two sizes. Tiles made of oak with the Versailles pattern from the Red Room, have the dimensions of 630x630 mm (Fig. 3b), while the tiles from the Study, the Blue Room, the Chapel and the

Library that have a simpler pattern, 675x675 mm. The frames of the latter tiles and the cross motif are made of oak and their central elements are made of pine wood (Fig. 3a).

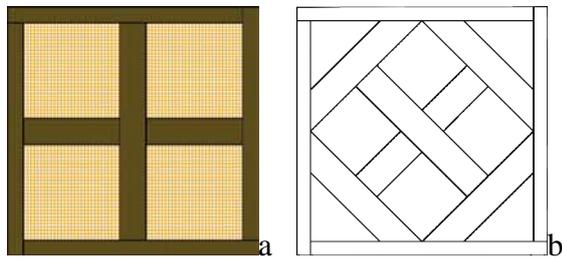


Fig. 3. Bieździedza manor house: a – design and wood species (oak-*Quercus* sp., pine-*Pinus* sp.) of the tile in the Study, Blue Room, Chapel and Library; b –tiles design from the Red Room (oak-*Quercus* sp.)

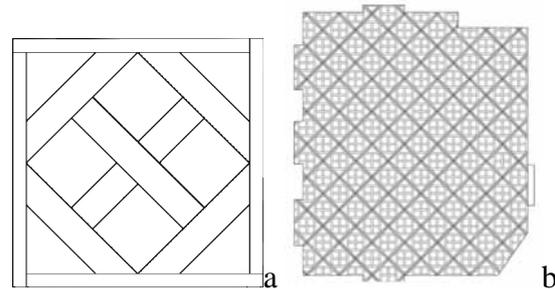


Fig. 4. Falejówka manor house: a-tile design (oak-*Quercus* sp.); b- tile layout within the room

The Falejówka flooring set consists of two rooms with square, decorative tile flooring. The square, geometrical flooring tiles are made of oak wood. They also have the Versailles pattern (Fig. 4) and can be found in two rooms. Those rooms are: the Living Room situated in the gardenside part and a bedroom connected with it and located on its left. The remaining floors in that manor house are made of parquet planks organised in the herringbone pattern.

FLOOR STRUCTURE

The structure of the floors installed on the ground floor was investigated in the Falejówka, Przewrotne and Tarnowiec manor houses. In the Bieździedza manor house, the decorative flooring was placed on the first floor on ceiling beams.-Considering that it is in a very good state, it was impossible to determine its structure precisely.

The flooring of Falejówka and Przewrotne manor houses is placed on ceiling beams that are located alongside the width of the rooms and supported by low, bricked columns, whose section is: 290x290 mm. In this manner, a space below the floor was acquired, 1068 mm high in Falejówka and 290 mm high in Przewrotne, ventilated by little windows located at ground level. The ceiling beams in Przewrotne (dimensions: 210 mm wide x 170 mm high) are placed alongside the shorter wall of the rooms. They support pine boarding (the boards are 36 mm thick). In Falejówka, pine ceiling beams with the size of 160 x 180 mm were additionally supported by two binding joists (180 x 180 mm) placed in parallel to the longer walls of the rooms. Boarding made of 32 mm thick pine boards was placed on the binding joists and beams.

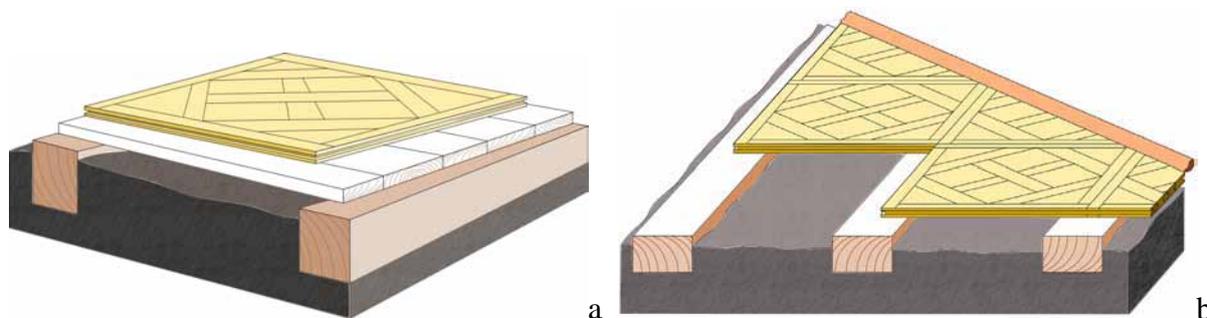


Fig. 5. Tarnowiec manor house floor structure plan: a – flooring located on boarding and on beams; b – flooring lying directly on beams

The floor in the Tarnowiec manor house has an unusual structure. The manor house is partially cellared and in the places where there is no cellar, it has floors placed on beams located directly in the sand. In the cellared spaces, the floors are supported by pine beams placed in the sand that was used in order to achieve an even level on top of the cellar ceiling. In both cases, the sand fills in the spaces between the beams quite tightly and stabilizes their position. In the places with cellars (Rooms 1, 2 and 6) the pine beams are placed in parallel to the shorter walls of the rooms, and are supported by joists located alongside the walls, connected with them with the use of lap joints. Additionally, the tile flooring is supported by pine boarding which is 40 mm thick (Fig. 5a). The distance between the beams was not identified. In this case, the sand does not enter in direct contact with the ground, but touches the bricked cellar top, ventilated by window openings.

In the rooms placed in the uncellared part of the manor house (Room 4 and 5) the floors are placed directly on the beams, with no boarding (Fig. 5b). The beams are made of oak wood and are placed on joists with grooves, also made of oak wood, that are lying flat on recesses in the walls of the rooms. The section of the joists has the dimensions of 100 x 180 mm; the groove with the dimensions of 50x50 was made at the distance of 130 mm from the side of the joist that lies next to the wall. Beams are placed diagonally and support only the frames of the component tiles. The section of beams in the Room no 4 has the dimensions of 100 x 140 mm, whereas the distance between them is of 480 mm. In the Room no 5, because of the large size of the tiles, smaller non-continuous joists were inserted between the oak beams that have the same dimensions as above and lay at the interval of 775 mm. The section of the joists is variable, ca. 100 x 100 mm, and they support the flooring tiles in the half of their width.

FLOORING STRUCTURE

The flooring in the Falejówka and Przewrotne manor houses has a single-layer structure and is 27mm thick in Falejówka (the wear layer is of 12mm, and the groove of the joint is 5mm thick) and 35mm thick in Przewrotne (the wear layer is of 12mm, and the groove of the joint is 10mm thick). The elements of the Versailles pattern in Falejówka are joined with tongue in groove, whereas the cross motif - with lap joint. The simple frame pattern in Przewrotne is joined with tongue in groove, and the centre is filled with two or three elements that touch one another without profiled joints. In both manor houses, the tiles are joined using the spline joint. The flooring is fixed to the boarding and the boarding to the ceiling beams with the use of hand forged nails.

In the Tarnowiec manor house, the tiles are single-layered, although their thickness differs between the rooms. In the Rooms 1, 2 and 6, the tile thickness amounts to 29 mm, the wear layer is of 12 mm, and the groove of the joint is 5mm thick. In the case of these floors the thickness of the elements may also differ within one single tile. It tends to happen in case of Versailles pattern flooring. In Tarnowiec, the frames are thicker (29 mm), and the centre is made of thinner elements (22mm). In the places where the tiles lay on full boarding, wedges were placed locally between the boarding and the tile elements. The tiles are stable thanks to the use of tongue in groove joints that fasten the tile elements, but due to the fact that the filling was less thick, it has a slightly concave shape at this moment; and the level differences may reach up to 5 mm. The cross motif situated in the centre of the tile is fastened with the use of lap joints. The flooring thickness in the Room no 4 is from 42 to 35mm, the wear layer has 12 mm at the moment, and the groove has 8 mm. In this case there is also a difference between the thickness of the frame (42mm) and the filling elements (from 35 even to 26mm), yet due to the fact that the flooring has no boarding and touches the beams only with its frames, no inserts levelling the tiles were needed. The individual elements in the tiles are fixed with the tongue in groove joint, and the cross motif – with lap joints. The largest tiles in

the Room no 5 are 32 mm thick, their wear layer is of 12 mm, and the groove is 10 mm thick, they make use of tongue in groove joints, whereas the cross motif - also lap joints.

In Tarnowiec, the flooring is fastened to the beams with forged nails. The flooring tiles are joined with one another using spline joints. In the Rooms no 1, 2 and 6, they are made of pine battens with longitudinal fibre layout. In the Rooms no 4 and 5, the spline is made of oak wood with transverse fibre layout and is non-continuous.

SUMMARY

The designs of the decorative wooden flooring in the manor houses that were subject to research are very diverse as to the elements' layout, wood species selection, tile dimensions and the dimensions of the individual elements. Within a single manor house, the tiles may differ between the rooms as far as their design and dimensions are concerned, or they may appear next to floorings made of boards.

All the tile patterns are geometrical, the tiles have square shape and the flooring design within a room stays consistent. The designs consist of a thin frame with a cross motif and four square recesses inside or of a frame and filling in the form of a diagonally placed square, divided into four fields by a cross (the so called Versailles pattern, Soubise type [Wolski, 2007]).

Oak wood may be used for all the tile elements, or just for the frames that would be filled with pine or ash wood inside. In fewer cases, frames of ash are applied. Parquet planks are made of oak or ash.

The wooden floor structure consists of various layers. It is based on beams lying in the sand or on joists suspended between bricked columns. The flooring may be placed on boarding or by supported only by the beams. It is fastened to the underlying structure with hand forged nails. The flooring tiles are joined with one another using spline joints. The individual elements in the tiles are fixed with tongue in groove joints, and the battens of the filling that form a cross – with lap joints.

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Streszczenie: *Wzornictwo i konstrukcja zespołów ozdobnych posadzek drewnianych dworów południowo-wschodniej Polski.* W pracy przedstawiono zachowane do dziś zespoły zabytkowych drewnianych posadzek ozdobnych pochodzące z dworów w południowo-wschodniej Polsce. Zostały one scharakteryzowane pod względem wzornictwa poprzez rysunki wzorów płyt, kierunku ułożenia włókien, gatunków drewna jak również rodzaju przekroju elementów tworzących tafle elementarne. Wykonano także rysunki układu wnętrza i rozmieszczenia płyt w pomieszczeniach. Badaniami objęto konstrukcję podłogi oraz konstrukcję tafli posadzkowych.

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