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Evolution in the construction of facing brick façades in Valladolid with the introduction of pressed brick, from the last quarter of the 19th century to the first quarter of the 20th century

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At the end of the 19th century, facade walls were erected with the heading bond, so-called «a la española». The thickness of these walls exceeded one bat.[1] Because of this, they were carried out by two bricklayers working at the same time, one of them on the exposed surface of the wall and the other on the non-exposed surface. Both of them laid bricks alternating whole bricks with bricks cut in half widthways. The holes left between these two faces were regular, and they were filled with one or more headers, preventing continuous vertical joints from occurring in adjacent courses in an attempt to interlock the brickwork.

This type of wall was effected with the same type of brick until pressed brick appeared. Pressed brick was used to erect the outer face, whereas handmade or common brick continued being used for the inner face. Pressed bricks were laid with butt joints of about 3mm thick, and handmade or common bricks were laid with ordinary joints of about 8mm. In order to implement these walls on level courses, bricks of different thickness were used, pressed bricks were

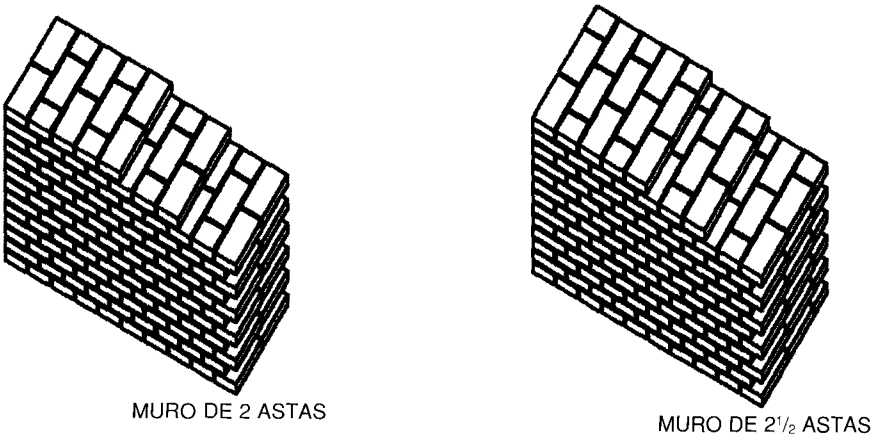

Figure 1
Pictures of a 2 bat wall and a 2 1/2 bat wall with the bond described above

5mm thicker than handmade or common bricks, and they generally had bed of similar size.

To define the building system used in these facades, the following expression was used: «**fábrica de ladrillo prensado trasdosado de recocho**» [pressed brick brickwork with a non-exposed hard burned brick facing].

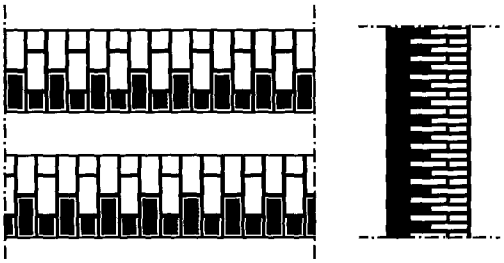

Figure 2
2bat wall effected with pressed bricks and handmade bricks. Pressed bricks in horizontal sections have a diamond pattern on the bedding surface and those in the cross-section have a striped pattern. The figure shows the two different bond courses

Figure 3
Pressed brick from the Silió Pottery in Valladolid found in a demolition site. Pressed bricks contained recessed panels on the surface called frogs, and the mortar which joined the bricks was placed into the frogs the bricks presented on the bedding surface. This made it possible to implement the brickwork with butt joints

Facades which had been built with the same type of brick started being effected with two different types of bricks. These bricks presented several differences relating implementation, function and finish, among which the following can be highlighted:

— the horizontal wood frame made of joists rested only on the handmade or common brick inner face, whereas the outer face stood in front of the frame as a whole.
— in the facade holes, carpentry was placed between both faces. On the outer face, the recess was built with pressed brick of 1 bat width, whereas on the inner face it was with handmade or common brick. On each face, the holes were closed with different arches in the upper part: jack or segmental arches with rowlocks on the outer face, and flat arches on the inner face.
— on the outer face, the pressed brick was left exposed, and was used to devise the facade ornamental features. The inner face was cladded.

Figure 4
Photograph of a facade hole seen from the outside. The outer face (to the left and up to the gate) is pressed brick, and the inner face is common brick

The first buildings that were put up following this construction system at the end of the 19th century presented quite simple ornamental features with bricks. These were mainly restricted to band cornices at the strike with floor surfaces, the fence-in of holes, and eaves.

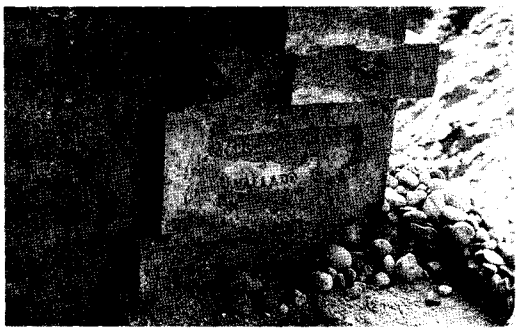

Figure 5
Photograph of a section of a building under renovation at a cornice level. The outer face (right) has pressed bricks, and the inner face handmade bricks

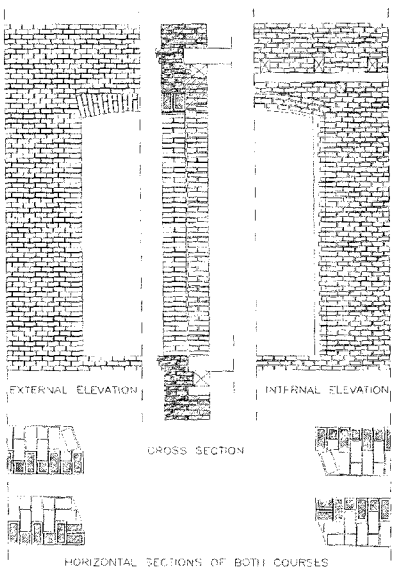

Figure 6
Descriptive drawing of the construction of these types of facades, representing a hole, and the strike of the hole with the horizontal frame (internal and external elevations, cross-section and both bond courses)

Figure 7
1883 building with ornamental features devised with two-colour bricks placed around the holes and at the strikes with the frame

Ornamental features are gradually filling up the facade external facing wall. More and more patterns are being introduced, some of which do not observe the rules for brickwork interlocking. Examples of these elements include the following:

- Head joints between bricks which are effected in the same vertical and in several courses.
- Very small cut brick pieces.
- Courses implemented with cut bricks which are sloping with respect to the horizontal.
- Vertical rowlocks with cut bricks.

There is every indication that the outer face starts being effected as a cladding face where the ornamental features are devised, whereas the inner face is the resistant one.

Another change also occurs in face thickness, since carpentry starts being placed at half bat from the

facade outer face, leaving a facing brick recess of this same width.

Figure 8
1909 building with the ornamental features devised on the piers too, and with a variety which is far superior to the one in the previous figure

The building system kept on developing in the 20th century. The two faces do not have the same function in the wall anymore. One of them is the resistant one, whereas the other one is a wall cladding which interlocks with the previous face. They do not have either the same finish or the same thickness, since the outer face is half bat thick and the inner face is thicker.

This new implementation system is called «**fachada de ladrillo ordinario refrentada de prensado**» [ordinary brick facade with pressed brick on the outer face].

This building system can be considered as a precedent of the current facing brick facades, which

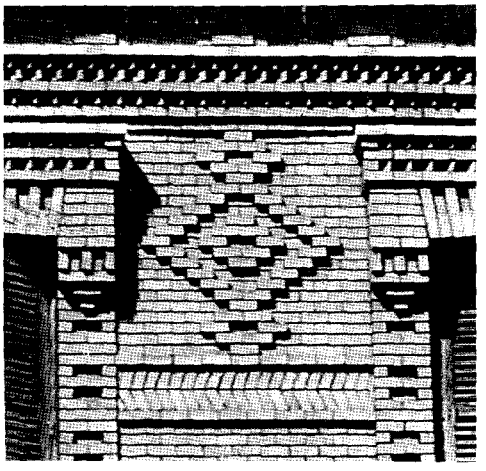

Figure 9
Detail of the ornamental features of a pier from the facade in the previous figure

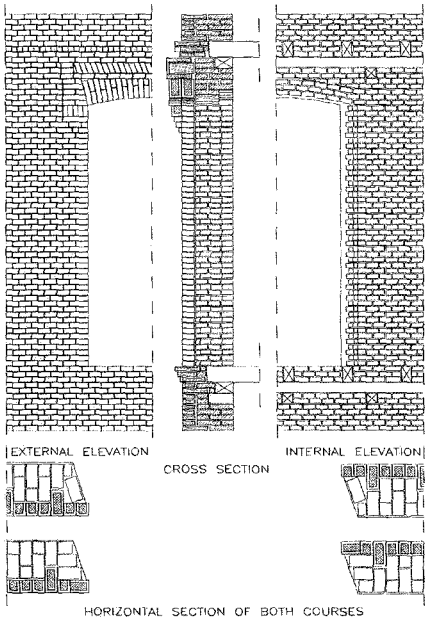

Figure 10
Bond with the outer face in half bat thick pressed brick interlocked with brick ties to the common brick on the inner face. The outer face continues being effected with header bonds but with half bricks. This implementation system is used nowadays when half bat thick faces are effected with header bonds

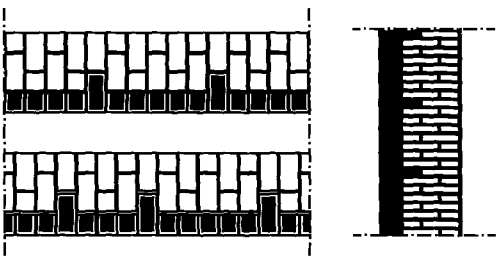

Figure 11
2 bat wall effected with the building system described above

are carried out with the so-called traditional system, and which consist of two faces: the outer face with half bat thick facing brick, and the inner face with common brick.

In summary, it can be said that at the beginning the use of pressed brick only affected the outer face of facades, since it was used in the construction of facades as a substitute for bricks placed on the outer surface. Nevertheless, and due to the possibilities this type of brick presents to devise more and more complex ornamental features, it ends up modifying the implementation of facades altogether. As a result, facades are built with a common brick resistant face and a pressed brick cladding face.

NOTES

1. 1 Spanish «asta».