USCI

a project for Fibois 42

designed by // Paolo Dal Santo

Details:

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Project description:

Usci is a project born from the desire to have a unique and new door inside the house that characterizes: the home, the person who lives in it and also a deep attachment to the territory from which the shape and the materials of this door comes from.

Piccoli Usci is born primarily from the exploration of what are the entrances to the homes of the historic center in the city of Saint Etienne, most of which are beautifully handmade with colored wood and brass details. From this research I tried to take the colors and motifs present on every one of these doors, and translate them into a new concept of door for contemporary houses that becomes a wall of memories and a pretext to express a deep attachment to the territory. In this way I managed to tie the tradition of the historic entrances of the buildings to a contemporary object, using a local material: the Sapin Blanc that perfectly adapt itself to these color and shape games elevating it to a new status in the value scale of wood.

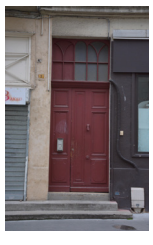
The research:

The research has first of all started from the desire to find something that was closely related both to the local tradition of the area in which Fibois is operating and to the context in which the project would have fit in. This is why I began to investigate one of the objects that best represent the city of Saint Etienne and the region from which the material comes: the historical entrance gates of the houses in the city center.

From this initial idea came the need to go hands on to study in depth the forms, materials and colors of these doors. A photographic report distributed over three days has created a sufficiently large archive (124 doors) to be analyzed.

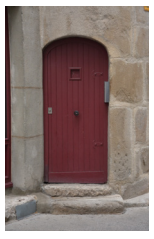
On the following pages, fifty photographs that have been taken into consideration for the next steps of the project.











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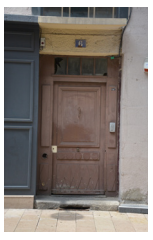






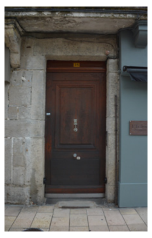







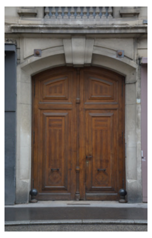

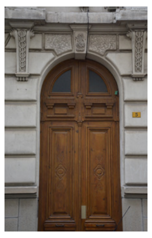
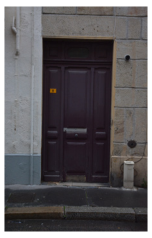

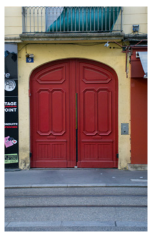




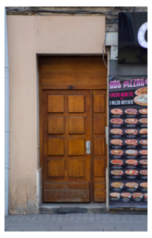



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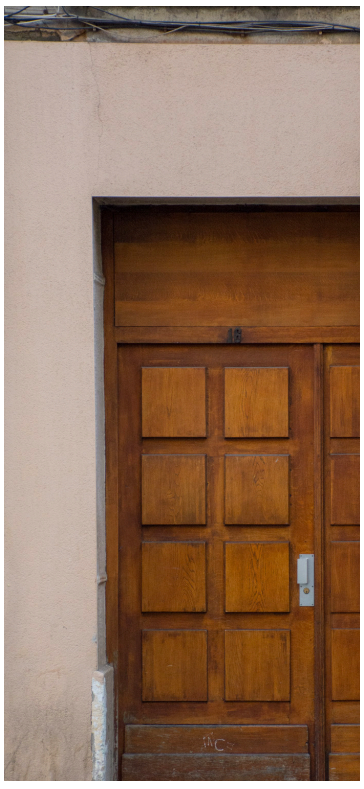
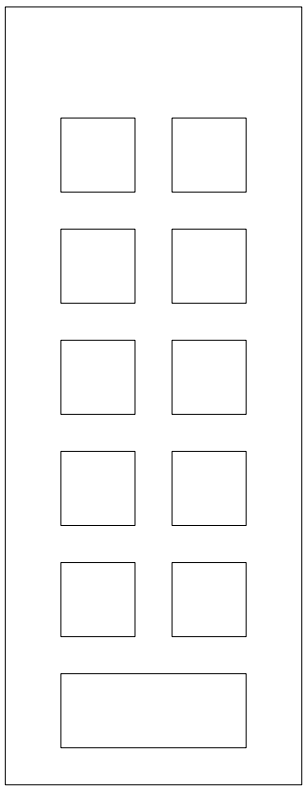
SERVICE RAPIDE

The developement:

After understanding shapes and colors, I tried to graphically identify guidelines that could represent a more modern version of some of the selected doors. In some cases it was considered a small detail enlarged that became the main pattern on the door, while in other cases the main lines of the doors were taken, simplified and transported first by hand on sketches and then optimized and normalized thanks to the use of a cad-software. The example of the work is represented on the two pictures on the right.

On the following page, twenty examples of doors that represent the simplification work that has been done.

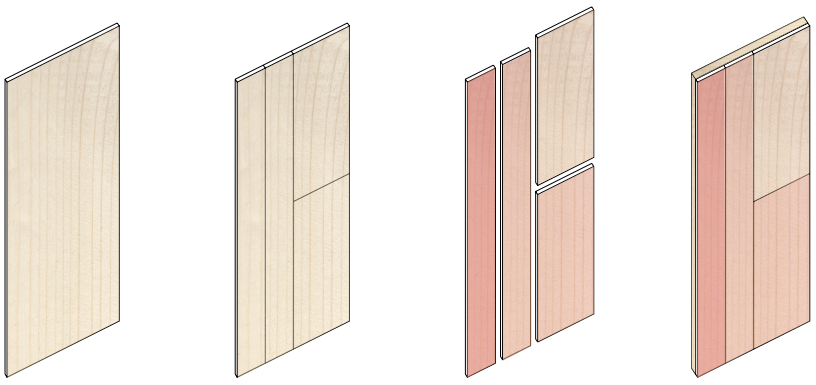




The process:

The actual physical making the doors followed the principle of simplification of the processes. Starting from a 5 mm panel of Sapin Blanc, it is milled (CNC) and divided into the various parts that compose the main door design. The individual pieces then, thanks to the great capacity of Sapin Blanc to absorb the color, are treated superficially with a natural water based dye and colored according to the colors requested by the customer or the architect.
Once the individual pieces have dried, they are reassembled and glued onto a 5 mm multilayered wood panel and then attached to a honeycomb structure that has the aim reduce the final cost and weight.

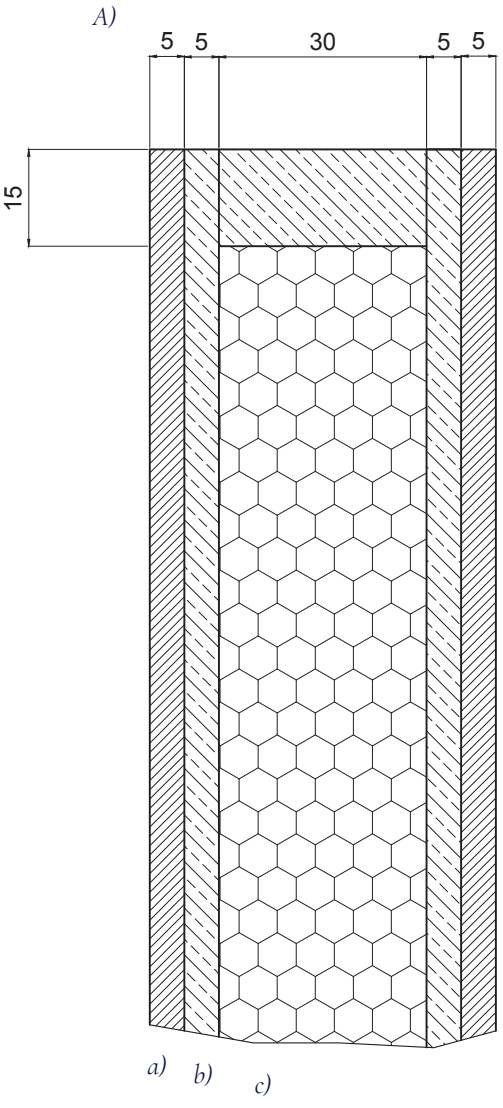
Here represented are the steps that lead to the finished product (4) and an internal section of the door (A).



1) *2)* *3)* *4)*

1) Sapin Blanc solid panel
2) Milling of the single pieces
3) Separation and dyeing of single pieces
4) Bonding of the pieces on a multilayer and hollow core support

A)



a) Sapin Blanc
b) Chipboard/ multilayered wood
c) Honeycomb cardboard structure

a) *b)* *c)*

Scale 1:1

The typologies:

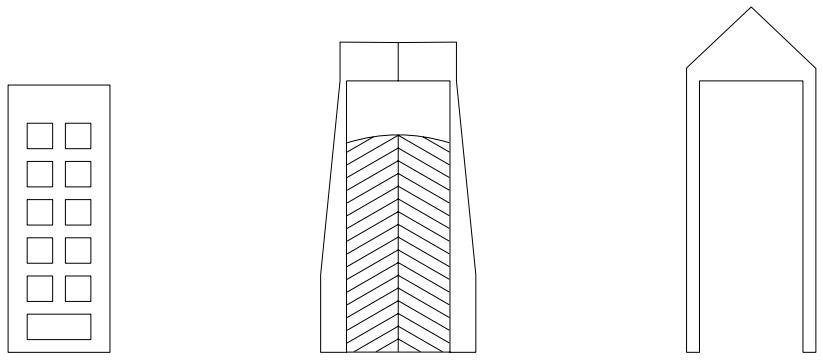
The types of doors identified for the development of this project were three:

B) Entrance doors

A) Doors inside the house

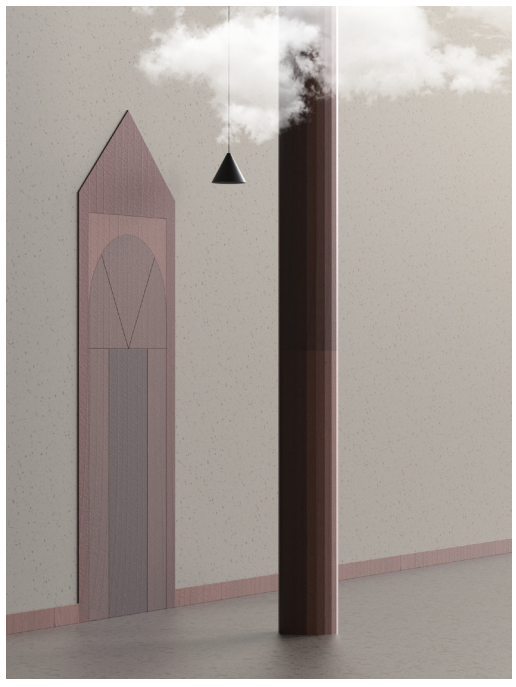
C) Frames.

These three typologies, exemplified in the diagram below, are explained in more detail in the following slides.

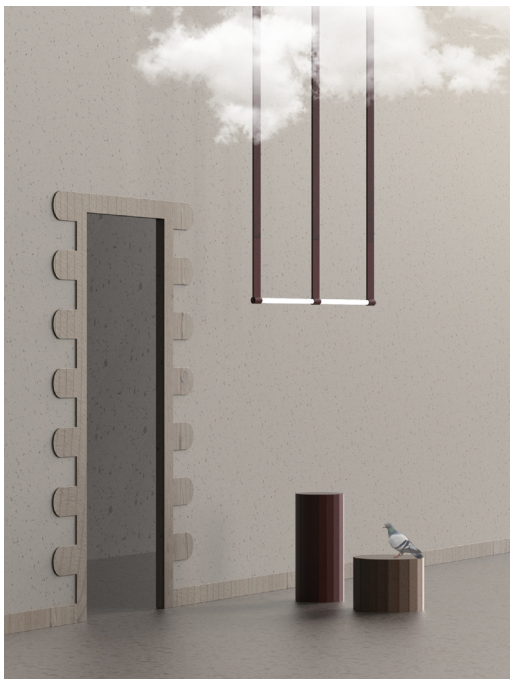


A) *B)* *C)*

A)



B)



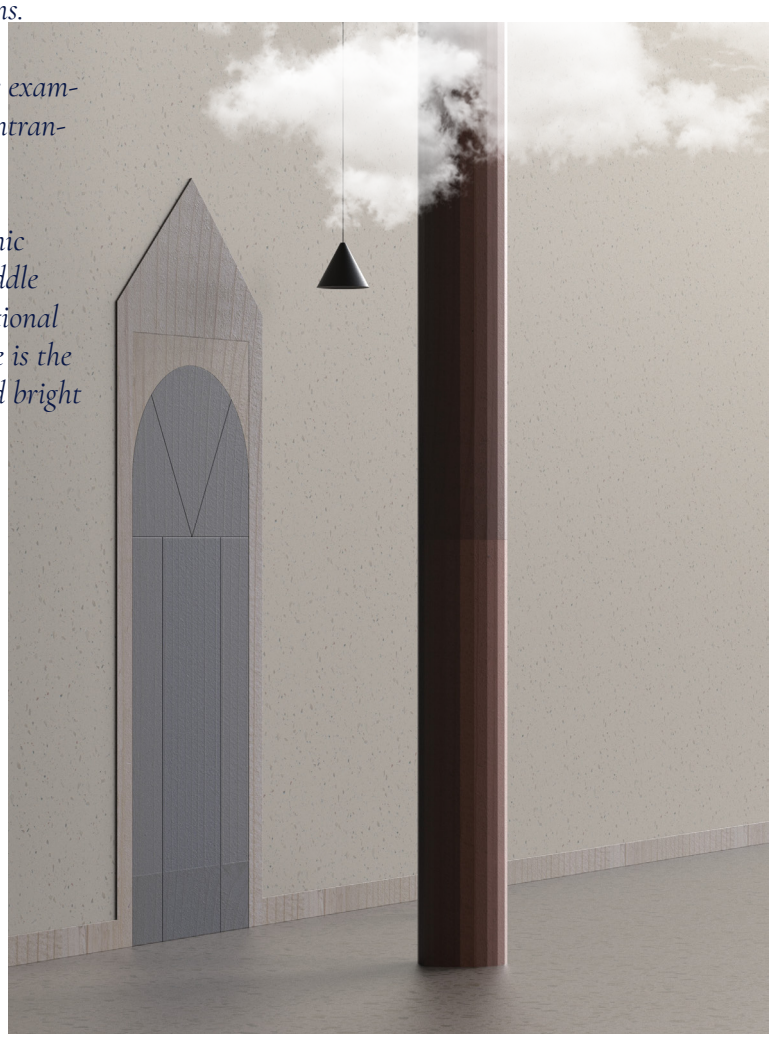
C)

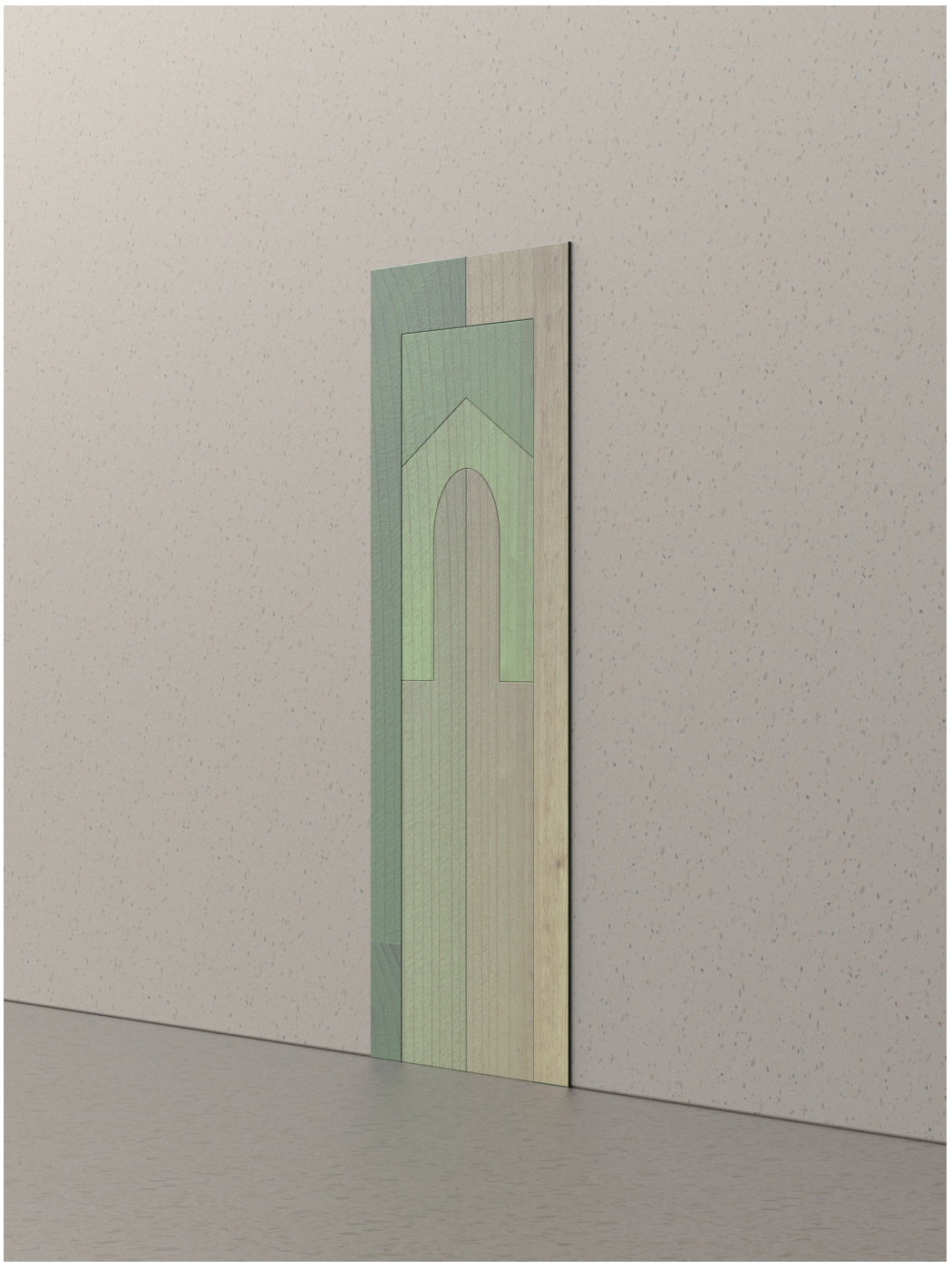
Entrance doors

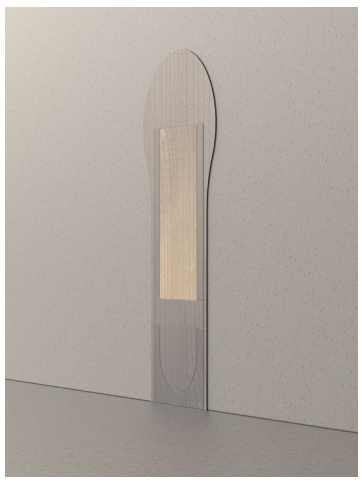
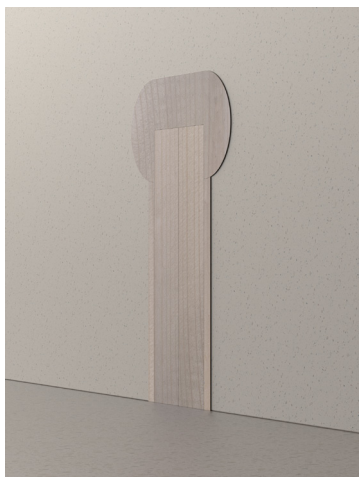
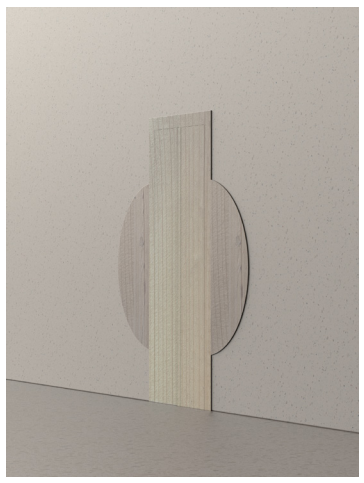
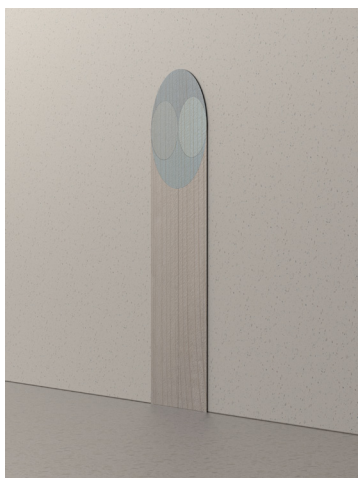
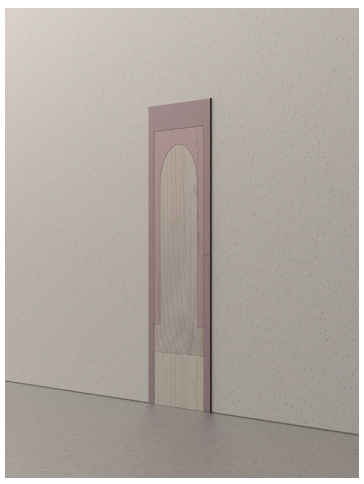
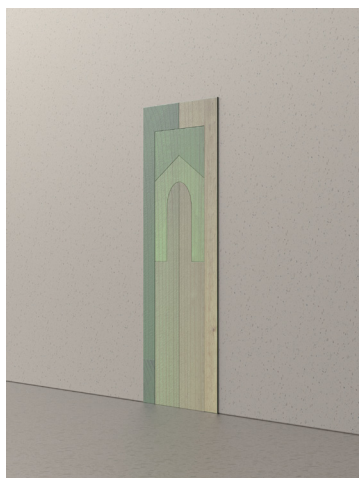
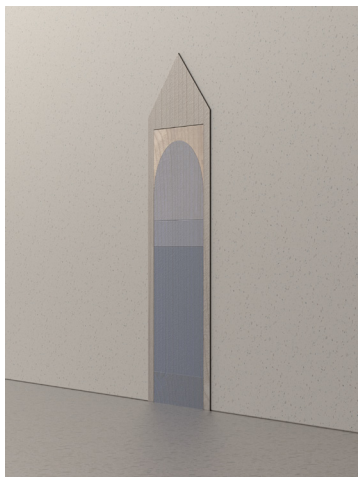
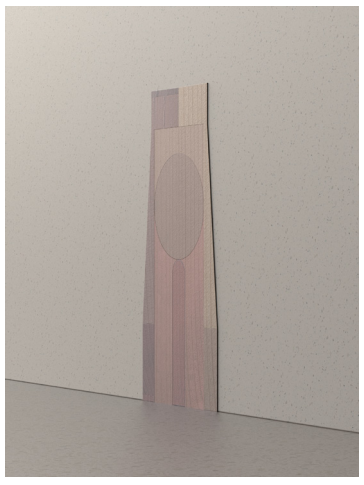
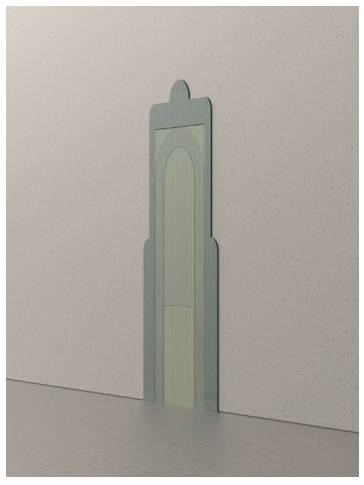
First of the three types of doors developed is the so-called "entrance door". For this typology the main idea was to create iconic shapes that could best characterize the entrance of the house. Two fundamental aspects describe this typology: bright colors that reflect those of the traditional doors studied, and recognizable and archetypal forms.

The following page presents some examples of doors identified for "the entrances".

In order we have: at the top, iconic shapes and soft colors, in the middle brighter colors and almost traditional shapes, while at the bottom there is the combination of iconic shapes and bright colors.



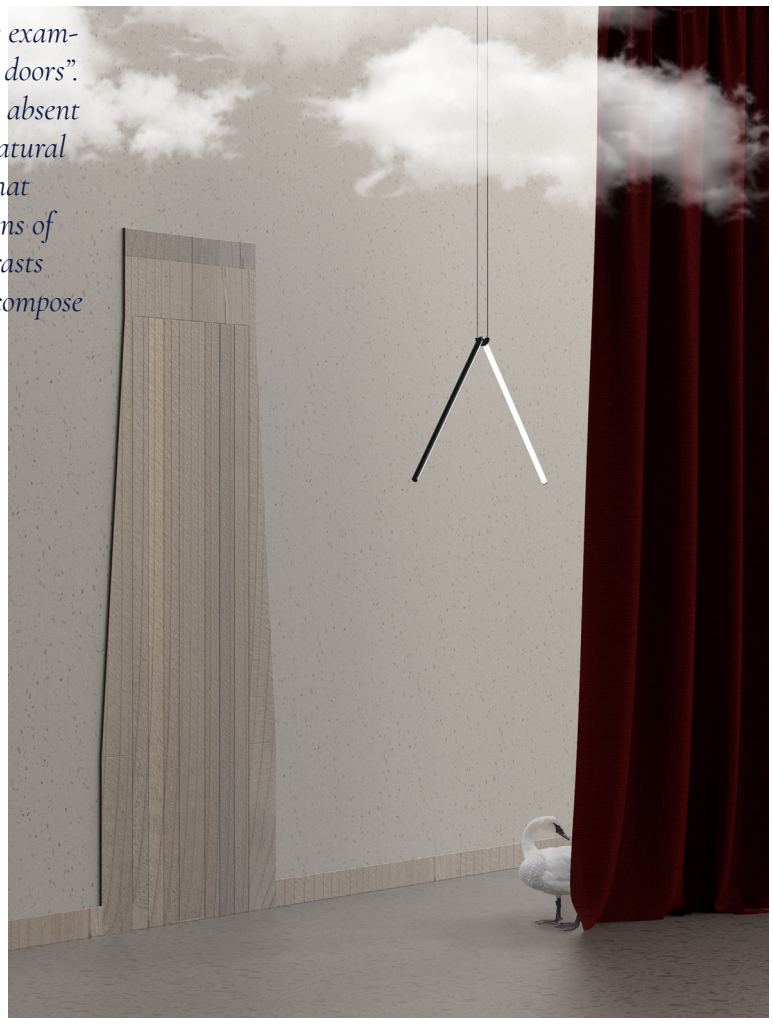


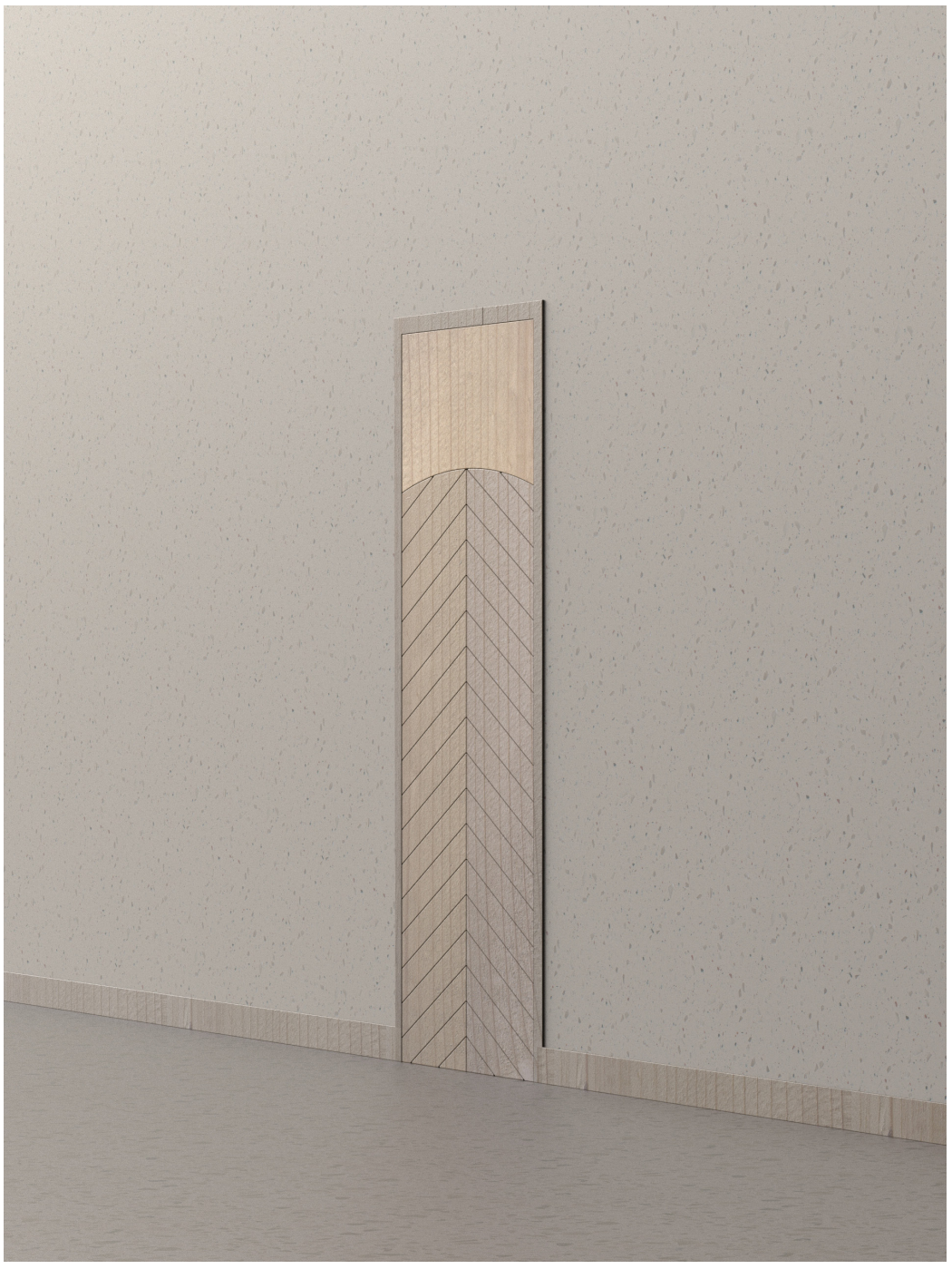










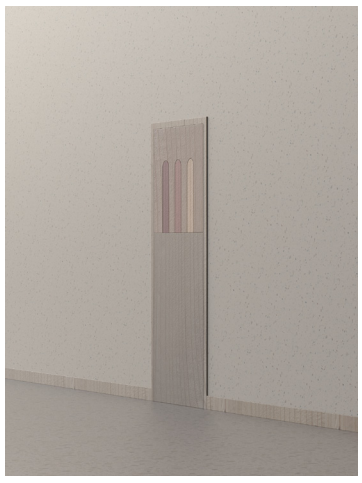
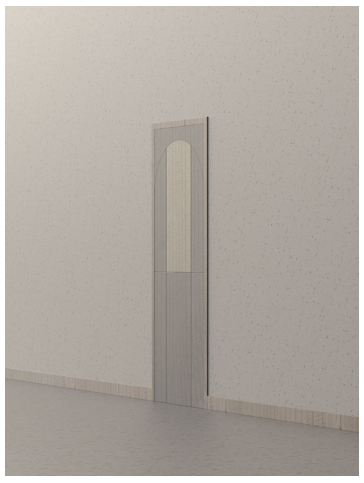
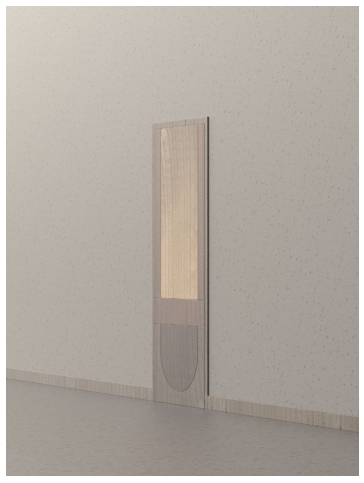
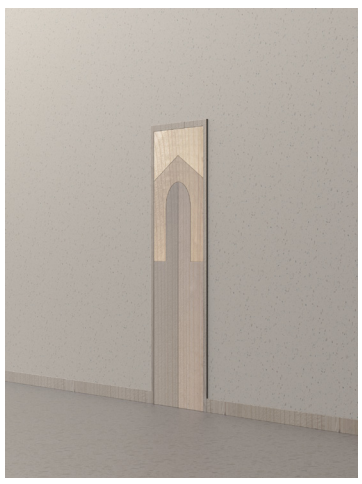
Inside doors

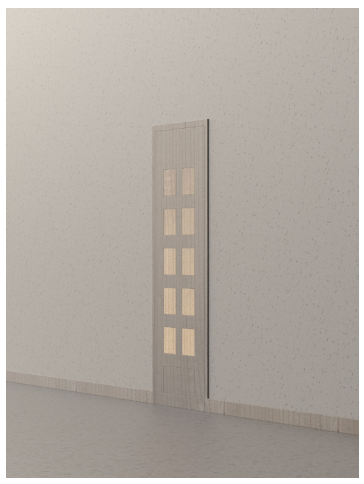
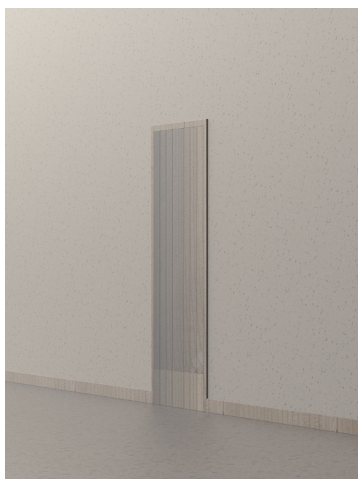
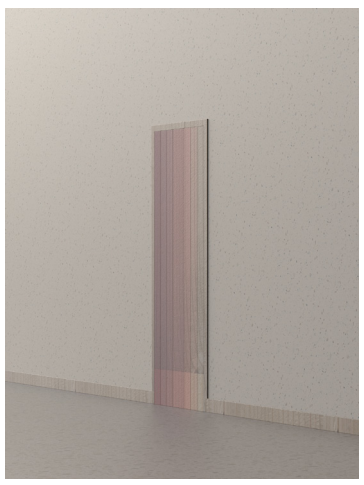
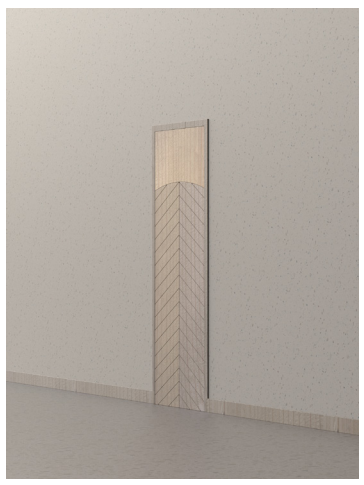
The second of the three types is that of the doors for the interior of the house, all those doors that connect rooms with other rooms. In this case the need was to have the same shapes compared to the previous ones, but with tones and frames that were more balanced and less characterized by bright colors.

The following page presents some examples of doors identified as "inside doors". In this case the colors are almost absent and space is left to the color of natural wood treated only with shades that slightly lighten or darken the veins of the wood to accentuate the contrasts between the various pieces that compose the door.





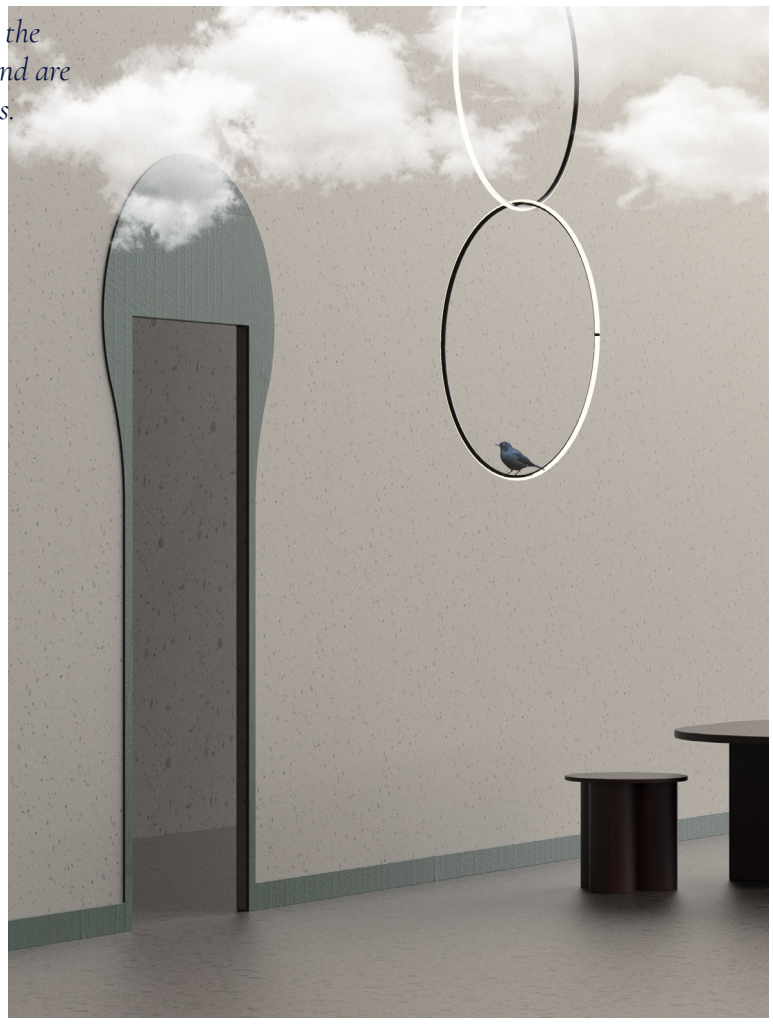





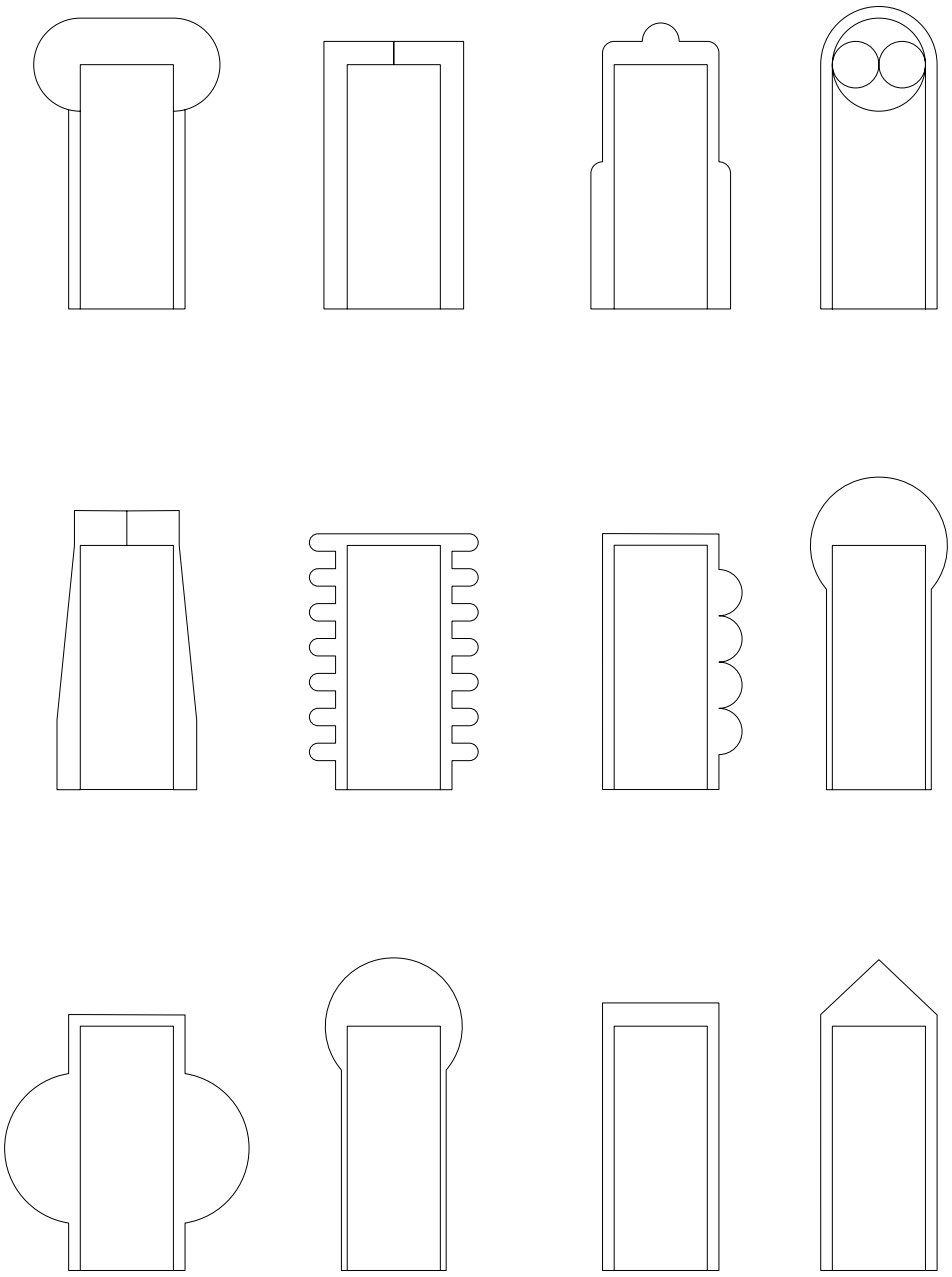





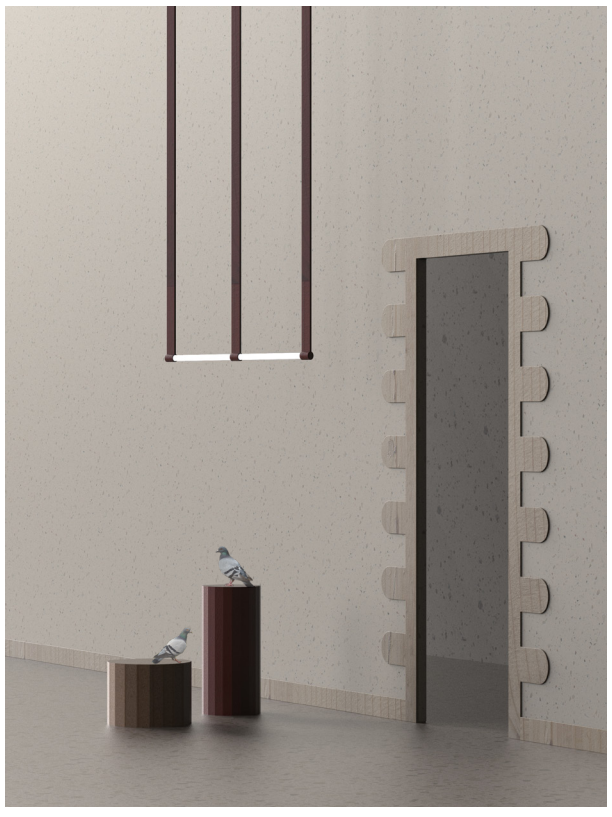
Frames

The third and last typology is the one of the frames, that are all those openings in the walls that are not necessarily covered by a door, but which can be enriched by a decorative outline. In this case various forms already seen in the first category have been applied to openings in the walls.

The range of the forms goes from the most particular to the simplest and are represented on the next two pages.



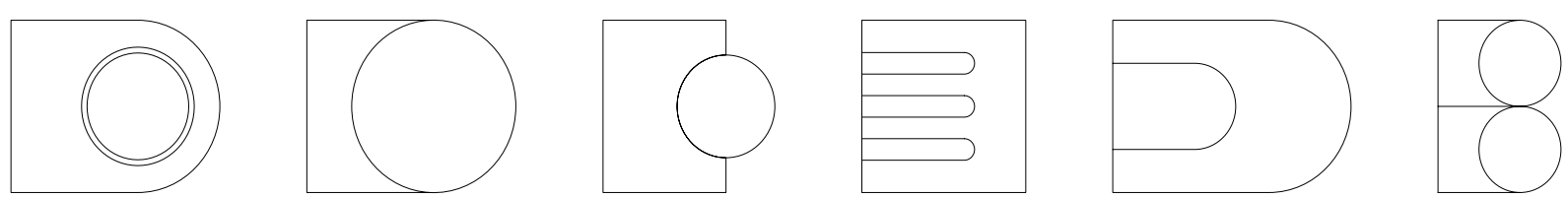




Switches and plugs

A subsequent development of this project has been done designing in addition to the doors, also those objects that very often are called to dialogue with them: the light buttons and the power sockets. Following the same principle applied previously, some formal details presented in the doors have been taken and applied on a reduced scale to the buttons and sockets.

In the pages below are the formal solutions designed.

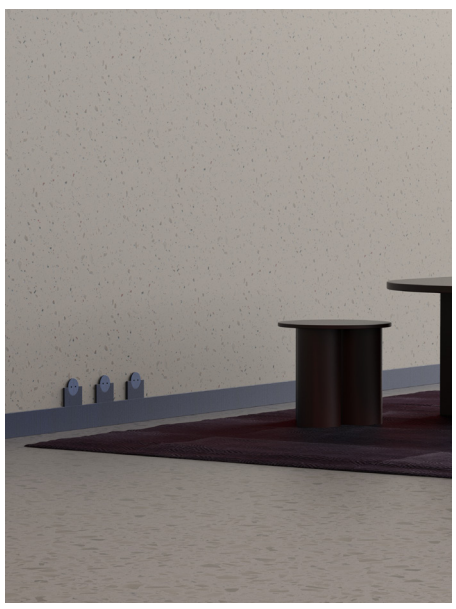












Switches

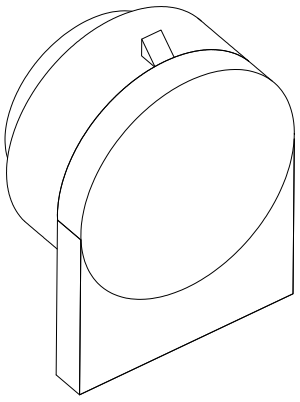
Technology details

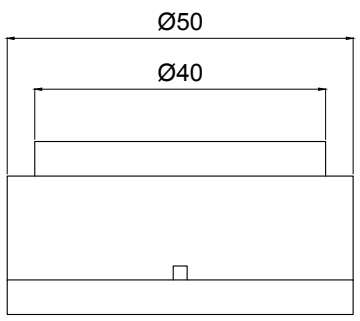
Trying to innovate the interaction with the light button and to avoid excessive degradation due to the continuous contact between the hand and the wood, the classic push-button has been replaced by a capacitive button that turns the light on and off at simple contact between the hand and the object.

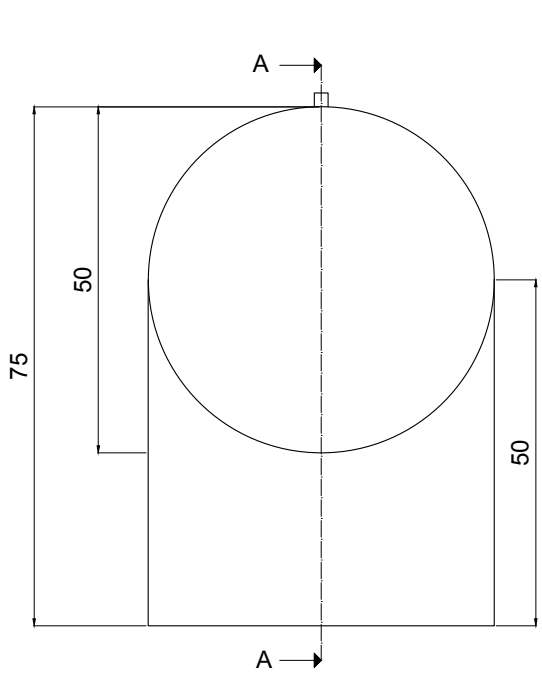
As showed in Sez. A-A, a capacitive sensor is placed below the wooden surface. This sensor is able to detect a change in electrical voltage on the surface and therefore to send the light on-off signal.

An explainatory video is available at this link:

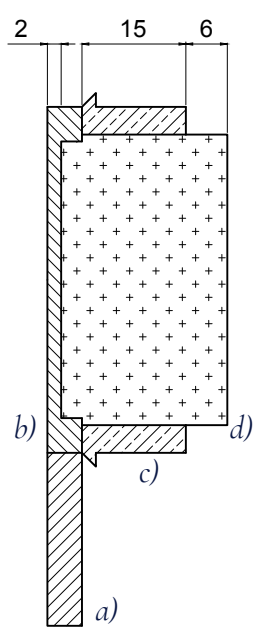
https://www.youtube.com/watch?v=pzDkq8XgFeM





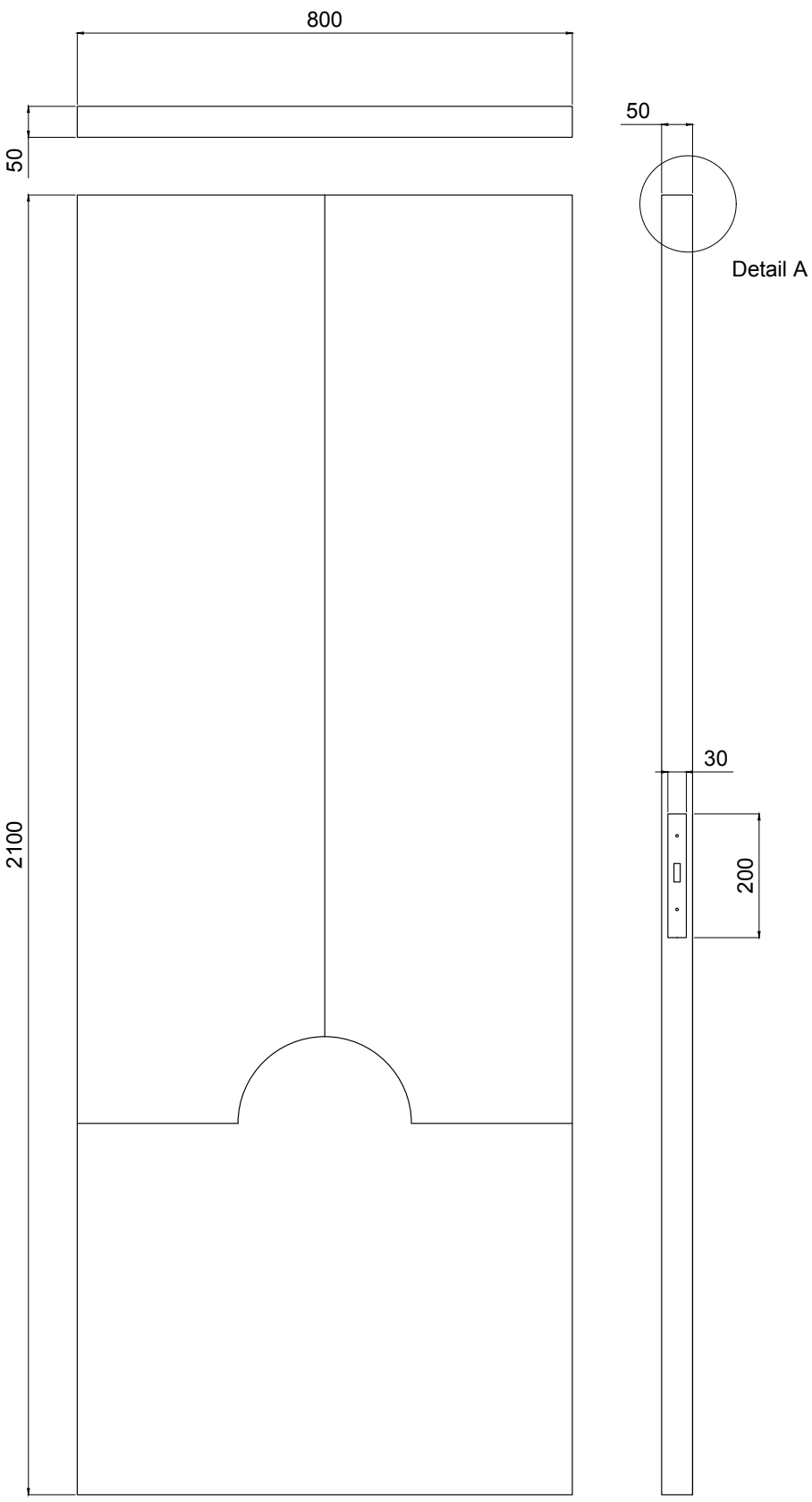


Scale 1:1



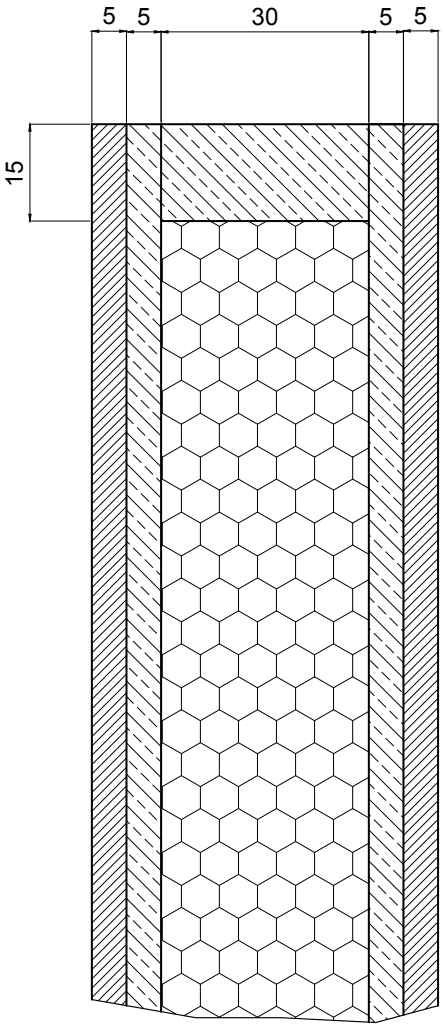
SEZ. A-A

a) Wood cover
b) Wood cover
c) Locking system
d) Capacitive sensor



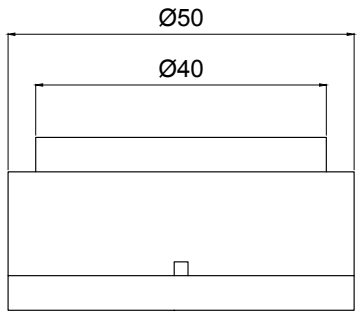
DOOR

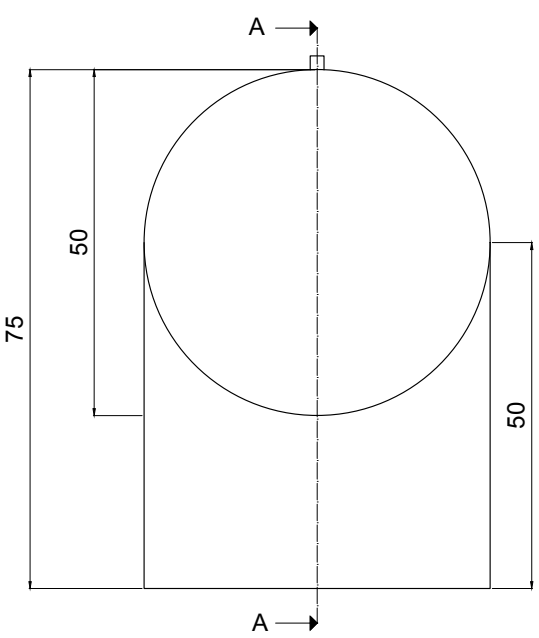
Scale 1:10



Scale 1:1

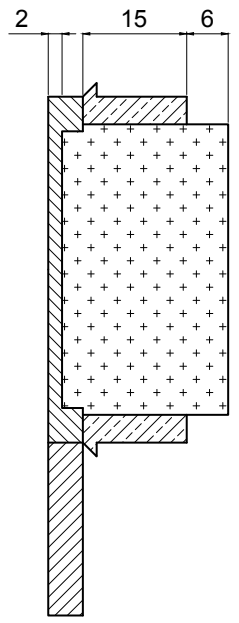
A



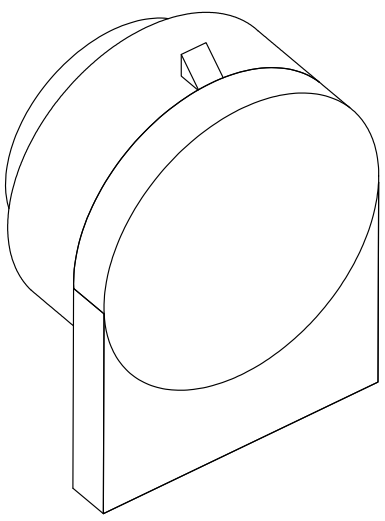


POWER BUTTON

Scale 1:1



SEZ. A-A



Course	Academic year	Date	School	Scale
OBJECT	2018/2019	17/05/2019	ESADSE	1:1
Student: PAOLO DAL SANTO			View	
Table: GENERAL DIMENSIONS	Professors: Benjamin Graindorge / Eric Jourdan	Number: 1/1		