

TERRA

Research Project

Léon Félix

Avenue de Jomini 14

1004

Lausanne SUISSE

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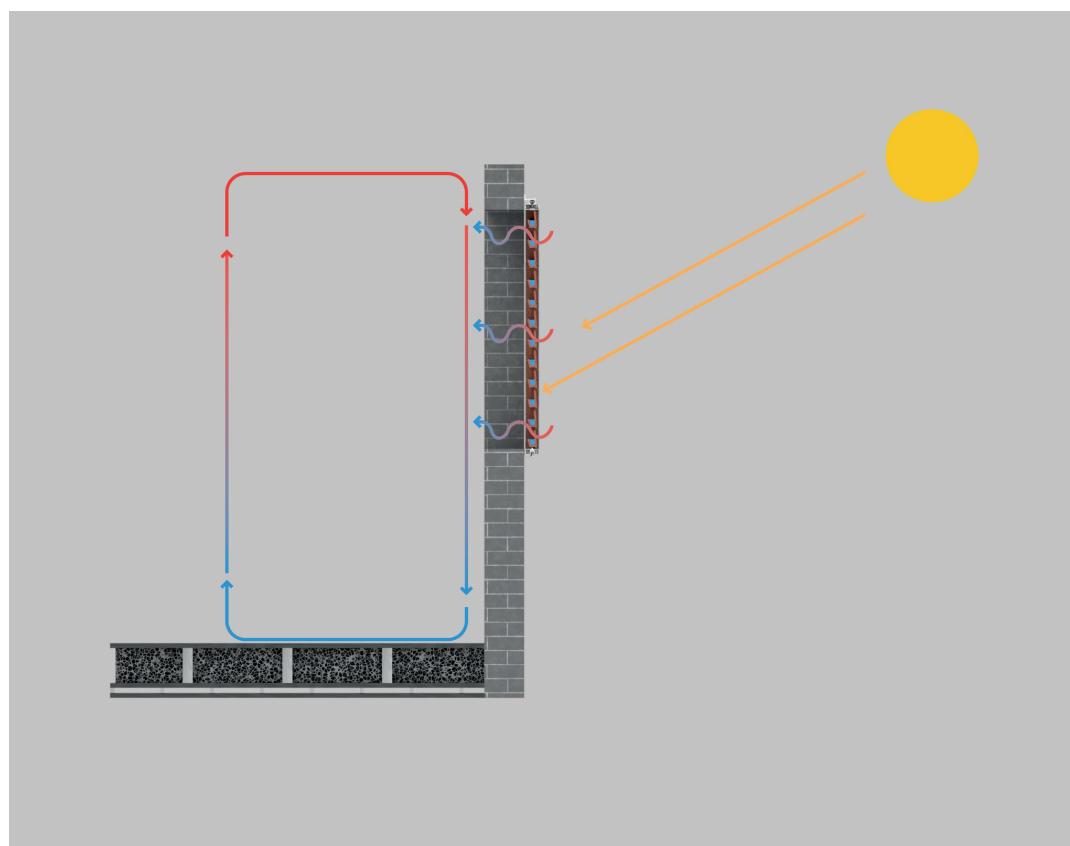
Terra est un système de climatisation passive. Ce volet coulissant en terre cuite, inspiré du fonctionnement des moucharabieh permet de refroidir son environnement. Il est destiné au région chaude et utilise des matériaux durable, peu onéreux et facile d'accès . Il est composé d'un élément en terre cuite extrudé. Ce module est répété et empilé l'un sur l'autre et maintenues par un cadre en acier pour former le volet . Une fois en fonction le principe est simple, l'utilisateur remplit les extrusions d'eau, par capillarité la terre吸ue progressivement l'eau contenue qui va s'évaporer par ses pores et refroidir l'environnement . Le flux d'air naturel accentué par la géométrie du volet crée un convection qui permet de faire circuler ce nouvel air froid.

EN

Terra is a passive cooling system. This sliding terracotta shutter, inspired by the functioning of the moucharabieh, allows to cool its environment. It is intended for use in warm regions and is made of durable, inexpensive and easily accessible materials. It is composed of an extruded terracotta element. This module is repeated and stacked on top of each other and held together by a steel frame to form the shutter. Once in operation the principle is simple, the user fills the extrusions with water, by capillarity the clay gradually absorbs the water contained which will evaporate through its pores and cool the environment. The natural air flow accentuated by the geometry of the shutter creates a convection which allows this new cold air to circulate.







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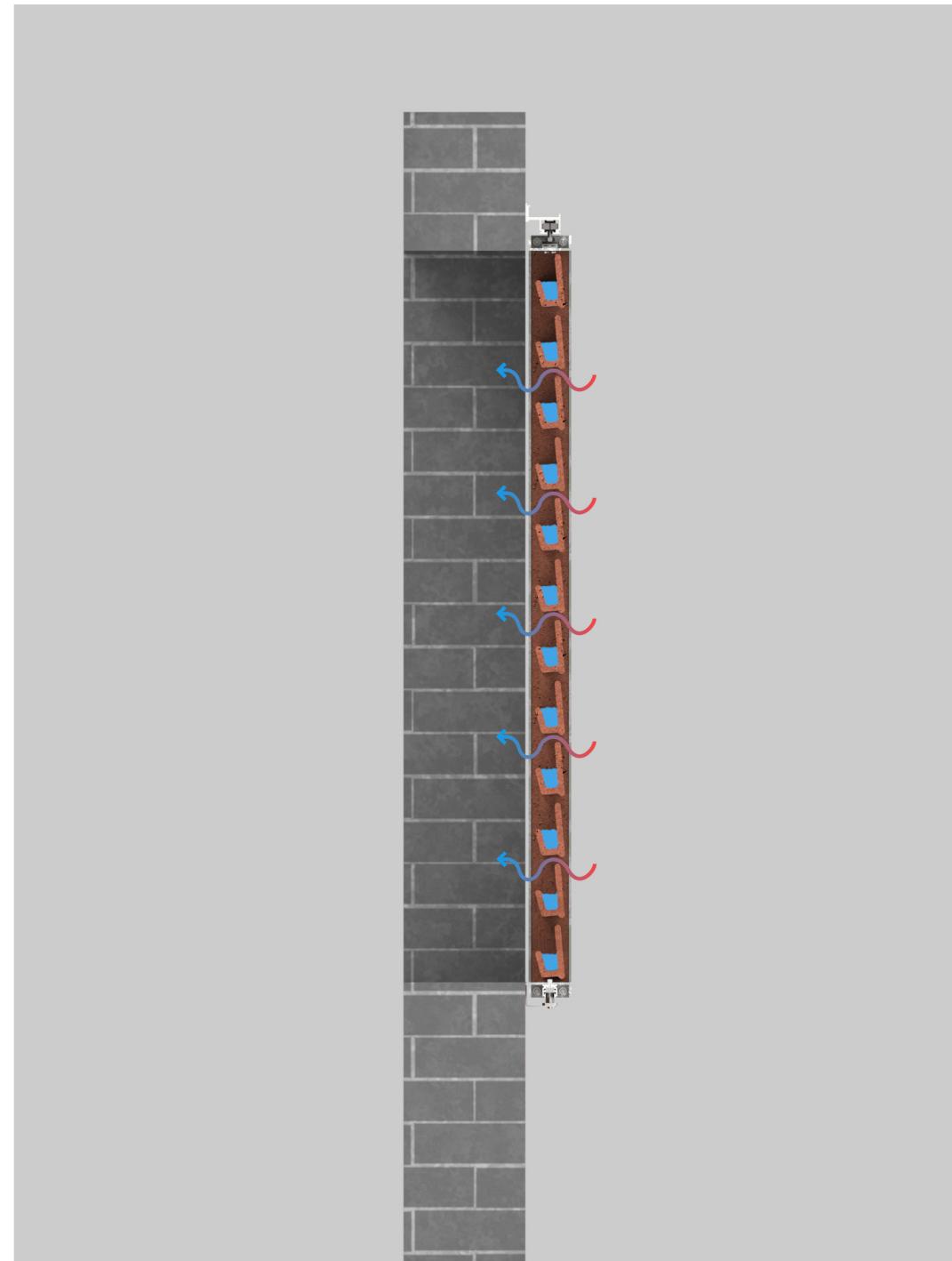
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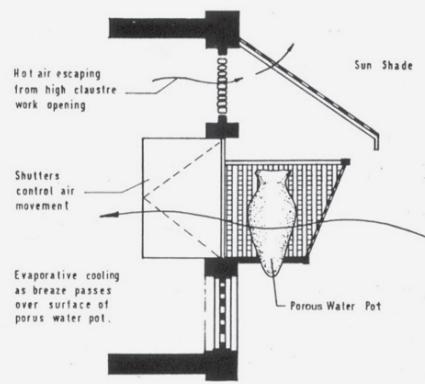
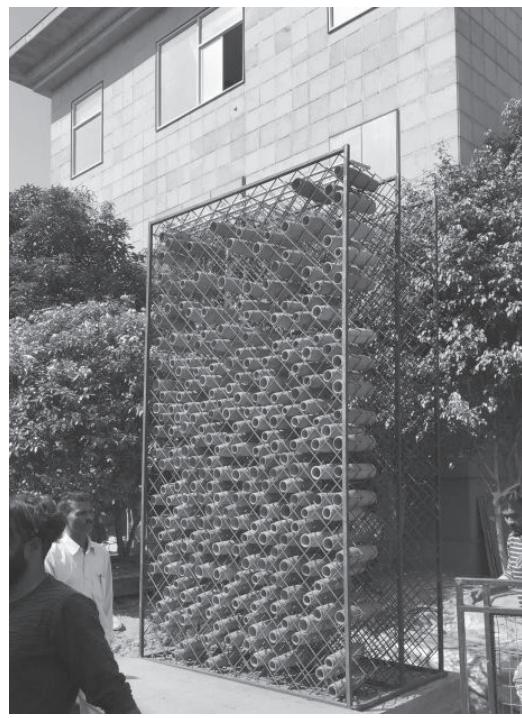
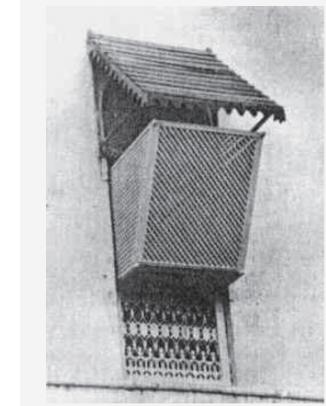


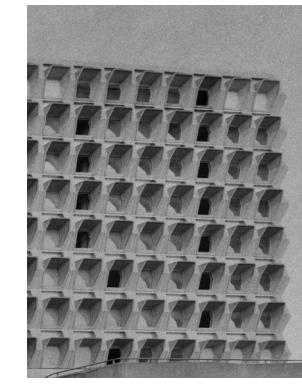
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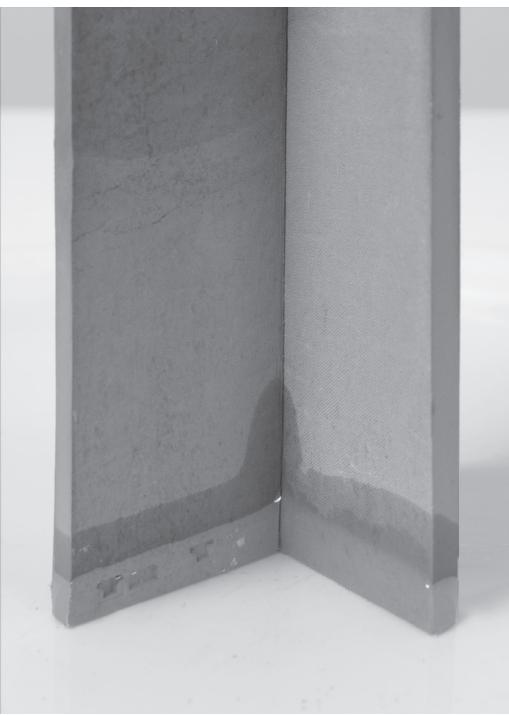
References - 1. Balconies - Hans & Liek 2. Antique climatisation system 3. Amphore 4. Indian beehive inspired cooling system 5. Unknown 6. Maxime-Louis Courcier -Shape and capillarity research 7. 8. Sean Charlton White 8. Air brick 9. Cavity ventilation 10. Jean Prouvé Facade 11. Unknownn 12. Unknown 13. Pierre Louis Gerlier autoconstruction 14. Lewis Leeds lecture on ventilation 15. Maquette1 16. Maquette2 17. Sketch1 18. Window 19. Maquette3 20. Maquette4 21. Unknown 22. Maquette5 23. Sketch2
Développement - 24. Maquette6 25. Sketch3 26. Moucharabieh 27. Sketch4 28. Sketch5 29. Pascale de Redon Musée ornithologique 30. Maquette7 31. Maquette8 32. Jean Prouvé Brise soleil 33. Test capilarité 34. Test écoulement 35. Maquette9 36. Shutter 37. Détail maquette9 39. Test écoulement 40. Détail assemblage 42. Mutina Mistral 43. Mutina Celosia 44. Sketch6 45. Sketch7 46. Détail sketch7 47. Exterior brick cladding 48. Sketch8 49. Sketch9 50. Sketch10 51. Sketch11 52. Détail maquette10 53. Détail maquette10 54. Maquette10 55. Système assemblage terre cuite 56. Sketch12 57. Maquette11 58. Sketch13 **Final -** 59. Sketch14 60. Bouroullec Hanging Treillis 61. Production 62. Fillière en inox pour l'extrusion 63. Caisse Rako rempli de raté 64. Pièces extrudées 65. Boudineuse 66. Vue en plein 67. Vue en coupe 68. Détail fonctionnement en coupe 69. Détail éclaté 70. Schéma fonctionnment



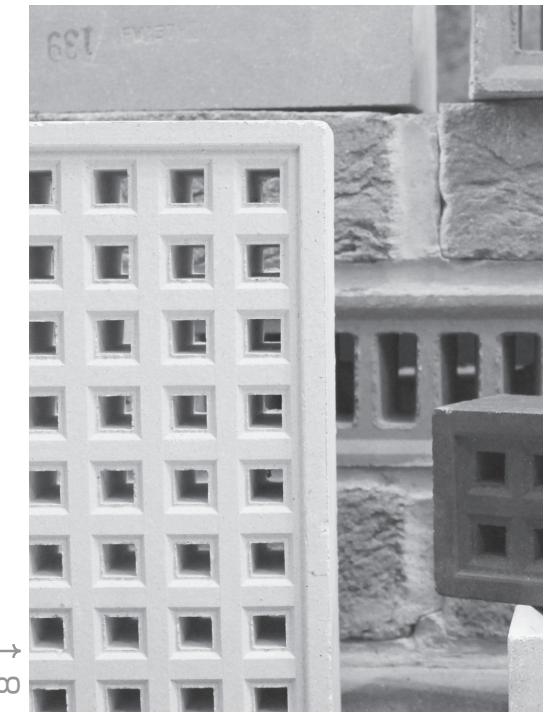


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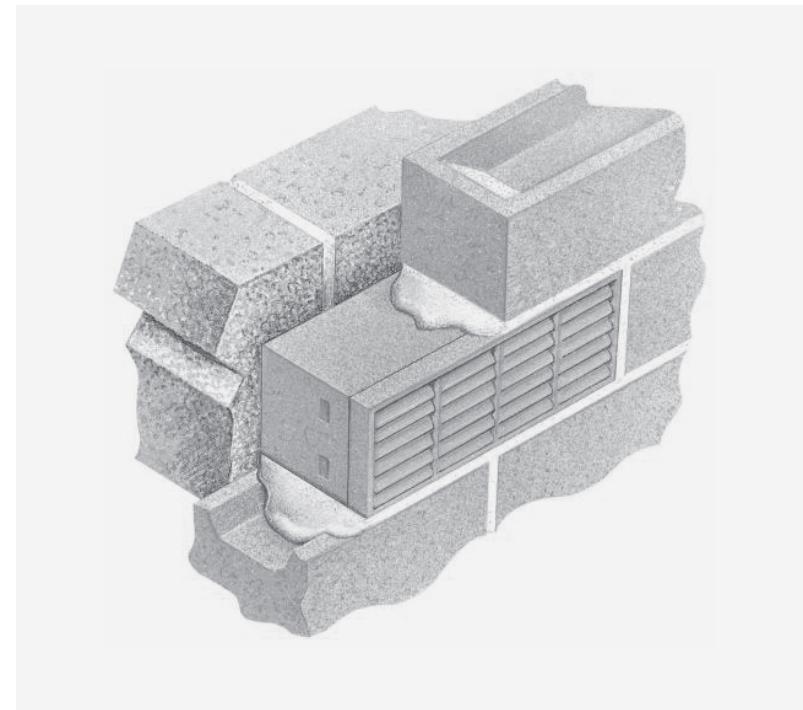
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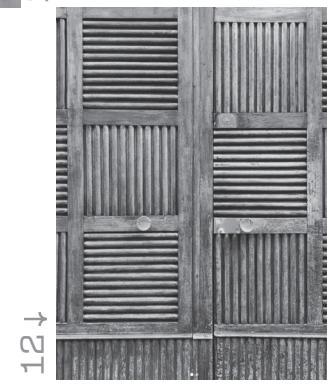
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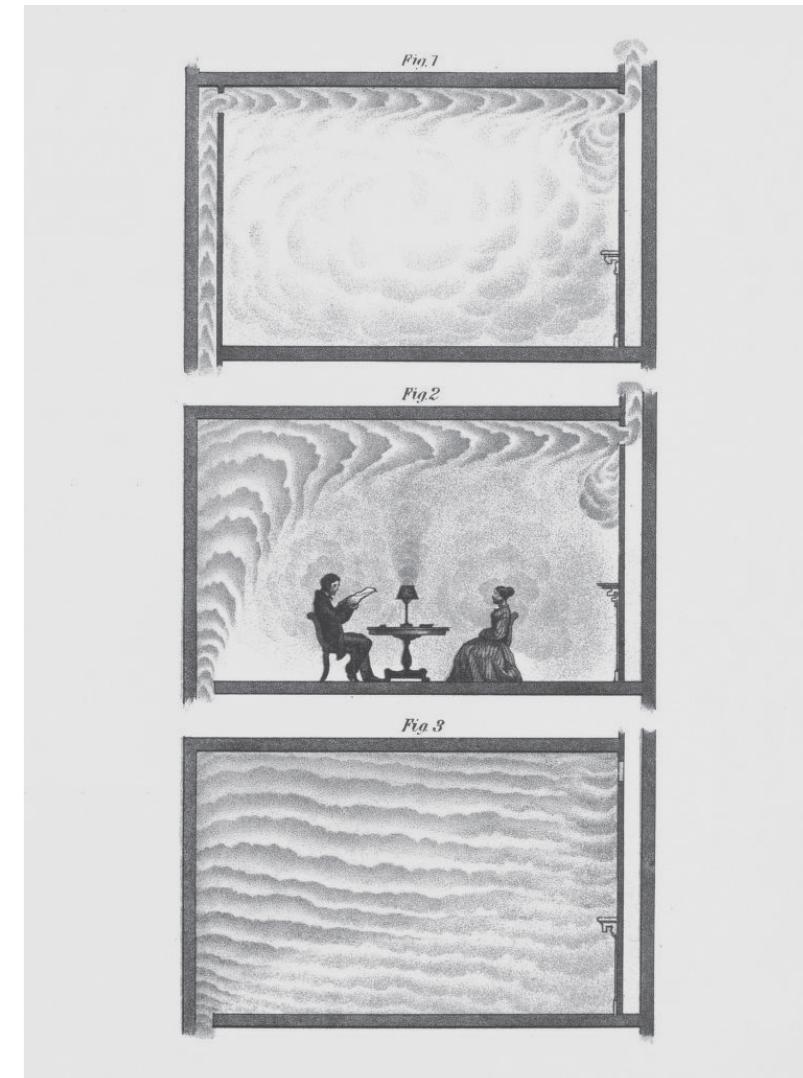
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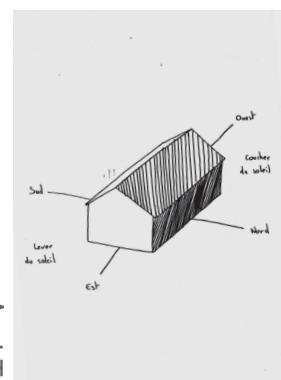
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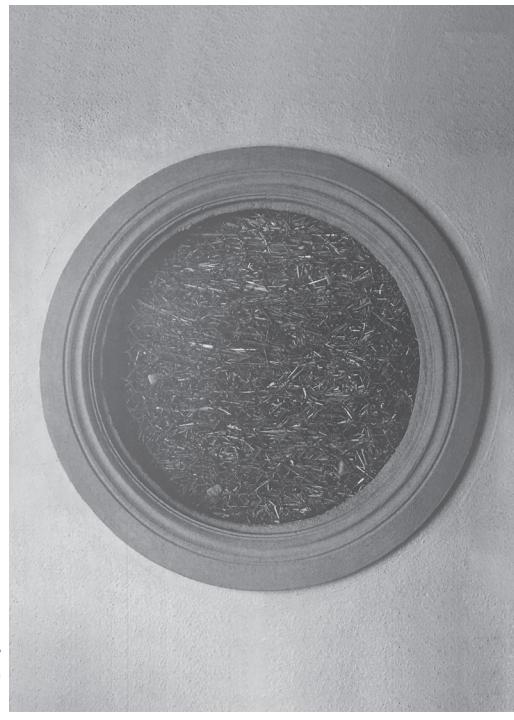
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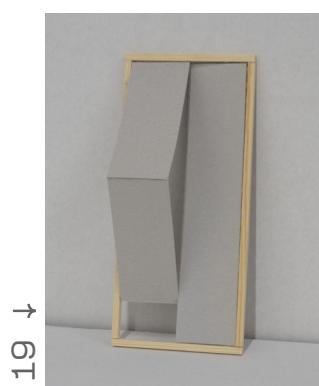
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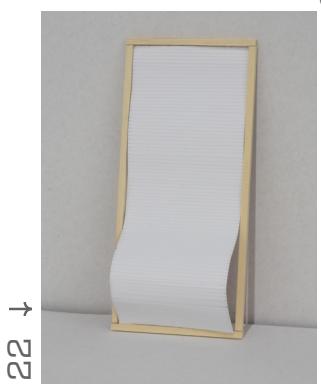
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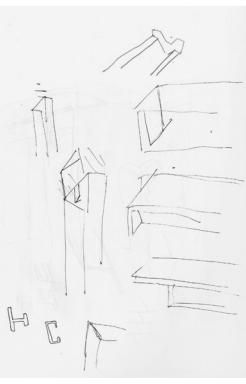
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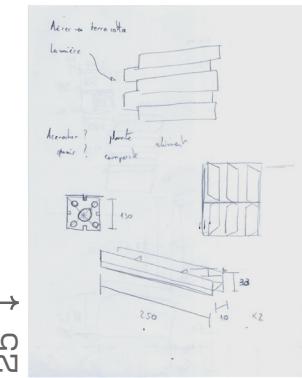
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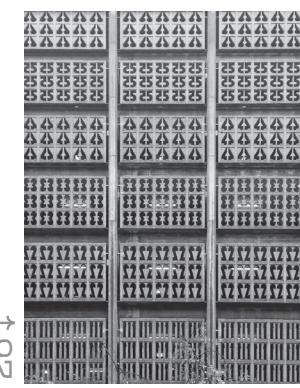
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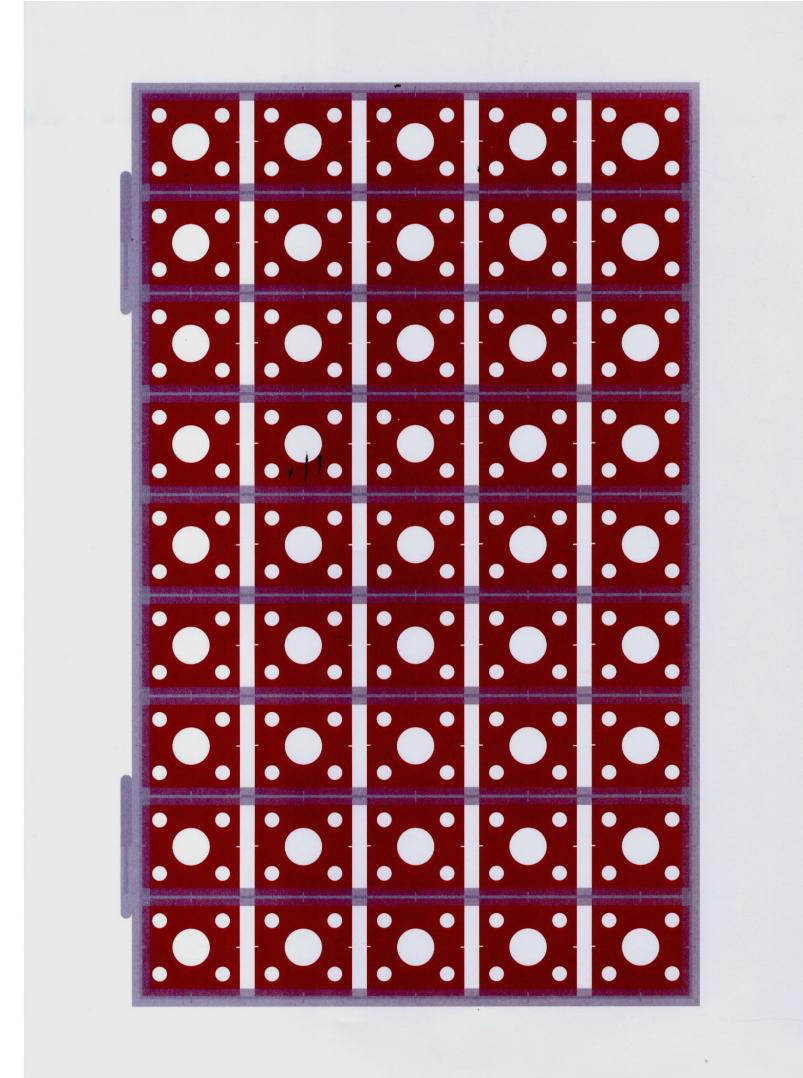
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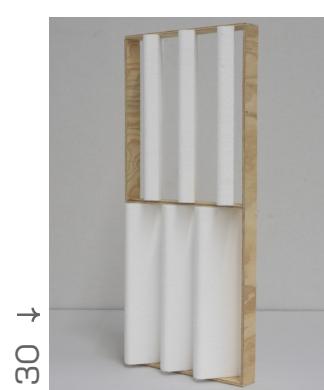
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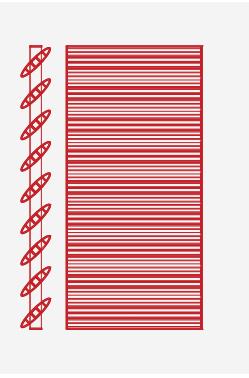
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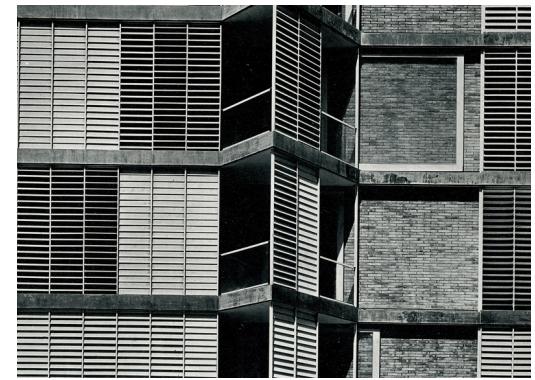


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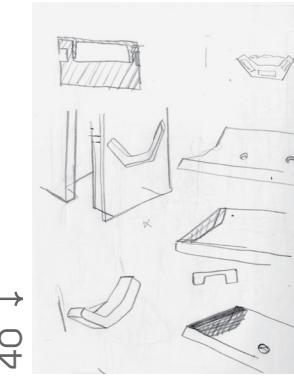
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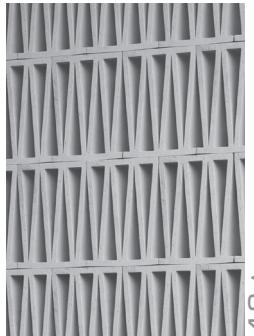
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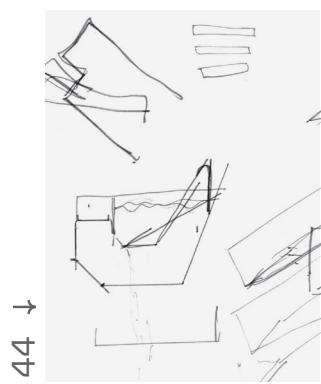
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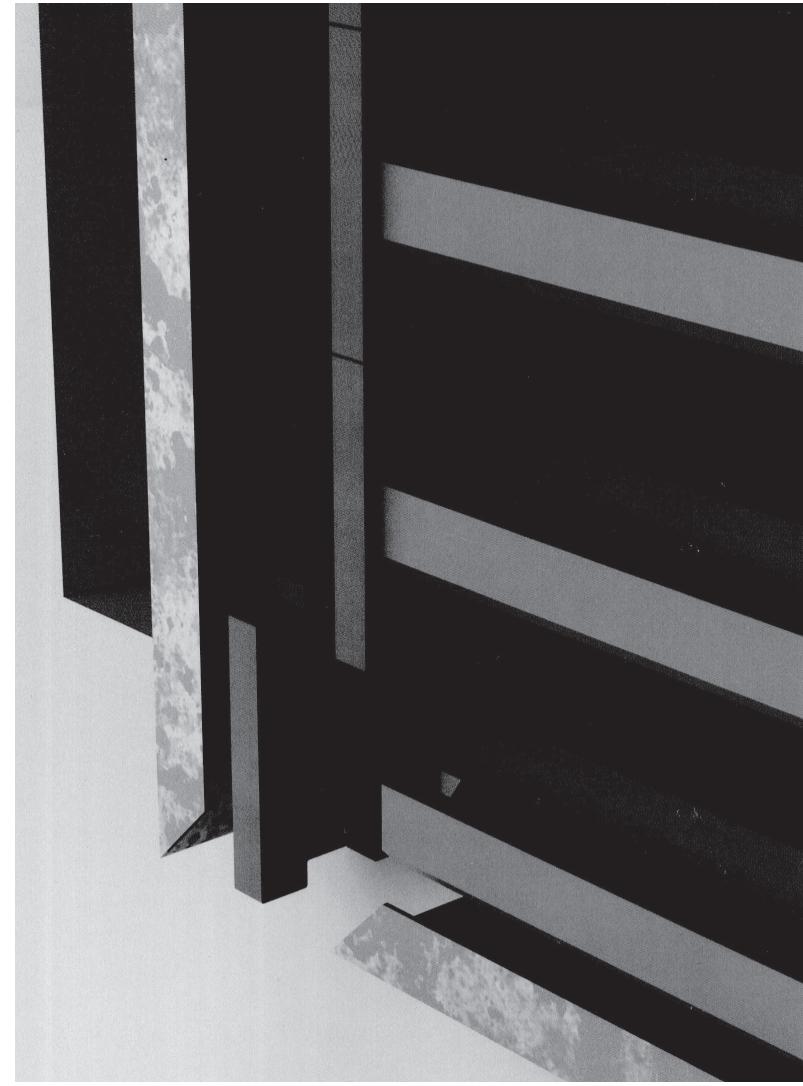
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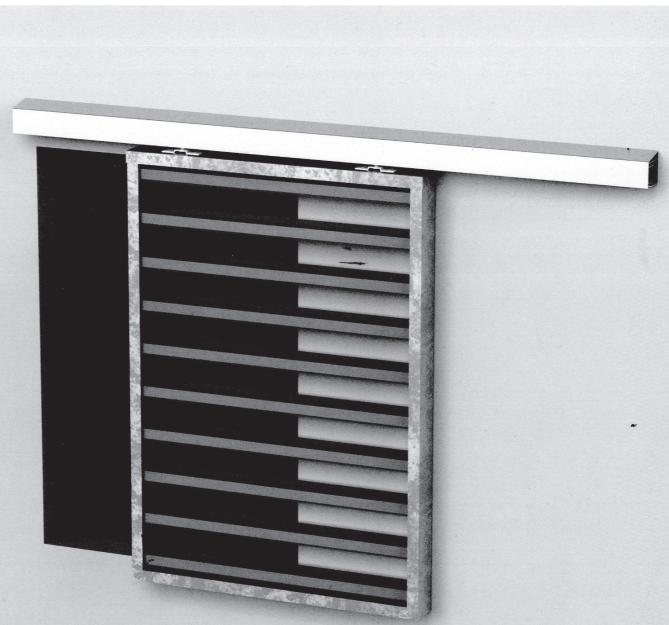
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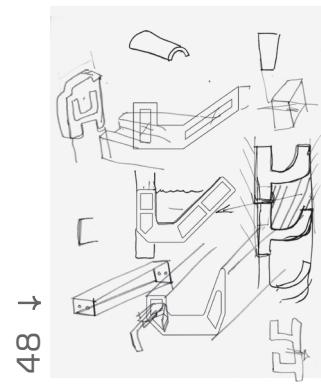
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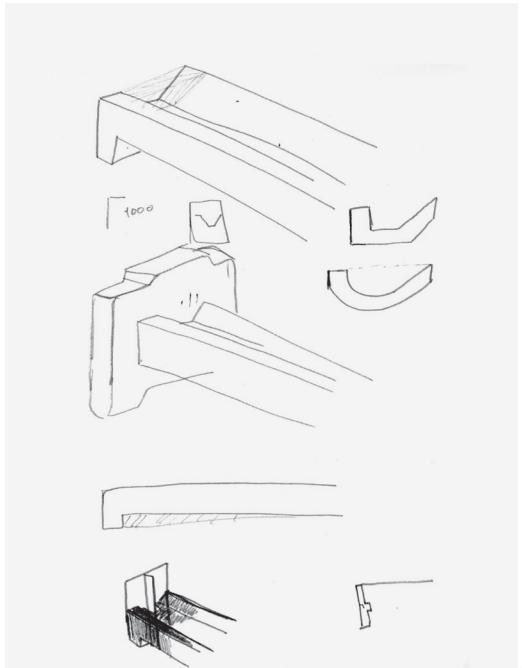
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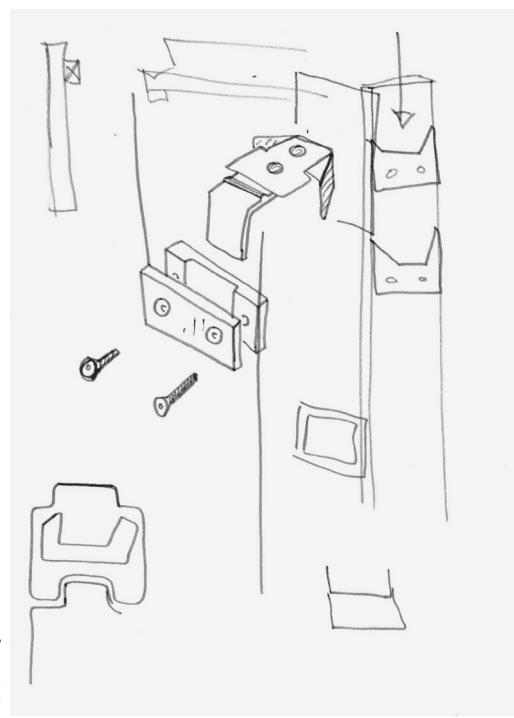
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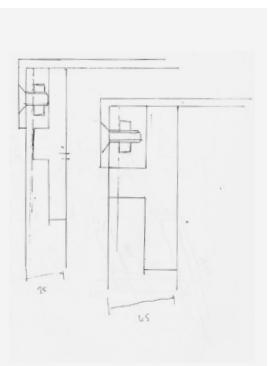
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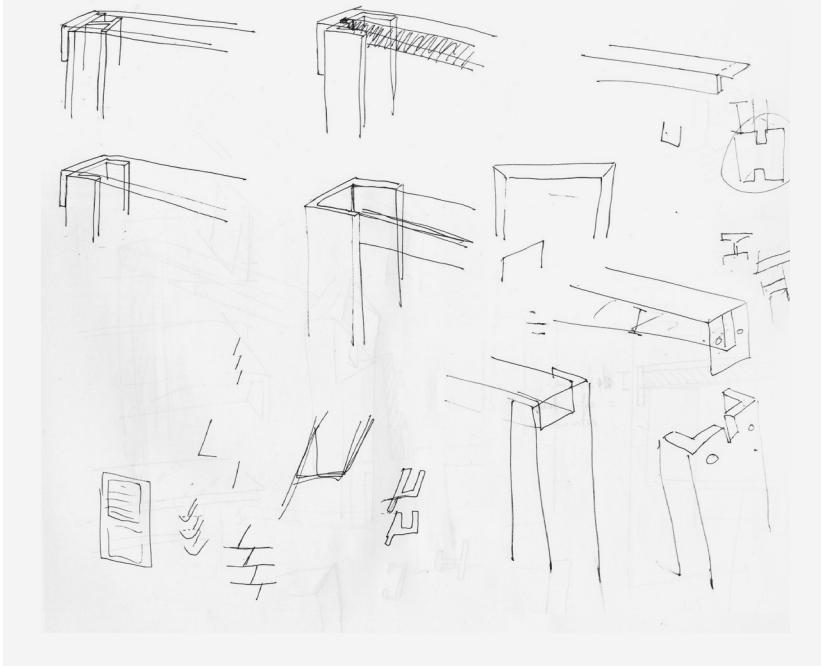


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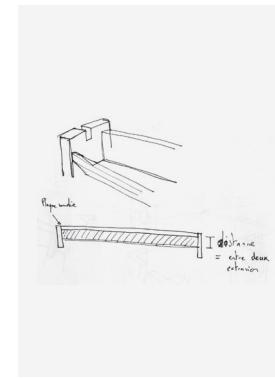


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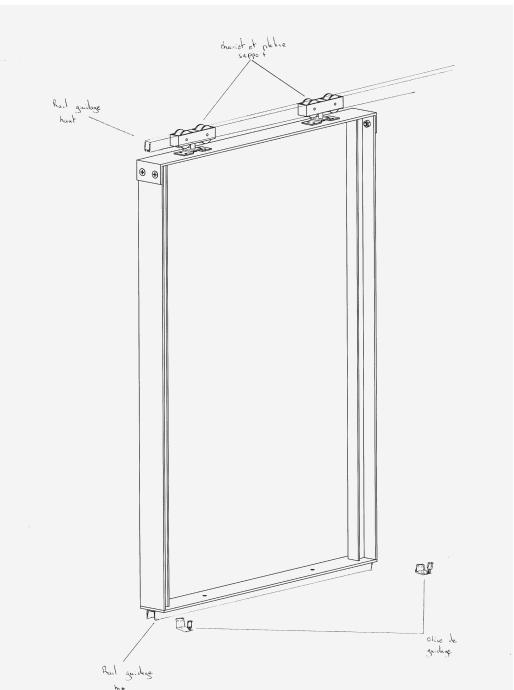
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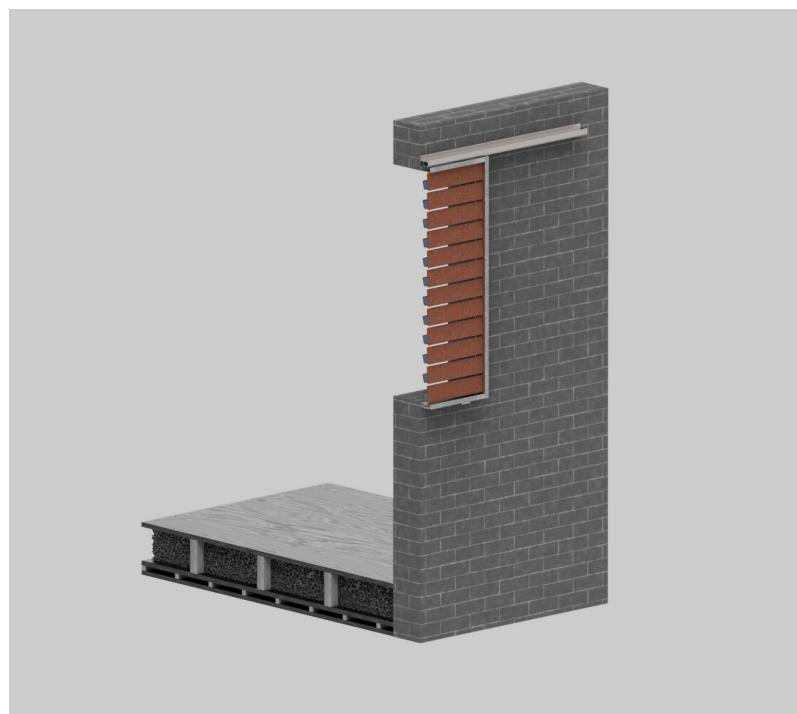


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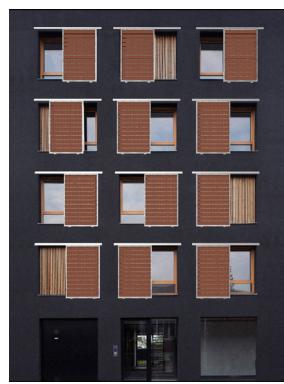
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