

Jacob Barkan

ARCHITECTURAL CERAMIC ASSEMBLIES WORKSHOP  
ARC 404 | OMAR KHAN  
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# Ornate Blossom

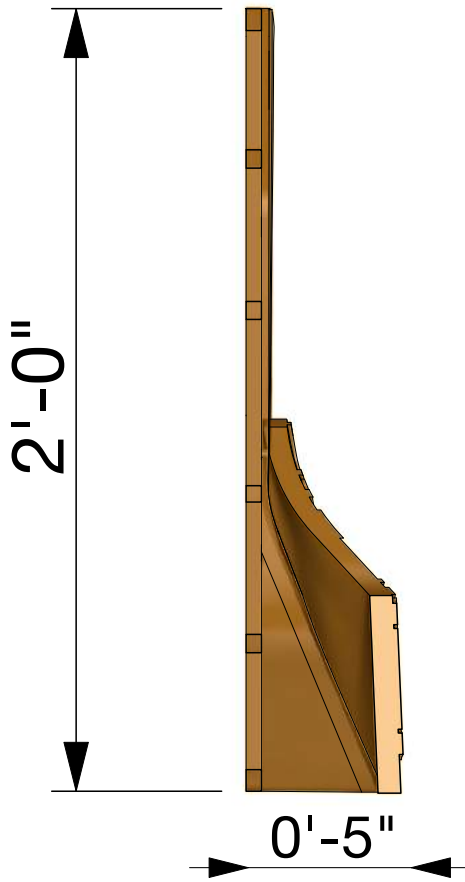
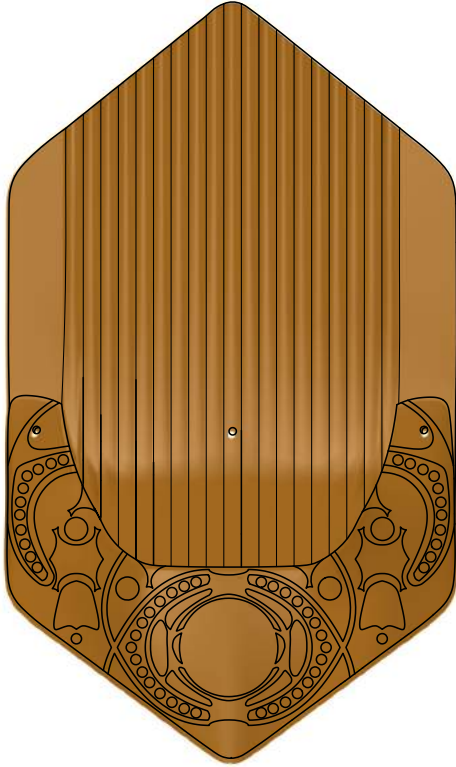
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Ornate patterns were a standard attribute of prestige architecture in the 19th and early 20th centuries. Terra Cotta was an ideal material for sculpting expressive patterns and figures for building facades. Some of the work that inspired this project came from the designs of Louis Sullivan who focused on complex organic designs to decorate his buildings. In the wake of Modernism and emerging construction technologies, ornamentation was deemed unnecessary. However in recent years, Terra Cotta has staged a comeback as a high performance material which can be easily sourced. Today's terra cotta designs are not designed by craftsmen, instead its build is through strategic parametric design. *Ornate Blossom* proposes an argument that traditional craftsmanship can be a pleasurable facet of the built environment. So this project asks can traditional expressionism and current performance standards be mediated in the age of climate change?

Project sketch



# Panel Design

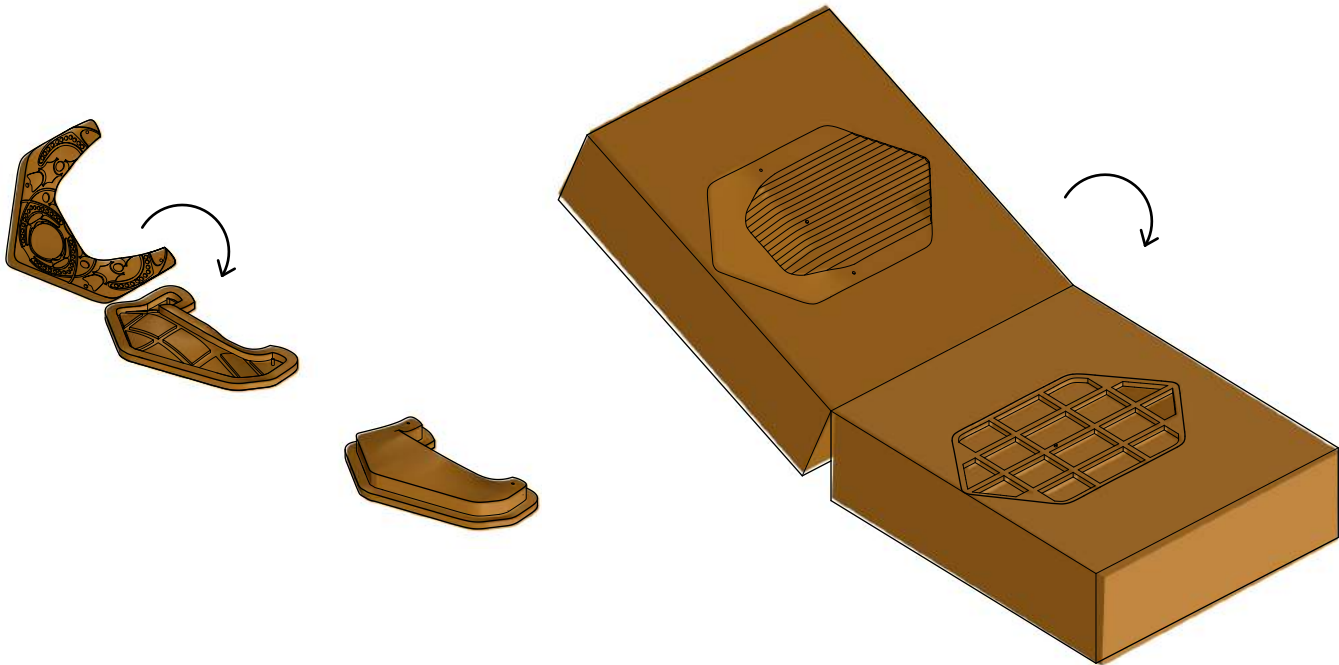


Caption: Plan, Section w/ dimensions.

Caption: Isometric of one panel and multiple panels aggregated



# Manufacturing Technique



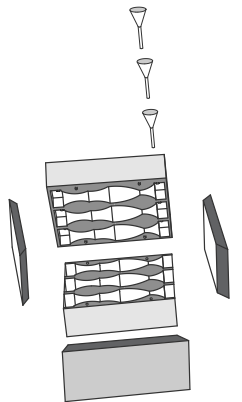
Isometric Mold Design

Isometric Manufacturing Technique

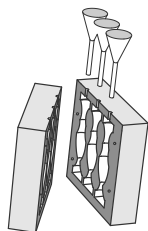
## SLIP CASTING

Slip casting is a process in which a mold is assembled in parts, generally including a top and a bottom including side walls if needed. The mold contains several holes (which range in size based on size in which funnels are then inserted the slurry is poured in incrementally. This style mold is used to create more ornate and complex designs. This kept in mind the holes drilled into the mold allow for the air to be forced out to prevent air pockets from forming. The mold is allowed to dry. Once dry the mold is disassembled and the final product from this process is removed from the mold. It is placed on racks and sent to firing.

Original for is CNC cut and post-processed by hand if needed. A mold is the created for final casting processes.

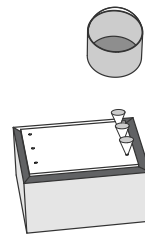


Mold is assembled placing the top and bottom molds together lining up the keyholes. Four sidewalls are added to sides to mold and strapped together.

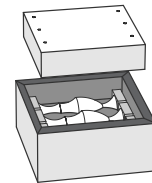


Vertical mold is assembled aligning keyholes and is strapped together.

### Horizontal Molds



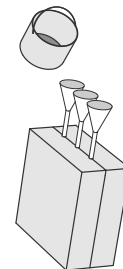
With the mold assembled funnels are placed at one end and slurry is poured in stages. The holes at the foot of this mold allow for the escape of air as to prevent buildup.



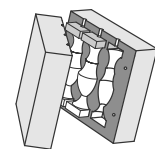
The mold is disassembled the walls are removed top mold is pulled off. The final product of this process is removed from the top and bottom.



Final products are removed and sent for firing.



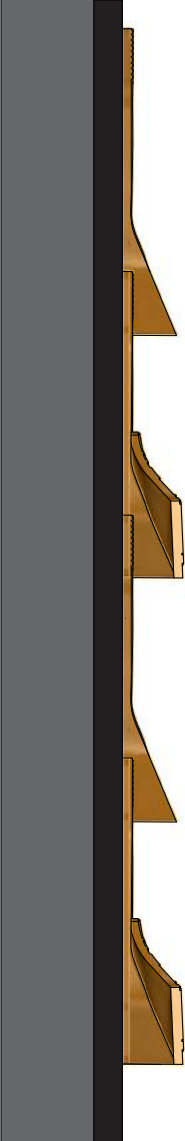
The funnels are inserted and slurry is poured in incrementally. As slurry fills in the air is forced out of the mold through the top mold holes.



Funnels and straps are removed. The mold is disassembled and the final product of this process is removed.

### Vertical Molds

# Construction Details



Section of attachment. Modules are mortared onto the wall.

Isometric of construction detail w/multiple panels



# Performance



Panel performance render. Modules absorbing rainwater which allows the planters to thrive.

