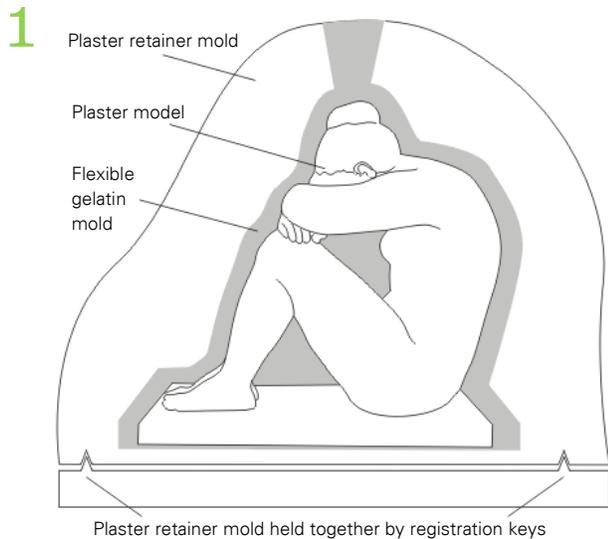


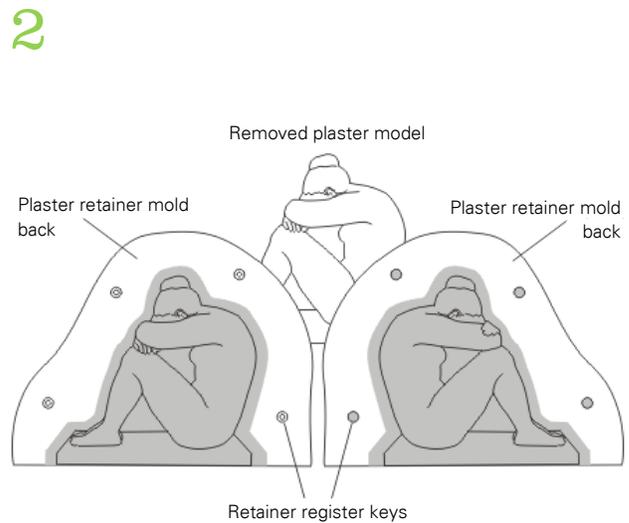
# Lost Wax Casting Process

Drawings are based on the sculpture *Night*, by Aristide Maillol.

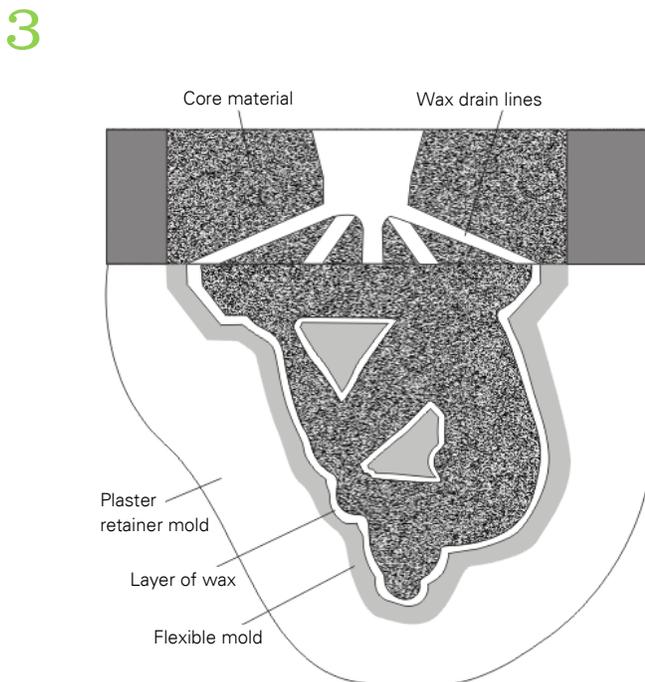
Please note that this is a simplified illustration of a very complex process.



The artist first sculpts a model in clay or plaster. The surface of the model is coated with a protective coating. The model is then placed within a plaster retainer mold into which liquid elastic gelatin is poured.

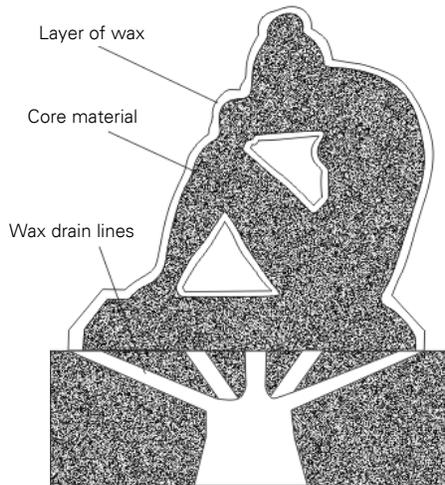


When the flexible mold solidifies, it is gently pulled from the surface of the model in two equal sections revealing a negative impression, front and back.



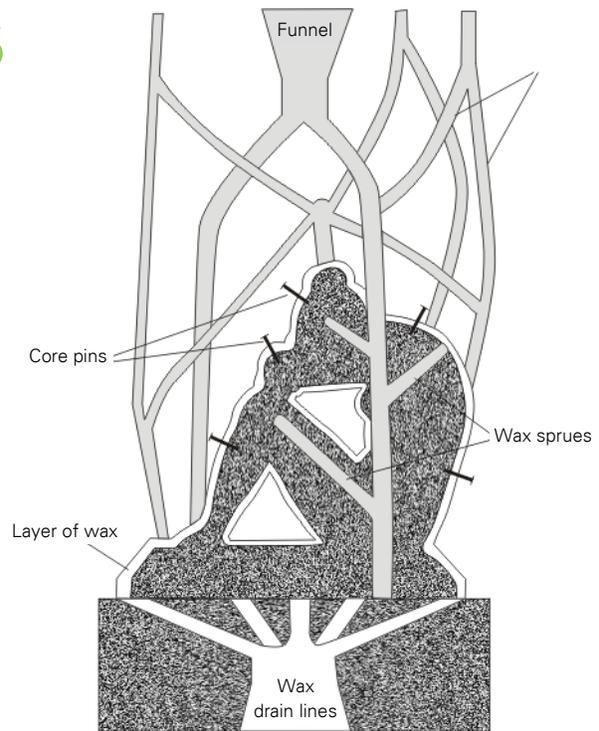
When the wax solidifies, a core of investment material is poured. After the core solidifies, the two halves of the flexible mold with the outer plaster retainer molds are removed to reveal the wax "positive." Melted wax is then applied to the inside of the flexible mold. The thickness of the wax determines the thickness of the finished bronze.

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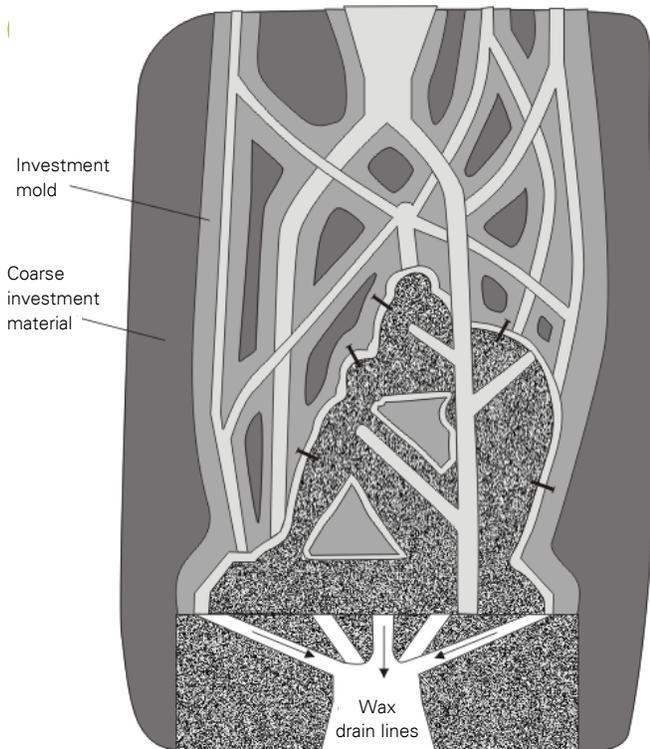


The artist can make adjustments at this point, hand-finishing the wax positive to the desired level of completion before the bronze casting. This is the point at which the artist signs the work and an edition number and a foundry seal are added.

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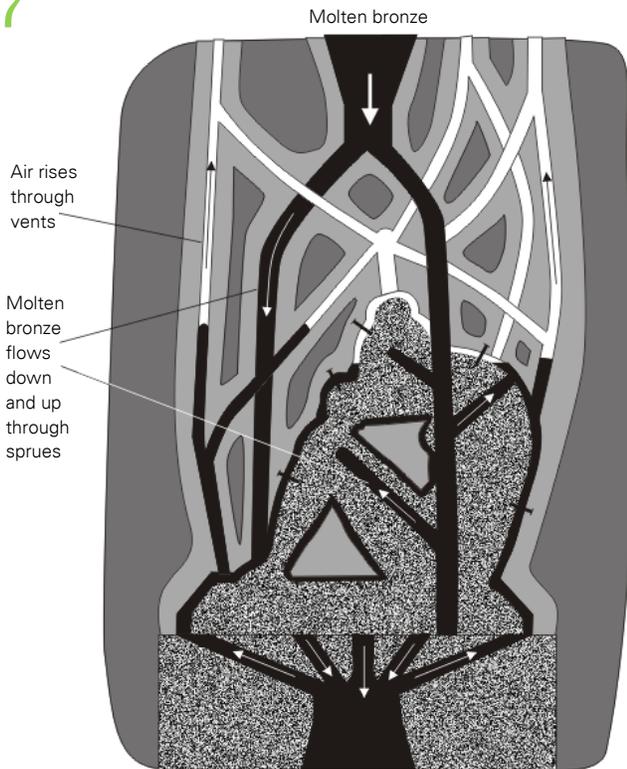
Wax runners, sprues and risers (air vents) are attached to the wax positive. These will act as channels for the bronze to fill the spaces left behind from the melted wax and for the air to escape. Core pins are inserted through the wax to the investment core to maintain the distance between the core and the outer mold once the wax is gone.



A fine grade ceramic investment material is applied to the wax positive and runners to make an outer "investment mold". A coarser investment material is added on the outside, filling all the spaces in between as a protective cradle. The core pins will bind the wax positive and the core to the investment mold.

The investment mold is fired in a kiln to make the mold solid and to melt the wax from the inside; hence the name, "lost-wax" process. The wax escapes out of the drain lines at the bottom of the mold creating air spaces between the core and the outer investment mold, which is held in place by the core pins.

7



When the investment mold has cooled, molten bronze is poured into the mold flowing downward through the runners and then up through the sprues filling the air spaces left by the melted wax.

8



When the bronze is cooled, the outer investment mold is chipped away and the rough bronze is ready for finishing.

9



The runners, sprues and vents are removed, chiseled and filed so that no trace of them remains. This process is called "chasing". The core is removed from inside of the bronze leaving the finished shell.

When the chasing is complete, a thin layer of corrosive oxides are applied to the surface of the bronze giving it a "patina" which is slightly brown, green, or blue in color.

Aristide Maillol, *Night (La Nuit)*, ca. 1902-09 (cast 1960)  
Bronze, 41 x 42 x 22 1/2 in. (104.1 x 106.7 x 57.2 cm.),  
Raymond and Patsy Nasher Collection, Dallas, Texas