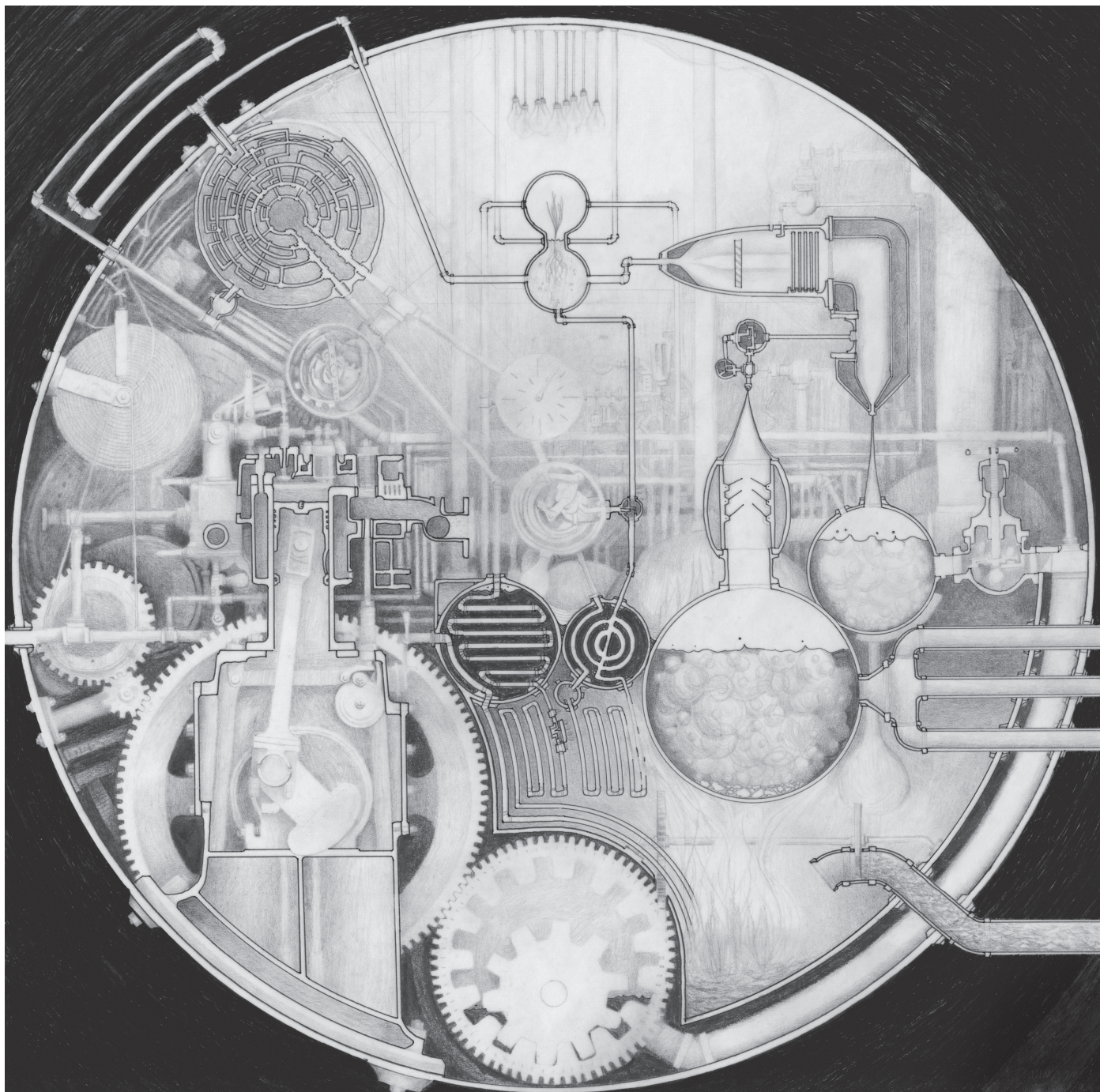


Living Machines

KATIE SHIMA



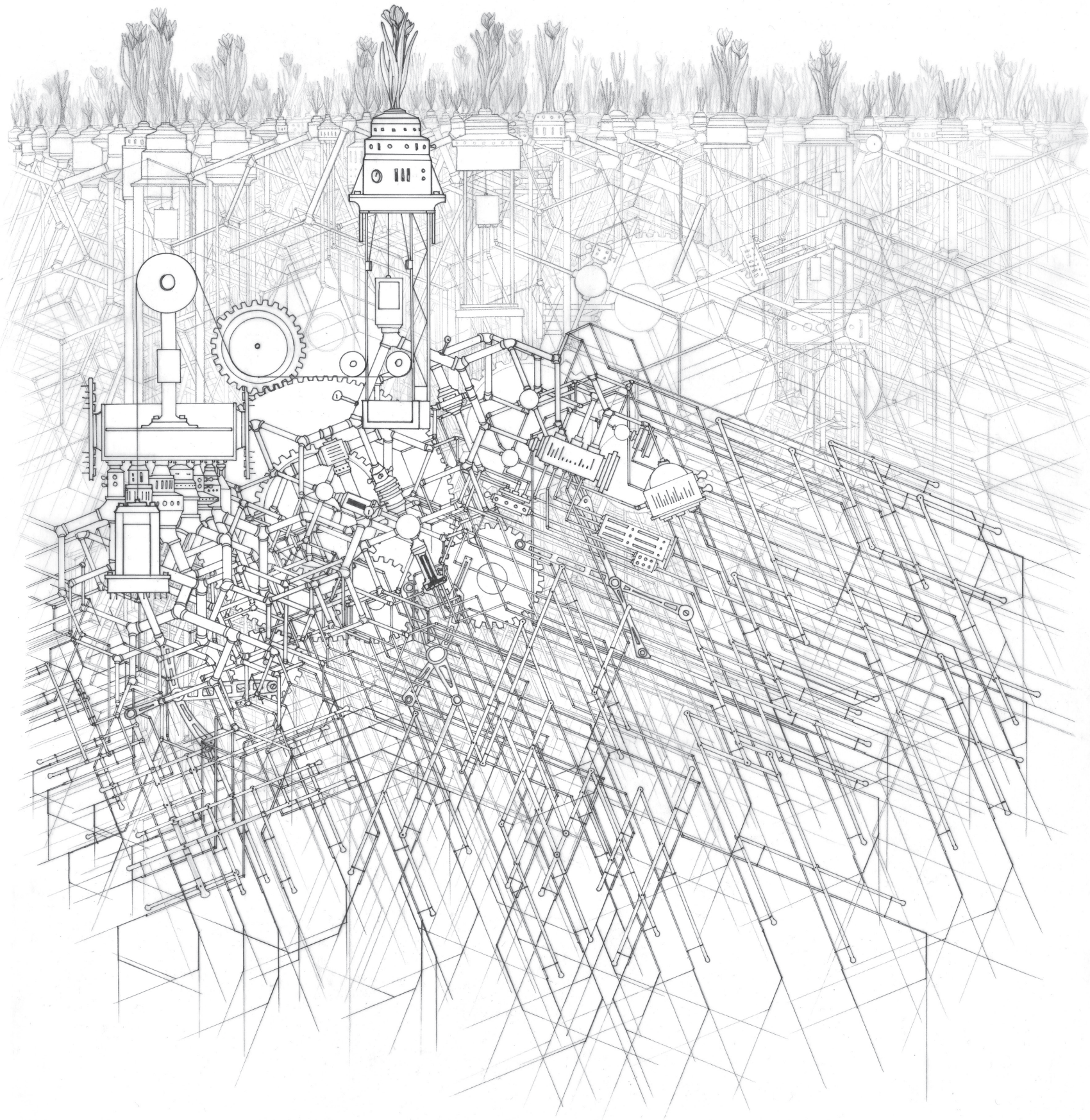
THIS SERIES OF PENCIL AND INK DRAWINGS TELLS the story of a world very similar to our own. Made using architectural drafting techniques, they explore how using a system of simple rules (restricting the angles of lines, repeating components, fractal logic) can yield a seemingly complex, even chaotic, design that transcends the sum of its constituent rules.

(FRONT COVER)
Spherical Plant Vessel, 2012
ink and graphite on vellum
11"X 11"

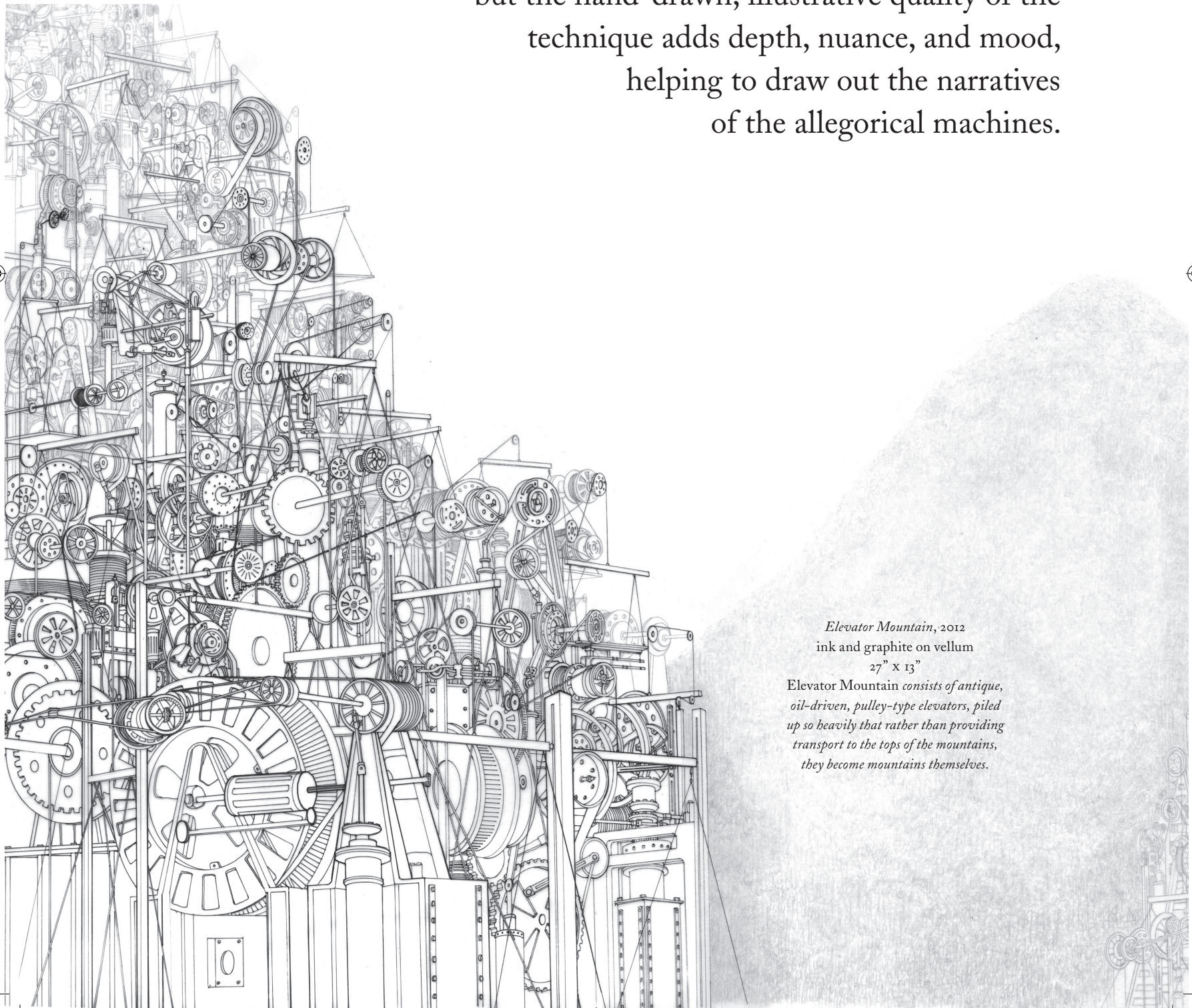
Spherical Plant Vessel is a sooty, sprawling machine entirely dedicated to keeping a small plant alive in a bubble. Nitrogen and phosphorus are processed from raw materials into fertilizer through a series of heating, cooling, pressurizing, and vaporizing steps; these are based on real industrial practices and simplified for visual clarity. The chemicals are pumped into the plant's vessel along with cooled water harvested from condensation inside the machine. Electric light is produced by a Faraday-type generator. A nineteenth-century oil engine powers the machine.

Spring, 2012
ink and graphite on vellum
11"X 14"

Spring is a field of what appear from above ground to be crocuses. Below ground, the hinged roots extend and contract via a system of motors and gears, collecting nutrients from the soil. The nutrients are then conveyed upwards via elevators to the stems of the plants.



The drawings depict a world in which industrialized societies replace natural processes with artificial ones in order to maintain their standard of living, or ways in which they might do so in the future. Parts of these mechanical landscapes are drawn with technical accuracy, in section or elevation, like architectural documentation, but the hand-drawn, illustrative quality of the technique adds depth, nuance, and mood, helping to draw out the narratives of the allegorical machines.



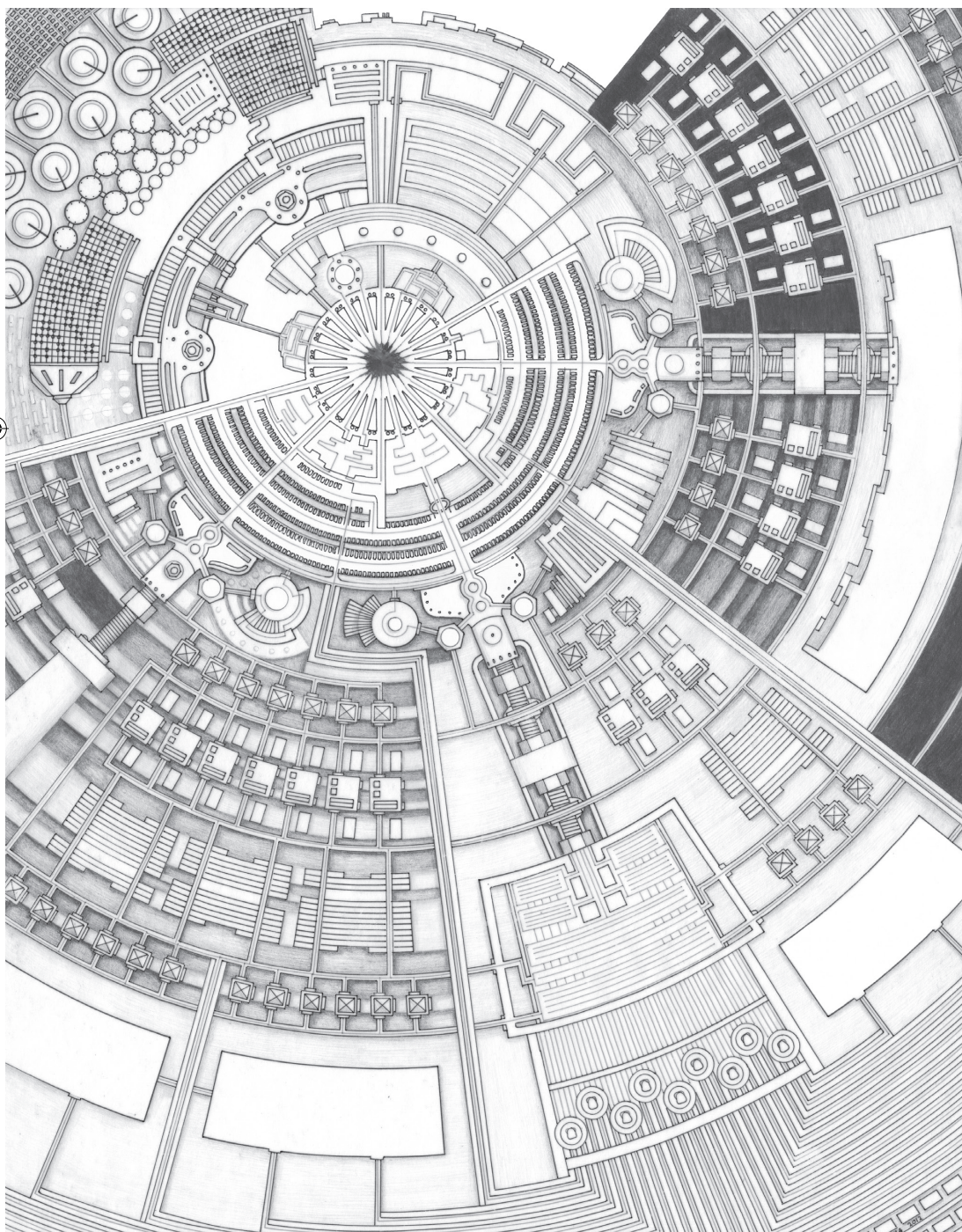
Elevator Mountain, 2012
ink and graphite on vellum
27" x 13"

Elevator Mountain consists of antique, oil-driven, pulley-type elevators, piled up so heavily that rather than providing transport to the tops of the mountains, they become mountains themselves.

In this world, machines work and produce materials for the sustenance and comfort of its inhabitants. Motors turn gears, belts, and pulleys; pumps extract water from the ground; and minerals are mined, transported, and refined.



The machines have become so integral to the landscape and atmosphere that they cannot easily be separated or even distinguished. Boilers, beakers, and pipes become the root systems of trees, clouds are shrouded in water vapor by their wind-powered mist-making instruments, and entire landscapes are composed of their constituent mechanical parts.



Water Circuit, 2012
ink and graphite on vellum
11" x 14"

Part machine, part city, water lies at the heart of Water Circuit. Water is pumped through a hydroelectric dam through capillary action, circulated through residences, recycled at a wastewater treatment plant, and pumped back into an urban center inspired by Celebration.

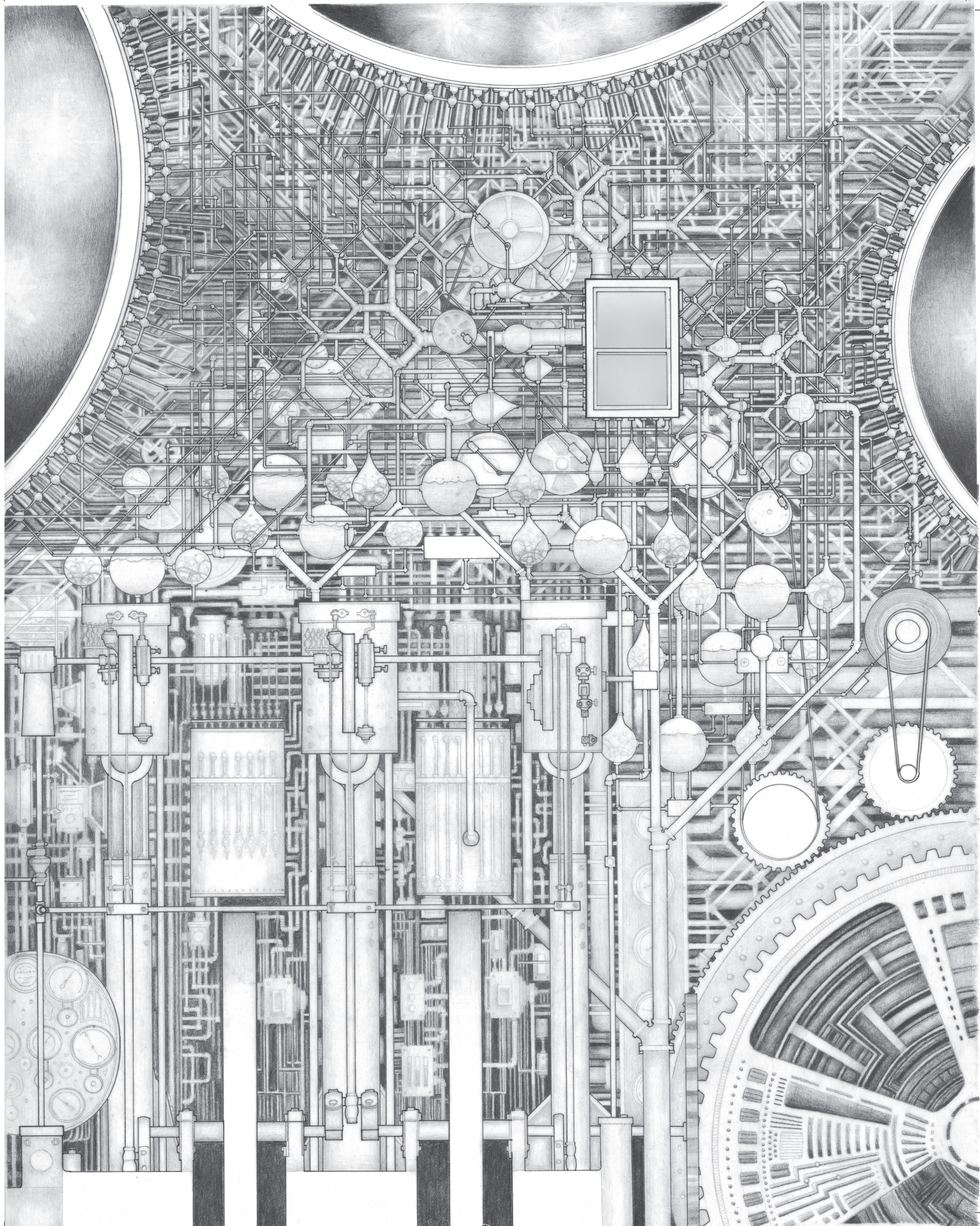
Window, 2012
ink and graphite on vellum
11" x 14"

Window is a complex machine that produces the ingredients for a blue sky—nitrogen, oxygen, water vapor, and light—and pumps them into the window frame. Some of the defining elements of the machine are a nineteenth-century water pump at the lower part of the image, a Faraday-type electricity-producing flywheel at the lower right, and the harvesting of the nitrogen given off by stars through the portals at the upper edges of the drawing.

(BACK COVER)

Submarine Island, 2012
ink and graphite on vellum
11" x 14"

On Submarine Island's beach, sun umbrellas and mangrove trees float by unaware that their island is actually a submarine.



Shima's feather duster hand renders the horrible reality of the Anthropocene, a world wholly made and controlled by legions of Willy Wonkas dancing with the progeny of David Macaulay on top of Burtynsky's *Manufactured Landscapes*. We shudder. At least someone is keeping tabs on this forced march into oblivion, but beware of becoming an accessory to the brutal murder of Mother Nature. Your prison term and penance might include: a fifty year sentence drawing rust, bacteria and moss, that will inevitably spring up from this mountain of Hubris.

— BEN NICHOLSON

Drawn by a parametric mind with a beautiful hand, Shima's machines in the garden are more than Leo Marx for the steampunk generation. Equal parts wasteland and wilderness, "Living Machines" extends pastoral allegory with critical anachronism—cultivating unnatural adaptations of the inorganic to find new possibilities for the future of environmental activism.

— MICHELLE FORNABI

