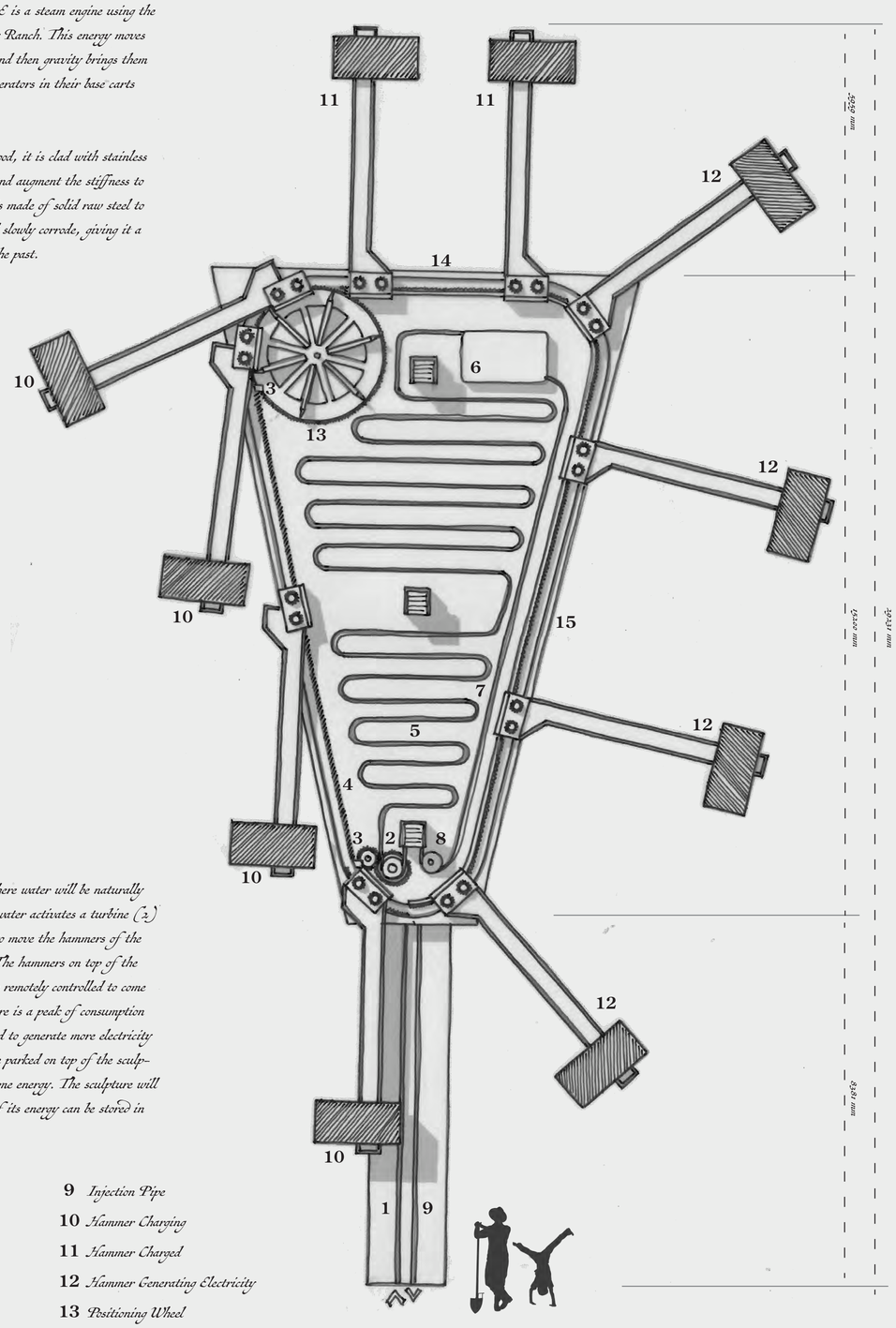
THE PERPETUUM MOBILE

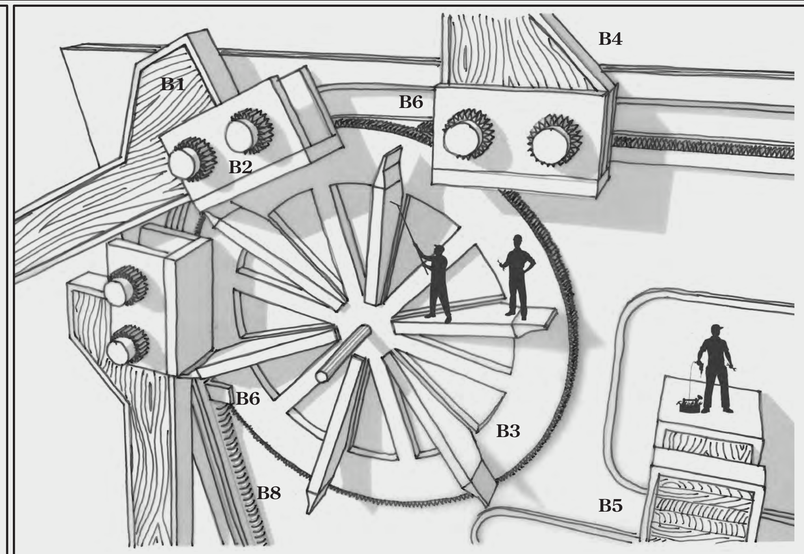
THE PERPETUUM MOBILE is a steam engine using the geothermal energy available in Fly Ranch. This energy moves heavy hammers up the sculpture and then gravity brings them back down. The hammers have generators in their base carts which generate electricity.

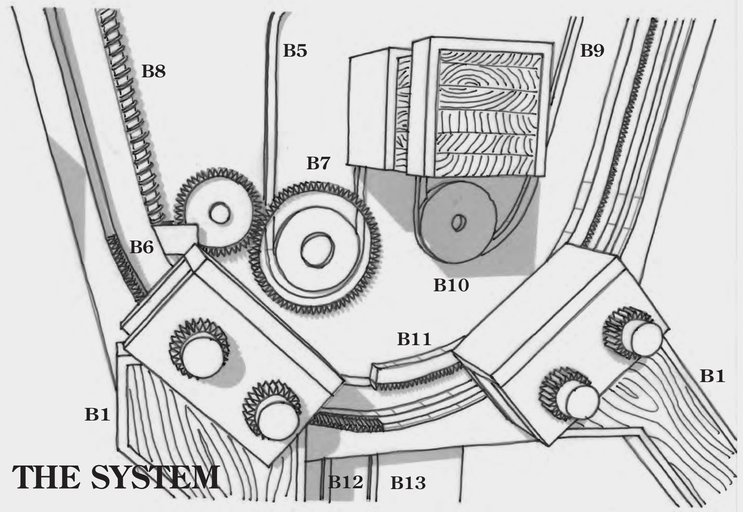
The entire structure is made of wood, it is clad with stainless steel to protect the exposed areas and augment the stiffness to the structure. The hammer head is made of solid raw steel to give weight. The steel surface will slowly corrode, giving it a patina reminding of machines of the past.



A pipe is bored into the ground where water will be naturally turn into steam. The pressurized water activates a turbine (2) that generates mechanical energy to move the hammers of the sculpture with a spinning screw. The hammers on top of the sculpture are 'loaded' and they are remotely controlled to come down whenever needed. When there is a peak of consumption the hammers can adjust their speed to generate more electricity on the way down. They can also be parked on top of the sculpture when there is need to store some energy. The sculpture will be in perpetual motion, but 50% of its energy can be stored in hammers on top.

1 *Steam Pipe*
2 *Turbine*
3 *Gearbox*
4 *Infinite Screw*
5 *Cooling Coil*
6 *Condensation Tank*
7 *Return Pipe*
8 *Injection Pump*
9 *Injection Pipe*
10 *Hammer Charging*
11 *Hammer Charged*
12 *Hammer Generating Electricity*
13 *Positioning Wheel*
14 *Hammer Storage Track*
15 *Generating Track*

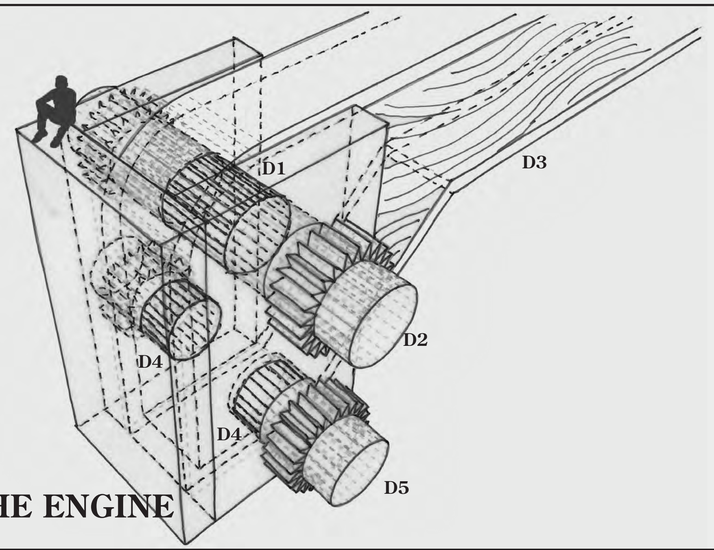




THE SYSTEM

The Hammers are driven up mechanically and they generate energy on the way down.

B1 *Hammer*
B2 *Hammer Cart*
B3 *Positioning Wheel*
B4 *Hammer loaded*
B5 *Cooling Coil*
B6 *Gearbox*
B7 *Turbine*
B8 *Infinite Screw*
B9 *Return Pipe*
B10 *Injection Pump*
B11 *Generation Track*
B12 *Steam Pipe*
B13 *Injection Pipe*



THE ENGINE

The cart is the controlling element of the system. It guides the hammers around the sculpture and has 3 generators to produce the electricity.
The cart-wheels spin only in one direction, so that they, with the hammers, can be pushed upwards, turn and generate electricity downwards.

D1 *Main Generator*
D2 *Main Axis*
D3 *Hammer Arm*
D4 *Secondary Generators*
D5 *Secondary Axis*