

SHAFTS

This includes the metal shafts or sticks which constitute the framework of the structure. The vertically placed shafts (coloured white if they are in front, grey if they are in the back - in the simulated framework) are placed as vertices of a rectangle/square. Horizontal shafts are placed as the “sides of the square”, bridging the “vertices”, i.e. the vertical shafts. These (vertical) shafts are placed one on the top of another, connected by fillers. At the top and bottom of the shafts, there are holes for nails.

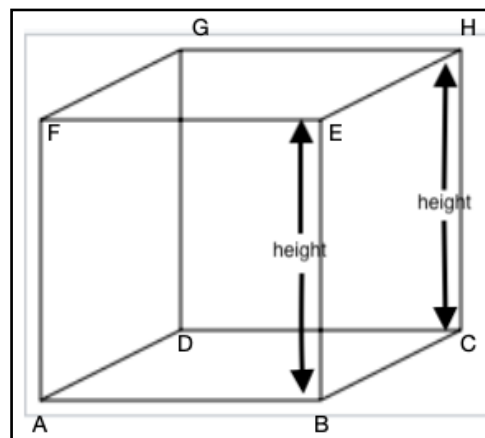
FILLERS

Fillers are hollow metal tubes, which have holes for nails in them. When these fillers are placed on the shafts, these holes will correspond to the holes on the shafts. Nails shall be fixed through these holes to connect shafts together. The image beside is an example of a filler. Fillers should be used instead of welding metal together because fillers can then be used to increase the height of the structure easily and adding more levels. It also shortens the assembly process.

FOUNDATIONS

The foundation of the structure is formed by digging a cuboidal pit of a certain height. Take this envisioned pit as the cube image on the right. Place a shaft (vertically) on points A, B, C and D respectively, such that each shaft is equal to the pit's height, i.e. each shaft's top reaches ground level. Thus, AF, BE, CH and DG are all shafts. Lay shafts (horizontally) bridging the vertical shafts, i.e. AB, BC, CD and AD are all shafts.

This forms “square” ABCD; The foundation level.
All shafts are connected with fillers.



ABOVE GROUND LEVEL

Lay shafts (horizontally) again a ‘level’ above the previous square, i.e. bridging the top of the vertical shafts, thus EF, FG, GH, EH. This forms “square” EFGH; the first level; this is at ground level.

Connect bottom ends of 4 more vertical shafts with points E, F, G and H. Now bridge the top ends of these shafts by laying shafts horizontally. Like E, F, G and H were connected. This forms another “square”. The second level; this is above ground level. Similarly, form an arbitrary amount of levels.

INTRODUCTION OF PLANTS

With the structure ready, we can move onto developing its floral components.

To form the outlay of the project, we plant creepers. Creepers are planted at ground level, within the boundaries of the first level. Many creepers are planted at the same time, to form a thick, compounding exoskeleton of creepers. After some time, these layers of skeleton completely cover and engulf the metal framework like a haunted house is covered with creepers. A dense web of plants is formed.

These creepers will form a psuedo-flooring for the other plants to grow. Dump thin layers of manure and soil over this web of creepers. Now scatter seeds of small herbs and shrubs over this web. Soon smaller herbs and shrubs will grow, the first generation of plants has starting growing on the structure. First only smaller plants must be grown, so it thickens the “flooring“ of each level gradually. With these plants growth in motion, it starts a loop of growth, since these plants’ will cross-pollinate and shed seeds which can be grown in this environment.

IRRIGATION

To irrigate this massive structure, we cannot rely on rainfall entirely. To combat plants dying out, we propose sprinklers and/or artificial rainfall. Install pipes along with the shafts which will transport water amongst the entire framework. Openings for sprinklers on the pipes, similar to sprinkler systems in farms, can be used to provide water. Like pipes are laid in the ground in farms, we lay the pipes alongside the shafts. Underwater tanks below the surface, connected to the city's main fresh-water supply system can serve as the source for water in sprinklers.

SUNLIGHT

In the lower levels, after the upper levels grow too dense with vegetation, sunlight will become scarce. A system of mirrors can be used to reflect light down to lower levels. Few large mirrors placed above the top level can reflect down the sun's rays onto other mirrors at lower levels. The mirrors placed above the top level slowly turn their face to keep up with the movement of the sun across the sky, like sunflowers do. Mirrors can be turned using similar technology as used for turning solar panels in Shirdi's prasadalaya. Concave lenses can be placed such that the reflected sun's rays pass through the focus of the lens; the lens then diverges this light such that it acts as a flood light over the entire level's plants.