

Jugaad

An architectural installation for 48°C by Sanjeev Shankar

What happens when a thousand oil cans decide to fly?

Jugaad explored this idea through a celebratory and constantly evolving process of re-purposing and redefining the cooking oil can, a ubiquitous feature of Indian life. The project borrows its name from a hindi term which refers to attaining any objective with the available resources at hand. By combining this attitude with an open-source, inclusive process, the project took recycling and reuse beyond a simple utilitarian measure into an exciting adventure of defiance and collective will. This journey is the result of a unique engagement with the residents of Rajokri, an urban village on the outskirts of New Delhi in India. Over a period of three months, Sanjeev Shankar used the discarded oil can as a vehicle to explore ideas of sustainability, recycling and re-purposing with 90 other residents from the village. Using grass root ingenuity, *Jugaad* reincarnated 945 such cans into an incredible free-standing shade canopy spread over 70 square metres.

This story celebrates the practice of jugaad and the collective spirit of India and its people.

The Journey :

What happens when people are inspired, challenged and encouraged to work together for a cause?
What happens when constraints become triggers for innovation?

Along with these triggers, the journey in New Delhi began with the recurring image of the oil can. Initial resistance within the village to work with an outsider and explore the discarded oil can, a common symbol of 'waste', was an important challenge for us. It was crucial to appreciate that the main priority of the local community was survival and earning their daily bread. Global issues of environment, sustainability and recycling can inspire them only if they are linked to their daily lifestyle. Through deep human level engagement, there was a gradual change in perception and the community saw the merits of this project and the potential in transforming mundane, discarded domestic objects. Gradually, the entire community was inspired. The oil can soon became an object of desire and value. Hundreds of oil cans were scavenged from different parts of the city and cleaned in large cooking vessels which are usually used for local weddings. After washing the cans, the lids were cut-out and their edges bent to create metallic tiles. As the word spread, more village families participated in the process. The can lids were hand painted with *gulal*, a deep pink pigment used in *holi*, an Indian festival of colour. The painted lids were drilled along the edges and stitched together using thin metal wires to create a pixelated pink metal fabric. 20 volt halogen fittings were then placed in the existing apertures to provide illumination at night. The top layer of the canopy with 945 can lids was now ready. To make the bottom layer, empty can bodies were perforated to admit light and allow air circulation. 692 such cans with each can weighing upto 700 gms were joined together using bolts which acted as shear connectors. The result was a sculptural honeycomb which acted as a reflector for the pixelated pink skin above. The two layers were suspended by pulleys using 12mm and 6mm steel cables, fastened to a pair of supports anchored into the ground. The fabrication process and vision of *Jugaad* became an integral part of village life and its people. There was song, dance, food, laughter and an overall spirit of celebration through the journey. These were as critical to the final result as was the unorthodox challenge of using scavenged materials to fabricate a magic carpet.

During day, *Jugaad* floated gracefully, gently, defiantly and improbably above the ground with light dappling through its skins, providing shade for the meeting place below. At night, the entire assemblage emerged from the darkness like a sparkling, other-worldly vessel on the brink of

breaking free from its tethers. Each oil can, with its original colour, texture, labels and scars echoed an individual history and journey, and yet lent to a new beginning. Thousand oil cans did indeed fly!

The journey of *Jugaad* is a testimony to the combined human spirit of creativity and improvisation in a culture of scarcity and survival. It marks a humble beginning for a radical way to design community places and bring democratic design to the fore.