

Design Resource

## Walnut Furniture

Traditionally Manufactured Wooden Furniture

by

Sandeep Sangaru

Craft Development Institute, Srinagar

Source:

<https://dsource.in/resource/walnut-furniture>



1. Introduction
2. Slide Show
3. Contact Details

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Source:

[https://dsource.in/resource/walnut-furniture/  
introduction](https://dsource.in/resource/walnut-furniture/introduction)

## Introduction

### Walnut Craft of Kashmir:

The natural beauty of the region is no doubt an inspiration and diverse skills are used to imaginatively replicate this legacy. Carved walnut wood work is one of the most important crafts of the valley and Kashmir is home to some of the best walnut wood carving done anywhere in the world.

Walnut is the most common wood used for carving and Kashmir is the only place in India where this wood comes from. It also is now one of the few places in the world where walnut is still available. The wood is hard and durable, its close grain and even texture facilitates fine and detailed work.

Woodcraft in Kashmir has a history that spans over ten centuries. Wood work is a craft born of the needs of the local people and inspired by the rich variety of beautiful wood available in the valley, such as walnut and deodar.

The kashmiri craftsmen are renowned for their craftsmanship and the skill of the kashmiri wood worker is not restricted to small objects but extends to the fine geometrical designs of the ceilings, ornate doors and ceiling panels, cornices, facades and roof eaves as well as intricate Pinjra (Lattice) work.



Chinar Leaf



Bowl in shape of Chinar Leaf

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### About Project:

The project proposes technology and production based intervention in the area of wooden furniture, traditionally manufactured in and Srinagar valley, Kashmir.

The project is envisaged a design development exercise involving professional designers, local artisans, manufacturers and traders engaged in the production of wood-based traditional furniture. The scope of the project also proposes to research and identify issues, concerns and bottlenecks towards quality and commercially viable production of furniture from Kashmir, for domestic and international markets.

### Objective of the Project:

- Design development of wood based traditional furniture, to address typical production related concerns towards innovating joinery & detailing.
- Introduction of related hardware and exploration of its application to achieve economical & quality oriented production of wood based furniture.
- Explore & develop alternative surface finishing techniques in the context of international markets.
- To Explore and demonstrate integration possibilities of modern technology with traditional techniques & skills base towards competitive design & production, in the context of present and future markets.
- Design development to achieve knock-down possibilities, convenient assembly, stakability and volume reduction for economical transportation.
- Design development to appreciate optimal use of raw material and human resource in production of wood-based furniture.
- Generate knowledge base and reference material in the above context to initial further development.

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## Slide Show

**Design process that was followed:**

- Introduction
- Field survey & Information Collection
  - Kashmir
  - Walnut wood working
  - Historical reference
  - Trade Structure
  - Craftsmen
  - Trade and market
  - Patterns, Motifs
  - Raw Material
  - Seasoning
  - Existing products
- Analysis & Approach
  - Analysis
  - Approach
  - Other crafts
- Product Development (Concepts, Process, Prototypes)
  - Furniture
  - Accessories
- Profiles
  - Craftsmen Participated
  - Designers
- Drawings

**Resource Downloads:**

- [Walnut Furniture - Slide Show – pdf](#)

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Project Coordinator & Designer : Sandeep Sangaru  
Junior Designers : Ranjit Khaira & Mann Singh

Project Co-ordination and Management : Craft Development Institute, Srinagar,  
Sponsors : Development Commissioner - (Handicrafts)

Document design & Photography : Sandeep Sangaru  
Research & Documentation : Ranjit Khaira & Sandeep Sangaru

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### References & Sources :

1. Studies in The History And Art Of Kashmiri And The Indian Himalayas, Author Hemant Gurti, Wadood, (1991)
2. Arts And Crafts, Jamina And Kashmir Author DR. Saif, New Delhi, Ashraf Publications, 1990.
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8. Craft Documentation Paper Macher Crafts Of Kashmir, Kashmir Shanta, Ahmedabad, National Institute Of Design, 1990.

### Foreward

At the dawn of the 21st century there is a new way to see Craft. National borders, local styles, and traditions still exist, but there is an emerging awareness that transcends customs established when the world did not move so fast. Technology, Computers and the rise of Internet have something to do with this awareness, but to do a project like this. Those who greet the past the present and future with open mind – understand that this output of designs and prototypes is not about standardization but about diversity, intending one more direction to explore possibilities upholding tradition and identity.

In general our aim as a team has been to produce ideas drawing together all the strands of Culture, architectural detailing, techniques and construction style seen and practiced in Srinagar to bring about a distinct character to the products. In particular we have tried to reduce historical complexities to the fundamental necessary, and that of marketability of the designs for full appreciation.

My endeavor from the first has been to understand the distinct view of the general principle, which governs the historical development of a craft, and my hope is that those who pursue this subject add on to the pages of the present work in this document. I have attempted to texture the document by using a lot of photographs for visual reference and stimulation. A lot more work need to be done in this area to preserve and document for days to come.

I acknowledge designers Ms. Ranjit Khaira and Mr. Mann Singh in assisting me in this project and contributing towards research and design. I took almost all the photographs over the duration of the project and am indebted to Md. Asaf Bhat for showing me some beautiful architecture, places and Craftsmanship. Gulam Nabi and Parvez for driving us around Srinagar. And people in Srinagar. I like to acknowledge Anwar Akhtar, Manu, Sajid, Saqib staff from CDI and Jaz Ahmed and family for all their support. Unacknowledged, finally, is my debt to Mr. M. S. Farooqi, Director, CDI, Srinagar for all the support to me and my team through out the project and made us feel at home.

J. B. Bhat

### INTEGRATED DESIGN AND TECHNICAL DEVELOPMENT PROJECT IN THE AREA OF TRADITIONALLY MANUFACTURED WOODEN FURNITURE SRINAGAR, KASHMIR.

Designer: Sandeep Sangaru  
Assistant designers: Ranjit Khaira, Mann Singh

Sponsor : Development Commissioner (Handicrafts)  
Co-ordinator: Craft Development Institute, Srinagar

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Abashed back holder



Jhelum River near looking through Mawla and that part of the has happened from the past



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## Introduction

The project proposes technology and production based intervention in the area of wooden furniture, traditionally manufactured in and Srinagar valley, Kashmir.

The project is envisaged a design development exercise involving professional designers, local artisans, manufacturers and traders engaged in the production of wood-based traditional furniture. The scope of the project also proposes to research and identify issues, concerns and bottlenecks to wards quality and commercially viable production of furniture from Kashmir, for domestic and international markets.

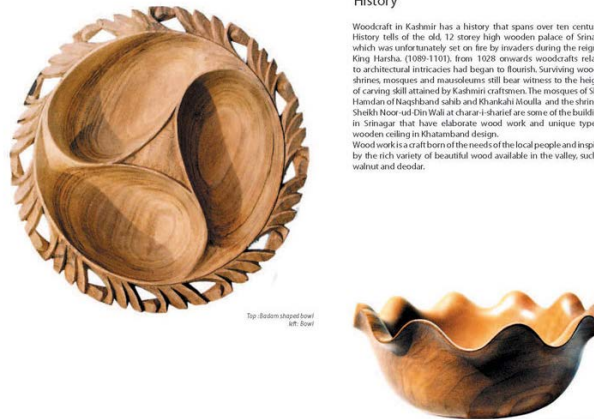
Objective of the project:

- Design development of wood based traditional furniture, to address typical production related concerns to wards innovating joinery & detailing.
- Introduction of related hardware and exploration of its application to achieve economic & quality oriented production of wood based furniture.
- Explore & develop alternative surface finishing techniques in the context of international markets.
- To Explore & demonstrate integrative possibilities of modern technology with traditional techniques & skills base to wards competitive design & production, in the context of present and future markets.
- Design development to achieve knock-down possibilities, convenient assembly, stakability and volume reduction for economical transportation.
- Human resource to appreciate optimal use of raw material and human resource in production of wood-based furniture.
- Generate knowledge base and reference material in the above context to initial further development.

## History

Woodcraft in Kashmir has a history that spans over ten centuries. History tells of the old, 12 storey high wooden palace of Srinagar which was unfortunately set on fire by invaders during the reign of King Harsha (1089-1101). From 1028 onwards woodcrafts related to architectural intricacies had begun to flourish. Surviving wooden mosques, madrasas and mansions still bear witness to the heights of carving achieved by Kashmiri craftsmen. The mosques of Shiekh Hamdan of Naqshbandi Sahib and Sharik Ali Moulla and the shrine of Sheikh Noor-ud Din Wali at charari-sharif are some of the buildings in Srinagar that have elaborate wood work and unique type of wooden ceiling in Khattambandi design.

Woodcrafts are also an integral part of the local people and inspired by the rich variety of beautiful wood available in the valley, such as walnut and deodar.



## Kashmir

The natural beauty of the region is no doubt an inspiration and diverse skills are used to imaginatively replicate this legacy. Carved walnut wood work is one of the most important crafts of the valley and Kashmir is home to some of the best walnut wood carving done anywhere in the world. The Kashmiri craftsmen are renowned for their craftsmanship and the skill of the Kashmiri wood worker is not restricted to small objects but extends to the fine geometrical designs of the ceilings, ornate doors and ceiling panels, cornices, facades and roof eaves as well as intricate Pinjar/Lattice work.



Walnut wood

Walnut is the most common wood used for carving and Kashmiri is the only place in India where this wood comes from. It is also now one of the few places in the world where walnut is still available. The wood is hard and durable, it's close grain and even texture facilitates fine and detailed work. It also presents visually interesting effects with mere plain polished surfaces. Its color and sheen are unique, and the carving that is done on this wood is of the finest quality. The tree also grows at a very high altitude, up to 10,000 feet sea level. Walnut wood from the root is very dark in colour, and the grain here is much more pronounced than the wood of the trunk, which is lighter in colour. The branches have the lightest color and have no noticeable grain. The intrinsic worth of the wood from each part of the tree differs—wood from the root being the most expensive.

### Trade structure

Srinagar has a large number of wood units involved in manufacturing and retailing of walnut wood carved furniture. These units can be broadly divided into two categories. First is a fairly smaller structured unit that involves mostly members of the family. They interact directly with the customer (domestic or international) and are involved in running the business, right from production to carving to marketing and transporting.

The other is a much larger organization which houses many different units, each specializing in a particular product. These organizations cater to the domestic market and are also involved in exports, either through an international trader or individual clients. Such organizations have as many as 16-20 independent units working for them. Each unit employing an average of 18 to 20 workers, which include 7-8 carvers. A lot of carving work is also sourced out. Some of these workers have carried on the work generation after generation, working for the same employer.



### Craftsmen

Wood carving is done on a variety of articles both decorative and utilitarian. Objects ranging from furniture (tables, chairs, writing desks, dining tables, beds, wine bars, etc.), panels, screens, doors to articles of personal use like cigar boxes, jewelry boxes, photo frames and various other articles.

The work can be divided into two main categories of workers. The structural worker and the carver, however there are some who are involved in doing both the works.

The structural worker is the one who develops the basic product form with all the joinery details and the assembly. There is minimal use of machinery and the basic tools used are the planer, jig saw, band saw and power tools.



left bottom: Tibetan figures in walnut  
Top: walnut crackers with wooden threading.  
Next page: Table top dragon lamp base showing undercut carving

Depending upon the design, many a times a major portion of the basic structure is all hand carved, such as the legs and the carved members in a furniture piece. Accessories like bowls and serving trays are entirely hand carved. The basic piece, which is assembled by the structural worker, needs a lot of work by the carver and the finishing person to finally reach its beautiful, aesthetic and valued charm. The carver (Naqash) is responsible for creating the very characteristic kashmiri element in these products. Depending on his carving skill and the amount of carving needed in a product, it can take a carver anything from a few days to six months to produce a carved carver. The use of the carver's skill and the knowledge of the flora and fauna of the place and have been in use since a long period and have been passed on from generation to generation.



Left: finely carved tray with intricate floral designs  
This one is delicately carved, revealing a more subtle floral motif

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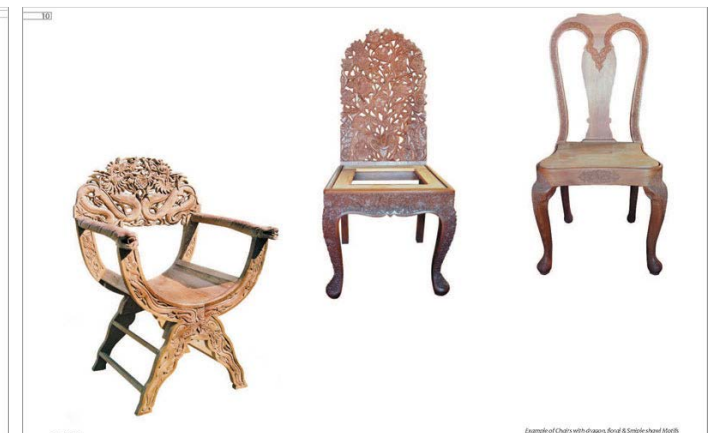
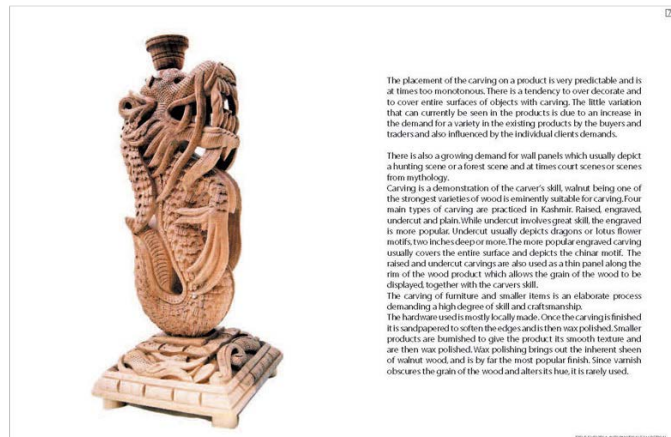
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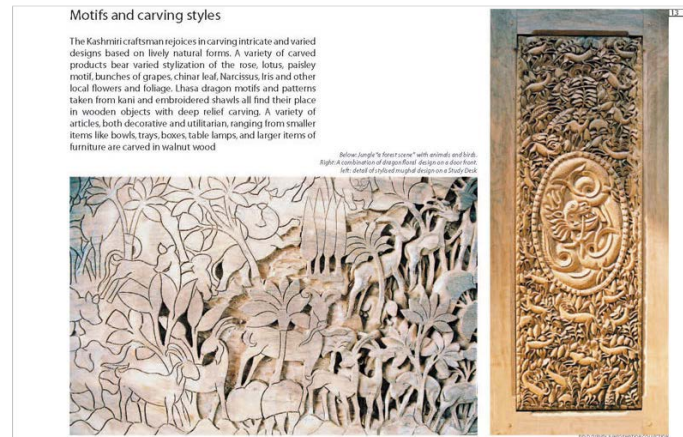
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### Raw material and Seasoning

Walnut is a tree that is not used for wood at a raw material but also gives fruits. A tree is only cut with permission from Forest department, which come through after thorough inspection and approval of the forest department. The tree is cut after 10 years. The auctions are made periodically from time to time depending upon availability. These logs of wood are sold at open auctions. Ropes are handed per cubic meter and the quality of the wood is the buyers' responsibility. The experience of selection. These logs of wood are usually cut in the local swamini to standard sizes and stored in shed for seasoning. There is lot of wastage of wood because of the unstable weather conditions. The logs are 4 feet long. Width of logs starts from 1 foot to 2 feet. Depending on the product to be made craftsman select wood and require to re-season. Seasoning is a costly and time consuming process and would not be employed except in special cases unless there were valid reasons why it is required. The use of the most important means are as follows. The factors grow the strength of the wood. The factors are, moisture, increases most strength of process, increases faster holding power and thereby joint strength, increases electrical resistance, increases the resistance to decay and insect attack, increases the thermal properties of wood. In addition to these advantages, drying wood below the fiber saturation point prevents it from becoming a source of decay. The wood is dried by the method by wood drying (furnace, in particular, is preferred). Wood seasoning in Swamini is usually done naturally. Panks are cut and the wood is allowed to air pass through. It takes 3-4 years for wood to work in use.

### Effect of Seasoning on Wood Properties

Whether artificially seasoned or left to dry naturally in place, wood in service will ultimately assume a moisture content level that is consistent with the relative humidity of its surroundings, i.e., it will adsorb or desorb moisture from or to the atmosphere until the vapor pressure of the water in the wood just balances the partial pressure of the water vapor in the surrounding air. This equilibrium

value, or equilibrium moisture content, varies with climatic as well as service conditions and may easily range from 4 percent for furniture in a heated house to 12 percent for timber in covered but unheated buildings.

Removal of so-called free water, or sap, from cell cavities has little effect on wood other than to lighten it, but removal of "imbibed," or "hygroscopic," moisture from the cell walls materially affects its physical and mechanical properties. Free water is removed first during seasoning since energy needed to break hygroscopic bonds is fully utilized evaporating free water from the wood surface. The moisture content level at which all free water has been removed from the cell cavities but none of the hygroscopic moisture from the cell walls is referred to as the "fiber saturation point." For most species the fiber saturation point exists at a moisture content level of about 25-30 percent (where moisture content is expressed as a percentage of the oven dry weight of the wood).

#### Methods of seasoning wood

### AIR DRYING

Of the methods available for seasoning wood, air-drying is the oldest and simplest. Air dried lumber is suitable for exterior use, and green timber is also frequently allowed to partially air dry prior to kiln drying. Since the effectiveness of the drying process depends upon weather conditions which control the drying rate and the final moisture content which can be reached, air drying has been replaced by kiln drying in many areas but is still an important process. Most air drying is done in the open, with the lumber stacked in several layers, but when it is essential to have rapid drying to prevent sap rot, end piling may be used. In humid areas this may be necessary if a dry kiln is not available. Such end racking promotes good air circulation and consequent rapid drying which eliminates the staining problem which rain causes end surface checking and warping of the material. Another method of piling once used to promote rapid drying was edge piling. Although it is generally thought that air-drying is a gentle method

of seasoning, but it is often severe depending on the time of the year and the species involved. Material cut from the oaks, sycamore, beech, maple, and other woods, which have large rays, will surface check readily and consequently thick material cut from these trees is given special treatment. To eliminate rapid end drying, the ends are frequently coated with a material such as paraffin or tar to retard evaporation, but often this is not enough protection, and it is necessary to place the material in what are known as semi-kilns in which the drying rate is still more retarded. Semi-kilns are often nothing more than covered sheds in which the material is piled, but they may often be large enclosed buildings in which low heat and controlled humidity are used to slow the drying process. In semi-kilns the temperature is usually maintained at 60° to 70° F. and fans are used to circulate the air, green stock may be dried 8 to 12 percent moisture content in 3 months.

### Reasons for air drying wood

Four main reasons include:

- To increase dimensional stability: Wood shrinks across the grain (not along the grain) when it dries. If wood is cut to size before it is seasoned, it will shrink during drying and thus be undersized in its final form.
- To reduce or eliminate attack by decay or stain: Wood is dried below 20 percent moisture content is not susceptible to decay or sap staining.
- To reduce the weight: The weight of lumber will be reduced by 35 percent or more by removing most of the water in the wood or, as we say, by "seasoning."
- To increase the strength: As wood dries, the stiffness, hardness and strength of the wood increases. Most species of wood increase their strength characteristics by 50 percent or more during the process of drying to 15 percent moisture content.

#### KILN DRYING

Kiln drying of lumber is perhaps the most effective and economical method available. Drying rates in a kiln can be carefully controlled and defect losses reduced to a minimum. Length of drying time is also greatly reduced and is predictable so that dryer lumber inventories can often be reduced. Where staining is a problem, kiln drying is often the only reasonable method that can be used unless chemical dips are employed.

Kilns are usually divided into two classes progressive and compartment. In the progressive kiln, timber enters at one end and moves through the kiln as the temperature rises. Temperature and humidity differentials are maintained throughout the length of the kiln so that the lumber charge is progressively dried. In the compartment kiln, the lumber charge is placed in a chamber subdivided into natural draft kilns in which heated air is allowed to rise through the material by natural convection, and forced draft kilns in which the temperature is maintained by a fan.

Compartment kilns differ from progressive kilns in that the timber is loaded into the kiln and remains in place throughout the drying process. Temperature and humidity differentials are maintained and because of their construction the temperature and humidity conditions within them can be closely controlled. Consequently, they are preferred to progressive kilns in the drying of lumber that is difficult to dry. Circulation may be either forced or natural just as with progressive kilns. Drying conditions cannot be controlled as closely in progressive kilns as in compartment kilns. The rate of drying and the rate of drying is also slower. For these reasons kilns built today are of the forced draft type and many of the old natural draft types have been replaced.

#### DEHUMIDIFICATION DRYING

Although dehumidification drying is relatively new compared to conventional kiln drying, it is now used by significant numbers



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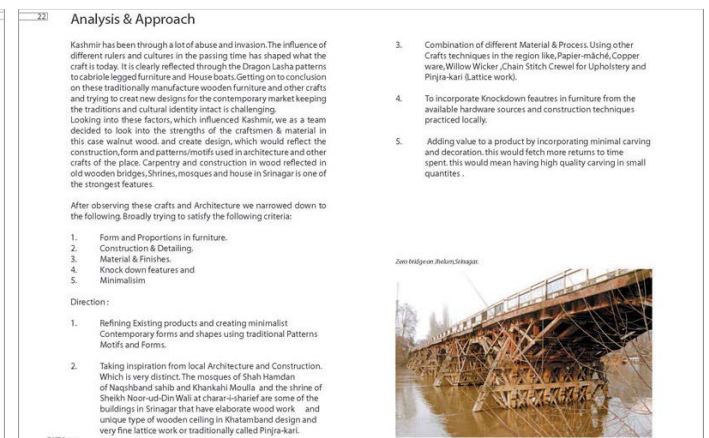
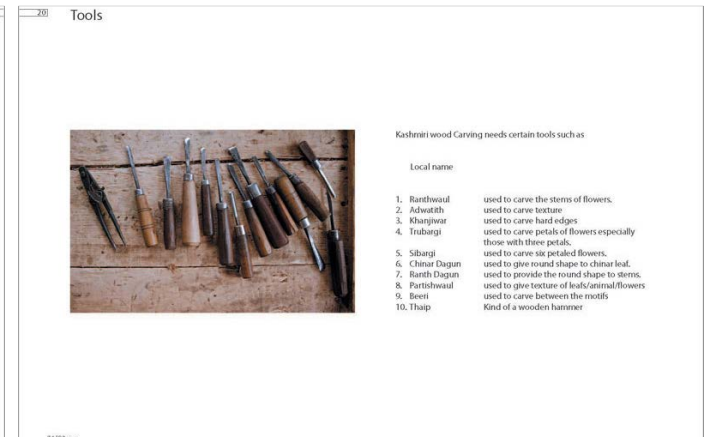
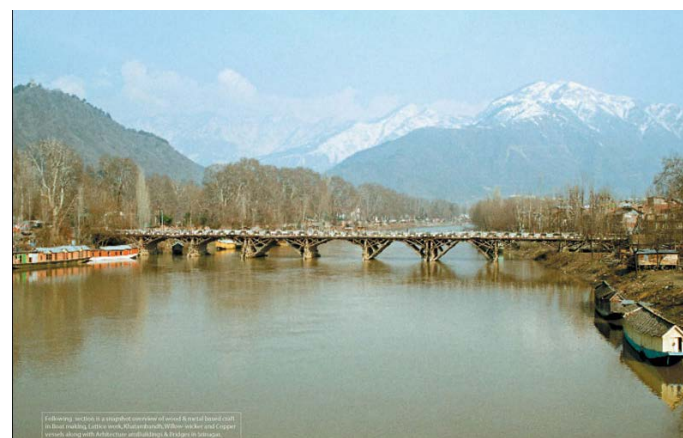
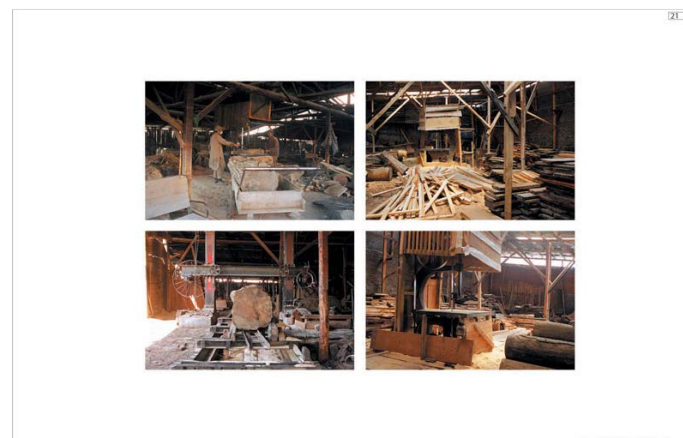
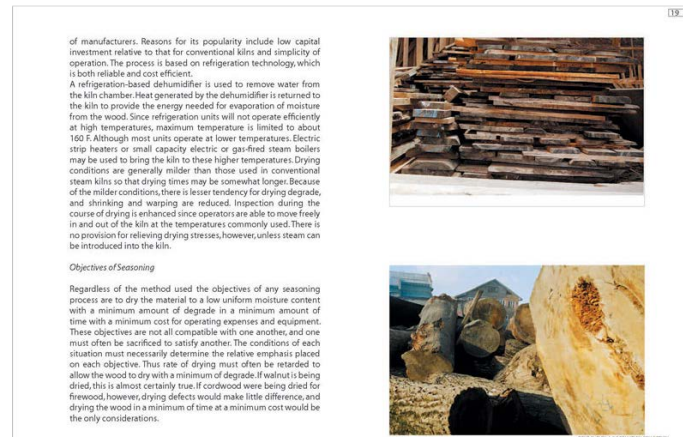
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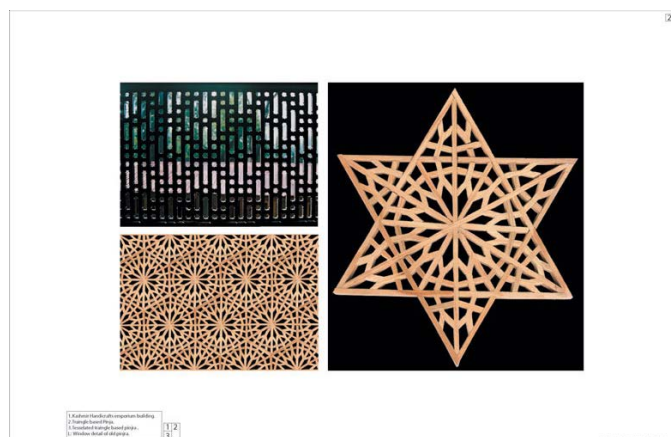
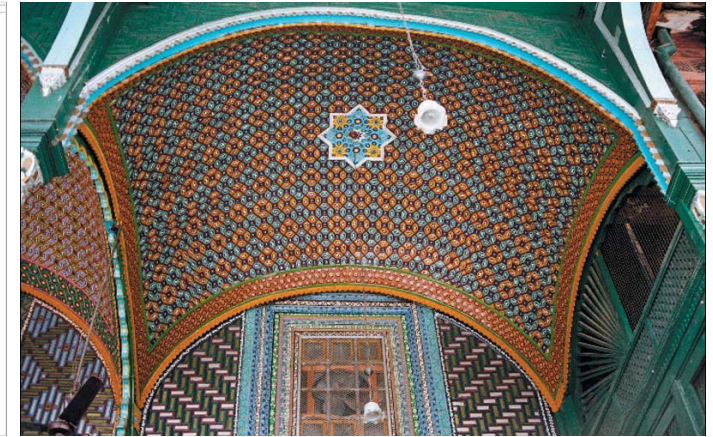
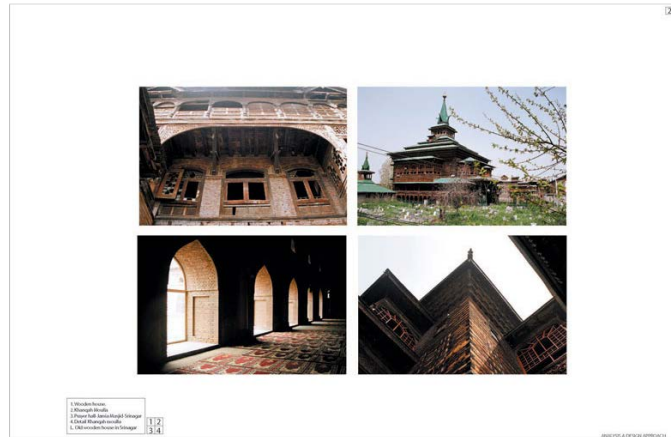
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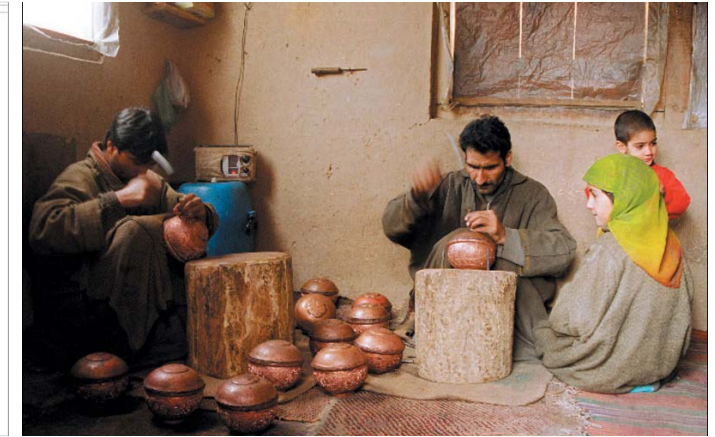
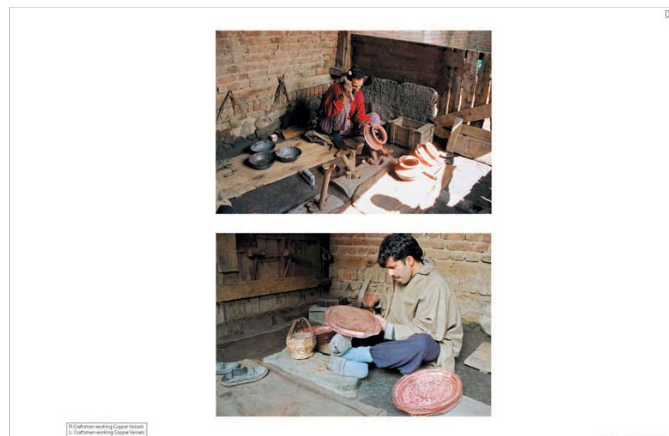
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| List of Prototypes  |           |             |
|---------------------|-----------|-------------|
| DINING CHAIR        | DESIGN 1  | Rs 4000.00  |
| STOOL               | DESIGN 2  | Rs 3000.00  |
| NESTING TABLES      | DESIGN 3  | Rs 4000.00  |
| BOOK SHELF          | DESIGN 4  | Rs 5400.00  |
| SHOE RACK           | DESIGN 5  | Rs 4500.00  |
| CENTRE TABLE        | DESIGN 6  | Rs 7000.00  |
| DINING TABLE        | DESIGN 7  | Rs 12000.00 |
| SIDE CHAIR          | DESIGN 8  | Rs 3500.00  |
| LOUNGE SOFA         | DESIGN 9  | Rs 13300.00 |
| CHAIR               | DESIGN 10 | Rs 4700.00  |
| WRITING DESK        | DESIGN 11 | Rs 12300.00 |
| DRESSING MIRROR     | DESIGN 12 | Rs 5400.00  |
| SERVING BOWL        | DESIGN 13 | Rs 350.00   |
| TABLE TOP LAMP BASE | DESIGN 14 | Rs 800.00   |
| SERVING BOWL        | DESIGN 15 | Rs 400.00   |
| TRAY                | DESIGN 16 | Rs 700.00   |
| TRAY                | DESIGN 17 | Rs 600.00   |
| HANGING LAMP        | DESIGN 18 | Rs 1200.00  |
| LAMP BASE           | DESIGN 19 | Rs 800.00   |

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## Product development

This section of the document describes visually the journey from concept sketch to prototype. following describes an overview of the idea behind the concepts.

Design-01,06 & 07:

Taking elements from architectural details of mosques. And using the construction detail of wooden screws which is commonly used in small products like lamp stands, walnut crackers etc. made of walnut wood.

Adding a subtle texture of scooping out material with a chisel enhancing grain and color of walnut wood. This texturing gives the product a different finish and feel. Different patterns can be created using this technique, when the wood is clear of grain and light in colour, back of the seat is fully carved.

Design-02:

The proportion and shape of this stool is derived from the arches and architectural elevation of mosques and Shrines found in Srinagar. The construction character and detailing is inspired from the wooden bridges. A range of designs can be created using this style of construction and styling.

Design-03, 04, 05 & 06:

Pinja kail or latticework which was used very extensively as an element in the local architecture. This craft is not practiced anymore as it used to be in old times. The idea of incorporating pinja-kail into a piece of furniture and trying to revive the craft doing this was refreshing. Products shown here is an initiative taken towards blending a very old dying craft and contemporary forms of minimalism, adding a lot of value to a product.

Design-09:

Trying to redefine and refine some existing products like this sofa (page 11). Aim was to minimize and enhance Shafae-work (all work) with fine carving finished on both sides. Modularity in construction and assembly was considered while designing this product. Which

Concepts, Process &amp; Prototypes

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would help in packaging and assembled with the help of a carpenter on site with minimum instructions. This design can be further developed into a complete knockdown design with proper hardware and detailing.

Design-10 & 11:

These two products are designed again to demonstrate different techniques to enhance wood grain with some shaping and carving. This strong character in form is derived from Mukarnas (inside of arch ways and domes) of Islamic architecture, which is found in some buildings and ruins in and around Srinagar. And is a very common feature in Mughal architecture also. The writing desk is designed keeping in mind the usability from both sides, this table has no back and can be used as a room divider without blocking the space around and making it a centre of activity.

Design-13 to 19:

Accessories or small products made of walnut wood like Trays, bowls, boxes, lamps etc are a big part of the trade. We selected a few of these products to accessorize the furniture that was designed in this project. There is a big tourist market and export market where these smaller products are in demand. The products developed are simple straight forms with fine carving.

DESIGN 01

DINNING CHAIR



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Designer: Sandeep Sangaru

DESIGN 02

STOOL



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Design Resource

## Walnut Furniture

Traditionally Manufactured Wooden Furniture

by

Sandeep Sangaru

Craft Development Institute, Srinagar

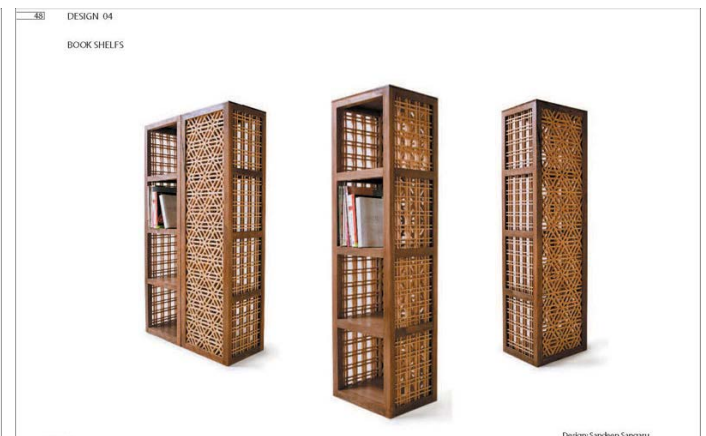
Source:

<https://dsource.in/resource/walnut-furniture/slide-show>

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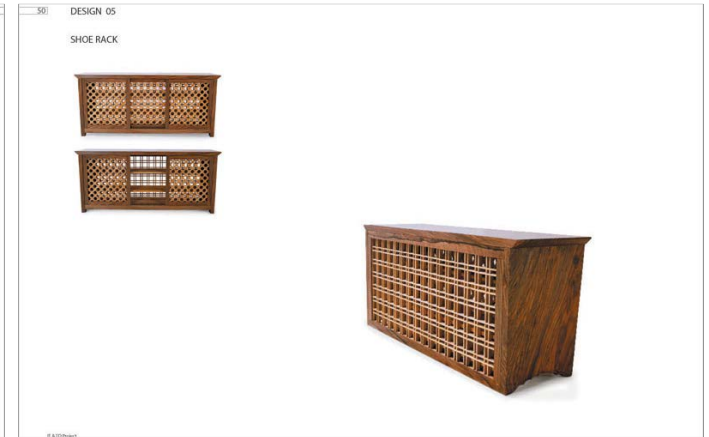
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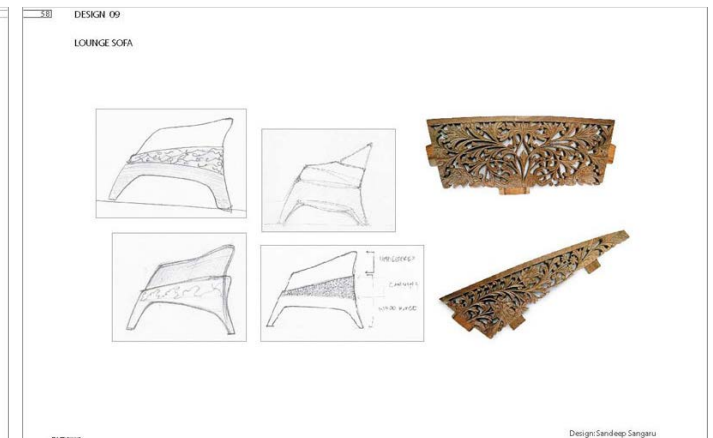
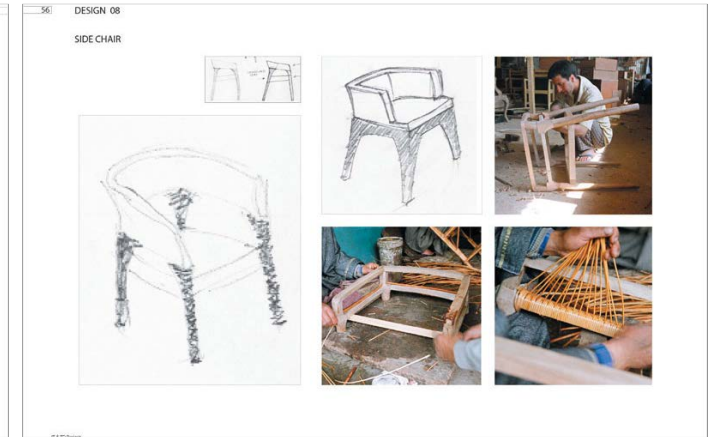
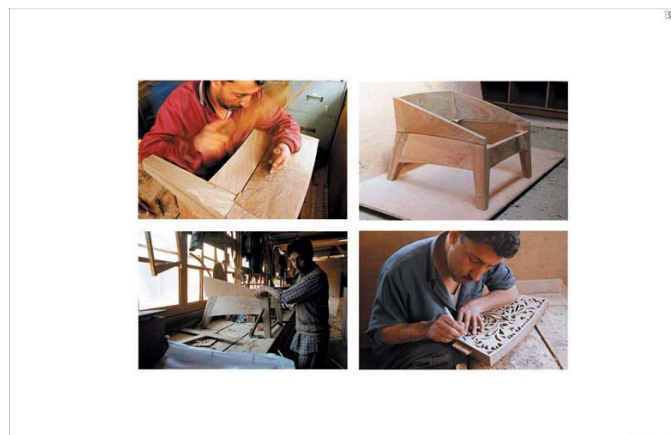
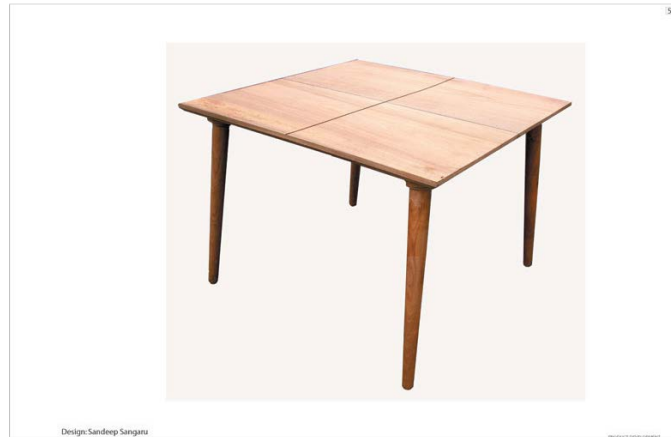
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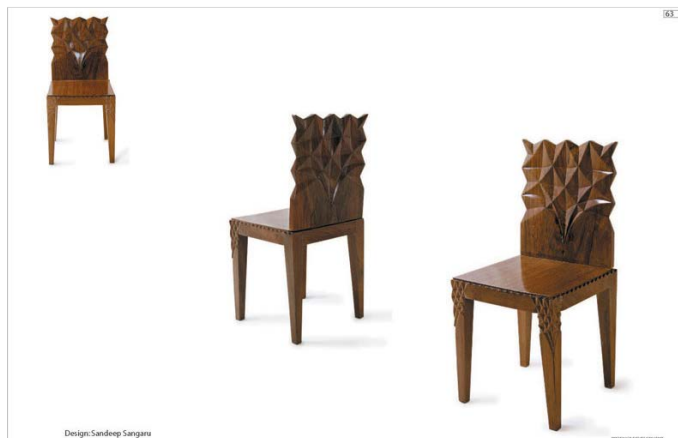
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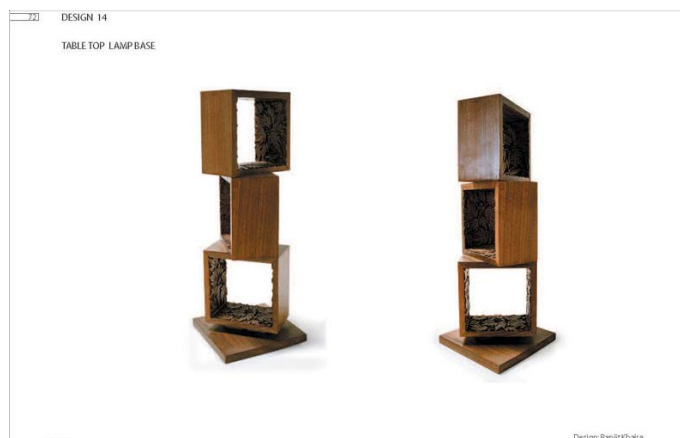
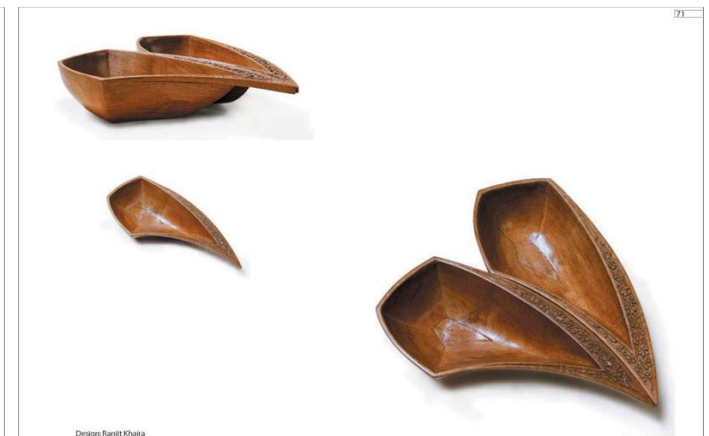
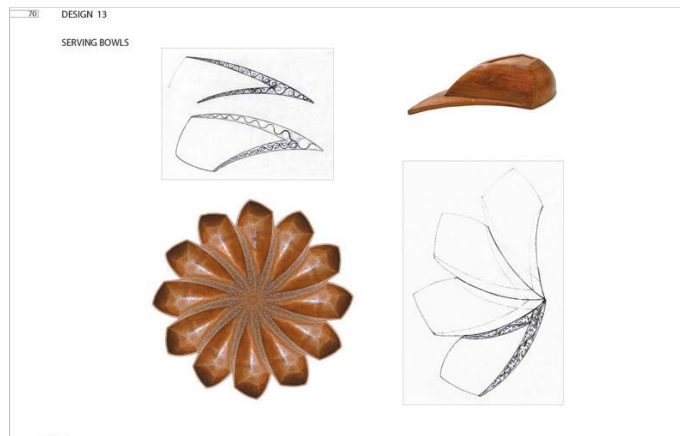
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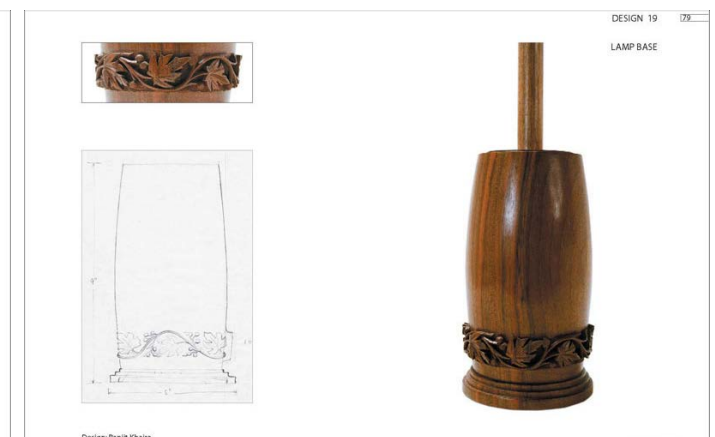
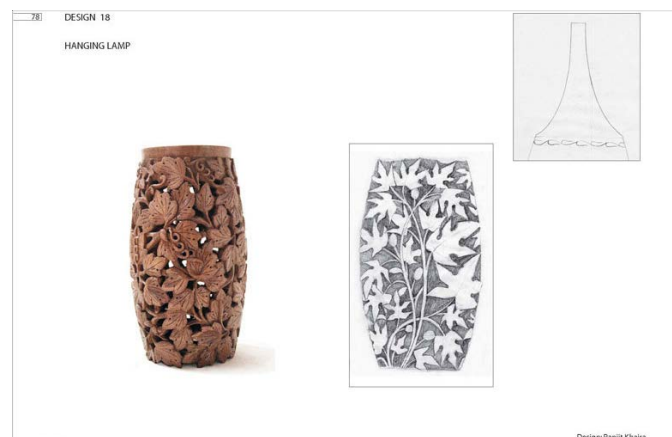
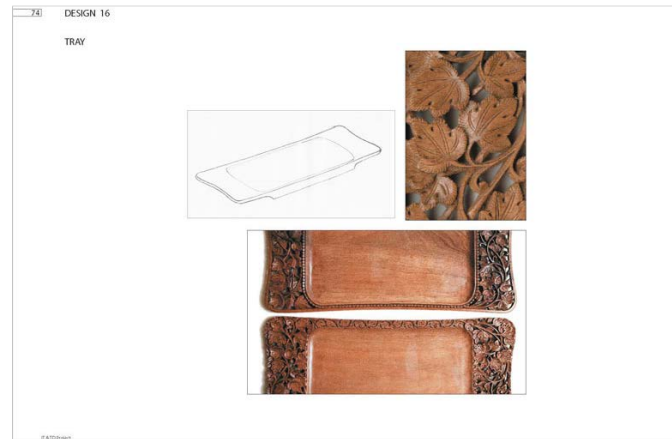
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| 80  |  |   |  |
| <b>Craftsmen participated</b>   |  |   |  |
| <b>Ess Que</b><br>Hawal, Srinagar.<br><i>Meheraj-u-din Sheikh (Carver)</i><br>S/o Gulam Nabi Sheikh<br>R/o Vicharnag, Shoppi Mahala<br>Srinagar.<br><i>Shabir Ahmad Bafanda (Carver)</i><br>S/o Abdul Ahad Bafanda<br>Kamangarpura<br>Jamia Masjid, Srinagar<br><i>Owais Ahmad Malik (Carver)</i><br>S/o Abdul Rashid Malik<br>Nalwara<br>Dangarpura, Srinagar<br><i>Meharaj-u-din Gillcar (Carver)</i><br>S/o Gulam Mohamed Gillcar<br>r/o M K Chor, Hawal, Srinagar<br><i>Mustaq Ahmed Butt (Carpenter)</i><br>S/o Gulam Rashid Butt<br>R/o Dull Hasan Yar<br>Habba Kadal, Srinagar<br><i>Abdul Qayoom Dar (Carpenter)</i><br>S/o Gulam Rusul Dar<br>R/o Batwara Bund, Srinagar<br><i>Sajad Ahmed (Carpenter)</i><br>S/o Gulam Ahmed Sheikh<br>R/o Habak, Nasim Bagh<br>Srinagar<br><i>Showkat Ahmed Najar (Carpenter)</i><br>S/o Gulam Ahmed Nazir<br>R/o Khirani Hana Lar<br>Gandharbal, Srinagar | <i>Abdul Rashid Khan (Carpenter)</i><br>S/o Gulam Muheedin Khan<br>R/o Nadi Kadal, Srinagar<br><i>Abdul Raham Sheikh (Carpenter)</i><br>S/o Gulam Rahman Sheikh<br>R/o Zinnar, Shanpora<br>Srinagar.<br><b>Khalil Md. Kalwal's Workshop</b><br><i>Khalil Md. Kalwal (Carver)</i><br>S/o Late Gh. Ahmad Kalwal<br>Lal Bazaar<br><i>Fayaz Ahmed Kalwal (Carver)</i><br>S/o Khalil Mohd. Kalwal<br>Lal Bazaar<br><i>Gh. Nabi Tarfaroaz (Carver)</i><br>S/o Gh. Mohiddin Tarfaroaz<br>Umer Colony<br>Lal Bazaar<br>Srinagar<br><i>Abdul Hamid Beigh (Carpenter)</i><br>S/o Late Assad ullah Beigh<br>Qureshi Mohalla<br>Lal Bazaar<br>Srinagar.<br><b>Kashmir Standard Craft</b><br><i>Md. Asraf Bhat (Carver)</i><br>S/o Gulam Ahmed Bhat<br>Okhum sahib<br>Opp. Islamia College Gate<br>Hawal, Srinagar<br>Pin- 190002 | <i>Ab. Rashid Najar (Carver)</i><br>S/o Gulam Mohd Najar<br>R/o New colony<br>GadaPora<br>Srinagar<br><i>Abdul Gani Khan (Carpenter)</i><br>S/o Abdul Aziz Khan<br>r/o Nandirish colony(B)<br>bemina<br>Srinagar<br><i>Tariq Ahmed Sheikh (Carpenter)</i><br>S/o abdul Razaq Sheikh<br>R/o Navsara<br>Srinagar<br><i>Nazeer Ahmed Ghanai (Carver)</i><br>S/o Gulam Ahmed Ghanai<br>Islamia College<br>Kandivar<br>Srinagar<br><i>Md. Rafiq Nazar (Carver)</i><br>S/o Ismail Nazir<br>R/o Nandirish Colony(B)<br>Bemina<br>Srinagar<br><i>Farooq Ahmed Rangrez (Polisher)</i><br>S/o late Md. Sidhi Rangrez<br>R/o Killi Masjid<br>Sraf Kadal<br>Srinagar<br><b>School of Designs, Miskinbagh</b><br><i>Gulam Md. Rag (Carpenter)</i><br>S/o Md. Iqbal Rag<br>R/o Sfa Kadal<br>Zadi manzil, Srinagar | <i>Gulam Nabi Rishi (Carver)</i><br>S/o Gulam Ahmed Rishi<br>R/o Gali no.3, Home no.150<br>Basta Mahal<br>Lal Bazaar, Srinagar<br><i>Gulam Rushul Ahangar (Carver)</i><br>S/o Abdul Rehman Ahangar<br>Rainawari<br>Zuzlangra<br>Srinagar<br><i>Ahmed Bhat (Polisher)</i><br>S/o Noor Md. Bhat<br>Arampura<br>Nava Kadal<br>Bakshi Park<br>Srinagar |
| IT & TD Project   |  |   |  |

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| <b>Designers Profile</b>  |  |
| <b>Sandeep Sangaru</b><br>Industrial Designer<br><br><b>Qualification</b><br>1999 Post Graduated Diploma in Industrial Design (Furniture Design), National Institute of Design, Ahmedabad, India.<br>1996 BE Mechanical from Utkal University, Bhubaneswar, Orissa.<br><br><b>Work Experience</b><br>2004 Design Consultant, Visiting faculty to NID.<br>2002-2004 Faculty at National Institute of Design, Ahmedabad, India.<br>1999-2002 Partner, Digital Force, Special Effects House, Hyderabad.<br>1999 Associate Designer, New Curriculum Development for Accessory Design.<br><br><b>Interest</b><br>Film Making<br>Structure Design<br>Research & Teaching<br>Craft and Design<br>Photography<br><br><b>Address:</b><br>Flat no. 7<br>Plot no. 229<br>Defence Colony<br>P.O. Sainkपुरi<br>Secundrabad - 500 094<br><br><b>Mobile:</b> 093913 85317<br><b>Res:</b> 040 55225183<br><br><b>E-mail</b> sandeep@sangaru.com URL www.sangaru.com | <b>Mann Singh</b><br>Industrial Designer.<br><br><b>Qualification</b><br>Graduate Diploma in Industrial Design (Furniture)<br>National Institute of Design. 2002.<br><br><b>Experience:</b><br>Design head: Devi design, New Delhi.<br><b>Interests:</b><br>Systems Thinking and Design.<br>Craft Development.<br>Education and training.<br>Geometry<br>Installation and interactive design.<br><br><b>Address:</b><br>V 311, Army flats<br>Mansa devi complex<br>Panchkula, Haryana<br>mannsingh@hotmail.com Mobile : +91 98106 48845<br><br><b>Ranjit Khaira</b><br>Industrial Designer.<br><br><b>Qualification</b><br>Post graduate Diploma in Industrial Design (Ceramics)<br>National Institute of Design. 1999<br>Bachelor in Finearts, MSU, Vadodara. 1996<br><br><b>Address:</b><br>503<br>Pratap tower<br>behind Angar tower,<br>IG Marg,<br>Manjalpur, Baroda-390004 |



Design Resource

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contact-details](https://dsource.in/resource/walnut-furniture/contact-details)

## Contact Details

This Project was done by Industrial Designer Sandeep Sangaru under The Craft Development Institute (CDI). These craft development studies were undertaken by Designers for CDI, Srinagar and have been contributed by Mr. Farooki, Director, CDI, Srinagar.

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You can write to the following address regarding suggestions and clarifications:

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