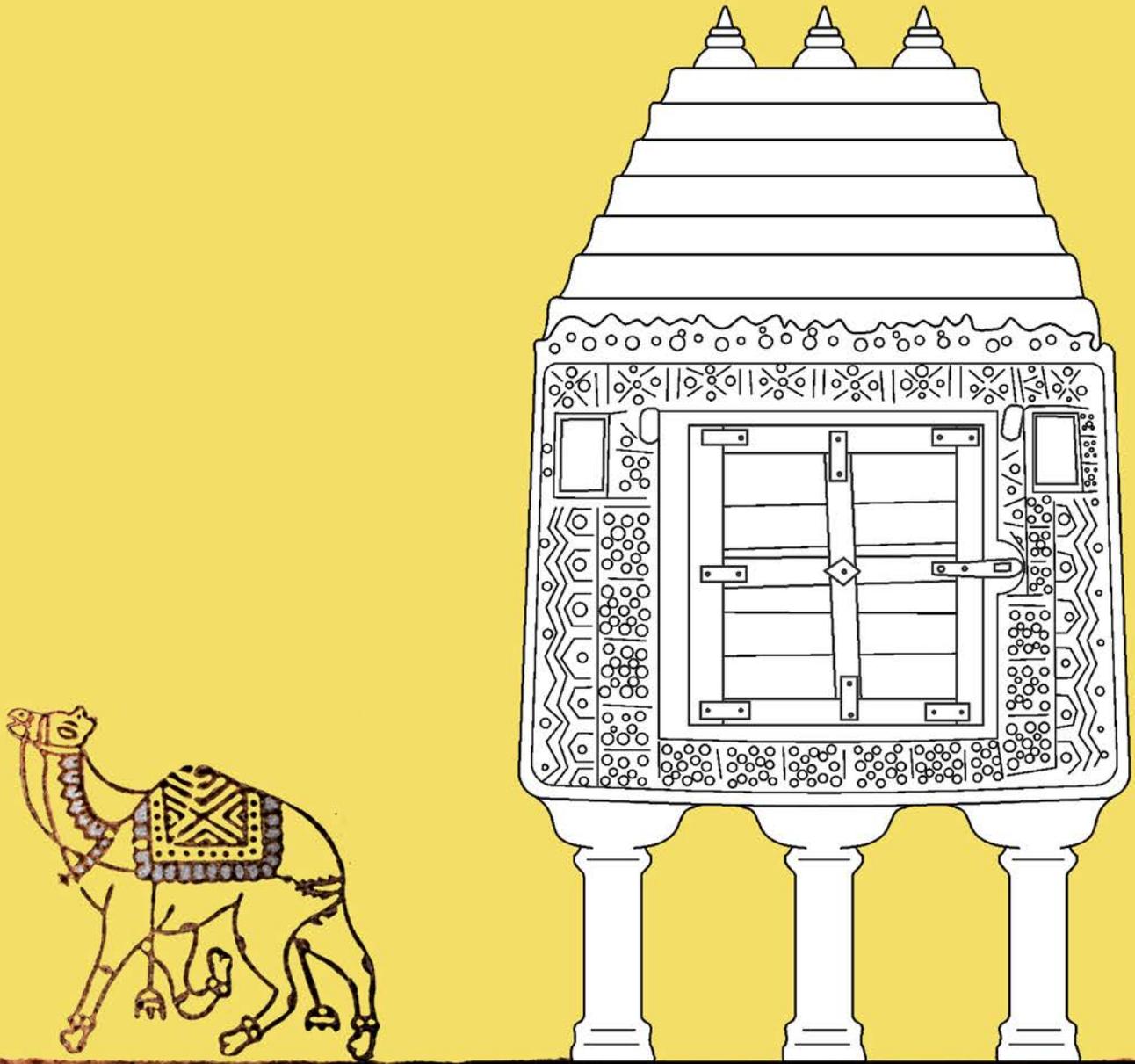


Kathā tara: an indigenous storage of Rajasthan.

a thesis by Pankaj Soni UI2208
under guidance of Prof. Jay Thakkar



Directed Research Project
Study of Vernacular Furniture of North-West India.
DICRC, Faculty of Design,
CEPT University,
Ahmedabad- 380009, Gujarat, India.



Woman welcoming guest in Maroodi village near Barmer.

Acknowledgements

First of all I wish my gratitude to School of Interior Design for giving me comprehensive knowledge in entire curriculum subjects. Secondly I am much thankful to all my faculties for in-depth guidelines in their respective subjects; Krishna ma'am for teaching basic design principles to its complex roots. Snehal ma'am engages me into the research process. Kireet Sir for representing drawings technically correct. Later these technical lines were replaced by Sagara Sir through the medium of sketching. Jay Sir tried to compress the actual image and made me to see through the layer of graphics. Anand Sir for history. Gautam Sir for material and construction method. Rajan Sir for clearing all service line of plumbing. Parantap Sir for making me practically trained and my sincere thanks to all visiting faculties, admin & library staff members of CEPT.

Like to thank my guide Jay Sir for giving me a chance to be a part of such programme and DICRC team members Mansi, Samrudh, Rishav, Mitraja for all support and generative feedbacks. Jay bhai for all tea cups to make me awake and continue to peddle the work load rest of the day.

Below are the lists of people who come across the field visit and helpful in completion of this research document:

Jalore district:

Padamchand Ji, Hemendra Ji Chothamal, Bhawarlal Ji and Nandiswardeep Ji.

Barmer district:

Tribhuvan Singh ji Rathod, Prof. Pruthiviraj Singh Ji, Pyari Devi Jain, Mohini Devi Jain, Om Prakash ji Sharma, Pursottam Ji Khatri, Shambhu Ji Mankad, Dinesh Ji Salecha, Manju Devi Jain, Khamma Devi Chopra, Tarun Jangid, Ghen Singh Ji Rathod, Manohar Singh Ji Sodha, Bhavani Singh Ji Rathod, Surendra Singh Ji Rathod, Roop Singh Ji Rathod, Fakri Devi Hasulal Jain and S.U.R.E. (Society to Uplift Rural Economy, NGO in Barmer city)

Prof. Padam Singh Ji Rajpurohit, Ranaram Ji Prajapat, Kamla Devi Meghwal, Bhawani Singh Ji Rathod, Haji Resham, Hasam Khan, Alias Haji Immam, Vilal Immam, Narayanram Ji Choudhary, Jayrama Ram Ji Kukna, Punra Ram Ji Kukna, Nararam ji Kukna and S.W.R.C. (Society Work and Researchant's Centre, NGO in Dhanau)

Jaisalmer district:

Chandra Singh Ji Ujjval, Babu Singh Ji, Yashwant Singh Ji, Harshal Ji Vyas, Lalit Ji Vyas, Mahendra Singh Ji, Anil ji Vyas, Raghuveer Singh Ji Bhati, Manish Ji Vyas, Tarun Ji Chauhan, Vikram Singh Ji Bhati, Pandit Shri Brij Mohan Ranga, Pavan Ji Tanvar, Prem devi, Ghemar Singh Ji Bhati and Amboo devi.

Special mentioning to Fatehkaran Singh Ji Charan of Barmer for their remarkable help during all field trips and it would be hard to complete the task without him.

Had a great time with my batch mates throughout the campus days and memorable moments that are shared with Raj and Nasir.

I like to thank my family Mummy Papa Brother and Sister for believing in me always and my wife for encouraging and pushing me to complete the task on time.
Love for Babudoo:)

Acknowledgement would not be complete without the things that become part of routine life and are equally important and they are my work place, tools, pc and my bike.

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"Vernacular architecture has been examined from the perspectives of art and architectural history, folklore, anthropology, historical and cultural geography, archaeology, architectural theory and sociology." -Upton 1983

Vernacular furniture

Architectural elements like columns, walls, floors and roof along with openings of windows and doors help in defining interior spaces. These elements give a form and establish a pattern of interior space. Apart from all these, there are certain interior elements which develop and enhance the interior space. Furniture is one of these elements which make interior space habitable. With the help of furniture elements there is a transformation between an interior space and individual. Furniture helps in transforming our day to day activities from a complex to simple. A piece of furniture belonging to particular region or community can be termed as Vernacular furniture. It is generally domestic furniture used in the day to day life of people. It is made by the local craftsperson using indigenous materials. It expresses cultural skills, religious influence, climatic conditions and economic levels of the individuals as well as the community at large. The process of vernacular is that which has been arrived through the process of trial and error over a long period of time.

Area of study

Study of vernacular is important as they are free from external influences. It formalizes one to understand the basic human responses to the built environment and life associated with it. Every culture and community has a unique identification. Even the furniture depicts the tradition and rituals of that community. Hence such range of furniture can be termed as Indigenous furniture. This study focuses on the vernacular furniture of north-west India and state selected i.e. Rajasthan. Number of indigenous furniture elements observed during the first field visit to Jalore and Barmer. A cuboid with pyramidal roof top and legs below it accompanying with a door in centre having finely embedded patterns seizes the attraction. This is a clay storage unit found in desert areas of Rajasthan. To verify this author has made other visit to Jaisalmer of Marwar region and Chittorgarh & Bhilwara of Mewar region. (See map on next page). It is observed that Marwar regions is richly rooted in its cultural values and in Mewar region due to modernization there's a rapid change in the living style of urban and rural people. Though Jaisalmer is one of the tourist attractions, people have bought furniture from nearby areas and preserved it as their art collection in most of the havelis and hotels for commercial purpose. Hence it is proved that such indigenous storage furniture is largely seen in desert regions of Rajasthan.

Aim

Study the role of *Kathatara*-a storage unit found in rural regions of Rajasthan where it is used to preserve food, beverages like milk and curd in hot arid temperature having some other essential items like spices, home-made pickles also placed in it.

Objectives:

This study being a primary research, most data will be collected through field visits and depends on tangible aspects of the chosen furniture:

- Study rural areas of Barmer and Jaisalmer district where there is more possibility of such kind of built-in food storage units.
- Study houses of these areas responding to site and climate which helps to analyse interior spaces and effect generated in making of interior furniture elements.
- Study role and uses of identified furniture object and categorized each and every section of items being stored in it.
- Infer indigenous material and technique used in making of furniture pieces.

Methodology:

Research methods for the study are divided into two phases:

- Identifying and recording data through photographs, measured drawings, oral histories and interviews with local people and scholars about chosen storage furniture.
- Mapping of activity and usage response to the furniture are identified through the process of photographs and series of sketches.

Analysis:

- Study distinct types and subtypes of indigenous storage furniture based on their function.
- Identify and research on nomenclature of the furniture pieces, their styles and sizes.
- Analysing various craft techniques that were involved in process of making from raw to final finished form of furniture.
- Analysing activity pattern and their operational response.



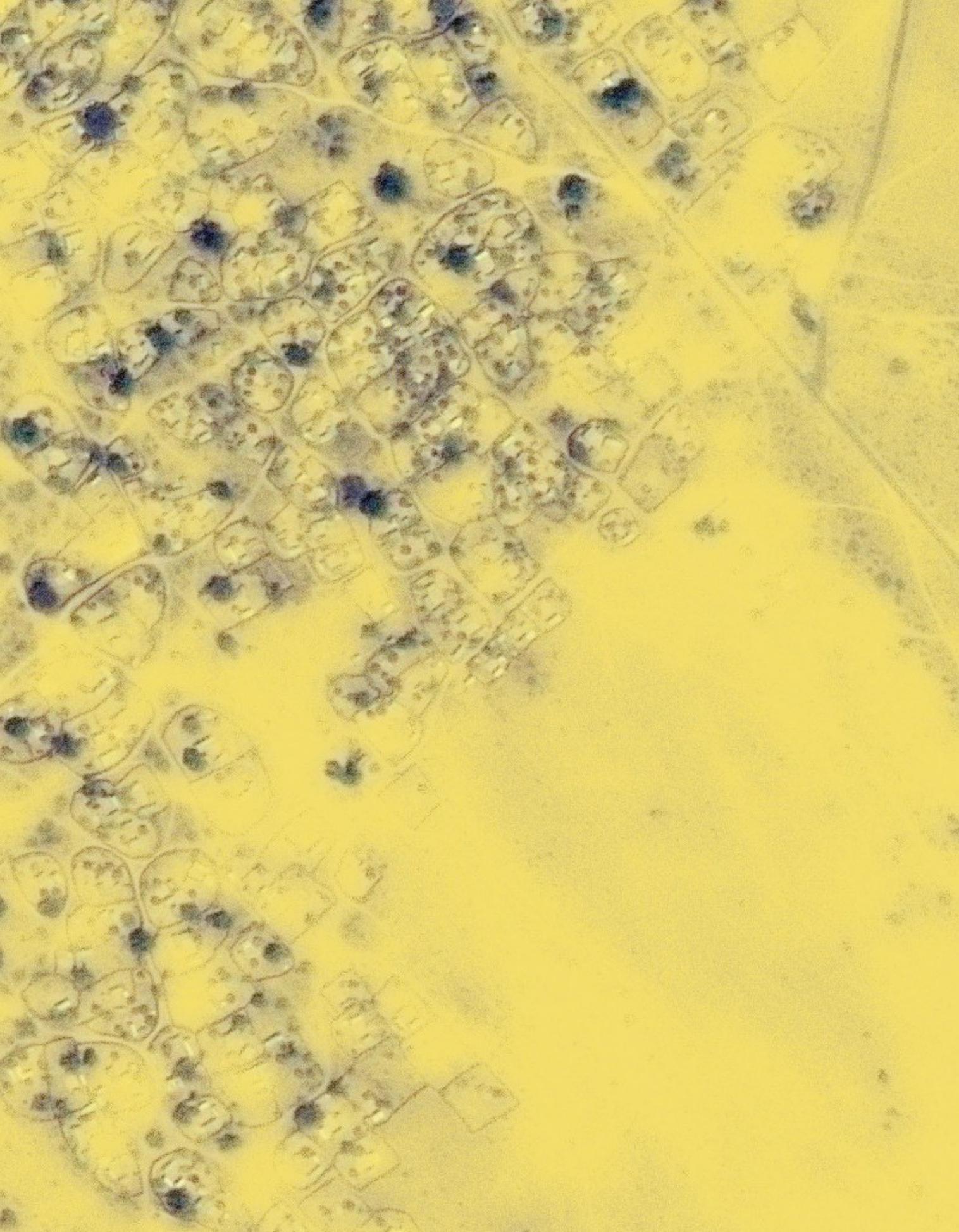
1.1_Map of India demarcating Rajasthan state.



1.2_Map of Rajasthan state and division of regions.



1.3_Routes travelled by author during field work.

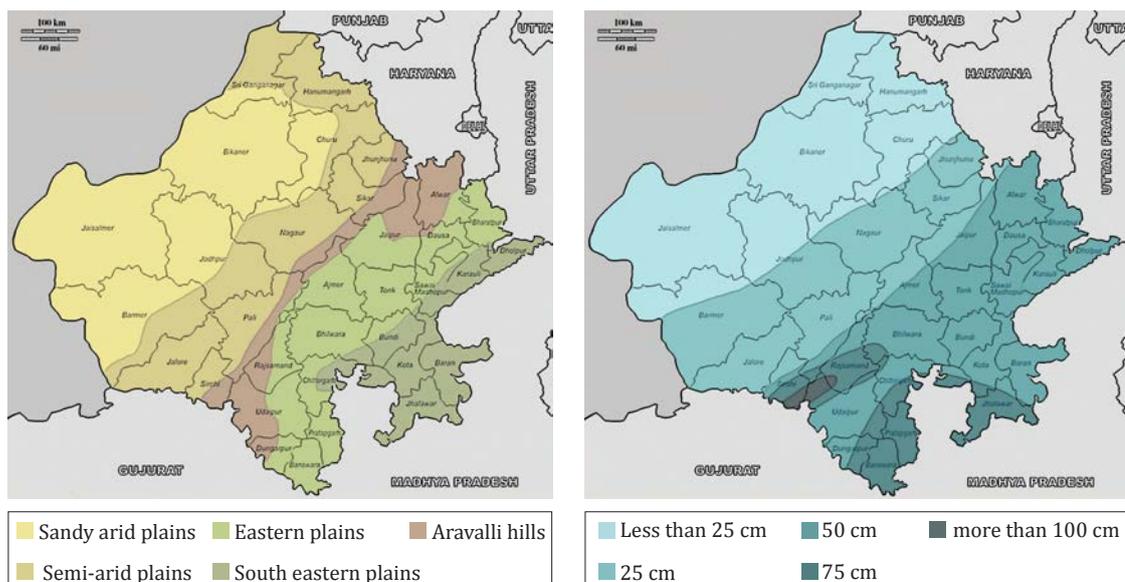


"Man builds home to protect himself from nature around him." – David O. Aradeon, 1971

Geography and Climate

Man has always drawn inspiration from nature and with development of his understanding that occurred over many centuries tried to make a distinct environment suitable for his needs and comfort. The close physical world of man refers to the natural forces of the environment which he adopted to live in. These forces are the geographical location of the place, the nature of topography, the forces of climate and also the availability of resources which would help to adjust above factors in an efficient way.

Rajasthan has varying geographic features though a major part of the state is dominated by dry region. The Aravalli range runs from Northeast to Southwest for over 600 kilometers and divides the region into Eastern Rajasthan and Western Rajasthan. It separates the Thar desert of the West from the plains and plateaus in the Eastern region. Some part of the total geographical region lies under forest vegetation. The Rajasthan desert forms a major portion of the Thar Desert and it is the biggest desert in India and encompasses the districts of Jaisalmer, Barmer, Bikaner and Jodhpur. Like its varying topography, Rajasthan has varying climate. The climate of the Rajasthan can be broadly classified into four distinct seasons: Summer - the hot season extends from April to June. The average temperature range from 25° to 46° C (77° to 115° F). Monsoon - occurs in the month of June in the eastern region and mid- July in the western arid regions and extends till mid- September. Post-monsoon - from mid-September and continues till November. Winter - extends from December to March. The average temperature in winter ranges from 8° to 28° C (46° to 82° F).



2.1_Geographical map of Rajasthan.

2.2_Average rainfall in Rajasthan.

Facing page: Cluster of settlements in Konara village near Chohtan of Barmer district. Image courtesy: Google maps.

Kathātara: an indigenous storages of Rajasthan.

Built-forms

As mentioned diverse geography and climate of Rajasthan has a direct impact on its architectural form. Dwellings on desert regions of Rajasthan consist mainly of *Dhani*. It is found in circular form having conical shaped roof. The basic material used for construction of walls is earth. Earth is largely used material in rural houses of Rajasthan as it is easily available, easy to handle and highly durable. It is seen in various types of earth construction like rammed earth, adobe, cob and wattle & daub. After earth materials, vegetation is the main source of building resources, and wood in various forms and modes is the most important component. Logs, which in their simplest form are nothing more than tree trunks stripped of branches, cut or split into convenient lengths. Here the basic material used for construction of roof is thatch. A conical frame is made of wooden sticks of *Aakra* shrub which largely grows here. This frame is rise from the wall and is tied at the peak of the roof.



2.3_Scattered settlement at Sodiyaar village, Barmer.



2.4_Use of mud bricks for wall construction in some parts of Barmer district.



2.5 *Aankra* scrup commonly seen everywhere in desert regions. It is used in making of roof and hedge largely.



2.6_Thatch roof stitched by grass ropes giving stability from extreme climate condition in every mud house of desert regions. Above illustration from Maroodi village near Barmer.



2.7_Thatch roof supported on wall and projected outward with bunch of reeds resting on five to six wooden posts. Above illustration from Maroodi village near Barmer.



2.8_Under construction wattle and daub structure with corrugated cemented roofing in Konara village, Barmer.



2.9_Finished form of mud plaster wall with corrugated metal sheet roofing in Dhanau village, Barmer.



2.10_Mixed use of material in construction of built forms with partially plastered mud in Dhanau village, Barmer.



2.11_Light penetrates inside the house through wall of thorns in Sodiyaar village, Barmer.

Kathātara: an indigenous storages of Rajasthan.

One of the enduring strengths of traditional structures is their intimate relationship with their environment. The earthen round house with its insulating walls can accumulate and store the heat of the day for evening comfort. The circular form, in contrast to the rectangular, helps to concentrate thermal radiation in a central, enclosed interior space. Rather than strive for maximum ventilation, window and door opening reduced to smallest possible dimension so that the thermal properties offered by the thick earthen walls will be maximized. Warm and dry weather of desert region encourages cooking in the open, but a more severe climate needs special thought and action for food preparation. Building a kitchen separately from main dwelling increases the cost and labour of inhabitants but they prefer to build as it solves the problem of space heating in cold weather during winters.



2.12_Boundary wall to be protected from animals which also demarcates the total area of owner's land. Sodiyaar village, Barmer.



2.13_Entrance emphasized by creating organic patterns in walls and sometimes thumb impression on the edge of seating platforms. Sodiyaar village, Barmer.



2.14_Busy courtyard during morning hours following routine household activity like churning of buttermilk in *Valona*. Maroodi village, Barmer.



2.15_Shading area facing the yard used for gathering and relaxing. Mahabar village, Barmer.



2.16_Separate hut used for guest where extra pair of cots are placed. Maroodi village, Barmer.



2.17_Granary cells found within the yard of every house compound. Sodiyaar village, Barmer.



2.18_Rectangular house with central door opening majorly used in kitchen pupose or store room. Maroodi village, Barmer.



2.19_Service rooms are placed such that the entrances of any room do not face it directly. Mahabar village, Barmer.



2.20_Cow or Cattle shed isolated from the main yard. Maroodi village, Barmer.

Kathātara: an indigenous storages of Rajasthan.



"Typologies are necessary ingredients of vernacular study. Thus the form and function are best understood in their widest range." – Allen G. Noble 2014

Introduction

In any interior space, furniture that is attached to the architectural shell comes under Fixed in place or In-built furniture. Sometimes furniture that cannot be accommodated in any place or whose moving or repositioning requires major disruption is also falls in the same category. Such storage furniture consists of largely grain/food storages, floor or wall mounted shelves, surfaces, wall cabinets, etc. These furniture plays very important role in domestic life of village people. It is observed that there is no room where storage space is not found in the house. Each and every room is occupied by at least one storage unit no matter how big or small size it has. All these fixed furniture are probably made by women with locally available material. Movable storage furniture comes in an endless variety of shapes and sizes, like surface storages, water pitcher stand, chest on wheel & chest on stand, trunks, wooden/clay containers, cabinets and various others.

This section briefly focuses on storage furniture that are presently found in regions of Rajasthan ranging from outdoor to indoor furniture units. All types of movable and fixed in place furniture are discussed in this chapter varying in their form, size and material. For example there are wooden chest typically found in every second person's house. Such piece of furniture falls under both categories like fixed in place and movable furniture. Chest on wheels can shift to any place while chest on stand cannot because of its live weight when filled with valuables. A raised surface or a table and water pitcher stand made of wood or stone comes in same group. All these are constructed as per usage and availability of space. Some of the furniture elements are made at the time of constructing the house. One of such element is in-built niche or cabinet, it is seen in spaces that are used frequently by anyone. Besides this cabinet or a niche wooden or metal hooks are also inserted in a wall for hanging kind of storages. Various kinds of furniture are observed in kitchen area like wall and floor mounted clay shelf used for keeping or storing utensils; clay or stone made containers for storing grains; a typical wooden or clay cupboards are found where food products remains fresh and safe.

Above paragraph make us believe that storage furniture are important part of daily routine in rural regions of Rajasthan.



3.1_A wooden chest on stand used for storing vessels and valuables of the house. This furniture was kept in the area near kitchen. It has cast iron lock and thin metal sheet to join two wooden members. It is called *Maju* in other regions and *Kathotra* in Roopsi village, Jaisalmer.



3.2_ *Maju* is used to store mattresses and cloths. It is given wheels for easy shift. Dove tail joinery used in construction and wrought iron strips which are riveted on junction of wooden plank. This particular piece of *Maju* found in Jalore.



3.3_ This small *Maju* is used to store things which are not frequently used. This particular piece is very different from rest of the storages as it is tapered on top and low in height. This particular piece is found in Jaisalmer.



3.4_ A chest on wheels is used to store mattresses. Teak wood is used in its making. This *Maju* was found in corridor of Jain dharamshala, Jalore.



3.5_ This particular piece of *Maju* is decorated with brass studs. Originally there was a pull out drawer in the bottom of the *Maju* which got damaged by the time. Falna village, Pali.



3.6_ *Maju* a chest on wheels found in the bedroom area of the house to keep garlands. The openable wooden shutter has brass casted lock and thin brass strips. Lower part of chest is joined by iron strips. Gol village, Sirohi.



3.7_Inbuilt niche called *Aada* is generally constructed in structural wall as it has good depth for storage. Wooden doors are pivoted to stone with metal sheet using forging technique. On top two wooden hooks are installed for hanging while projected stone piece used to place candle in havelis of Jaisalmer.



3.8_*Aada* a niche with wooden door used to place valuable which also get lock by brass chain and other open niche used as water pitcher stand. Roopsi village, Jaisalmer.



3.9_This cabinet is found in kitchen area under stair. Below one is used for heavy utensils while above niche for valuables in Jalore.



3.10_It is a niche in a wall made into a cabinet by adding wooden shuttering. Ceramic tiles are used for decoration in Chohtan, Barmer.



3.11_*Tani* is a wooden piece fixed to ceiling and another piece of wooden stick hangs horizontally by a thread or pierced into the holes of *Tani*. It is used to pile mattresses, carpets and cloths in Roopsi village, Jaisalmer.



3.12_*Khuti* is found in every regions varying in forms and material. It is a hook inserted into the wall to hang lanterns and the one besides the doorway is used to hang curtain to cut off the heat.



3.13_Actual use of *Ghanochi* is to place water pot but sometimes also used for piling mattresses in Roopsi village, Jaisalmer.



3.14_Inbuilt niche used as a shrine in living room. Deity placed on the surface is called *Bajot* in Jalore.



3.15_*Denchi* a raised wooden surface used for piling up the mattresses in Konara village, Barmer.



3.16_*Denchi* a raised surface made of stone and mud used for stacking earthen pots in Roopsi village, Jaisalmer.



3.17_A small storage made up of using clay with paper mess and reeds as structural member: Jaisalmer.



3.18_*Ghanochi* is used for pot stand piling bigger to smaller pot one upon other. It is finely carved with shape of peacock or horse. Jaisalmer.



3.19_Niche with extended stone surface used as water pitcher stand which referred as *Parindo* in Bhingarh village, Chittorgarh.



3.20_ *Janeri* a floor mounted shelves made up of mud. It is constructed in kitchen area near the hearth having easy accessibility while cooking. It used to place utensils in Konara village, Barmer.



3.21_ *Bhandariya* is a projected niche from wall surface used to store various kinds of things. It has ledge on top, metal hooks on sides and a niche at bottom. Such storages are found in stone material in havelis of Jaisalmer.



3.22_ *Bel* is like a creeper formed its organic shape on wall using wooden sticks as structural members coated with clay and mirror embedded on it. *Bel* is an elaborately designed shelves used to place utensils and kitchen accessories in Roopsi village, Jaisalmer.



3.23_Floor mounted low wall holding rough stone above with one or two opening in front for storing grains is called as Bakaari. It is found in kitchen or vestibule area of the house in Bhingarh village, Chittorgarh.



3.24_A big storage bins for granaries for yearly use. Sodiyaar village, Barmer.



3.25_A paper mache grain storage chest. Gadan, Barmer.



3.26_Grain storage bins made using mud and lime plastered in Bhingarh village, Chittorgarh.



3.27_A clay mirror embedded pot for storing grains of weekly use. It is called *Maata* in Barmer.



3.28_*Kothi* made of metal sheet for grain storage found in Bichhor village, Chittorgarh.



3.29_Kathantaro a cupboard made of wood used to keep the food products fresh for few days. It is generally found in clay but family occupied with more number of members than this is an alternative as it has larger storing capacity. It is placed in kitchen area with floor mounted shelves in Konara village, Barmer.



3.30_Another piece of food storage found in Jaisalmer.



3.31_Floor based mud storage for keeping prepared food and sometimes with valuables in Dhanau village, Barmer.



3.32_In-built store to place food stuffs in Jalore.



3.33_A clay paper mache container for chapati found at Jaisalmer.



2.10_A clay paper mache container for food found at Gadan, Barmer.

Kathantara: an indigenous storages of Rajasthan.



"Type as opposed to style is the object of analysis for the student of vernacular architecture." – Hudson, 1988

Definition

A *Kathatara* is a cool place for storing food items before use. It was commonly seen in houses before the extensive use of the refrigerator. In rural areas of Rajasthan, such elements are found to be very important. Due to extreme hot climatic condition, low economic factor and lack of electricity in rural context, people prefer to use such furniture at large extent.

Kathatara is a small storage unit made of mud having a small door opening in front. The entire furniture piece is decorated with small mirrors embedded in clay. Eatables are kept in the small opening at the center provided with the door. In the hot conditions of summer, when temperatures often touch 50 degrees Celsius, this indigenous refrigerator is very useful. It is used to keep milk and curd or any other food item that needs to be kept fresh. It is made using the *Talab* (pond's) mud mixed with camel's dung (no straw) for better strength. The external surface coating is also done using a white mud diluted in water.

English term used for this is Larder meaning a room to store food. At different places different terminologies used for such in-built furniture in the regions of Rajasthan namely:

- Kothi
- Kothiyo
- Kothlio
- Kotha
- Kathatara
- Kathantaro

Difference observed not only in terminologies but also in form, style, ornamentation and scale. All these variation are listed as follows.



4.1_Mud larder and mud granaries of Jalwali village in Bikaner district from *Architecture of the Indian Desert* by Jain, K. & Jain, M.



4.2_Mud larder and mud granaries of Jalwali village in Bikaner district from *Architecture of the Indian Desert* by Jain, K. & Jain, M.

Facing page: Unused *Kathatara* found in store room detach from main living area in Maroodi village near Barmer.



4.3 *Kathatara* Gadan, Barmer.
Material; Clay+Paper mache+Wood+ Mirror+ Lac paint



4.4 *Kothlio* Roopsi, Jaisalmer.
Material; Clay+Wood+Mirror+Distemper paint



4.5 *Kothiyo* Konara, Barmer.
Material; Mud+Wood+Mirror



4.6 *Kothiyo* Konara, Barmer.
Material; Mud+Wood



4.7 *Kotha* Mahabar, Barmer.
Material; Mud+Wood



4.8 *Kotha* Sodiyaar, Barmer.
Material; Mud+Wood



4.9_Kathatara Jaisalmer.
Material; Clay+ Paper mache+ Wood+Mirror



4.10_Kathatara Jaisalmer.
Material; Clay+Paper mache+Wood+Reeds



4.11_Kathatara Gadani, Barmer.
Material; Clay+Paper mache+ Wood+Mirror



4.12_Kothiyo Konara, Barmer.
Material; Mud+Wood+bulb



4.13_Kothi Sodiyaar, Barmer.
Material; Mud+Wood

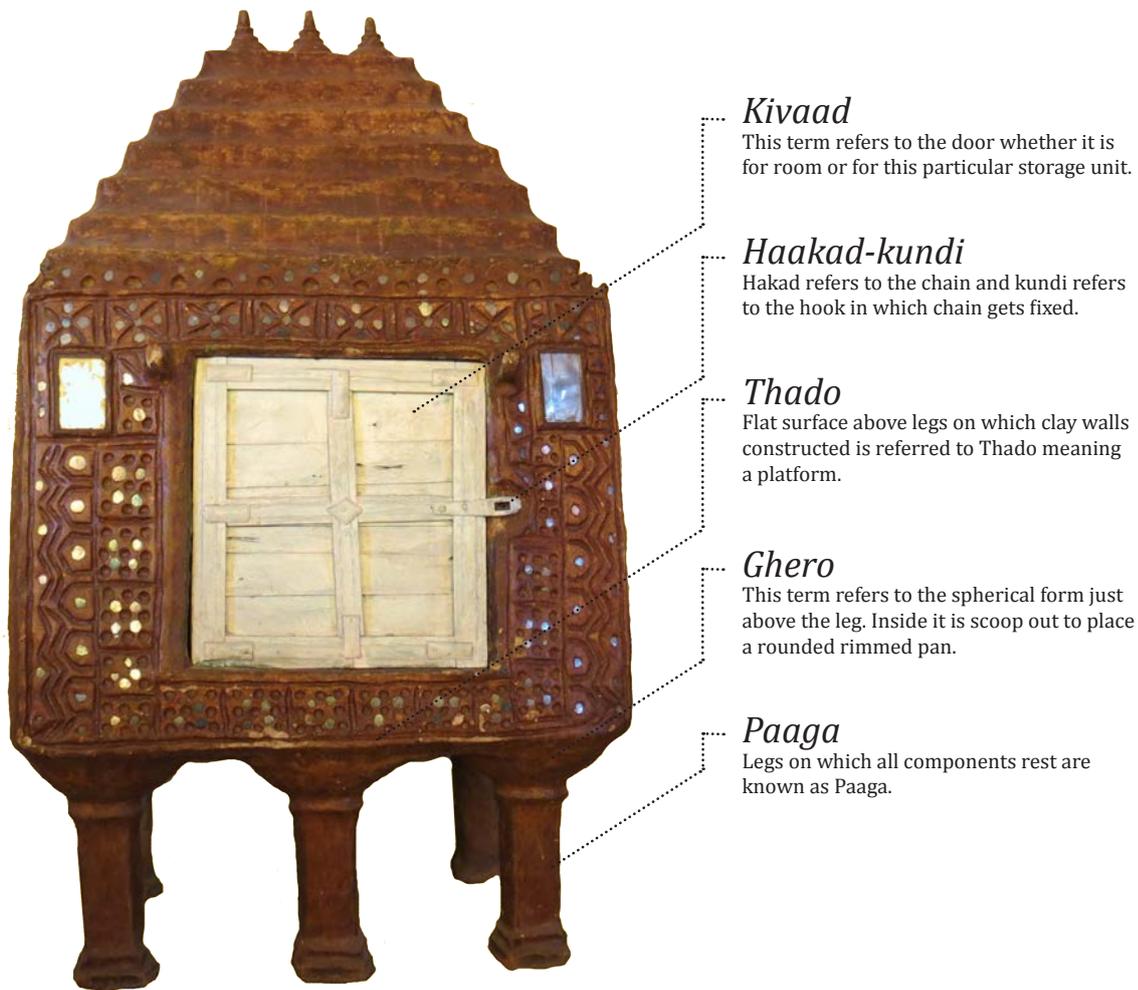


4.14_Kathantaro Maroodi, Barmer.
Material; Mud+Wood

Kathatara: an indigenous storages of Rajasthan.

Form

One can assume that form is derived from the basic principles of house form in which indigenous people inhabit. Form consists of rectangular box having pyramidal shape of structure above. Large volume is created on the top which does not allow the heat to penetrate. Below the box, legs are also provided for ergonomic measures and safety purpose. Approximately 1'x 1' door opening is provided on facade of the unit making it convenient for easy transmission of things.



4.15_Front view of *Kathatara*.

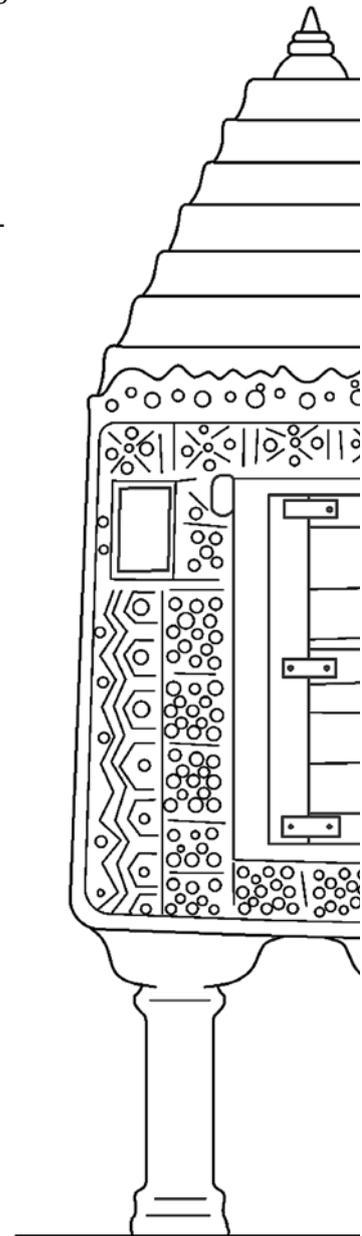


4.16_Various views of *Kathatara*.

Ornamentation

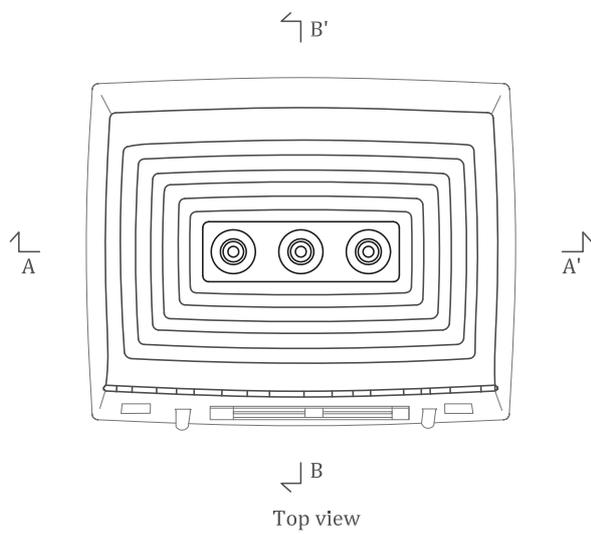
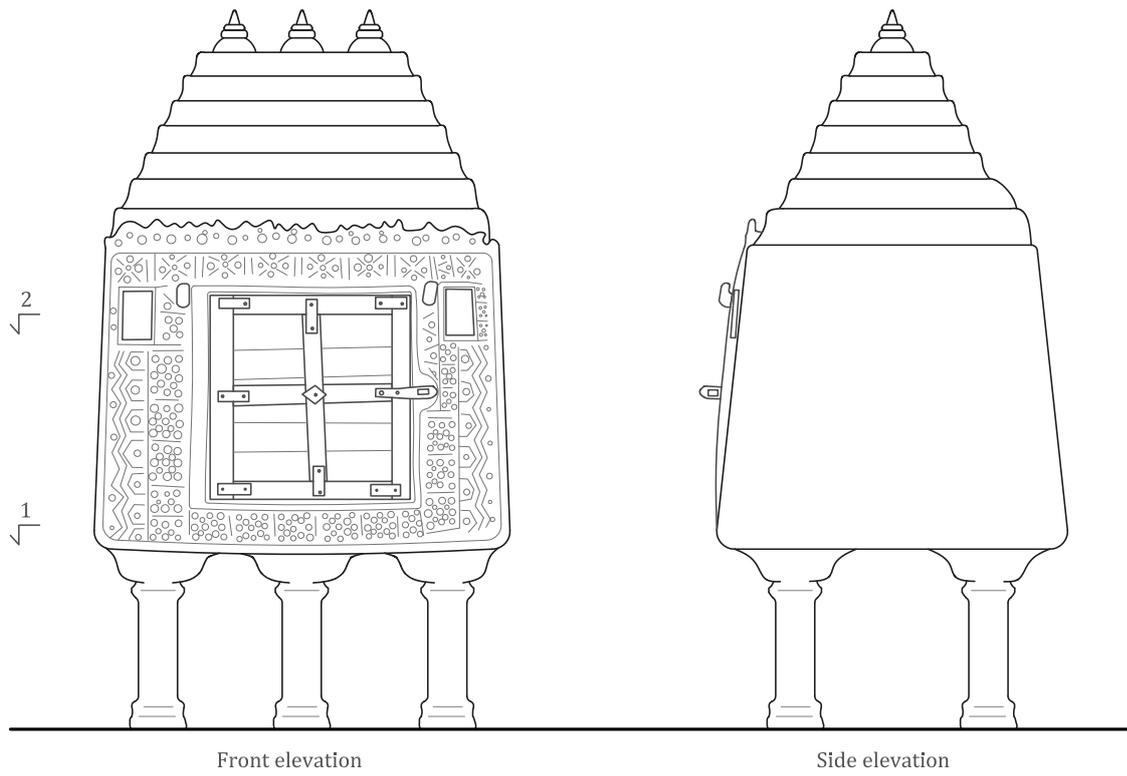
Furniture form and ornamentation are influenced from the architecture in which it exists. Craftspersons use various finishes depending on type. Finishes were done for various reasons and most common is to deal with appearance of the form. Other reasons are the social prestige or symbolic meaning. There are various ways in which craftsmen did finishes. One is added layer to already built structure i.e. surface finishes and other finish is directly applied to the material like polish, inlay and carving work.

Here we deal with the first one where craftsmen construct walls with white clay then make relief patterns in the same clay and embed them with pieces of mirrors. Clay is embedded by using thumb or finger impression forming smooth edges and curves hence it is not possible to make intricate design. These patterns are generated without prior sketching. Thus the walls of storage unit itself become the base on which the relief is applied directly. In this case material like paper mache is mixed with clay to achieve lighter weight and lac paint is used on the outer surface for aesthetic value. All this relief work is done on the front facade while side and back surface remains flat. Legs are meant for its functional purpose and untouched from decoration. Some door openings are carved with fine intricate patterns having metal joineries. One of the interesting things that one notices is the peak decorated like a crown placed on storage unit.

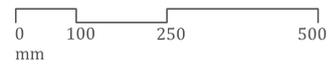


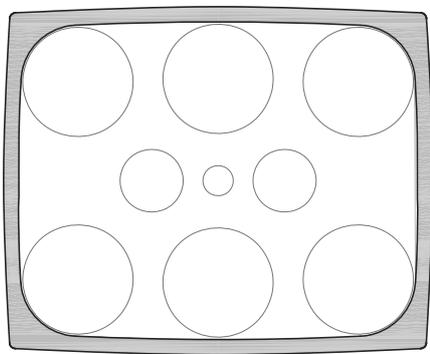
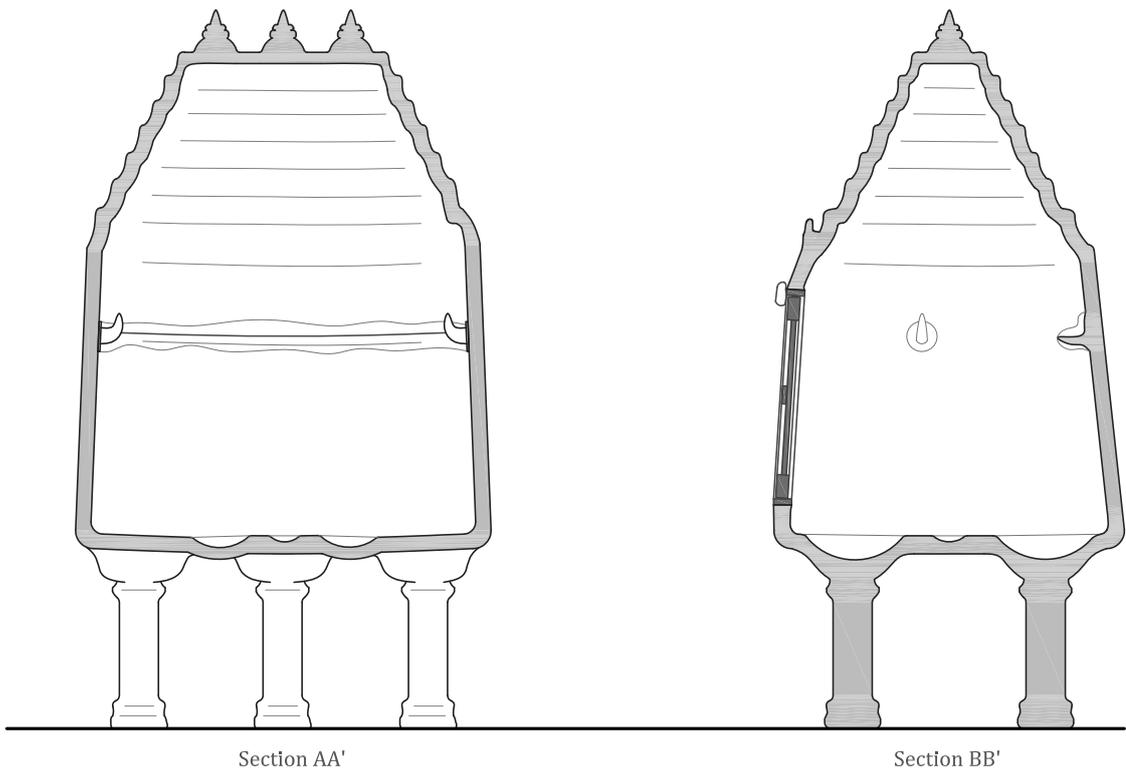
4.17_Part detail to show embedded patterns and mirror work of Kathatara.

Scale

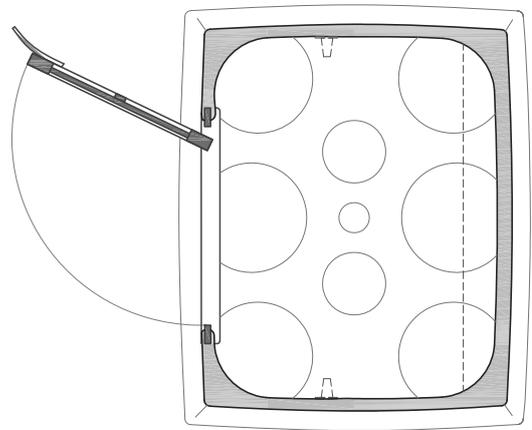


Ghodal Restaurant,
Gadan, Barmer.





Plan 1



Plan 2

Uses

Mainly *Kathatara* is used for beverages like Milk, Curd, Buttermilk and also Prepared food. Other uses are Spices, Utility box, Grain, Pickle, Vegetable oil, Flour and many others.



4.18_ *Odi* a basket made of grass used to cover the food products which are not able to fit in the door opening size of larder at Konara village, Barmer.



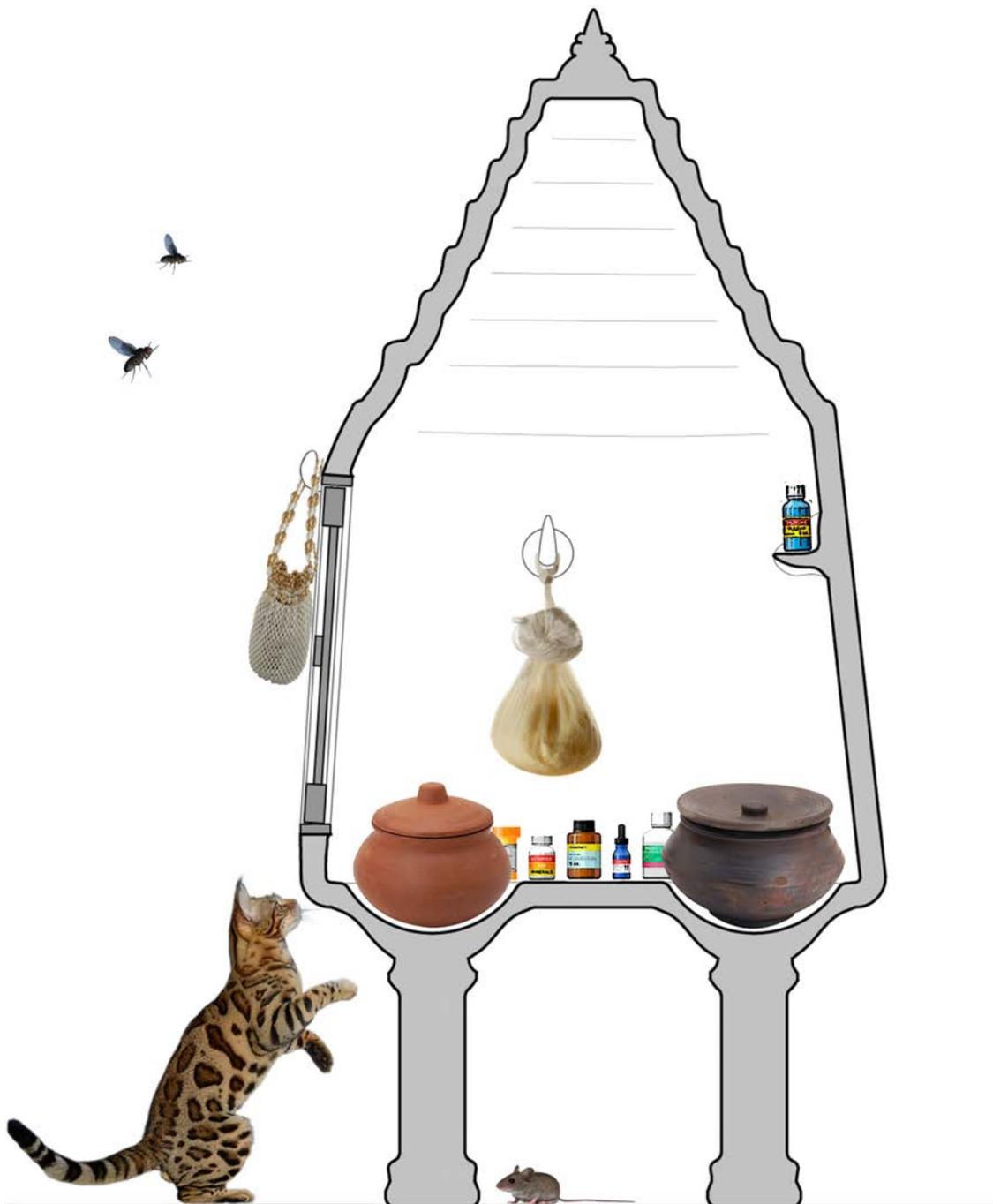
4.19_ Inside view of *Kathatara* showing number of substances kept together at Roopsi village, Jaisalmer.

List of substances that *kathatara* consists of are:

Primary use:		Secondary use:	
			
Milk (500-1000ml)	Curd (500-1000ml)	Grains (max. 1kg)	Medicine (as per use)
			
Prepared food (200-500g)	Buttermilk (500-1000ml)	Spices (max. 200g)	Vegetable oil (max. 1000ml)
			
		Pickle (200-500g)	Utility box (valuables)

Specifications

Kathatara remains cool in extensively hot arid temperature of desert regions. It has dipped rounded base where broad rimmed pan filled of milk/curd can easily placed. It is made covered and lifted from the ground so that there are no chances of flies and rats to get in. This also prevents heat coming from ground which provides good air circulation beneath the surface. It is equipped with small shelves and hooks for specific storages. It is easy to maintain. It is re-plastered or painted to hide the dust collected over the surfaces throughout the year.



4.20_Diagram with a cross sectional view of *Kathatara* showing basic organization of the things placed inside and outside.

Kathatara: an indigenous storages of Rajasthan.

Material and Making

Construction materials are limited to clay and wooden sticks in most of the villages. The extremities of climate and constraint of materials brings out resourcefulness in people in every aspect of their living. Construction method for this furniture piece is same as the technique applied in making of the indigenous built forms. Raw material is available from the place where water is collected in rainy season. This area is dug for about one to two feet deep into the ground. This clayey earth is cleaned and puddled by feet by adding water so that it is sufficient enough to form a uniform thin paste to be shaped with hands later. Drying period for clay varies in summer and winter.

“People have to make do with whatever is at hand. The form and arrangement of dwellings, for example, are constrained by the availability of local materials, the nature of the climate, and the socio-economic facts – everything in it has a purpose.” (Tuan 1989)

“



Prembai, Roopsi village, Jaisalmer.

In earlier times it was not necessary that bride get everything in dowry. Few things like *chulho*, *bel*, *kothlio* (hearth, shelves, larder respectively) that are required to run the house were made by us under supervision of our mother-in-law. It is easily noticeable if helping hand involved in making of *Kothlio* (larder), as patches differs with poor finish and unsatisfactory results.

“



Taridevi, Mahabar village, Barmer.

To live in mud houses one also need to repair and maintain it by re-plastering the surface every year after the rain. Same thing we also applied for *Kotha* (larder) by diluting white clay with water sufficient to form a thin paste for coating.



4.21_Women walk for 4-5km from their home to collect pond (*Naddi*) base mud. This process is repeated three to four times to have sufficient amount of raw material. It is later filtered and other soil and stone particles were removed which is required in making of *Kathatara*'s. Bhadav village 25km from Barmer is famous for its good quality of clay and considered to be best among these areas.

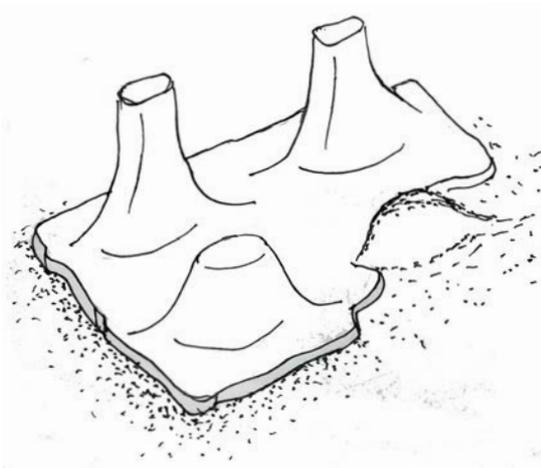


4.22_Clay is mixed camel's dung *Mingna* or donkey's dung *Leed* to achieve strength and anti-termite. Some also add paper mache to decrease the self-weight.

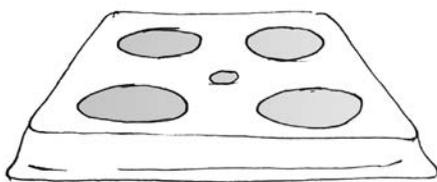
4.23_Mud mortar is puddled three-four times daily and not allowed to dry. This task generally performed by kids. Water is gradually added to form a thin paste.



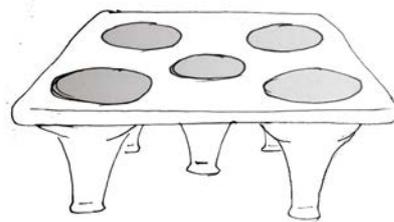
4.24_ *Baani* a dust particle collected from the fire place is used to make *Ghero* a rounded deep surface of *Kathatara*.



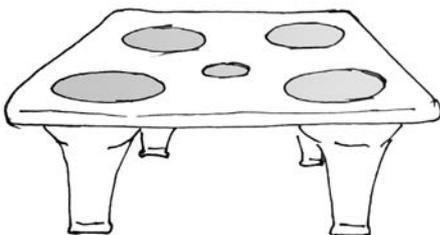
2.25_Clay is applied on bump made of *Baani* act as mould in making of *Thado* a rectangular flat surface which become base for *Kathatara*.



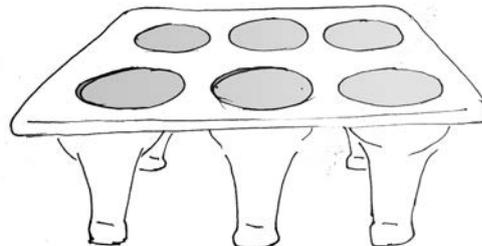
0- *Paaga* (*Thado*)



5- *Paaga*



4- *Paaga*

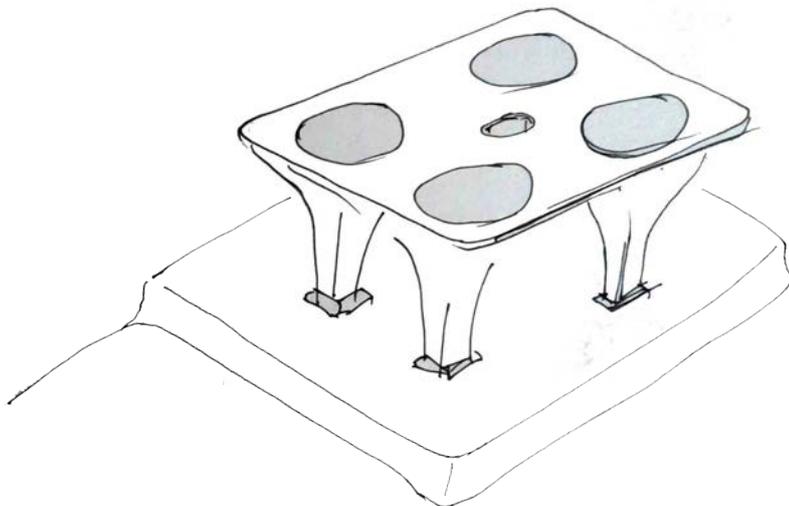


6- *Paaga*

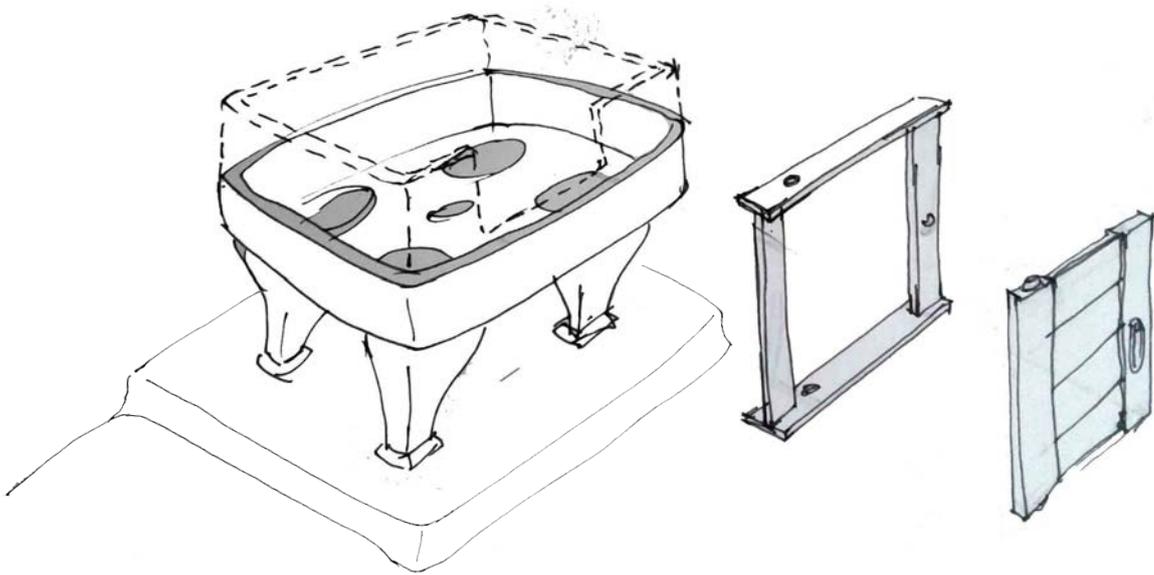
4.26_Total numbers of leg types possible for making of *Kathatara*.



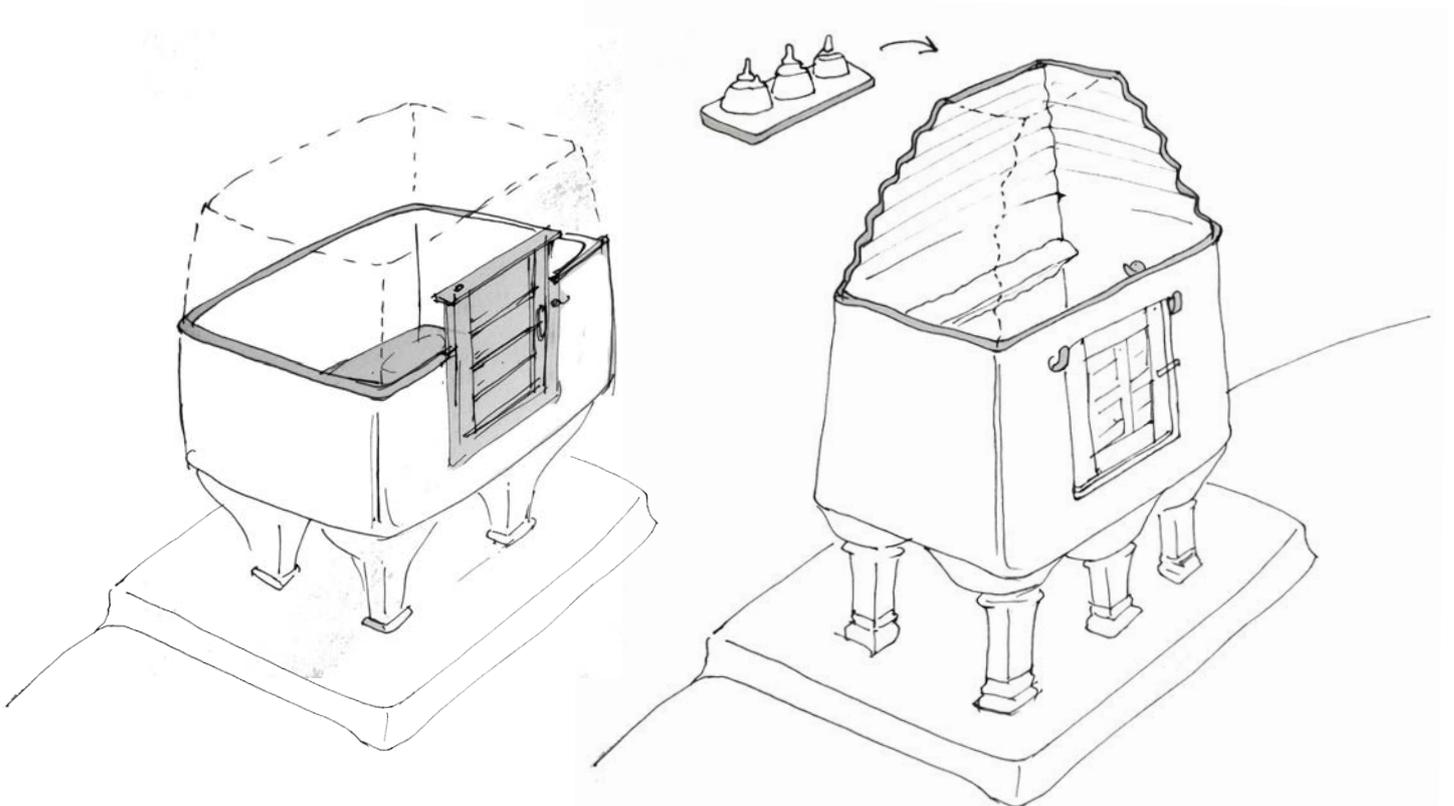
4.27_After drying in open area under direct sunlight, base is lifted to its desired place. Drying period in summers is two to three days while in winters is three and four days.



4.28_A plinth on which Kathatara placed is fixed with mud mortar.

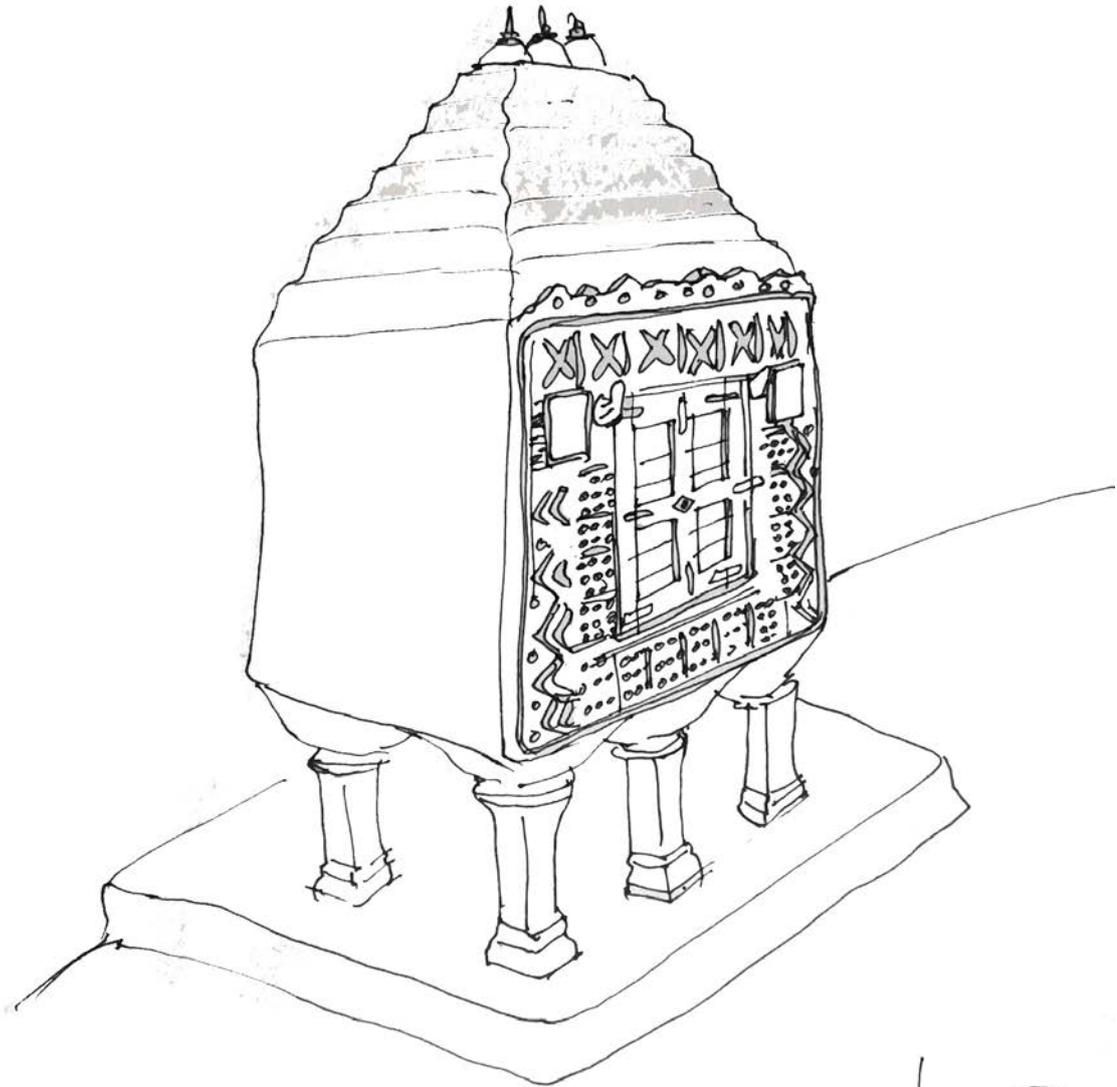


4.29_On *Thado* approximately 10cm of clay wall is applied on periphery first. After drying second layer of clay wall is constructed and process is repeated till one reach the peak of *Kathatara*. Meanwhile wooden frame structure is fixed in middle of the front facade.

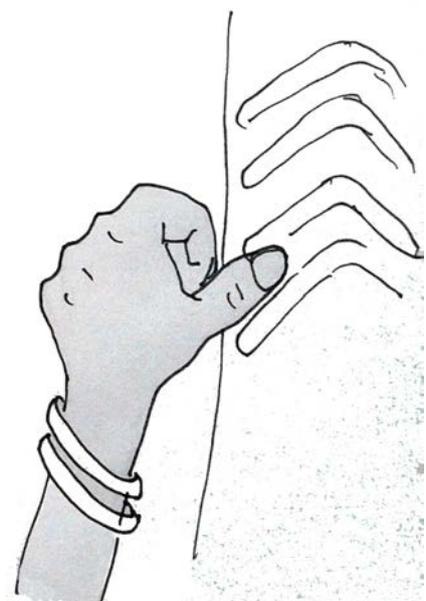


4.30_Step by step wall is constructed and wooden door is fixed which was pre-ordered to wood worker or sometimes it is taken from unused *Kathatara* found in their society.

4.31_Addition of shelves and hooks inside of *Kathatara* for more storage use and roof cap is made separately to be fixed on clay wall later.



4.32_A thin paste of clay mixture is used in ornamentation of Kathatara. It is applied from top to bottom. Clay is embedded through thumb and patterns are designed as per their choice.



4.33_Detail of embedded clay and mirror work on surface of Kathatara.



"Evidence is derived not only from oral tradition but also field study. Indeed in investigation of this kind it is almost essential that the two are used together." – Aalen 1965

Framework

To study furniture it is important to distinguish the factors that led to its emergence. It is also important to know its relevance in which that furniture exists. This is best understood when number of typology studied and placed together to see commonality and variability. For basic set of comparison it is appropriate to take at least three case studies on hand because in two case studies one may look at either similarity or discusses its diversity. In three or more cases it is easy to plot remarks by stating its pros and cons or which case study falls in majority or minority or which cases are related or differs. Few basic steps and sequence required to analyse selected case studies of *Kathatara* for this thesis. Initially it is important to know where actually the piece of furniture is existing, which means its location. Secondly reference with built-forms and the community. Later study may deal with the space, its placement, orientation and connection with other important furniture elements. As furniture is often used by the user, next approach may deal with its occupants and frequency of using furniture piece on routine basis is also taken into consideration.



Location



Built forms



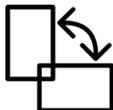
Community



Placement in the space



Connection with other elements



Orientation

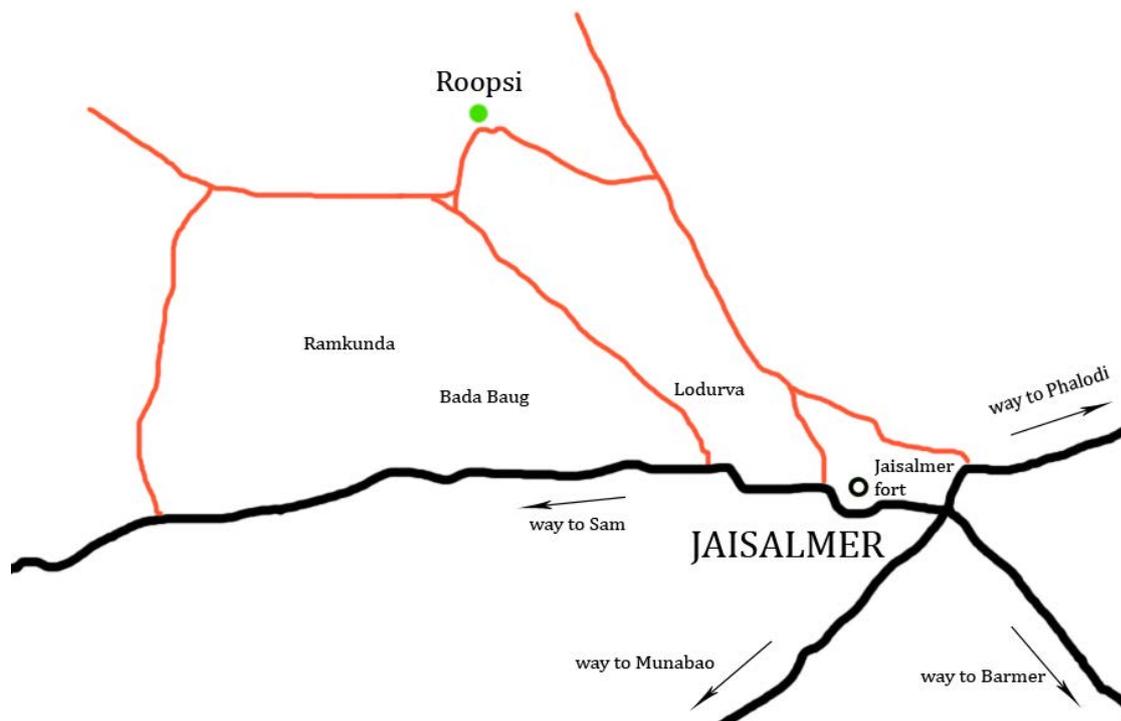


User



Frequency of use

Facing page: Students measuring the two generation old furniture piece of cradle locally known as *Ghodiya* in Jalore.



CASE STUDY 1

Roopsi village, Jaisalmer.

Roopsi is situated 21 km towards north-west of Jaisalmer. The typical house forms are constructed of stone masonry bound by mud mortar and renovated houses by cement mortar. Exterior and interior walls are painted white to reflect tremendous heat in summers. Small patches and border on walls are decorated with other colours. Houses consist largely of rectangular built structures with two way entries. Periphery of the house shares its walls with other house making cluster kind of planning in its context. Long and narrow rooms are arranged around periphery creating a central open space which is the focus of the family living. Thus the courtyard becomes the key element of the house where all doors open into the yard and number of activity take place here.

Although in the desert region, its close surrounding have patches of cultivable land. People are occupying in farming trade of cereals like *Bajra* (millet) and *Jowar* (sorghum) and as they are pastoralists, they need widespread area to feed their goats and sheeps. Hence some people tend to settle down on the field itself for few month of harvesting. Here women look after their domestic life and in free slot use the flexible quality of mud to shape various kind of household goods like *Bel*, *Kathatara*, *Ghatti* (refer figures 3.22, 4.4, 5.5 resp.) which are needed to perform their routine task in more organised way. This village is mainly populated with community of Bhati caste under Rajput clan, natively they are strong and fit. Land reforms have improved their lifestyle and they are now satisfied living in village.



5.1_House forms are now renovated with stone masonry with direct application of colour paint.



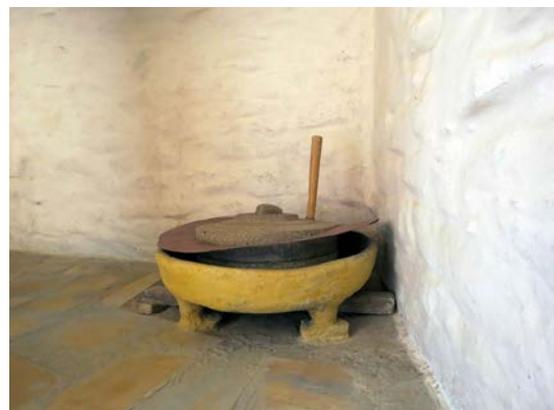
5.2_Entrance wall painted in different shades for extra emphasis.



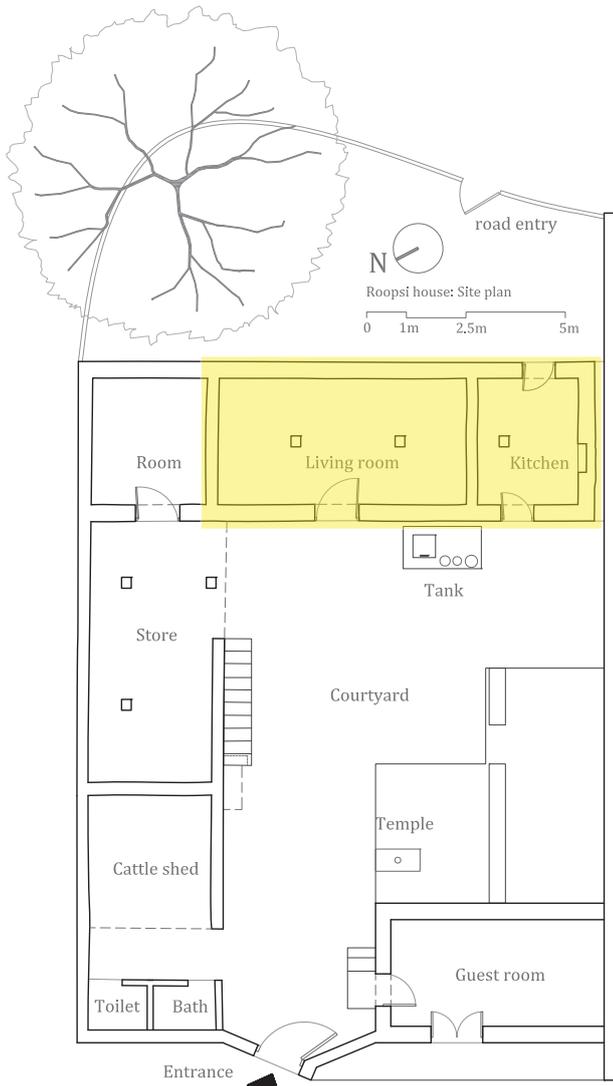
5.3_Inner walls are also treated in same manner. There were clay elements as one enters in a room glittering through mirrors embedded on it.



5.4_*Mushal-Okhli* located in room where kitchen activity take place. It is used for grinding pulses, grains and spices like dry chilli or turmeric with wooden hand crusher called *Mushal* while *Okhli* is local sand stone grouted in ground.



5.5_*Ghatti* is used to grind grains. The central wooden member is adjustable to upper stone for different sizes and types of flour. The outer stand is made out of clay covered with metal sheet to be moisture free.

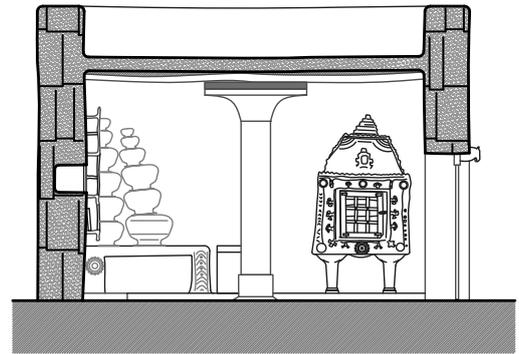


Rooms are fairly large and spanned with rough wooden rafters closely arranged with the bearings on walls and stone pillars which have wide capitals. These rafters are covered with a layer of hay and mud. The heavy walls and thick roof keep the houses cool during summer and warm in winter. Flooring are found in stone slate with cement mortar as adhesive in area that are utilised for workplace i.e. kitchen, store room and water place while living room and part of court area are in mixture of mud, cow dung and hay. The stair leading to a flat roof is very narrow with high and uneven risers. These single storey low heighted flat roof structures serve a variety of functions like drying of homemade goods. Interior are dark and poorly ventilated but decorated with wall paints in white, red and chrome yellow. These rooms are often furnished with cots, shelves, raised platform and sometimes an odd stool or chair. Room with no door shuttering is used as workplace and store area occupied with hand mill grinder and

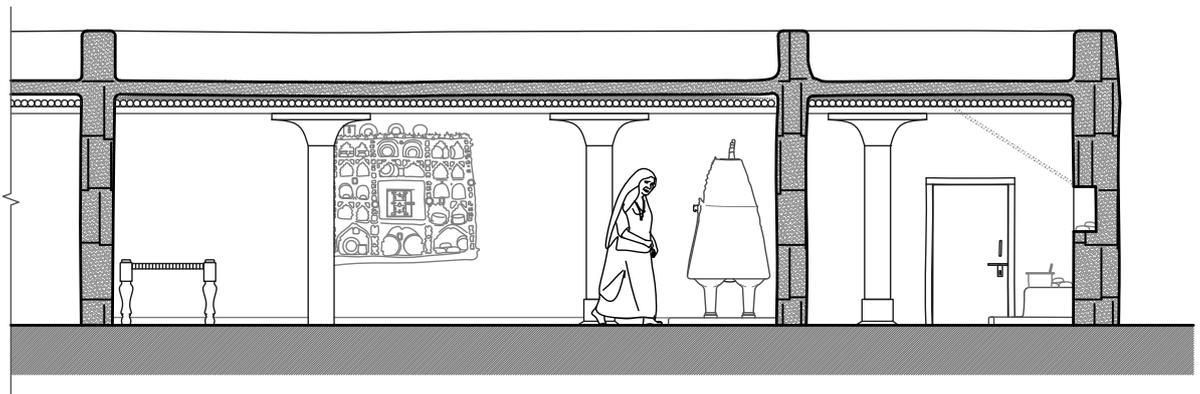


5.6_General view of courtyard with temple and water pitcher stand. Low heighted door lintels opens into the yard.

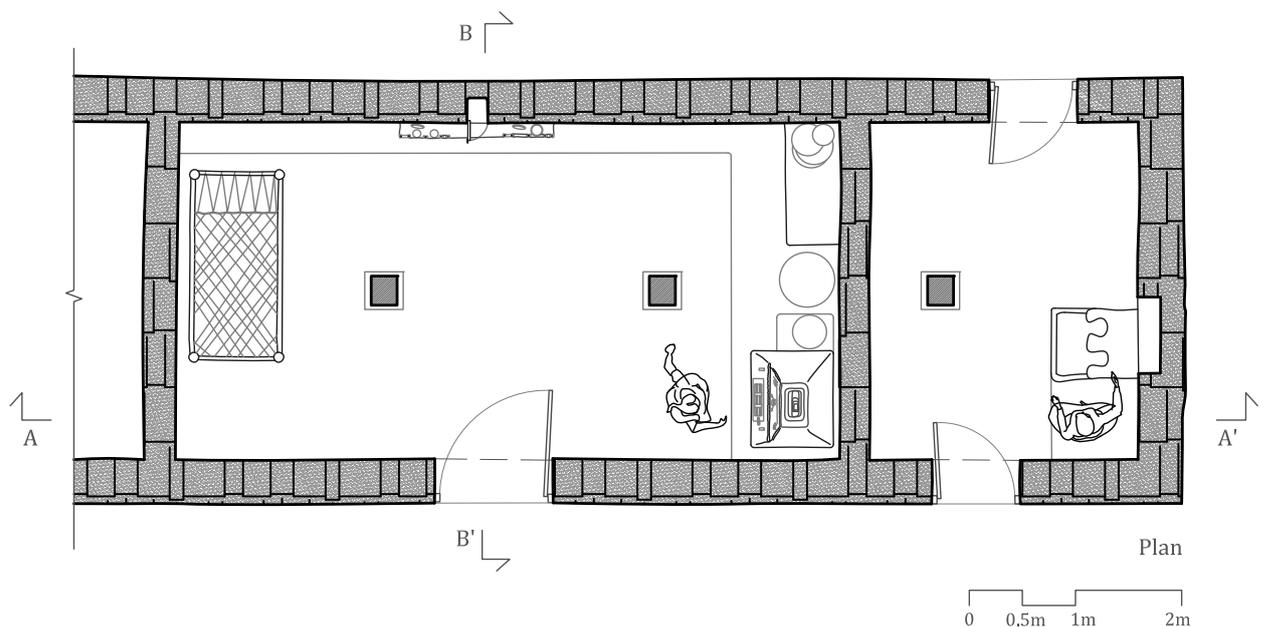
mattress stand. There is one large platform with temple used for gathering during festival time and second platform with small in dimension serves as water pitcher stand. This house is later occupied with one guest house which is featured with direct entry to the street. It is not unusual to find an outer yard consisting of thorny-stone hedge used to protect from outside animals to come in. Another is small thatch roofed area for cattle near the entry point.



Section BB'



Section AA'



Plan

0 0.5m 1m 2m



5.7 *Kothlio*

Woman of the house generally engages in making of this furniture. Use of white embedded clay and mirror work enhances the presence storage element in the space. During festive times walls are often re-painted along with in-built furniture to hide the dust. Such in-built storages are not just used from inside but also its outer surrounding negative space.



5.8_Ledge provided on front facade is gets utilised by few frequently used things.



5.9_Shelves inside of *Kothlio* used for extra storage space.



5.10_Detail of wooden hook with carved horse and embedded mirror work.



5.11_Patterns embedded in clay as per makers choice.

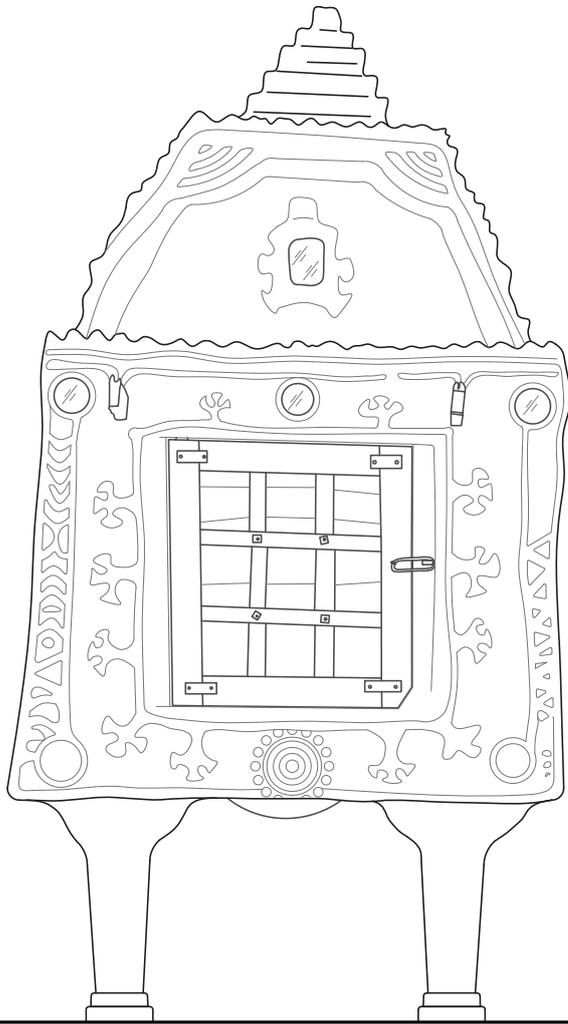


5.12_Generally women used to hide their valuables in some kind of utility box.



5.13_All cooking necessary material is also kept in this storage furniture.

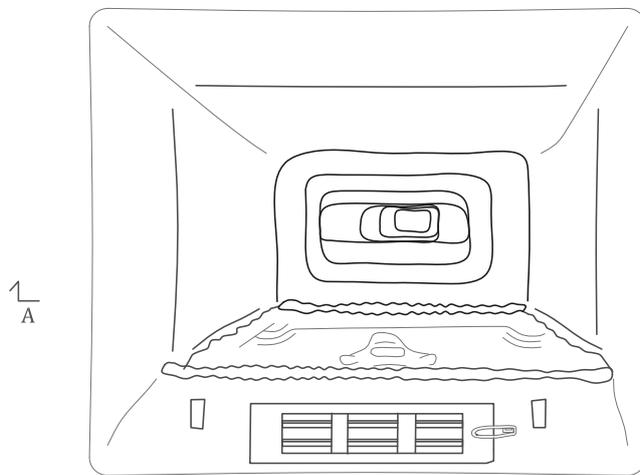
Kathātara: an indigenous storages of Rajasthan.



Front elevation

B ↗

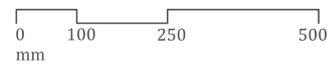
Top View

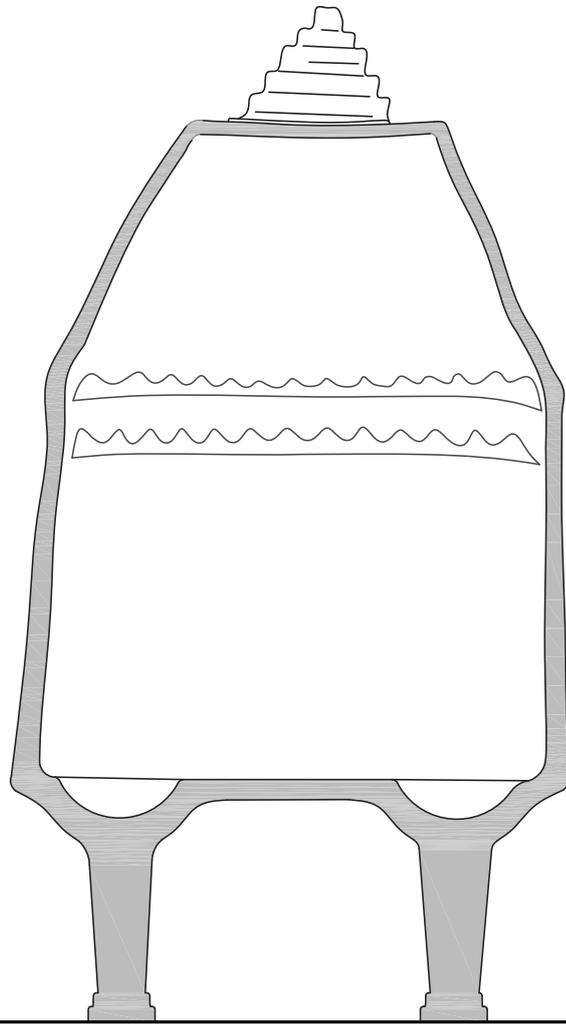


↙
A

↘
A'

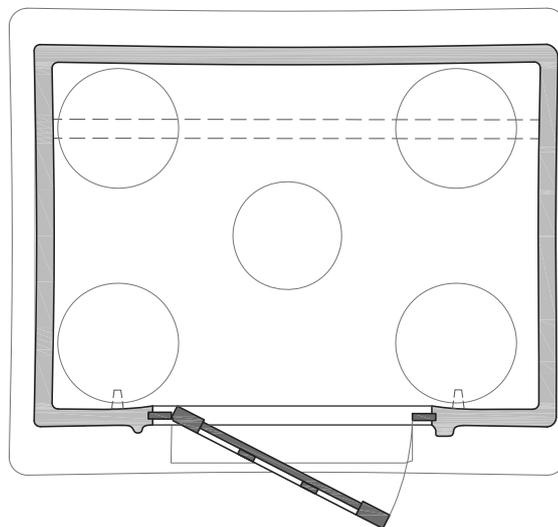
B' ↘



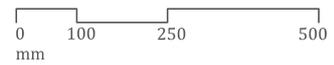
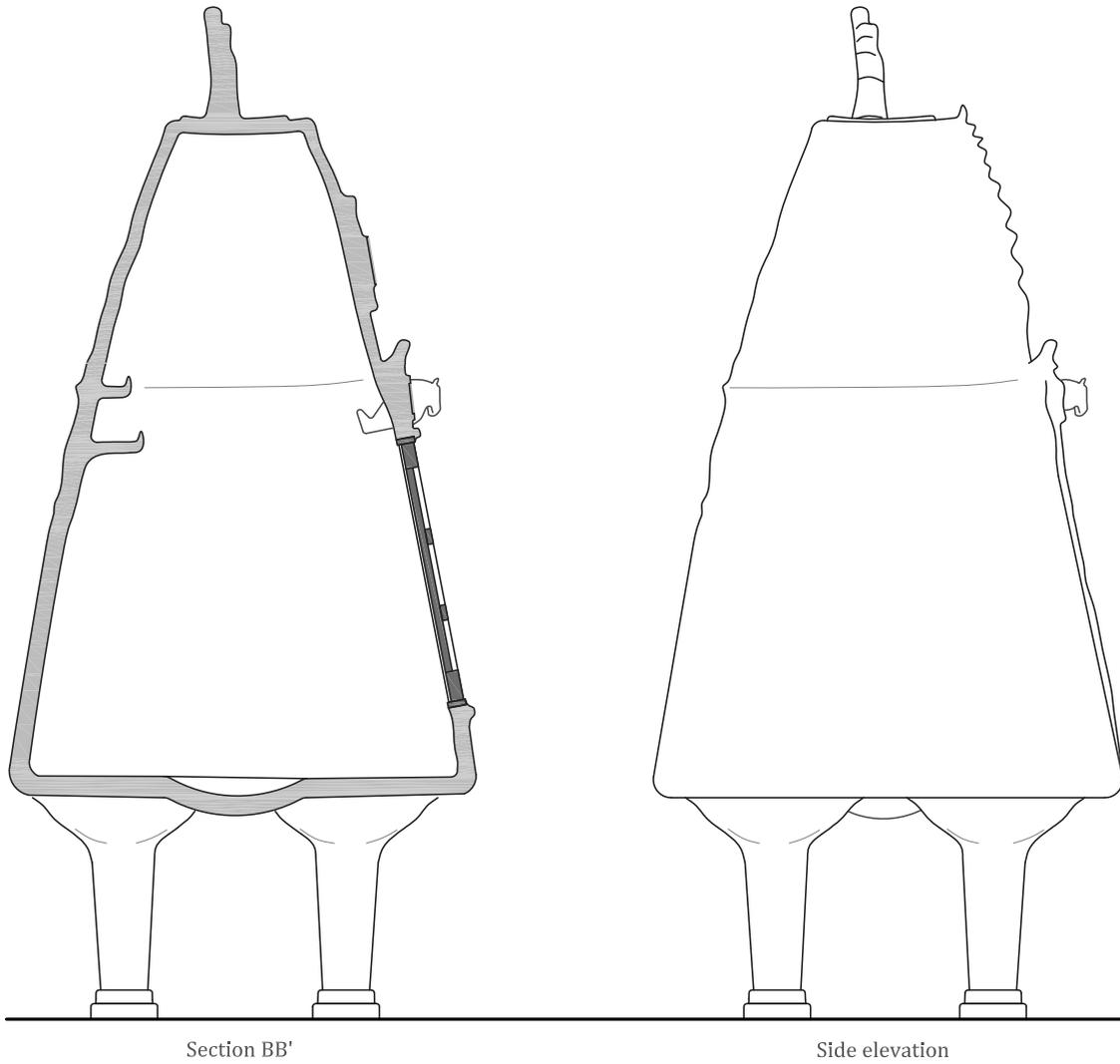


Section AA'

Plan 1

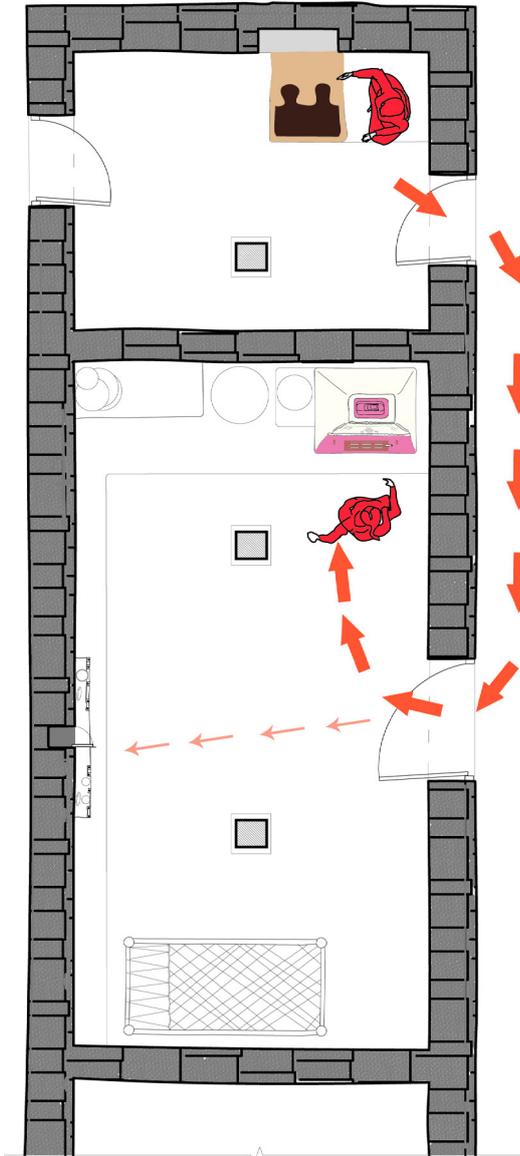


Kathātara: an indigenous storages of Rajasthan.





Kathatara: an indigenous storages of Rajasthan.



Placement in the space:

This particular *Kothlio* is located in living area of the house at one corner on plinth to achieve enough height to access door opening.



Connection with other elements:

Kothlio is connected with wall storage unit called *bel* where utensils are kept later used for preparing and serving of food. It has indirect connection with the hearth located in kitchen area making long circulation between kitchen and living where larder is placed. *Denchi* (raised platform for storage) and *Macha* (a cot) as other furniture found in the living space.



5.14_Kitchen area of the house.



5.15_Living area acquired with all fixed in place furniture.



Orientation:

It receives very less amount of light as it is placed at corner of the room, so orientation has no role.



5.16_Living area with door opening and larder.



User:

House is occupied by couple and *Kothlio* is used by only lady of the house as her children comes occasionally here during festival time. User with no other help finds hard to perform the household activity as walking distance is the major issue here.



5.17_Woman of the house 'Prem devi'.

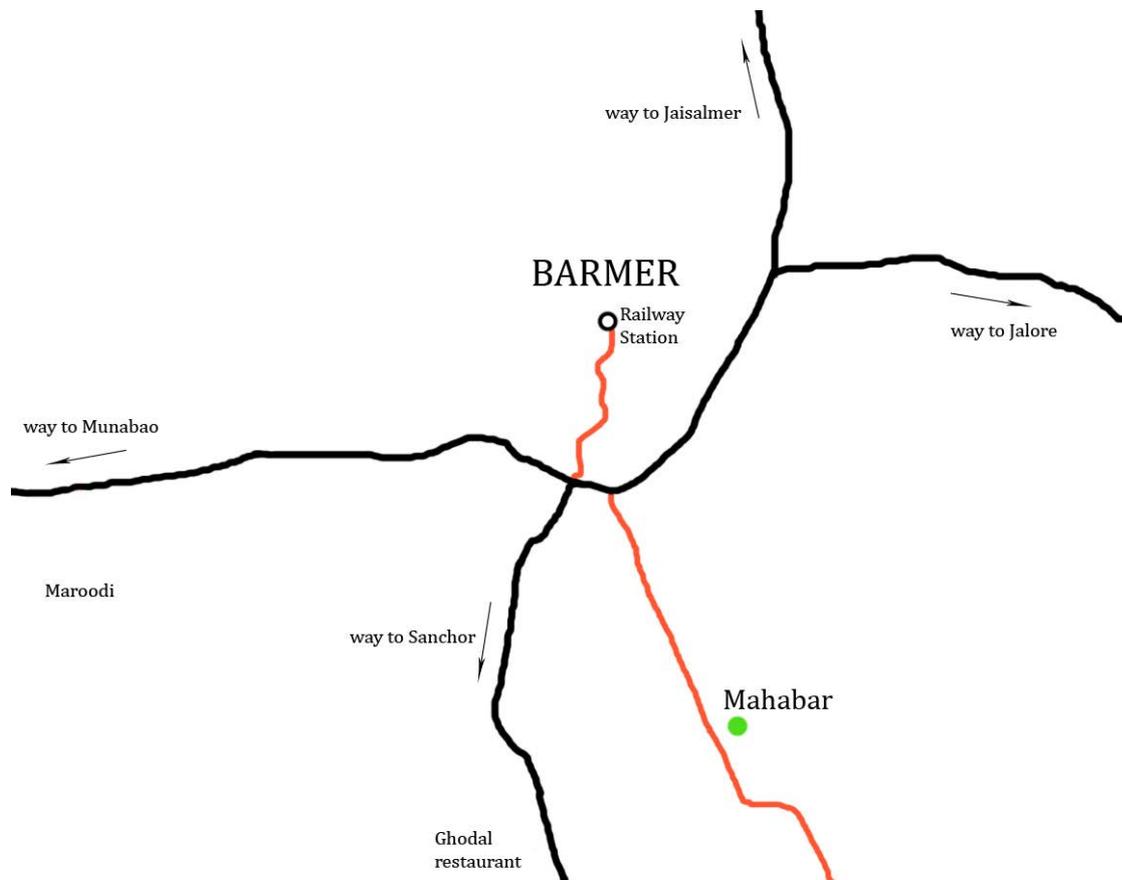


Frequency of use:

This particular *Kothlio* is used mostly during cooking time as of all cooking ingredients are placed in it. Secondary, it is used as a safe, as a dresser (material placed on ledge) and various other storages at back and underneath of *Kothlio*. Hence it is been used throughout the day.



5.18_Woman approaching yard from living room.



CASE STUDY 2

Mahabar village, Barmer.

Mahabar village is located 11 km towards south of Barmer. Like any other village Mahabar consists of several *Dhani*'s. The typical *dhani*'s are composed of several huts (*jhumpa*) including one rectangular structure (*padva*) within the central courtyard. The *jhumpas* have conical roofs whereas rectangular spaces have flat roof. Both the circular and rectangular structures are used as major living spaces. All these are bounded by hedge of thorns, which also includes yard for animals. Typically women construct all the mud related work like elevating walls, kitchen hearth, racks and storage units of the house while men's job is to do only wood construction work like laying of the conical thatch roof. The high plinth area within the yard is kept clean and maintained by applying a cow dung floor finish at regular time period. Mostly one coating is done after every rainy season. Village life is organised on the basis of community groups largely Hindus and then Sikhs. They interact with every social group but social hierarchy is maintained between peoples of different castes and communities. Here people live by sheep breeding and agriculture. Most women are occupied in weaving on a commercial basis. A hand loom is typically found in each community. Some people are engaged in carpentry work as Barmer is known for its intricately wood carving furniture. *Rohida* wood is very commonly seen in these regions.



5.19_All art work done by the woman. Window in the hut used peep people approaching the gate.



5.20_Man making furniture from locally available wood of Rohida tree.



5.21_Wall shelf locally called *Bel* having geometrical patterns and opening to place the things which are often used daily.

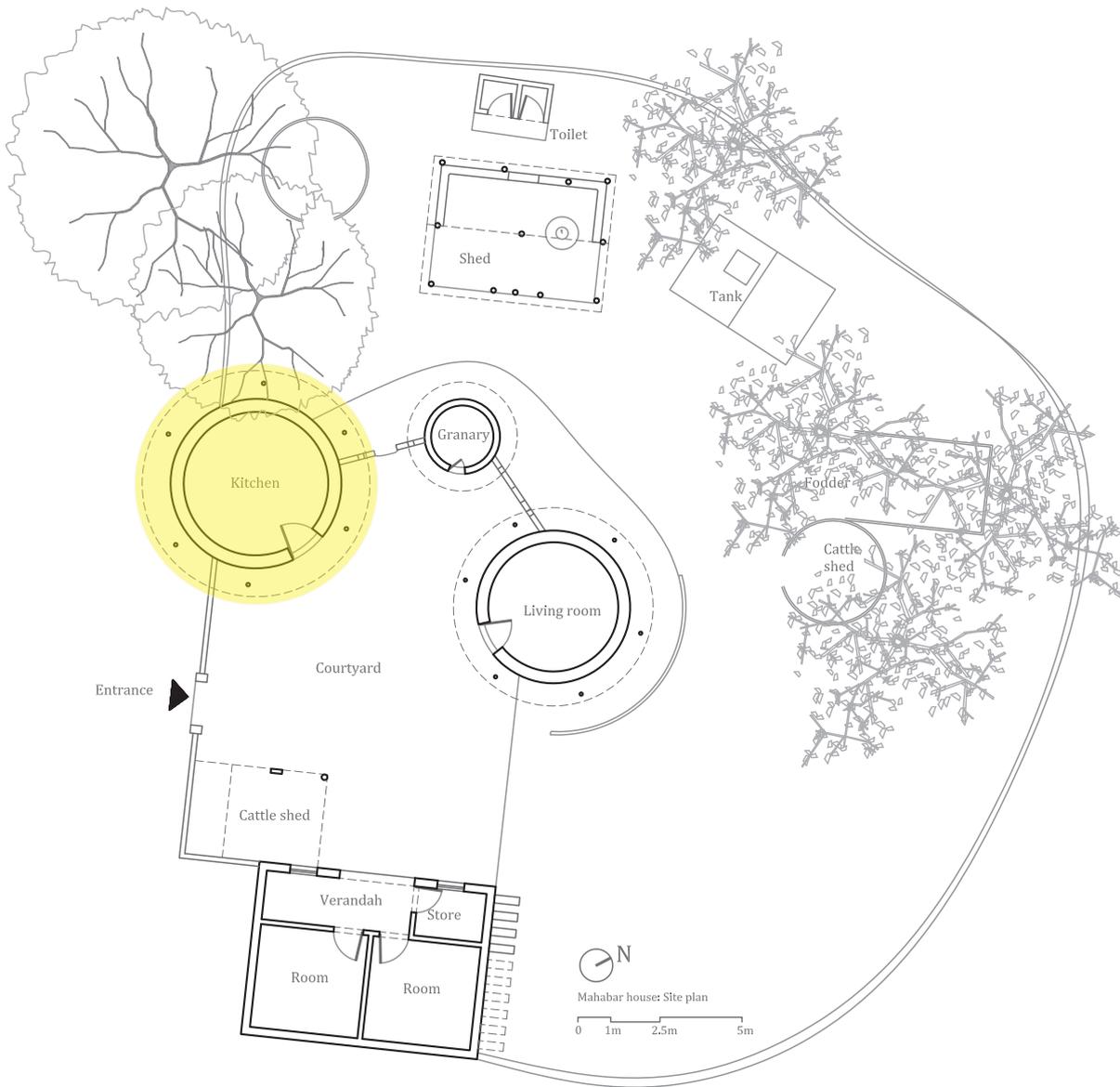


5.22_Separate shed made of workplace within the compound yard.



5.23_Woman stitching the bedsheet in free slot during noon hours. It is done on commercial basis among the villagers.

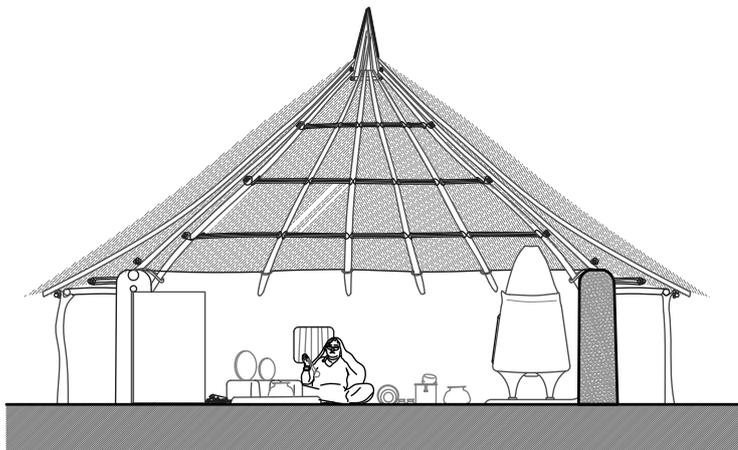
Kathātara: an indigenous storages of Rajasthan.



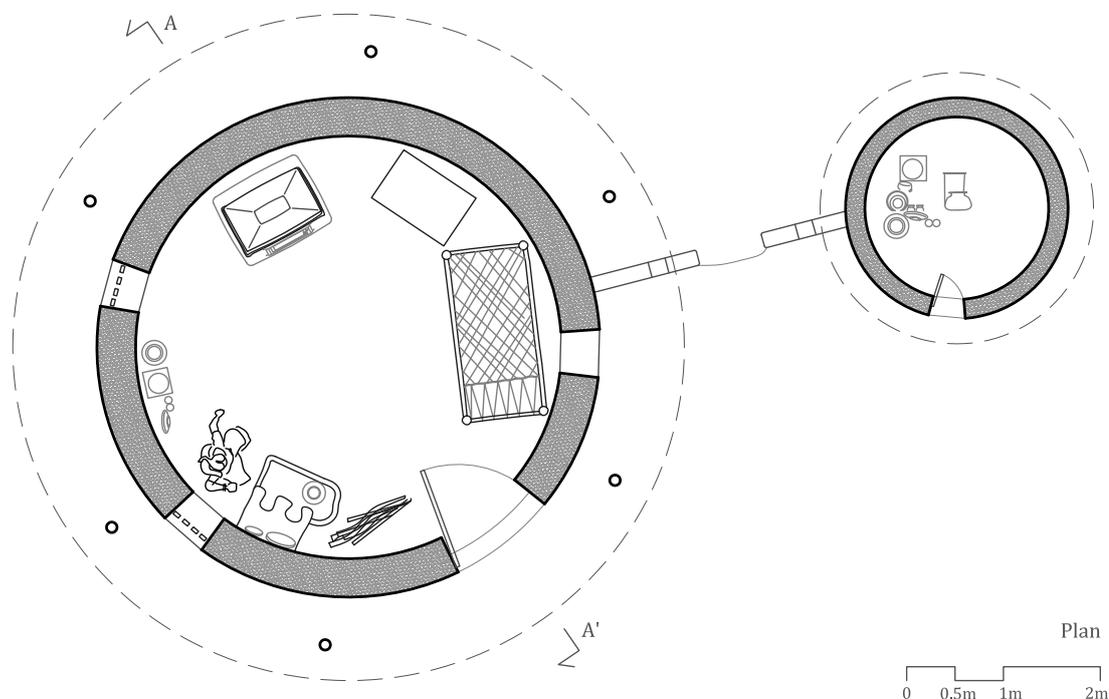
5.24_View of kitchen on left and on right there's granary hut now used for general storage.



5.25_Girl leading goats to their yards. At back granary cell connected through compound wall with living room.



Section AA'



Plan

0 0.5m 1m 2m

Basically this house is occupied by Sikh family. Living pattern is same as Hindus, but there is no common religious building observed in this village. Built structure is organised in the same way as discussed. The kitchen is the busiest room after the courtyard. It is used by everyone during day time. Next to this there is one small private room occupied by the parents and their children may sleep with grandparents in a rectangular room build of stone masonry. This room also served as a living room and had a semi-opened verandah. A small hut for grain storage is found in the compound which now used as storing kitchen goods. Additional structure may include a rest area for guest and nowadays toilet blocks are also seen within the boundary. The outer small room is used for storing of fodder and therefore situated near the cattle. The cattle shed found near the entrance is now used for receiving guest and other activity which require shading.



5.26 *Kotha*;

A monotonous quality of space and furniture receives harmonious relationship with each other. Insulating properties of mud house protect man from external climate. In a same way such enclosed storages keep the food items fresh because of its same material property. Like mud wall this *Kotha* is also replastered with thin paste of clay and inside surface are sometimes lime finished to achieve cooler temperature.



5.27_Deeply embedded clay patterns on facade.



5.28_Ledge and roof occupied with things to be accessed quickly as viewed from top.



5.29_Each and every space gets utilised by various things for storage as viewed from below.



5.30_Sharply cladded vertex of *Kotha* to gain more strength against breakage as viewed from sides.

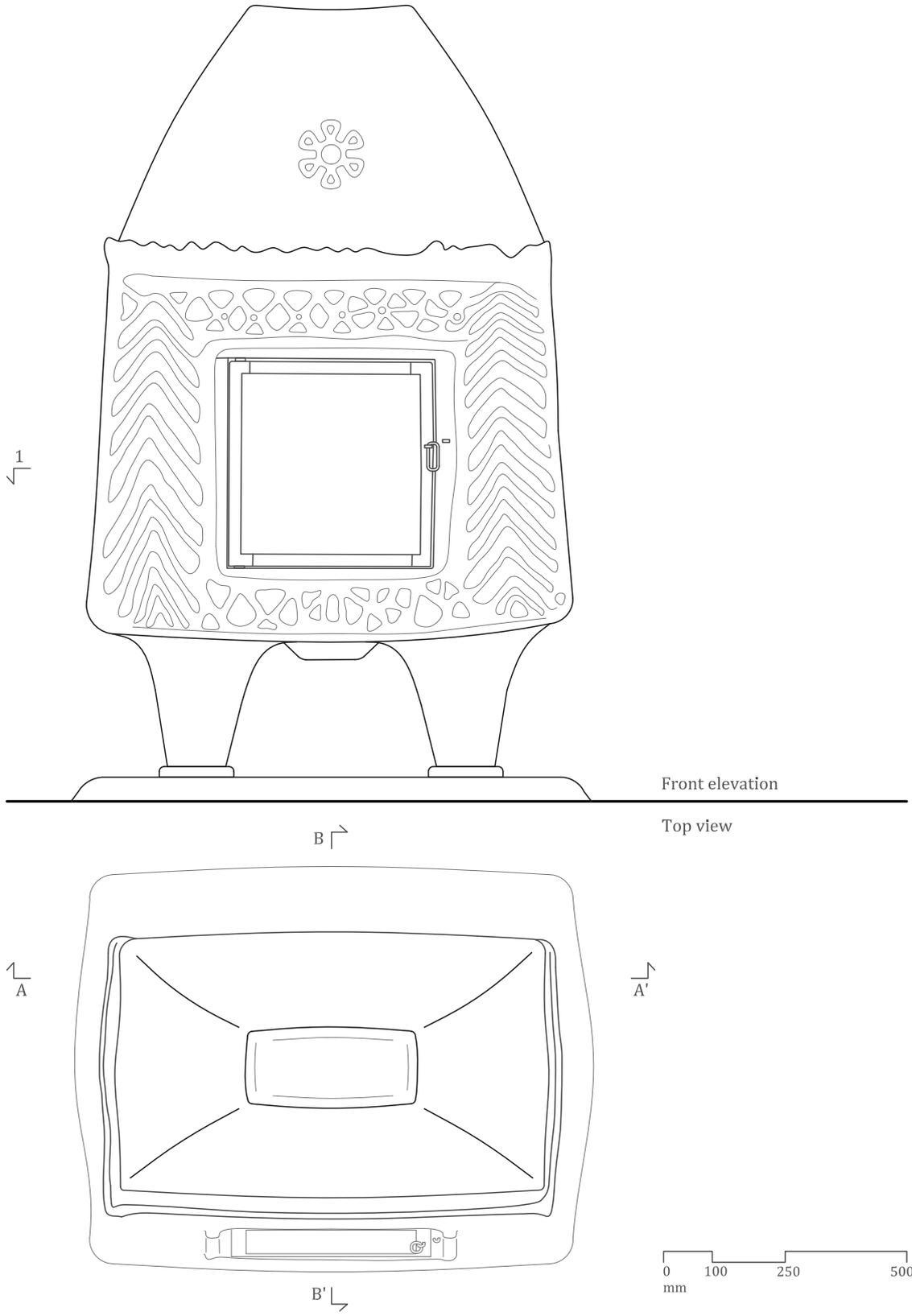


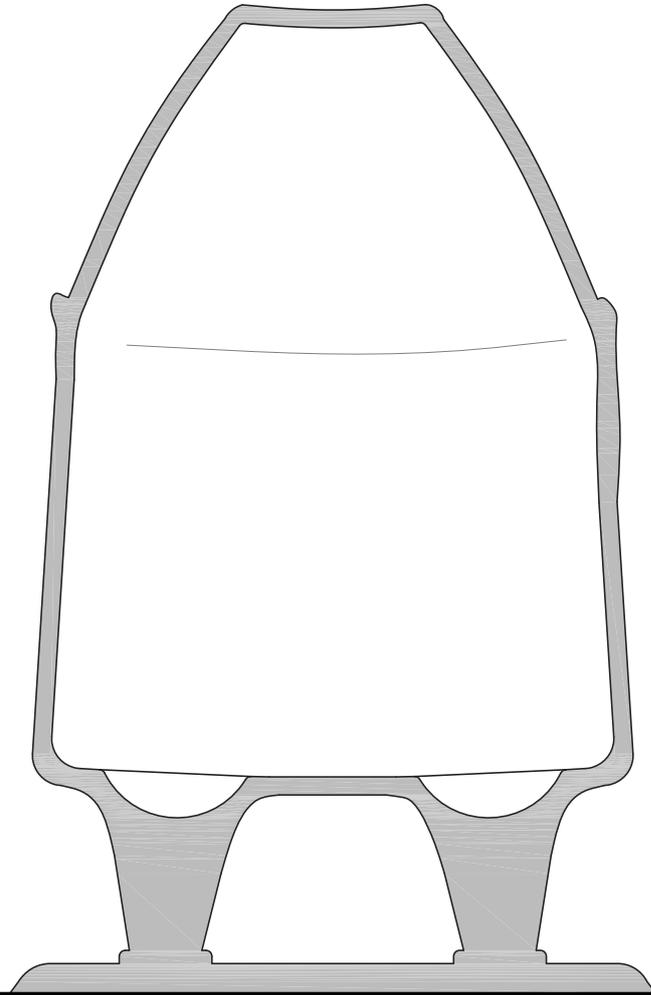
5.31_Door detail with tenon and mortise joinery. Metal thin plate riveted on wooden frame is later addition.



5.32_Inside view of *Kotha* with an earthen pot placed in scooped surface which do not let it fall.

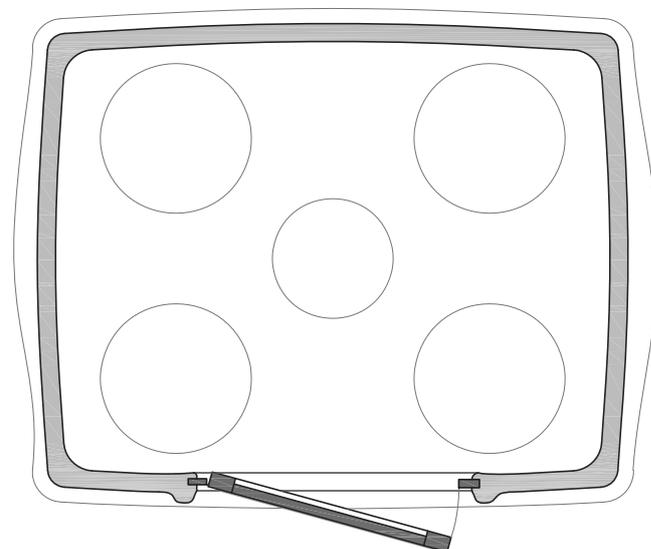
Kathātara: an indigenous storages of Rajasthan.



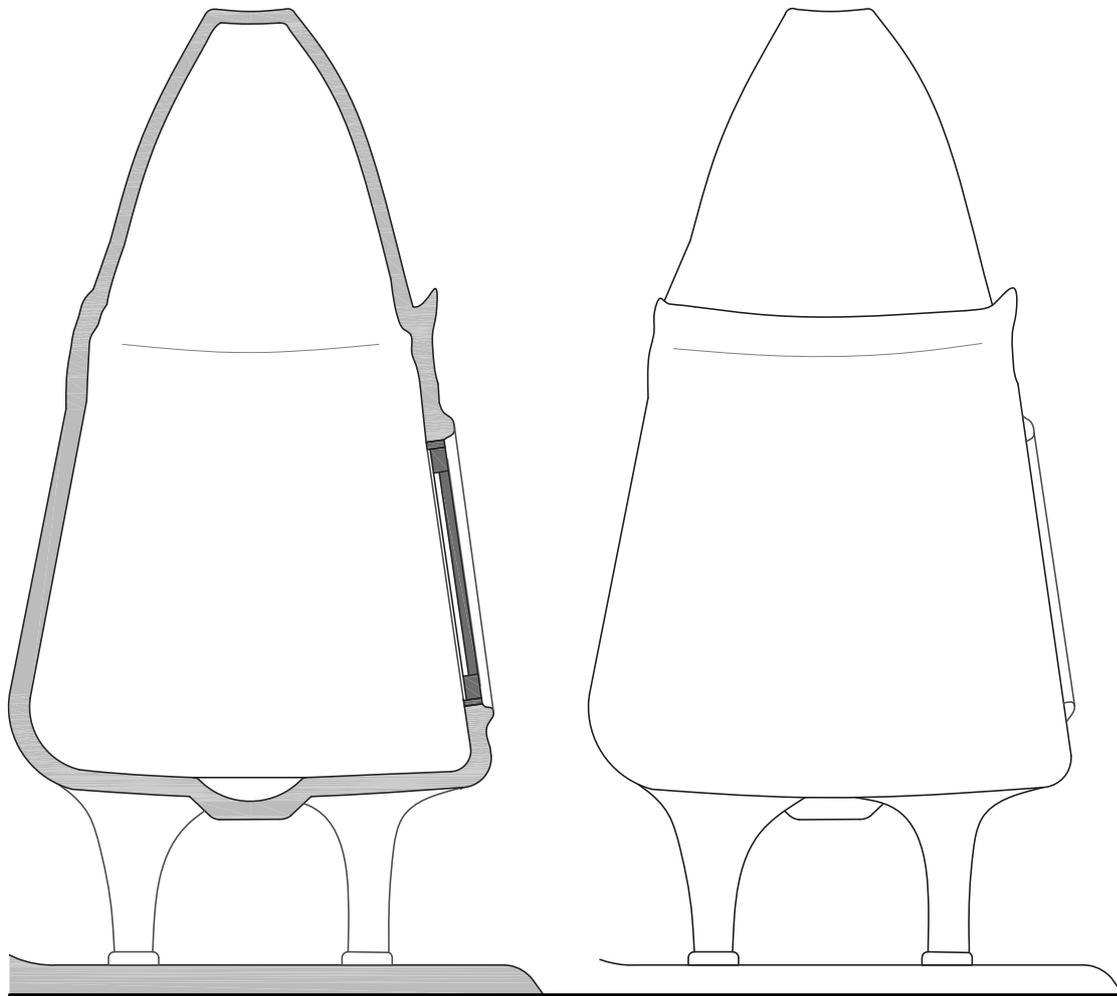


Section AA'

Plan 1



Kathātara: an indigenous storages of Rajasthan.



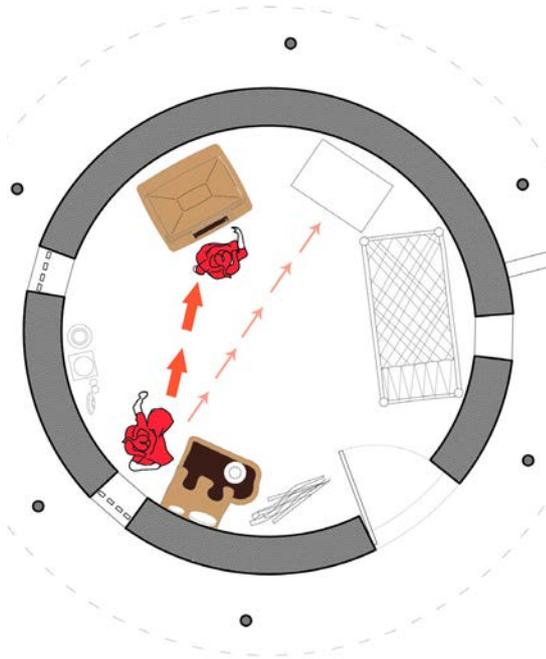
Section BB'

Side elevation





Kathātara: an indigenous storages of Rajasthan.



Placement in the space:

This *Kotha* is located at the tangent point of the house on demarcated plinth by giving free space to other elements. It occupies 1/10th area on floor.



Connection with other elements:

It is directly connected with hearth and store unit but no activity collide with each other as all are placed in triangular relationship.



5.33_Fire place in kitchen referred as *chullah*.



5.34_ *Kotha* with storage cabinet in kitchen.



Orientation:

It is oriented facing the door opening of the house where it receives good amount of day lighting making it very easy to perform the task.



5.35_Kitchen as viewed from its entry door.



User:

Particularly this *Kotha* is used by multi hands as three generation live together in this house.



5.36_'Tari devi' (holding stick) with her family.

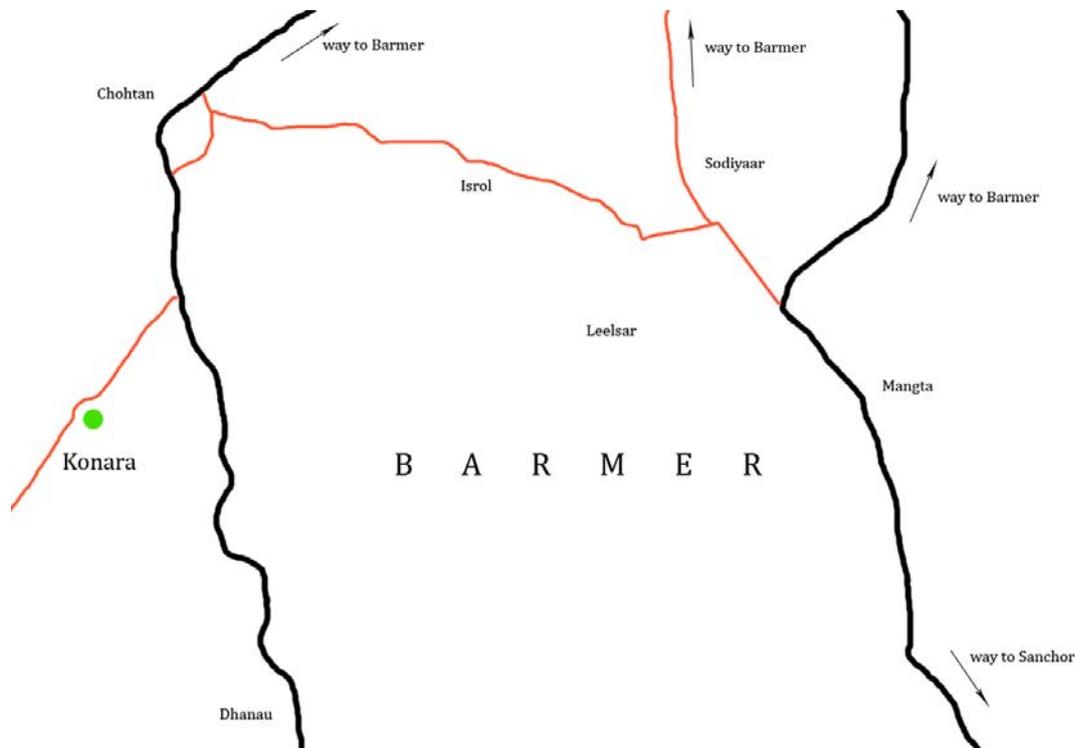


Frequency of use:

It is mainly used for fermenting curd and keeping milk i.e. twice in a day time. It is not used frequently in cooking hours because nearly placed wooden storage unit is get utilized for that purpose.



5.37_User approaching *kotha* from fire place.



CASE STUDY 3

Konara village, Barmer.

Konara village is located 67 km south-west of Barmer. Hedge of thorns attached with neighbour's hedge forming a molecular kind of structure if viewed from aerial (see on page 4). Living quarters are formed within this boundary. Predominantly two types of built forms are recorded in this village. One having only rectangular build structure arranged on sides of the yard, other with circular structure arranged randomly with one rectangular house. Materials for hut are mud brick for wall and thatch for roofing while in rectangular structure it is mud bricks and cement roof. Flooring is laid by mixing animal dung with mud and hay in the yard and inside the room. Fixed in place furniture are made with same earthen material without hay (refer figure 3.20). This village is near to Chohtan which is famous for its wood carving work, hence it is obvious to have great use of locally available material in surrounding places. Movable furniture include cots, swings (see next page), surface table (refer figure 3.15) and other wooden furniture.

This village is largely occupied by Muslim community of Khan and Pathan clans. However they communicate in *Marwadi* language which generally spoke in Marwar regions by Hindus. There is no sign of spiritual place in any of the house. Two occupations are common in surrounding of Chohtan town (17 km from Konara) i.e. Wood work and *Jeera* (Cumin) farming. Hence people live here by agriculture and sheep breeding while few survive on carpentry work.



5.38_Rectangular structures are arranged on both sides of vestibule and circular forms are arranged around the yard which makes the contrast image on viewing simultaneously.



5.39_Woman seating on *Macha* a typical cot found everywhere in these regions.



5.40_*Hindo* means cradle for kids to sleep. Wooden members are intricately carved. It can dismantle easily because of detachable metal hooks.

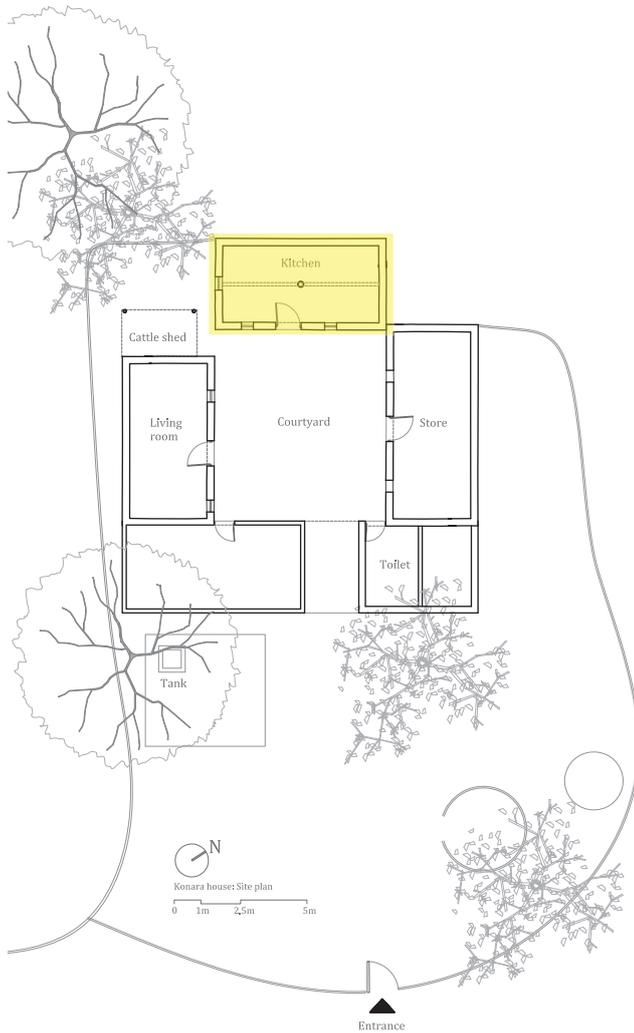


5.43_Typical kitchen layout of this village.



5.42_Kitchen is organised in rectangular built form having gable roof top on mud bricks.

Kathātara: an indigenous storages of Rajasthan.



The fluid layout of the boundary wall protects the desert sand to flow inside the yard. Compound area is not finished and remains sandy as there is continuous flow of sand from outside. There is one water tank common in all houses within the compound area. Before stepping into the yard one has to pass by vestibule area which narrows down the opening for sand to enter. Backyard is used as cattle shed. If numbers of cattle increases than front yard is get utilized by adding thatch roof structure and separate shed for storing fodder. Rectangular built structures are arranged with door facing the yard having flat roof. Exterior are painted white to radiate the solar heat and interior walls remains to its original form. Kitchen building is gabled roof having metal column taking central load of top most wooden log where frame work of wooden members are resting. Corrugated cement sheet is fixed by nuts and bolts on wooden structural frame. Interior equipment like fireplace, storage, shelves are made with earthen materials. There are small copper utensils for weekly storage of grains. Good air circulation and lighting is maintained in all structures with

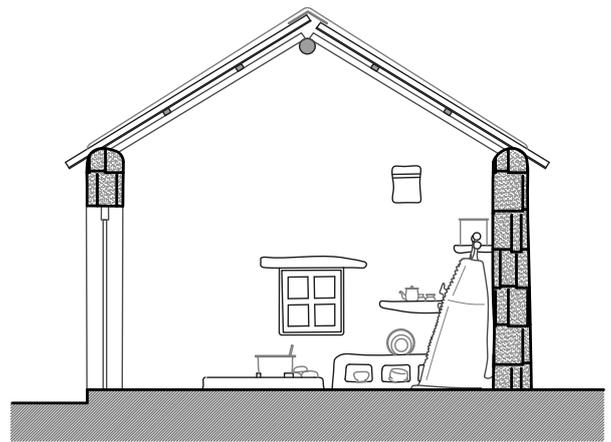


5.43_Busy courtyard in morning slot when number of activity take place. Living and kitchen at left and right side resp.

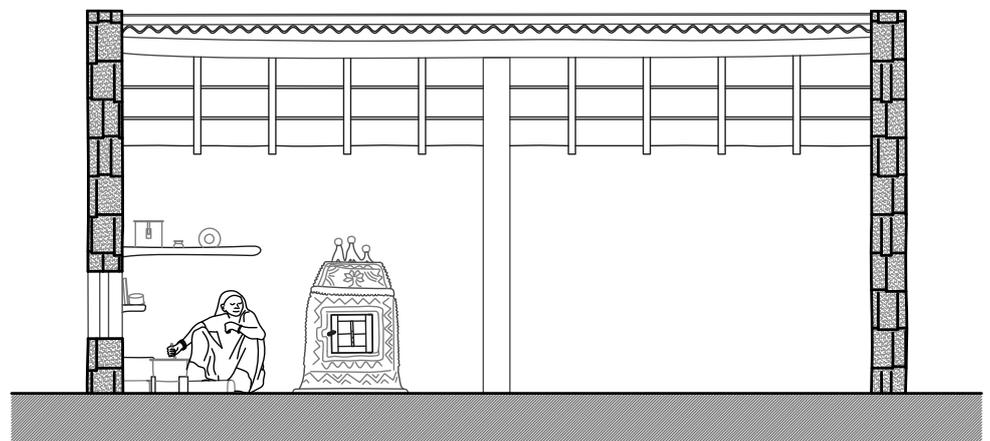


5.44_View from courtyard facing narrow vestibule area. Store room on extreme right and toilet block seen with door.

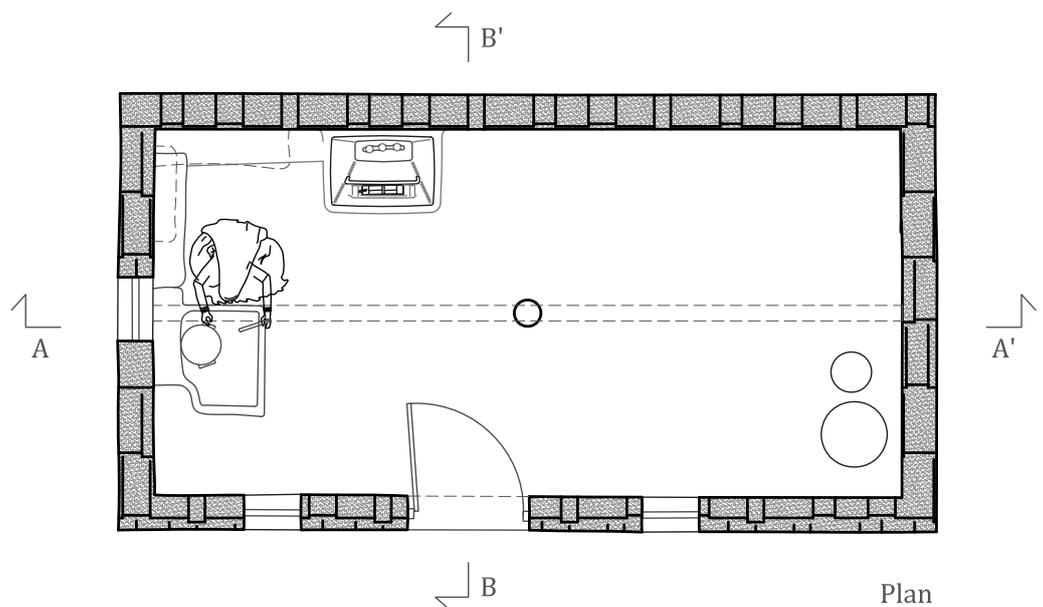
more windows and sufficient door opening. There is one separate room for storage where all types of material goes in like grain containers, piling of mattresses, hand mill grinder, wall niches to place valuables and extra pair of cots are placed here for guest comfort, though there is no separate room provided for guest to rest.



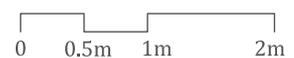
Section BB'



Section AA'



Plan





5.45 *Kothiyo;*

Particularly in this Muslim community larders are found in smaller dimensions though occupied with more family members. Reason is sometimes they require bigger sized utensils to fill milk or buttermilk which don't fit in the volume of clay larders. Hence wooden cupboards or reed baskets are an alternative solutions to it (refer figures 3.29 & 4.18). Above example is not found efficient enough in hot arid regions as it is directly constructed from floor which gradually heats up the base while leg supported larders makes free way for air circulation.



5.46_Constructed directly on *Thado* a rectangular base with no leg support.



5.47_Door detail with tenon and mortise joinery in wood having riveted nails.



5.48_Few ornamentation done by choice with no relevance of other. Here light bulb is inserted on the peak of mud structure.



5.49_Corner edges treated sharply for extra strength and emphasis.

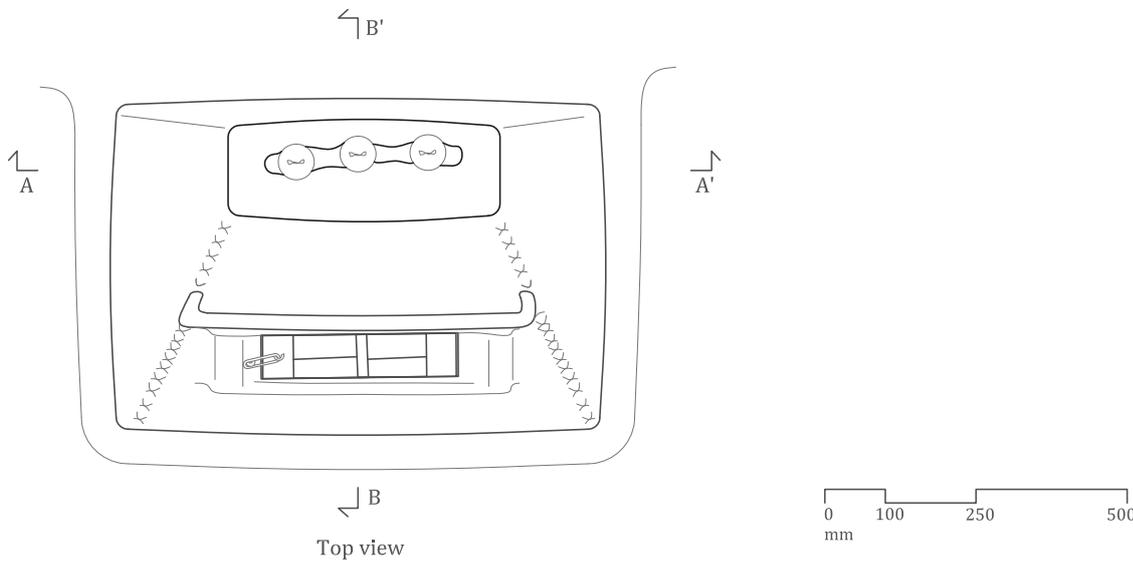
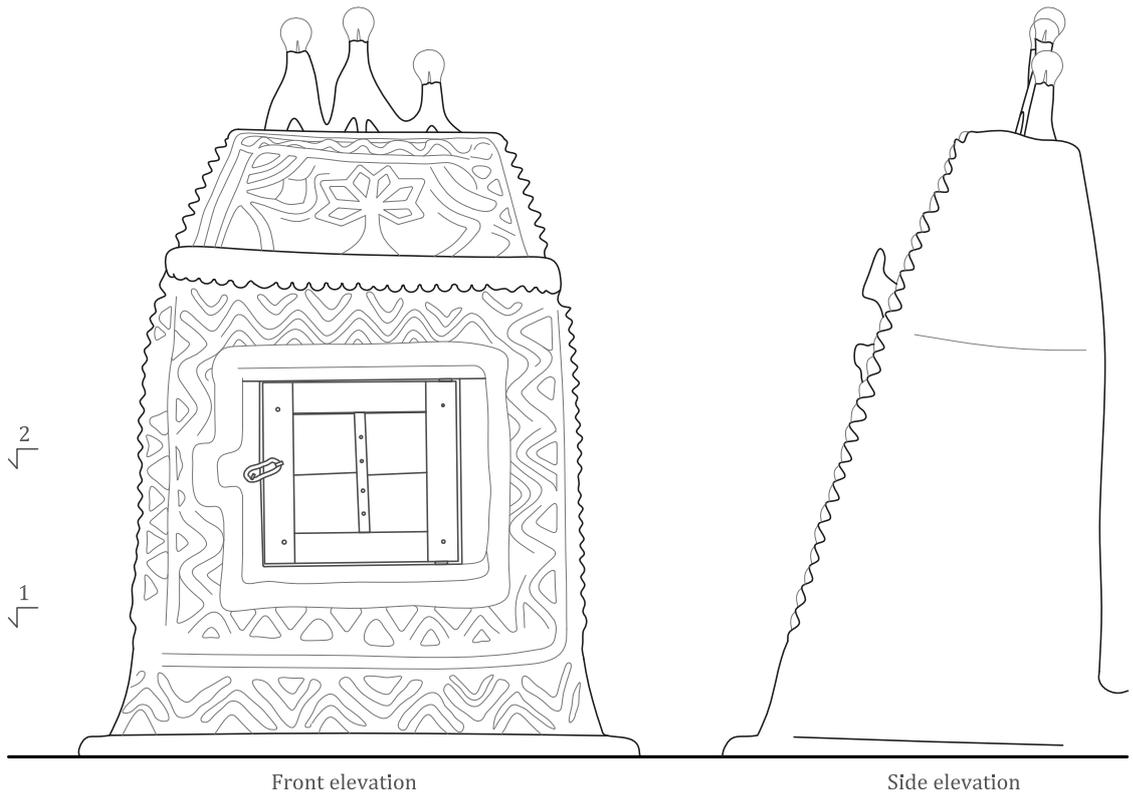


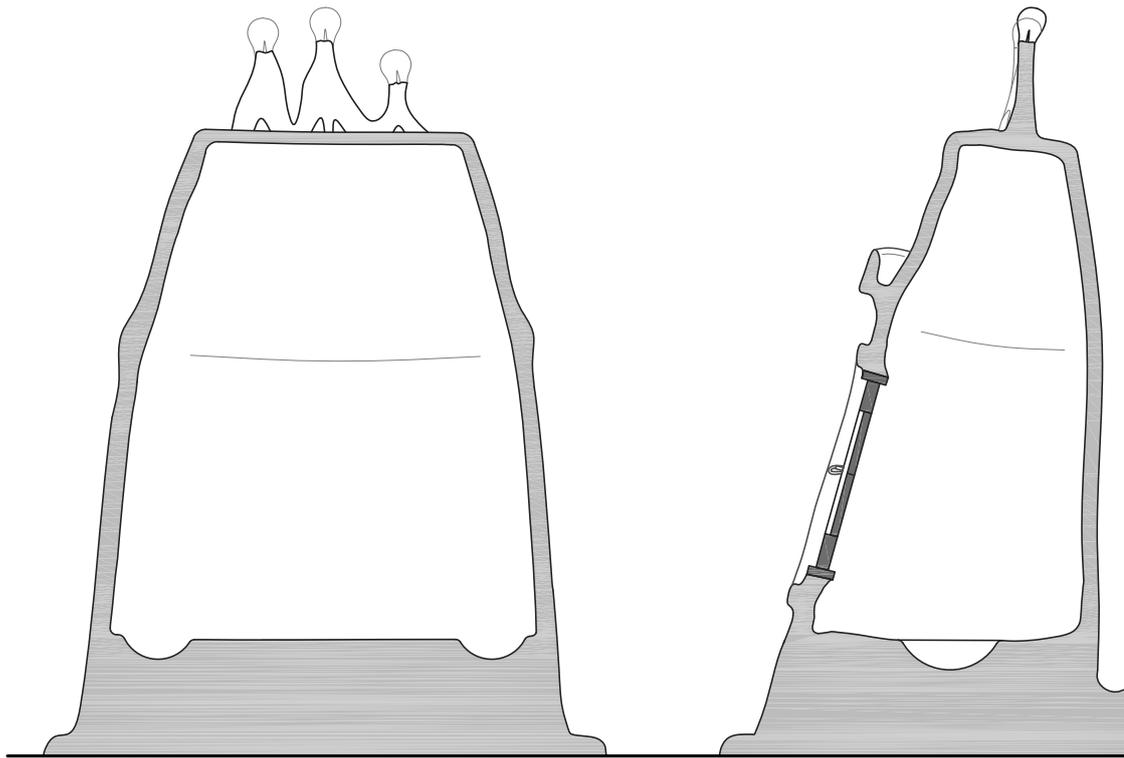
5.50_Ledge provided to place small things while cooking.



5.51_Inside view of *Kothiyo* occupied with food items.

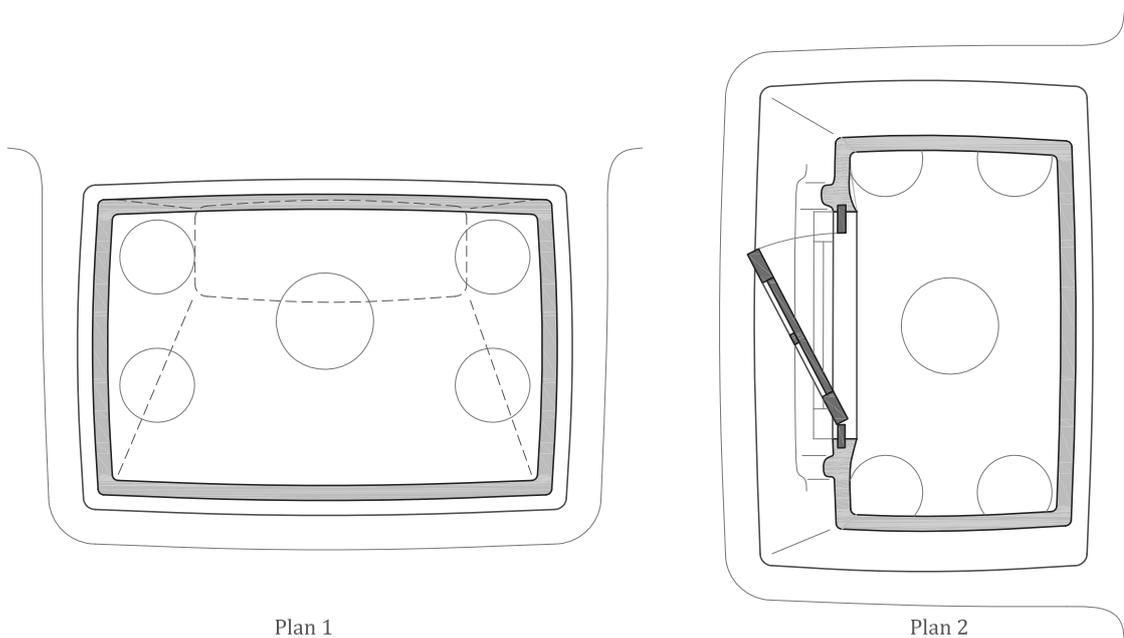
Kathātara: an indigenous storages of Rajasthan.





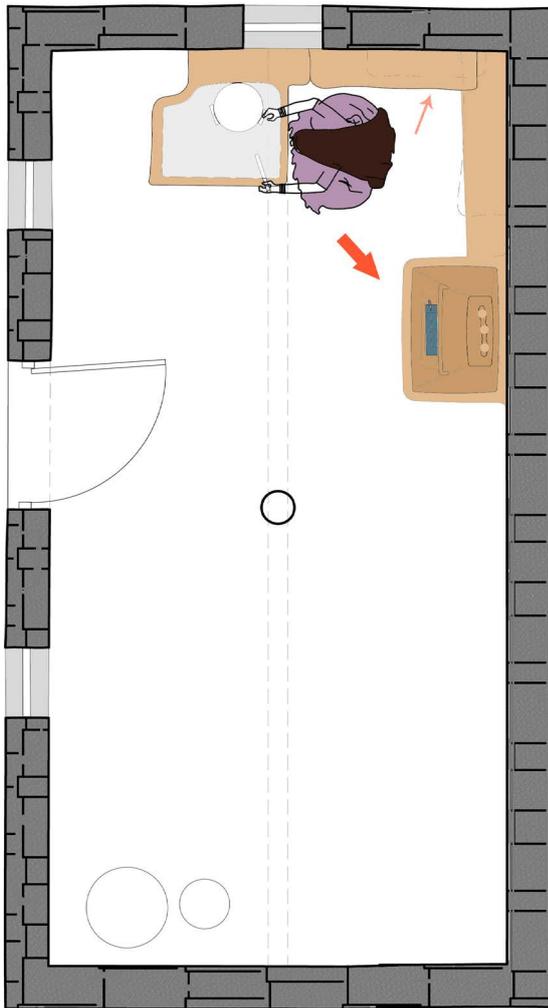
Section AA'

Section BB'



Plan 1

Plan 2



Placement in the space:

The whole unit is fixed in a corner of the room where *Kothiyo* is attached with low plinth linking it to storage shelves and further with the hearth.



Connection with other elements:

All the elements are interlinked with each other and direct connection is formed between *Kothiyo*, *Janeri* and *Chullo*. (larder, shelves and hearth resp.)



5.52_ *Kothiyo* placed right besides shelf and hearth.



5.53_ *Kothiyo* with easy accessibility to other elements.



Orientation:

This *Kothiyo* is very rightly oriented towards the facing door. Enough of light is entered inside the larder when opened. Larder's door is pivoted on right side which makes easy for user to perform the activity.



5.54_ *Kothiyo* facing towards kitchen entrance.



User:

No one help is required as all other units are at one place which allows easy accessibility by just changing the body postures.



5.55_ 'Murada bai' in her cooking mood and posture.

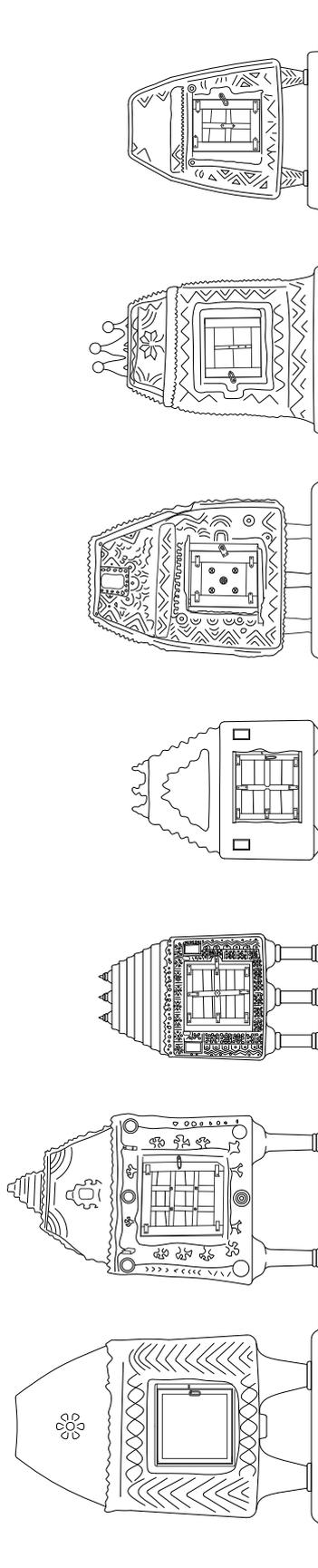


Frequency of use:

It is mainly used for fermenting curd and keeping milk i.e. twice in a day time. It is not used frequently during cooking activity because storage shelf built near this *Kothiyo* is been largely consumed for placing spices and other necessary goods.



5.56_Close proximity between user and *Kothiyo*.



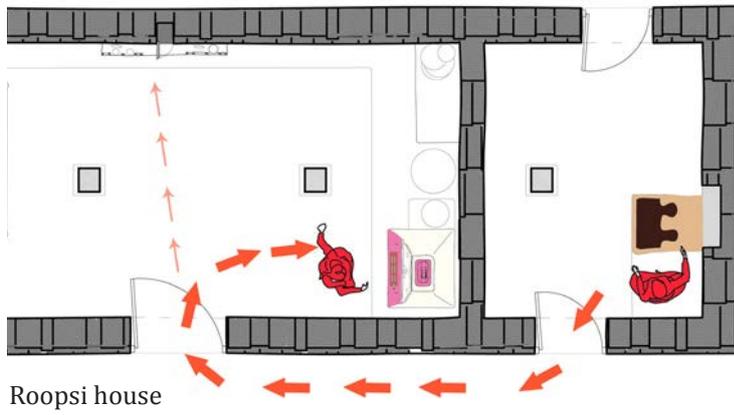
First four letters are common among all larders which were case studied for this document namely: **Kothlio**, **Kotha** and **Kothiyo**. One can say that these words may derive from **Kothi** a local term used for food container which can be of any size and volume but the word *Kathatara* is specifically referred to a gabled top or shrine shaped structure having certain size seen in Marwar regions.

Completion period of *Kathatara* for case 1 at Roopsi house was noted slowest. Woman took one month to finish the job, reason is only single person is involve in making the entire unit excluding door fitting which usually made by local carpenter or replaced from old piece of unused *Kathatara*. Case 2 at Mahabar house woman took two weeks in completing the task. One of the family members mentioned that the approx. weight of *Kathatara* may be 100kg and this is comparatively higher from other cases. So the raw quantity of material requires more and it is difficult to handle by one person. As this house was occupied by many family members, work is distributed among themselves. Puddling of clay is done by kids and for shifting the *Thado* three to four adult people is required. Hence it is done faster from case 1 though both the sizes are same as multiple hands are involved. Lesser time recorded for completion of *Kathatara* in case 3 at Konara house. One week is enough for women of this village to complete the construction process. One reason is the patches of water collected in pond is found very near from their house, so travel time for loading and unloading of raw material of clay reduces which is not in case 1 of Roopsi house due to scarcity of rainfall (refer figure 2.2). Secondly it is made smaller in size so total time consumed is less from case 1 & 2.

All cases studied are of different community, so the requirement of placing substances or goods will vary in each case. Hindu family of case 1 in Roopsi occupies whole volume of *Kathatara* (refer figure 4.19). As only husband and wife reside in this house, family need of storing food items is less hence there is no need of separate storage unit. Sikh family of case 2 in Mahabar need larger storage unit to place kitchen goods as more family members live in this house. Here *Kathatara* most of time is occupied with beverages like milk and curd but other raw food materials are placed in storage cell found in compound area of the house (refer figure 5.24). Muslim family of case 3 in Konara hardly use *Kathatara* due to more family members they require larger space to keep their big food utensils. They use *Odi* for this (refer figure 4.18), other raw material they may keep on storage racks found inside the kitchen room (refer figure 5.52).

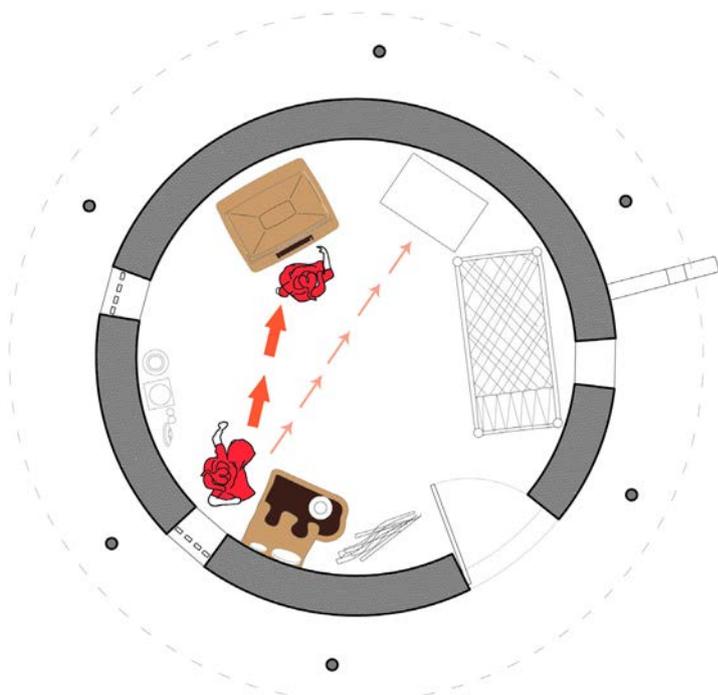
It is observed that there are no religious symbols are designed or embedded on any of the *Kathatara* by any of the community. Though in case 1 of Hindu family *Kathatara* is inaugurated by following traditional rituals by marking *Swastik* sign on front facade or on door and later *Puja* (worship) is performed before it is been used for the first time.

Facing page: Women returning home from their farm with bunch of wooden sticks which is to be used at fire place for cooking (on the way from Sodiyaar to Barmer). Drawing showing variation in form and scale of larders of different places.



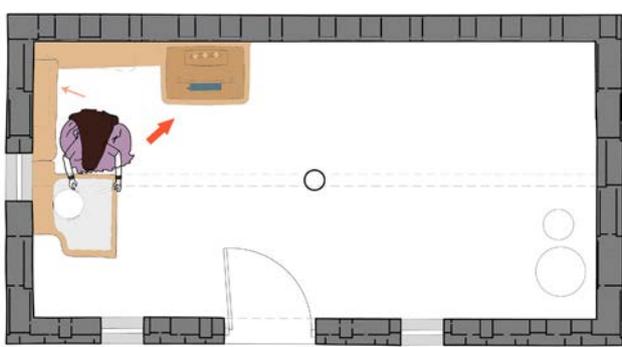
● ● ● ● ● Placement in the space:

● ● ● ● ● Connection with other elements:



● ● ● ● ● Placement in the space:

● ● ● ● ● Connection with other elements:



● ● ● ● ● Placement in the space:

● ● ● ● ● Connection with other elements:

- Avoidable
- ● Tolerable
- ● ● Workable
- ● ● ● Suitable
- ● ● ● ● Acceptable



In case study 1 Larder is located in living area of the house at one corner placed on plinth by which user accessibility becomes easy to use but builds no relationship with kitchen and living area where larder and storage shelf are placed.



In case study 2 Larder is located at the tangent point of the house on demarcated plinth by giving free space to other elements which results in formation of triangular relation with hearth-store-larder.



In case study 3 Larder is attached with low plinth linking it to storage shelves and further with the hearth which makes very easy accessibility with hearth-store and hearth-larder.



Orientation of furniture piece is as important as its placement. One of the major thing that goes into consideration is the amount of light required to see the substances placed inside larder. First example is rated below average as it faces shadow of door.



Case 1 user found very unsatisfied with her larder though age wise user 1 and 2 are same because woman of case 1 steps alone to reach at larder point while case 2 has younger people help. User of case 3 don't require anyone for accessing the larder as it is palced ergonomically close.



Larder is approached very quickly by user in case 3, while in case 1 and 2 user needs to get up from cooking area to have the things from larder.

● Avoidable ●● Tolerable ●●● Workable ●●●● Suitable ●●●●● Acceptable

People are taking initiative to bring positive change by getting the past valuables back with modern equipped amenities. Nowadays at few places *Kathatara's* are replaced with new type of finished forms as shown in figures below. These products are mass produced and readily available. Such products are cheaper to buy and produce zero maintenance hence it is very preferable in economical class societies. Opinion of a user for an element changes with change in space and context. One cannot consider refrigerator to be a part of an interior element any more as this become a piece of product now.

One kind of refrigerator is developed in north-west Gujarat by using clay as shown in figure top-right side. It requires no electricity or any external cooling energy. The refrigerator is able to preserve fruits and vegetables for few days. Refrigeration happens when the top compartment of stored water drips down through the appliance's sides and evaporates from the porous clay surface, cooling the interior. Clay is a poor conductor of heat and results in cooler internal temperature when the outside temperature is very high. Since clay is porous, water leaks and reaches the outside surface where it evaporates cooling the whole thing.

In pot-in-pot refrigerator, two earthen pots of different sizes placed one within the other as shown in figure center-right. The space between the two pots filled with wet sand. Food items is placed into the inner pot covered with a lid or damp cloth. As the moisture in the sand evaporates, it draws heat away from the inner pot according to the laws of thermodynamics. Addition of more water required for cooling its contents for longer time.

Another refrigerator that runs without power is developed by the Central Arid Zone Research Institute, Jodhpur. It has addressed local problems of preserving fruits, vegetables and dairy products in the dry heat of Rajasthan. As shown in figure bottom right it is made of bricks, cement and coarse sand. The temperature inside is 12-15 degrees lower than that outside, while humidity is higher by 85%. This fridge can preserve 30-50 kg of vegetables for four to five days in summer and six to seven days in winter.



Kathatara: an indigenous storages of Rajasthan.

Aada

An inbuilt niche generally constructed in structural wall for good depth of storage. Wooden doors are inserted for safety purpose.

Aankra

A shrub largely seen in desert regions.

Baani

Dust particle of burned wood and cow dung.

Bel

An inbuilt storage shelf used to store vessels.

Bhandariya

A projected niche from wall surface used to store utensils and other valuables.

Chullo

A hearth or fireplace.

Denchi

A raised surface used for storage.

Dhani

A circular house forms.

Ghanochi

A wooden piece of stand used to place water pot.

Ghatti

Two piece of stone used to grind grains.

Ghero

This term refers to the spherical form just above the legs of larder.

Ghodiya

A cradle for infants.

Haakad-kundi

'Hakad' means the chain and 'kundi' means the hook on which chain is locked.

Hindo

A cradle for infants and children.

Janeri

Floor mounted shelves used for placing utensils.

Kathatara, Kothi, Kothiyo, Kothlio, Kotha, Kathantaro

An enclosed storage unit whose insulating properties of the material helps to keep food items fresh for few days.

Khuti

It is basically a hook inserted into the wall to hang cloths, baggage or lanterns and also used to hang curtain to cut off the heat.

Kivaad

A pivoted wooden door.

Kothi, Kothar, Maata, Bakaari

A container used for storing grains.

Macha

A cot made of wooden supports having interwoven jute rope as surface.

Maju

A wooden chest on wheels or stand used to store cloths or mattresses.

Mushal-Okhli

'Mushal' means hand crusher and 'Okhli' means scooped piece of stone used for grinding spices.

Naddi

A water pond in desert regions.

Paaga

Legs on which all other furniture components rest.

Parindo

Niche with extended stone surface used as water pitcher stand.

Rohida

A tree found in desert areas of Barmer and most of furniture is made by its wood.

Tani

A wooden piece fixed to ceiling and another piece of wooden stick hang horizontally by a thread or by piercing into the holes of wooden piece. It is used to pile mattresses, carpets and cloths.

Thado

A platform of storage unit on which clay wall is constructed.

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List of figures:

Figures 2.20, 3.5, 3.6, 3.20, 3.27, 4.14, 5.19, 5.21, 5.36, 5.39 and 5.55 are from DRP team. Other than above mentioned all images, drawings, diagrams, maps (raster & colour) and sketches are done by the author.