CENSUS OF INDIA 1961

VOLUME IX

MADRAS

PART VII - A - VI

HANDICRAFTS AND ARTISANS OF MADRAS STATE

WOOD CARVING OF MADURAI

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FOREWORD

One of the first steps to be taken in the First Five Year Plan was the establishment of six Boards for the promotion of handicrafts, village and small industries : (1) the Khadi and Village Industries Board (2) The All-India Handicrafts Board (3) The All India Handloom Board (4) The Central Silk Board (5) The Coir Board and (6) The Small Industries Board.

The rapid expansion of the activities of these Boards which concentrated not only on production and techniques, but also on organisation, extension, credit, marketing, and export, consolidated and enlarged the position that the household industries sector had so long enjoyed in the nation's economic life. It was this fact that forced itself upon the preparations for the 1961 Census and demanded that household industry should be separately investigated for a proper accounting of the nation's manpower resources and its specific contribution to the national income. The 1961 Census therefore asked a special series of questions on household industry, input of family and hired labour, and the periods over which household industry is conducted. It was felt, however, that an enumeration of the total number of establishments and their industrial classification would be incomplete without a proper description of what they produce and how they produce. It was important to make an assessment of the limits of rigidity within which traditional skill operates. This could be obtained by studying the caste, occupational, social and economic stratifications, the limitation of credit and marketing facilities, the dominance of custom over contract, the persistence of traditional tools and design forms, the physical limitations of transport, communication and mobility, the inability to adopt new lines or adapt to changing circumstances. It was important also to make an assessment of the limits of flexibility that traditional skill is capable of because the transformation of tradition1 skills to modern skills is easier said than done and a thorough study may well reveal that it is perhaps cheaper from the social point of view to develop industrial skills from scratch than to try to graft traditional skill on alien soil. A rather tragic case of failure to make what would on the face of it seem a minor adjustment cast its heavy shadow on the nation when it was discovered that goldsmiths used to working on 22-carat gold all their lives felt sadly helpless when asked to work on 14-carat, so narrow and unadaptable were the limits of their skill and proficiency and so rudimentary the tools and equipment with which they and their forefathers had worked. This fiscal accident revealed that tools are even more important than skills.

An early opportunity was therefore taken in February 1960 to suggest to State Census Superintendents, that the Census provided a unique opportunity for conducting and documenting a survey of this kind. As such a survey was quite outside the usual terms of reference of Census work it was thought prudent cautiously to feel one's way with the thin end of the wedge of what would, it was hoped, prove to be an exciting pursuit. It was therefore considered the wiser course to wait until the State Census Offices felt so interested that they would no longer take the inquiry as an imposition but rather want to do it on their own and ask for the necessary staff and equipment. This office, too, in its turn, could make use of the interval to organise and elaborate the design of inquiry in order to feed the appetite that work in progress would serve to whet. Because it was a labour of love, sought to be unobtrusively thrust on one's colleagues and because the inquiry itself was so vast that normally it would demand in any country as big a set-up if separately established, as the Census organisation itself and that over a much longer period, and because it was almost a pioneer venture, nothing like it having been undertaken since the 1880's, it was decided to move towards a build-up by stages, to let the inquiry unfold itself only as fast as my colleagues chose to ask for more.

Thus, in the first circular of 18 February 1960, it was suggested that the inquiry might be conducted through the agency of the Development Department, the State Director of Industries, the Director of Tribal Welfare, the Registrar of Cooperative Societies, and other organisations concerned with the promotion of household industry. A draft questionnaire containing 30 questions in three parts was recommended for canvassing. It was suggested that information on this questionnaire, village by village and area by area, might either be obtained through the regular departmental channels of the State Government, or through the newly set up Census organisation, or through the hierarchy of the newly-created Panchayats. Stress was laid on the need of photographic documentation and illustration of designs, shapes and forms not only by photographs but with the help of line drawings or sketches together with a full description of the materials used.

Almost the whole of 1960 and the first half of 1961 were spent in organising and taking the Census count, although several States even during this period had not allowed the grass to grow under their feet but made exploratory studies and decided in their minds how the inquiry should be organised. A series of regional conferences held in Trivandrum, Darjeeling and Srinagar in May and June 1961 revealed much enthusiasm among State Superintendents to proceed with the survey, but the need of separate staff and equipment was felt at the same time as the realization dawned that this was much too serious an inquiry to be treated casually and left to be achieved through the usual administrative channels and State Census Superintendents proceeded to augment their staff with qualified research and investigating officers, technical persons, photographers, artists, draughtsmen and other trained personnel.

This was followed by rapid progress in coordination between the Central and State Census offices in the matter of exchange and processing of information, documentation and investigation, of assisting each other with trained investigators and in editing and finalizing drafts, layouts, presentations.

Mention has been made of a questionnaire in three parts and thirty questions. The idea was to make a beginning with empirical, analytical studies based on a structured questionnaire which would replace general descriptive accounts that had obtained so far. The primary aim was to obtain a picture as much of the artisan himself as of his craft, to obtain a perspective of the artisan and his craft in his social and economic setting, the extent to which tradition bound him and the winds of change ruffled him, the extent of his mobility, and immobility, the conditions of market, credit, new contacts and design in which he operated, the fame of new as well as traditional producer-customer relationships in which he still worked, and how far he was ready to pierce his own caste-tribe socio-economic cocoon and make a break through to new opportunities promised by the Five Year Plans. The aim was to hold up the mirror to hereditary skills struggling with the dialectics of tradition and change.

Thus the first part of the questionnaire, purporting to be a village schedule, sought to take account of the size and population of the village, its remoteness from or proximity to centres of trade and commerce, in short, the degree of isolation in which the artisan worked, and the relative strengths of various communities in the village which would afford clues to social interdependence and the prevalence of the JAJMANI system. The second part was devoted to artisan communities in the village; the several castes of artisans, the number of families in each, the total number of workers, males and females, the extent of cooperative activity among them, the extent of dependence upon employers and of wage or contract labour. There were questions on the raw materials used, the means of their procurement, the possible extent of dependence on others for raw materials, the extent of the material that artisans can handle within the limits of their skill. There were other questions on the exchange and flow of designs, the use of colours, the ancientness of the craft and legends associated, the colonization of the craftsman, on patrons and customers and on social and economic contact

with the world inside and outside the village. There were specific questions on the workshop itself and particularly the tools and the source of supply of these tools, because it was felt that tools decide everything and are the surest index of inertness or flexibility. Separate blocks of questions were designed to bring out the ramifications of artisans castes throughout the country and the ways they sustained themselves, the type of clientele they catered for, the extent to which they operated on money or barter or service, how specialised their craft was, how wide the market, how dependent they were on their socially preordained clientele and how restricted the latter was by the seemingly unalterable laws of social custom; the extent to which they could operate in the open market, the range of their wares and the sizes to which these were ordinarily restricted either by the limits of their own skill or the length of their customers' pursestrings. Inquiries were to be made about the operation of middlemen and of cooperative societies, the people who gave new designs and demanded new products. Finally the several stages of production of the articles themselves were to be fully described including the final and finishing stage and a list of very skilled craftsmen of each community was to be furnished. The third part was devoted specially to tribal communities and designed to find out how self-sufficient or dependent they were on the production and supply of manufactured goods, the extent to which they produced themselves or depended on others, their contacts with other communities and the specific forms of production and commerce through which these contacts were maintained.

Particular emphasis was laid on the need of obtaining as full an account as possible of unique regional design differentiation as they reflect not only the very culture patterns of the country but the persistent inventive faculties of the craftsmen. The importance was emphasised of giving full attention to articles of domestic use as it is in their shape, designs and forms that the culture patterns and traditional skills persist most tenaciously.

Simultaneously with the investigation of specific crafts, State Superintendents proceeded to compile a comprehensive list of all types of handicrafts obtaining in their State. As for the specific Crafts to be investigated several tables were devised from the structured questionnaire in order to guide investigators toward pointed observation and analysis, to enable them to write, not just general descriptions, but with their eye on the object and on facts.

Investigations conducted between Spetember 1961, and May 1962, including a study group of all States and the Social Studies Division in December 1961 at Delhi, stimulated many of the States into going in for a much enlarged schedule. The revised village schedule itself, the counterpart of the first part of the February 1960 schedule, contained 19 large sections containing elaborate and probing questions. The Family Schedule for practising artisan families similarly contained 19 main questions each subdivided into many questions. The Family Schedule for non-practising artisan families contained 21 questions. There were schedules for the study of cooperative societies, of production-cum-training centres, and of consumer's preference. This enlarged schedule of investigation, in the formulation of which the States themselves actively assisted, was greatly welcomed. The surveys that will appear in this series will therefore consist of two main types: (a) those based on the original short schedule and (b) those based on the much enlarged schedule. In some cases Census Superintendents felt enthused enough to scrap the work based on the original short schedule and do it over again on the enlarged schedule. In the meantime much experience was gained on the analysis of facts and figures to cloth each observation with plenty of authentic information so that the reader could make his own judgement instead of being expected to see all the time through another pair of eyes.

This programme of survey of handicrafts and household industries has been fortified by several ancillary surveys, each one of which would deserve major attention. Along with the survey a compilation has been made of all handicraft centres in each State and an inventory

prepared of skilled craftsmen. Photographic and other documentation has been built up to constitute what may now be regarded as the most considerable repository in the country. Elaborate and accurate maps of craft centres in taluks, tehsils and districts are either ready or under preparation. A full census of all fairs and festivals, weekly hats and markets, throughout India, has been taken and is being published for the first time. Andhra Pradesh has embarked upon a project of chronicling the social and religious antiquity and uniqueness of every fair and festival. A separate volume will be devoted to each district which promises to be of the utmost value to sociologists and orientalists. A full and complete inventory, replete with sketches and measurements of every object has been prepared of exhibits in museums of tribal crafts in India. There has been a fairly satisfactory survey of houses and buildings, indigenous architectural designs and use of local building material of the whole country. All this has been entirely a labour of love, patienty organised and executed under great strain and in disregard of health and comfort, for which I take this opportunity of expressing my appreciation and grateful thanks to my colleagues.

New Delhi

July 30, 1964.

ASOK MITRA

Registrar General, India

PREFACE

Sri A. Mitra, Registrar General, India has, in his foreword, indicated how a study on handicrafts was planned as part of the 1961 Census on an All India basis. Against this background, I will indicate briefly what has been done in Madras State.

In "Harijan" dated 10th November, 1946, Mahatma Gandhi wrote as follows:

> "The villagers should develop such a degree of skill that articles prepared by them should command a ready market outside. When the villages are fully developed, there will be no dearth of men with a high degree of skill and artistic talent. There will be village posts, village artists, village architects, linguists and research workers. In short, there will be nothing in life worth having which we will not have in village."

It has been the pride of India that her arts and artisans have been well-known throughout the world. It has also been the endeavour of the Government of India to preserve our crafts and raise the economic standard of the artisans through various measures initiated during the First and Second Five Year Plans. In a mixed economy, it is necessary to maintain a balance between industrial development and the development of our village crafts and industries. This volume is an attempt to study the conditions of handicrafts including village industries and craftsmen of Madras State, on statistical basis. It will also be our endeavour to examine how far the village of Gandhiji's concept is being maintained in India and to what extent the crafts could be sustained on a competitive basis, which in the long run will add variety and artistic value to the various products which this State can produce.

This study was undertaken at the instance of Sri Asok Mitra, Registar General, India. The relevant extracts of the letter written by him in 1960 are reproduced below :

"You will recall that we have introduced special questions on household industry in the household schedule and on establishment and workshops in the houselist in order to obtain a frame for all types of industries in the country. There was of course, a special request from the Ministry of Commerce and Industry in this regard, but from the census point of view, it is important to assess the magnitude of the household industries and small establishments, so that it can be related to livelihood of the population and enumeration of the total number of establishments and their industrial classification would be incomplete without a proper description of what they produce and how they produce. Census Organisation can well afford a comprehensive survey of a descriptive nature and I believe the Census really provides a unique opportunity for conducting such a survey."

This volume entitled 'Handicrafts and Artisans of Madras State' is the result of his letter. As the survey in this State was begun before the Social Studies Division was set up in New Delhi, it has not been possible for me to follow the questionnaire evolved on an All India basis. I have followed my own method of study. It was my intention to collect information on all the handicrafts practised in the State and build up tables for the State, district by district, and taluk by taluk. Some work was done in this direction. But the project had to be given up because of the difficulty involved in conveying a proper concept of handicrafts to different agencies filling in our schedules. So our attempt has been limited in preparing monographs on selected industries noted for their aristic appeal.

Detailed monographs on Silk-weaving of Kancheepuram, Palm-Leaf Products of Manapad and Nagore, Art-metal wares of Thanjavur, Fine Mats of Pattamadai, and Icons in Stone and

Metal have been already published. The present volume is on "Wood Carving of Madurai and Virudhunagar". Monographs on the following have been prepared and will be issued in due course :

1. Woollen Druggets and Carpets of Walajapet
2. Glazed Pottery of Karigiri
3. Bell Metal and Brass Metal wares of Nachiarkoil

It is also hoped that during the intercensal period more monographs will be prepared on other handicrafts. This survey was rendered possible by the sympathetic attitude adopted by the Government of Madras who directed the Director of Industries and Commerce, the Registrar of Co-operative Societies, the Director of Information and Publicity and the Director of Harijan Welfare to extend their full co-operation to me in the study.

I am grateful to Messrs Janatha Printing and Publishing Co., Private Ltd., for having printed this volume in record time. I do hope that this volume will be of interest to the general readers.

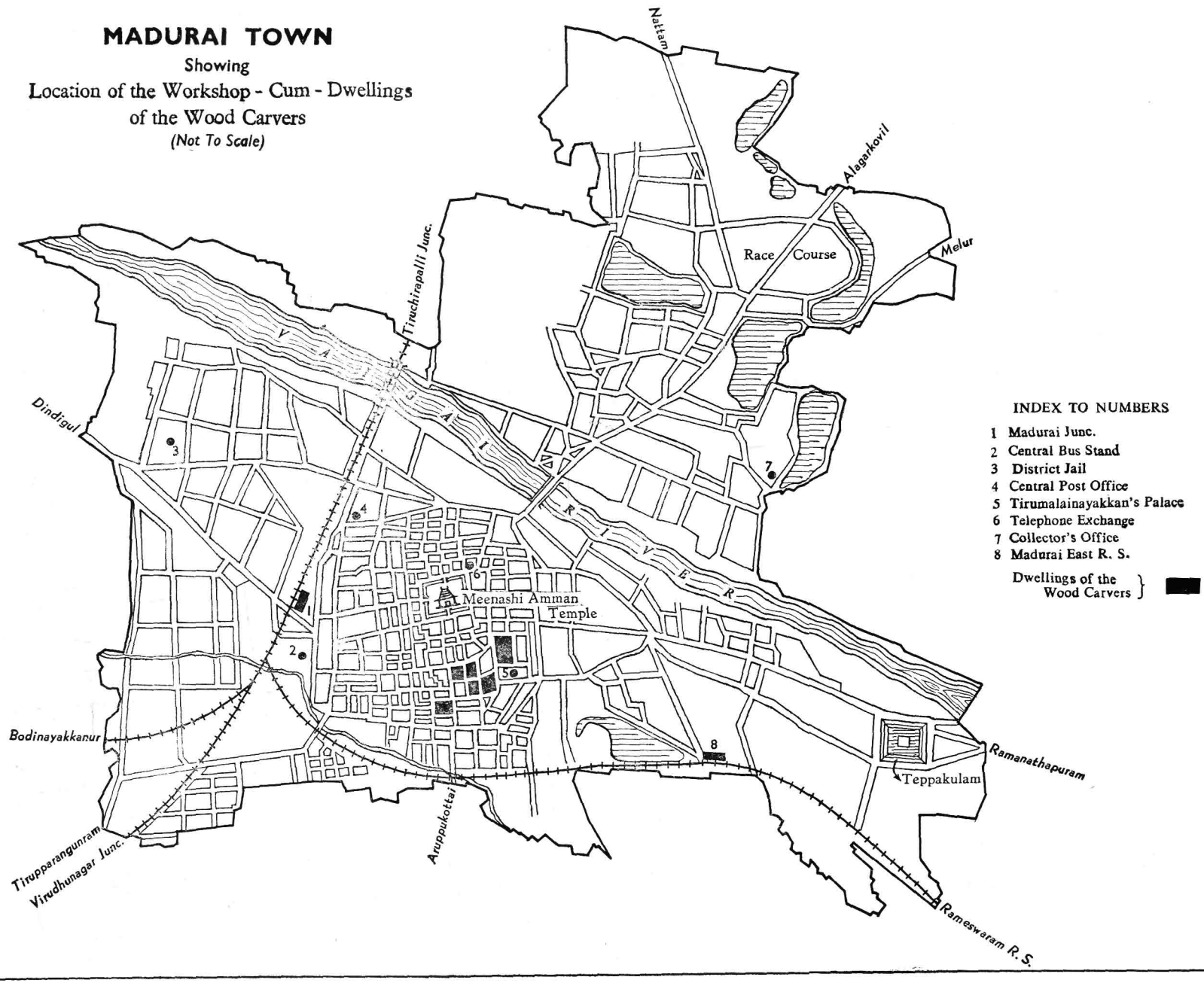
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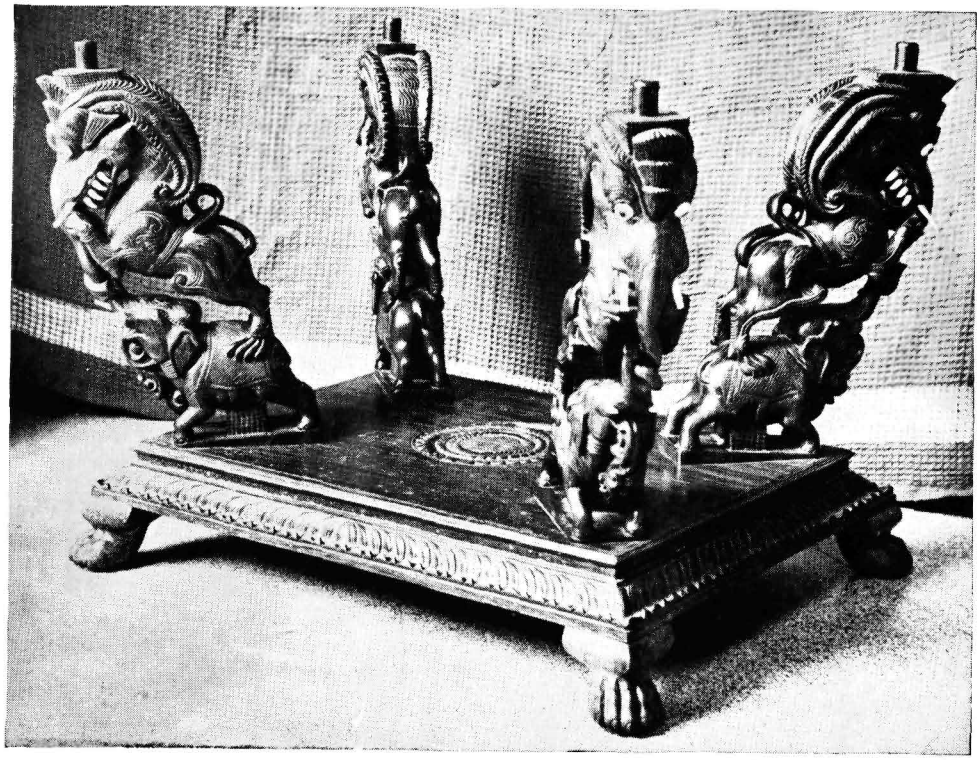
MADURAI TOWN

Showing

Location of the Workshop - Cum - Dwellings of the Wood Carvers

(Not To Scale)





This is a lovely piece of Yali four leg teapoy without top displayed in the Gandhi Museum. It is an expensive teak wood design, a delight both to the owner and the beholder.



The teak wood top plank of the Yali teapoy depicting an intaglic form of Meenakshi Kalyanam.

WOOD CARVING OF MADURAI

CHAPTER I

INTRODUCTION

Wood carving is an ancient craft of India and was practised in this country long before stone sculpture was taken up. Even today wood carving is in vogue, the stress nowadays being on small pieces of furniture and articles of daily use like tea-poys, chairs, screen, jewellery caskets, book-ends etc. But the carpenter of ancient India not only carved bedsteads, wooden seats and thrones, but also chariots for use in war. Ornate and beautifully carved wooden doors and panels can be seen in villages and towns testifying to the skill of Indian carpenters. The places best known for rich ornamentation and skilful execution of superior designs are Kashmir in the North, Gujarat and Rajasthan in the West, and Mysore and Travancore in the South. The more impressive of them are the elaborately carved temple cars of South India, the beautiful carvings found in the old palaces of Rajasthan and the wood work of temples in Gujarat and Kathiawar. "The art of wood carving in Mysore and Coorg is a mixed form of indigenous and Chalukyan art. It is a decorative art mostly using celestial forms. Madurai was long famous for a simple and elegant type of incised blackwood tables. The design was made by means of a pair of compasses while the legs were in the form of elephant heads with extended trunks. But now Burmese and other styles are followed and the Yali figures of the great temples are copied for the legs of the tables." † Sir George Watt commenting on Indian Wood carving says "the art conceptions seen in wood work have been greatly influenced by the grain of the timber employed, such as the deep under-cutting and sculpture that is possible with teak, red wood and walnut. the low relief of shisham and deodar, the incised designs of ebony, the intricate and minute details of sandal and barbaric boldness of rohira, sal and babul and other coarse grained and hard wood".§ In India, wood carving is used in architecture as well as in cabinet work. However, wood carving in architecture is now being given up especially in the South. Yet it is difficult to separate the two and therefore, are treated together in this monograph. Even though some of the excellent works in wood carving are found in places like Nagina, Aligarh, Lucknow, Manipuri etc., the South can hold its own in the matter of wood carving. Mysore, Coorg, Madras and Travancore are too well-known for the quality of their wood carving, especially sandalwood carving with ivory work in Mysore, the intricate cabinets and tables of Madurai and the coconut shell work of Travancore enjoy worldwide fame. The style of carving differs from place to place; for example "the carved work of Travancore is bold and the designs are naturalistic in style. At Trichy, Madurai and other places, the designs are floral and worked out with great minuteness and are really more remarkable as examples of patience than as works of art. The Mysore work is elaborate and minute representing figures in Hindu mythology skilfully encircled by intricate foliage with figures of animals in relief". *

Wood carving for architectural purposes, as has been indicated earlier, was practised in almost all small towns and many villages in India and the doorways of houses normally possess carvings, whether of high quality or inferior in scope. In spite of the fact that we do not have any surviving examples of some of the earliest specimens of wood carving, mainly because of its perishable nature, it can be assumed that wood carving even from the earliest times was widely used for architectural decoration. Some subscribe to the view that the beauty of the carved panels and window screens found in the earliest rock cut temples of Ajanta, Nasik, Mahabalipuram etc., is the result of carved wooden prototypes. In ancient India, the worker in wood called the Sutradhar held a high place in the social hierarchy on whom devolved the burden of making the chariots for the warriors and he was also by profession the charioteer, both in peace and war. The carpenters are mentioned in the Rig Veda. Even today superb examples of the carpenters' craft can be seen in the architectural wood carving found on the temples and palaces of Mysore, Madurai and Bellary and stand testimony to the fact that in wood one could create the

† Sri Rustam J. Mehta: Handicrafts and Industrial Arts of India.

§ Sri Rustam J. Mehta: Handicrafts and Industrial Arts of India. P 48

* G. Bide: Handicrafts and Industrial Arts of India P. 50

effect of sculpture in stone. In recent times, however, as explained earlier, wood architecture has given place to elaborate carving of items of furniture. This had not developed to its fullest extent in ancient days. "Except for the cities and wherever the people have come under Western influence, the Indian temperament is not suited to the use of too much furniture in the home. The simplicity of life in ancient India and the few needs of the people even today must have restricted the development of the art of furniture making and it was not till the reign of the Mughals that the rich aristocracy and the pleasure loving rulers demanded a better type of household goods. It has been said that except where the social life of the people has been influenced by European ideas, furniture in India is conspicuous chiefly by its absence."* The art-critic, A. Jacquemart has described India as the land that has no furniture. In spirited defence replies Dr. Jorge De Andrade: "This does not mean, however, that the wood workers' craft was unknown in India of old. On the contrary, in our shrines the ornaments and ceremonial arches, the pillars and the beams of the temple roofs, raths and other vehicles for the carriage of religious images were most of them veritable master-pieces which the genius of an essentially artistic and religious race dedicated to the glory of God and not as a means of parading the wealth and the munificence of men, as was generally the case in Europe of those days, and is even today in the world at large".§

In ancient works, mention has been made of the woods to be used and the Silpa-satras actually give detailed instructions on how to fell the different timber trees, in what seasons and even how to season the timber to prevent cracks and unequal drying: Prohibitions have been laid down against the use of wood of trees struck down by lightning, storms or knocked down by elephants and floods; those growing by the side of public roads are also prohibited for use. Not only that, but even those trees, the upper branches of which had been strangled by heavy creepers and those in which many birds had built their nests should not be used according to the tenets laid down in the ancient works on architecture and mechanics. Some of the varieties of wood which are not locally available but imported from other places are nowadays used in Madurai for furniture, general carpentry, and carving etc. They are:

1. Tectona grandis (teak)—furniture, turnery and whenever durability is required.
2. Dalbergia latifolia (Blackwood, Shisham)-furniture, carving, door and window frames of temples, large houses, etc.
3. Artocarpus integrifolia (Jack Fruit Tree)-Carpentry, furniture, boxes, turnery and all kinds of cabinet work, musical instruments.
4. Albizzia lebbek (East Indian Walnut)-Furniture general carpentry, carving, turnery, decorative work.
5. Toona ciliata syn. Cedrela toona (Indian Mahogany)-Furniture, carving, cigar boxes, tea chests, toys.
6. Jugulans regia (Walnut) - Carving, Lacquer work, small furniture, musical instruments.
7. Diospyros melanoxylon (Coromandel Ebony)-tool handles, building work, carpentry, carving, fancy articles, decorative work, brush backs, combs, toys, inlay work, walking sticks.
8. Diospyros ebenum (Ebony)–Furniture, carving, turnery, brush backs, inlay work, cabinet work, veneering, docorative handles, walking sticks.

According to Edgar Thurston, Madurai is a noted centre of indigenous art handicraft which is surviving from the days when the town was the chief city of the South of India. Then craftsmen were attracted from far and near and each brought with him his own peculiar style. In course of time, these various styles became merged into what is the characteristic of the wood carving of the city. The wood carving of this place is celebrated for its boldness of form due to the influence of the stone carvers, for its delicate tracery on flat surfaces probably first introduced by men from Bombay side, for the fine carving of panels decorated with scenes from the Mahabharata and for the excellent modelling of the Swamis which suggests the influence of sandal wood carvers from Mysore and Western India. Domestic shrines, carved mandapams, side doors and small tables are regularly produced by the craftsmen of Madurai.

A brief reference to wood carving in temple architecture is necessary at this stage. The wood carving for the making of temple rathas is today an extinct art but it had reached its highest stage of development in 17th and early 18th century holding its place along with stone and bronze sculptures. A curious phenomenon of modern times is that some of the ancient temple cars containing many intricate and

* Sri Rustam J. Mehta: Handicrafts and Industrial Arts of India p. 43

§ Marg, VIII-1. 1954.

superb specimens of wood carving are now being broken down and sold in public auction to art collectors. It is high time that this is stopped as many of the carvings are worthy of preservation in national museums and art galleries instead of being sold to satisfy the cupidity of curio collectors. The art of manufacturing new temple cars is almost a forgotten art as modern vehicles used in temples do not contain such intricate carvings.

"South Indian wood carvings occupy a special place among other aspects of Indian fine arts as they had remained purely Indian in spite of Muslim invasion. North India was so much affected by the Muslim influence in arts that in wood carving, the grotesque and extravagant fancy gave way to bold geometrical severity, the deeply under-cut Hindu work was replaced by the Mohammadan work which is characterised by flatness of relief. The canons of Muslim art forbid the portrayal of human forms and of most animals whereas the central theme of Hindu art is the portrayal of Gods and heroes with their devotees and vahanas. Hence in North India where Muslim influence was great, Hindu art lost its characteristics. Sir Geogre Birdwood observed in 1903 "So deep has the Mohammadan influence sunk that even in Ayodhya, the birth place of Rama, the craft wood work presents no image of the ever popular hero with the bow". He has stated that South India was the best place to study the intricacies of wood carving. Here the most ornate and intricate carvings are found on temple cars though a few palaces, temples etc., have ornamental doorways, beams and so on. Temple cars are usually lavishly decorated with prodigious carvings in refreshing varieties. Demon-like gigantic Dwarapalakas and fiying angels are also fixed. Another important figure is the chariot driver-Ravana in Vaishnavite cars and Brahma in Saivite cars. In temple cars of both sets, Yali takes its legitimate place of ornamentation and the corners of various layers invariably have horsemen fixed for decoration."*

In Tamilnad, Madurai and Ramnad are the best centres of wood carving. The temple cars at these places proclaim the skill of the craftsmen who fashion them. Among these, the temple cars of Ramanathapuram district, especially Virudhunagar, Srivilliputhur and Karaikudi are most excellent.

In Madras City, wood carving is being taught in the Madras School of Arts and Crafts. Wood craft was first started in 1877 in the School of Arts in a desultory way and some years later, a wood carving class was established with one Meenakshi Asari of Ramanathapuram as the foreman. He was succeeded by his son R. Kalimuthu Asari and both of them-father and son-were largely responsible for the influence which this school has had upon wood carving in the South of India. Although at the outset the class was not well frequented, yet owing to the demand for carved furniture among Westerners the pupils in the school were able to get good wages and its popularity increased.

Since the best pieces of wood carvings in South barring Mysore come from Madurai town, this monograph is dedicated to the study of the techniques of the Asaris of Madurai town.

The Asaris belong to the Kammalan group which are made up of five occupational sections, namely Tattan (Goldsmith), Kannan (Brassmith), Tachan (Carpenter), Kaltachan (Stone Mason) and Karuman (Blacksmith).

"The Asaris are divided into three territorial groups, Pandya, Sozhia and Kongan. The Asaris of Madurai belong to the first group. The Kammalan caste is highly organised. They profess the Saivite form of the Brahmin religion and reverence greatly Pillaiyar, the favourite son of Siva. The Caste however has its own special Goddess Kamakshi Amma who is commonly worshipped by all the Sub-divisions. Oaths are taken in her name, and disputes affecting the caste are settled before her temple. The exact connection of the Goddess Kamakshi with the Caste is not known. There is, however, a vague tradition that she was one of the virgins who committed suicide by throwing herself into a fire and was in consequence deified.

The Kammalans claim to be descended from Visvakarma the architect of the Gods and in some places claim to be superior to Brahmins calling the latter Co-Brahmans and themselves as Visva Brahmans. According to one story of the origin of Kammalan they are the descendents of the issue of a Brahman and Beri Chetti woman.

The Kammalans call themselves Achari and Paththar, which are equivalent to the Brahman titles Acharya and Bhatta, and claim a knowledge of the Vedas. Their own priests officiate at marriages, funerals and on other ceremonial occasions. They wear the sacred thread which they usually do on the Upakarma day, though some observe the regular thread investiture ceremony"‡

These Asaris fashion out domestic furniture of

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* I. J. Thomas: "The Hindu" September 1, 1963

‡ Edgar Thurston: Castes and Tribes of South India Vol. III

various sizes, lamps, wooden cobras and teapoys which are sold directly to the visitors or to the Victoria Technical Institute (VTI) and other government emporia. The art of wood carving is entirely in the hands of a few Asaris all of whom are concentrated in South Marret Street and Palanganatham of Madurai town. According to information we were able to gather from these Asaris all their forefathers were carpenters. According to them, one Arumugam Asari and Kantham Asari were the two who started making carved tables and teapoys. The present set of Asaris engaged in this craft claim to be either directly or distantly related to these two Asaris. In the initial stages, Christian Missionaries patronised the art and in due course thanks to the help and encouragement given by the VTI, the art started to flourish. During the reign of the Nayak kings, the Asaris had full time work, assisting in temple carving, but after the death of Thirumala Nayak, the greatest of the Nayaks, there appeared an interregnum of 200 years during which there was no one to carry on the work of temple carving and architecture. The descendants of the earlier craftsmen who specialised in temple architecture gave up their work and started to do ordinary carpentry. During the second half of the 19th century, there was an advocate by name Mr. Pisar living at 137, Ramnad road. The bungalow in which he lived is now occupied by the office of the newspaper Dinamani. During the days of Arumugam Asari, there were very few carpenters and these were doing only general carpentry work. Arumugam Asari who had migrated from a village near Madurai decided to turn his energies and his skill into the carving of exquisite pieces of furniture. He carved out one or two beautiful pieces out of rose wood and presented them to Mr. Pisar and his son-in-law Mr. Poke. The two impressed by the craftsmanship displayed by Arumugam Asari tntroduced him to the Victoria Technical Institute, Madras. This inaugurated a new chapter in the history of wood carving in Madurai. From then on Arumugam Asari steadily started supplying beautifully carved items of furniture to the Victoria Technical Institute and his example was followed by his brethren and this indirectly resulted in the consolidation of wood carving craft in this town. Arumugam Asari continued to live in Madurai and his products continued to be patronised by Christian Missionaries and foreign visitors. He was one of the few who modernised old designs. The elephant legs as well as the Yali legs for elaborately carved tables were his own innovations.

After the demise of Arumugam Asari, the greatest iving exponent of the art of wood carving in Madurai is Appavo Asari. Born in a village of Lalapuram, he migrated along with his father to Madurai. His father learnt the art of wood carving from one Mookan Asari and settled down in Madurai. Even from a young age, Appavo Asari displayed a talent for wood carving and with his father, speedily took up the work. Pretty soon he became an adept in this art and started producing with his brother Velayudhan Asari works of rare art and beauty. After his father's death, Appavo and his brother opened a small workshop in South Marret street and carried on business on a small scale. He and his brother separated and set up independent shops and at this stage Appavo Asari was lucky to receive valuable orders from T. V. Sundaram Iyengar and Sons the famous fleet owners of South India (TVS) and VTI Madras. Pretty soon he became a skilled and capable workman and even now in the Gandhi Museum, a richly decorated wooden table with four Yali legs and the wooden top depicting a scene from Meenakshi Kalyanam carved by him is proudly exhibited. The Secretary of the Museum assured me that this table was worth Rs. 1500/-. It seems the Industries and Commerce Department purchased it from Appavo Asari for Rs. 1500/- and presented it to the museum. Seeing the success and popularity of Arumugam Asari, many carpenters flocked to his workshop and under his expert guidance took up the art of wood carving and started their independent workshops. At present in Madurai town, there are 25 artisans solely of Asari caste engaged in wood carving in 7 workshops. Their production units are entirely run by master craftsmen employing labourers.

It is only natural that Madurai City with its famous Meenakshi temple became the centre of a flourishing wood carving industry. Madurai for many centuries has been the capital City of Pandyas and Nayaks and being a city in which many wealthy people with artistic taste have lived, this has naturally attracted artisans of various kinds—whether they be experts in stone, in wood, in metal etc. It is also recorded that Thirumal Nayak, the greatest of the Nayaks patronised the carvers, weavers and other skilled craftsmen and this helped not a little in making Madurai a traditional and artistic centre. No wonder that many intricate pieces of wood carving can be found here. For a brief period after the fall of the Nayaks, the art was in its doldrums. But again the gap was bridged by the adaptability of the Asaris in switching over from architectural carving to utility carving of articles of furniture.

Rose wood and teak wood are the favourite woods of the past and present day wood carvers. Sandal wood and black wood were being used intensively in

earlier days; but sandal wood is nowadays rarely used, black wood occasionally. Rose wood is now most commonly used by the present day carvers. These woods are found in the Cumbam valley 70 miles west of Madurai district, at an elevation of 1500 to 3000 feet above sea level. Even though Madurai has an abundance of a variety of woods, yet the supply is not enough to meet the demand of the wood carvers. Therefore, many of the wood carvers have to import rose wood and teak wood and sometimes sandal wood from Kerala and Mysore where the finest types of wood are found in abundance.

CHAPTER II

TECHNIQUES OF PRODUCTION

Raw Materials

Wood

The following are the most important raw materials used in wood carving:

Wood varies in colour, density, hardness, elasticity, strength and gravity. Some wood shows resistance to wear and tear and vibrations, others are very durable resisting decay under various conditions. Sometimes wood is defective. This is caused by defective seasoning; sometimes pieces of wood contain holes caused by insects or worms or openings in the wood, all of which seriously reduce the strength of the wood and sometimes defects become impossible to trace whether there is any opening or not. So at the time of selection of wood, only an experienced wood carver who knows all about his raw material goes to the spot to select his wood. Two different types of wood used by the wood carvers of Virudhunagar and Madurai are rose wood and teak wood. But in a majority rose wood is preferred, and only to order, carved items of furniture are manufactured out of teak wood.

Rose wood

This is one of the most beautiful of native woods. It has a chocolate brown colour, sometimes tending to be reddish with a much lighter sap. The pores are rather large, but the grains are open and straight. The wood is strong, hard and moderately heavy. It is durable, splits with some difficulty, takes and holds nails well and is very easy to work upon. It polishes very well, takes glue readily and the finish will invariably be excellent and smooth.

Teak wood

It is very strong, heavy, durable and hard. The wood warps little. It shapes well, splits easily, nails with difficulty and polishes well. It is highly resistant to decay. It is fairly easy to plane, chisel and saw and splits easily. It is rather stiff and tough and the colour is of a light yellow or creamy white. The following statement would indicate the comparative characteristics of rose wood and teak wood:

	Rose-wood	Teak-wood
Durability	Medium	Good
Grain	Open	Open
Strength	Strong	Strong
Hardness	Hard	Hard
Weight	Medium	Heavy

Seventy miles from west of Madurai lies the forest of Cumbum where one gets a variety of woods. It is said to be one of the main timber forests of Madras state. Much of its forest produce is in great demand by Asaris of Madurai. From Theni, which is 25 miles from Cumbum, timber is exported by lorries. Asaris of Madurai once or twice a year go to Cumbum to select the best wood and return. The selection is based on its outer appearance and also by knocking on it with a hard metal so as to deduce the quality of wood from its sound. When there are heavy orders placed on them and the supply from Cumbum is inadequate, these Asaris visit Kallai in Kerala (230 kms) for purchasing fine quality of wooden logs. Kallai is famous throughout India as a commercial centre marketing the finest quality of timber. Logs are purchased in bulk and stored in their houses by master craftsmen of Madurai at least for one year to meet the heavy orders. Usually, logs cut from the trees are cheap and these are further cut into smaller pieces. After the big sized logs are purchased either from Kallai or Cumbam, they are transported by lorries direct to the saw mills in Madurai where they are sawn into small bits. One cubic foot of rose wood costs Rs. 30 to 40. Teak wood also costs a little more. After purchasing the logs, they are sawn either by machine or by hand to suitable sizes required for their work. Small sizes of logs are sawn by the hand and if the logs are large in size, sawing is done by the sawing machine. One set of sawing machines will complete the sawing of about 200 cubic feet per day and the cost of sawing one cubic foot will approximately come to Rs. 0.87 np. By hand sawing a pair of sawers can complete only about 3 to 4 cubic feet of wood which will cost 15 to 25% more than if a machine was engaged. The sawing of wood in the various sizes is done according to the work to be executed. Suppose an Asari wants to manufacture a teapoy of 3-6′x 1-0′ and of 1″ thickness with the support of two

elephants 14″ in length, 12″ in height and 7″ in width, the wood is sawn in such a way that he gets a plank of size 3½′ x 1′ x 7½″ for the two elephants. The quantity of wood required will be as follows:

For plank 3-6″ x 1′-0″ x 1 ⅛″	0.30
For 2 elephants 1″ x 1′-3″ x 7½″ x 2	1.20
	1.50 c.ft.

The sawing of wood could be completed within 20 minutes by the machine. It would take half a day for a pair of sawers. The price of wood has been rising steadily upwards since the war years. A comparative statement would bear out this contention:

Year	Teak-wood (per cubic foot)	Rose-wood (per cubic foot)
	Rs.	Rs.
1940	3.00	2.75
1950	13.00	9.00
1963	30.00	35.00

The above figures would clearly indicate that the prices of teakwood has gone up during the last 25 years by 900% and that of rose wood by nearly 1200%.

Spirit

The next important raw material is spirit. Unlike alcoholic stimulants, this spirit is the denatured methylated alcohol used as varnish. Since it is poisonous, industrial users have to dilute it or sometimes colour it with a violet dye. The price of spirit for one bottle has also gone up by leaps and bounds. In 1946 the price was 37 np, in 1950 it rose to 57 np. and in 1963 the prevailing rate is Rs. 1.37. In a span of 23 years, the price of spirit has gone up by 267%. Thus the increase in prices of the two essential raw materials has led to an increase in the price of finished products placing the articles beyond the reach of the average consumer.

Mansion Polish

This is a very important raw material and is used to polish the articles so that the dull wood takes on a fine gleam. The price of this material, like its other ancillaries, has gone up considerably. It was priced at Rs. 1.50 per 1 lb. in 1940, became Rs. 3/- in 1950 and now it is available at Rs. 5/-. Without this essential item, the work cannot be completed to the entire satisfaction of both the artisan and the buyer and so a stock of a number of tins is always found in the workshops of the wood carvers. It is available in the local market of Madurai town.

Deer Horn

This is another raw material which is used for certain types of carved tables etc., and that too where the teeth, eyes and trunk of wooden animals have to be fixed. Deer horn is purchased in bulk by viss and the necessary cuttings are made by the carvers themselves. One viss of horn can be purchased and stored to be used for two or three years. This is also available in the local market. The malaise of increased prices seems to have affected deer horn also as the price has risen from Rs. 2.50 in 1940 to Rs. 9/- per viss in 1950 and has now reached Rs. 12/-.

Brass Sheets

These are locally purchased. One seer costs Rs. 2.50 and out of this amount 60 to 70 tongues of snakes to be used in the manufacture of wooden cobras can be fashioned. This is also used for engraving and to be fitted to the wooden table tops. It is available in the local market of Madurai town.

Brasso

A tube of brasso costs Rs. 1.25 and this is utilised to polish the brass sheets to a gleaming perfection. It is available in the local market of Madurai town.

Ceiling Wax

This helps to fix engraved brass sheets on to the furniture. It is available in the local market of Madurai town.

Shellac

This helps to join one article with another. The various articles to be joined are placed inside the hollow piece of wood, rubbed on both sides with Shellac, drilled and fitted with screws. It is available in the local market of Madurai town.

Screw Bolts and Washers

Many shapes and sizes are used in wood-carving. They are used to fasten tightly. Washers are discs of metal with a hole in the centre. A washer placed over the end of a bolt before the nut is screwed on, prevents the nut from digging into the wood and add strength to the assembled parts or serves as a separate moving part held together by a bolt. They are made of mild steel available in the local market at a cost of 25 np. per unit.

1.6 Kilogram = 1 viss
300 grams = 1 seer

All these materials are easily available in the local market and the Asaris informed that even though demand was very high they experienced little difficulty in securing them. The only complaint they had was against the prohibitive cost of these articles, the prices of which are rising day by day.

Tools

The following are the most essential tools and equipments used for wood carving:

1. Ruler
2. Handsaw
3. Bar clamp
4. Files
5. Drilling pit
6. Chisels
7. Wooden mallet
8. Screw drivers
9. Hammers
10. Cutting plier
11. Spanners
12. Jack plane
13. Sand paper
14. Brush
15. Dividers
16. T. Squares
17. Gauges
18. Putty knives

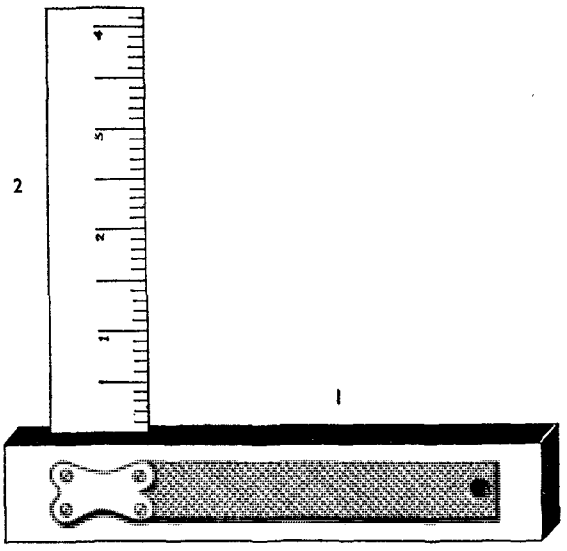
Approximately two dozen carving tools are sufficient, the most useful being straight chisels and gauges varying in size from $\frac{1}{8}$" to 1" or more according to the type and nature of work to be done. The tools are sharpened on stones. The following is the description of some of the tools and equipments:

Ruler

2' ruler is most commonly used. This is made of box wood purchased locally at a cost of Rs. 2.25

Squares

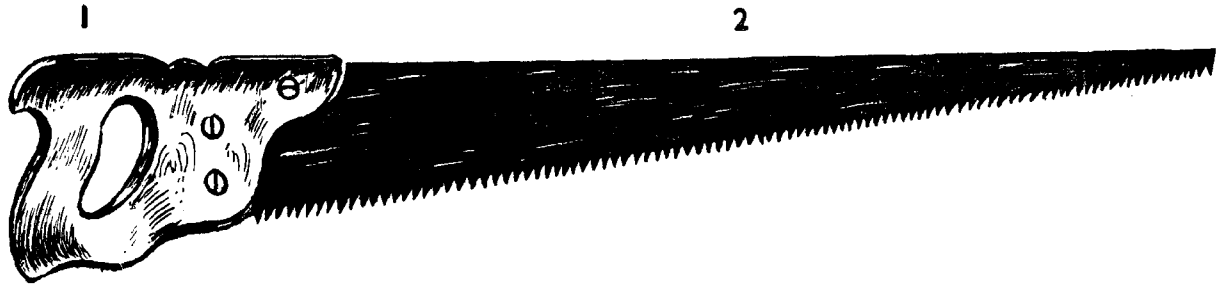
This is another indispensable tool of the trade. The 'T' square may be made of steel or wood, but the blades are always of steel. The blade length varies from 4" to 12". This is a precision tool which is to be handled with care as any damage to it affects its accuracy.



1 Steel body or frame *2 Steel measuring blade*

Hand Saws

There are two types of hand saws, the cross cut saw and the rip saw. The cross cut saw is used for sawing across the grain of wood and the rip saw is used for sawing with the grain. The size of the teeth of a saw is usually denoted as the number of points to an inch. The cross cut saw has teeth like small triangular knives which cut the fibres of the wood as the saw moves to and fro. The rip saw as its name



1 Wooden handle *2 Iron blade with teeth*

indicates is designed to cut parallel to the grain of wood. The teeth of the rip saw are chiselled and are filed straight across. They are prepared locally at a price ranging from Rs. 4 to Rs. 6.

Sand Paper

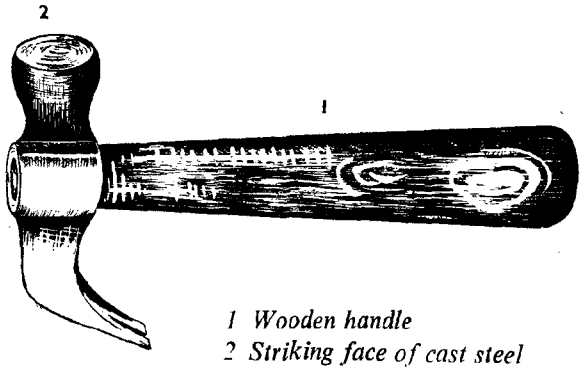
Another important raw material used is sand paper. This is used to smoothen the surface after the wood has been shaped with the help of cutting tools. Various grades of sand paper are used, i.e. from 1½ to O grade. For fine finish O grade is used. Even here the prices have been shooting up steadily.

Year	Price	
1940	5 np	(one sq. ft)
1950	6 np	,,
1963	15 np	,,

The price has gone up by 200% and it is feared that the price would go up still further mainly because of the setting up of an industrial estate in the outskirts of Madurai town and the consequent springing up of many small scale industries which constantly use sand paper. It is available in the local market of Madurai town.

Hammers

A number of hammers are used by the wood carvers varying in weight from 3 ozs. to 22 ozs. They are made of cast steel having a striking face on one side and the wooden handle on the other. They are available locally at a cost ranging from Rs. 2 to Rs. 5.



1 Wooden handle
2 Striking face of cast steel

Screw Drivers

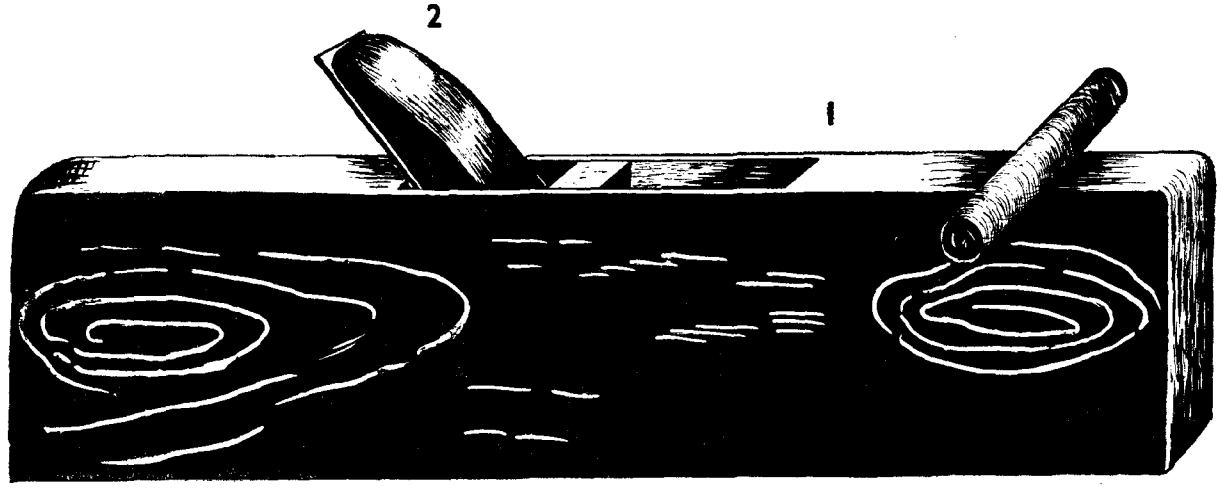
This is a handy tool. It may be used as a chisel, a punch or for a number of other purposes. Sizes usually range from 3/16″ width to 24″ length. It costs about Rs. 1.50 np.



1 Wooden handle *2 Iron blade*

Planes

Planes are used to smoothen the surfaces and accord a superior finish to wooden articles. Planing is usually done before sand papering. It costs about Rs. 20.



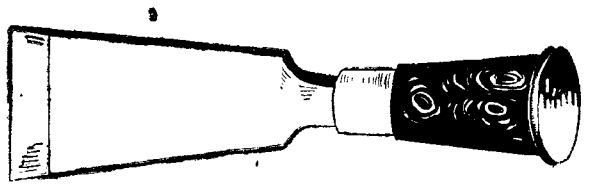
1 Wooden body *2 Chisel*

Jack Plane

This is approximately 14" or 15" long and 2¼" wide. The plane iron is ground straight while the corners are slightly rounded. It costs about Rs. 30/-.

Chisels

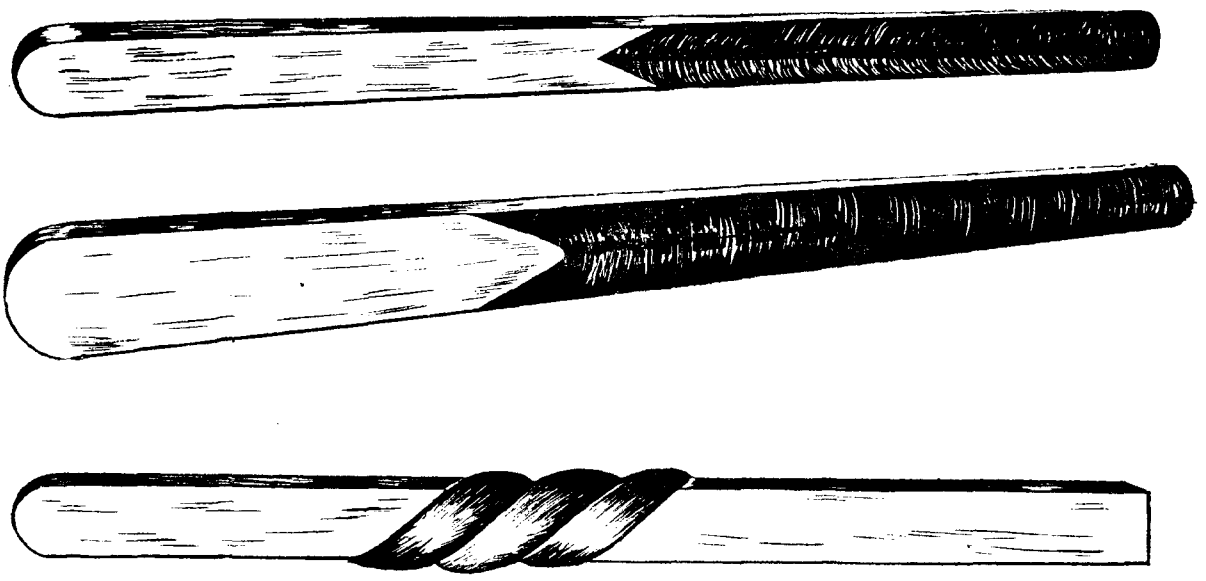
A number of chisels form part of the equipment of a wood carver. The chisel is a piece of steel ground to a level at one end and sharpened to produce a keen cutting edge. The main parts of the chisel are the blade, the shank and the handle. There are 12 chisels in a complete set owned by any wood carver. The cutting edges range in width from 1/8" to 2". These chisels are used to remove chips from the wood and to undertake any type of carving work on the wood. They are available locally at a price ranging from Re. 1 to Rs. 15.



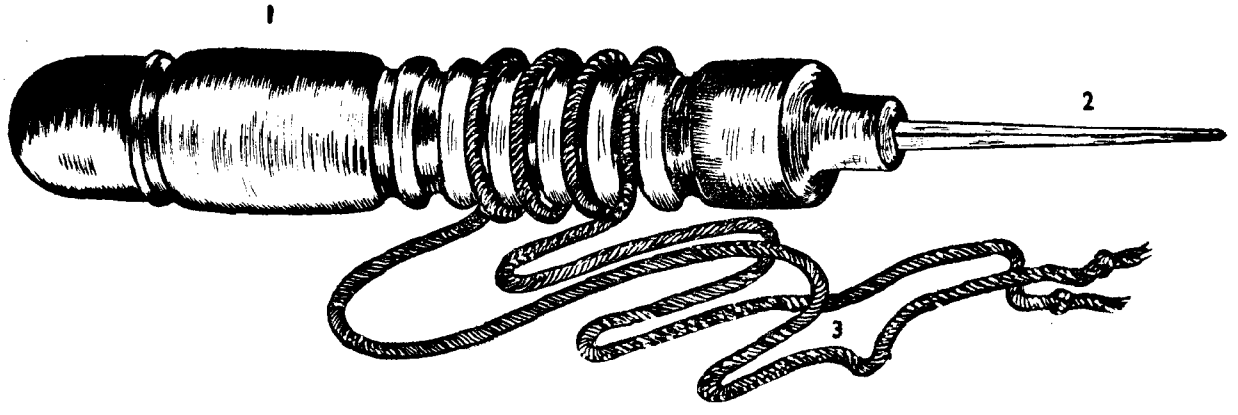
1 Wooden handle 2 Iron blade

Gauges

This is a chisel with the blade curved in cross section. Gauges have various amounts of curvature in the blade to suit different types of carving work. The bevel may be ground either on the side or outside. This implement is used for making concave cuts.



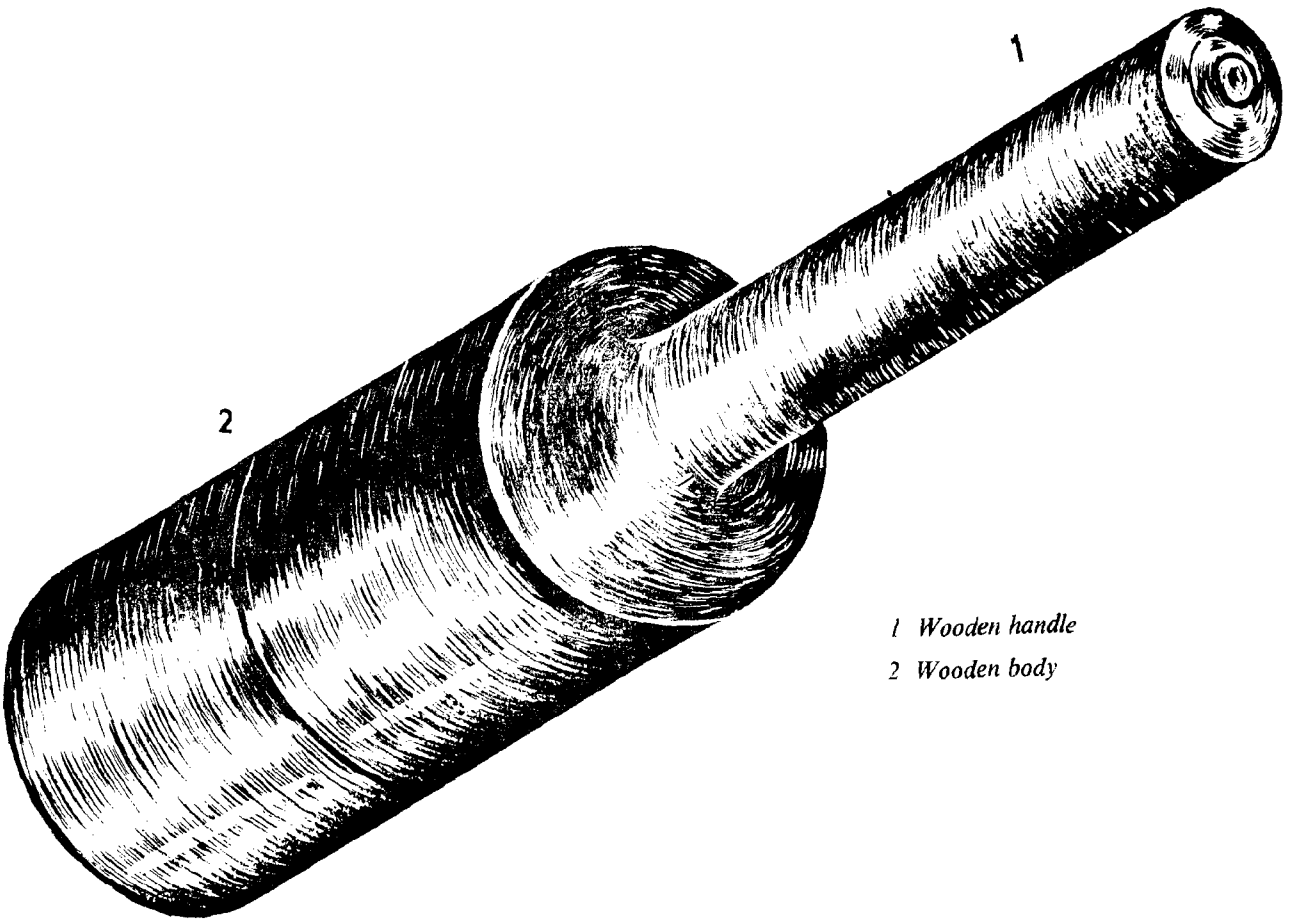
Boring Tool



1 Wooden handle 2 Steel drill 3 Rope

Mallets

This is a wooden hammer used to pound on the chisel and gauge handles. It costs about Rs. 3/-.



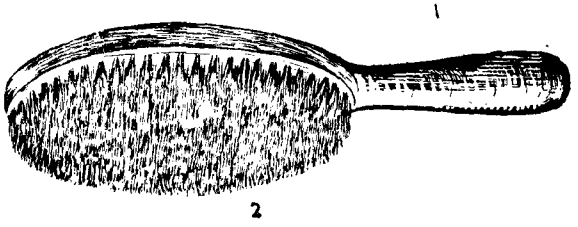
1 Wooden handle
2 Wooden body

Boring tool or Drilling Bits

There are six parts to the common anger bit used in wood carving, the screw, a threaded point which drives the bit into the wood, the spur which holds the screw, the lips which do the cutting, the twist, a spiral flange which removes the chips out of the hole, the shank which adds length to the bit and the tang, a square part which fits into the brace. This cuts a very smooth hole. The handle is made of wood. The top portion is of two pieces which is fixed with the bottom handle by an iron ring. The drill bit, made of steel is fixed to the wooden handle. The boring or drilling is done by twisting or turning the tool half way around and back again while pressure is applied by the master craftsman. This alternate twisting and turning is repeated until the hole of the required depth is bored.

Brush

At the finishing stage a soft brush made out of synthetic fibre with a wooden base is used to clean and to remove the dust over the articles. It costs Re. 1/- and is purchased locally at Madurai.



1 Wooden handle *2 Synthetic fibre*

Putty Knife

This is a thin flat steel blade with a wooden handle. It is used for scraping or cleaning. Putty knives are made in various widths and have stiff or flexible blades. It costs Rs. 2/-.

Files

The wood file is used to smoothen edges and curves that are difficult to smoothen with other tools. The cutting surface consists of sharp edged teeth. The cut of the file is determined by the spacing between the teeth and the angle at which the teeth cross the surface of the file. There are single as well as double rows of teeth. There are round, flat, square, half-round or triangular teeth varying in length from 3" to 14". It costs from Rs. 1.50 to Rs. 5/-.

Bar Clamp

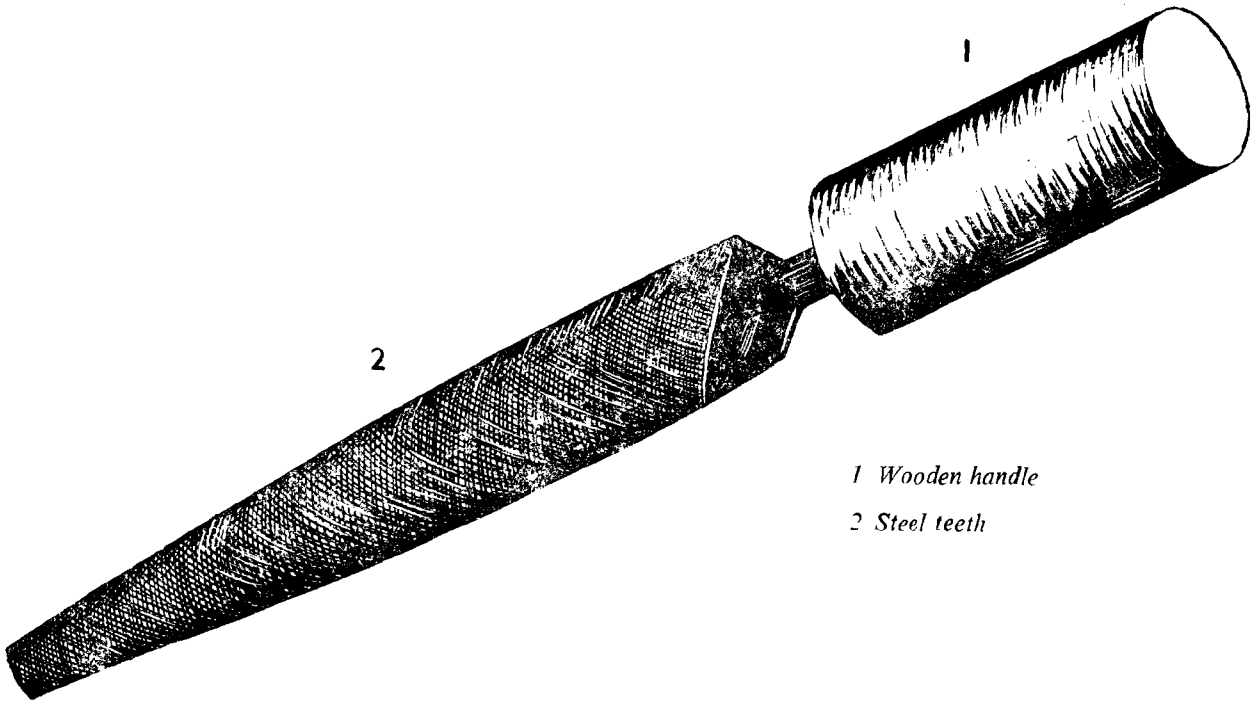
These are made of different sizes from 2½' to 7' made of iron with holes every 4" with an iron plate which is adjustable and has a handle provided with screws. The clamp consists of a bar with an adjustable stop at one end and a hand screw on the other. The bar clamp is used to clamp frames and edges to edge joints to remove the bends in the wood for fitting and sometimes for planing purposes.

Handscrew

The handscrew is a clamp put to a wide variety of uses. It is essentially used whenever two pieces of wood that cannot be placed on the vice are to be held together. The size of the handscrew measured by the length of the jaw ranges from 6" to 18".

Manufacturing Process :

The traditional wood carving viz., Gods, temple cars and Gopurams having disappeared by the middle of 18th century the present day wood carvers are engaged in the manufacture of high quality furniture in which the art of wood carving is displayed to maximum advantage. Any one with patience enough to watch each and every stage of the manufacture and witness the transformation of a plain piece of wood into a lovely piece of art form will without hesitation describe this craft as the most remarkable and delicate of all handicrafts. The following articles are manufactured at Madurai, either in rose wood or in teak wood but mainly of the former.



1 Wooden handle

2 Steel teeth

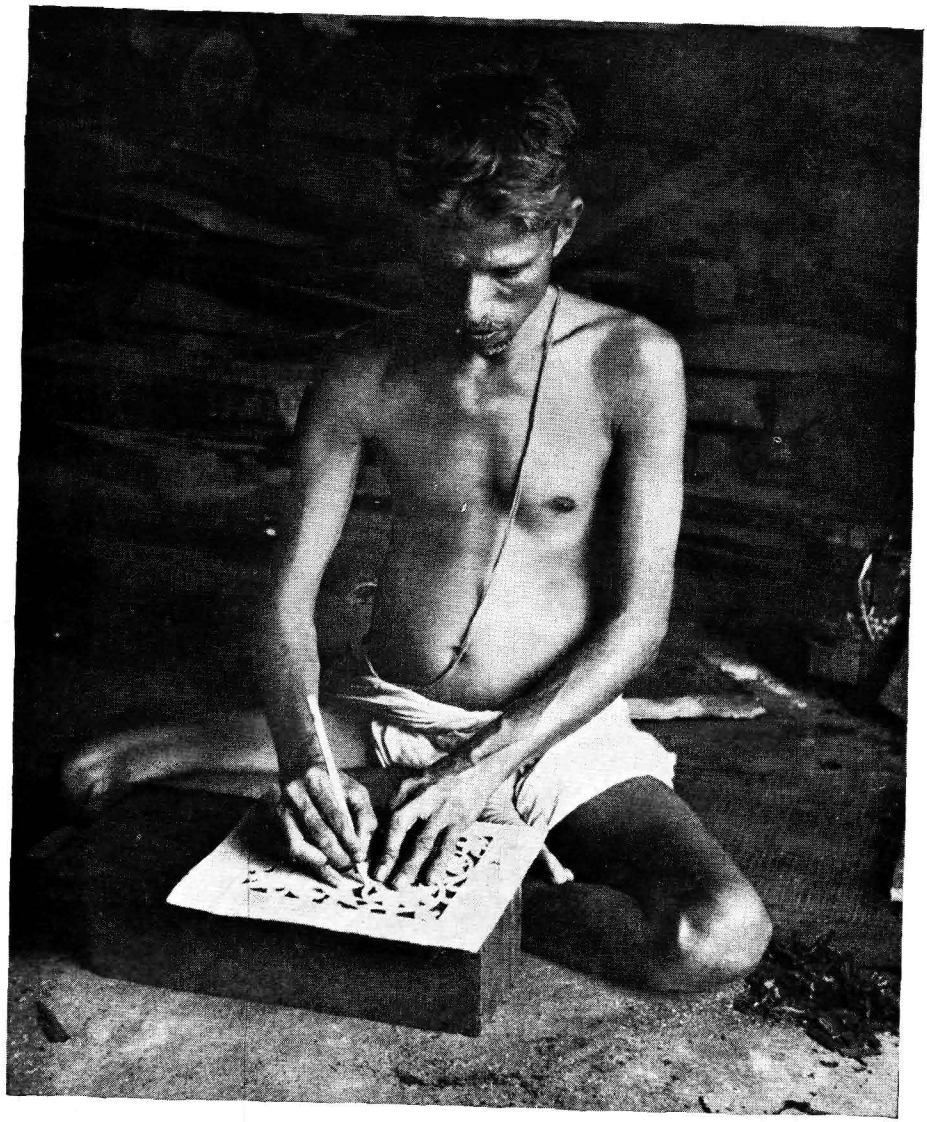
1. Rose wood elephant head table.
2. Rose wood carved table
3. Row of rose wood elephant figures
4. Fighting elephants
5. Yali teapoys or tables
6. Peacock tables



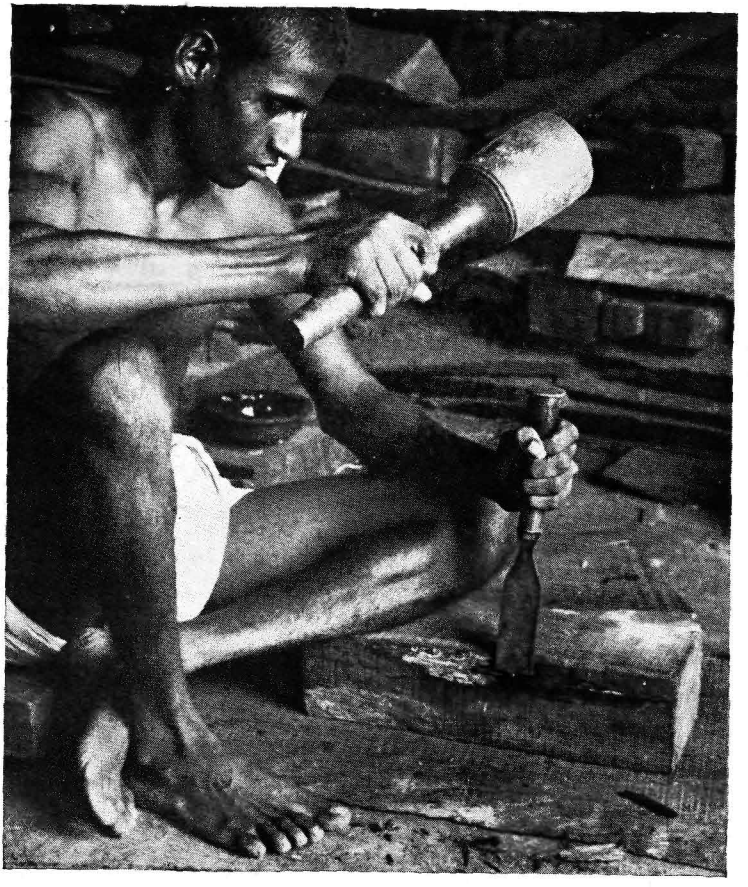
A piece of rose wood is taken and the artisan (sawyer) intends to prepare teapoy, grips it with both his legs holding the top portion with his left, cuts it with the saw to the required shape and size.



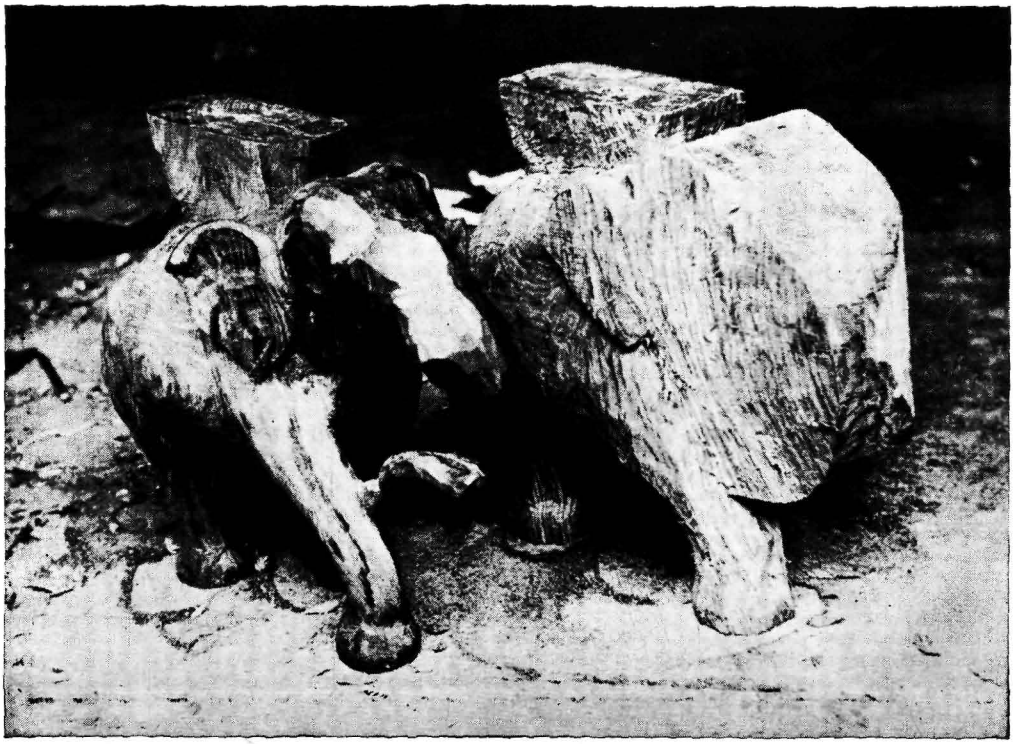
After cutting the rose wood to the required size to prepare teapoy planing is done carefully to smoothen the surface.



The carver is marking the out lines to prepare rose wood teapoy, with a lead pencil, around the cut-out portions of the given design.



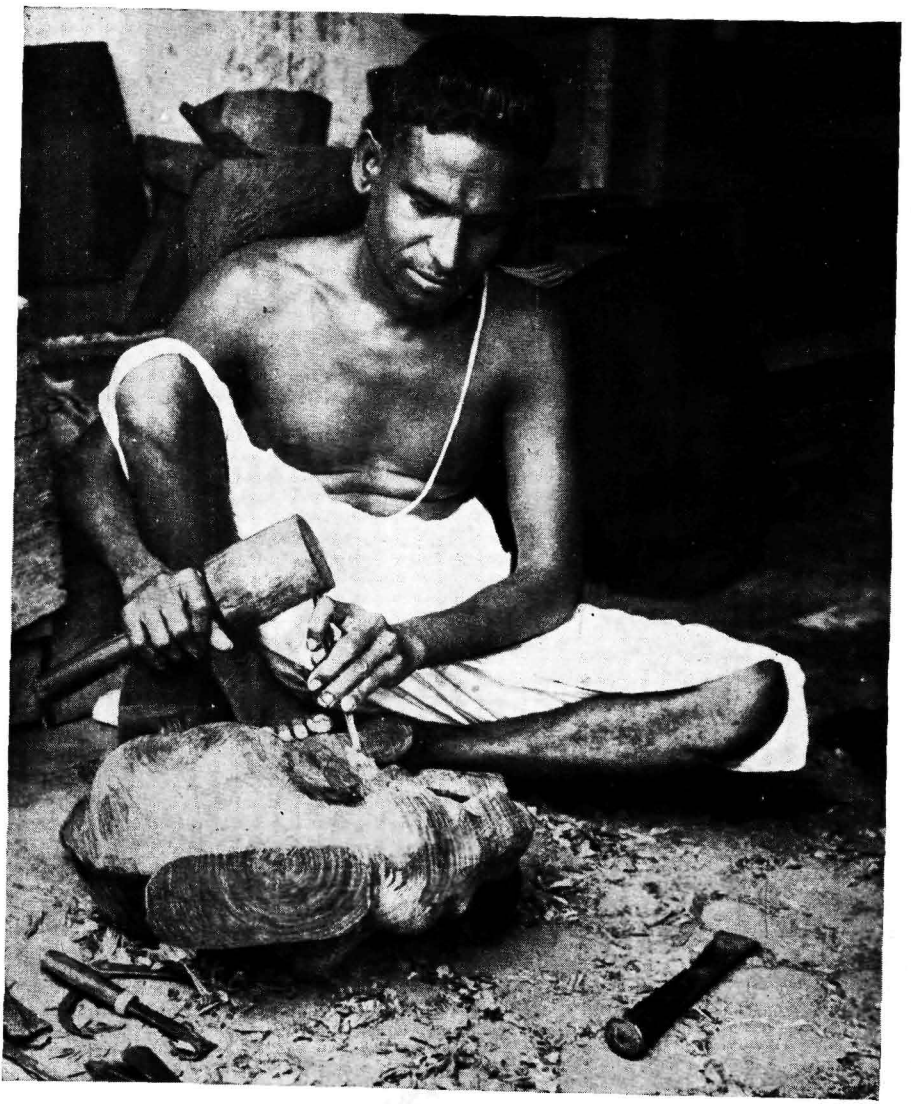
This experienced Asari starts with a solid block of rose wood to prepare baby elephant. He grasps his idea without any pre-conceived plan or aid which he develops as he works from the shape and grain of the material.



After removing superfluous rose wood from the two pieces of baby elephants one could see the advance stage of chiselling with an eye on achieving an increasingly greater degree of realism.



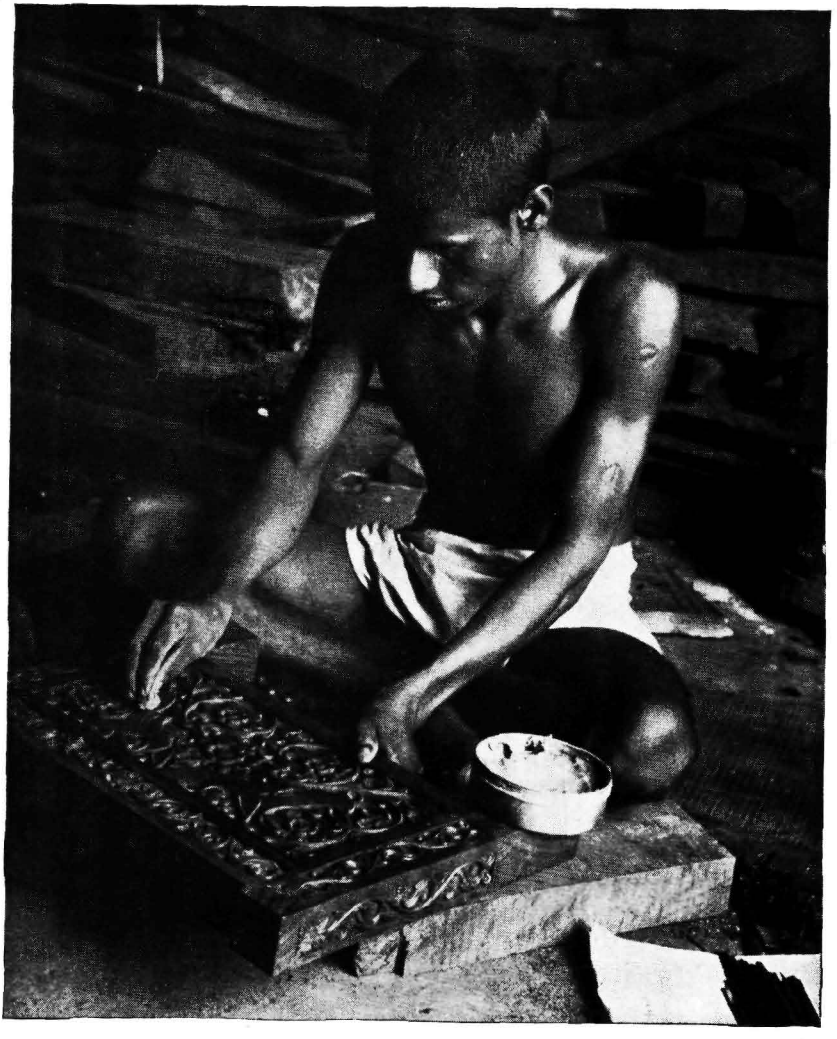
When unwanted rose wood is removed from the baby elephants it is filed with sharp files to smoothen the edges and curves.



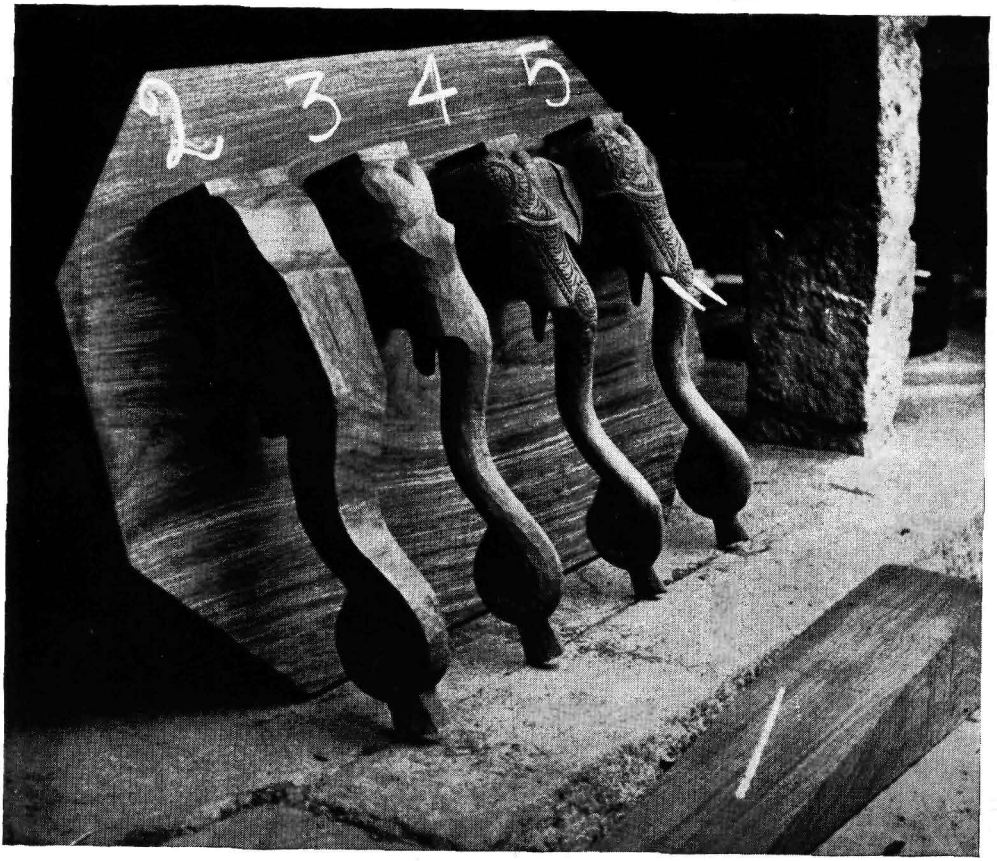
The master carver seems to be bracing his left leg against one of the four legs of the baby elephant while the toes of his right foot are clamped against the top and taking a curved chisel in his left hand and the mallet in his right, starts the most important and delicate part of work viz. "carving".



A careless carver keeps chisel on carved portion of the object. He gently taps with a wooden mallet on the upper plank of a medium size teapoy.



With the help of a piece of cloth in his right hand, French polish is slowly rubbed over the floral design by the carver for giving more brilliance to the surface of the rose wood end panels of a teapoy.



Here are four rose wood Elephant head legs indicating separately each process in five different stages. The numbers marked on each set is a representation of different succeeding stages.

1. This log of wood has been sawed and planed to the required shape and size for carving an elephant head table leg.
2. The shape of an elephant trunk made on the piece of rose wood to suggest its shape.
3. After bringing it to the correct shape, it is filed with sharp files and rubbed with sand papers to make it smooth to take the carvings.
4. Note the minute carving on the forehead, ears and the upper part of the trunk.
5. Finally deer horn, is used to indicate the eyes and tusks. This art of fixing the deer horn into the rose wood is regarded as one of the most delicate operations and a fine example of minute workmanship.

7. Cobras
8. Cobra table lamp
9. Yali dressing table
10. Temple gopuram
11. Tiger leg teapoy
12. Table with two baby elephants

For all these embodiments of the wood carver's art, more or less the same method or technique is followed, the only difference being the amount of intricate carving involved and the fixing of additional items like teeth, eye balls and tongues to the wooden animals.

STAGE I

Selection of Wood:

Wood carving not only calls for a high degree of skill, but requires that the carver possesses a high order of imagination. Generally for wood carving, native teak wood or rose wood is selected. Sometimes when there are bulk orders, wood is fetched from Kerala or even from Mysore but this happens very rarely. Rose-wood is most preferred in Madurai and Virudhunagar. The artisans prefer this wood to any other wood because it is harder with close grains, is extremely pliable in the hands of the carver and takes on beautiful polish and colour. Wood is purchased from the local market in Madurai in logs and bits. The logs and bits are selected according to the type of articles to be manufactured. We have come across some who have purchased logs with knots and cracks and when asked why they should prefer this type of inferior quality wood have received the surprising reply that the articles to be manufactured were small and the price cheap and therefore an inferior finish would not matter at all.

STAGE II

Sawing of Wood:

After purchasing logs from the local market, they are removed to saw factories where sawing machines are fixed or labourers are employed with hand saws to saw the wood into the required shapes and sizes. If the logs are large in size, the sawing is done by machine, but if the logs are small in size and if the number of pieces to be prepared limited in number, hand sawing is preferred.

STAGE III

Planing:

Planing is always done before shaping of wood. In all the workshops, various types of planes are kept and planing is done for smoothening the surface of wood. Planing has to be done carefully as it should never be done against the grain of the wood. This would result in small splinters of wood tearing loose.

STAGE IV

Shaping and Carving:

After the wood which has been cut into small bits of the required shape and size has been planed for smoothening the surface, the master craftsman draws the figures with the help of a pencil or small chisels required to be carved on the wooden bits with the aid of a cardboard design. The designs are already drawn on the cardboards and cut to the required shape and it is common to see in the workshops a bundle of card-board designs hanging on the wall. If the designs are small and the pieces to be carved also small, these designs are directly drawn on the wooden piece with the help of a compass attached to a pencil or with a chalk piece. If the designs are big, the cardboard design cut exactly to the size of the wooden article to be carved is taken, placed on the piece of wood and the impression of the design is lightly carved on this wood with the aid of a pencil, chisel and the mallet. After the correct and clear impression of the design to be carved on the wooden piece is made, the master craftsman proceeds to remove the surplus portion of the wood with the aid of chisels and the mallet. Shaping is a very delicate process and the chisel has to be grasped in such a way that on the wooden mallet affecting contact with the top portion of the chisel, no indentation takes place. The contours of the design have to be followed closely on the wood. After shaping is done and the superfluous wood is removed, the carving in its embryonic stage is filed with the help of sharp files and rubbed with sand paper of $1\frac{1}{2}$ and 1 grades. The next stage consists of the carving. It is here that the skill of the wood carver is displayed to the maximum advantage and distinguishes him from an ordinary carpenter. Different kinds of carving tools are used and the designs whether it be a floral motif or shape of the trunk of an elephant or the ears, legs, the tail and the body of any animal, or the sinuous coils of a snake, are delicately carved by the craftsman.

STAGE V

Polishing:

After the carving has been completed, French Polish is applied on the designs with the help of a soft cloth. French polish is applied consistently over the

outer surface as well as the inner surface of the wooden article and allowed to dry for about one or two days. Then with the help of fine sand paper of O grade the outer and inner surface are once again firmly rubbed. Mansion polish is finally applied over the surfaces and rubbed gently with a soft cloth. This completes the process for the manufacture of a carved item of furniture.

The following Table indicates the time taken for some of the articles manufactured at Madurai :

Process	Round Table with elephant head		Teapoy with peacock legs.		Yali teapoy		Cobra		Table with support of two elephants	
	Hr.	M	Hr.	M	Hr.	M	Hr.	M	Hr.	M
Sawing and planing	2	00	3	00	5	00	1	00	1	50
Rough and smooth shaping	10	00	12	00	24	00	6	00	15	00
Filing smooth and carving.	22	00	28	00	50	00	10	00	30	00
Paper rubbing and Polishing	6	00	8	00	15	00	2	00	10	00
Fixing up nails and bolts	3	00	3	00	8	00	1	00	6	00
Fixing eyeballs, teeth, tongue and general check-up.	3	00	4	00	20	00	2	00	8	00
Total Hrs.	46	00	58	00	122	00	22	00	70	50

The following is the brief description of a few of the reputed products of Madurai :

Yali Carved Wooden Table:

This is a table which can be used for a variety of purposes. The Yali motif used for the carving of the legs of the table is based on the mythological animal found sculptured on temple pillars of the famous Meenakshi temple of Madurai. The four legs of this table are elegantly carved and stand as lasting monuments to the craftsmanship of the carvers of Madurai. The legs of this table are made and fastened with glue and screwed to the top plank of the table. This top plank is minutely carved with floral motifs or with panels depicting mythological scenes. This Table is used for decorating living and drawing rooms.

Cobras :

This is manufactured either in the form of a table lamp or to be displayed as a realistic wooden cobra. It is noted for its grace and elegance. This makes an attractive decoration in the patio of the garden, the front portico or in the drawing room. The top portion of the piece, the head is fitted with a screw to the bottom base, the coils. This is made out of rose wood.

Fighting Elephants:

This is a decorative piece produced in rose wood. The carver displays all his skill in carving an angry tusker with a raised trunk. Specimens are available in many sizes.

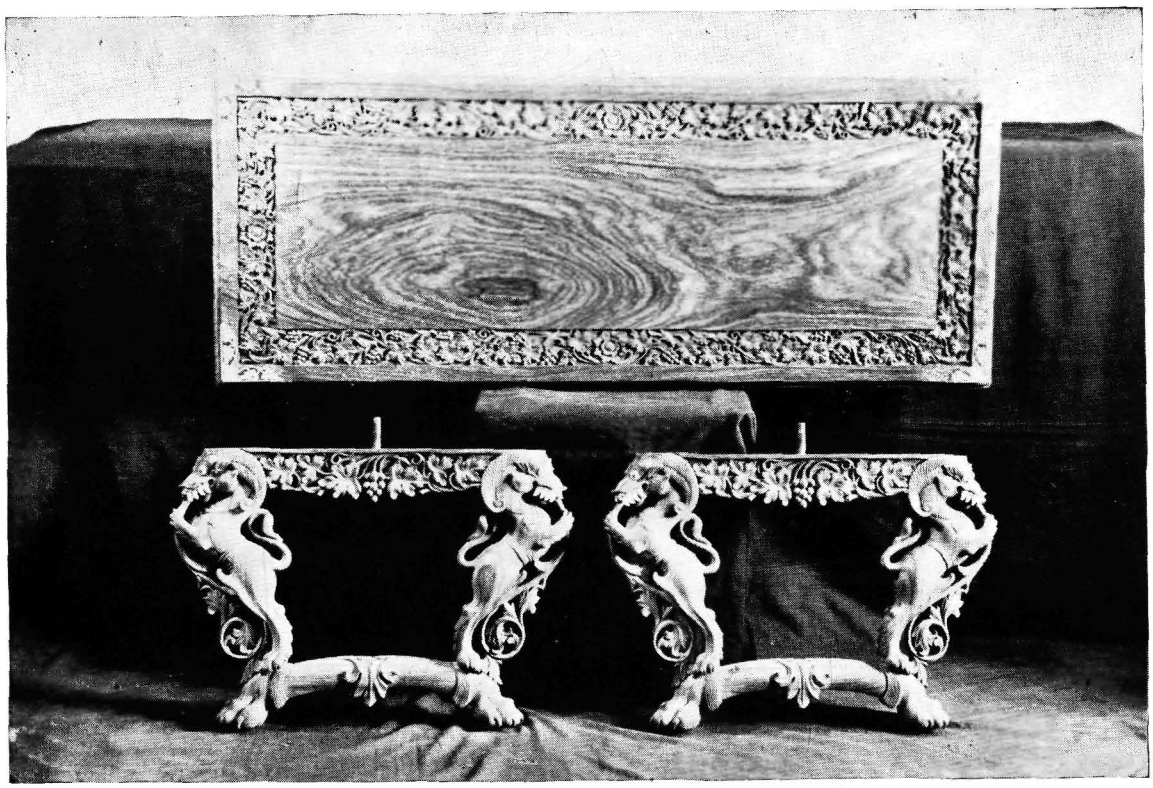
Peacock leg Teapoy :

This is usually constructed out of rose wood with marquetry decoration, chiefly of floral motifs on both sides and the centre, plain in conception. The legs consist of wooden peacocks.

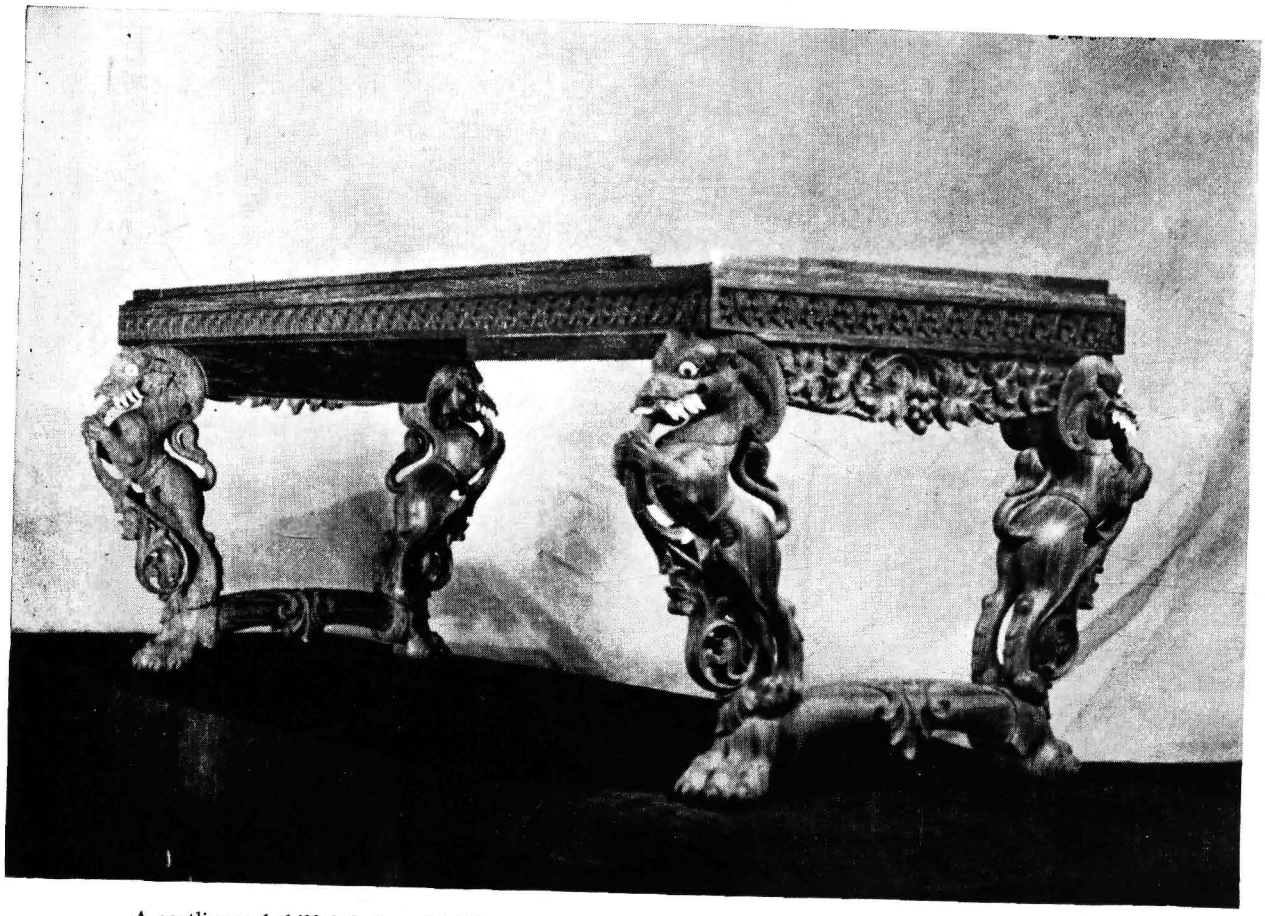
PROCESS OF MANUFACTURE :

Yali Teapoys :

Some 40 years ago Appavo Asari of Madurai initially started the manufacture of the Yali teapoys. We were privileged to watch the manufacture of this teapoy by Appavo Asari. There is no specific method of seasoning the wood by these Asaris in Madurai town. The wood to be used is allowed to dry for two to three months and then it is cut to the required size, taking into account the size of the teapoy as well as the size of the Yalis which form the legs. Separate pieces of wood are taken for the four legs of the table and the centre plank. The wood after being cut by saws to the required size is taken and planed before the processes of shaping and carving start. After planing is done by the assistants of Appavo Asari, the latter takes up the wooden piece and the cardboard design of the Yali and placing the latter over the wooden piece, follows the design of the Yali on the wood with the aid of chisels and a small mallet. After this clear impression of the Yali has been taken, Appavo Asari hands over the piece of wood to his assistants who start the work of shaping. The piece of wood is placed on a medium sized plank and is held firmly between the legs and with the help of special types of chisels and the wooden mallet, it is shaped to approximate to the design of the Yali, a ferocious mythological animal resembling the lion. This work is done by more experienced assistants of Appavo Asari. After shaping has been done what



This super yali head teapoy showing the top and legs separately produced by the Master Carver Appavo Asari of Madurai.



A costlier and skilful design of Yali Dining Table worked out with great minuteness and patience.

now emerges is a crude form of the Yali. This mass which is just taking shape is now personally handled by Appavo Asari for the most difficult part of the work, viz., carving.

It takes nearly a week to carve out the 4 Yali legs. Carving commences on the impression created on the wood after shaping. For carving, the following tools are used :-

1. Square chisel of sizes 1/8" to 1"
2. Curved chisel of size 1/8" to ½" to carve at the bends
3. Madal chisel of 1/8" to convert hollow surfaces smooth
4. Square chisel of 1/8" to make pointed curves

For delicate pieces of work, small chisels of less than 1/8" are used. By just utilising these chisels and the mallets, the shaped wood is intricately carved and finally emerges the main body of the Yali. All that is required to make it the reality which the carver has conceived is to mark the eyes and the teeth as well as the claws of the Yali legs. Before this work commences, sand paper is applied on the surface to smoothen it. The sand paper is held in the right hand and the article is held firmly between both the legs for the sand paper treatment. There are three grades of sand paper -1½, 1 and O used at different stages. Now the work of marking the eyes, teeth and claws commences. With the help of a chalk piece, they are marked out on the carved wooden surface. Then holes for the eyes and the teeth are drilled with the help of the drilling lathe by two persons. After the drilling is completed, a piece of cloth is dipped in French polish and rubbed on the the outer surface. This is done because the outer surface of the wood may contain scratches and the natural lines and curves would be accentuated by the French polish. The surface coated with French polish is allowed to dry for 15 minutes. After this, fine quality sand paper, of grade O is rubbed over the surface to remove the French Polish. Now a piece of cloth dipped in Mansion polish is gently rubbed over the design so that a uniform coating is applied and allowed to dry for 10 minutes. After this drying, a soft plain cloth is taken and the outer surface is polished. This imparts the necessary colour, texture and lustre to the carved wood. The flxing of the eye bails and the teeth to the Yali figure head is handled personally by the master carver Appavo Asari. This is not delegated to any of his assistants. Deer horns purchased from the local market cut into pieces of the required size are kept ready and selection for the Yali eyes and teeth are made according to the article carved. The pieces of deer horn which functions as the eye balls are taken and some glue is rubbed in the holes drilled at the places where the eye balls are to be fixed. The deer horn piece is then fixed into the hole and slightly tapped with a small hammer. After the eye ball has been fixed, the centre is marked and with the help of the hand drilling lathe, a hole is made in the centre of this eye ball. A small piece of rose wood stick is taken, dipped in glue and pushed through the hole made in the eye ball, tapped carefully with a small hammer so that it is firmly fixed in position and then levelled so that the eye ball and the rose wood stick lie on the same level. This forms the pupil of the eye. Finally eye balls are treated with the sand paper of O quality. In the same way, teeth are fashioned out of deer horn by master craftsmen. Two long pieces are selected according to the size and filed sharply at one end, so that they give the appearance of a row of teeth. The Yali design in which the eye balls have been fixed is placed on a small log of wood and with a sharp tool, the gap for fixing the teeth is drilled on the yali. Glue is now rubbed on both sides of this gap and the teeth are fixed firmly in position and tapped with a small hammer. Filling material is now prepared by mixing glue and saw-dust to form a thick paste. This is now utilised as a filling and allowed to dry for an hour. Sand paper is now rubbed both on the row of teeth as well as on the outer surface of the Yali around. Another set of deer horn, 1½" in length and filed at one end are fixed on both sides of the row of teeth already attached. These constitute the tusks of the Yali. Markings are made on both ends of the row of teeth. The hand-drilling lathe is taken by the master craftsman and placed over the spot marked by the chalkpiece. Two persons are required for this drilling, one person twists the rope while the master craftsman holds the drill tightly over the spot and applies the pressure. The holes are drilled to a depth of ½". After the teeth are filed to make it sharp at one end, the thick ends are covered with glue and placed in the openings made. With the help of a small hammer, the tusk is tapped into position. After fixing the tusk and the eye balls, the back legs, toes, tail and eye lashes of the Yali are carved in detail with the help of various carving tools. With the carving tool in the left hand and the hammer in the right, the craftsman gently taps on the head of the tool with a light hammer. Here all the skill of the nimble fingers of the artisan is displayed to maximum advantage and so emerges a wonderful specimen of the Yali out of a block of wood.

The next item, after the completion of the Yali legs, is the manufacturing of the Yali table top. A 4' plank of wood is taken and on this is carved a

profusion of ornamental and floral motifs decorated with fret work. The design cardboard is fixed on the plank of wood with the help of nails. Now with various chisels, the master craftsman carves out the decorative motifs. The carving is done in the same way as other items etched on the Yali legs. After carving is completed, the plank is once again subjected to treatment with French polish, rubbed with sand paper and waxed with Mansion polish to give it the final glossy appearance. This carved plank along with three other planks which do not have any carvings on them form part of the table. These three planks only undergo the process of planing, shaping and polishing. The first plank is 4'2" in length and the other two 18" in length. To one of the 18" planks are attached 4 screw threads on one side and four bolts at each corner where the Yali legs are to be fixed. Vangiram is rubbed on this plank and the other plank of 18" is fixed over this plank with the help of the screws. The two big sized planks are now taken, the carved plank placed outwards and the plain plank placed inwards. Glue is rubbed on the inner surfaces and planks are joined together with the help of the screws. The depressions created by the fixing of the screws are closed by filling with saw dust mixed with glue. After this, French polish is applied to the planks, subjected to the sand paper treatment and a final coating of Mansion polish given. Now the carved Yali heads are taken and nail fixed in the raised portion of wood. A $1\frac{1}{4}$" hole is drilled on the top of the head of each Yali leg. The Table top, as already indicated has 4 corners fitted with bolts. A nail, 2" long is inserted $1\frac{1}{2}$" into this hole drilled in the Yali's head and the depression created by this drilling and fixing is smoothened. Then the screw nail without head is fixed on to the bolts found on the four corners of the Table. Thus the teapoy top is fixed on the top of the four raised portions of Yali heads. This facilitates the rotation and removal of the Yali legs as and when the table has to be packed and transported to other places. Before despatch to the customer, the completed table is once again polished.

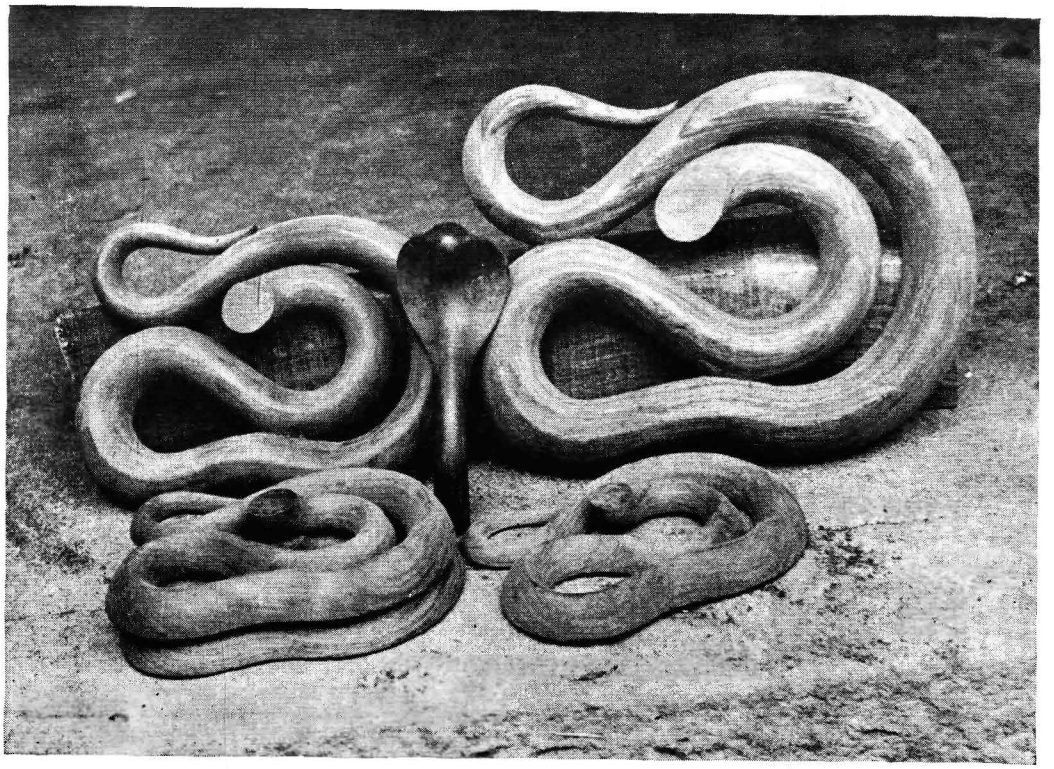
Cobras:

Wooden cobras are produced in all sizes, the most common being one of 15" x 6" x 4" but the manufacture is the sole monopoly of one Asari in Madurai, named A. P. Subramanya Asari. Cobras are produced out of rose wood.

As before, wood is purchased locally and sawing is done by machine. The wood required for the manufacture of cobra is 3" thick, 1" wide and 15" long. These bits are brought from the workshops. The cobra design in cardboard is placed on the wooden piece and the outline drawn in pencil. There is some specific reason in using pencil here. If the designs are light and easy to grasp, pencil is used and for complicated designs, chisels are used. The article is manufactured in two parts, the hood and the coils. Firstly, the coils are prepared. The wood is first shaped to conform to the coils of a snake. The edges are roughly smoothened with the file. Now comes the most difficult part of the work, viz., carving. The chisel is held in the left hand and with the wooden mallet this is slowly tapped round the circular shaped wooden piece, so that the carver creates on the wood the impression of a snake with its scales. Finally, with the help of a small chisel and hammer, he gives the finishing touches to the wood and so emerges the coils of a cobra, 7" to 18" in length. Afterwards, the hood is prepared with another block of wood 3" thick and 9" in length. After the wooden hood is completed, rough sand paper is taken and rubbed on the surfaces. This is followed by rubbing with better quality sand paper. The eyes of the cobra made of deer horn are fixed on the hood in the same way as was done for the Yali head. Finally, French polish is applied on both the parts once again rubbed with fine quality sand paper and polished with Mansion Polish. On the base of the coils, a nut is fixed by drilling and to the hood nails are fixed. The two parts are then screwed into position. Lastly, tongues fashioned out of brass sheets are attached to the mouth. The net result is a most realistic cobra. Some of the cobras have on the head a bulb holder drilled into position, so that it could act as a table lamp also.



The Cobra with its hood on. It is a separate decorative piece of wood sculpture placed on the carved Elephant head rose wood table.



The partially finished bodies of the realistic coiled rose wood Cobras displayed here excel all of the other modern designs in grace, workmanship and elegance. The wooden Cobras, are finished examples and the head which is seen in the centre, is so perfect in its realism that it surpasses all of the configurations in fidelity to nature. Note the two separate parts, the body and hood. The top portions are fitted to flat rose wood bases which serves as pedestal by means of screws.

CHAPTER III

ECONOMICS OF PRODUCTION

It is conceded that much better work was turned out in the past when this industry was patronised by royalty and others. There are very few master wood carvers at present in South India and the reasons for this decay have been set out in the introductory Chapter. Many of these master craftsmen have turned to the manufacture of ordinary items of furniture for even though this does not call for a high order of skill and the individual items are not costly yet the articles produced are in every day demand and so the craftsmen are at least assured of a steady income, Wood carving requires an artisan to be trained from infancy and he has to develop delicacy of touch combined with quickness of hand. Not only that, he should combine in himself all qualities of an artist and a manual labourer. So what was once a teaming and thriving activity has now become an almost extinct craft. Altogether in the areas of Madurai and Virudhunagar, there are only about 16 workshops with a total of 40 carvers. Here, again specialisation of designs is practised with the result that if for example a customer desires a Yali teapoy he can only approach one carpenter, or if he desires a cobra table lamp, he has to approach some other wood-carver. It is to be noted that it is not by any convention or by contract the other craftsmen are prevented from making different designs. As such, all the Asaris can manufacture any design but some have mastered a particular design. Thus each individual craftsman sets up his own monopoly of design and products. The majority of goods are made to order. Most of the Asaris when not executing direct orders manufacture goods in anticipation of orders and stock it in their workshop-cum-dwelling. On receiving the orders, they supply the required articles. All that they need do is to polish the stored-up articles. The Appendix 4 will throw light on the cost of production of some of the famous products of Madurai. There is no specific season in which brisk sales are effected. Prices differ from one Asari to another. During our survey, we found that no two Asaris sell the same product at the same price. But this is also due to the fact that a particular Asari enjoys the monopoly in one design and customers are aware of this and do not approach some other Asari for the article which is the monopoly of a particular Asari.

In Madurai, there are 18 families comprising 25 artisans and in Virudhunagar there are 11 families with 15 artisans. The following Table would indicate the number of families and artisans in Madurai and Virudhunagar practising the craft since the year 1943.

Year	Total persons	Total families
1943	90	65
1953	72	50
1963	40	29

Thus it would be evident that less and less people are pursuing this craft. Unless foreigners and the Victoria Technical Institute extend their patronage in the years to come, this craft may become well nigh extinct. During our enquiry, we found that the majority of the orders are placed by foreigners who are prepared to pay as much as Rs. 400 to 500 for a single article. For many Indian homes, the articles turned out by these Asaris would be a luxury and hence the poor response from local consumers. For the last few years, however, the carvers are fortunate in having the patronage of the T. V. Sundaram Iyengar family who now and then place orders for costly items of furniture to be presented to their rich and influential customers both at home and abroad as well as to furnish their main transport offices and other branches spread all over the South. Appavo Asari is their leading manufacturer. In fact, we were privileged to see a most wonderful specimen of his art now preserved in the Government Museum which was completed by him after a month of hard labour. This acts as a standing monument of his skill; he is one of the very few to possess a decent workshop and his house also bespeaks of his affluence. But in the case of others, the workshops are small and dirty, most of them falling under the Census definition "Workshop-cum-dwelling." There are no facilities for ventilation. The rooms in which they work are small and dark and most of the finished goods lie pell-mell in a corner. The wood carvers undertake work mainly on orders but bulk orders come from T. V. Sundaram Iyengar & Sons, Victoria Technical Institute, and some from the Government emporia. Many of the goods are

presented, as already stated, by the T. V. S. Approximately during the last year orders from the Victoria Technical Institute amounted to Rs. 32,000, from Government Emporia Rs. 8,000, from the T. V. S. Rs. 5,000 and individual orders amounted to Rs 5,200.

Wages

"Wood carving offers a rich variety of experience in the field of industrial art. Few activities offer such great opportunity for the individual to use his general knowledge, skill and resourcefulness to produce a completed object. That would show the degree of success he has attained in using his select knowledge and the skill he has attained". This reflects the veneration in which a wood carver is held for the application of his art. The master wood craftsmen are in affluent circumstances and even their assistants are better off, compared to assistants engaged in other handicrafts. All the master wood carvers we came into contact are relatively well off. They do not work for wages, but manufacture articles on orders placed on them. The profits may range between Rs. 300 to 400 per month. The master craftsman personally engages himself in the difficult, yet important work of drawing, shaping, carving, fixing up the eye balls and teeth and the final finish. The master craftsman employs other artisans with knowledge of carpentry and wood carving on piece rate wages according to the orders they receive. If there are no orders, they still manufacture goods, as stated earlier, in anticipation of orders and so keep a few assistants on their weekly pay roll. The industry requires a fair amount of capital in the initial stages, to purchase the raw materials, especially the superior quality wood like rose-wood and teak-wood which cost a lot of money. The wood is purchased in bulk and stored in the workshops. There are a few minor artisans who purchase their daily requirements from the local market. But these are few in number. There are 4 categories of workers under master craftsmen engaged in wood carving and the work is equally distributed among them and the wages are paid according to the work turned out.

1. The lowest wage is earned by the sawer whose income may not exceed Rs. 1.50 per day. After the introduction of machine sawing these hand-sawers are not very much in demand and there are only a few who cater to the needs of the smaller artisans. Compared to machine sawing handsawing is more costly by nearly 500%. Only minor artisans and master craftsmen who want to fashion miniature articles indent upon the services of this hand sawers.

2. Planing, shaping, removing of the extra wood and rubbing with rough sandpaper are entrusted to an Asari with some pretensions to skill and his income ranges between Rs. 3/- and Rs. 4/- per day.

3. Along with the master Asari, there is another Asari to help him. He is almost as skilled as the master Asari, but normally this person does not have the capital necessary to set up an independant business. More often, he is an understudy to the master Asari and in times to come, may perhaps, be setting up an independant workshop. This man is in charge of drawing, shaping, sometimes filing, or fixing up of the eye balls and teeth and minor items of carving. This man's income ranges between Rs. 5/- and Rs. 6/- per day.

4. There is a polisher who is to rub with sand paper, apply French polish and finally Mansion polish and give the finishing touches to the article by rubbing it with a soft cloth. His income ranges between Rs. 2/- to Rs. 4/- per day.

Like other famous handicrafts, there is very little cooperation among Asaris. Many Asaris work on wages under Master Craftsmen. These are the unfortunate other workers than those of 4 categories who assist in minor work. They have no capital to start an independent business and perforce have to work for wages. The dependent Asaris also execute orders placed on them for general items of work like ordinary tables, stools and benches to augment their monthly income. As there is very little occupational mobility in this craft, dependent Asaris are attached to particular workshops and work under master craftsmen for years to come, sometimes the son going along with the father to the same workshop and on the father's death, the son taking over the major share of the work. The master craftsmen readily come to the help of the dependent Asaris in times of need.

Time is not an important factor in this craft as this craft is not governed by any factory or Labour Acts; nor do the workshops come within the purview of these Acts. The workshops usually open at 8 A.M. and close at 7 P.M. An interval of one hour is given for lunch and on the whole, wages are paid for a 10 hour day. Following is the Table of wages for some of the items of work assuming that the artisan works for 8-10 hours a day.



The master carver Appavo Asari is sitting in his own workshop with a file in his hand giving some finishing touches before delivering the two rose wood baby elephants holding lotus in their raised trunk to the Customer.

Process	4 categories of workers.	Elephant head round table.	Teapoys	Cobras	Teapoys with animal legs
		Rs.	Rs.	Rs.	Rs.
1. Sawer	1	2.00	1.50	1.00	3.00
2. Rough planing	2	3.00	4.00	4.00	5.00
3. Smooth shaper and fixing of bolts and nails.	2				
4. Carver	3	7.00	7 00	5.00	10.00
5. Filing and fixing of eye balls, teeth etc.	3				
6. Polisher	4	4.00	4.00	3.00	5.00

Since this is a declining craft and does not attract people nowadays, as it used to be before, we noticed that no boy under the age of 15 years was working in any of the workshops. Since the average income per artisan never exceeds Rs. 90/-, even assuming that he works continuously for 10 hours per day, the Asaris are not anxious to ask their children to take to this work. Only master craftsmen who earn Rs. 300/- to Rs. 400/- per mensem are interested in making their sons take up this craft

Training of Artisans

Surprisingly enough, whereas for other traditional crafts like stone sculpture, bronze icons making and similar renowned handicrafts, training centres have been opened,wood carving which is more ancient than any of the other handicrafts and is as renowned as the others has not been encouraged by the setting up of a training centre for the artisans. It is hoped that this lacuna will at least be filled in the near future by the setting up of a wood carving centre at least in Madurai or Virudhunagar, the main strongholds of wood carvers in South India. As it is, only a class in the Madras School of Arts and Crafts imparting training to wood carvers flourishes in Madras City and it is too much to expect the poor Asaris to come all the way to Madras City, pay for their board and lodge and learn carving techniques.

Cooperative Society

There is no Cooperative Society for the artisans. his being an individual craft, a Cooperative Society cannot work efficiently. Moreover, as already stated by me, individual Asaris have a monopoly in the manufacture of individual items and it is in the interest of master craftsmen to prevent the formation of any Cooperative Society. Moreover, the specialised skill necessary for the wood carving industry prevents many from taking up the craft and it is difficult to set up a Cooperative Society with few members. The Asaris also feel that as there are only 40 of them engaged in the industry, the goods purchased are costly and there is no local demand, it would not be possible for them to organise the craft on cooperative lines. Moreover the bulk cousumers who place regular orders are very well aware of their needs as well as the names of master craftsmen against whom they should place orders and as such, it is too much to expect that a Cooperative Society can compete successfully against these master craftsmen unless the latter are also brought within the fold of the Cooperative Society. This is a well nigh impossible task.

The following Table indicates the articles manufactured, the selling price and profit of some of the articles.

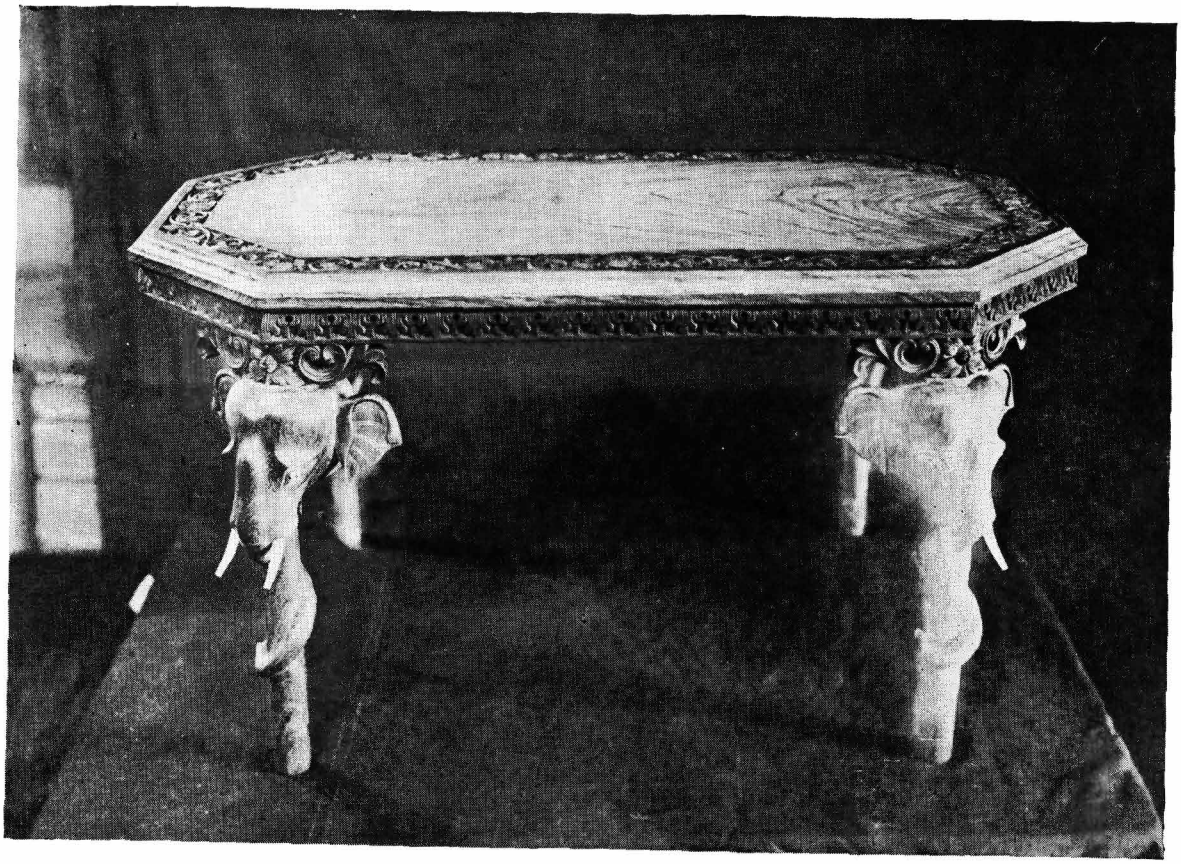
Name of article	Sale price	Profit
	Rs.	Rs.
1. Gods	375	100
2. Dressing Table	150	50
3. Teapoy	100	40
4. Table with peacock legs	150	45
5. Frames	40	8
6. Teapoy with Yali legs	550	256
7. Fighting elephants	120	40
8. Cobras	50	8
9. Table with two elephants	275	110
10. Teapoy with elephant legs	80	15

From this it would be evident that the master craftsmen are able to enjoy a fair amount of profit for the articles they turn out in their workshops.

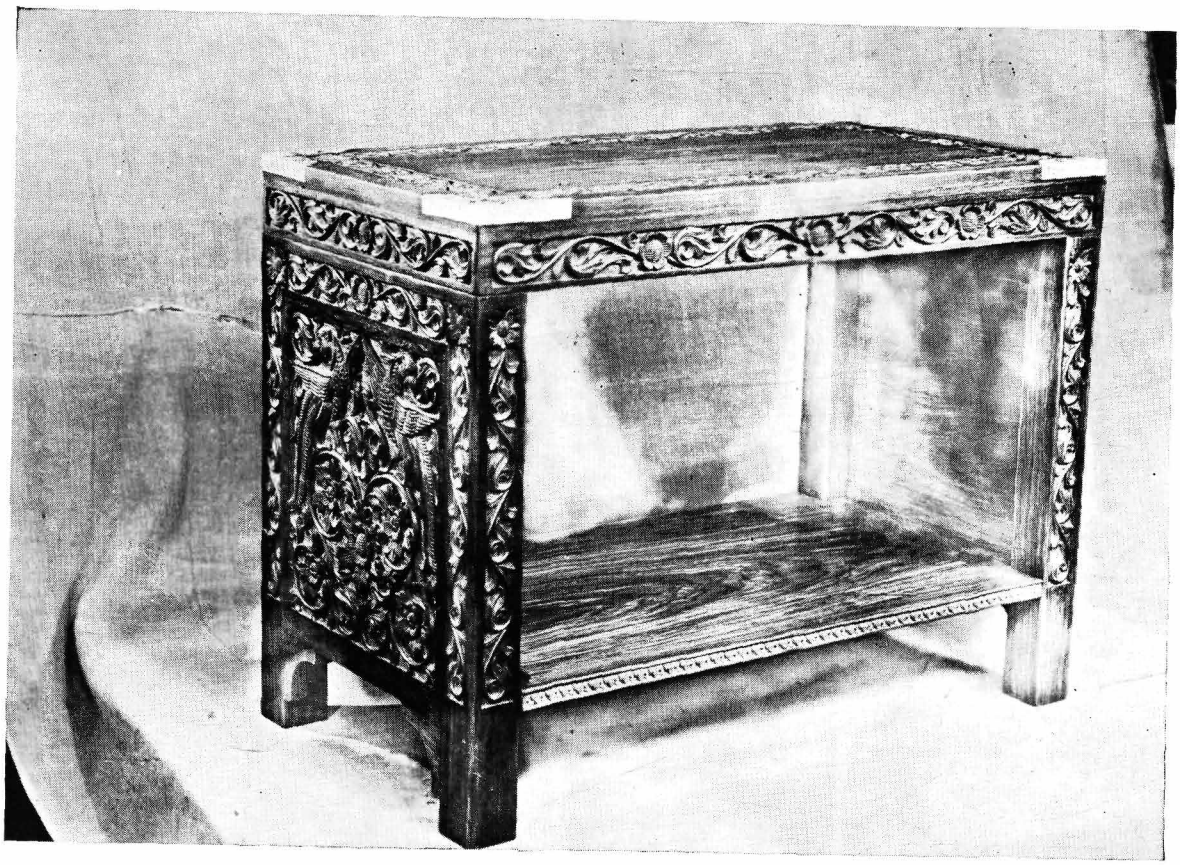
Marketing

This is most important for the development of any craft. This has posed severe problems for many industries and has proved the basic factor in the decline of many an important handicraft. Fortunately, marketing channels are well established for wood carving. This seems a paradox in the light of the observations made above that it is a declining craft. But even though marketing channels are well established, the orders placed on them, though steady are few and, therefore,

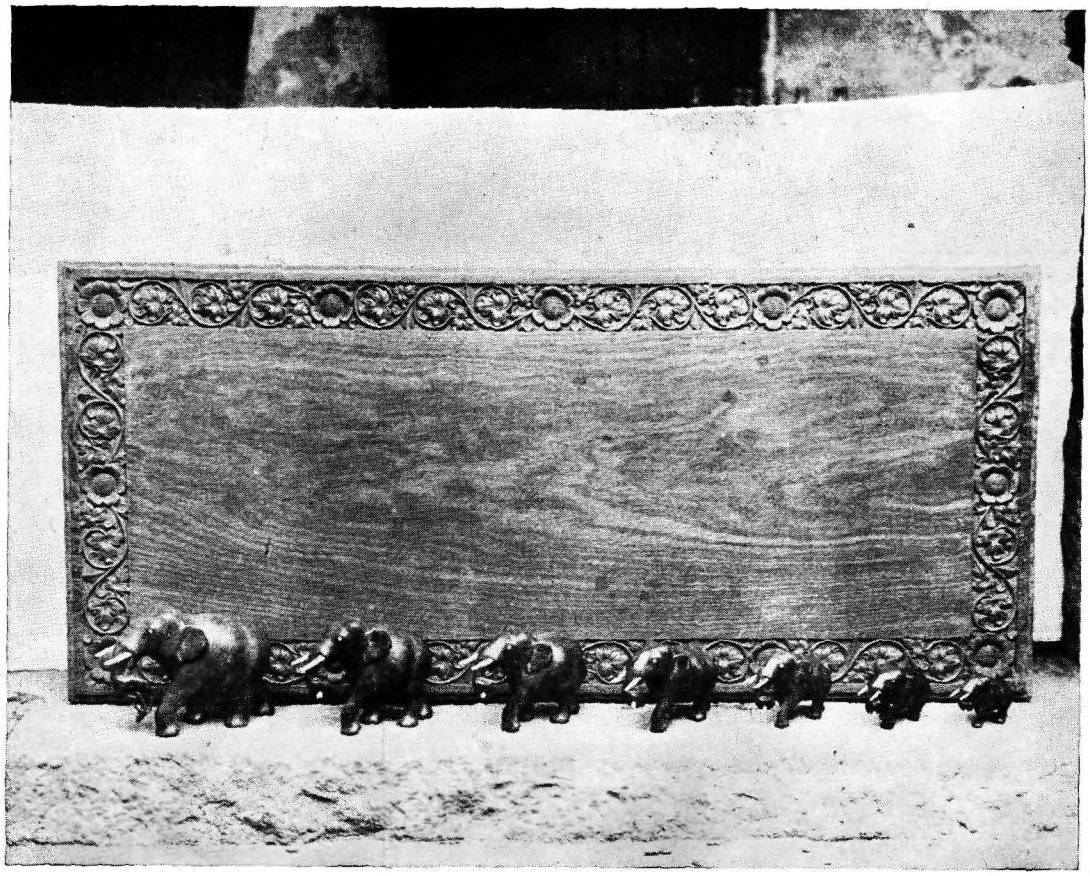
it is not a very lucrative profession to follow except by those well established in the line for a number of years. In the latter 18th and early 19th centuries, Madurai being a temple city and for many years basking under royal patronage, many visitors flocked from all parts of India to this place and were struck by the wonderful specimens of carved furniture manufactured here and placed orders for them. But the prices of articles being prohibitive, only foreigners could make spot purchases. Therefore, as time went by, orders dwindled and now only certain selected concerns like Victoria Technical Institute, T. V. S. Company, Government emporia plus a few foreigners who happen by chance to see these articles displayed, place bulk orders. The industry would have gone into extinction immediately after the removal of royal patronage, but for the Christian Missionaries who have a reputation for encouraging and reviving dying handicrafts. Christian Missionaries put the Victoria Technical Institute on to these wood carvers at a time when orders were few and far between. Consequently, the main consumer of these goods happens to be this Institute.



A naturalistic teak wood elephant-head table worked out with great care and attention.



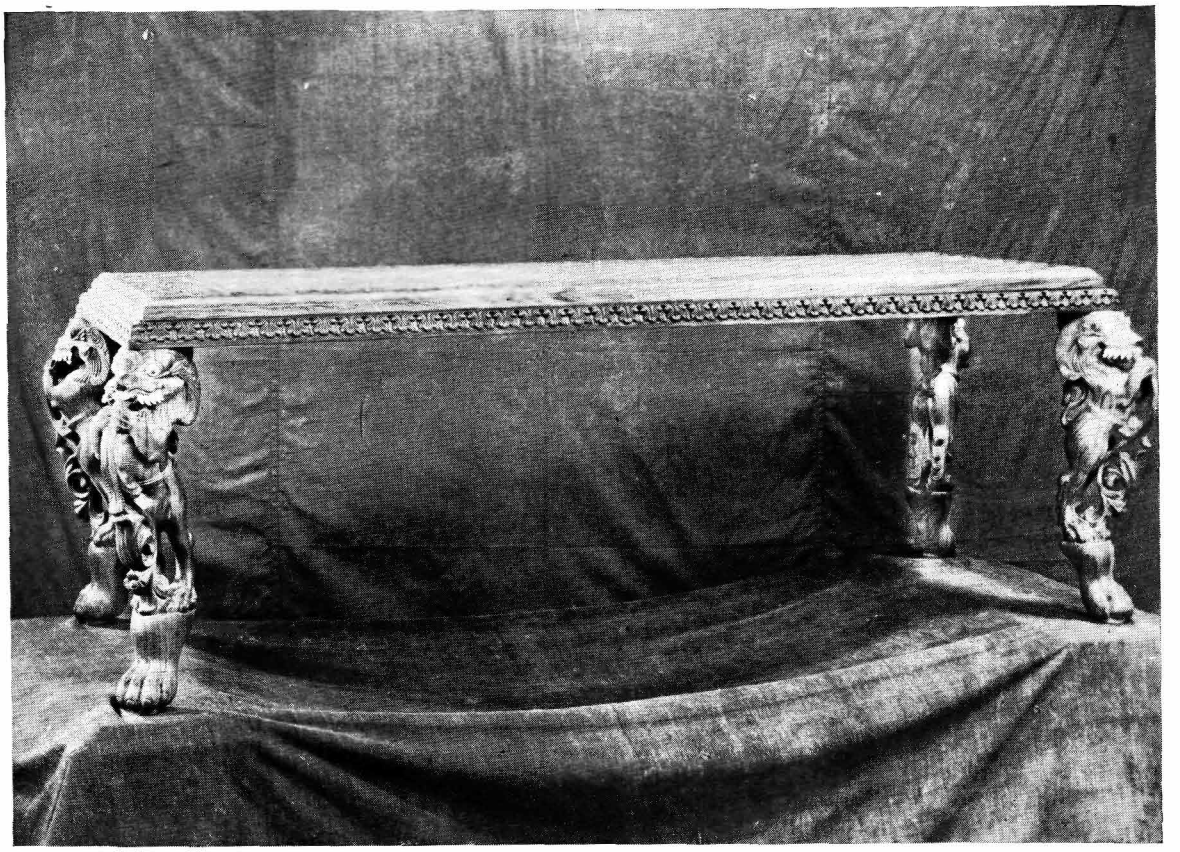
A popular rose wood Radio case with the design of Parrots on both the sides.



Brilliantly carved row of elephants in rose wood are kept in front of the teak wood carved wooden plank of a table. It throws light on the strict discipline and orderliness among their set.



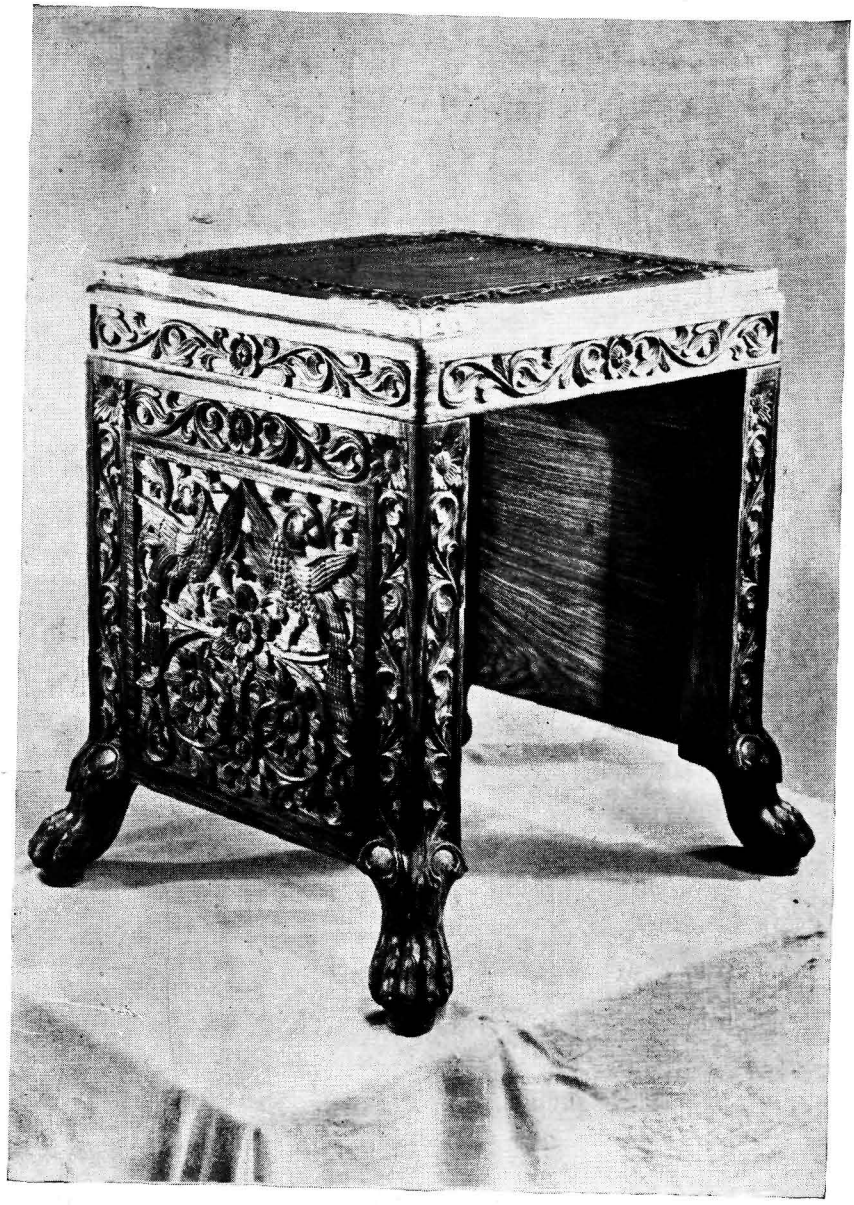
Yali teapoy reflects the delicate tracery of touch on the top and the ferocious mythological animal legs, attained by the present day craftsmen of Madurai.



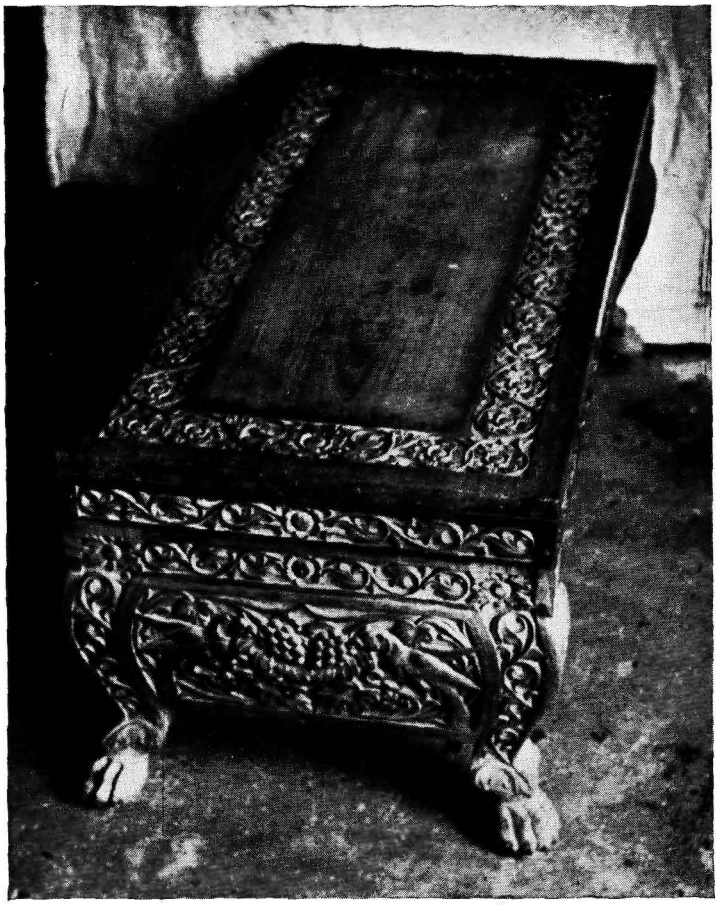
A brilliantly carved teak wood yali figure of the temple copied for the legs of the dining table.



One of the many excellent designs of dressing table with Yali figure as legs carved by the celebrated carver Appavo Asari.



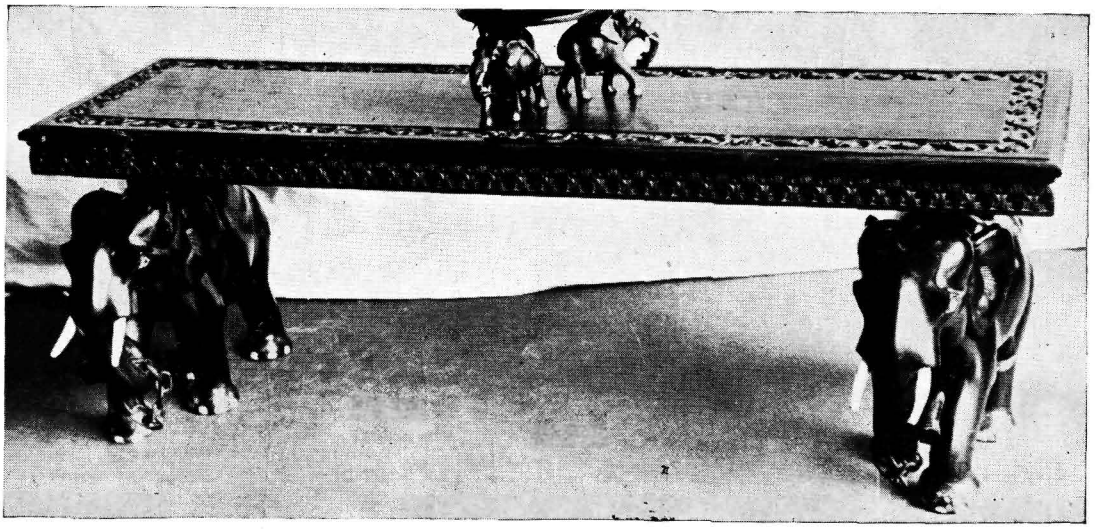
A wonderful piece of teapoy carved with two parrots on both sides with tiger paws as legs.



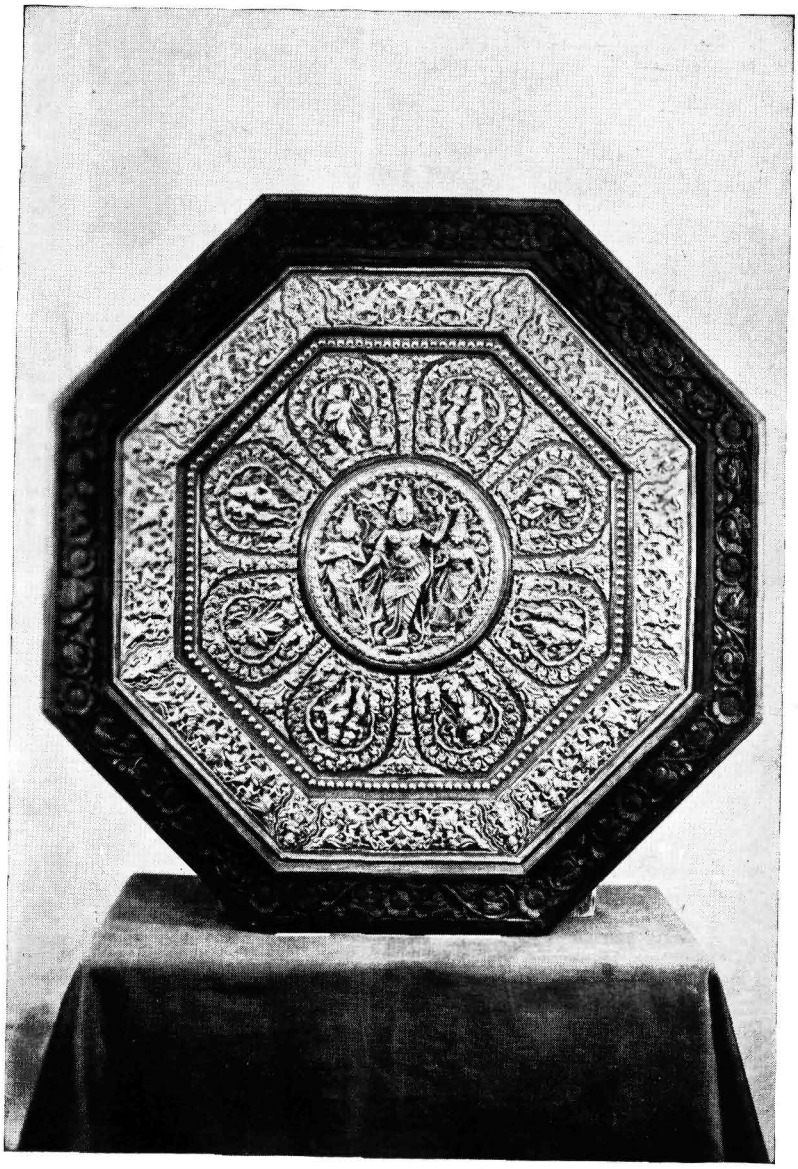
A costlier bold specimen of tiger leg teapoy.



Rose wood tiger-leg leapoy is a simple design. Note the four legs of this man-eater executed in a bold free style.



This rose wood excellent modern design of the two baby elephants teapoy speaks of South India's indigenous art which has a rich and important tradition of several centuries. The three baby elephants are independent article kept on the teapoy.



An octagonal shaped top plank of a teapoy incised with the legendary hero Rama with bow in one hand and arrow in another with his consort and brother. Note the exquisitely carved pictures depicting the legendary figures surrounding it.

APPENDIX 1

Main and Subsidiary Raw Materials required for Wood Carving

	Name of the material	Use of the material	From where it is imported	Cost of the material	How it is made
		Main Material			
1.	Wood (Rose and Teak wood)	These two varieties are the most important raw materials used in all types of wood carving.	Cumbam, Kallai and Mysore	One cubic foot Rs. 35/- (in logs) Rs. 55/- (in pieces)	It is a natural growth of the trees.
		Subsidiary Materials			
1.	Spirit	For polishing purposes	Local market	One bottle Rs. 4.00	It is manufactured by distillation of fermented liquors.
2.	Wax	This is used for polishing purpose	-do-	One kilogram Rs. 1.50	By melting natural bee hives.
3	Shellac	It helps to join and hold the articles	-do-	One kilogram Rs. 3.00	By mixing beeswax, white dammar, lac and liquor ammonia
4.	Mansion Polish	It helps to polish well and turn the articles lovely.	-do-	One box costs Rs. 5.00	...
5.	Deer Horns	It is cut into small bits which serve the purpose of fixing up teeth, eye balls and elephant trunks.	-do-	One Viss Rs. 12.00	It is cut from the dead or live deer.
6.	Glue	It holds fast the joints by pasting on both the surface of the wood	-do-	One kilogram Rs. 3.50	Manufactured by Hides flushing
7.	Brass sheets	It serves the purpose of fixing up as snake tongue or for engraving work	-do-	One seer Rs. 2.50	It is manufactured by casting copper
8.	Brasso	It helps to polish the brass inlay works and tongue of the snakes	-do-	One tin Rs. 1.50	...
9.	Screws, nails, bolts and washers.	To fasten tightly	-do-	0.25	They are made of mild steel.

APPENDIX

Tools

	Name of the tool	Name of the tool maker	Name of the place where it is manufactured.	Length, breadth and height of the tool.	Cost of the tool. Rs. nP.	Use of the tool.
1.	Ruler	Company	Madurai, Madras	24″ x 1½″ x 1/5″	2 25	To take measurement
2.	T. Squares	,,	-do-	24″ x 3″ x 1″	4 00	For drawing parallel lines
3.	Hand saw	,,	Madurai	18″ x 4″ x 1/8″	5 00	To cut the wood.
4.	Hammers	Self	Madurai	Various sizes	4 00	It is tapped on the head of the chisels and other carving tools to form the design.
5.	Mallet	Self	Madurai	-do-	3 00	To drive the chisel in the wood.
6.	Spanner set	Company	Madras, Bombay	-do-	One set 15 00	To tighten up the nails, bolts and screws.
7.	Planes	Company and Carpenter	Madurai	-do-	20 00	To remove the extra piece of wood.
8.	Chisel	Company	Madurai, Madras	-do-	15 00	To remove chips of wood and to carve on the articles.
9.	Gauges	Company	Madurai, Madras			It is used for making concave cuts.
10.	Drilling pit	Self	Madurai	-do-	4 00	It helps to bore the holes.
11.	Putty knives	Self	Madurai	-do-	2 00	It is used for scraping and cleaning purposes.
12.	Dividers	Company	Madras, Bombay	-do-	2 50	It is used to transfer measurement and to draw circles.
13.	Files	Company	Madras	-do-	2 00	To smoothen the edges, curves and surface of the carved articles.
14.	Bar clamp	Company	Madras, Bombay	-do-	30 00	It holds the article or the log of wood firmly and helps to saw, plane and to remove bends from the wood.
15.	Cutting plier	Company	Madurai	-do-	2 50	It helps to cut the nails and to twist it.
16.	Screw drivers	Company	Madurai	-do-	1 50	To fix the nails and screws.
17.	Sand paper	Company	Madurai	-do- -do-	0 15 per cubic ft.	It is rubbed before and after carving is over and to make the surface smooth.
18.	Brush			-do-	1 00	To remove the dust.

APPENDIX 3

Designs

Name of the craft	Name of the town.	Traditional design	Modern design	Who gives the design	Native or foreign
WOOD CARVING	Madurai town and Virudhunagar	Gods and Goddesses	Dressing Table		
		Temple cars	Teapoys		
		Elephants	Dining Tables		
		Horses	Frames		
		Gopurams	Teapoys with Yali and peacock legs	Wood carver himself	Foreign and native
		Yalis			
		Cobras	Cobras with table lamps		
		Peacock Tables			
		Fighting elephants			

Economics of Production

	Name of the design	Size	Wood for planks and legs	Wood reapers	Sawing and planing	Rough and smooth shaping and wages for fixing up nails and bolts	Smooth filing carving and fixing up eye balls, teeth and tongue	Paper rubbing and polishing	Price of nails, bolts, glue and paper	Price of eye balls, teeth tongue and brass sheets	Total Wages	Workmen	Weeks or days	Cost price	Selling price	Profit
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.			Rs.	Rs.	Rs.
1.	Carved round table with elephant head (3 legs)	15″ x 12″ x 12″	22	6	2	12	25	6	3	3	51	3	6 days	79	100	21
2.	Teapoy with peacock	24″ x 18″ x 15″	30	8	3	18	35	8	3	...	67	3	8 days	105	150	45
3.	Yali Teapoy	4″ x 18″ x 18″	80	20	8	50	100	25	6	5	194	4	3 weeks	294	550	256
4.	Table with support of two elephants.	5′ x 14″ x 18″	30	...	3	25	50	18	3	3	102	3	2 weeks	132	250	118
5.	Cobra	15″ x 6″ x 4″	15	...	0.50 np	10	12	3	0.50 np.	1	27	2	3 days	42	50	8

APPENDIX 5

Name of the Workshop Owners, Number of Workers and the total Annual Production

Name of the factory owner	Total number of workers	Total annual production in each workshop	Total annual production in Madurai and Virudhunagar
		Rs.	Rs.
MADURAI			
1. Appavo Asari	4	7000	
2. Guruswamy Asari	Self	1500	
3. Velayudham Asari	5	5000	
4. Shanmugam Asari	2	3500	50,200
5. Kandan Asari	2	2700	
6. Nilamekam Asari	2	3000	
7. Subramaniyam Asari	3	4000	
	Total ...	26,700	
VIRUDHUNAGAR			
1. Ayah Durai Asari	3	6000	
2. Sankaran Asari	2	4000	
3. Mariappan Asari	1	2000	
4. Alady Asari	Self	1500	
5. Sivasankaran Asari	,,	2000	
6. Sankali Asari	,,	2500	
7. Raju Asari	,,	2000	
8. Karpai Asari	,,	1500	
9. Muthai Asari	,,	2000	
	Total ...	23.500	

APPENDIX 6

Skilled Artisans of Madurai and Virudhunagar

MADURAI TOWN :

1. Appavo Asari
2. Guruswamy Asari
3. Velayudhan Asari
4. Shanmugam Asari
5. Kandan Asari
6. Nilamekam Asari
7. Subramaniyam Asari

VIRUDHUNAGAR TOWN :

1. Ayah Durai Asari
2. Sankaran Asari
3. Mariappan Asari
4. Alady Asari
5. Sivasankaran Asari
6. Sankali Asari