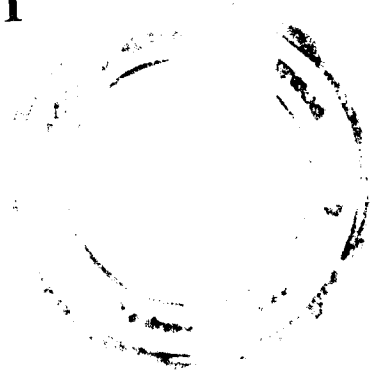
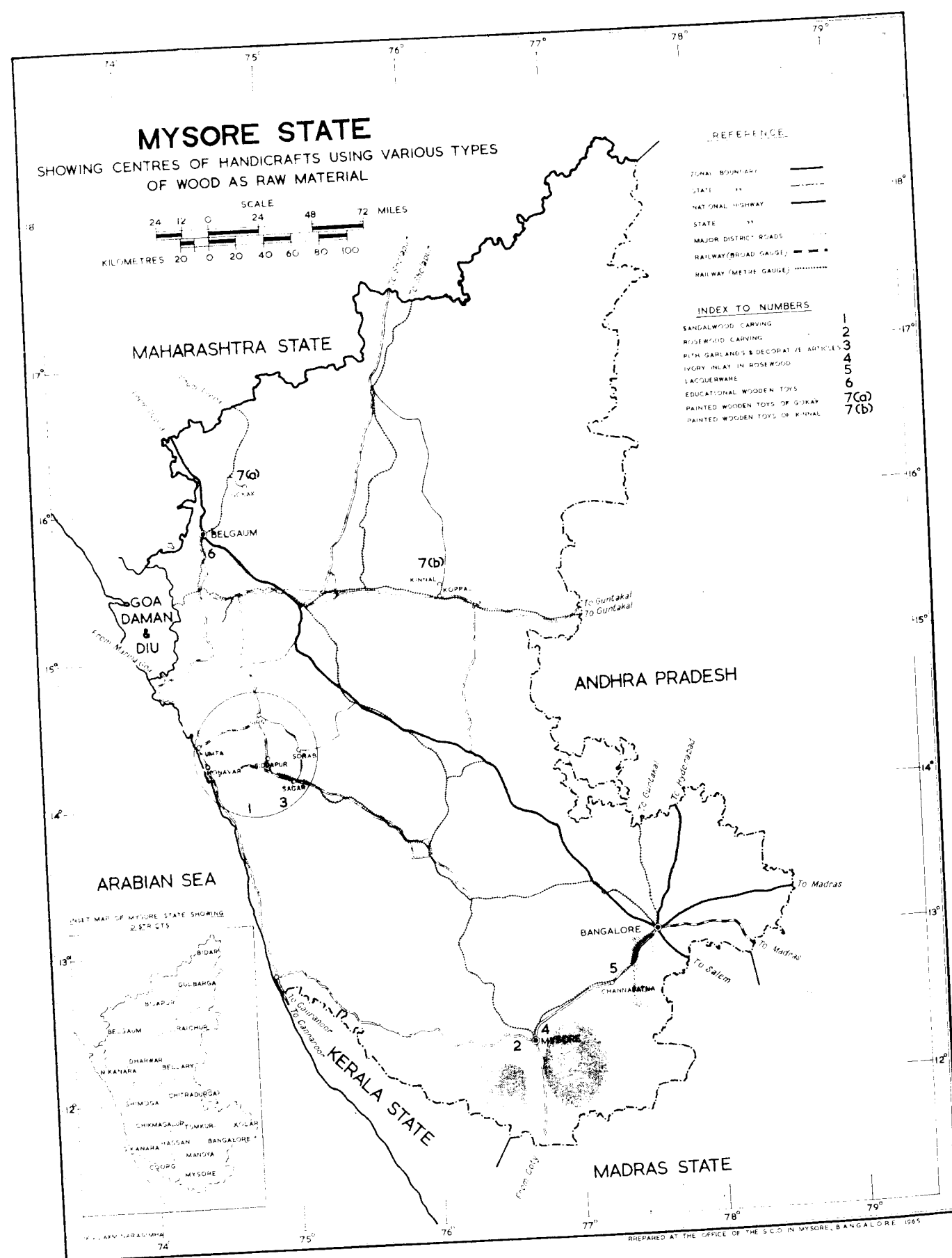




PART VII - A
HANDICRAFT SURVEY MONOGRAPHS
CRAFTS USING WOOD AS THE CHIEF RAW MATERIAL

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HANDICRAFT SURVEY
MONOGRAPHS ON

1. SANDALWOOD CARVING

2. ROSEWOOD CARVING

3. PITH GARLANDS AND DECORATIVE ARTICLES

4. IVORY INLAY IN ROSEWOOD
5. LACQUERWARE

6. EDUCATIONAL WOODEN TOYS

7. (a) PAINTED WOODEN TOYS OF GOKAK
(b) PAINTED WOODEN TOYS OF KINNAL

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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 question 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 limitations 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 traditional 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 finalising 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 designs in which he operated, the frame 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 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 artisan 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 specialized 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 differentiations 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 shapes, 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 September 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 clothe 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, patiently 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

In this volume of the 1961 Census Report are presented Monographs on Handicrafts carried on by hereditary as well as non-hereditary craftsmen using various types of wood as the chief raw material. The crafts which have contributed to artistic excellence have been dealt with. Attempts have been made to highlight the changes that have taken place after Independence.

The importance of the Rural Craft Surveys undertaken as part of 1961 Census has been emphasised at sufficient length by the Registrar General, India, in his Foreword.

In selecting the crafts for survey, the criteria laid down by the Registrar General, India, have been followed. The following Handicrafts are covered in this volume:

- | | |
|--|-------------------------------------|
| 1. Sandalwood Carving | 5. Lacquerware |
| 2. Rosewood Carving | 6. Educational Wooden Toys |
| 3. Pith Garlands and Decorative Articles | 7. (a) Painted Wooden Toys of Gokak |
| 4. Ivory Inlay in Rosewood | (b) Painted Wooden Toys of Kinnal. |

Efforts have been made to give an idea of the various aspects of these handicrafts in detail. Photographs, sketches and coloured plates included in this volume will, it is hoped, prove useful in providing a realistic idea of various processes involved in the crafts at different stages of production.

Sri S. Ramachandran, Senior Technical Assistant, has carried out the field work with devotion and zeal. He has drafted the monographs besides taking photographs presented in this volume. The entire work of investigation and drafting have been carried out under my personal guidance and supervision. Sri M. A. Srinivasan, Assistant Superintendent of Census Operations, has gone through the monographs and assisted me in editing.

Bangalore,
16-11-1965.

K. Balasubramanyam
Superintendent of Census Operations in Mysore

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SANDALWOOD CARVING

OF SORAB, SAGAR, SIRSI, KUMTA, HONNAVAR AND SIDDAPUR

CHAPTER I

INTRODUCTORY

Introduction

Wood carving is a very ancient craft in Mysore and it is as old as the ancient temples. The craft flourished in intimate association with sculpture and architecture. Wood carving found free scope for expression mostly on doors and ceilings of temples and on temple *Rathas* (chariots) which bear ample testimony to the antiquity of this art. The skill of carving is manifest to a high degree of perfection in the carvings to be found on all the three types of *Rathas* viz. *Agama*, *Yudha* and *Vihara*. Such of the *Rathas* as are used for carrying the image of the deity in procession around the temples are called *Agama Rathas*. Hundred and more of beautifully carved figures in wood will meet the eye of any discerning person looking at an *Agama Ratha*. The characteristic features of this type of *Ratha* are that on its four corners are perched carved figures of lions in a rampant attitude and in between the lions will be a number of smaller figures exquisitely carved and panels of intricate workmanship. In *Yudha* and *Vihara* types of *Rathas* the figures are not as many as are to be found in *Agama Ratha*. But yet sufficient carving skill is seen in these types of *Rathas* also. On the interior ceilings of temples carved panels of *Dasavatara*, *Kailasa*, *Kurukshetra* and other mythological themes are beautifully depicted. Carvings of exquisite skill and beauty are also seen on the door frames, doors and ceilings of old houses.

Teakwood is used in the making of *Rathas* as this variety of wood is not only quite soft to work upon but is also moth resistant. The artisans who built the *Rathas* belong to the community of Viswakarma.

Sandalwood carving as distinct from other wood carvings is, however, a speciality of Mysore and is practised in a few centres of the State. This is a traditional art confined to a few families belonging to a particular community. Its origin in point of

time is, however, not easy to determine. The artisans who specialised the craft of sandalwood carving belong to a community different from Viswakarma and they go by the name of Gudigar.

Gudigars

The Gudigars as ascertained from the master craftsmen, are migrants to Mysore from Goa. They settled in the districts of North Kanara and Shimoga. Those who settled in Shimoga carried on the craft of sandalwood carving under the patronage of the Royal family of Mysore. The craftsmen settled in North Kanara were patronised by the rulers in Bombay Province.

In Shimoga district they are to be found in the taluks of Sorab and Sagar and in North Kanara district in the taluks of Sirsi, Kumta, Honnavar and Siddapur. Further, they are found in the town of Sorab and in the villages of Jade, Bilegodu, Jamballi, Tavanande and Janginakoppa of Sorab taluk, in the town of Sagar and in the villages of Talaguppa and Honnakeri of Sagar taluk, in the town of Sirsi and in the villages of Banavasi, Koppa, Koorli, Islur and Hebballi of Sirsi taluk, in Kumta town, in the town of Honnavar and at Nathakeri hamlet in Karva village of Honnavar taluk and in Siddapur, Bilgi and Herur of Siddapur taluk.

The Gudigars are Shivites and wear the sacred thread. The Swamiji of Sringeri is their *Guru*. They observe all Hindu festivals. The shrines of their family deities are in Goa. Havik Brahmins officiate as their priests during religious functions.

The Gudigars, also called ‘Gaud Chitrak’, belong to the *Gothras* (clans) of Bharadwaja, Vasista, Gowthama, Kasyapa, Kowndinya, etc. Marriages are contracted between members of different *Gothras* and *Sagothra* (endo-clan) marriages are taboo. A member may marry his father’s sister’s daughter or his mother’s brother’s daughter but marriage between parallel cousins *i.e.* cousins

who belong to identical siblings is not permissible. There is no objection to a man taking a second wife on the death of the first wife but there is on sanction to widow remarriage.

Matrimonial alliances are contracted not only between families resident in the 6 taluks enumerated above but also with the families at Kuppalli in Goa who are known as Chitars. The Chitars are engaged in making lacquerware.

The names of Gudigars at Kumta and Honnavar end with the suffix 'Shetty' and the language spoken by them is Konkani. For those at Sirsi the suffix is 'Gudigar' and they speak Kannada. Though Kannada is spoken by the Gudigars at Sorab and Sagar also, such suffixes to their names are conspicuously absent and this perhaps is due to local influence.

While the male members of the Gudigar community are engaged in sandalwood carving, the female members make wreaths, garlands and such other articles out of pith. Formerly, Gudigars were carving ivory also, but this art is now found to have fallen into decadence due to the prohibitively high cost of ivory and the competition they have to face from their compeers in Travancore.

Many of the Gudigar households own lands and most of the owners have leased out the land for crop rent. Those who are in villages are, in recent years, found to be taking up self-cultivation. During the current decade some of the educated persons among Gudigars have also accepted employments abandoning their hereditary craft, the earnings from which may not perhaps be adequate to support and sustain them.

Making of Ganesha idols in clay, during the months of Sravana-Bhadrapada (August-September) provides them a seasonal employment. According to Hindu custom, the idol of Ganesha is made in clay for worship on the auspicious day of the year 'Vinayaka Chaturthi'. Further, an idol once worshipped is immersed in tank or well water and it cannot be used for a second time. So these idols have to be made afresh for worship each year on the day of 'Vinayaka Chaturthi'. This custom has offered scope to the Gudigars to make and sell these idols every year on quite a large scale. This has given further edge to their skill as these idols are made by Gudigars in places where they are found, though in other places this

may be the job of non-Gudigars. During the marriage seasons the making of *Basinga* (marriage coronet) worn by the bride and bridegroom keeps them fully engaged.

Gudigars have no scruples about eating meat and are generally non-vegetarians. They cremate their dead.

The craftsman is usually the head of the household. The household consists of not only husband, wife and children but also of other relatives. A married son normally stays with his father. Division among brothers takes place only after the death of parents. Invariably the dependants are more than the number of earning members in a household.

Centres of Production

Sorab, Sagar, Sirsi, Kumta, Honnavar and Siddapur are the chief centres of sandalwood carving in this State. Sorab and Sagar are in the district of Shimoga and Sirsi, Kumta, Honnavar and Siddapur are in the district of North Kanara.

Sorab

Sorab, which is a taluk headquarters town, is the principal place of residence of Gudigars. This small town is about 55 miles from Shimoga, the district headquarters and is connected by bus. The area of the town is 0.20 sq. miles and the population as per the 1961 Census is 4,327. There are 37 Gudigar households with a population of 212 in Sorab. Out of 37 households, 29 are engaged in the craft of sandalwood carving. The households of the Gudigars are concentrated in the main bazaar, the centre of the town and in the Chamarajpet Road. A few households have since shifted to the extension opposite the Electric colony.

Sagar

This is a large town and taluk headquarters in Shimoga district, situated at a distance of 45 miles from Shimoga. It is connected by rail as well as by bus and is a centre of betel-nut production and processing. The famous water falls at Jog is 16 miles from this place. The area of this town is 4.03 sq. miles and the population, according to the 1961 Census, is 20,414. The number of Gudigar households in this town is 15 and their population is 115. The households are distributed in two localities viz. Shivappanaik Nagar and Vinoba

Nagar. Out of 15 households in this town 13 are engaged in sandalwood carving.

Sirsi

Next to Karwar Sirsi is the big town in North Kanara district. It is 80 miles from Karwar by bus. It is both a town and a taluk headquarters of North Kanara district. The area of the town is 4.01 sq. miles and in the 1961 Census it has returned a population of 21,240. The 16 Gudigar households of this town are mainly residing at the locality of Hosapet and a few are distributed at Channapatna Bazaar and Neelekani. The population of Gudigars in this town is 111. Fifteen households out of 16 are engaged in hereditary craft.

Kumta

Kumta is a port on the Arabian sea, situated at a distance of 38 miles from the district headquarters, Karwar. Kumta is a taluk headquarters town. Its area is 4.90 sq. miles and population as per the 1961 Census is 16,223. The Gudigars are found living in the centre of the town and the street they reside is still being called the Gudigars' Street, though the Town Municipal Authorities have renamed it as High School Road. There are 9 households of Gudigars in this town and 5 of them are engaged in sandalwood carving. The best carvings of North Kanara come from this centre. The distinguished visitors to India from abroad are usually presented with sandalwood caskets and other articles made at this centre.

Honnavar

This town is at a distance of 10 miles from Kumta and is on the coast. It is also a taluk headquarters and is 48 miles from Karwar. It is at the mouth of the river Sharavathi. The town extends

an area of over 10 sq. miles and has a population of 10,453. There are 5 Gudigar households in this town and they all reside in one area. 4 households out of 5 are engaged in the carving craft.

Siddapur

This is also a taluk headquarters town in North Kanara district. The area of Siddapur Panchayat is 2.61 sq. miles and the population according to the 1961 Census is 5,405. The 2 Gudigar households at Siddapur make articles from sandalwood.

Establishments

According to this survey which was conducted during January-March, 1963, in all there are 68 establishments engaged in producing sandalwood articles in the centres of Sorab, Sagar, Sirsi, Kumta, Honnavar and Siddapur. All the 68 establishments are proprietary concerns run by individual households. In these 68 establishments, 101 carvers are engaged in making sandalwood articles.

The following table furnishes the number establishments engaged in producing sandalwood articles and the number of carvers in each of the centres surveyed:

Name of the centre	No. of establishments engaged in producing sandalwood articles	No. of carvers
(1)	(2)	(3)
1. Sorab	29	42
2. Sagar	13	19
3. Sirsi	15	23
4. Kumta	5	8
5. Honnavar	4	6
6. Siddapur	2	3
Total	68	101

CHAPTER II

TECHNIQUES OF PRODUCTION AND ARTICLES PRODUCED

Raw Materials

Sandalwood is naturally the chief raw material used in this craft, the other materials being rosewood, yellow teak, ivory, sandpaper, polish, nails and screws, and hinges and hasps.

Sandalwood

Sandalwood (*Santalum album*) is the costliest of all the woods and is widely known for its high fragrance. Insects do not infest this wood and valuable articles can therefore be stored in sandalwood receptacles with a certain amount of safety.

Sandalwood is the most valuable of the forest produce in Mysore yielding a major revenue. The tree, wherever it may stand, is the property of the Government.

The sandalwood tree (Plate 1) grows wildly in the districts of Shimoga, Hassan, Chikmagalur, North Kanara and Mysore. It is a parasite and needs a host to thrive. There are more than a hundred species of host plants. The tree attains a height of about 30 to 40 feet. The diameter of the stem of a medium sized tree ranges from 1½ ft. to 1¾ ft. The carvers consider a 100 year old tree as fit for carving. But the tree is felled much before its attaining this maturity. The trunks of the felled tree are left on the ground so that white ants may eat away the sapwood leaving behind the aromatic heartwood. The heartwood is sawn into pieces and dried.

Sandalwood are of two varieties viz., 'Srigandha' and 'Naga gandha' (gandha=sandalwood). The heartwood of 'Srigandha' is yellowish brown in colour and close grained. This variety of wood is fit for carving. The 'Naga gandha' is dark brown and is used in the extraction of sandalwood oil.

Sandalwood billets are sold by weight and the present value per kg. is Rs. 5.82. Sandalwood is supplied to the carvers by the Government Depots through the Carvers' Co-operative Societies.

Rosewood

Rosewood is used for making pedestals on which the carved figures and caskets of sandalwood are mounted. It is also used as back boards to fix the figures carved in relief, for border pieces of frames to enclose panels and similar other purposes. The cost of rosewood in these centres ranges from Rs. 40 to Rs. 50 per cubic foot.

Yellow teak

This wood is used for bottoms and lids of caskets, for panel backs and as supplementary pieces when a large piece of sandalwood article is to be made at low price. The cost per c. ft. of yellow teak is Rs. 6 to Rs. 8.

Ivory

For making of tusks of carved elephants ivory is necessary. Ivory is also employed for ornamentation. The craftsmen get ivory at Rs. 60 per kg. from dealers.

Sandpaper

Sandpaper of 0 grade comes in for use when the surface of the carved pieces of sandalwood is to be smoothened. Sandpaper can easily be had in the local shops at Re. 1 per 12 sheets of size 12 inches by 10 inches.

Wax polish

Wax polish made by mixing wax and turpentine is available with local dealers. This polish is rubbed over the carved pieces to give it a fine texture. The polish is packed in tin containers and the cost per tin is Rs. 4.

Nails and screws

Nails and screws of lengths varying from 1/4" to 3/4" and of different gauges are necessary for joinery work. These are available in the local hardware shops.

Hinges and hasps

Hinges and hasps are essential for fixing the lids of caskets and boxes. The lids of caskets are

fastened with brass hinges and brass hasps are provided. Hinges and hasps are available with local hardware dealers.

Tools (Plate 2)

The tools used by the sandalwood carvers are saw, plane, hand drill, ruler, try square, hammer and screw driver. Apart from these carpenters' tools, carving tools which consist of chisels and gouges of different sizes and shapes are also necessary.

Saw

Saw is needed for cutting the billets of sandalwood into the required size. A handsaw is used for rough cutting and a tenon saw for accurate cutting. The latter type has a very thin blade with fine teeth. The cost of a saw varies from Rs. 5 to Rs. 10 depending upon the quality and make.

Plane

This tool is used for smoothing the surface of sandalwood and also for reducing the material to size which cannot at times be done by a saw. The smoothing plane makes the surfaces even and a rebate plane the internal angles even. A plane with wooden body costs Rs. 4 to Rs. 5 and with a steel body Rs. 25 to Rs. 30.

Drill

Boring of holes in the wood is an absolute necessity in joinery. A drill with bits is employed for the purpose. A drill with a set of bits costs about Rs. 20.

Ruler

Any kind of ruler which measure inches, quarters and fractions serves the purpose. The craftsmen normally use rulers made of wood costing about Rs. 2.

Try square

This is a precision tool and is necessary for testing and marking square corners. The cost of this tool is about Rs. 5.

Hammer

Hammer is required for driving nails into the wood. The craftsmen use cross-pene (warrington pattern) hammer of ¼ lb to 1 lb as the nails are to be carefully driven into the wood to avoid

possible damages. The cost of hammers vary from Rs. 1.50 to Rs. 3.00.

Screw driver

Screws are to be driven into the wood carefully to avoid damage for which a screw driver is needed. This is available for Rs. 1.50.

The carpenters' tools used by carvers are obtainable from local merchants.

Carving tools

The carving tools are straight and angular chisels and gouges of various shapes and sizes. These tools are called *Kadiyuva Chana*, *Bagina Chana*, and *Nunupu Chana*.

Kadiyuva Chana

Kadiyuva Chana is a firmer chisel forged of steel. One side of its cutting edge is bevelled. The size of the cutting edge varies from 1/16" to 1". This chisel is used for severing the sandalwood.

Bagina Chana

Bagina Chana is a gouge or chisel with a curved edge in the form of an arc. The size of the gouge at the cutting edge range from 1/16" to 1". The firmer gouge having the outer grinding bevel is used to scoop out curved recesses, and the paring gouge with an inside grinding bevel is used for short cuts and internal curves.

Nunupu Chana

This tool is similar to the firmer chisel but only both its cutting edges are bevelled. This chisel is specially suited for hand manipulation. The size of *Nunupu Chana* at the cutting edge varies from 1/16" to 1/2".

A craftsman needs about 40 carving tools in all.

Mallet

The sharp edged carving tools are operated mainly by mallet. The mallet used by the carvers is a block of wood size 12"×3"×2".

The carving tools are 6" to 7" long and have no handles. The craftsmen keep them wrapped safely in a piece of cloth after use. Carving tools are sharpened frequently on whetstone which is of absolute importance. The tools are made to order by the local blacksmiths.

Types of Carving

Carving in the round, carving in relief, incised carving, chip carving and pierced carving are the varied types of carving in vogue. The subjects chosen are chiefly mythological Hindu Gods and Goddesses.

Carving in the Round

The chief characteristic of this type of carving is that it is unattached to any background. The object to be carved is totally detached from the rest of the wood. Carving in the round of human or animal figure demands utmost care and skill as they have to present, viewed from whatever angle, the appearance that it purports to portray.

Carving in Relief

In contradistinction to the carving in the round, if the object carved is one which is attached to a background it comes under the type 'relief'. The three types of reliefs are high relief, middle relief and low relief. In high relief the figure stands out boldly and in middle relief it is somewhat raised. In low relief the figure is flat upon to the background.

Carving in high relief also requires the utmost skill but the amount of work involved in this is relatively less as it has to depict only the frontal view. However, the figures carved in high relief stand out prominently and give the appearance of their being almost detached from the background.

Incised Carving

This type of carving is done without any ground work. Flower traceries and creepers are the common motifs adopted.

Chip Carving

The chip carving consists in designs being evolved by the removal of chips from the wood. This technique is adopted essentially in ornamental and decorative works.

Pierced Carving

Pierced carving makes for effective ornamentation. That part of wood which would normally be the ground work in other types of carving is completely cut away so as to leave behind exclusively the design. As in this removal of much of the wood is necessary it demands of the carver much care and skill.

Techniques of Production

The technique of sandalwood carving, particularly that of carving in the round can be set out in the following four stages:

1. Reducing the block of wood to shape.
2. Boasting in.
3. Finishing.
4. Polishing.

1. Reducing the Block of Wood to Shape.

From his stock of billets the carver selects a block of wood suitable to the size of the figure he intends to carve. If the billet is a large piece he cuts it to a suitable length by a handsaw. It the billets are to be cut into tablets the carver uses a tenon saw and the surface of the tablet is smoothened on either side by planing.

After selecting the wood the carver reduces it to the shape of the figure to be carved. He draws a pencil sketch of the figure on the block of wood and normally this outline is drawn with the help of a template. By using the *Kadiyuva Chanas* of different sizes and a mallet he cuts out the shape the figure from the solid block of wood.

2. Boasting in

By removing the superfluous wood with the aid of *Kadiyuva Chanas* and *Bagina Chanas* of different sizes and the mallet, the carver reduces further the crude shape obtained by reducing the block of wood to a rough form of the figure. This process of carving the figure to a rough state is called 'boasting in'.

3. Finishing

The most important part of the carver's job commences after 'boasting in'. By employing all types of *Chanas* (chisels) the carver improves the shape and appearance of the figure. He manipulates the chisels and gouges with utmost care and skill to bring out gradually the desired form. The carver continues the carving in all its intricate detail until the desired expression and finish is achieved (Plate 3).

4. Polishing

The carved piece is then smoothened with 0 grade sandpaper. Then wax polish is carefully rubbed over the article to give it a fine texture.

Images of Vinayaka, Nataraja, Venugopala, Lakshmi, Saraswathi, Radha-Krishna, Shiva-Parvathi are some of the objects that are generally carved in the round.

CARVING IN RELIEF

The same objects that are carved in the round are carved in high and middle reliefs also. The process of carving of these two types of relief are almost alike except that the depth of the ground is slightly more in the case of high relief.

To carve the figure in high relief, as usual, the carver selects the required block of sandalwood and sketches on it the figure to be carved. The part of the wood outside the pencil lines is cut away to form the ground. This is done by malleting the chisels and gouges of various sizes over the piece of wood, depending upon the space to be cut out. The surplus wood thus being removed the figure stands out on the 'ground' in relief. After 'setting in' the figure, the superfluous wood found in the ground is removed. The process is further followed by flattening and smoothing the ground. Then the figure is manipulated with chisels and gouges till it gets a perfect get up (Plate 4).

INCISING

Incising designs like flower traciers, creepers, festoons and engraving of animals and birds are on flat rectangular pieces of sandalwood and these embellished pieces are meant to specially adorn for the sides and tops of boxes and caskets. The pattern to be carved is first neatly drawn with a pencil on the tablet and is thereafter engraved in meticulous detail. The inter-spaces between the lines are cut away. If the figures of animals and birds are to be carved, it is done after forming the ground on which the form stands in low relief (Plates 5 & 6).

Incising and carving in low relief are found in the designs carved in the trays and on the handles of paper-knives and walking-sticks.

CHIPPING

Chips are removed from the wood with a fine and narrow edged chisel to form the border

designs. The carver does it with no marking on the wood.

PIERCED CARVING

The carver outlines the design on the wood with pencil markings. By employing sharp and narrow edged chisels and a mallet, he completely takes out the wood in the inter-spaces between the lines. The sharp edged chisels penetrate the wood and a proper manipulation of the tools would help to remove all superfluous wood and leaves behind the design proper.

This type of carving is found on photo frames, calendar stands and *Prabhavali* or the designed arch which forms the background of mythological figures.

The carvers work sitting on a mat or rag spread on the floor. The rough work is done by holding the block of wood to be carved tightly between the feet and malleting the chisels over the piece. The smooth or the delicate part of the work is done by keeping the carving piece on a desk or a solid wooden block and manipulating the chisel with the right hand in the manner of a pencil.

In cases where there happen to be heavy orders, the local carpenters are taken for assistance to help the Gudigars in joinery works (Plate 7).

Designs

The figures carved by the Gudigars are alike in style to the *Shilpa* or stone carvings found in South Indian temples. The subjects and motifs chosen for carving belong to Hindu Mythology and subjects within the common knowledge of the craftsmen such as animals, birds and natural scenery of several kinds. There has recently been a tendency among carvers to imitate the subjects found on calendars.

Articles Produced

Sandalwood is suitable for all types of carving and by taking advantage of this suitability, the carvers produce a wide range of choice articles which include images of deities, panels, caskets, photo frames, trays, *Vyasapeeta*, paper-weights, paper-knives, walking-sticks, fans, elephants, flower pots, garlands and many other utility articles.

Images of Deities

Images of Venugopala¹ (Plate 8), Ganesha² (Plate 9), Nataraja³ (Plate 10), Vishnu⁴, Lakshmi⁵ (Plate 12), Saraswathi⁶ (Plate 13), Radha-Krishna⁷ (Plates 11 & 14), Shiva-Parvathi⁸, Rama-Sitha-Lakshmana-Anjaneya⁹ are carved in round as well as in relief. The size of the figures ranges from 6" to 14" in height. The images carved in the round are mounted on rosewood pedestals and the figures carved in relief are assorted between rampants or floral scrolls and are fixed to a rosewood back. The *Prabhavali* in the background adds to the beauty of the figures (Plates 9, 10 & 14).

Panels (Plates 15, 16 & 17)

Panels with the above mentioned images of deities and other mythological themes such as 'Menaka-Viswamithra', 'Shakunthala-Dushyantha' and many motifs from *Ramayana* and *Mahabharata* and varied scenic designs are carved in middle and low reliefs. The panels in low relief are enclosed in rosewood frames. They are made to be hung on walls and with stands so as to rest on tables. The panels are of oblong and vertical rectangular shapes. The size of panels ranges from 9" x 6" to 14" x 12".

Casket (Plate 18)

Boxes and caskets are made from 6 rectangular pieces of sandalwood of thickness 1/4" to 1/2". The 4 pieces for the sides are incised with creepers and flower traceries. The piece fixed on the lid is carved with a figure of God or Goddess and of animals like elephant, deer and of birds like peacock and swan. The side pieces of caskets are carved with herds of elephants or of deers, or a flock of peacocks in various postures with the background of a forest scenery. The lid is fixed with a panel in low relief. The size of the caskets varies from 14" x 9 1/2" x 6 1/2" to 30" x 21" x 15" and boxes are made in size 6" x 3" x 3 1/2" to 10" x 6" x 4".

1. Lord Krishna playing on flute.
2. Son of Shiva and Parvathi, the god of wisdom, remover of difficulties and obstacles, addressed at the commencement of all undertakings.
3. Lord Shiva in dancing posture.
4. The second person of the Hindu triad (Brahma, Vishnu, Maheswara) and a celebrated Hindu deity.
5. The goddess of fortune, consort of the god Vishnu.
6. The goddess of speech and eloquence, patroness of music and the arts, consort of the god Brahma.
7. Krishna, the most celebrated form of Vishnu with his beloved Radha.
8. The celebrated Hindu god and his consort Parvathi.
9. Rama, the seventh incarnation of Vishnu with his consort Sita, brother Lakshmana and his devotee Anjaneya.

The lids of boxes and caskets are hinged at the back with ordinary brass hinges and secured at the front with a brass hasp. The caskets are set on pedestals of rosewood.

Photo Frames (Plate 19)

Photo frames are made in size 5" x 4" to 12" x 10". The usual pattern is to fit the four border pieces carved with designs, with cross-lap joints. The recess of the frame is supported by a flat sandalwood piece or of yellow teak which forms the back-plate of the photograph.

Another pattern of photo frame is the one made from a single rectangular piece of sandalwood 1/4" thick. The top portion of this frame is carved with the figure of a swan in pierced carving and the bottom consists of a rectangular or oval shaped niche. A socket is provided at the back of the niche to hold the photograph.

Calendar Stands

These are made by fixing a panel of 3 sq. inches and a socket to hold date cards to a board side by side. The small panels of calendar stands have the figures of elephant, deer, peacock or swan.

Trays (Plate 20)

Trays of size 5" x 3" to 12" x 8" are made in rectangular and oval shapes. The tray is incised with designs of flower traceries, creepers and with a carving of a figure in the centre.

Vyasapeeta (Plate 21)

This is a stand for reading books. *Vyasapeeta* consists of two flat rectangular pieces of sandalwood and these pieces are cross jointed. Carvings of usual patterns like swan, flowers, etc., are found on the outer portion of these pieces.

Paper-weights

Paper-weights are made of thick rectangular pieces of size 2 1/2" x 1 3/4" to 4 1/2" x 4". They are also made in oval shape. A figure of an animal or bird is carved on the top of the piece.

Paper-knives (Plate 22-a)

Paper-knives are mostly made by beginners in the line. Simple floral designs are carved on the handles of the paper-knives.

Walking-sticks (Plate 22-b)

This is another fancy as well as utility article made of sandalwood. The sticks have carved handles.

Fans (Plate 23)

Fans which take semi-circular or circular shapes when spread out are made with blades of sandalwood, the length of which range from 6" to 10". The outer ends of the fan are carved with flowers and tiny figures.

Elephants (Plate 24)

These figures are carved in the round with varying heights ranging from 3" to 6". The figures are sold as single pieces or as herds of 5 to 6 one following the other over a rosewood bridge. Elephants are also carved in the postures of fighting and dragging a log.

Flower Pot (Plate 25-a)

By utilising the waste pieces of sandalwood they make leaves and flowers. After assembling the leaves and flowers to form a plant, the whole is placed in a pot carved of sandalwood.

Garlands (Plate 25-b)

The shavings obtained while planing the sandalwood are used for making garlands. The shavings are wrapped over sawdust to take the shape of beads and these are strung into garlands.

Utility articles

Utility articles like shirt buttons, cuff links which were once popular have lost the demand after the advent of plastics into the market. Cigarette-holders, cigarette-cases, penholders, penholder stands, *Japamala* (rosary), combs are some of the utility articles made of sandalwood.

The finished articles which are usually a few in number are kept by the craftsmen safely in a wooden box or trunk to avoid possible damage till they are sold.

From a perusal of the old gazetteers it can be inferred that there has not been any noticeable change in the kinds of articles produced since about a century. The motif of *Geethopadesha* a scene from *Mahabharata*, where Lord Krishna preaches *Geetha* to Arjuna, has become popular during the present decade. The main piece is an assemblage of several pieces carved in the round. The price of a piece of *Geethopadesha* ranges from Rs. 1,000 to Rs. 5,000 depending upon the size of the piece and its workmanship.

CHAPTER III
ECONOMIC AND GENERAL ASPECTS

Cost of Production

The sandalwood articles are priced on their artistic value rather than their sandalwood content. It is possible to make out of a piece of sandalwood valued Rs. 10, one article worth Rs. 50 or even Rs. 200. Any account of cost relating to these products of artistic workmanship can at best be an estimate only. The craftsmen do not keep regular itemised accounts of the expenses incurred by them for the various materials required for their craft and relating to every article they make. One thing that is certain about the cost of these articles is that the raw materials cost much less than the cost of the skilled labour on the wages of the workmen. Also materials like wax polish and sandpaper purchased at a time are used for some months and the relative cost of these materials used for every article is never worked out meticulously. However, an estimated statement of cost of production of certain samples is furnished to give a general idea:

I. Article: Image of Venugopala carved in the round (Plate 8).		
size of the piece: 22"		
size of the figure: 14"		
	Rs.	Rs.
Cost of raw materials:		
sandalwood	80.00	
rosewood	4.00	
sandpaper	0.20	
polish	0.60	
nails and screws	0.20	85.00
Cost of labour		615.00
Cost of production		700.00
II. Article: Image of Ganesha carved in high relief, mounted on pedestal and provided with <i>Prabhavali</i> in the background (Plate 9).		
size of the piece: 13½"×11"		
size of the figure: 5½"×4"		

	Rs.	Rs.
Cost of raw materials:		
sandalwood	14.00	
sandpaper	0.30	
polish	0.50	
nails and screws	0.20	15.00
Cost of labour		65.00
Cost of production		80.00
III. Article: Panel carved in middle relief (Plate 16).		
size: 12½"×10½"		
design: festoon of sunflowers.		
Cost of raw materials:		
sandalwood	13.00	
rosewood	1.00	
sandpaper	0.25	
polish	0.60	
nails and screws	0.15	15.00
Cost of labour		60.00
Cost of production		75.00
IV. Article: Casket (Plate 18).		
size: 13"×9"×9"		
design: Peacock and forest scenery.		
Cost of raw materials:		
sandalwood	30.00	
rosewood	3.00	
sandpaper	0.40	
polish	1.20	
nails, screws, hinges and hasp	0.40	35.00
Cost of labour		115.00
Cost of production		150.00
V. Article: Fan (Plate 23).		
size: blades-6" each, handle-10".		
design: swan and creeper.		
Cost of raw materials:		
sandalwood	2.75	
sandpaper	0.10	
polish	0.10	
nails	0.05	3.00
Cost of labour		15.00
Cost of production		18.00

In these five cases, in the total cost of production raw materials account for 16, 19, 20, 17 and 15 per cents respectively. Under normal conditions the expenditure on raw materials will not exceed 20 per cent. This limit will exceed in respect of such pieces which are of less artistic finish.

As for profit and loss, the question of the workman running a loss does not arise at all for the simple reason that the finished product always fetches a price higher than the price of raw materials used. This does not, however, mean that the earnings of the craftsman are always of the same standard, in as much as his earnings depend upon the price of the article which is fixed by the Co-operative Society's price fixing committee, when articles are marketed through the co-operative society. When, however, the articles are sold by the craftsman to a private dealer instead of to the co-operative society, the price realised is ultimately decided as in any other case by demand and supply.

Capital

The craftsmen are pursuing the craft of sandalwood carving, employing carpenters' tools and simple carving tools. The work place is a part of the living space of their respective dwellings and there is no exclusive investment on buildings. The capital investment of the 68 establishments is about Rs. 20,000. Out of this amount Rs. 7,000 or 35 per cent is on tools and the remaining Rs. 13,000 or 65 per cent represents the circulating capital. The craftsmen, excepting a few, cannot afford to possess bulk stock of raw materials.

The tools possessed by the craftsmen are acquired one by one spread over a number of years and not purchased outright at one time. The amount that has to be spent on replacement of the worn out tools is not much and the craftsmen are able to meet this expenditure from their earnings.

Production

The 68 establishments engaged in producing sandalwood articles in the centres surveyed have produced articles worth Rs. 190,000 during the year 1961-62. The value of raw materials consumed by these establishments during the same period is about Rs. 40,000. The value of production in respect of each centre is furnished below:

Name of centre	Value of production (Rs.)
(1)	(2)
1. Sorab	71,000
2. Sagar	36,000
3. Sirsi	43,000
4. Kumta	26,000
5. Honnavar	12,000
6. Siddapur	2,000

Of the total production, 37 per cent is produced at Sorab, 19 per cent at Sagar, 23 per cent at Sirsi, 14 per cent at Kumta, 6 per cent at Honnavar and one per cent at Siddapur.

Marketing

Carved pieces of sandalwood have a market within as well as outside the State. The chief centres of trade within the State are Bangalore and Mysore and those outside the State being Bombay, Delhi, Madras and Calcutta. The sales in the manufacturing centres are more during January to May on account of marriage season when people go in for these pieces for making presentations to the newly weds.

The Gudigars dispose of the sandalwood articles through their co-operative societies and also through the dealers. The Co-operative Society at Kumta is not financially sound and only 20 per cent of the total production of this centre is marketed through this co-operative society and the rest is sold through the local craftsmen-cum-dealers. In the centres other than Kumta, 33 per cent of the total production is marketed through co-operative societies.

For despatching the pieces to out stations the craftsmen and dealers pack them securely in dealwood cases with heavy paddings of cotton and paper cuttings. The packages are sent by rail as well as by road.

Households of Carvers

In the centres surveyed there are 84 households of Gudigars with a population of 544. Out of 84 households 68 are engaged in sandalwood carving. Sixteen of the households are not pursuing the craft for the following reasons. In 7 of the households there are no male persons to take up the craft. In one household the male adult is too old to continue his trade. Two of the households are engaged in producing utility articles of wood such

as churners, rolling pins, combs, etc., and in 6 households the male adults are in employment as teachers, office assistants, and paid secretaries of co-operative societies.

The 68 households pursuing the craft consist of 477 members of whom 126 are male adults, 135 are female adults and 216 are children below 14 years of age.

Details of the households of Gudigars in respect of each of the centres surveyed are as hereunder:

Name of centre (1)	No. of households of Gudigars (2)	Population of the households in col (2) (3)	No. of households engaged in Sandalwood carving (4)	Population of carvers' households				No. of carvers (9)
				Total (5)	Males (6)	Females (7)	Children (8)	
1. Sorab	37	212	29	174	48	52	74	42
2. Sagar	15	115	13	104	23	23	58	19
3. Sirsi	16	111	15	107	30	34	43	23
4. Kumta	9	58	5	46	11	13	22	8
5. Honnavar	5	28	4	26	8	9	9	6
6. Siddapur	2	20	2	20	6	4	10	3
Total	84	544	68	477	126	135	216	101

Out of the 126 male persons, 101 are sandalwood carvers. Of the remaining 25 adult males, 3 are employees in Government establishments, 17 are students in the age-group 15-22 years and 5 are old persons.

As regards the size and composition of these 68 households 7 are 2 member households, 3 are 3 member households, 7 are 4 member households, 8 are 5 member households, 9 are 6 member households, 8 are 7 member households, 7 are 8 member households, 7 are 9 member households, 3 are 10 member households, 3 are 11 member households, 2 are 12 member households, 1 is a 16 member household, 2 are 17 member households and 1 is a 20 member household.

The carvers work in their houses mostly in the verandah. They generally work from morning to evening. They do not work on the day of *Amavasya* (new moon). However, this is not observed as a rigid rule now though it is said that in former days this was observed very strictly.

Economic Conditions

Gudigars are independent workers. By and large the craft is carried on almost entirely by the members of the households. On the whole 5 craftsmen, who are also dealers, have engaged a few workmen under them for wages, chiefly for doing work ancillary to the craft.

Sandalwood carving is the principal occupation

of all the 68 households. Further, making of garlands and decorative articles of pith is the subsidiary occupation of all these households. Thus no household of Gudigar is solely dependant upon the earnings from sandalwood carving alone. Besides earnings derived from land or a supplementary item of work like making of idols of Ganesha (Vinayaka) in clay during Sravana-Bhadrapada (August-September) augment the income of these households.

About 60 per cent of these craftsman households own lands. More than 80 per cent of them own houses. The houses are built with mud walls and have roofs of Mangalore or country tiles. A few houses in Sorab are thatched with straw. Most of the houses are unfurnished.

Out of the 68 households of carvers, 27 are in the income group Rs. 101-150 a month, 15 are in the income group Rs. 151-200 a month, 18 are in the income group Rs. 201-300 a month and each of the remaining 8 have an earning of more than Rs. 300 a month.

In order to give an idea about the general expenditure pattern the budgets of a few representative families are given below:

- I. A household with 9 members of whom 2 are carvers, 1 is a pith worker and the rest are non-earning dependants. The average income of the household is Rs. 220 a month of which Rs. 200 is from sandalwood carving and Rs. 20 is from pith work.

Average monthly expenditure:	
Items	Rs.
1. Food (cereals)	70
Food (non-cereals)	10
2. Drinks	20
3. Fuel and light	10
4. House rent	15
5. Clothing	20
6. Pan, tobacco, etc.	5
7. Other items	30
8. Purchase for production	40
Total	220

- II. A household in Sagar with 8 members of whom 1 is a sandalwood carver, 1 is pith worker and the rest are non-earning dependants. The average monthly income of this household is Rs. 180, of which Rs. 150 is from sandalwood carving and Rs. 30 is from pith work.

Average monthly expenditure:	
Items	Rs.
1. Food (cereals)	80
Food (non-cereals)	10
2. Drinks	23
3. Fuel and lighting	14
4. House rent	8
5. Clothing	25
6. Pan, tobacco, etc.	3
7. Other items	10
8. Purchase for production	30
Total	203

On the date of Survey the household had an outstanding loan of Rs. 200 and the deficit budget is balanced by credit purchases.

- III. A household in Sagar consisting of 9 members, of whom 3 are earners and 6 are non-earning dependants. Two of the earners are sandalwood carvers and one is a pith worker. The household is put up in its own house. The average earnings of the household is Rs. 215 a month. The carvers earn Rs. 190 a month and the pith worker earns Rs. 25 per month.

Average monthly expenditure:	
Items	Rs.
1. Food (cereals)	85
Food (non-cereals)	12
2. Drinks	30
3. Fuel and lighting	15
4. House repair	1
5. Clothing	25
6. Pan, tobacco, etc.	7
7. Other items	10
8. Purchase for production	30
Total	215

- IV. A household in Sorab with 5 members of whom 1 is a carver, 2 are pith workers and 2 are children.

The household is staying in its own house. It also owns 3.00 acres of land which has been leased out for crop rent. The average monthly earnings of the household is Rs. 190, made up of Rs. 125 from sandalwood carving, Rs. 40 from pith work and Rs. 25 by way of rent.

Average monthly expenditure:	
Items	Rs.
1. Food (cereals)	55
Food (non-cereals)	8
2. Drinks	30
3. Fuel and lighting	10
4. House repair	3
5. Clothing	25
6. Pan, tobacco, etc.	10
7. Other items	14
8. Purchase for production	35
Total	190

- V. A household in Sorab consisting of 11 members. Of these members 3 are carvers, 5 are pith workers and 3 others are dependants. The household owns 4.00 acres of land and has leased it out for crop rent. It is residing in its own house. The average monthly earnings of the household is Rs. 335. The earnings from sandalwood carving and pith work being Rs. 220 and Rs. 90 respectively and the income from land being Rs. 25.

Average monthly expenditure:	
Items	Rs.
1. Food (cereals)	120
Food (non-cereals)	22
2. Drinks	40
3. Fuel and lighting	15
4. House repair	2
5. Clothing	35
6. Pan, tobacco, etc.	12
7. Other items	29
8. Purchase for production	60
Total	335

On an average, 35 per cent of the total monthly expenditure is spent on cereals, 5 per cent on non-cereals, 12 per cent on drinks (including milk and sugar), 5 per cent on fuel and lighting, 2 per cent on house rent or repair, 12 per cent on clothing, 3 per cent on pan and tobacco and its products, 9 per cent on miscellaneous items and 17 per cent on purchases required for the trade.

Enquiries regarding indebtedness of the Gudigars reveal that even after supplementing their income from various sources, they have not been able to make both ends meet. About 60 per cent of the households have run into debt and the loans have been incurred for marriage and other ceremonial expenses.

Co-operative Society

Altogether there are four co-operative societies formed by the craftsmen engaged in sandalwood carving. The aim of these co-operative societies is to promote the craft of sandalwood carving and to safeguard the interests of the craftsmen. Of the four co-operative societies three are in North Kanara district and one is in Shimoga district.

"The Mysore Gudigars' Co-operative Society, Ltd." was established in 1915 at Sagar. This serves all the craftsmen members in Shimoga district. There is a branch of this co-operative society at Sorab.

"The Sandalwood Carvers' Co-operative Society" at Honnavar was established in 1939. "The Sandalwood Producers' Co-operative Association" at Kumta was formed in 1940 and "The Gaudchitraks Co-operative Sandalwood Carving Society" at Sirsi came into existence in 1943. The area of operation of the Co-operative Societies in North Kanara district is confined to the respective taluks.

The working capital of the co-operative society at Sagar is Rs. 10,000 which includes a loan from the Government of Rs. 7,000 still outstanding. A grant of Rs. 19,000 has also been received by this co-operative society towards the investment on building, furniture and to meet the managerial expenses.

The co-operative society at Kumta has received a loan towards working capital of Rs. 10,000 and a grant for managerial expenses of Rs. 1,000.

The co-operative society at Sirsi has received a loan of Rs. 7,500 from the Government of which Rs. 4,500 is repaid and Rs. 3,000 is outstanding. The Government loan of Rs. 15,000 obtained by the co-operative society at Honnavar has been repaid in full.

The number of members in these four co-operative societies are 179. Among them 101 are sandalwood carvers from the centres surveyed and the rest constitute carvers from the rural areas of the districts of Shimoga and North Kanara and workers engaged in pith work.

The total value of finished products marketed through these co-operative societies during 1960-61 is Rs. 56,572.

The co-operative societies have supplied to the members sandalwood on loan basis and tools at subsidised rates.

Training Centres

The Artisan Training Institute at Sagar is an old institution which provides training in sandalwood carving. The period of training is two years and the trainees are given a stipend of Rs. 20 per month. Though the training is open to all, preference is given to candidates belonging to Gudigar community. The Superintendent of the Institute selects the candidates in consultation with the Assistant Director of Industries and Commerce, Shimoga district. It may be mentioned that no candidate of any other community has so far sought admission to the course. The physical and mental make up as well as the artistic bent of mind required of this craft are to be acquired by a constant and intensive practice under an able guide.

The Artisan Training Institute at Kumta is a recent one and in this Institute also training is imparted in sandalwood carving.

Training in this craft is provided at Sri Chamarajendra Technical Institute, Mysore and at the J. J. School of Art, Bombay. Gudigars of Shimoga district prefer the Institutes at Sagar and Mysore, while those in North Kanara district prefer the J. J. School of Art, Bombay of which North Kanara district formed a part prior to States Reorganisation.

At the time of the survey there were 14 trained craftsmen engaged in sandalwood carving in the centres covered. Besides 8 trained craftsmen of these centres are in employment as instructors in Industrial Training Institutes.

Urban and Rural Craftsmen

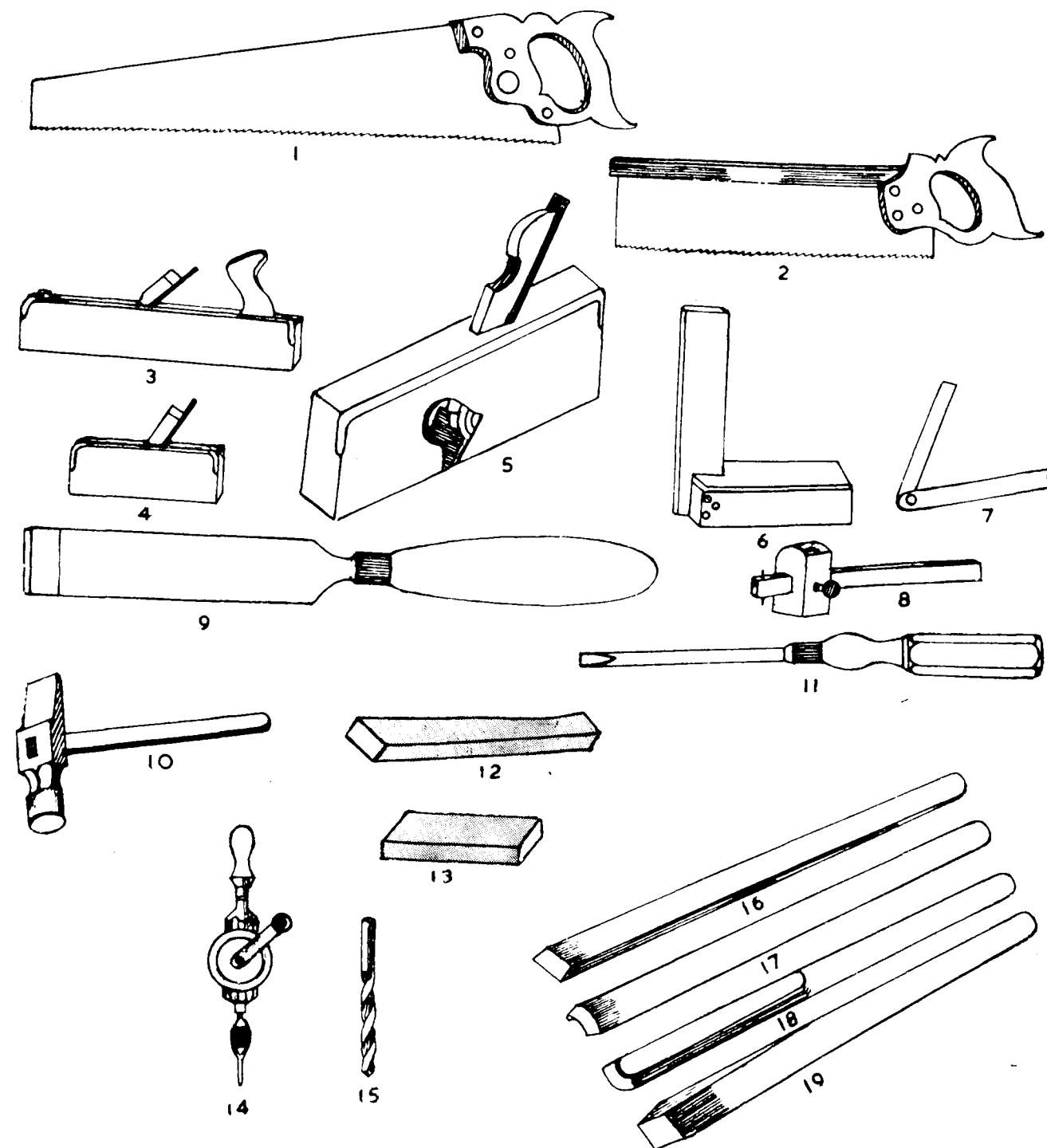
It is a point of interest to note that high priced articles and images of deities of sandalwood, involving more time and labour in making are produced by the craftsmen staying in villages, particularly at Jade in Sorab taluk and at Nathkeri in Honnavar taluk. The plausible explanation for the preference these rural craftsmen show towards the production of such time consuming articles is that being primarily agriculturists they practice carving as a subsidiary occupation and they are



A sandalwood tree (×) about 30 years old.

PLATE 2

SANDALWOOD CARVING



Tools used by the Sandalwood carvers.

1. Handsaw, 2. Tenon saw, 3. Jackplane, 4. Smoothing plane, 5. Rebate plane, 6. Try square, 7. Ruler, 8. Marking gauge, 9. Chisel, 10. Hammer, 11. Screw driver, 12. Mallet, 13. Whetstone, 14. Hand Drill, 15. Drill-bit, 16. *Kadiyuva Chana*, 17. *Bagina Chana* (firmer gouge), 18. *Bagina Chana* (paring gouge), 19. *Nunupu Chana*.



A carver giving finishing touches to an image carved in the round.



Carving of a figure in relief.



Prior to carving the craftsman outlines the design, previously traced on the wood with pencil, by means of a chisel and mallet.



Carving of a design in low relief by manipulating with chisel.



Joiners at work.



The front and the back view of Venugopala (Lord Krishna) carved in the round.
The figure is mounted on a carved pedestal.

Size of the figure: 14 inches. Size of the piece: 22 inches.



Ganesha (Vinayaka) carved in high relief.
The *Prabhavali* and pedestal are made of sandalwood.

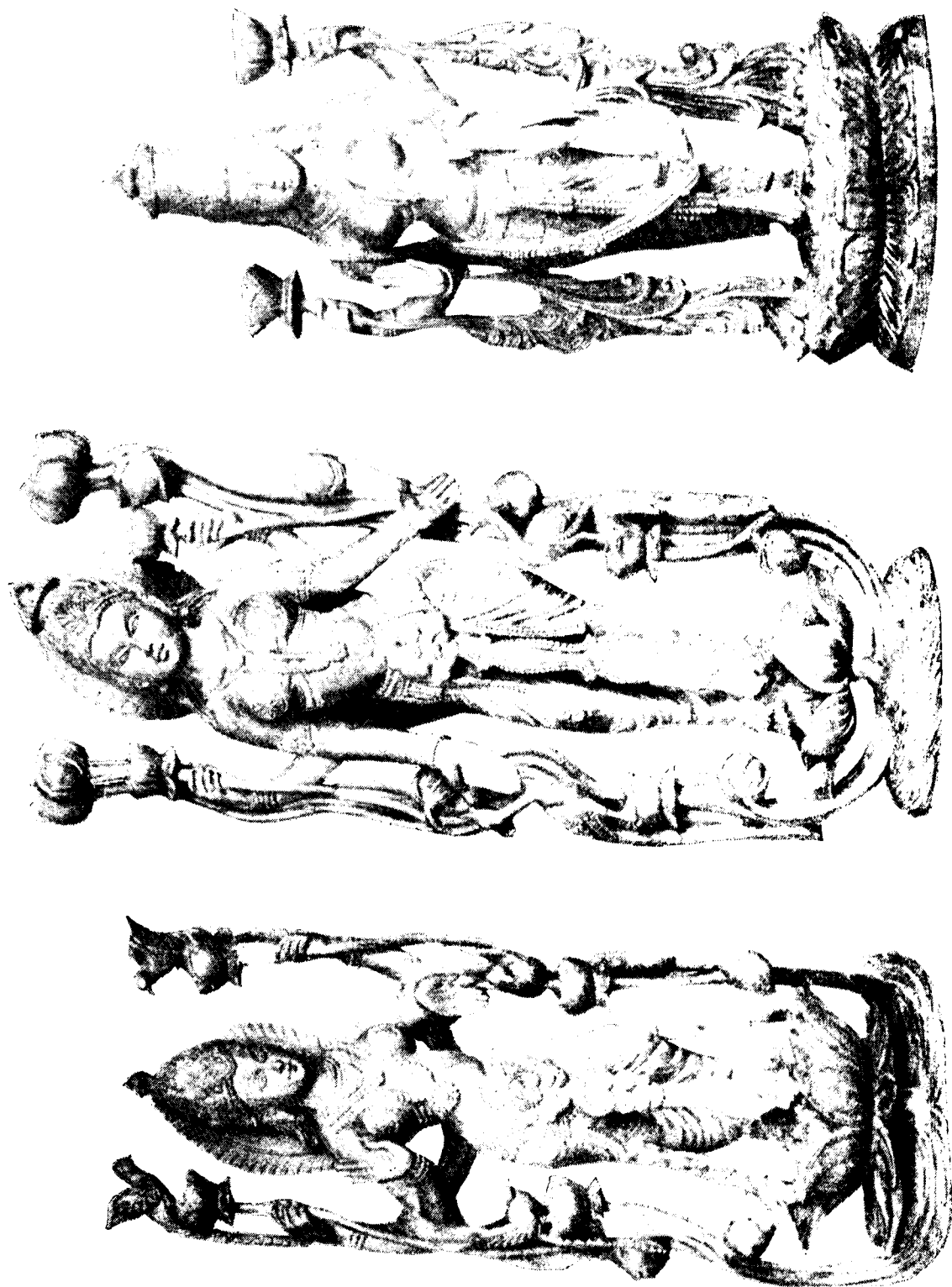
Size of the piece: $13\frac{1}{2}$ inches by 11 inches. Size of the figure: $5\frac{1}{2}$ inches by 4 inches.



Nataraja (Shiva) carved in high relief.
The *Prabhavali* and the pedestal are also of sandalwood.
Size of the piece: 13 inches by 9 inches.



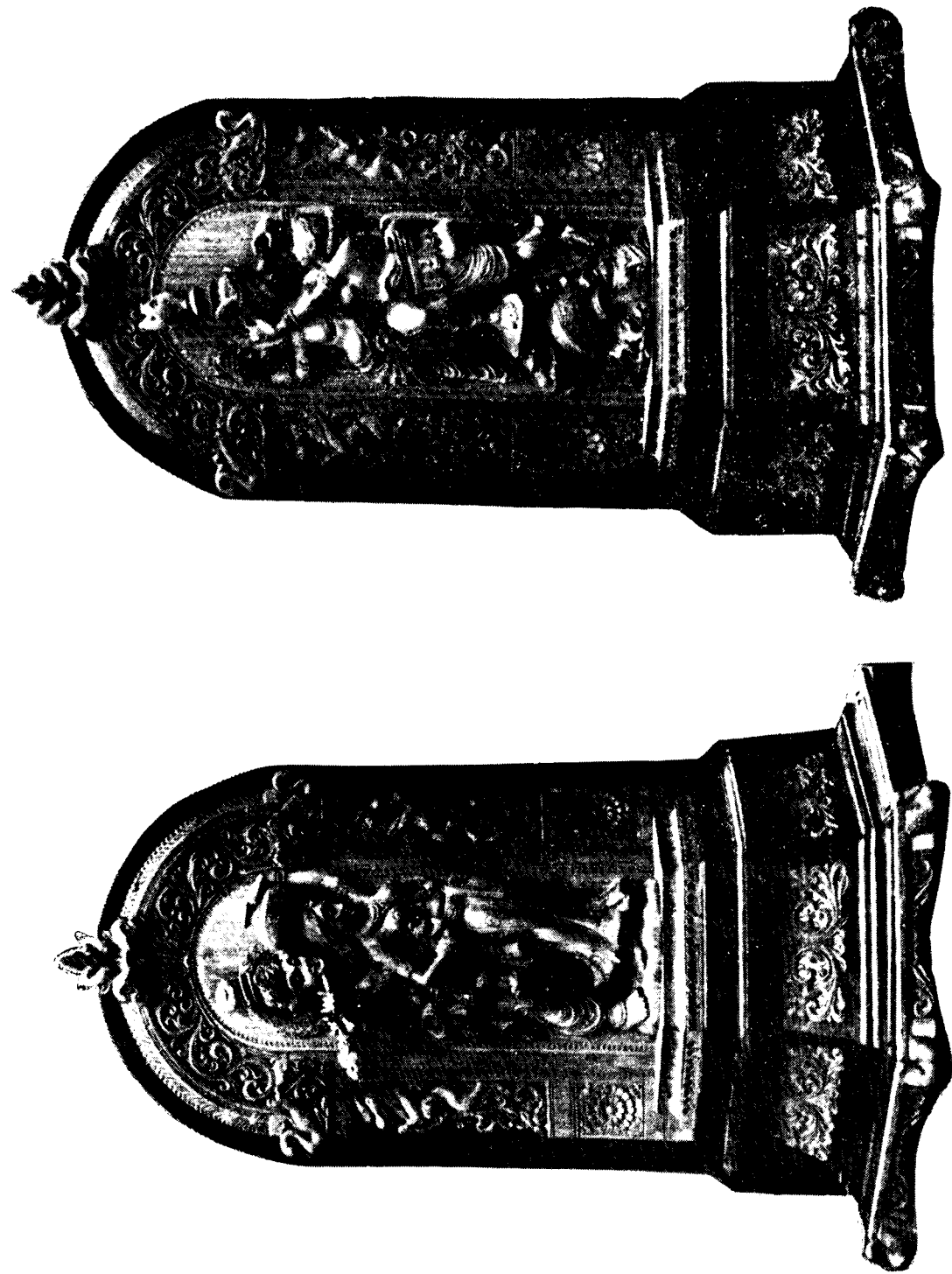
Radha-Krishna, carved in the round and mounted on a plain pedestal.



Images of Lakshmi — carved in the round in *Shilpa* style.



Images of Saraswathi — carved in the round in *Shilpa* style.

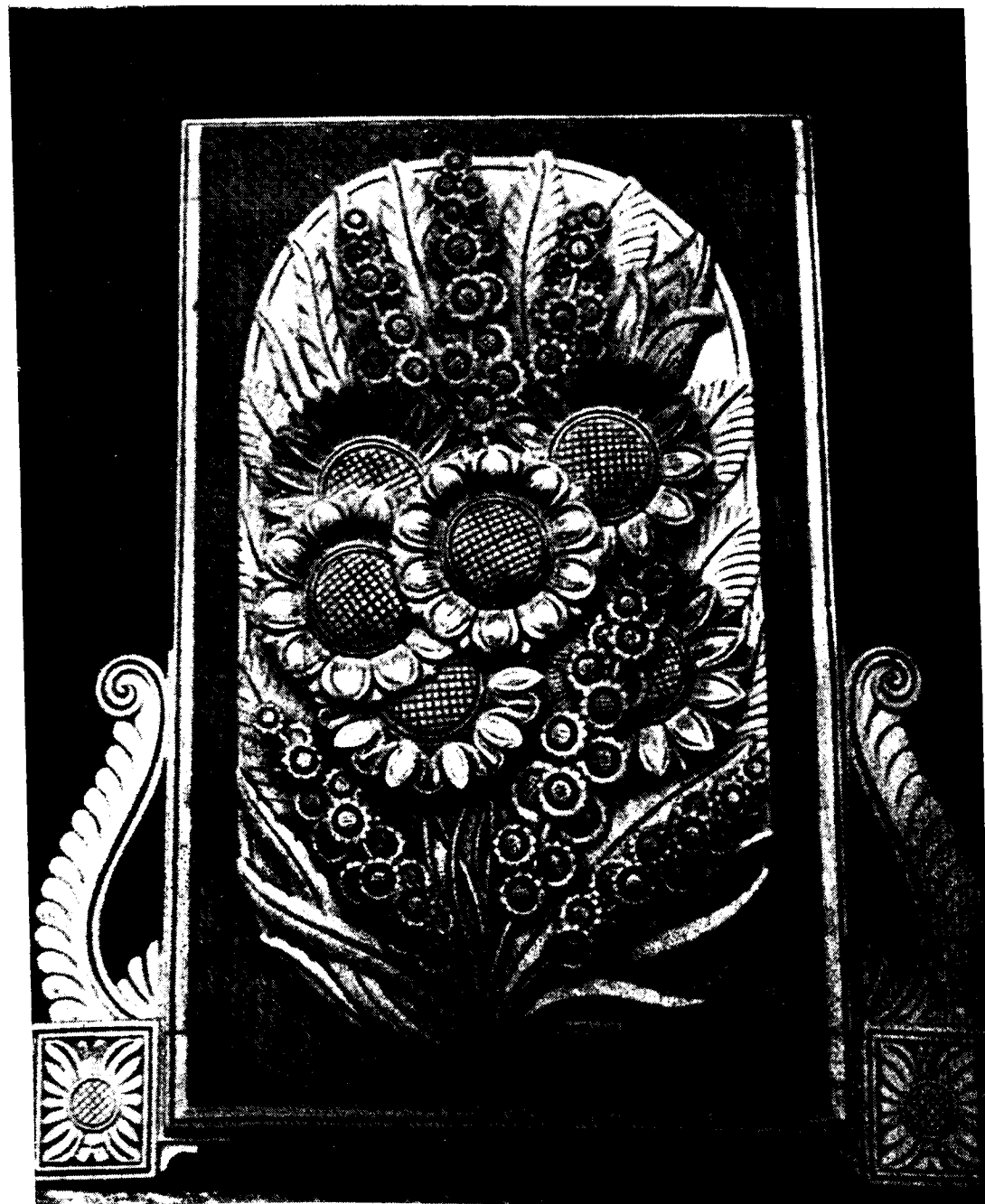


Radha-Krishna. carved in high relief with exquisite *Prabhavali* and picturesque pedestals.



A panel showing Rama, Sita and Anjaneya. The panel is enclosed in a rosewood frame.

Size: 12 inches by 5 inches.



A panel showing festoon of sunflowers.
The panel is fixed to a rosewood back.

Size of the piece: $12\frac{1}{2}$ inches by $10\frac{1}{2}$ inches.



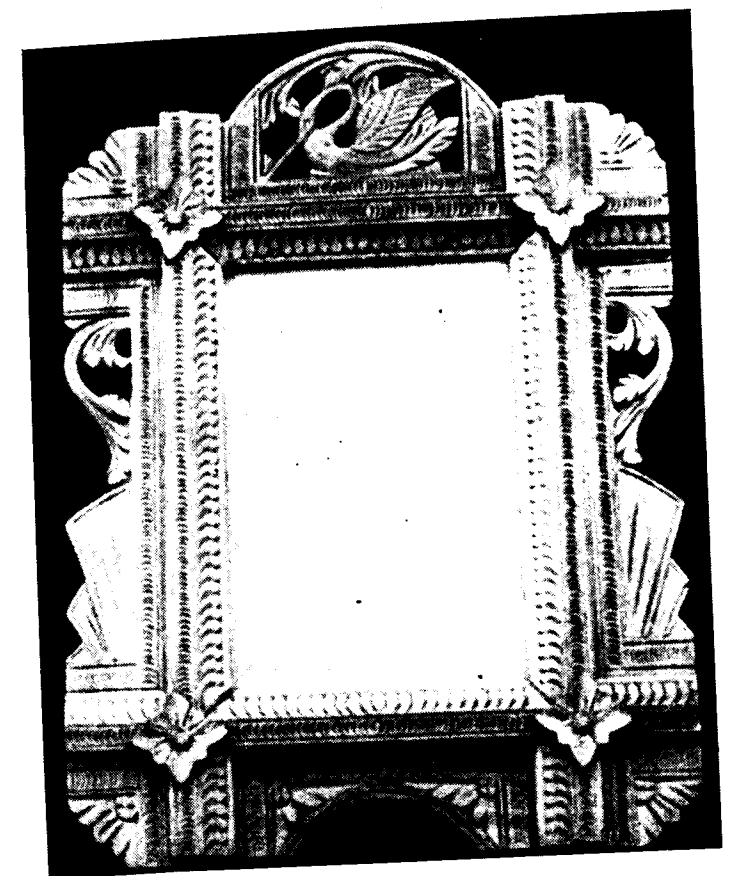
A panel depicting the famous Jog falls. The panel is fixed to a rosewood base.
Size of the piece: 12 inches by 10 inches.



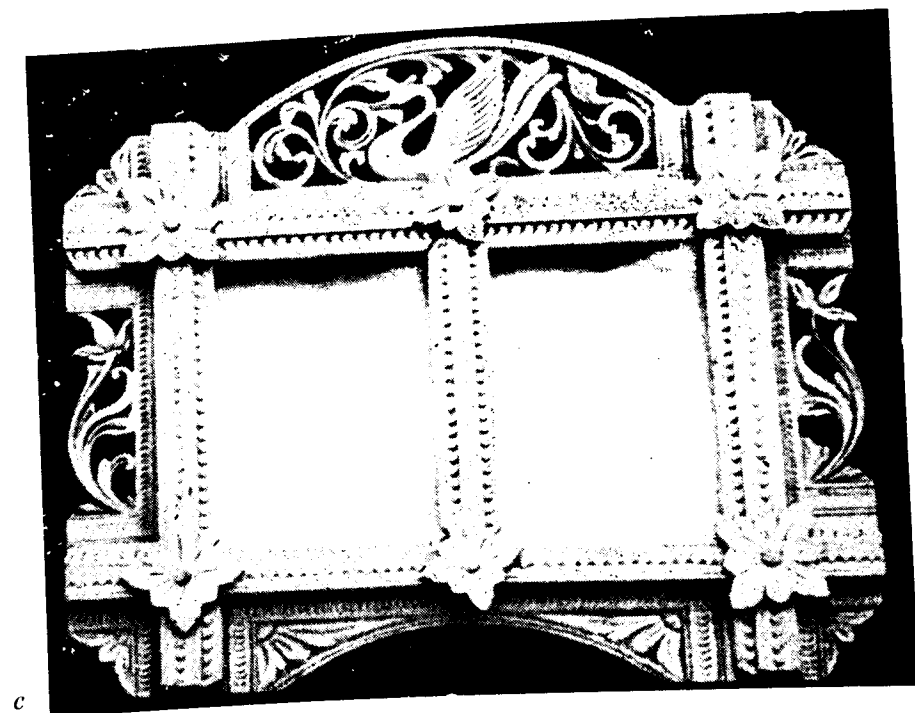
Front view of a casket. The four swans set on a rosewood pedestal support the casket at the corners.
Size of casket: 13 inches by 9 inches by 9 inches.



a



b

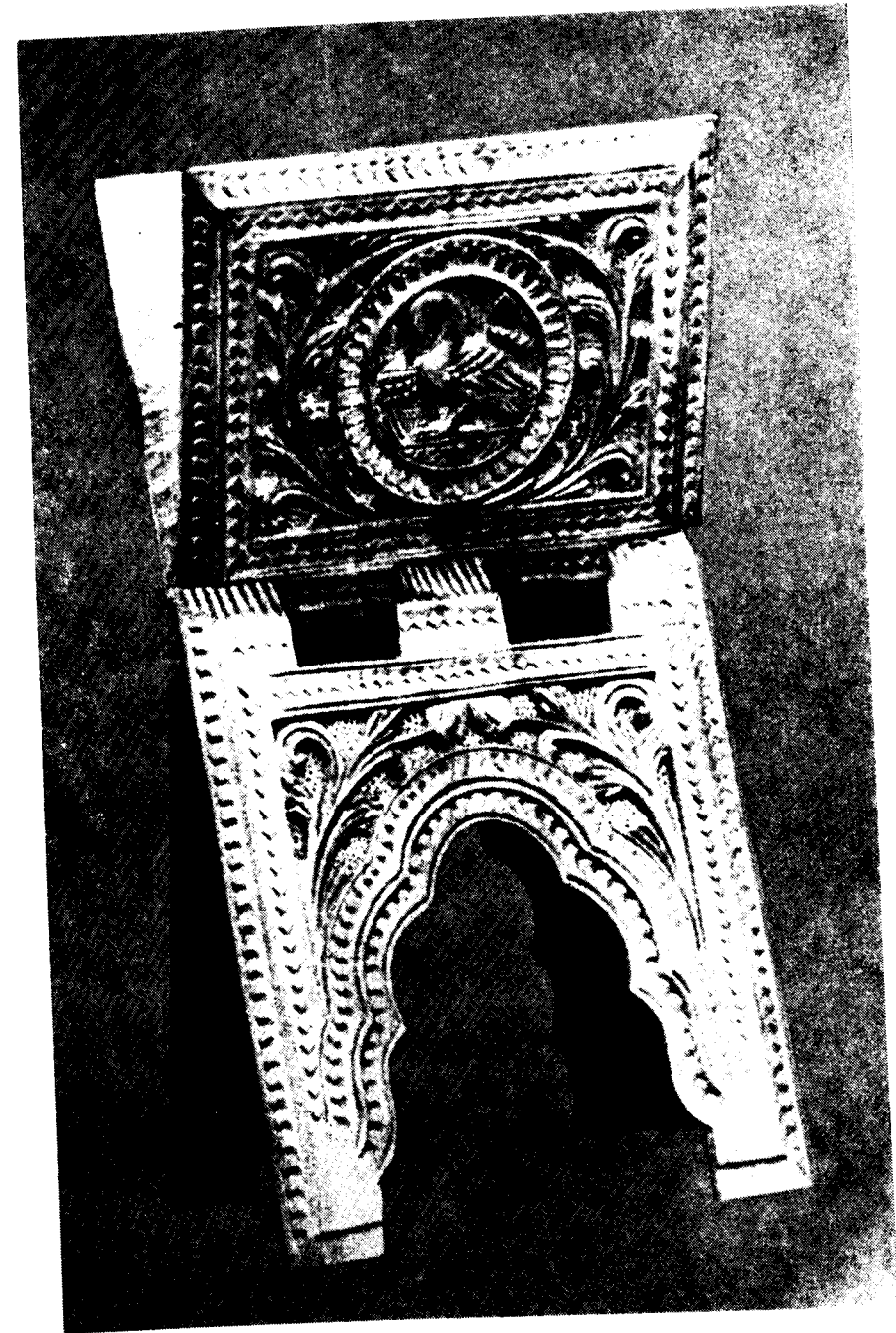


c

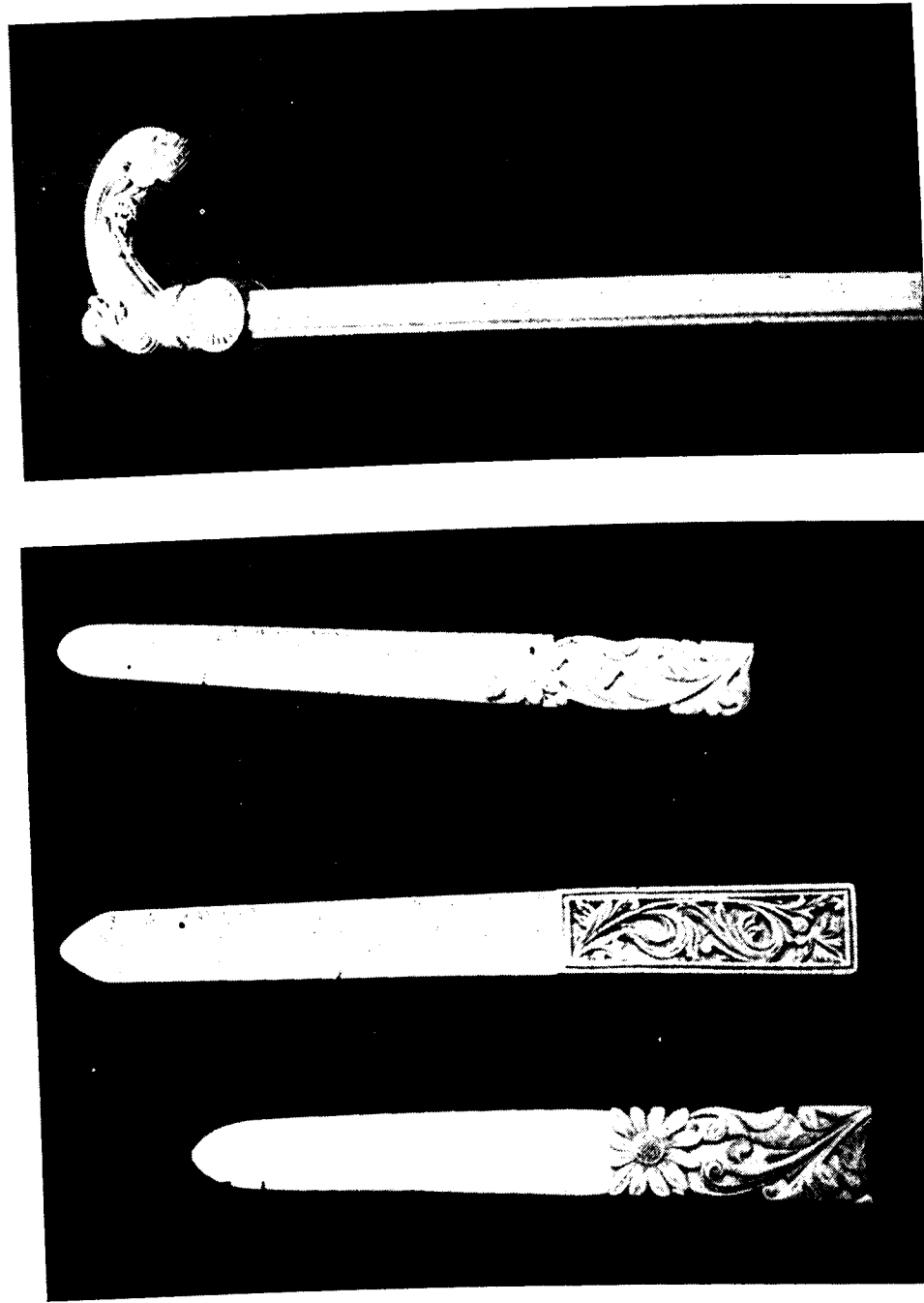
a. A delicate photo frame of excellent workmanship (Size: 8 inches by 4 inches). b. A decorative photo frame (Size: 9 inches by 7 inches). c. A photo frame to hold two photographs (Size: 8½ inches by 7 inches).



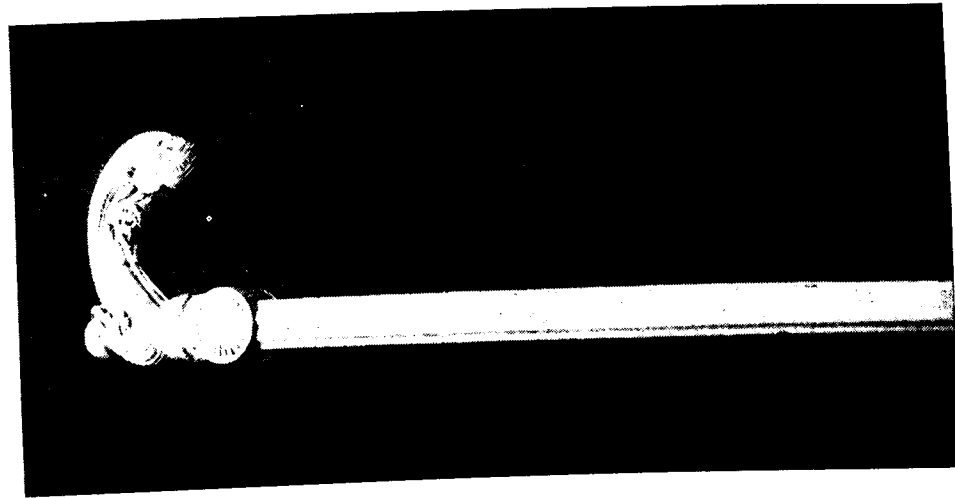
A tray incised with creepers and a carving of a swan in the centre.
Size: 10 inches by 7 inches.



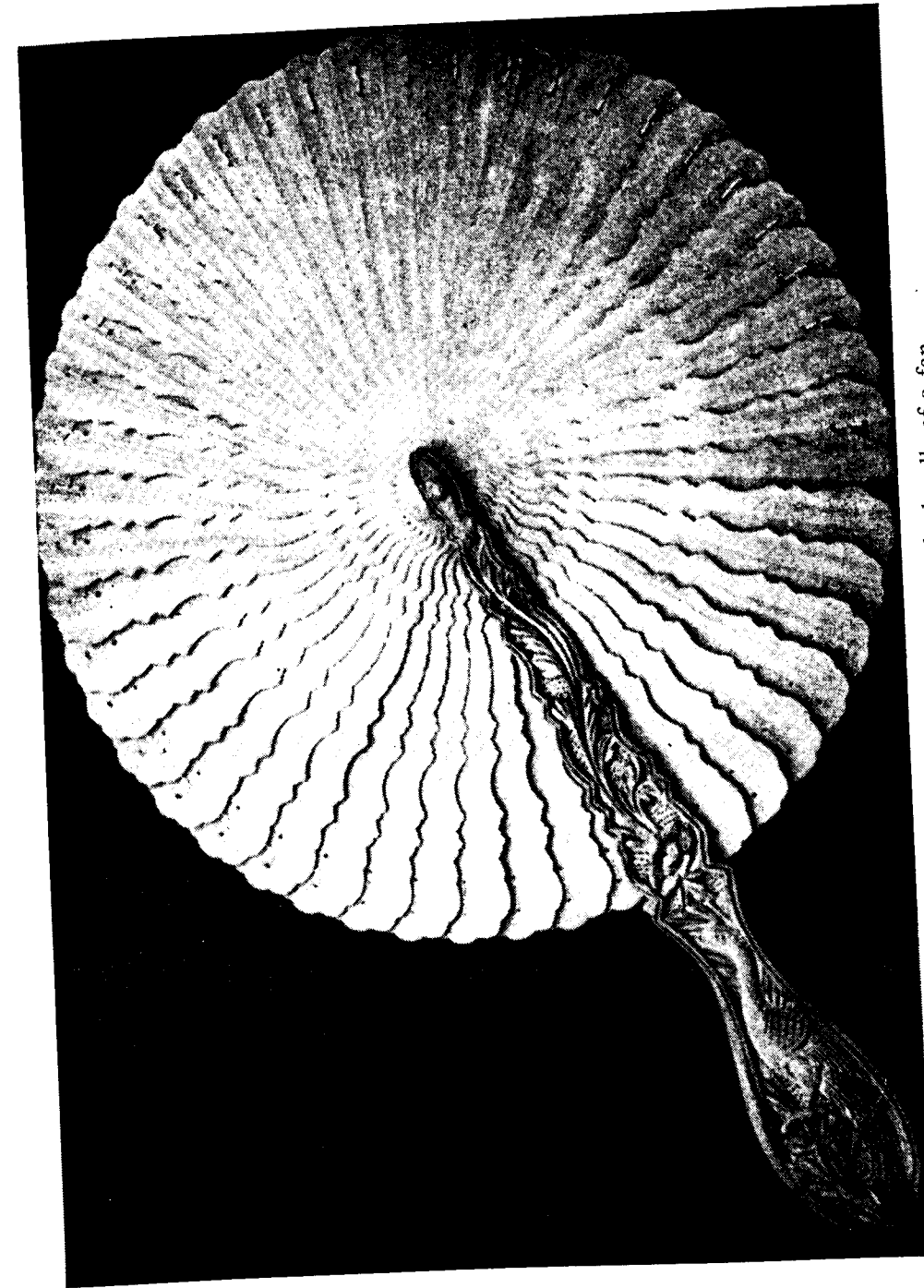
Side view of a *Vyasapeeta* (book-stand)



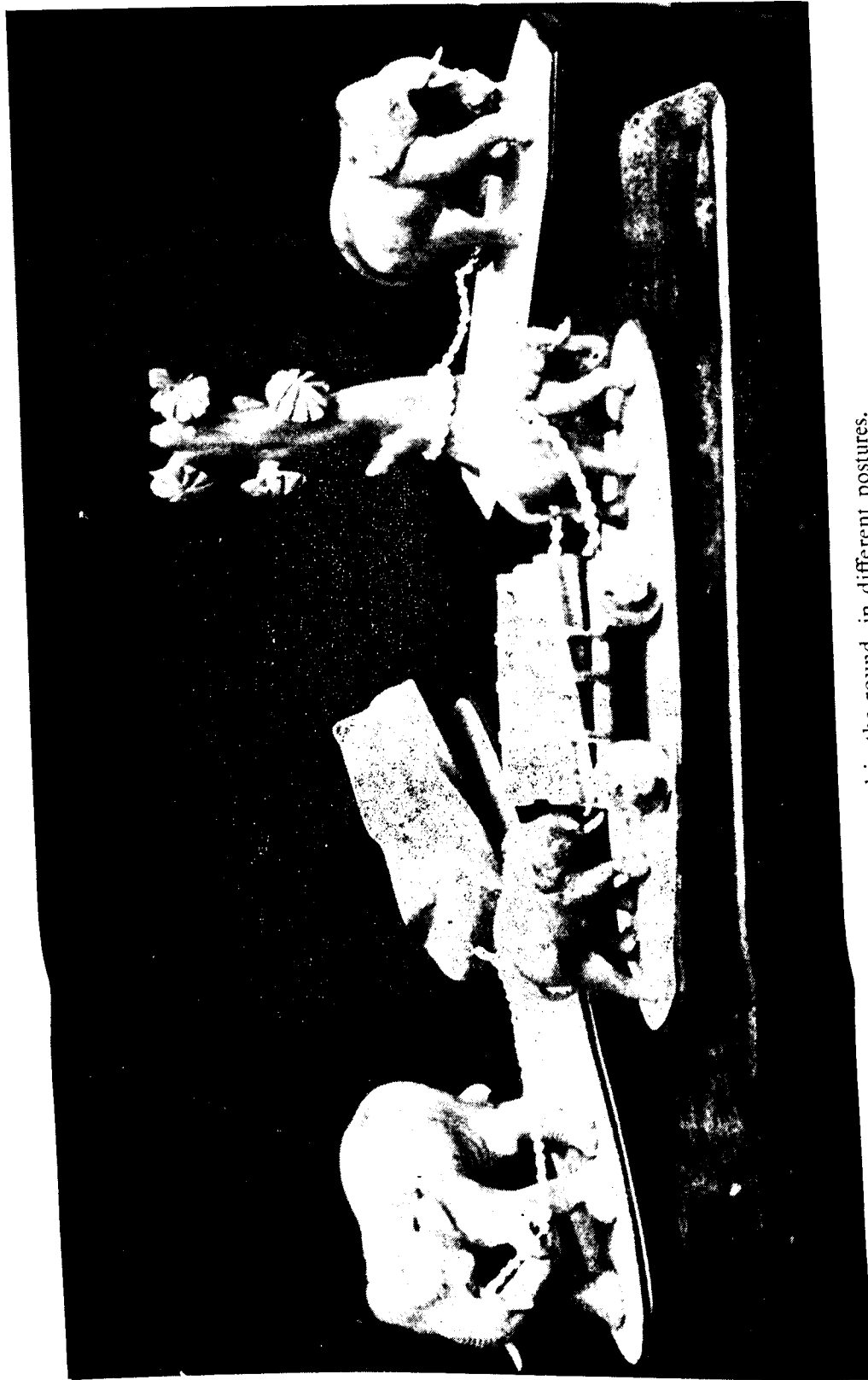
a. Paper-knives with carved handles.



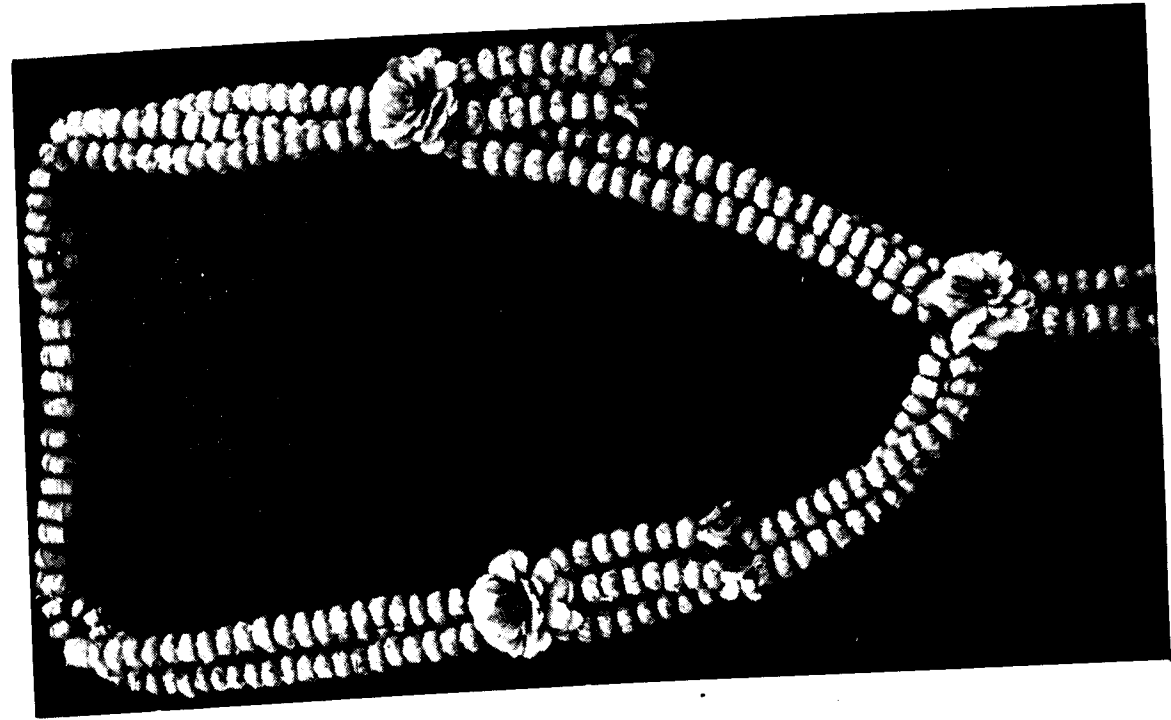
b. A walking-stick with an artistically carved handle.



A swan and creepers carved on the handle of a fan.
Size: Handle 10 inches; blades—each 6 inches.



Elephants carved in the round, in different postures.



b. A garland made of the shavings of sandalwood.



a. Sandalwood flower pot

not therefore keen on getting an immediate return from this trade.

But the position of their co-craftsmen in the urban centres is different. The earnings from this profession constitute their main stay and they can hardly afford to take up orders which involve a

longer time to execute. They, therefore, take up to making small articles such as fans, boxes, photo frames, calendar stands, trays, and the like which can be completed in about a week's time and yield a quicker return. They carve high priced articles mostly on order.

CHAPTER IV

CONCLUSION

In the 'Industrial Art of India', George C. M. Birdwood writes, "The most beautiful example of Mysore Sandalwood Carving even seen in this country was a little cabinet exhibited by Major Puckle in Annual International Exhibition of 1871". In the Gazetteer of the Bombay Presidency—Kanara, it is mentioned, "some of the articles carved by Subbanna of Honnavar which were sent to the Exhibition in Paris gained a silver medal".

The above references confirm the appreciation of this craft and its recognition abroad during the last century. The sandalwood articles presented to the distinguished visitors to India testify the recognition of this craft during the current century.

The craftsmen feel that the earnings from this craft is not encouraging and say that they are carrying on the trade for want of an alternative. A few craftsmen differ from this view.

When questioned about their intention of training their sons in the hereditary industry, they have stated that their ambition is to see that their sons discontinue the craft and take up employment which provide a regular income.

A peculiar feature of this craft is the natural feeling of pride that the Gudigars have, that they alone can carry on this craft and none else. (No other community persons, except a Lingayat at Sagar, has tried to take up this craft so far.) They realise with some vanity that their craft requires an artistic afflatus which is not a common quality of all men and is definitely a natural gift. Quite often this feeling has had a baneful effect on the practical side of their life by making them adopt an air of superiority towards the others with whom they have to live, and thus provoke dislike.

Attempts are being made by agencies like All India Handicrafts Board and such others to keep this a living craft.

APPENDIX I

LIST OF SANDALWOOD CARVERS IN THE CENTRES OF SORAB, SAGAR, SIRSI, KUMTA, HONNAVAR AND SIDDAPUR.

Sl. No. of household	Sl. No. of carver	Name of carver	Sl. No. of household	Sl. No. of carver	Name of carver
Sorab			8.	11.	S. G. Santhappa
1.	1.	B. N. Bekkappa		12.	Nagaraja
2.	2.	G. Annappa	9.	13.	K. Krishnappa
3.	3.	B. Puttappa	10.	14.	Vedantappa
	4.	Parasuramappa	11.	15.	Umapathi
	5.	Subramanya		16.	B. Ramanna
4.	6.	K. G. Subbarayappa	12.	17.	Narayanappa
5.	7.	D. Rangappa	13.	18.	Devappa
6.	8.	R. Narayanappa		19.	Puttaswamy
	9.	Mylarappa	Sirsi		
	10.	Vaikuntappa	1.	1.	Anand S. Gudigar
7.	11.	Ramachandrappa		2.	Mohan A. Gudigar
	12.	Srinivasa		3.	Ramadas N. Gudigar
8.	13.	M. G. Giriappa		4.	Srinivas N. Gudigar
9.	14.	Chowdappa	2.	5.	Chikkanna M. Gudigar
	15.	Santappa	3.	6.	Venkappa V. Gudigar
10.	16.	Chowdappa	4.	7.	Vasantha V. Gudigar
	17.	Narayanappa	5.	8.	Ramachandra D. Gudigar
11.	18.	T. Narayanappa	6.	9.	Sadananda D. Gudigar
	19.	Venkatesh		10.	Laxman D. Gudigar
12.	20.	T. S. Dayananda		11.	Nagaraja Gudigar
	21.	T. S. Dhananjaya	7.	12.	Sitharam C. Gudigar
13.	22.	Gurunathappa	8.	13.	Ramachandra A. Chitari
14.	23.	Chikkanna	9.	14.	Rathnakar K. Shetty
15.	24.	Shivaramappa		15.	Suresh K. Shetty
	25.	Gopalappa	10.	16.	Gopal S. Gudigar
16.	26.	J. B. Gangadhara	11.	17.	Ramalinga S. Gudigar
	27.	B. K. Puttaswamy	12.	18.	Vittal R. Shetty
17.	28.	K. Damodarappa	13.	19.	Manjappa H. Gudigar
18.	29.	S. P. Bangarappa	14.	20.	Vaman N. Gudigar
19.	30.	B. G. Gopalappa		21.	Nagesh N. Gudigar
20.	31.	Chowdappa		22.	Roulunath N. Gudigar
21.	32.	B. Rangappa	15.	23.	Dathathreya V. Gudigar
22.	33.	Ganapathappa	Kumta		
	34.	Neelakantappa	1.	1.	Chidananda Shetty
23.	35.	B. K. Venkatesh		2.	Sankara A. Shetty
24.	36.	Bandi Manjappa	2.	3.	Datta Iraya Shet
25.	37.	Achutha	3.	4.	Samba A. Shet
26.	38.	B. Sankarappa		5.	Laxman A. Shet
27.	39.	Annappa	4.	6.	Subbarao R. Shetty
28.	40.	Kotrappa		7.	G. R. Shetty
	41.	Ganapathappa	5.	8.	G. V. Shetty
29.	42.	Seenappa	Honnavar		
Sagar			1.	1.	Narayana M. Shetty
1.	1.	T. Govindappa	2.	2.	Santaram R. Shetty
	2.	S. G. Chowdappa		3.	Devidas S. Shetty
2.	3.	Jade Annappa	3.	4.	Santhi V. Shetty
	4.	Gopalappa		5.	Mohana
3.	5.	S. Bangarappa	4.	6.	Nagesh V. Shetty
4.	6.	Ramappa	Siddapur		
	7.	Narayana	1.	1.	Vittal C. Chitrak
5.	8.	Parasuramappa		2.	Venkatesh C. Chitrak
6.	9.	K. G. Santhappa	2.	3.	M. B. Gudigar
7.	10.	K. G. Shamanna			

ROSEWOOD CARVING
OF MYSORE CITY

CHAPTER I

INTRODUCTORY

Introduction

Rosewood carving, like sandalwood carving, is quite an ancient craft of Mysore. At present it is carried on in Mysore city and those engaged in it belong to the community of Viswakarma.

Though this craft can claim an ancient origin, it has been organised on the present lines in Mysore since 1870 specialising in the production of single piece carved figures. This switching over to carving of figures was more a necessity arising from loss of patronage for carved doors and ceilings which went out of fashion, than of choice. The craft actually revived after Sri Chamarajendra Technical Institute came to be established at Mysore and wood carving was introduced as a subject of study.

Centre of Production

Carving of rosewood figures is confined only to the city of Mysore and this type of work is not done anywhere else in Mysore State.

Mysore is a city with a population of 253,865 and is situated at 12°18' N. Latitude and 76°12' E. Longitude towards the north-western base of the Chamundi hills. It is also the district headquarters. The area of the city is 14.4 sq. miles.

The city sprawls with well laid out and beautiful parks. There are also a number of temples. Mysore is served very well by rail and a net work of roads link it with Bangalore, the State capital, and other important places. The distance between Mysore and Bangalore is 86 miles by train and 89 miles by road.

Though comparatively a new city, it can boast much of a hoary past. Till independence, Mysore was a native State ruled by hereditary Maharajas. Mysore city owes its importance to the ruling dynasty which made the city its place of residence. Recently some important industries and the Central Food Technological Research Institute have also come to be established. Mysore is a

place of tourist interest and any visitor would find a lot to see and enjoy in paying a visit to Jagan Mohan Palace, the Zoological gardens, the Chamundi hills, Sri Chamarajendra Technical Institute and the palace of the Maharaja. There are a number of public offices as well. The Mysore University is having its headquarters here. Colleges providing instruction in Arts, Science, Medicine, Engineering, Commerce, etc., are also located in the city.

Dasara which is observed in the city as a semi-religious festival with great pomp and pagentry attracts each year a very big crowd. Thousands of visitors from far and near congregate to witness the celebrations which end up with a colourful procession of the Maharaja to the Bannymantap. These celebrations are unique in the country for their colourful pagentry and grandeur. An exhibition is held as an adjunct to the festival in which a section is set apart for the display of Arts and Crafts products.

The Brindavan gardens at Krishnaraja Sagar which attracts a great many visitors is just 12 miles distant from the city. Srirangapatna, the capital of Tipu Sultan and a place of historical interest is at a distance of 8 miles only.

Railway Workshop, Sandalwood Oil Factory, Silk Weaving Factory, Sri Krishnarajendra Mills and the Java Motor Cycle Industries are among the other major factories in the city.

Apart from rosewood carving, the other crafts pursued in the locality are Agarbathi manufacturing, making of musical instruments, weaving and inlay of ivory and woods of different colours in rosewood.

Viswakarmas

The rosewood carvers in the city belong mostly to the Viswakarma caste. The classes pursuing the five superior crafts of making articles in gold, brass and copper, wood, iron and the sculptor go

by the names of Viswakarmas. They claim descent from Viswakarma, the celestial architect. Locally they are called Akkasale, Kanchugara, Badagi, Kammara and Shilpi respectively.

Viswakarmas are found all over the State though called differently in different parts of the State. The male members have the suffix Achari to their names. Members of these five divisions interdine with one another and intermarriages between them are also not prohibited.

Persons Engaged in Rosewood Carving

Eighteen households are at present pursuing this craft in Mysore city. Among them 16 households started this craft during the present generation while for the remaining 2 households the craft is an ancestral one.

Of the 18 households, 16 belong to the caste of Viswakarma, one is a Telugu Banajiga and the other a Vokkaliga.

All the heads of the Viswakarma households are carvers. Fourteen have been trained either full term or part term in Sri Chamarajendra Technical Institute. Wood carving is not a hereditary occupation for them except in the case of two. On enquiry it is ascertained that 13 were goldsmiths and one a milk vendor.

The father of the head of the Telugu Banajiga household was a merchant and of the Vokkaliga household a teacher. Both these carvers are trained in Sri Chamarajendra Technical Institute for full term.

Communitywise distribution of artisans employed in rosewood carving at Mysore are given below:

Name of Caste (1)	No. of households (2)	No. of persons employed in production					
		Household			Hired		
		P.	M.	F.	P.	M.	F.
(3)	(4)	(5)	(6)	(7)	(8)		
Viswakarma	16	19	19	..	8	8	..
Telugu Banajiga	1	2	2	..	..	..	..
Vokkaliga	1	1	1	..	..	..	..
Total	18	22	22	..	8	8	..

P=Persons. M=Males. F=Females.

Establishments

There are 18 establishments in Mysore city engaged in producing carved rosewood figures. All the 18 are proprietary establishments run by individual households. In these 18 establishments, 30 carvers are engaged in production among whom 22 are household workers and 8 are hired workers.

Besides these 18 establishments, a private unit consisting of 10 persons does carving in the premises of Kurubara Choultry located in Irwin Road of the city. Five of them belong to the Viswakarma caste and one each to the castes of Vokkaliga, Kunchitiga, Lingayat, Kuruba and Christian. These workers are on the look out for other jobs and evince little interest in sticking to this occupation.

CHAPTER II

TECHNIQUES OF PRODUCTION AND ARTICLES PRODUCED

Raw Materials

Rosewood is the chief raw material used in the craft. Other materials that are necessary besides rosewood comprise deer horn, ivory, wax, polish, sandpaper and hardware.

Rosewood

Rosewood (*Dalbergia latifolia*) grows in abundance in the forests of Mysore, Hassan, Shimoga and Coorg districts. Locally called *Kari Mara*, it smells rose water and burns with a smoky flame. The narrow sapwood is yellow while the colour of the heartwood varies from dark brown to black. It has longitudinal streaks and the wood is hard and close grained. It takes a lustrous polish and in consequence is used extensively in cabinet making. It is also the chief raw material for inlay craft which is gainfully practised by many in Mysore. A cubic foot of this wood weights from 50 to 60 lbs. Its price per cubic foot varies from Rs. 30 to Rs. 150 depending on the girth and quality of the block.

Deer Horn

Deer horn is used for making the tusks of elephants and teeth of 'Happy-man'. Trimmed deer horn though resembling ivory when freshly cut hardly retains its ivory appearance for long and turns brown. Deer horn is sold locally at Rs. 0.75 per pair or at Rs. 2.50 per lb.

Ivory

For quality workmanship genuine ivory is employed in the craft instead of deer horn, as deer horn turns brown after some period. The ruling price of ivory is Rs. 45.00 to Rs. 50.00 per lb.

Beeswax

The use of beeswax is in polishing. Molten beeswax mixed with turpentine is applied uniformly on the carved piece as a base for polish.

Polish

For polishing these articles, polish specially prepared by mixing wax and turpentine which is readily available with local dealers is used. This polish gives an attractive finish to the carved pieces besides acting as a protective coat. It is sold in tins and costs Rs. 4.00 per tin.

Sandpaper

Carved pieces are to be smoothened before polishing and sandpaper of grades ½, 0, 00 are used for this purpose. This is available in the local shops at Re. 1 per 12 sheets.

Hardware

The use of hardware such as nails and screws is also essential in the craft of rosewood carving.

Tools (Plate 1)

Carving tools are of simple style and type as of old and the efflux of time has brought no change in their shape or design. However, the material from which they are made has improved a lot in recent times.

The tools consist primarily of chisels and gouges of differing sizes and shapes. The size varies from 1/16" to 1" and even more. All the tools are of equi-length and measure 8".

Chisels are used for removing superfluous wood and gouges serve the purpose of cutting hollows either deep or shallow which straight tools are incapable of doing.

The carving tools are made of steel and are manipulated by malleting. They locally go by the names of *Matta Chirna*, *Kolave Chirna*, *Thete Chirna*, *Rekhe Chirna* and *Kolamatta Chirna*.

Matta Chirna

It is a firmer chisel with one side of its cutting edge bevelled. The size of the cutting edge ranges from 1/16" to 1". This type of chisel is of uniform

utility articles such as table lamps, bases for cloth hangers etc., is completely shut out as these are now turned cheaply on lathes.

Another handicap from which the rosewood carvers suffer is that the nature of the wood precludes adoption of new designs to meet the changing tastes and thereby augment the earnings. Carved pieces of sandalwood can easily sell by virtue of the quality and fragrance of the material and also the wide reputation such articles enjoy.

Similar and favourable factors are not, however, available to articles made of rosewood.

Storage

Carved pieces are displayed on wooden racks and the carvers are experiencing little or no difficulty for storing them as they are mostly sold out even before there could be any heavy accumulation.

Dealers when they despatch the pieces, pack them securely in dealwood cases with heavy padding.

CHAPTER III

ECONOMIC AND GENERAL ASPECTS

Cost of Production

Like any other article of artistic value, carved figures of rosewood are also priced on their artistic merit. The carvers do not maintain itemised accounts of expenditure on raw materials. However, with a view to obtaining a general idea of the production cost, rough assessment is made of the cost of raw materials used in the two common items of manufacture and furnished below:

- I. Item of carving: Elephant
size : 9"
posture : trunk down.

Cost of raw materials:	Rs.	Rs.
rosewood	7.00	
deer horn for tusks	0.25	
sandpaper	0.50	
polish, wax & turpentine	0.75	8.50

A carver has to work 2 full days to complete the piece which is sold for Rs. 16.50 and yields him a labour charge of Rs. 4.00 per day.

- II. Item of carving: Happy-man
size : 8"

Cost of raw materials:	Rs.	Rs.
rosewood	5.00	
deer horn	0.25	
sandpaper	0.50	
polish, wax & turpentine	0.75	6.50

To carve this figure, a carver has to work two days and the piece sells for Rs. 14.50. The labour charges on this average Rs. 4.00 per day.

Out of the total cost, raw materials account for 33 per cent and labour which is invariably household 67 per cent. The realisations by way of labour indicated in the above cost analysis holds good only when the piece sells at a fair price. On account of competition and the urgency of the carver to realise cash for meeting his family needs, the pieces are sold at much lower prices which cuts deeply into his wages which may sometimes be even as low as Rs. 1.50 to Rs. 2.00 per day.

The cost shown against rosewood refers to cut pieces from timber. The carvers usually obtain their requirements from firewood depots and the

advantage of low price thus derived helps to augment their margin of profit.

According to the carvers, the very, low price offered for the product by the local dealers compels their going in for cheaper wood of low quality from firewood dealers. However, much these unscrupulous local dealers of carved pieces may beat down the cost of the articles to derive to themselves the best advantage, there is absolutely no possibility of the producers incurring any loss. Such a loss could arise only when the dependance is entirely on hired labour. But this trade in Mysore is practised mostly as a household industry and outside labour is rarely employed. The carver's margin of profit or to be more precise his earnings, depend on his capacity to hold the stock for getting a more favourable price. If on the other hand, pressed for funds he should sell in a hurry, he gets less. The maximum earning of a carver under normal circumstances varies from Rs. 5.00 to Rs. 6.00 a day.

The carvers do not depend on the dealers to whom they supply finished products for raw materials, and they arrange to get their own supplies. They, however, receive advances from dealers against orders booked by them.

Capital

The craft is pursued by the craftsmen employing simple tools, the investment on which will not be beyond Rs. 100. Power operated tools are of little use to them. Raw materials are not stocked in large quantities and they cannot also afford to do so.

The capital investment of all the 18 establishments is only on tools which aggregates Rs. 2,000. As regards the working capital it was ascertained to be in the neighbourhood of Rs. 3,000 during the period of this study. No capital is invested on acquiring buildings for running the craft as the carvers work in their residential houses or in rented sheds.

Production

The value of articles produced by the 18 establishments in Mysore during the year 1963-64 was about Rs. 40,000. The value of raw materials used during the same period was about Rs. 12,000.

Households of Carvers

There are 18 households of rosewood carvers in Mysore city. These 18 households consist of 79 members of whom 23 are males, 23 are females and 33 are children below 14 years of age. The heads of all these 18 households are professional carvers and have been carrying on the trade as their principal means of livelihood. They have no other supplementary avocation. Among these 23 adult male members, 22 are gainfully employed as full time carvers and one is a student doing carving in his spare time. The females are all domestic workers and take little or no part in the pursuit of the craft. The children below 14 years of age are mostly students.

Of these 18 households, 2 happen to be 2 member households, 7 are 3 member households, 1 is a 4 member household, 2 are 5 member households, 3 are 6 member households, 2 are 7 member households and 1 is a 8 member household.

Economic Conditions

Fifteen of the households pursue the trade with household labour, while 3 others employ hired labour also in addition to the family members working. The total number of hired workers in the trade is 8. Hired labourers are paid wages on daily wage system. A skilled worker gets Rs. 3.00 a day.

Thirteen of the households work at home and 5 work in rented sheds. Two households own houses while the other 16 live in rented houses. The carvers' houses are pucca constructions and a majority of them have electric lights and taps also.

Out of the 18 households covered in this survey, 10 are in the income group Rs. 50-100 a month, 5 are in the income group Rs. 101-150 a month and 3 are in the income group above Rs. 150 a month. About 30 per cent of the income is spent on the purchase of raw materials. A major portion of the earnings is spent on such essential items as food articles and rent and there is little

surplus left for being spent on recreations and the like.

Marketing

The finished rosewood products are usually supplied to dealers who sell in their show-rooms both inlay articles and carved pieces. Rosewood articles have a market within as well as outside the State. The dealers in the city send the carved pieces to their out-station agents. The demand for these articles is said to be more in the cities of Bombay, Delhi and Madras. Local sales are meagre.

Co-operative Society

Sri Viswakarma Craft and Banking Co-operative Society which was established at Mysore in 1954 has for its object the providing of aid to persons engaged in handicrafts such as work of goldsmith, painting, inlaying of ivory in rosewood etc., including rosewood carving. The carvers of rosewood have not formed any co-operative society of their own. The co-operative society buys carved figures from members displaying them in their show-room for sale. The realisations from the sale of carved pieces during 1963-64 was about Rs. 3,000.

Almost all the rosewood carvers are members of this co-operative society. They reported that the co-operative society is unable to fulfill their needs in marketing the finished products satisfactorily.

Training Centre

With a view to fostering and promoting the indigenous crafts of Mysore, imparting training in Arts and Crafts and help developing a taste for good design and craftsmanship, the Government of Mysore started a training centre at Mysore in 1892 called Sri Chamarajendra Technical Institute. The Institute was shifted to its own present building in the year 1913. Wood carving is a subject of study in this Institute since the time of its inception. The courses of study other than wood carving are drawing and painting, modelling, sculpture, sandalwood and ivory carving, inlaying of ivory in rosewood, engraving and enamelling, metal work, carpentry and cabinet making, rattan work, fitter's work, blacksmithery and polishing and upholstery. The duration of study for wood

carving is 5 years. At present 8 candidates are undergoing training in the Institute. Qualifications for admission to this course are that the applicant should have studied upto the first year of Middle School. A stipend is given to trainees, the rate of which varies according to the year of study. It is Rs. 3 per month during the first year, Rs. 4 per month during the second year, Rs. 5 per month during the third year, Rs. 6 per month during the fourth year and Rs. 8 per month during the fifth and final year.

There is a production unit in this Institute where 5 wood carvers are employed. Carved articles worth Rs. 2,487 were produced and sold in this unit during 1963-64. The wood carvers are not engaged exclusively in carving but also attend to other items of work in the Institute such as embellishing of furniture articles with floral and other designs.

Rosewood Carving and Sandalwood Carving

The craft of rosewood carving is confined to only one centre viz., Mysore city, while sandalwood carving is done at 6 chief centres in the two

districts of Shimoga and North Kanara. Even as sandalwood carving happens to be the traditional craft of Gudigars, rosewood carving is the traditional craft of Viswakarmas. The Gudigars have specialised exclusively in sandalwood carving whereas Viswakarmas function in a diversified field such as wood carving, stone carving, construction, carpentry, blacksmithery, goldsmithery and metal casting. The female folk of Gudigar households engage themselves gainfully in making pith articles while the female members of rosewood carvers neither pursue any independent craft nor are of any help to the males. Sandalwood carvers produce a wide variety of articles, but the rosewood carvers are unable to do, as rosewood by its very nature lends itself only to carving in the round and eludes completely relief carving. Also the number of rosewood carvers in the State is about one fourth the number of sandalwood carvers.

The law of demand and supply plays an important part in both types of carving in deciding the quantum of earning of the carver.

CHAPTER IV

CONCLUSION

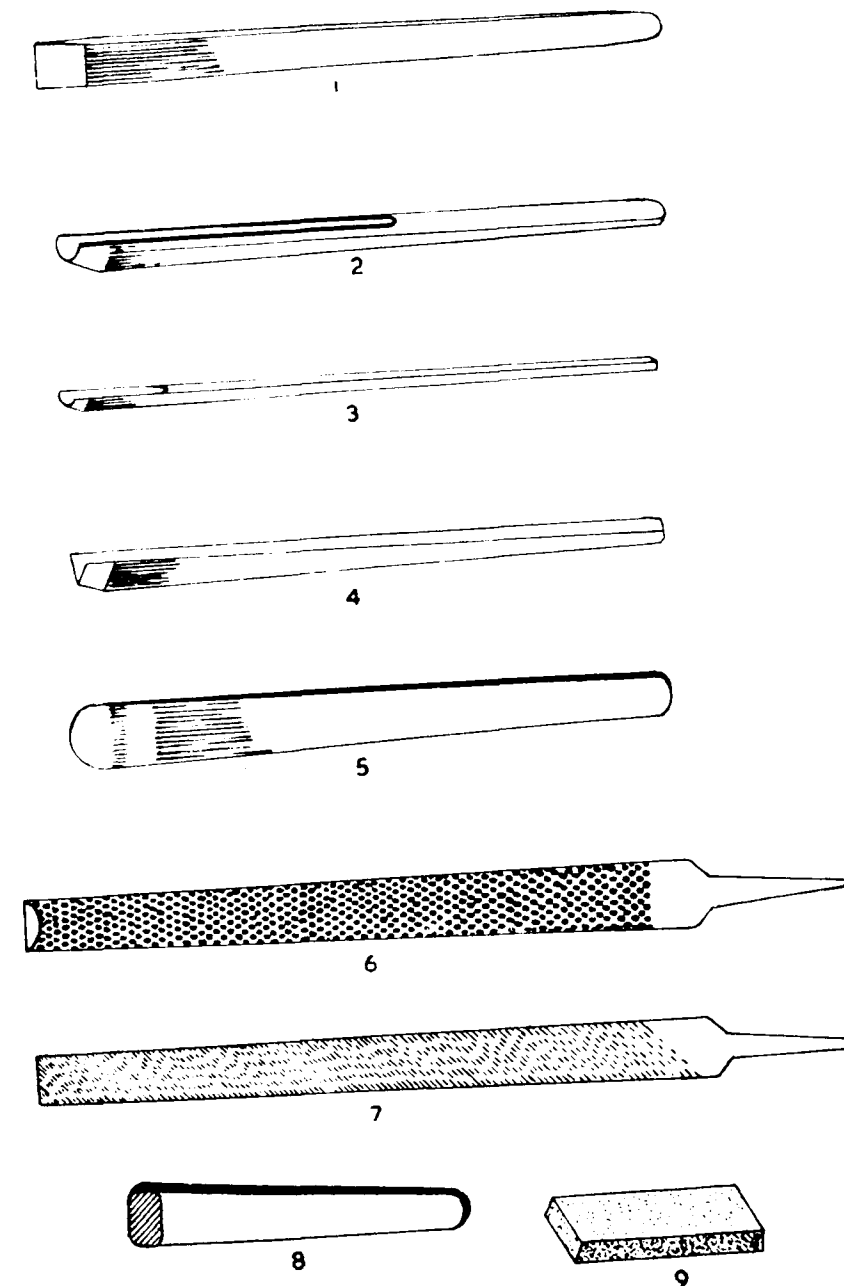
Wood carving in this State had at one time attained a high water mark of perfection but now it has fallen from its pedestal of past glory. The carving of decorations on ceilings and doors which used to be very much the choice of the wealthy and the privileged and also a status symbol is no longer the fashion today. In consequence, the wide patronage the craft enjoyed in the past greatly has practically disappeared. Rosewood carving and inlay work are two of the skilled crafts of Mysore city which use rosewood as base material. Tracing the course of their individual prosperity presents an interesting study in contrast. The inlay craft though late to arrive in the field, has come to its own quite speedily and flourishes well putting more money into the hands of the worker, while the sister craft of wood carving claiming a comparatively earlier origin and having also had its hay days before the advent of inlay, is found now to be trailing far behind. If these conditions do not change for the better, there is hardly any doubt that the art of rosewood carving would, in course of time, be completely extinct. Its resuscitation is also not simple, due mainly to difficulties that flow from the fact that the craft lends itself to carving in the round only, thereby imposing severe restrictions on varieties of production and adaptability to changing needs and tastes. The daily earnings of a carver do little justice to the excellence of his art, but yet the carver plods on with his trade for want of an alternative. Further, the ignorance on the part of rosewood carvers of the

modern technological developments hinders their improving the craft on scientific lines. Availability in plenty of cheap inlay articles is a further disability to finding easy sale for carved pieces. It should, however, be said to the credit of this craft that despite all these handicaps, the carved rosewood pieces have maintained their high artistic merit.

The dealers' exploitation is also to some extent responsible for the craft having fallen on evil days. The assistance and encouragement of an agency which has no motive of profiting itself is thus felt essential to promote their sale and place the craft on a sound footing. The existing Sri Viswakarma Craft and Banking Co-operative Society has not been able to fulfill this role effectively. The craftsmen are also precluded from supplying their products to institutions direct, as the quantum of production is small. This helplessness has thrown them on the tender mercies of the dealers.

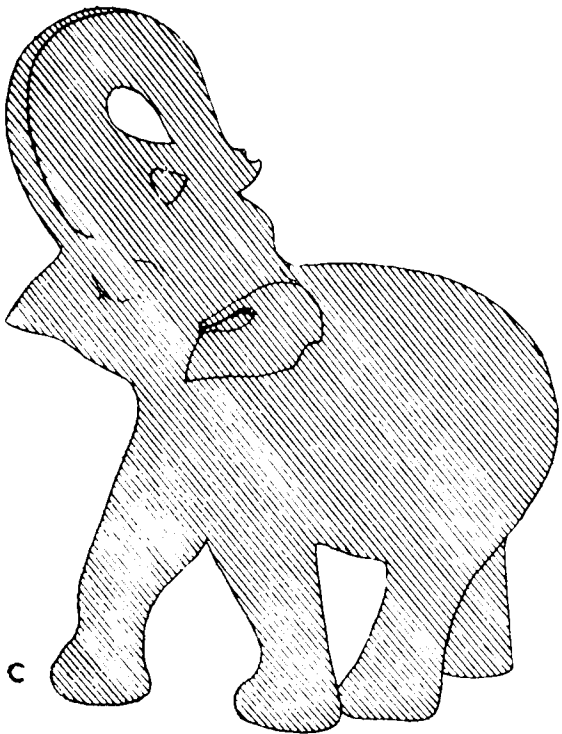
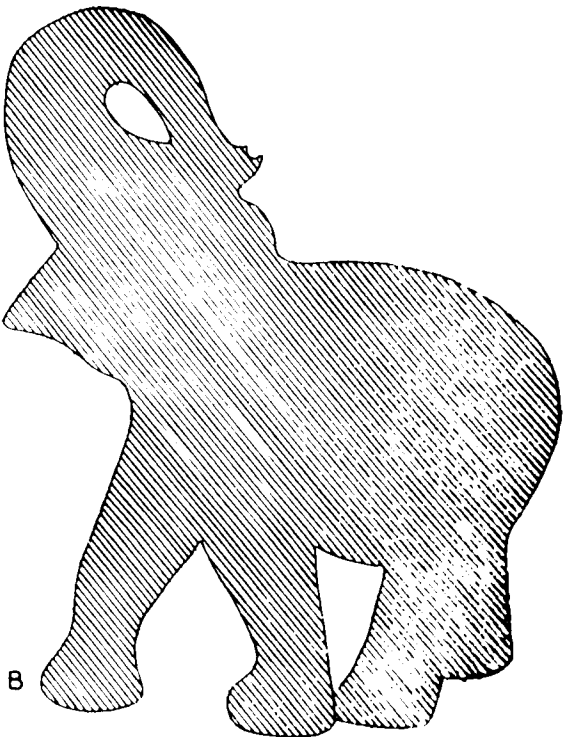
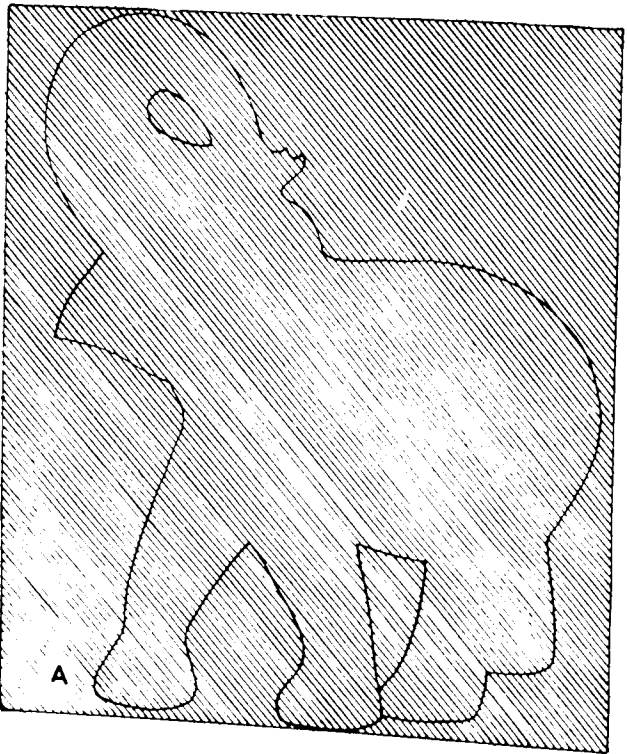
Rosewood cut from logs is costly and so the craftsmen resort to inferior wood that comes mingled with firewood. This has proved banal to the production of standard pieces.

The craft is now finding itself in doldrums, and the Institutions established for the regeneration of fine arts will have to step forward and make all out efforts to provide encouragement and trade facilities which might enable the gradual picking up and survival of the craft. Any apathy shown just now is sure to make rosewood carving a lost art for the succeeding generation.



Tools employed by the Rosewood carvers.

1. *Matta Chirna*, 2. *Kolave Chirna*, 3. *Thete Chirna*, 4. *Rekhe Chirna*,
5. *Kolamatta Chirna*, 6. *Rasp*, 7. *File*, 8. *Mallet*, 9. *Oilstone*.



Stages in carving in the round.
A. Marking is made on the block of wood.
B. An early stage in boasting.
C. An advanced stage in carving.
D. Finished figure.



A carver at work — outlining the figure of Happy-man.
The figure is carved in the round.



Wood is reduced to shape.
Chisels and mallet are used.



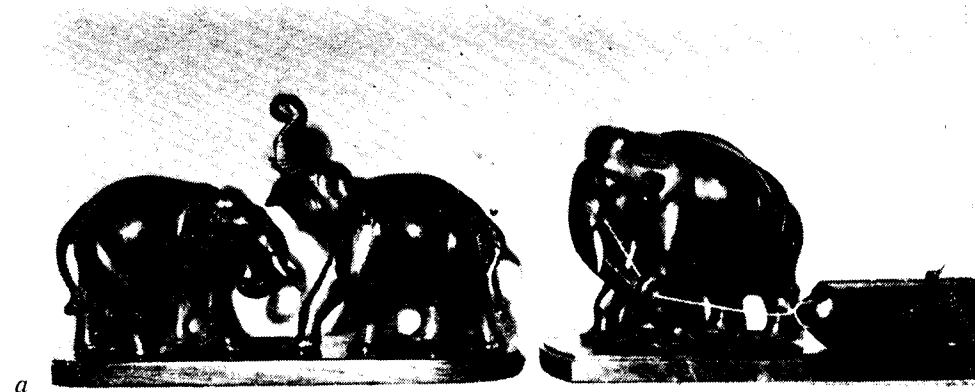
The figure is brought to its final form.
Chisels and mallet are again employed.



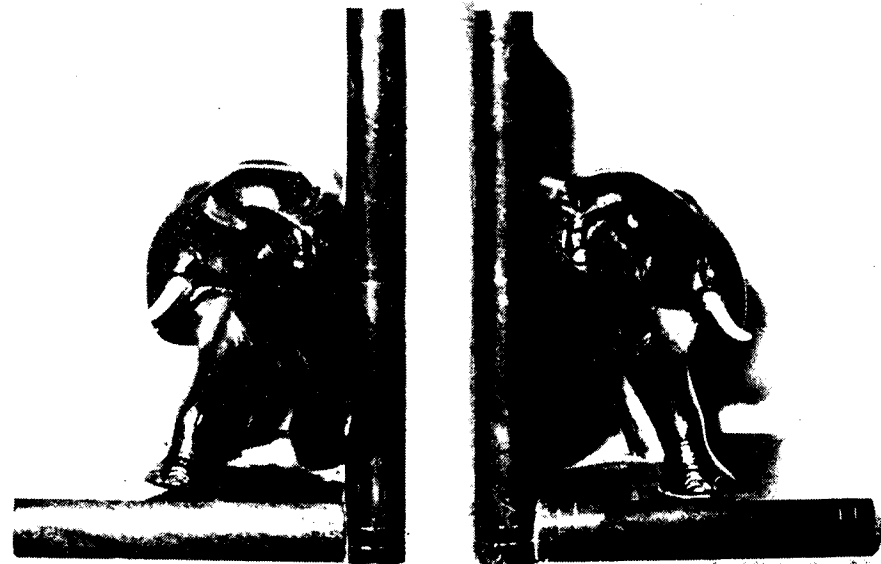
Sandpapering the figure.



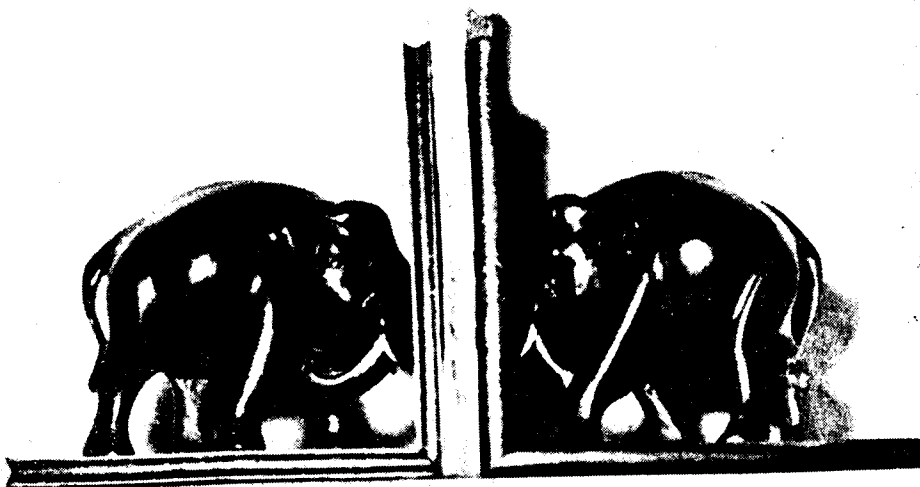
Polishing.



a



b

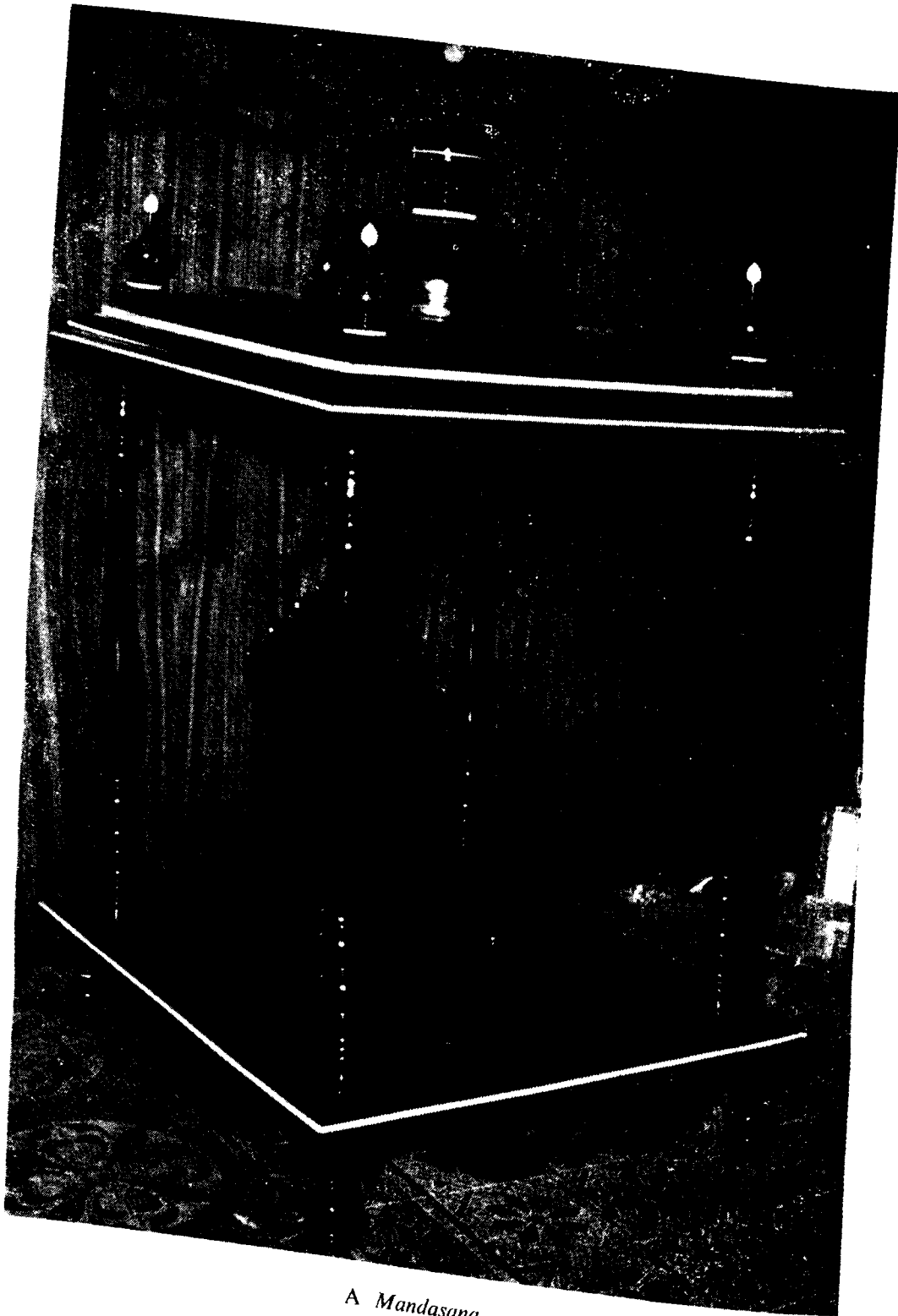


c

... .. c. Elephant and leg drawing postures. b & c. Book Ends.



Figure of Happy-man
Size: 9 inches.



A Mandasana.

ROSEWOOD CARVING

APPENDIX I

LIST OF ROSEWOOD CARVERS IN MYSORE CITY

Household No.	Name of Carver	Household No.	Name of Carver
1.	S. Govindaiah	10.	A. Kalachar
2.	E. Viswanathachar	11.	K. Somachar
3.	E. Subramanyachar	12.	K. Javaraiahchar
4.	J. Chandrasekharachar	13.	C. Thimmachar
5.	M. K. Parameswarachar	14.	C. Elakkachar
6.	C. Puttachar	15.	K. Kalachar
7.	C. Sankarachar	16.	A. Cheluvachar
8.	Rame Gowda	17.	Thimmappachar
9.	L. Sankarachar	18.	N. Cheluvachar

APPENDIX II

LIST OF WORKERS WHO WORK IN KURUBARA CHOULTRY

Sl. No.	Name of Carver	Sl. No.	Name of Carver
1.	Mallappa	6.	C. Mahadev
2.	Niladhara	7.	Puttannaiahachar
3.	Raju	8.	S. Puttachar
4.	R. K. Das	9.	Thimmaiah
5.	E. Maradilingachar	10.	Lingachar

APPENDIX III

PRICE LIST OF CARVED ROSEWOOD ARTICLES

Item	Size (height)	Price (Rs.)	Item	Size (height)	Price (Rs.)
Elephant (trunk down)	5"	7.00 to 9.00	Elephant lamp stands	5"	14.00 to 16.00
	6"	10.00 to 11.00		6"	16.00 to 18.00
	7"	12.00 to 14.00		7"	18.00 to 20.00
	8"	15.00 to 17.00		8"	20.00 to 25.00
	9"	20.00 to 22.00		9"	26.00 to 30.00
	10"	22.00 to 24.00		10"	35.00 to 40.00
	11"	28.00 to 32.00		11"	40.00 to 50.00
	12"	30.00 to 35.00		12"	50.00 to 65.00
Elephant (trunk up)	5"	10.00 to 11.00	Book-ends (pair)	6"	20.00 to 24.00
	6"	14.00 to 15.00	Happy-man	4"	6.00 to 8.00
	7"	16.00 to 18.00		6"	10.00 to 12.00
	8"	20.00 to 22.00		8"	12.00 to 18.00
	9"	25.00 to 28.00		10"	20.00 to 22.00
	10"	27.00 to 30.00		12"	23.00 to 26.00
	11"	35.00 to 40.00		15"	35.00 to 50.00
	12"	40.00 to 50.00		18"	50.00 to 60.00
				20"	75.00 to 100.00
				24"	85.00 to 120.00

PITH GARLANDS AND DECORATIVE ARTICLES
OF SORAB, SAGAR, SIRSI, KUMTA, HONNAVAR AND SIDDAPUR

CHAPTER I

INTRODUCTORY

Introduction

Making of flowers, wreaths and garlands out of pith is a craft carried on by the womenfolk of Gudigar community, the menfolk of which community carve articles in sandalwood.* The similarity between these two crafts is the artistic skill and taste exhibited by the persons engaged in them. Excepting this and the fact that these crafts are carried on by members of the same household, though by different persons, there is no other link between them. Both crafts are conducted in the household premises. Men work usually in the verandahs and the women in the backyards of the houses.

The raw materials used in these crafts are entirely different and have absolutely no connection with each other. Again, the products of the craft of sandalwood carving are fairly costly while those of pith work are cheap. Further, sandalwood carving is exclusively carried on by men and the pith work is carried on by women, though these workers of both crafts belong to the same households. It is surprising that with all these differences both the crafts are thriving side by side. In the absence of any plausible explanation that could be offered for their being pursued side by side, one has only to surmise that this circumstance is a matter of mere coincidence.

Persons Engaged in Pith Work

As already mentioned, the ladies of the Gudigar households make articles of pith. It is a hereditary craft and when girls are about ten years of age, they commence making flowers of simple designs with their mothers in their spare time, after attending school. The girls are not sent to school after they reach the age of about twelve years and these grown up girls devote their time almost entirely to this craft apart from the time they devote to household duties.

The details relating to the life of Gudigars as a community, their social habits and customs and also their economic conditions have already been dealt with in the monograph on Sandalwood Carving. It would be superfluous to repeat them in extenso as they apply equally with regard to this craft also being carried on by the same households.

Centres of Production

The chief centres of pith work in Mysore are the same as those of sandalwood carving viz, Sorab and Sagar in Shimoga district and Sirsi, Kumta, Honnavar and Siddapur in North Kanara district.

Establishments

According to the results of this survey conducted during January-March, 1963, there are 83 establishments engaged in producing pith garlands and decorative articles in the centres of Sorab, Sagar, Sirsi, Kumta, Honnavar and Siddapur. A total of 155 persons make pith articles in these 83 establishments.

The table furnishing the number of establishments engaged in producing pith articles and the number persons engaged in the craft in each of the centres surveyed is given below:

Name of centre	No. of establishments engaged in producing pith articles	No. of pith workers
(1)	(2)	(3)
1. Sorab	37	64
2. Sagar	15	25
3. Sirsi	16	35
4. Kumta	9	19
5. Honnavar	4	8
6. Siddapur	2	4
Total	83	155

* Refer page 3—Gudigars

CHAPTER II

TECHNIQUES OF PRODUCTION AND ARTICLES PRODUCED

Raw materials

The raw materials used in producing pith garlands and decorative articles are pith, colour powders, thread, wire, lace, tin-foils and glass beads.

Pith

Pith (also known as 'Sola'—*Aeschynomenaspera* or *paludosa*) is the chief raw material used in the craft and it is a feather weight material. It is the stem of a plant belonging to the family of water lily. This plant is locally known as *Bendu*. It grows in tanks in the taluks of Kalghatgi, Hanagal and Haveri in Dharwar district and in the taluks of Shiralakoppa and Shimoga in Shimoga district. The plant is not cultivated but is found in abundance as a wild natural growth in the areas mentioned.

The stem of the plant is cut at the root, taken out from water and dried in the Sun. The season for lopping the plant is from September to March. It is a seasonal occupation to a few households living in the areas where pith is found. Many Gudigars in Sorab collect the pith themselves from the tanks round about Shiralakoppa. They are given free licence by the Forest Department for the collection of pith. Dried stalks of pith are tied in bundles and are sold in Shandys (weekly markets) in Sorab, Sagar and Sirsi. A bundle of pith consists of 30-40 stalks of length 4 to 5 feet. The diameter of the stalks varies from 1" to 1½". The price depends on the size and quality of pith and would normally vary from Rs. 5 to Rs. 10 per bundle.

Households engaged in the craft stock pith for the whole year during the months when it can be collected. They store pith in the lofts. Apart from this craft, pith is largely used in the manufacture of hats; but Gudigars do not make hats.

Colour Powders

Colour powders soluble in water are used for colouring the pith. The basic colours are red,

rose, yellow, green, and violet. The colour powders are available in tin containers with local dealers and the price per tin varies from Rs. 2 to Rs. 3.

Thread

For stringing pith flowers thread is essential, and sewing thread is used for the purpose. It is also used for tying the flowers to the steel wire. The cost per reel of thread is 12 paise.

Wire

Strung flowers of pith are tied to thin steel wire for making wreaths as the use of mere thread would not very well serve the purpose. Steel wire of 16 gauge which costs Rs. 2.80 per kg. is used by the workers of the craft.

Lace

For making the wreaths attractive, glittering lace threads are also inserted. The lace is available in reels which cost Rs. 1.50 per reel.

Tin-foils

Coloured tin-foils are used for beautifying the decorative articles made of pith. The tin-foils cut into shapes of flowers and designs are pasted to the decorative articles.

Glass Beads

These are also used for the same purpose for which tin-foils are used. Glass beads put on string are tied to the decorative articles of pith.

Availability of raw materials

The Gudigars at Sorab and Sagar have no difficulty in getting pith. They buy it at the local shandy or collect it themselves from the tanks. Pith is sold in the shandy of Sirsi also. Those at Kumta and Honnavar have to go out of their towns to get pith, to places in Dharwar district where it is available in plenty. Other materials like colour powders, sewing thread, steel wire, lace thread, coloured tin-foils and glass beads are supplied to them by local dealers.

Tools

An ordinary steel knife is the chief tool used in this craft. The cost of this knife is about 50 Paise. They get it from the local market or get one made by the local blacksmith. They rarely use a pair of scissors for cutting tin-foils.

Techniques of Production

The process of making flowers out of pith can be explained in the following five stages of work viz., (1) cutting of pith into pieces, (2) paring of pith, (3) making of indentations, (4) colouring and (5) twisting into flowers.

1. Cutting of Pith into Pieces

The long stalks of pith are taken out from the bundle (Plate 1-a) and cut into pieces of 3" to 3½" in length (Plate 1-b) with the help of a sharp knife. Cutting is done quite easily.

2. Paring of Pith

After reducing the stalks of pith into cylindrical pieces, the grey outer layer of pith is peeled off, exposing a white cylindrical piece. This piece of pith is pared with a sharp knife in the manner of unrolling a rolled paper and the pith assumes the form of a sheet (Plate 2).

3. Making of Indentations

Ten or twelve such sheets of pith are rolled one within the other and the rolls are tied tightly with strings at both the ends (Plate 3-a). The size of such a roll would be 3" in height and 4" to 5" in diameter. Next, each of these rolls is cut into two equal circular halves and the number of rolls are actually doubled. On the cut side of the rolls, 'V' shaped indentations are made with the aid of a sharp knife (Plate 3-b).

4. Colouring

The sides of the rolls bearing indentations are dipped in colour solutions prepared before hand by dissolving colour powders in water. The colour of the solution is determined by the type of flower made. The rolls are then dried.

5. Twisting into Flowers

By holding the coloured roll of pith in the left hand, the worker tears out from the roll with the right hand, piece after piece about an inch in

length. By holding tight the uncoloured end between the thumb and the index finger, she twists the pith to the shape of a flower.

Articles Produced

Flowers, wreaths, garlands, *Basinga* (marriage coronet) and *Suggi Thurayi* (coronet for harvest dance) are the articles made of pith.

Flowers (Plates 6 & 7-a)

The pith workers make flowers and buds they see in the country side. Sometimes imagination gets better of the workers when flowers made become slightly unnatural either in their colour or shape.

Mallige Moggu (Jasmine buds) are made without colours, and the imitation buds made of pith have natural effect. Flowers like the *Gulabi* (rose), *Dhalia* and *Sevanthige* (chrysanthamum) are made of pith. A short steel wire is also provided for facilitating its being fixed to the hair. For making these flowers, the sheets of pith got by paring are dipped in colour solutions and then dried. The coloured sheets are cut out to represent the petals of the flower in making. These perals are assembled to assume the shape of the flower.

Garlands (Plate 7-c)

The flowers of pith are strung together for producing garlands. The flowers are strung by passing the flowers to the string with the help of sewing needle. They are also strung in the same manner as natural flowers are strung (Plates 4 & 5). Garlands are made in two types. In the first type the ends are connected by tying them up and in the second type the ends are let free. These garlands are used to decorate the photos in houses. The cost of a garland varies from Rs. 0.50 to Rs. 1.20. Special garlands are sold at prices ranging from Rs. 2.00 to Rs. 3.00.

Wreaths (Plate 7-b)

Wreaths, locally known as *Veni* are made to adorn the braids of women. Buds resembling Jasmine and flowers resembling *Sugandharaja*, *Patika* and other types of lilies are tied to a thin steel wire of 6" to 7" long with the help of sewing thread. Glittering lace threads are inserted sparingly in the wreaths. The cost of a wreath varies from 25 paise to 40 paise.

Another type of *Veni* commonly made in Sorab consists of a single flower (*Gulabi* or *Sevanthige*) strung round with Jasmine buds. This *Veni* has a wire fastener. The cost of it would be 12 paise to 16 paise each.

Basinga (Plates 8 & 9)

Basinga (marriage coronet) is made during the marriage season (January-May) and mainly to order. This is sold in sets consisting of two coronets one for the bride and another for the bridegroom. Pieces of pith 3" to 4" long are cut into convenient sizes and are fixed upright on a square or rectangular piece of cardboard. Over the projected pieces of pith many, more pieces are fixed to form the frame work. The height of this frame ranges from 8" to 12". It is also embellished by coloured tin-foils and glass beads.

Basinga for the bride is made in the form of a turban and is decorated with flowers of pith and tin-foils. A string of pith flowers is fixed at the back so as to decorate the hair braid of the bride. The cost of a set of *Basinga* depends on the workmanship and materials used in the making. It ranges from Rs. 15 to Rs. 30.

Suggi Thurayi

Suggi Thurayi is an ornamental headwear of pith used by Halakki gowdas¹ during the *Suggi Kuniha*² (harvest dance). This is made during the harvest season only. The price of a *Suggi Thurayi*

depends on the number of ornamented sticks used for it. The normal price would be Rs. 2.00 to Rs. 5.00.

Basinga and *Suggi Thurayi* are made by the male members of the Gudigar households with the assistance of the females of the household. These two articles are made to satisfy the local demand only.

Flowers, wreaths and garlands are made for local demand as well as for sending them to outside places. The finished articles are preserved safely in baskets or in plywood cases.

Working Place

There is no workshop as such for carrying on pith work. The women sit on mats in the backyard of the houses and work. Women of the same neighbourhood work in one place, not for the sake of mutual collaboration, but for overcoming the boredom by indulging themselves in light gossip (Plate 10).

Hours of Work

The women attend to this work after their normal household duties. The normal hours of work are 12 noon to 6 p.m.

They work on all days except on days of festival. A woman in her monthly period makes pith flowers but does not string them.

1. Halakki gowdas are found mostly in the coastal villages of North Kanara district. The caste seems to have been once the great landlord caste of Kanara. [Regarding Halakki gowda Caste, please refer to Census of India 1961, Part VI-Village Survey Monographs, No. 14, Haladipur.]
2. "Suggi Kuniha" is a dance associated with the occasion of harvest. Halakki gowdas dressed in colourful costumes and with the head-dress of "Suggi Thurayi" dance in small groups to the accompaniment of cymbals, drums etc.

CHAPTER III

ECONOMIC AND GENERAL ASPECTS

Cost of Production

Wreaths and garlands are not made one by one by making required quantity of flowers or buds for a wreath or garland. Large quantities of flowers and buds which would go into the making of a number of wreaths and garlands are first made for some days and later the articles are woven into *Venis* or garlands. A woman can make about 100 *Venis* or 40 garlands in a month. If she sets about making both *Venis* and garlands she can at best prepare about 50 *Venis* and 20 garlands during the same period. The time required for their making may be set down as follows:

	No. of days
1. Cutting the stalks of pith and peeling off the outer layer	3
2. Paring of the cylindrical pieces	3
3. Rolling the sheets, cutting, making of indentations	3
4. Making of flowers and buds	13
5. Preparing of wreaths and/or stringing garlands	8
Total	30

No account has been maintained by the pith workers of the money spent on the purchase of raw materials or the realisations obtained by the sale of finished products. In the absence of written records, cost of production has been estimated on the information furnished by individual workers.

I. Article: *Veni* or wreath.

No. of pieces made: 100

Cost of raw materials:	Rs.	Rs.
pith	6.00	
colour	0.80	
sewing thread	0.30	
steel wire	0.40	
glittering lace	0.50	8.00
Cost of labour		20.00
Cost of production		28.00

II. Article: Garland.

No. of pieces made: 40

Cost of raw materials:	Rs.	Rs.
pith	6.00	
colour	0.80	
sewing thread	0.70	
glittering lace	0.50	8.00
Cost of labour		22.00
Cost of production		30.00

Whatever the article made, the earnings of a worker over a period of about 30 days would be in the range Rs. 18 to Rs. 24.

The finished products always fetch a price higher than what has been invested on raw materials, and as such the worker incurring any loss is out of question. However, the profit depends upon the sale realisation which again varies according to the holding capacity of the worker.

Capital

The capital investment in the craft by all the establishments covered in this survey is about Rs. 2,000. Of this amount only Rs. 75 or 4 per cent is on tools and Rs. 1,925 or 96 per cent is on raw materials.

Production

During 1961-62, pith garlands and decorative articles worth Rs. 45,000 were produced by the establishments in the centres surveyed. The value of raw materials consumed by these establishments was round Rs. 9,000.

Marketing

Pith articles are sold direct to local consumers. In the centres of Shimoga district the middlemen collect the articles from Gudigars and sell them in the fairs and *Jathras* of the district. Articles made at the centres in North Kanara are mostly sent to Bombay. The Gudigars send the articles packed in plywood cases to their relatives in

Bombay, by parcel, who in turn hand them over to dealers. The articles are also sold through the Gudigars' Co-operative Societies in the respective centres, but this only represents a small fraction.

Earnings of Workers

The average daily earnings of a pith worker would be in the range Rs. 0.60 to Rs. 0.88. Considering the time devoted, this income compares more favourably with the wage rate of a woman agricultural labourer. In centres of pith work production except Sagar and Sirsi a female agricultural labourer is paid Rs. 0.75 to Rs. 1.00 for a full working day. The position in Sagar and Sirsi is, however, better where she can work as labourer in arecanut curing, and get a wage of

Rs. 1.50 a day. In spite of this higher wage rate the Gudigar women prefer pith work due mainly to tradition and also a feeling of their presumed higher rank in caste hierarchy which looks upon agricultural labour as a mean occupation.

Households of Pith Workers

In the centres surveyed, there are 84 households of Gudigars with a population of 544. Out of 84 households 83 are engaged in producing pith articles. In one household the only female adult aged 16 years is a student and is not pursuing the craft.

Details of the households of pith workers in respect of each of the centres surveyed are given below:

Name of centre	No. of households of Gudigars	Population		No. of households engaged in Pith work	Population of Pith Workers' Households				No. of Pith Workers
		col. (2)	col. (3)		Total	Males	Females	Children	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1. Sorab	37	212	37	212	55	65	92	64	
2. Sagar	15	115	15	115	24	28	63	25	
3. Sirsi	16	111	16	111	30	35	46	35	
4. Kumta	9	58	9	58	14	19	25	19	
5. Honnavar	5	28	4	26	8	9	9	8	
6. Siddapur	2	20	2	20	6	4	10	4	
Total	84	544	83	542	137	160	245	155	

Out of the 160 females, 150 are pith workers and the remaining 10 persons are old. Five of the children of whom 3 are 12 years of age and 2 are 13 years make pith articles.

Economic Conditions

Pith work is the principal occupation of 7 households out of 83 engaged in the craft. For 76 households this happens to be a subsidiary occupation. Details of economic conditions of Gudigars have already been dealt with in the monograph on Sandalwood Carving¹ and a discussion of it again would be superfluous.

Co-operative Society

There is no co-operative society formed exclusively by pith workers. However, the Gudigar women engaged in pith work are allowed to become members of the Sandalwood Carvers' Co-operative Society in their respective localities.

1. Refer page 14—Economic Conditions.

CHAPTER IV

CONCLUSION

The future of pith work craft seems to be inextricably mixed up with the future of sandalwood carving, as the same households are engaged in both the crafts. Sandalwood carving is no doubt economically more paying and as long as the men folk engage themselves in this as their main stay, the women folk can go on doing pith work for supplementing the family income. Though the income from pith work is not substantial, it appears as if it is yet being carried on more by tradition than for gain. It is perhaps this factor of unprofitability that dissuades women of other communities from taking up this craft though with a little practice it is easy to learnt it.

The craft is carried on by the Gudigar households in the districts of Shimoga and North Kanara as a subsidiary occupation. The articles made are meant mainly for local consumption and a small quantity is sent to Bombay. There has not been

any rivalry between this craft and the plastic industry or the craft of making flowers and bouquets from coloured papers. The reason is simple. Flowers, garlands and wreaths that are made from pith are not made in plastic and paper flowers are not durable. The persons engaged in the craft are continuing on the same lines on which it was being carried on by their ancestors and no new article has been made which can find a better market. One may expect this craft to endure till the present patrons' fancy for them continues. It is just possible that in times to come plastic substitute of articles now made only in pith may enter the market much to the detriment of this industry. In the event of such a competition between pith and plastic, the possibility of pith articles disappearing altogether from the market is more due mainly to peoples growing preference for plastic articles.



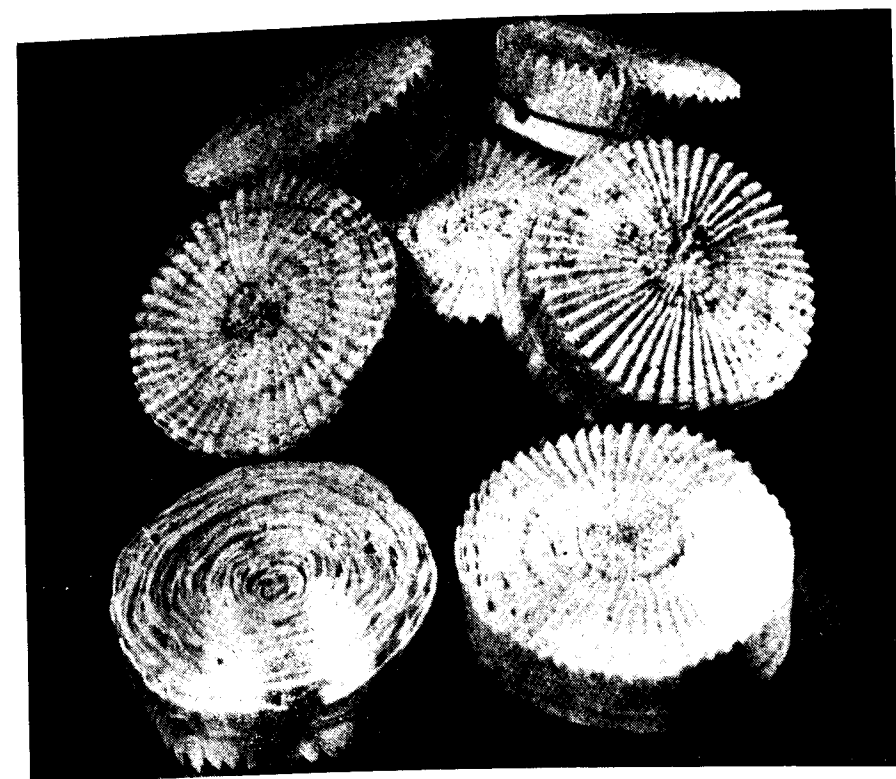
a. Raw pith. *b.* Stalks of pith cut from the long ones. The length of each piece is $3-3\frac{1}{2}$ inches.



Paring of Pith.



a



b

a. Pared pith. *b.* Rolls of pith with 'V' shaped indentations on one side.



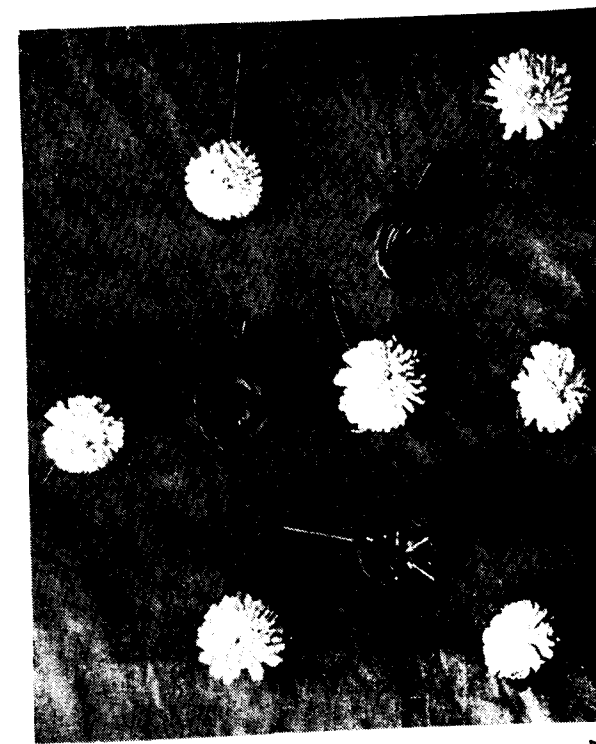
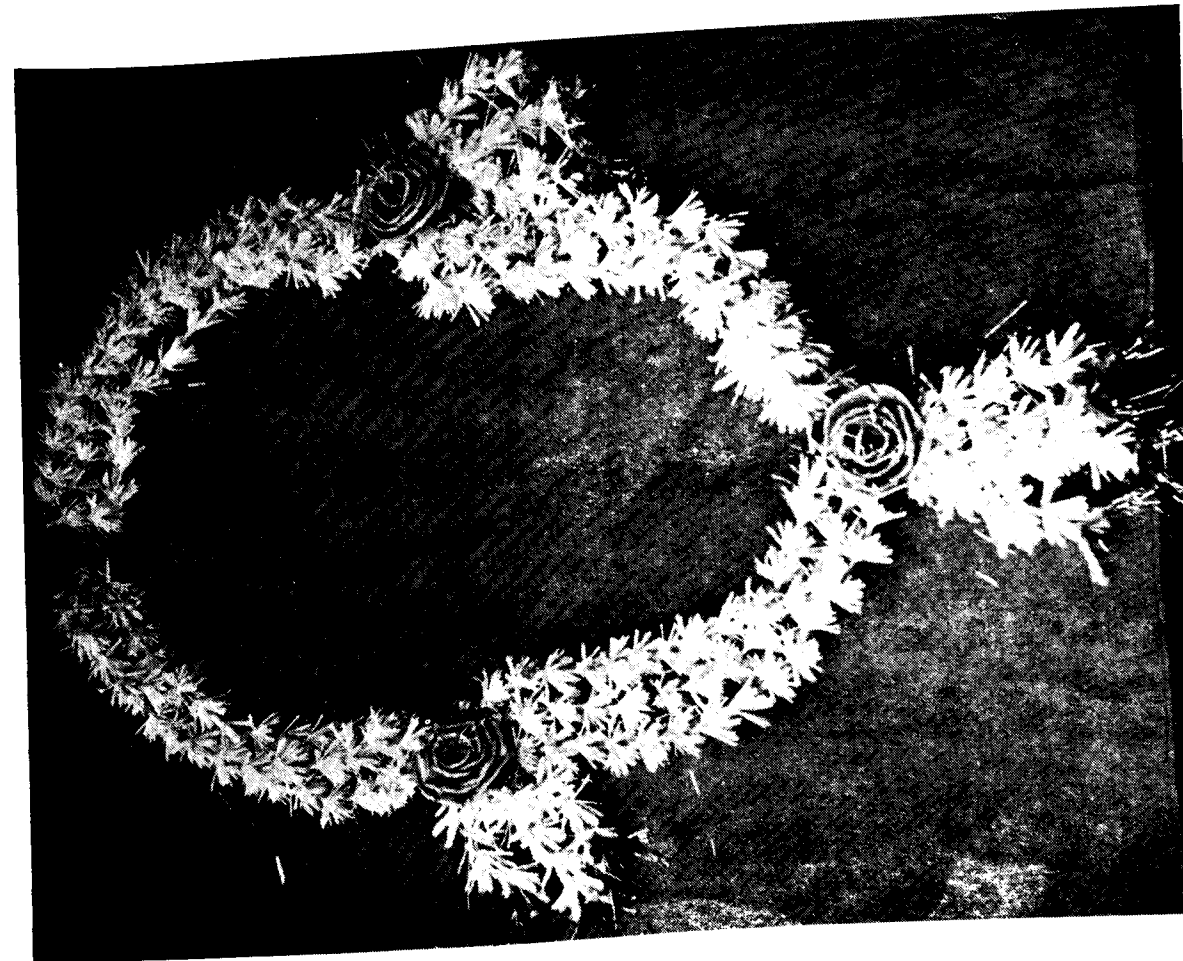
Stringing of pith flowers.



A pith garland nearing completion.



Various types of flowers and buds to be used for wreaths and garlands.

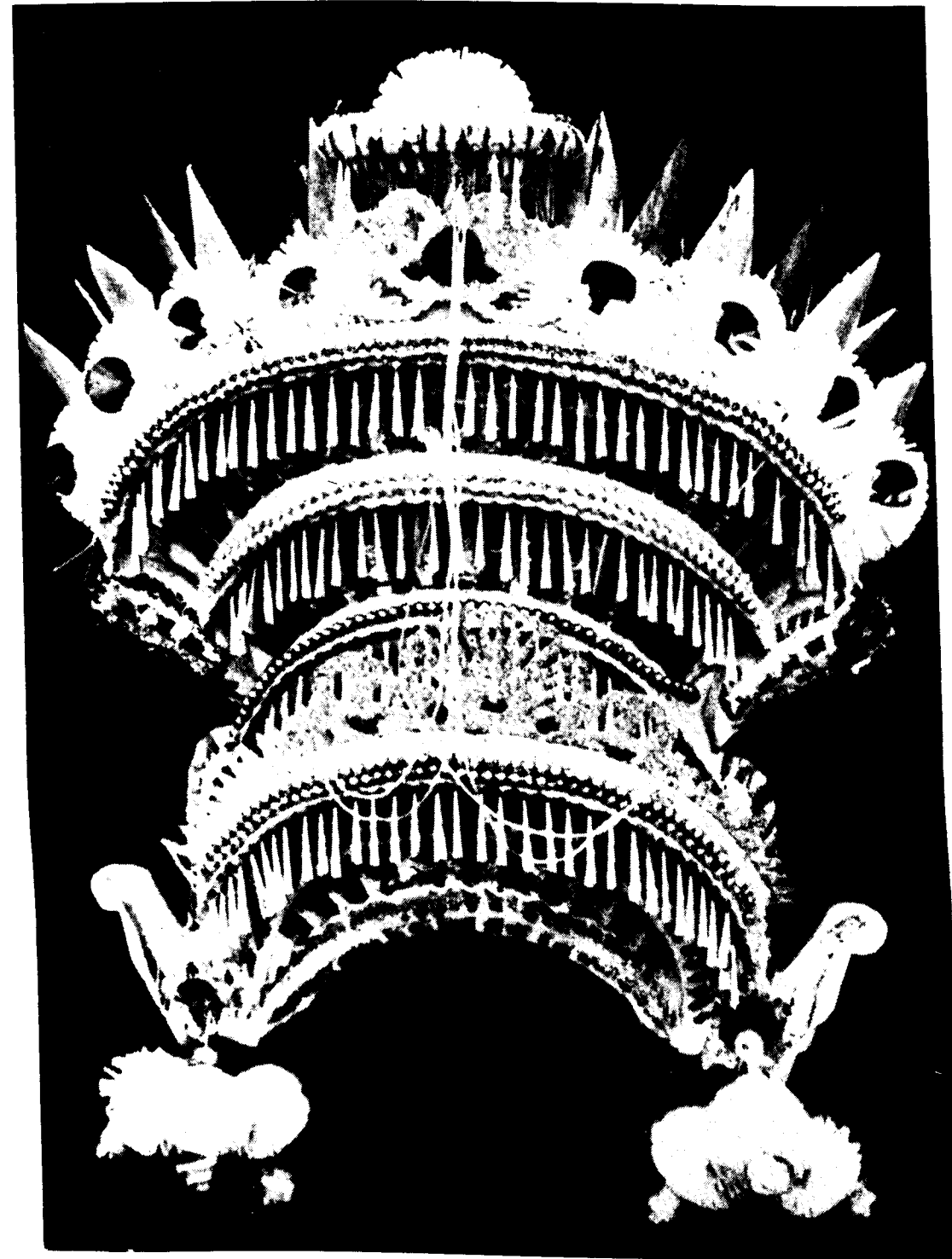


a

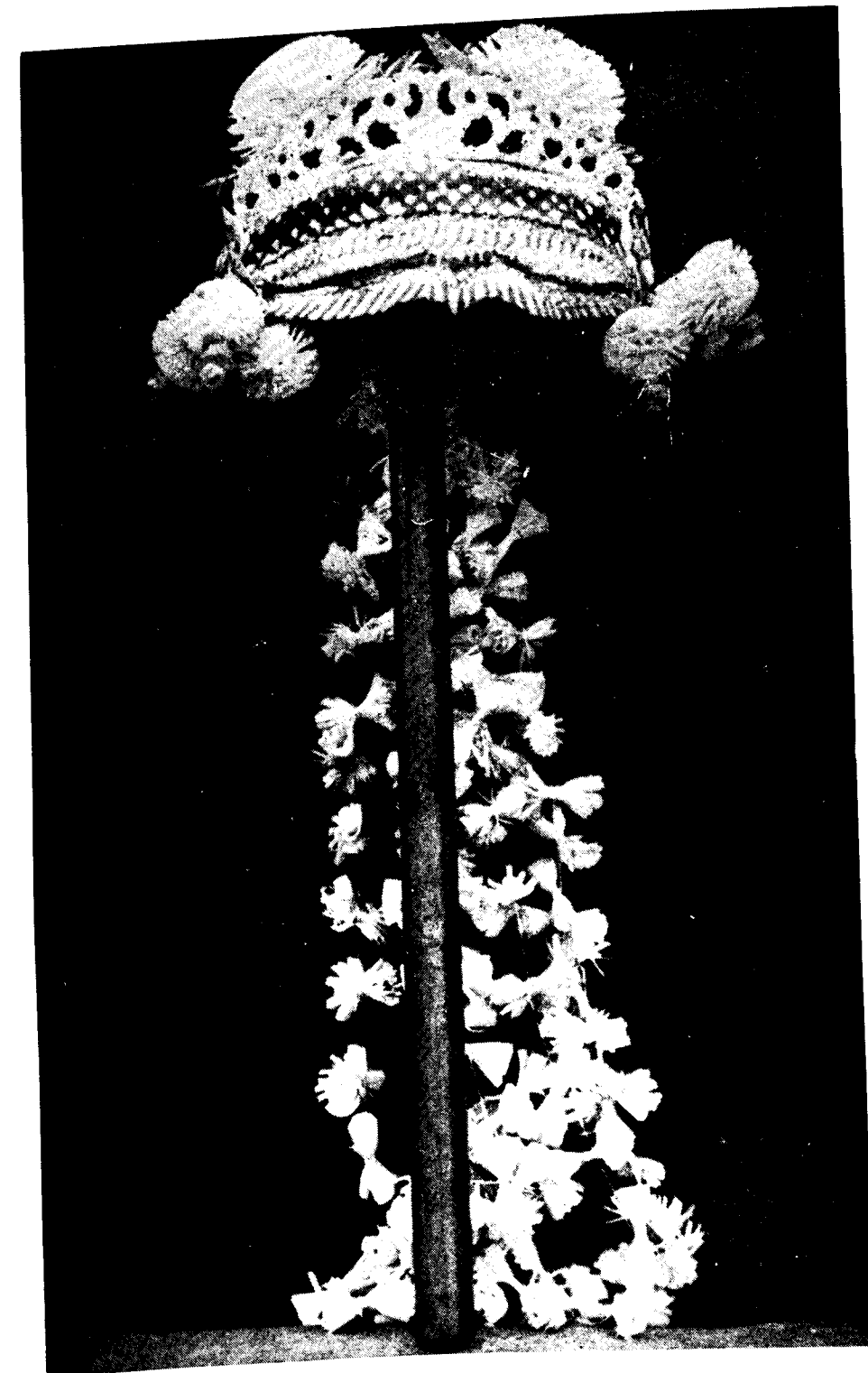


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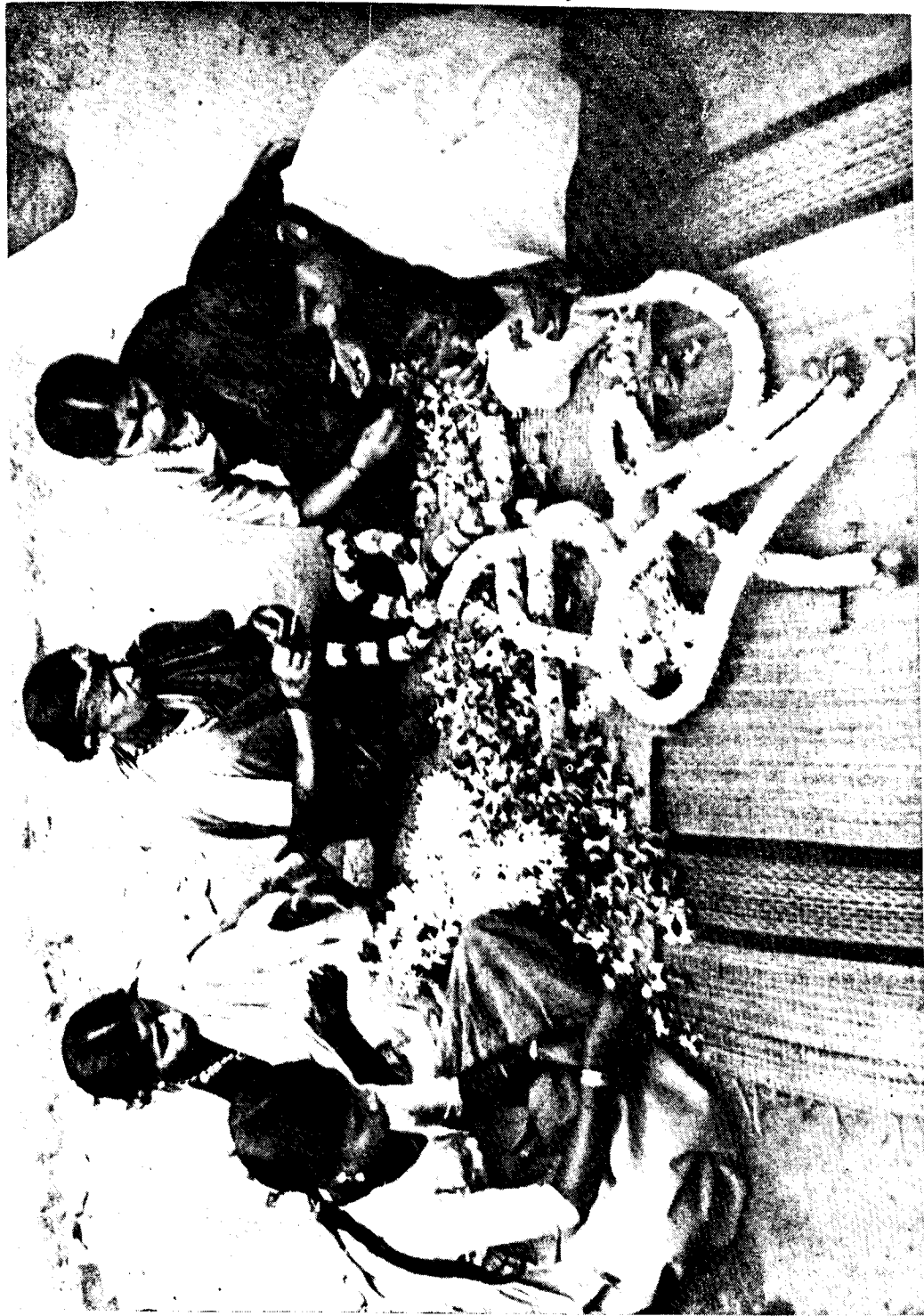
a. Pith flowers — *Gulabi* (rose) and *Sevanthige* (*Chrysanthamum*). b. Wreaths of pith flowers known as *Veni* to adorn the braids of ladies. c. A garland of pith flowers.



Basinga (marriage coronet) worn by bridegroom.



Basinga (marriage coronet) for the bride with a string of flowers to decorate the braid.



An assemblage of pith workers. They work in one place not for the sake of mutual collaboration but for overcoming the boredom by indulging themselves in light gossip

IVORY INLAY IN ROSEWOOD OF MYSORE CITY

CHAPTER I

INTRODUCTORY

Introduction

Inlay is the medium of art by which a surface is decorated by setting pieces of other materials in it. The ornamentation which usually consists of geometrical, scroll or floral patterns is produced by setting variously shaped small pieces into the design incised on a flat surface. Inlay can be classified into five categories *viz.*, Niello, Damascening, Bidri, Mosaic and Pietradura, and Intarsia.

Niello is inlaying one precious metal in another.

Damascening is inlaying silver or gold in iron or steel.

Bidri is inlaying silver as well as gold in an alloy of zinc and copper called Bidri. The name is derived from Bidar, the town where this type of ware was first made.

Mosaic is inlaying marble and glass in hard stone. Pietradura is a superior variety of mosaic involving the use of expensive stones.

Intarsia, more popularly known as Tarsia, is the art of inlaying woods of different colours including ivory upon a darker background.

The present monograph refers to the kind of inlaying which goes by the name of Intarsia or Tarsia.

Centre of Production

Mysore city is the only place in the State where inlay articles of wood are produced. This exquisitely delicate art consisted hitherto of ornamenting rosewood with ivory, but in recent years the emphasis has shifted to securing a happy and attractive combination of woods of different natural colours against a dark background.

The importance, situation and functional characteristics of Mysore have been described at sufficient length in the monograph on Rosewood carving¹ and could here be repeated only at the risk of monotony. Suffice it to say that the city has an area of

14.4 sq. miles and a population of 253,865, with some industries and institutions having come to be established in recent times, and deriving its importance mainly from the ruling dynasty making the city its residential capital.

Dasara is observed in the city as a semi-religious festival with great pomp and pagentry culminating in a colourful procession of the Maharaja to Bannyamantap on Vijayadasami day. The celebrations attract every year a very big crowd. As an adjunct to the festival an exhibition is also held in which a section is set apart for the display of Arts and Crafts products.

The world famous Brindavan gardens below the Krishnaraja Sagar Dam just at a distance of 12 miles from the city is almost like a fairly land providing aesthetic enjoyment through a harmonisation of light, colour and water and has become a tourists' paradise. The bulk of tourist traffic to Mysore city and the surroundings is drawn during the Dasara festivities. The spending spree in which the tourists find themselves on this gala occasion brings in a lot of sale for these exquisitely fine art pieces.

Apart from the craft of inlay in wood, the other chief crafts pursued in the city are rosewood carving, weaving, Agarbathi manufacturing and the making of musical instruments.

History of the Craft

Due to inadequacy of factual information it has been found rather difficult to present with sufficient exactitude and length the history of the craft. In the Mysore Gazetteer it has been recorded that "The art of inlaying ebony and rosewood with ivory which seems to have been pursued by Muhammodans, and of which the doors of mausoleum at Seriangpatam are good examples, has lately been revived at Mysore and many useful and ornamental articles are now made of this kind of

1. Vide page 23—Centre of Production.

intaglio. Such decorations are also to be come across on choice musical instruments especially the Vina".

In the absence of any other authentic and written records, information as to the origin of this art has been collected from local craftsmen who are professed to have some knowledge of its genesis. Following is the version of Haji Mirza Nayazmund Ali:

"My great grand father Mirza Zainulla Abidi alias Mirza Abidi came over to Srirangapatna from Isphahan (Persia) on the request of his cousin Nawab Mir Gulam Ali Khan Mashadi who was in the defence section of Tipu Sultan. Mirza Zainulla Abidi was a carver and was carving articles out of deer horn. His son (my grand-father) Mirza Yusuf Ali is said to be one of the craftsmen who made the inlay doors at the mausoleum in Srirangapatna. Mirza Yusuf Ali was making inlaid walking-sticks, boxes, trays, mirror frames and table tops.

"Mirza Yusuf Ali with his brother Mirza Abdul Ali migrated to Mysore from Srirangapatna in the first decade of the last century, perhaps due to the shift of capital to Mysore after Tipu. The two

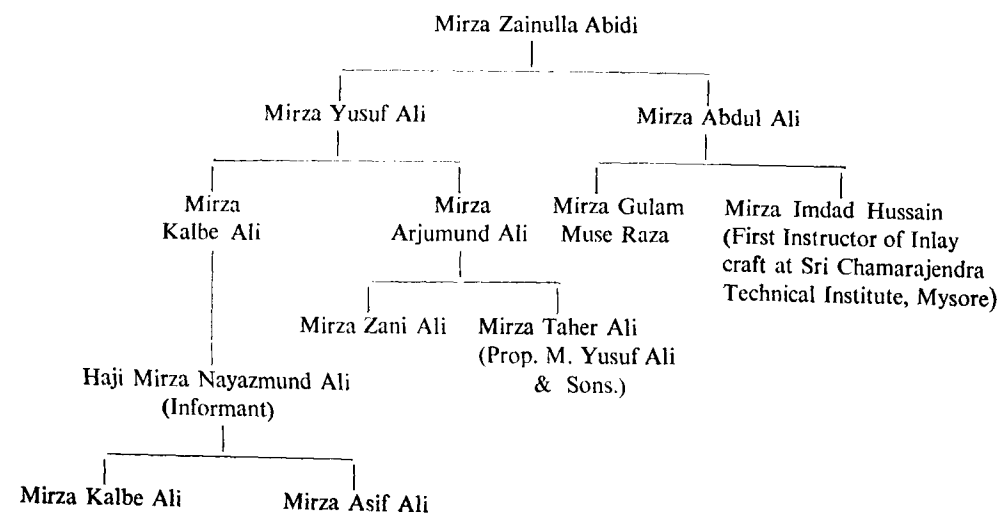
sons of Mirza Yusuf Ali, Mirza Kalbe Ali and Mirza Arjumund Ali established in the year 1870 their inlay workshop at Mysore styled 'Yusuf Ali & Sons' which is still working. This is the first unit established at Mysore.

"Mirza Abdul Ali also had two sons Mirza Gulam Muse Raza and Mirza Imdad Hussain. Mirza Gulam Muse Raza exhibited a photo frame and a casket inlaid with ivory at the British Empire Exhibition in 1914 and received a gold medal in appreciation of artistry. Mirza Imdad Hussain became an instructor in Sri Chamarajendra Technical Institute, Mysore and started the inlay section in the Institute.

"Mirza Kalbe Ali (my father) was at the time a renowned inlay worker and made the inlaid doors for 'Amba Vilas' in the Mysore Palace.

"In the year 1919 the firm 'Yusuf Ali & Sons' broke up into two—one doing business in the name and style 'M. Yusuf Ali & Sons' and the other 'Haji Mirza Niaz & Sons'. The 'Haji Mirza Niaz & Sons' is under my control and 'M. Yusuf Ali & Sons' is run by my father's brother's son."

Haji Mirza Nayazmund Ali produced the following chart of his family geneology:



According to the information furnished by Haji Mirza Nayazmund Ali the history of the craft at Mysore is to be traced to the beginning of the nineteenth century. The craft was carried on at Mysore by the one and only family of 'Mirza Yusuf Ali' who have been the pioneers in this Art, till the first decade of this century, they having migrated from Srirangapatna. They first worked at home but later opened a separate emporium 'Yusuf Ali & Sons' for expanding the business. In the initial stages there was no wide market and the firm depended only on a few visitors and local patrons for selling its products.

When the industry was thus languishing it was a happy coincidence that the Elephant Cigarette Co., came to place a heavy order for popularising their brand of cigarettes which went a long way to help its resuscitation and survival. They wanted 'Yusuf Ali & Sons' to make charming figures of elephants in action in varied postures. The artists prepared inlaid rosewood boxes and panels exemplifying the life of wild and tamed elephants. The foreign visitors felt supremely satisfied with the work and placed huge orders for elephant figures. Even now the Elephant & Palm tree happens to be the common design of the art.

However, the turning point was after 1913 when this craft was introduced as a subject for study at Sri Chamarajendra Technical Institute. As mentioned earlier, Mirza Imdad Hussain, a person of the same family was appointed instructor. Mr. Alderton who was the Superintendent at Sri Chamarajendra Technical Institute took interest in recommending this course for new entrants and tried Erinoid¹ along with ivory for inlay in wood.

In the third decade of this century, Sri Paramachar who was a carver at Sri Chamarajendra Technical Institute innovated a few designs of mythological figures and Persian motifs. Inspired by the new designs Mir Showkat Ali supplanted woods of different colours for erinoid which proved a success. An artist and designer by himself Mir Showkat. Ali replaced old designs and simple decorative motifs by complex and varied scenes of the countryside and pastoral subjects.

According to the statement of Mir Showkat Ali, the sales of inlaid articles have improved since 1945

and this trend is all the more pronounced after 1950. Import restriction on foreign toys appears to be one of the reasons for this increased sale. Besides the establishment, Khadi Gramodyog Bhavan and Arts & Crafts centres at several important places of the country where the patrons of art can have a look at them and buy them also appears to have helped the promotion of sales of these articles particularly after 1950.

Unlike pottery, sandalwood carving, weaving, etc., inlay work is not a monopoly of any particular caste.

Establishments

According to this survey which was conducted during July 1964, there are 15 establishments in the city of Mysore, engaged in the making of inlay articles. These 15 establishments are proprietary concerns and function mainly with hired labour. Two establishments out of 15 belong to the hereditary artisans and others are run by new entrants. The first establishment for manufacturing inlay articles came into being in Mysore in the year 1870. This pioneer establishment soon came to be split into two in 1919. Upto the year 1940, these were the only two establishments engaged in the manufacture of inlay articles. In the year 1942, two more establishments were added and these 4 functioned till 1955. Between the period of 1955 and 1960 six more came into existence. After 1960, a further five establishments were started which bring the present total to 15. In addition to these establishments, there are about 30 households which can be classified as 'cottage type, engaged in making of inlay articles mostly panels—primarily with household labour—in their respective residences. These households are distributed over several parts of the city and want of address particulars militated against all being contacted individually.

The 15 factory type establishments were surveyed during the course of the study.

Out of the 15 establishments, 5 are self supporting and 10 are depending on wood turning establishments for ancilliary services. The 5 self supporting establishments use electric power. The inlay part of the work is done, from start to finish, manually in all the establishments.

1. Erinoid is a casein thermoplastic made of the colloidal protein matter in separated milk by treatment with formaldehyde.

IVORY INLAY IN ROSEWOOD

The establishments work with their own raw materials. The raw materials are purchased from local dealers and the finished goods marketed through the local dealers or directly sent to dealers at several centres of the country.

The 15 establishments provide employment for 226 persons, of whom 186 are inlay artisans and 40 are apprentices. All the artisans are males. The proprietors and their family members who perform supervisory functions also work as engravers.

The establishments work on all days of the year, except on weekly holidays and other festival days. The average number of working days per establishment total 300 in a year. They work for 8 hours

a day, normally from 9 a.m. to 1 p.m. and from 2 p.m. to 6 p.m.

Payments are made to artisans either on the basis of monthly salary or daily wage. The monthly salary of an artisan ranges from Rs. 40 to Rs. 120 depending on the nature of work done and also his skill.

Details of the daily wage system are as follows:

	Wage per day (Rs.)
1. Carpenters	2.00 to 5.00
2. Figure cutters	3.00 to 4.00
3. Inlay workers	2.50 to 3.50
4. Artisans of finishing work	2.00 to 4.00
5. Engravers	5.00 to 7.00

Raw Materials

The artistic value of inlay articles is rated very high. They owe their ostensibly stiff price more to the maker's skill and artistry than to the cost of production. The raw materials that go into the making of these fine pieces consist primarily of rosewood, woods of different colours, ivory, plastic, carpenter's glue (*Vajra*), polish, beeswax, ivory black, turpentine, sandpaper and also hardware such as screws, pins, nails, hinges and rings.

Rosewood

This is by about the most important amongst the raw materials used as it provides the surface for inlay. The charm of the craft itself stems from the fact that ivory and woods of different colours produce in this black background a fascinating and delectable contrast.

Rosewood (*Dalbertia latifolia*) is locally called *Kari mara*. It smells of rose water and burns with smoky flame. The sapwood is narrow and yellow while the heartwood is dark brown to black in colour possessing longitudinal streaks. The speciality about this wood is that it takes a very fine polish. It is hard to work upon and is close grained. This wood is used for making articles of furniture and in carving. A cubic foot of the wood weighs from 50 to 60 lbs. and is priced at Rs. 30 to Rs. 150 depending on the girth and quality of the bole yielding the plank.

Woods of Different Colours

The most common varieties of colour woods used in the craft are the following and their colours are also indicated against each:

1. Jack (*Artocarpus integrifolia*) —yellow and bright yellow.
2. *Nelli* (*Emblie myrobalam*) —rose and light red.
3. *Devadaru* (*Cedrela toona*) —light brown.

CHAPTER II

TECHNIQUES OF PRODUCTION AND ARTICLES PRODUCED

4. Ebony —jet black.
5. Silver oak —pink and for glaring effects.
6. Sandalwood (*Santalum album*) —dark brown.
7. *Eaji* —yellow.
8. *Hale* (*Wrightia tinctoria*) —light yellow
9. Tamarind (*Tamarindus indica*) —blue, grey.
10. *Patanga* —dark red.
11. *Seega* (soapnut) (*Mimosa abstergens*) —amber.
12. *Krishna-agar* —green.
13. *Kadagale* —brown.
14. *Gauva* —ash, cream shade.
15. Mango (*Magifera indica*) —dull gery.

In addition to the above, many other unknown species are also used. The craftsmen secure their supply of the above woods from the local firewood depots by a judicious selection of the cut logs from the available lot.

Ivory

Ivory used in the craft is of the imported variety obtained from Banaras and Ahmedabad. It is available from local merchants at Rs. 45.00 to 50.00 per lb.

Plastic

In order to face the competition of the market a few of the establishments have been using plastic in place of ivory. This practice is not prevalent generally among all establishments as some of them are still keen on preserving the purity of the art. The concerns using plastic prefer the cheaper plastic combs which are readily available at Rs. 18 to Rs. 20 per gross, to sheets which have to be got specially.

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Carpenter's Glue (Vajra)

It is sold in the local shops at Rs. 4.00 to Rs. 4.50 per lb. It is essential for sticking pieces of wood and ivory to the inlay ground.

Polish

High polish is a desideratum for securing an attractive finish. Lac polish (colourless) manufactured locally is used for the purpose. This serves not only as a protective coat but also imparts a beautiful lustre to the finished piece. It is sold in bottles, the cost being Rs. 4 per bottle containing 20 c.c.

Beeswax and Ivory Black

These two materials are necessary for preparing Black polish. Black polish is prepared by mixing beeswax and ivory black in the proportion of 4:1 by weight. A little turpentine is also added for rendering its application on the finished piece easy.

Sandpaper

The use of sandpaper comes in when the surface is to be smoothened after inlaying. The grades of sandpaper which have come to be conventionally accepted are 1 to 00 and they could easily be had in the local shops at Re. 1 per dozen sheets.

Hardware

Being akin to a joiner's job, the craft cannot go without the use of nails and screws, hinges, rings, etc., which are available in the local hardware shops.

Tools (Plate 1)

The tools employed by carpenters such as chisel, saw, plane, hammer, sawing board, brace and bits, file, spoke shave, pincers, bradawl, screw driver, sandpaper block, wing compass, twist drill, whetstone are equally essential for these craftsman also. These tools being common to both carpenters and inlay workers, it is not proposed to be dealt with at length. A description is therefore given of the following tools which are needed exclusively in the making of inlay articles.

Coping Saw

Coping saw is the tool required for cutting the designs on the sheets of wood and ivory. It is made of a study frame, and the blades installed

also have a longer life than the blades of ordinary fret saw. It easily cuts through wood and ivory sheets of 1/8" thickness and the saw needs to be carefully manipulated.

Vice

The carpenter's vice fixed to the work bench helps to hold in a tight grip the wooden sheets required to be sawn. A sawing board is also used for this purpose.

Rasp

Half round rasps of size ranging from 8" to 12" are used with advantage for smoothing the surface after inlay.

Hammer

Hammer of 1/8 lb. is needed for embedding the inlay into the chased ground.

Marking Tool

An awl like tool with a pointed end used for inscribing on the surface to be chased the inlay design. It is manipulated by malleting.

Kachu Chirna

A chisel for deepening the outline of the design inscribed on the surface to be inlaid. The tool is manipulated by malleting.

Matta Chirna

A firmer chisel like tool the cutting edge of which is bevelled on one side and is used for severing the wood from the plank to accommodate the inlay design and is manipulated by malleting.

Vata Chirna

A chisel with an angular edge employed for trimming the rough ground after chasing with *Matta Chirna*.

Dassi Chirna

This tool is also manipulated by malleting. This tool is used for chasing cavities to set the splinters which form background contours.

Engraving Tools

Tools with sharp edges which are used like pencils for marking eyes, nose, ear, mouth etc., on the face of the human and animal figures.

Punch

Punches are made from discarded bits and the ends bear assorted designs to mark the borders of sarees, blouses and other wears of figures.

Scraper

A flat piece of iron with a sharp side serves as scraper for the inlay artisan. This type of scraper is necessary as the wood is hard. A sharpened scraper produces a smooth finish on the surface.

Coping saw, vice, rasps, hammer are factory makes and are available with hardware merchants. The inlay tools, scraper, engraving tools and punch are made by a local blacksmith.

Power Tools

Of late, the impression is gaining ground among owners of some establishments that for modernisation and expansion of inlay craft and to place it on an even keel power tools are necessary. The power tools of the following description have come to be acquired lately by these establishments:

Establishment I

Bandsaw, circular saw (2), circular plane, belt sander, disc sander, moulding machine, drilling machine, jig saw, lathes (2) and 10 H.P. motor.

Establishment II

Bandsaw, circular saw, drilling machine, lathes (5), and 2 H.P. motor.

Establishment III

Bandsaw and 2 H.P. motor.

Establishment IV

Bandsaw, planer, surface plane, circular saw, mortiser and 7 H.P. motor.

Establishment V

Bandsaw, circular saw, narrow bandsaw, drilling machine, grinding machine, sander and a motor of 4 H.P.

Techniques of Production

The production technique of inlaying ivory and woods of different colours in rosewood can be set down as coming under the following eight stages:

1. Making of planks.
2. Cutting of templates.
3. Cutting of ivory and woods of different colours for inlay.

4. Inlaying.
5. Application of *lappa*.
6. Smoothing the inlay surface.
7. Engraving and punching.
8. Finishing.

The first stage of work viz., making of planks is attended to by carpenters. Cutting of templates, and engraving and punching which are the second and seventh stages of work respectively, cannot be executed by any person engaged in the craft and skilled artists do both the jobs. Figure cutters are also skilled workers of the craft and they attend to the third stage of work viz., cutting of ivory and woods of different colours for inlay. The fourth stage of work is inlaying which is executed by the inlay workers. The fifth, sixth and eighth stages of work viz., application of *lappa*, smoothing the inlay surface and finishing respectively are carried out by the artisans for finishing works.

1. Making of Planks

Cut pieces of rosewood logs are sawn into planks of 3/4" thickness. The sawing is done by the handsaw and also by the bandsaw. The size of the log decides the length and width of the plank. The uneven sides of the plank are straightened with the help of a circular saw. The plank is then cut to the desired shape with a handsaw, the shape most commonly in vogue being either a rectangle or a square. When the plank has to be shaped oval the superfluous wood of the plank is chiselled off using a firmer chisel and mallet. For shaping it round also the process is identical. Nowadays the discs are turned on lathe. The surface of the plank on either side is smoothened by planing.

The billets of woods of different colours are also similarly sawn into thin sheets of thickness 1/8". Taking out of such thin lamina naturally implies deft manipulation of the tools if the sawing is to be done with the help of a handsaw. In order to lessen damages, usually attendant upon hand-sawing, advantage is freely taken of the power operated tools which have come to be installed in some of the establishments. The making of planks of required shape and smoothing their surface marks the first stage and the material is thus rendered ready to start the work. The work upto this stage is done by carpenters.

2. Cutting of Templates

The designs for inlay are given by the designers who are not in the regular employ of these establishments, but are free lancers. The designs are the creations of the designers. Each design is sketched on a drawing paper and coloured by water colour.

The artist who cuts the template makes a study of the design. A tracing of the design is taken in pencil on a transparent paper placed over the original design (Plate 2). The paper on which tracing is taken, is pasted to a thin cardboard and by using a sharp edged chisel the templates are cut out. The number of pieces of the templates depends on the number of colour contours that go to make up the design. A sketch may have to be cut into between 30 and 100 separate pieces.

3. Cutting of Ivory and Woods of Different Colours for Inlay

A selection is first made of cut sheets of woods of different colours as found in the design, and of ivory required for making face, legs and hands of figures. The template cuts are placed on the respective sheet of required colour and its outline are traced on the wood or ivory with pencil.

The sheet of wood is fixed tightly in a vice and the design is cut by means of a coping saw (Plate 3-a). The blade in the frame of the coping saw is inserted in such a manner that its teeth will be at right angles to the sheet that it cuts. While sawing curves the blade is deftly manipulated. The artisan sits on a stool and the vice in which the wooden sheet is gripped is fixed to a table. When a saw board is used instead of a vice, the artisan holds the sheet in one hand and plys the saw with the other (Plate 3-b). After the pieces are cut the rough edges are smoothened using a smooth file.

4. Inlaying

The several components cut out from the wood and ivory sheets are assembled to form the required pattern and stuck together by the application of glue at the periphery of each piece (Plate 4-a). The contours of the pieces favour adhesion. The assemblage of the components of the design is placed on the plank in which it has to be inlaid. Full and clear impression of the design is caused to be made on the plank by tapping the marking tool

with a mallet (Plate 4-b). The design is then removed and the mark scribed on the plank is deepened by malleting *Kachu Chirna* on the marking.

The marked portion is then scooped by using the *Matta Chirna* and mallet (Plate 5-a). The *Matta Chirna* also manipulated in the same manner as the firmer chisel. The wood is chased to a depth of 1/8" and this depth would be sufficient to accommodate the inlay design as the wood and ivory sheets employed for making the inlay design are treated to a thickness of 1/8". Much care is necessary to work exactly to the scribed lines as the inlay design has to set in the ground firmly. With the aid of a *Vata Chirna* and mallet the artisan trims the rough surface of the ground before embedding the inlay design into the ground.

Carpenter's glue is smeared to the chased area of the plank and the inlay design is driven into the ground by the artisan by carefully hammering it (Plate 5-b). Simple inlay designs are driven into the ground in a few settings and the intricate inlay designs are driven in many settings.

All the pieces of the inlay design being set in the ground, the engraver marks the background contours of the design (Plate 6) as found in the original drawing prepared by the designer, and returns the piece to the inlay artisan. The artisan makes narrow cavities by chasing the wood with *Dassi Chirna* to accommodate *Dassi* (Thin splinters of wood specially sawn) or narrow inlay (Plate 7-a). The ivory smithereens, to depict the flowers and leaves of trees or any such designs, are driven into the recesses left after setting the inlay design to the ground (Plate 7-b).

5. Application of Lappa

Lappa, the paste got by scraping rosewood scantling smeared with carpenter's glue is overlaid on the inlaid surface, by hand, to fill the recesses left unfilled. The *Lappa* is allowed to settle into the cavities for some hours and all superfluous matter is scraped off.

6. Smoothing the Inlay Surface

The inlaid piece will have a rough surface which has to be given a smooth finish. The rough surface is well rasped by the artisan to produce an even

surface (Plate 8-a). The surface is further smoothened by scraping (Plate 8-b). The sharpened scraper cuts a fine shaving and produces a smooth finish. This process is followed by rubbing well with fine grade sandpaper (Plate 9-a).

7. Engraving and Punching

Before finishing the inlay piece, eyes, nose, mouth, ear are to be marked on the figures of the design (Plate 9-b). This work is done by the engraver who is a skilled artisan. Engraving and shading tools are manipulated in the same manner as a pencil. The engraver finishes the design by effecting shades for a good get up. By malleting the punch bearing designs such as leaf, flower, rounds, squares, dots, etc., designs for the border and body of the wears of the figures are made. On the grooves of the engraved, shaded and punched marks, ivory black is applied in small quantities when the engraver wants to have an idea of the markings made by him. The ivory black gets into the grooves and makes the marking more pronounced.

8. Finishing

The final stage of inlay work is the process of finishing. After completing the work of engraving, black polish, a mixture prepared by mixing the ingredients beeswax and ivory black in the proportion 4 : 1 by weight and adding to it a little turpentine, is applied and allowed to dry. When this polish dries up it is scrapped off by using a scraper. For a fine finish, the piece is rubbed with 0 grade sandpaper. The final medium with which the inlaid piece is treated for a protective coat is lac polish. Several coats of the polish are applied with linen and each coat is well rubbed with rag (Plate 10).

Designs

Designs adopted for inlay prior to the advent of erinoid in 1920, were floral scrolls, festoons, creepers etc., the material used being solely ivory. The white inlay on black background turned after 1920 into colour opus on black background. When erinoid was found to make a good combination with ivory for inlay, the fashion to depict human figures gained currency coupled with other motifs of design. The colour combination also offered scope for the display of various aspects of Dasara

pagentry and this became a common design of the period. The floral designs gradually disappeared yielding place to landscapes, and human forms and pastoral subjects replaced geometric figures. Most of the present day designs are adaptations from Hindu mythology and Persian art.

The designs on the inlaid pieces generally consist of portrayals of Omar Khayam, Gipsy girl, Water-lady, Radha-Krishna, Lakshmi, Saraswathi, Krishna, messenger on horse back, messenger on camel back, birds on trees, elephants and palm trees, flower festoons and butterfly, Anarkali (a lady & deer) and village scenes such as a washerman driving donkeys, a shepherd driving sheep, a lady drawing water from a well, bullock cart carrying passengers, ploughing, village vista and such like being the product of the free imagination of the artist's mind. The figure of national leaders are also inlaid nowadays.

Articles Produced

A wide range of choice articles are made by the inlay workers at Mysore among which panels, trays, teapots, plates, boxes, powder bowls, automatic cigarette-cases and paper-weights are a few worthy of mention.

Panels (Plates 11 to 14).

Wall panels of rectangular, round, elliptical and oval shapes are made in varying sizes. Rectangular panels are made in sizes 11"×8," 12"×9", 13"×10", 22"×11" and 36"×18". The size of round panel ranges from 8" diameter to 12" diameter. Elliptical and Oval panels are made in sizes 6"×4", 9"×6", 9"×12", 10"×12" and 13"×10". Panel is the most common article manufactured. The designs as detailed in the previous paras are inscribed on these panels.

Panels are made not only in regular geometrical shapes but also in natural forms in which the plank exists with its own uneven sides. The cylindrical rosewood log is first sawn into planks of required sizes. The plank is then cut into round, oval, square or rectangular shapes as may be needed and both sides of the plank planed, extra care being had to plane the surface to be inlaid.

After the inlay of the panel is over a string is provided at the back of the panel or a dent is made to facilitate hanging.

Trays (Plate 15)

Trays of rectangular shape in sizes 12"×7", 18"×9", 20"×10", 18"×13", 24"×12" are made. The designs found in trays are festoons, flower creepers, butterfly, Anarkali, Omar Khayam, Sha-kunthala and designs of natural scenery.

After inlaying, the piece is bound on all sides by wooden pieces and provided with handles at the two ends. Wooden rests are fixed at the base.

Teapoy (Plate 16)

Teapoy and central pieces of sofa sets are in very good demand. The teapoy tops are rectangular, square, round and oval shapes. The legs are detachable and are either turned or foldable cross jointed frames. The height of the teapoy is 18" and the tops measure:

- Rectangle: 13"×10", 15"×12", 16"×13", 18"×15".
- Square : 10" sq., 12" sq., 15" sq., 18" sq.
- Round : Diameters 12", 15", 18".

Plates

Concave plates of diameters 6" to 9" and finished like a Nirmal¹ plate are made carrying designs of dancing girl, gipsy girl, etc.

Boxes (Plate 17-a)

Boxes in square shape of size 4"×4", 5"×5", 6"×6" and in rectangular shape of size 5"×4", 6"×4", 7"×4", 8"×4", 8"×5", 9"×5", 10"×6" are made. The lid is inlaid with designs. Box is made by joining 6 pieces of wood, four for the

sides, one for the base and the inlaid piece for the lid. Hinges and hasps for the lid are fixed before finishing.

Powder-bowls

Powder-bowls are made in round shape by turning on the lathe. The lid of the powder-bowl is inlaid with a wide variety of designs.

Automatic Cigarette-case (Plate 17-b)

This is a container to hold about 20 cigarettes. When the container is raised and lowered up comes a cigarette. The container is of rhombic shape and inlay is done on the two upper sides. The designs are the same as are found on the powder bowls.

Paper-weights

These are made by inlaying such simple designs as elephant, butterfly, flower, etc., on solid round and oval pieces.

Book-ends, calendar plates are also made by inlaying.

The inlaid articles are considered to be exquisite pieces of art in wood and the intricacy of the workmanship of each individual piece governs its price. Quality articles with intricate designs are only made to order as their price would generally be stiff. However, the dealers have brought out price lists applicable to articles which are produced on a mass scale for being put in the market for general sale without particular attention to quality. Extracts from these price lists are given in Appendix III (page 63).

CHAPTER III

ECONOMIC AND GENERAL ASPECTS

Cost of Production

Inlay articles are not produced by a single person from start to finish. Its production falls into eight distinct stages. The manufacturers maintained accounts of the total purchase and

use of raw materials but not of how much goes into each individual piece. However, by making a searching enquiry of a few master craftsmen the following details about the production cost have been elicited:

I. Name of article: Teapoy			
top	: rectangular-15"×12".		
legs	: cross & folding frame.		
height	: 18".		
design	: Anarkali.		
Cost of raw materials:	Rs.	Rs.	
rosewood for top	3.50		
rosewood for legs	2.00		
woods of different colours	0.50		
ivory	3.50		
sandpaper, polish, screws & nails	1.75	11.25	
Cost of labour:			
carpentry	3.00		
cutting and inlaying	5.00		
engraving	2.00		
polishing	2.50	12.50	
Cost of production		23.75	
Selling price		26.00	
Profit		2.25	
II. Name of article: Wall panel			
shape	: elliptical		
size	: 9"×6"		
design	: flower plant & birds		
Cost of raw materials:	Rs.	Rs.	
rosewood	1.00		
woods of different colours	0.25		
ivory	1.00		
sandpaper, polish	0.25	2.50	
Cost of labour:			
carpentry	1.00		
cutting and inlaying	1.25		
engraving	0.50		
polishing	0.50	3.25	
Cost of production		5.75	
Selling price		7.00	
Profit		1.25	
III. Name of article: Box			
size	: 6"×4"		
design	: worshipping lady.		
Cost of raw materials:	Rs.	Rs.	
rosewood	0.75		
woods of different colours	0.05		
ivory	0.50		
sandpaper, polish, screws nails, etc.	0.50	1.80	
Cost of labour:			
carpentry	1.50		
cutting and inlaying	1.00		
engraving	0.30		
polishing	0.40	3.20	
Cost of production		5.00	
Selling price		6.00	
Profit		1.00	
IV. Name of article: Powder-bowl			
size	: diameter-4", height 1½".		
design	: dancing girl.		
Cost of raw materials:	Rs.	Rs.	
rosewood	0.50		
woods of different colours	0.03		
ivory	0.37		
sandpaper, polish	0.25	1.15	
Cost of labour:			
wood turning	0.50		
cutting and inlaying	1.25		
engraving	0.30		
polishing	0.15	2.20	
Cost of production		3.35	
Selling price		4.00	
Profit		0.65	

1. An industry at Hyderabad, owes its inspiration to the village Nirmal in Adilabad district of Andhra Pradesh.

The sales tax is charged at the rate of 2 per cent. The payment of packing and forwarding charges depends upon the agreement entered into between the manufacturer and his agent.

The proportion of the cost of raw materials and labour is possible of being worked out only with reference to particular varieties of articles, as for instance, in respect of teapots it is 48:52, panels it is 40:60, boxes it is 45:55 and powder bowls 35:65. It is, however, not uncommon for panels made by using raw materials worth only Rs. 50 being sold as high as Rs. 500 owing to the skilled workmanship and the exuberance of the artistry of the piece.

Capital

The total investments of the manufacturing concerns is about Rs. 152,000. Out of this amount, Rs. 38,000 is spent on machinery, Rs. 60,000 on buildings and Rs. 4,000 on tools, the remaining Rs. 50,000 representing the working capital. The tendency among manufacturers is to buy raw materials as and when needed and not in bulk for stocking.

Five of the establishments are located in owned buildings and the rest in rented buildings. Machinery is installed only in five establishments on which the investment is Rs. 38,000. The tools valued Rs. 4,000 are owned by all the 15 establishments surveyed.

Production

The total production of inlaid articles during 1963-64 at Mysore is estimated to be of the value of Rs. 470,000. The share of the cottage type establishments is approximately Rs. 30,000. Panels and teapots only account for more than fifty per cent of the total production, the rest being made up of boxes, powder bowls, trays, etc.

Marketing

The inlay articles made at Mysore have a market all over the country. The articles are sold through recognised dealers in Delhi, Bombay, Calcutta, Madras, Bangalore and other important centres in the country. The sales promotion aspect of the trade received great fillip since the time the Khadi & Village Industries Commission introduced the sale of these ware in the centres run by it outside

the State. The dealers state that even for local sale their dependance is more on outside visitors than local residents.

Upto 1919 the manufacturing establishments of M/s. Yusuf Ali & Sons were selling their products solely through Sri Chamarajendra Technical Institute. The articles produced would be made over for display in the Institute's show-room and payments received after their sale, the Institute retaining its own agreed commission.

After 1919 and till about 1948, the manufacturing establishments besides making use of the agencies of Sri Chamarajendra Technical Institute, Mysore, the Victoria Technical Institute, Madras, and the Mysore Government Arts & Crafts Emporium, Bangalore also started selling their ware to customers in their own manufactory. In the year 1948, 3 establishments came to be set up in the city to deal exclusively in this product and certain other art pieces. By 1955 this number increased to 5 and by 1960 to 10. At the time of this study in 1964, there were 20 such establishments selling inlaid articles. Three of these dealers are in Irwin Road, 1 in Benki Nawab Street, 1 in Devaraja Market, 1 in Ane Sarot Street and 14 in Dhanwantri Road (including cross). Only eight out of these 20 dealers have their own manufacturing units while the remaining 12 buy articles from individual craftsmen and the manufacturing units for sale in their shops.

More than 70 per cent of what is produced finds a market outside while local sale at the manufacturing centre is a meagre 30 per cent. Almost all the manufacturers sell their products to the Arts and Crafts Emporium, Bangalore, Victoria Technical Institute, Madras, Central Cottage Industries Emporium, Delhi and the Khadi Bhavan, Bangalore.

As regards foreign export, a few of the dealers send them as gift parcels to U.S.A. and U.K. However, no direct export to foreign countries has been seriously attempted by any of the manufacturing or selling establishments.

The local demand is more during January to May when the marriage season will be on and people go in for these articles for making presentations to the newly wed.

The finished articles of inlay are wrapped in tissue paper to preserve its polish and to guard against scratches. A kraft paper is also wrapped round the tissue paper when it is to be despatched to outside places. Paper cuttings and straw are also used in packing for giving it a pad and prevent breakages. The containers used for packing are usually dealwood cases. The articles are sent by rail to far off places and by road to nearby places. The articles of inlay manufactured at Mysore are in demand throughout the year.

Wood Turners

There are four wood turning establishments in the city whose help the inlay workers frequently seek. Teapoy legs, teapoy round tops, plates for panels, powder bowls and paper-weights are turned on lathes in these establishments. The raw material is supplied by the inlay workers and charges for turning is paid at the following rates:

	Rs.
Round legs for teapoy - each	0.37
Teapoy tops - diameter 12"	0.25
" 10"	0.22
" 8"	0.12
" 6"	0.09
Plates - diameter 8"	0.30
" 7"	0.28
" 6"	0.25
Paper-weights - each	0.37
Powder-bowls - diameter 5"	0.50
Panels - diameter 12"	1.00
" 10"	0.75
" 8"	0.62
" 6"	0.50
" 4"	0.37

The investment of these four establishments on machinery and tools is Rs. 12,300. Out of the 4 turning units, one is housed in its own building and the other 3 in rented buildings. The total number of workers engaged in turning is 12, of whom 4 belong to the household itself and 8 are hired.

Inlay Workers

The 15 establishments surveyed are owned by 12 households. 9 households own 1 establishment each and 3 households own 2 establishments each. The 12 households who own the establishments are distributed in the locality of Mandimohalla of the city. These households are economically well

off having a monthly income ranging from Rs. 300 to Rs. 700.

Inlay work is a new venture for all the households excepting 2 and these 2 families have been in the line for over a century. The craft is the principal means of livelihood of all the 12 households.

The employees have not formed an association or trade union. The employers do have their own labour problems despite the absence of unions. Want of a recognised forum to voice the grievances of the employees in the trade has left them with little bargaining power.

The inlay workers are trained at Sri Chamarajendra Technical Institute or working as apprentice in the establishment itself.

The art of inlay involves no strenuous manual labour and an apprenticeship in the craft will help acquire the requisite skill.

Co-operative Society

There are no co-operative societies meant to serve exclusively the artists of inlay industry. Sri Viswakarma Craft and Banking Co-operative Society which was established in 1954, with the sole object of rendering assistance to persons engaged in handicrafts, irrespective of the type of the craft is to some extent helping the inlay industry. Membership of the co-operative society is open to inlay workers, gold and silver smiths, wood carvers, painters, etc. The co-operative society is having a sales emporium where inlaid and carved rosewood and sandalwood articles are sold. The members of the co-operative society are engaged in several types of crafts and as such the details regarding those engaged in inlay work only could not be collected. Finished articles are purchased and sold by the co-operative society and no production unit of its own is run. The total sales of inlaid articles during 1963-64 in the co-operative society was about Rs. 3,000.

Training Centre

Sri Chamarajendra Technical Institute, Mysore, was started by the Government of Mysore in 1892 and is functioning in the present building since 1913. The aim of the Institute is to foster and improve the indigenous crafts of the State, to

introduce new crafts, to train students in Arts and Crafts and also to promote a taste for good design and craftsmanship.

The courses of study in the Institute are drawing and painting, modelling, sculpture, wood carving, sandalwood and ivory carving, inlaying, engraving and enamelling, metal work, carpentry and cabinet making, rattan work, fitter's work, blacksmithery, polishing and upholstery.

The duration of the course of inlay study is 5 years. At present 14 candidates are undergoing training. Candidates for admission to the course

should be above 12 years and below 18 years of age and should have studied up to the first year Middle School. A stipend is given to students, the quantum of which varies according to the year of study. During the first year it is Rs. 3 per month, during the second year it is Rs. 4 per month, during the third it is Rs. 5 per month, during the fourth it is Rs. 6 per month and during the fifth year it is Rs. 8 per month.

There is a production unit also in the Institute, with 5 inlay workers. In the year 1963-64, inlaid articles worth Rs. 2,919 were produced and sold.

CHAPTER IV

CONCLUSION

The inlay craft in Mysore is quite a flourishing industry. The present study has revealed that there has been a progressive and rapid increase in the number of manufacturing and dealing units all making quite a sizable profit and the conclusion is therefore inescapable that this trade which is not subject to the rigours of any economic squeeze has an assured development and growth in the future also. The working of three plans has resulted in an alround improvement in the general economic condition of the people. The increased purchasing power combined with a taste for acquiring articles of artistry and beauty clearly discernable in the present times has helped to boost the sales of these articles. The articles made at present are within easy reach of an average person. Efforts are also being made to sell them as cheaply as possible by substituting plastic for ivory so that it may be feasible for people of lesser income also to possess these decorative pieces. As the inlay part of work has to be done by hand and involves much time and labour the scope for bringing down the labour cost is little. The manufacturers were

also unreserved in their expression of gratitude to the various agencies that have taken up the sale promotion of inlay articles in the various centres all over the country. The craft provides a substantial and unfailing income to the employees too. No systematic study has, however, been attempted so far to understand the public taste and improve the quality of production or take to more popular designs.

This craft has also not been spared of the absurdity indulged in by commercial artisans of making shoddy and cheap articles. If this pernicious practice were to continue, the craft is sure to be badly hit. It is essential that the quality and workmanship is not allowed to deteriorate if the product is to capture new markets and command an enlarged clientele.

One noticeable feature about this craft has been that of late there is a perceptible decline in the scope for self employment. The result is that factory type establishments have come to hold the field pushing out cottage type establishments.

APPENDIX I

LIST OF MANUFACTURERS OF INLAY ARTICLES

1. Art Centre.

2. Fine Art House.

3. Sarada Fine Arts.

4. Aryan Arts & Industries.

5. Lakshmi Fine Arts.

6. Fine Industries.

7. Associated Arts.

8. Mubarak Arts.
9. M. Yusuf Ali & Sons.

10. Dore Fine Arts.

11. Sri Sathyanarayana Fine Arts.

12. Mysore Sandal & Ivory Art Works.

13. Haji Mirza Niaz & Sons.

14. Bahadursingh Inlay Workshop.

15. Noble Arts.

APPENDIX II

LIST OF ESTABLISHMENTS WHICH DEAL IN INLAY ARTICLES

1. Art Centre, Irwin Road

2. Fine Art House, Irwin Road.

3. Sarada Fine Arts, Irwin Road.

4. K. Kempaiah, Benki Nawab Street.

5. Mysore Curios Arts & Crafts, Dhanwantri Road.

6. Tilak Stores

7. Sreekanteswara Fine Arts

8. Muruli Fine Arts

9. Suryani Fine Arts

10. Ganesh Fine Arts
11. Ganesh Industrial & Fine Arts, Dhanwantri Road.

12. Sathyanarayana Fine Arts

13. Moghul Art Emporium

14. Arun Fine Arts

15. Seshi Fine Arts

16. Sreenivasa Fine Arts

17. Noble Arts

18. Mumtaz Ahmed Khan, Devaraja Market

19. Venkatesha Fine Arts, Devaraja Market

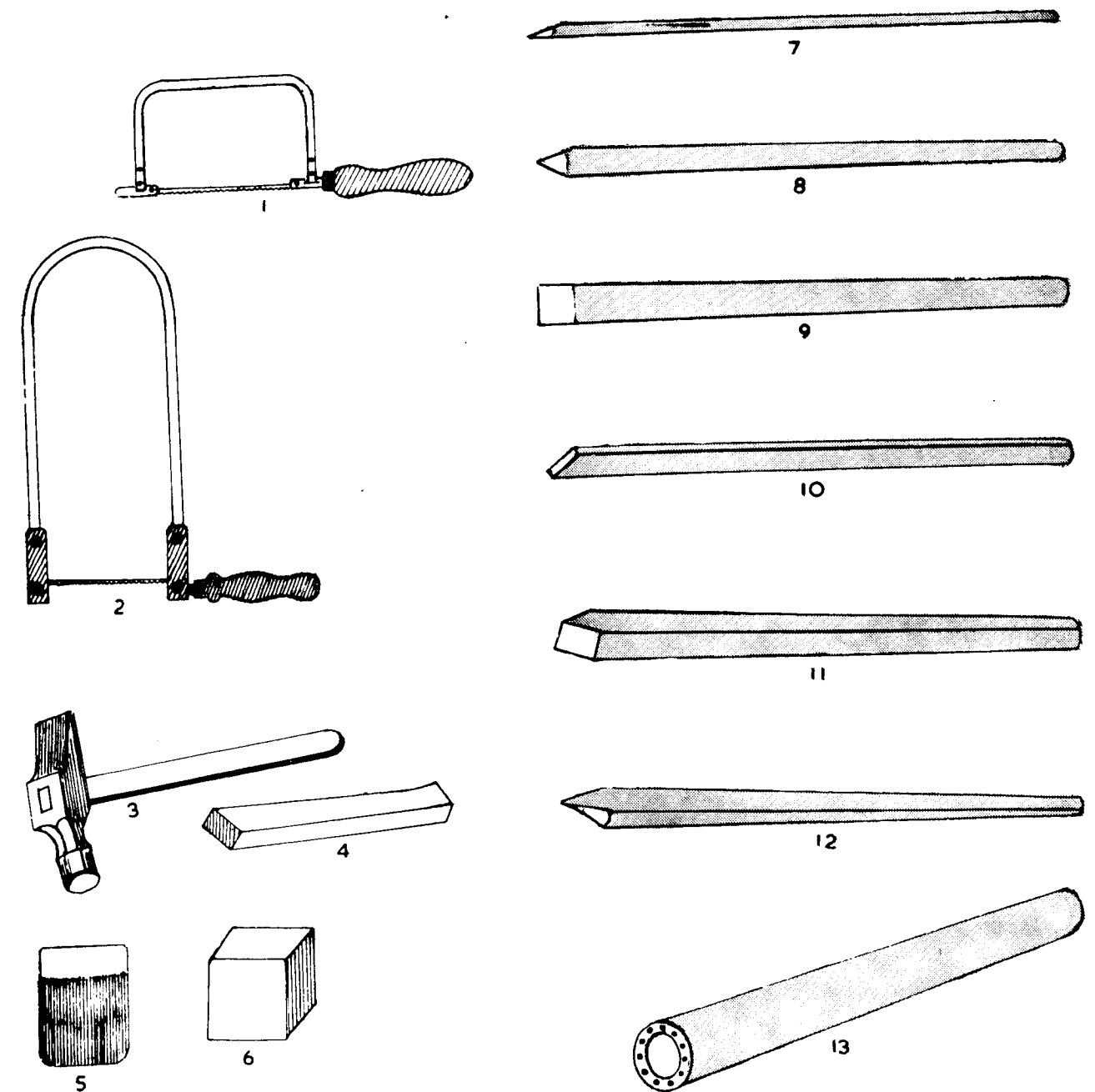
20. Hari Rao Inlay Arts, Dhanwantri Road

Show-room of Viswakarma Craft & Banking Co-operative Society, Irwin Road, Mysore.
Show-room of Sri Chamarajendra Technical Institute, Mysore.

APPENDIX III

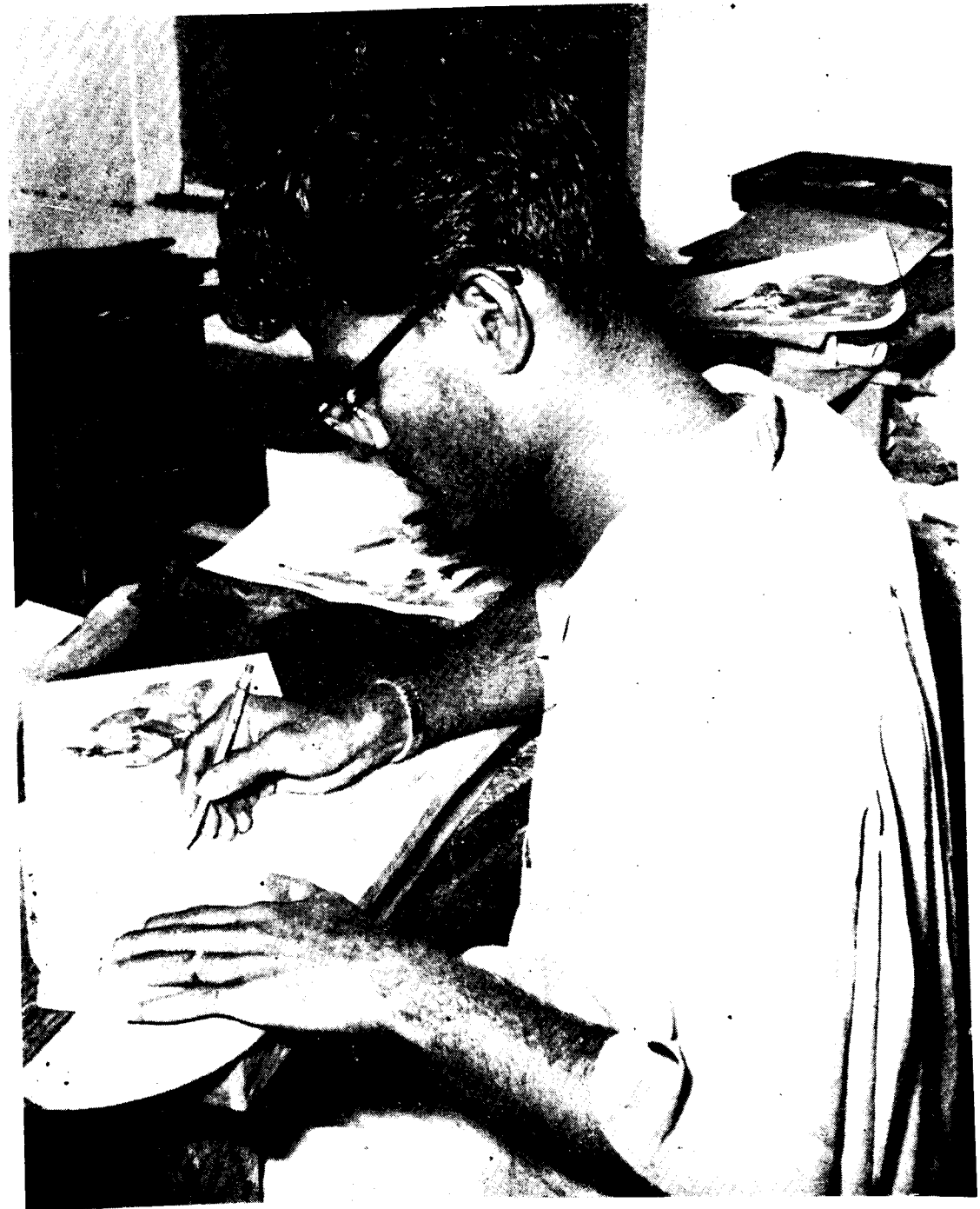
PRICE LIST OF INLAY ARTICLES

Item	Shape	Size	Price (Rs.)	Item	Shape	Size	Price (Rs.)
Panel	Rectangular	11"× 8"	8.00 to 9.00	Plates with stand (concave)		diam. 6"	7.00 to 8.00
		12"× 9"	10.00 to 14.00			7"	11.00 to 13.00
		13"× 10"	12.00 to 20.00			9"	16.00 to 20.00
		22"× 11"	25.00 to 50.00	Boxes		4"× 4"	3.00 to 4.00
		36"× 18"	100.00 to 300.00			5"× 5"	4.00 to 6.50
	Oval	6"× 4"	2.00 to 4.00			6"× 6"	8.00 to 9.00
		9"× 6"	5.00 to 8.00			5"× 4"	4.00 to 5.00
		9"× 12"	8.00 to 12.00			6"× 4"	4.00 to 6.50
		10"× 12"	12.00 to 14.00			7"× 4"	5.50 to 7.00
		13"× 10"	14.00 to 20.00			8"× 4"	7.00 to 8.50
	Round	diam. 8"	6.00 to 8.00			8"× 5"	7.50 to 9.50
		12"	7.50 to 15.00			9"× 5"	9.00 to 10.50
						10"× 6"	9.50 to 15.50
Trays	Rectangular	18"× 9"	14.50 to 18.00	Powder-bowls			3.50 to 6.00
		20"× 10"	18.00 to 26.00				
		18"× 13"	20.00 to 30.00	Automatic cigarette-case			7.50 to 10.50
		24"× 12"	18.00 to 35.00				
Teapoys	Rectangular or oval	13"× 10"	15.00 to 18.00	Paper-weights			2.50 to 3.50
		15"× 12"	14.00 to 34.00				
		16"× 13"	26.00 to 30.00	Book-ends			6.00 to 16.00
		18"× 15"	20.00 to 35.00				
	Square or round	Sq./diam. { 12"	12.00 to 15.00	Calendar Plates			4.00 to 6.50
		15"	20.00 to 30.00				
		18"	25.00 to 75.00				



Tools needed in the making of Inlay articles.

1. Coping saw, 2. Fret saw, 3. Hammer, 4. Mallet, 5. Scraper, 6. Sandpaper block, 7. Marking tool, 8. *Kachu Chirna*, 9. *Matta Chirna*, 10. *Vata Chirna*, 11. *Dassi Chirna*, 12. Engraving tool, 13. Punch.



An artist at work — tracing the design.



a. Cutting the sheet of wood. The wood is fixed in a vice and cut by a coping saw.

b. Cutting of wood using a saw board and a fret saw.



a. Assemblage of pieces of wood and ivory to form the inlay pattern.

b. Marking the outline of the design. Marking tool and mallet are used.





a. Preparation of ground by scooping. *Matta Chirna* (Chisel) and mallet are employed. *b.* Driving the design into the prepared ground by gentle tapping.



Engraver at work — marking the background contours.



a. Filling the narrow cavities. *Dassi* (splinters of wood specially cut) serve as fill plugs.



b. Ivory smithereens in the shape of flowers and leaves are driven into the recesses.



a. Rasping.



b. Scraping.



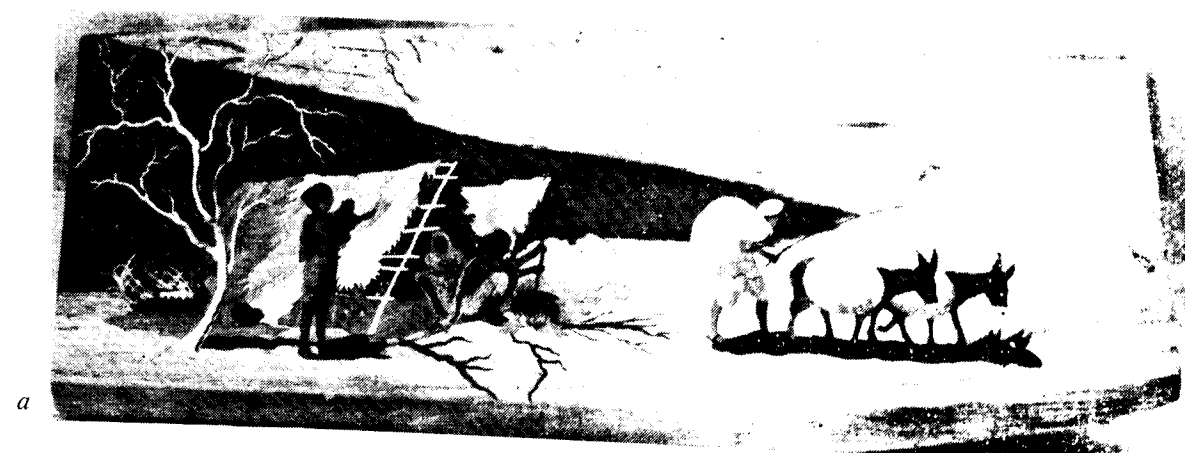
b. Engraving.



a. Smoothing the surface with sandpaper wrapped on a sandpaper block.



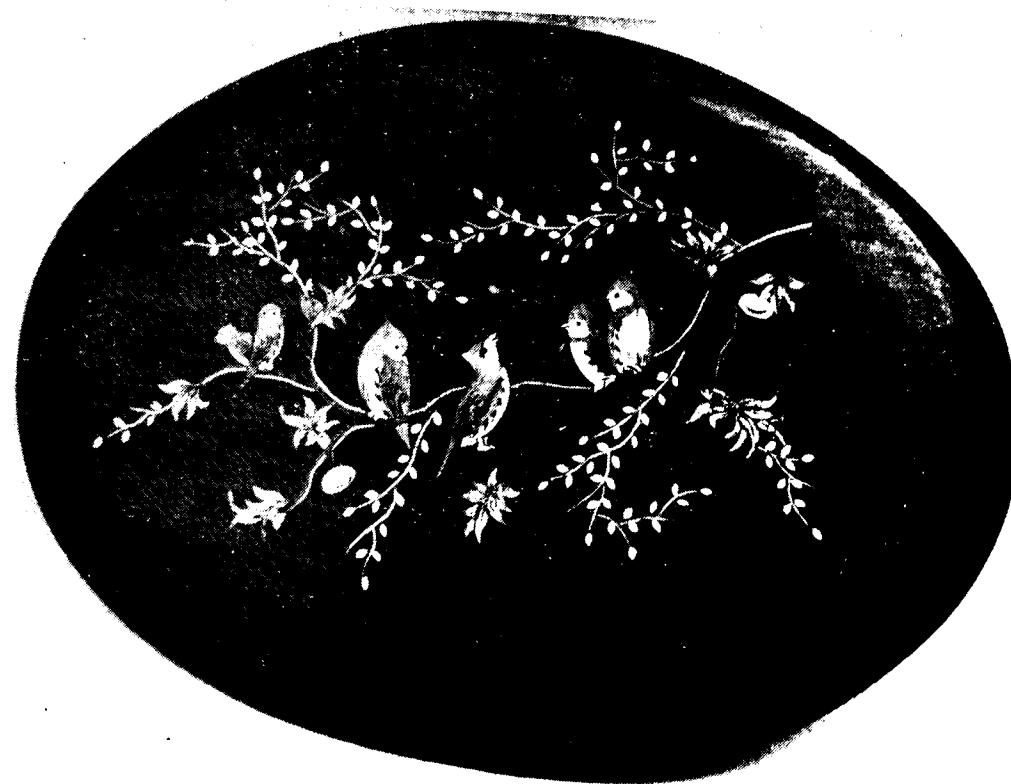
Polishing.



- a.* Rectangular wall panel featuring a country scene. Size: 28 inches by 10½ inches.
b. Wall panel depicting a nocturnal village meeting. Size: 28 inches by 16 inches.



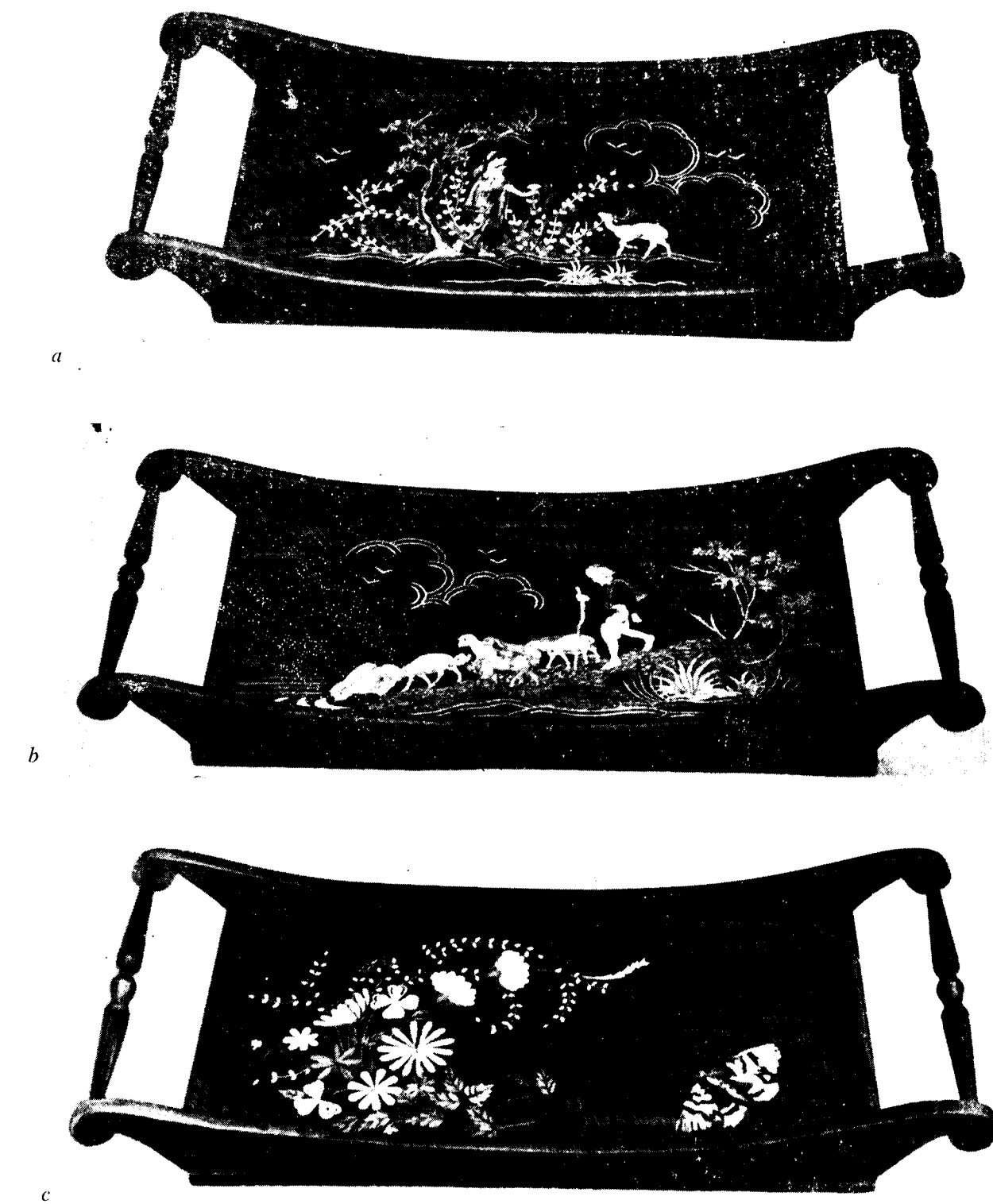
Round panel featuring a scene in *Omar Khayam*.
 Size: 12 inches diameter.



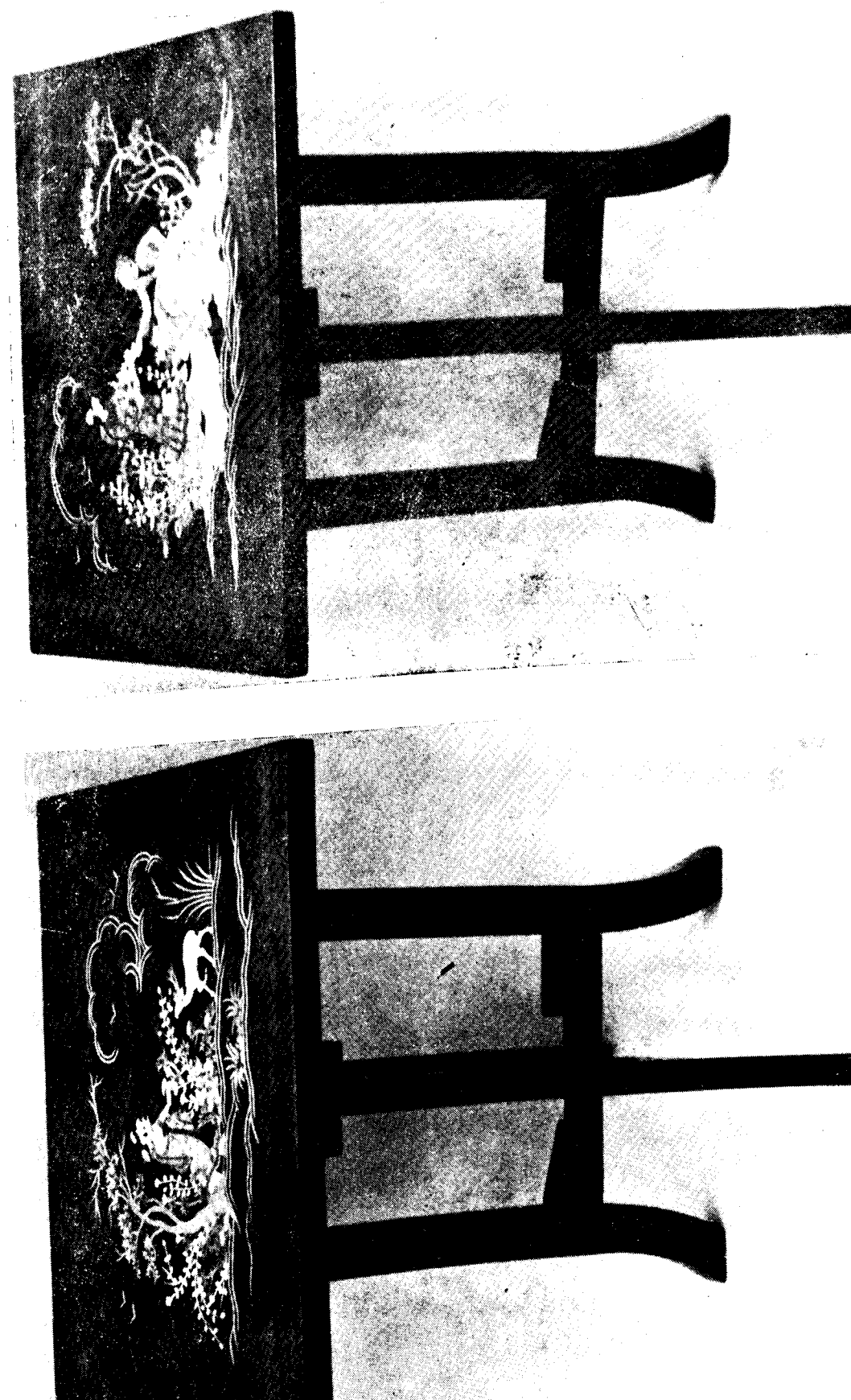
Wall panel of elliptical shape featuring birds perched on a twig full of blossoms.
Size: 12 inches by 9 inches



Wall panel of oval shape featuring a clear streamlet and two maidens with water pots.
Size: 9 inches by 12 inches



a. Tray with the popular design of *Anarkali*. b. Tray featuring a shepherd with his flock of sheep near a stream. c. Tray featuring a common design of festoons and butterfly.

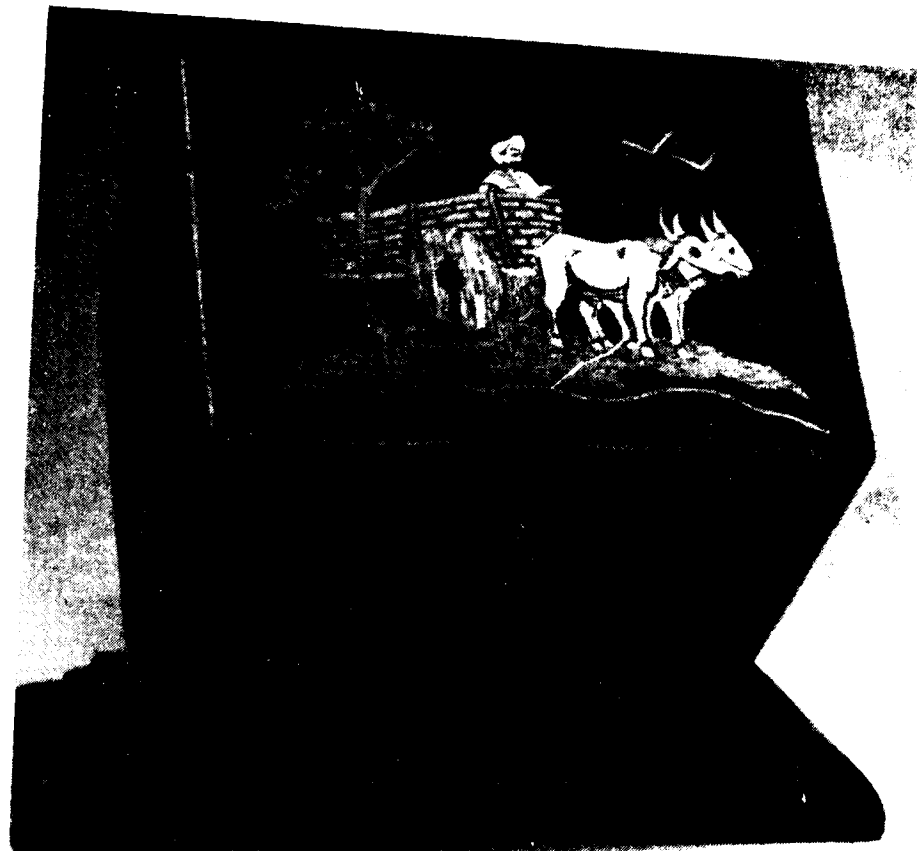


a. Teapoy with rectangular top featuring the design of *Anarkali* and legs of cross folding frame.

b. Teapoy with rectangular top featuring the design of *Omar khayam* and legs of cross folding frame.

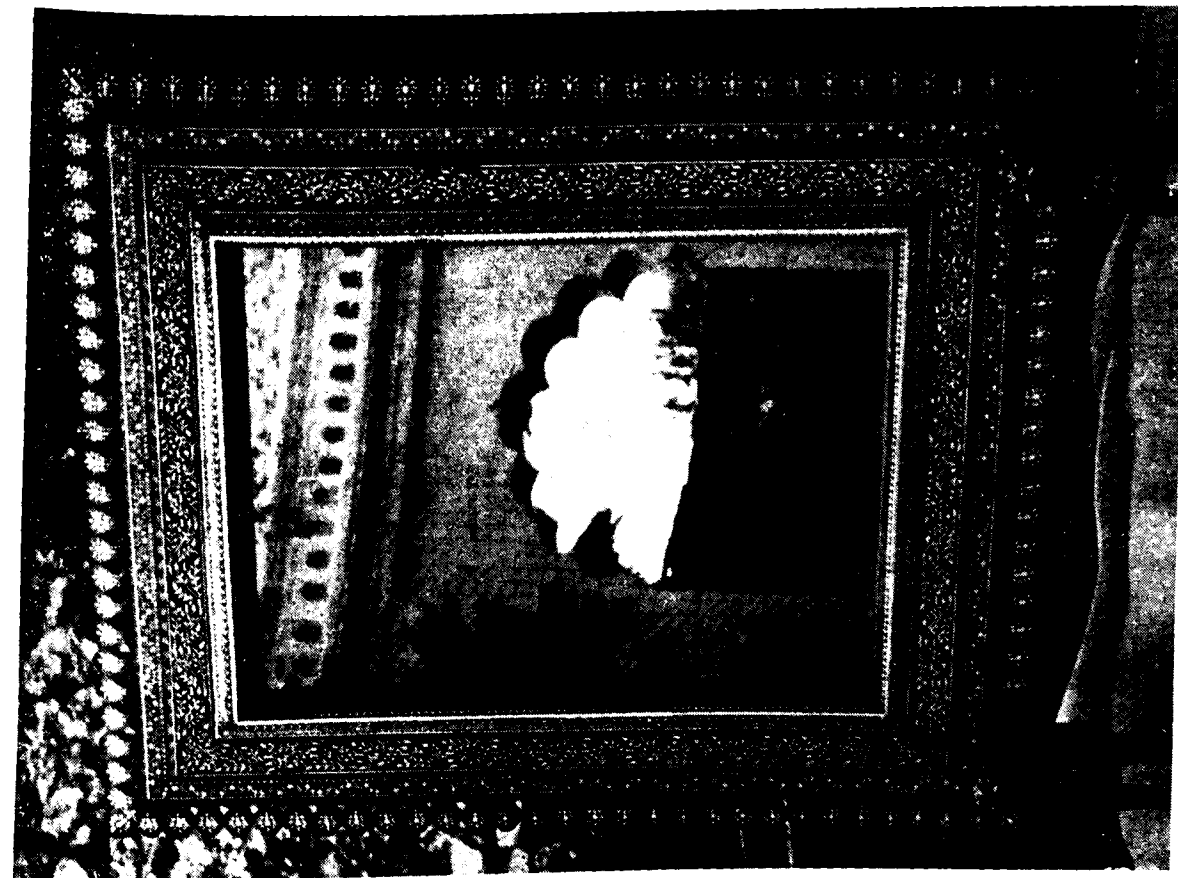


a

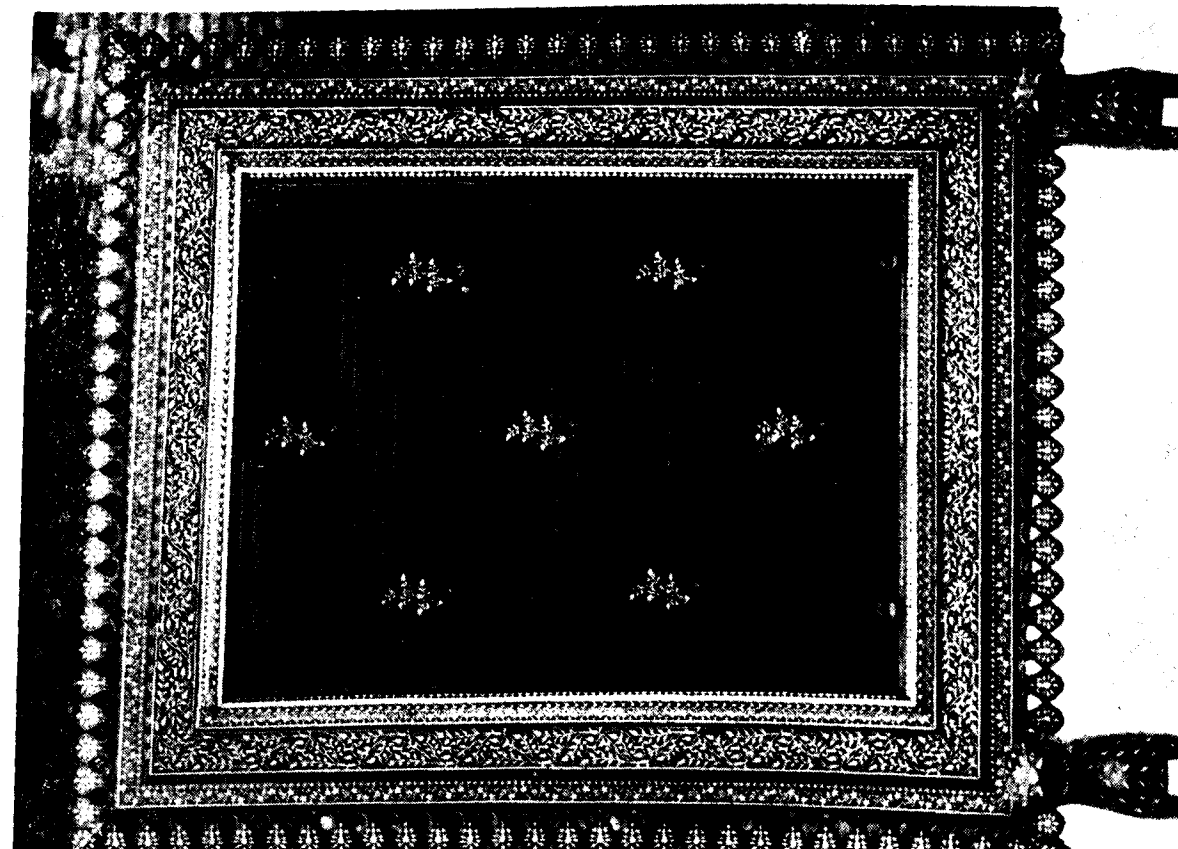


b

a. Inlaid boxes. *b.* An automatic cigarette case with bullock cart design.

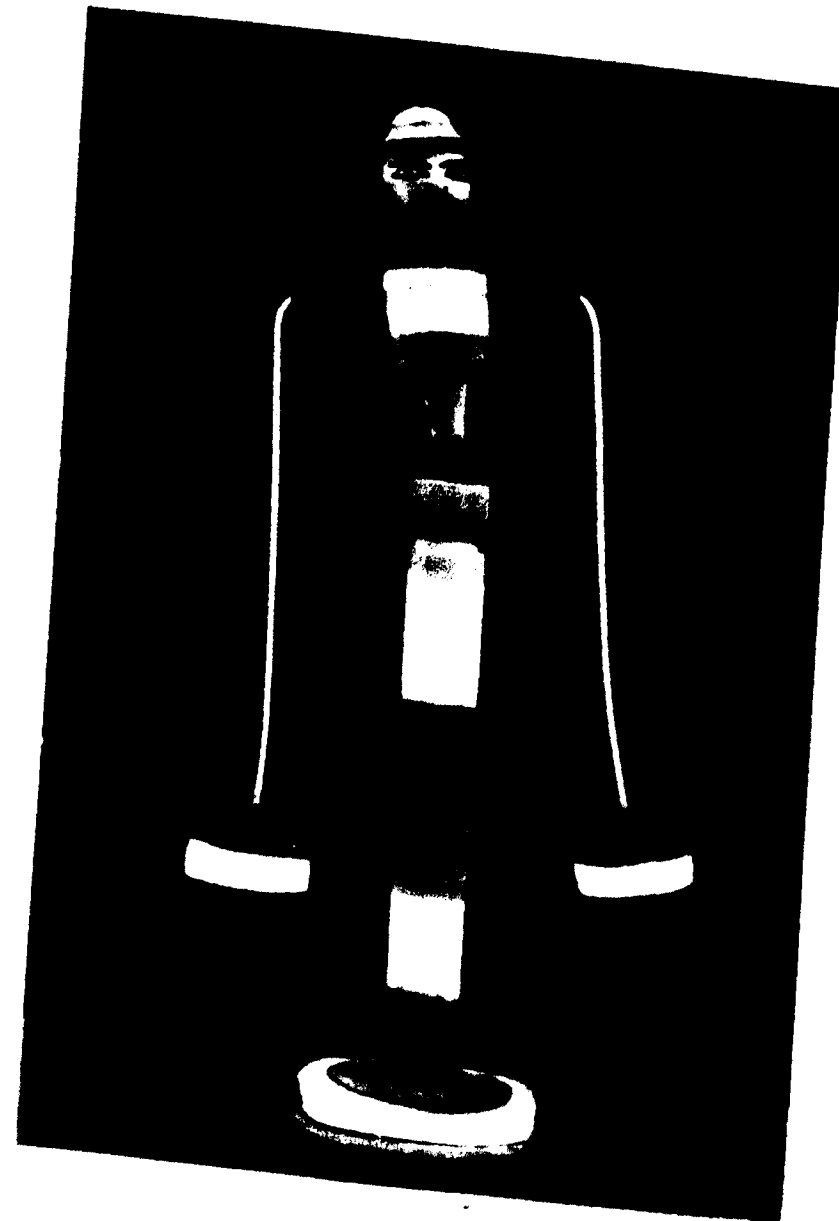


b. Inlaid mirror frame with the wooden sheet rolled up and showing the translucent mirror.



Inlaid mirror frame of 19th century with borders of creepers and ferns having an attractive rolling sheet behind which the mirror is encased.

LACQUERWARE
OF CHANNAPATNA



A balancing doll.

CHAPTER I

INTRODUCTORY

Introduction

Lacquerware of Channapatna is an indigenous industry the like of which is not found anywhere else in the State. The industry has registered impressive progress during the period of its existence for over six decades. Its importance lies in its being practised as a cottage industry. Though the craft goes popularly by the name of lacquerware it appears to be more appropriate to call it lac-turnery as the term lacquerware embraces any painted article and does not necessarily apply to pieces produced at Channapatna.

The difference between lac-turnery and lacquerware is one of technique. In lac-turnery paint is applied in a dry state. The frictional heat produced when lac is pressed against the turning ware assists the process. The lac employed is of animal origin. In lacquerware, paint which is of plant origin is applied in the liquid form.

The term 'lacquer' takes its origin from the Sanskrit word 'Laksha' meaning a protective varnish, a coating of which was being given in day past to household articles. The base of this material is a resin lac, the gummy deposit of the insect 'Techadria lacca', named after Father Tachard who was the first to publish the scientific description of this insect.

In lac-turnery the technique involved is wood turning which means evolving circular shapes by working the wood on a lathe and dextrous manipulation of suitable cutting tools on it. Wood turning is different from wood work done at the bench though the basic material for both is the same. Wood turning demands considerable care and caution as in this the article is required to be shaped on a revolving piece unlike at the bench where a stationery piece is worked on. The risk of accidents is more in wood turning than at the bench. Only a few species of wood are suitable for turning while work at the bench is not subject to any such limitations.

Centre of Production

Channapatna is the headquarters town of Channapatna taluk in Bangalore district. It lies at 12° 38' N. Latitude and 77° 13' E. Longitude at a distance of 37 miles (60 kms.) from Bangalore towards south-west on the Bangalore-Mysore road. Its distance from Mysore is 52 miles. The town is connected both by rail and road to Bangalore and Mysore. The population of the town according to the 1961 Census is 26,467 and its area 4 sq. miles. The town occupies the narrow strip of land between the railway line and the highway.

Channapatna is not only the administrative headquarters of the taluk but also an important commercial centre. A regulated market functions at the place and a large number of retail and wholesale traders are also doing substantial business. Apart from lacquerware, production of silk has also come to be associated with Channapatna. In view of this association a Sericultural Research Institute has been established recently by the Government of India. The town also affords educational, welfare and recreational facilities, on quite a liberal scale. There are high schools, a polytechnic, the Artisan Training Institute, the General Hospital, the Veterinary Hospital, and not a few cinema houses.

Channapatna is a place of historic importance. It was the capital of Jagadevaraya in 1580 and was later conquered by Chamaraja Wodeyar of Mysore in 1630. In 1759 it was over run by the Maharatta army, but was soon regained by Hyder Ali. The remnants of the fort stand even today as a monument to its past glory.

History of the Craft

The history of the craft of lac-turnery at Channapatna is to be traced to the turn of the last century. According to the reports of the local craftsmen the pioneer of this craft is one Baba Saheb Miyan Saheb who is also popularly known at the place as

Bavasmia. The craft had its beginning as an experiment to diversify the wares produced by the Chitragars who displayed a high degree of talents in the field of art and to improve thereby their economic conditions.

Bavasmia was at the time the Superintendent of the Government Industrial School at Channapatna. It is said, he was attracted by the art of Chitragars who were making painted *Rangoni* on country lathes. To make a study of lacquerware, Bavasmia visited Punjab where the craft was practised. After return from Punjab, Bavasmia introduced lacquerware as a subject of study at the Industrial School (the present Artisan Training Institute). Bavasmia visualised a good future for the craft and bent his energies towards improving its technique. He carried out experiments and substituted zinc sulphide for pigment of sulphur. For buffing, he found screwpine leaf superior in effect to rags used by the artisans of Punjab. Buffing is an essential part in the process of lacquering. Bavasmia experimented with several kinds of leaves such as date palm, cocoanut and palmyra and found ultimately that screwpine leaf was the most suited for buffing. Screwpine leaf not only helps to spread the lacquer evenly on the turned piece but also makes it lucid. After attaining a measure of success in his experiments with raw materials, Bavasmia made a power lathe using a diesel motor which enabled a speedier out-turn of work.

Local men who got a premonition of the success of this craft and also some trained students from the Industrial School, took up the craft as a full time avocation and till about 1930 the establishments gradually multiplied.

In 1930 a trained student of the Industrial School established the first power unit with 8 lathes and a 2.5 H.P. motor getting financial aid from Government. But this unit was wound up later in 1946.

The advent of power lathes proved a turning point in the fortunes of this craft. The power lathes made for speed and enabled a greater output combined with economy in the cost of production. Also working on a power lathe is comparatively less strenuous.

The contribution made to the craft by artist designers of the Design Centre, All India Handicrafts Board, Bangalore has been quite significant. They made a thorough study of lac-turnery and worked unsparingly on the development projects. The innovations regarding designs and colour schemes introduced by the artists gave the craft new dimensions and permitted a wider choice of articles being produced. The local master craftsmen also share the credit for what the industry has been able to accomplish in recent times.

In the early days, the wares were turned on hand lathes and the industry was subject to a severe limitation regarding the number of items manufactured. The articles were mostly sold to the missionaries and by pedlars to the travelling public at the railway-station and the bus stand.

Sri C. Hayavadana Rao in his Mysore Gazetteer* has the following to say about this industry.

"Lac-turnery is an old indigenous industry in Mysore, practised chiefly at Channapatna, by a class of people called *Chitragars*. The wood used is *Hale* or *Eagi* which grows abundantly on waste lands round about Channapatna. It is soft and of fine grain, admitting of being turned under a bow-lathe, worked by one hand. The people cut the logs and thick branches of the wood into smaller pieces, turn them under the lathe and apply variously coloured lac, by pressing it gently against the articles under the bow-lathe, in which process the lac melts and coats the toys. By dexterous handling, various shades of colour are imparted to the different parts of the toys turned by the lathe.

"Since the introduction of the subject in the local industrial school boys of other classes trained in the school have taken to the profession and are earning an independent living. The introduction of power driven lathes has facilitated the increase of production of these toys.

"The toys for which Channapatna is noted are remarkably well suited for their purpose and much sought after by all classes of people, including the Europeans. These toys are of brilliant colours, smooth and hard and the colour never comes off. Large toys, representing various animals, are made

from a soft wood like touch-wood *Bhurige-mara*. They are elaborately painted by hand; the birds especially and some fruits, being very fairly modelled and painted to imitate nature."

After the passing away of Bavasmia and upto 1940, persons engaged in this craft had practically no facilities for carrying on experiments on this creative art, and non-availability of tools and materials deterred any experiment being conducted on a quantitative scale. However, in recent years the research, which happens to be a key factor for the progress of any such craft has been taken up in the Design Centre and the Central Handicrafts Development Centre of the All India Handicrafts Board at Bangalore. The prevalence of competition which always acts as an effective stimulant to the production of improved and cheaper articles has given a fillip during the past two decades for the sustained growth of this craft. The lacquered wares which in the earlier days were crude and less attractive had failed to enthuse the celebrities. The craft however, survived due to a certain account local patronage it enjoyed. After its assuming a new role in recent years, the articles have come to occupy a place of honour as art pieces of some worth. It is an encouraging sign that the craft is making considerable headway and has been registering an all round improvement, thus assuring to those engaged in it a fairly decent living. The finished products need packing in containers to facilitate their marketing. Hence units which make containers out of palm leaf and cardboard sprung up at the place as ancillary to this industry providing employment to some more. This industry has also helped to provide the local carpenters, tinsmiths and blacksmiths, with uninterrupted work.

The Craftsmen

Chitragars who are hereditary artists were the first to take to making lacquerware at Channapatna. Their possessing knowledge of wood turning made it easy for them to learn the craft and on this account they were also preferred for admission to the Industrial School. Unfortunately the response from Chitragar families was found insipid and admission had therefore to be thrown open to students of other castes also. Due to the influence of Bavasima, local Muslims came forward

to join the course and this gave them an edge over others in this field. Only one Chitragar household is now found to be in the line.

During the course of this study, this one Chitragar household was interviewed. The head of the family and his son are making fake fruits and vegetables. According to his statement the street where he is residing (a cross lane of the Mahatma Gandhi Road) went by the name of Chitragar Street in the days old. He was not able to furnish information about the place from which Chitragars came to Channapatna. His caste men, he states, were engaged in making wooden masks—human and animal—used by the village folk on festive occasions and also images of deities. They also did painting in temples in the villages round about Channapatna. He reported that his caste men have since migrated to Bangalore and other places where a few of them pursue trade while others are employed, and his is the only family surviving to remind their former existence at Channapatna.

Muslims are now mostly engaged in this craft and next to them come Harijans. Others are insignificant. The Muslim households are concentrated in the locality of Diara and at Makkan and the Harijans at Yelekeri.

Bavasmia was the originator of this craft at Channapatna. In doing so he was inspired by the philanthropic motive of improving the lot of art minded Chitragars. His efforts, despite the Chitragars not taking kindly to it, did not go in vain as others at the place have been able to derive considerable financial benefit by adopting this craft as a means of living.

Establishments

First of all it is necessary to classify the establishments engaged in the craft of lac-turnery at Channapatna into two groups, on the basis of the type of lathe used. Establishments working with hand lathe will form one group and establishments working with power lathe the other. For the sake of brevity, the first group will be referred to in this monograph as the 'hand-sector' and the second group as the 'power-sector'.

During this study which came off in July 1965, all establishments in the power-sector were surveyed.

*Mysore Gazetteer, Volume III Edited by Sri C. Hayavadana Rao, 1929—pages 260-261

Power-sector

There are in the power-sector 20 establishments at Channapatna. The first in power-sector came to be established in 1930 but it soon went out of existence in 1946. The following table furnishes the details of units established from time to time and are still functioning.

Year	No. of units established
1941 ..	1
1943 ..	1
1945 ..	3
1950 ..	4
1956 ..	1
1959 ..	1
1962 ..	6
1963 ..	1
1964 ..	1
1965 ..	1
Total 20	

The establishments in power-sector have been in operation subsequent to 1941. According to the local reports, the hand-sector is not hit by the power-sector, though overproduction and unemployment were at first apprehended. The introduction of power lathes has helped increased production and also to bring down overhead cost. This has not adversely affected the hand-sector, in view of the expanding market for these products. The margin of profit is, however, reduced.

Out of the 20 units, 14 are owner-managed and employ hired labour. These 14 units have 110 lathes in all. Two of these have their own artists for doing the painting while the remaining 12 get painting done outside on piece work basis.

Two of the owners have allowed the lathes in their units numbering 18 to be used independently by individual craftsmen for which a monthly hire of Rs. 10 per lathe is charged inclusive of electric charges. These workers will have to obtain their own raw materials. They dispose of the finished products to local dealers.

In two other units which are equipped with 8 and 14 lathes respectively, 3 lathes in each have been hired out to individual artisans and work on the remaining 5 and 11 lathes respectively are done by owners utilising hired labour.

Another unit having 8 lathes has been leased out in its entirety to one individual who produces the ware employing hired labour.

A partnership concern for making lacquerware equipped with 10 lathes and a 3 H.P. motor was started at the place in the year 1945. It was composed of 5 partners and functioned till 1952, the profits being shared equally by them. Thereafter the partnership broke up and each partner got for his share two lathes with accessories and tools. But there could be no division of the motor. Hence an arrangement was worked out whereby each reserved for himself an equal right over its use. The expenses on rent and electricity are borne by all five in equal proportions. Each one is now working independently and finding his own market for the products.

The units in power-sector work on all days of the week, the normal working hours being between 8 a.m. and 1 p.m. and 2 p.m. and 5 p.m. Sunday is an off day. Females have no labour to contribute in this sector while children work as apprentices.

The hired workers are paid on piece-rate basis. The job of the turner is the shaping of the piece and to apply lacquer to it. The rate of wage is governed by the type of article produced. An artisan's earnings vary from Rs. 2.50 to Rs. 5.00 a day depending on his skill. The independent artisans who work on hired lathes earn a net amount of Rs. 40 to Rs. 50 a week.

The units producing articles essentially with hired labour are found to be economically sound have also been able to find funds for investing on purchases of raw materials in bulk. They are also in a position to hold the stock (finished products) over a period for securing better prices.

The total number of persons engaged in the craft in the power-sector is 208. Among them, 20 are owners, 164 are hired workers, 24 are independent workers who have taken lathes on hire, one is a leasee of a complete unit; and 2 are mere rent receivers, having hired their lathes to others.

Hand-sector

In the hand-sector the establishments number 340 and persons engaged in them number about 600. There are as many lathes in operation as there are workers. All the establishments in the

hand-sector are household proprietary concerns and they work with household labour. The investment on a hand lathe being meagre no body is compelled to work as a hired labourer in this sector.

The craftsmen work in a portion of their residence and in many cases a part of the living room serves as their place of work. The articles made on hand lathes are simple, archaic and traditional which need no artistic finish, the job ending with lacquering. The artisans in the hand-sector do not therefore need the aid of an outside artist as in the case of the power-sector.

The craftsmen work on all the days from morning to evening without respite, or specified break or interval. Nor are weekly holidays observed. They, however, take a respite from work on festive days and on special occasions. Among the workers, 20 per cent are females. The assistance of the children is also available to the elders.

On account of their poor economic condition the ability of the craftsmen in the hand-sector to invest on raw materials is highly circumscribed and small quantities needed for a day or two only are brought at a time. They are also unable to hold stock of the finished products. They are therefore compelled to dispose of their day's production to the dealers the same evening. It is also not uncommon for a majority of them to get raw materials from dealers as an advance payment with the corresponding obligation of having to supply them the finished goods. This commitment makes them surrender even their little bargaining power. Only those who are free from such obligations are able to angle for more attractive prices. The craftsmen in the hand-sector are controlled by the traders. Though he is an independent worker, his income and general economic condition are no better than that of a hired worker, in the power-sector.

CHAPTER II

TECHNIQUES OF PRODUCTION AND ARTICLES PRODUCED

Raw Materials

The high artistic merit which sandalwood, rose-wood and ivory inlay articles are heir to is not possessed by lacquerware. The craft is mechanised and therefore permits easy and quick reproduction of the type design in unlimited number.

The raw materials used in the craft are *Hale* wood, lac, lithopone, aniline colours, poster colours, enamel paints, screwpine leaf, turpentine, sandpaper and hardware.

Hale wood (Wrightia tinctoria)

Hale wood constitutes the chief raw material. This wood is extremely close grained and moderately hard. It is easily sawn and worked either by hand or on machine. It turns beautifully and finishes to a surface which needs little sanding. Its cheapness compared to other species of timber has made it specially suited for use in this industry. *Hale* is a medium sized tree. The bark is yellow. The wood burns with smoky flame. This species was in abundance in the nearby forests of Channapatna. Due to a heavy run on it by the craftsmen over quite a long period, the supply is getting depleted. The wood is now got from forests in the districts of Mysore, Hassan and Coorg. The wood is suited only for turning work and not for cabinet making or buildings. Its identity gets lost when covered by immaculate lacquer colour.

The cost of a lorry load of *Hale* wood is about Rs. 700. For 1,000 kgs. it works out to Rs. 120. The retail price of the wood varies according to the girth of the log.

Lac

Lac is the next important raw material. The lacquer-sticks are prepared with shellac. For transparent application no other substance is mixed, but for colour application lithopone powder and aniline colours are mixed.

Lac used by the craftsmen is imported from Ranchi in Bihar State and from Jalda in Madhya Pradesh. This material which comes in the form of thin circular pieces is sold by weight. The cost is Rs. 8 per kg. for special quality, Rs. 5 per kg. for medium quality and Rs. 3 per kg. for the coarse variety. Lac of coarse variety is used mostly in the hand-sector and the medium variety in the power-sector. Lac of special quality is used only for making quality pieces.

Lithopone

Lithopone is a compound of barium sulphate and zinc sulphide. It is a white powder making a good paste in water. Lac when mixed with Lithopone loses its transparency and becomes opaque. Lithopone is imported from Czechoslovakia and Germany. When supplied through the Rural Industrial Co-operative Society the craftsmen get the stuff at Rs. 3.50 per kg. but in the open market they have to pay Rs. 6 or 8 per kg.

Aniline Colours

Aniline colour is one among the three ingredients used in the preparation of lacquer-sticks. These colours are marketed in a powder form in tin containers of capacity 1/2 kg, and 1 kg. The following are the basic aniline colours available and their cost:

	Cost per kg. (Rs.)
Rodhomine (Rose)	15
Auromine (Yellow)	16
Diamond green	16
Purple	15
Violet	15
Ivory black	5
Red (Vermillion)	6

By a blending of these basic colours many other shades can be prepared.

Poster Colours

Poster colours are needed for painting scenery calendar plates, on and also for marking eyes, nose, ears and mouth on human faces. These colours are put on the market in the form of a paste in glass containers. Both foreign and Indian made poster colours are used by the craftsmen. The foreign stuff costs Rs. 4 per oz. and the Indian stuff Re. 1 per oz.

Enamel Paints

All shades of enamel paints are employed in the power-sector for a lustrous finish. They are available in tin containers of 500, 200, 100 and 50 gms. The cost is Rs. 11. 50 per kg.

Talegari

Talegari or screwpine leaf is important as a buffing material and is available in plenty locally. These leaves should be dry and free of moisture as leaves with moisture contents hamper the uniform spread of the lacquer. A bundle of 100 green leaves costs Rs. 0.50. The villagers supply them to the craftsmen. They are exposed to Sun drying. The craftsman twists the leaf in his hand and presses it on the revolving lacquered piece.

Sandpaper

The use of abrasive paper which is available in size 12" x 10" and in grades of 1/2 and 0 is imperative for smoothing and preparing the base for lacquering of the turned piece. The cost of sandpaper is Re. 1 for 10 sheets.

Turpentine

This is essential as an important solvent for paint. A bottle of 22 ozs. costs Rs. 1.62.

Hardware

Lacquerware being a craft with wood as base material the use of nails, screws, rings, etc., is inevitable. These the craftsmen buy from local dealers.

Tools (Plate 1)

The chief tool in lac-turnery is the lathe. Cutting tools and also the joiners tools, viz., saw, plane, hammer, brace and bits, file, screw driver are also required. Cutting tools are used in both the types of lathes, and they are forged from steel by the local blacksmiths.

Saw

Handsaw or a tenon saw is used for cutting the logs into billets. In hand-sector the craftsmen use handsaw or tenon saw and in power-sector hand-saw, tenon saw and circular saw are used.

Adze

The cut billets of wood should necessarily be reduced to shape before being mounted on the lathe for turning. By using an adze the craftsman removes the edges and other superfluous wood and brings it to the shape of a cylinder with the aid of this tool.

Power Lathe

This is a machine tool employed in the power-sector for turning the wood and for lacquering. The type of lathe that these craftsman use is meant to produce only cylindrical and conical shapes. The diameter of the wood piece that is being turned gets gradually diminished by the movement of cutting tools in a direction parallel to the work axis. As the tool is fed, shavings are peeled off from the work piece, layer by layer in continuous or broken strips.

The head stock of the lathe comprises of a revolving arbor or axle attached to two belt pulleys. The pulleys are bereft of any device for controlling speed nor is any such control necessary for the craftsmen's purpose. The other end of the belt runs over a cone pulley mounted on a revolving shaft driven by an electric motor. Of the two pulleys at the headstock, one is a fast pulley and the other a loose pulley. The fast pulley is keyed to the shaft and is rotating. The loose pulley being detached from the axle can impart no motion to it. The belt is set on the fast pulley to cause rotation of the axle and is slid on to the loose pulley to grind it to a halt even should the motor be working.

A tool rest is secured to the lathe bed by means of a clamp movable on its own axis from one end to the other. The tools are adjusted against the article to be turned in a line parallel to the work axis when cylindrical shapes are desired and at right angles when flat surfaces are desired.

The tool rest which itself represents the tali stock of the lathe is brought to position on the

lathe bed and cutting tools are adjusted against the article turned.

Hand Lathe (Patadi)

The hand lathe (Plates 2 & 10) is made locally by carpenters. It consists of 2 parallel rectangular wooden bars of size $19" \times 4" \times 3\frac{1}{2}"$. Both the bars carry two iron spikes at the working ends. One end of a third wooden bar is tenoned to the left parallel bar so as to be at right angles to it. The free end of the third bar passes through a rectangular hole made in the right parallel bar. This right parallel bar is movable, sliding on the connecting bar while the left one is fixed. A thick iron bar about 35" long rests horizontally on both the parallel bars serving as a tool rest. The craftsman sits on a low stool placed between the parallel bars. *Chandrike* is the rotating axle and it carries at its free end a cup chuck. Motion is imparted to the *Chandrike* by the craftsman moving forward and backward a bow string with his right hand.

The tool is only to be operated on the work in its backward motion. The two way motion implicit in moving the bow string described above retards considerably the speed of work. While the right hand is engaged in moving the bow, the craftsman holds the turning tool in his left hand and uses his right foot to regulate pressure on the tool.

The wood to be turned is fixed in the chuck and the *Chandrike* carrying the piece to be turned is fixed between the two dead centres of the lathe. A hole bored at the dead centre holds the turning piece securely in position.

Cutting Tools

Cutting tools remove superfluous wood by a shearing action in the manner as a hand plane does. Tools are used for facing, chamfering and cylindrical turning. The types of cutting tools used are common to both hand lathes and power lathes. They are *Mattuli*, *Uguruli*, *Pakkuli*, *Bhairige* (also called *Hejjuli*), *Thoduvauli* and *Koyyuli*.

Mattuli

This is a cutting tool with a straight edge used for taking a heavy rough cut of the work piece.

Uguruli

This is a gouge used for doing final cuts on the work piece before smoothing it with sandpaper.

Pakkuli

This is a side tool used in giving a final finish to the work.

Bhairige

Bhairige or *Hejjuli* is a tool used for drilling holes in the wood while revolving on the lathe. The cutting edge of this tool in a hand lathe is pointed and in a power lathe 'V' shaped.

Thoduvauli

It is a gouge for making bigger cylindrical holes in the piece when on the lathe. As a preliminary to using this tool a hole needs be made with a *Bhairige*.

Koyyuli

A cutting tool with a diamond point used to separate the work from the rest of the wood after it gets to a finish on the lathe.

Brush

For painting, brush is used. The artists use factory made brushes obtainable from local dealers.

Techniques of Production

The techniques of production of lacquerware can be explained in the following six stages of work:

1. Preparation of lacquer-sticks
2. Preparing the *Hale* wood for turning
3. Shaping the wood on the lathe
4. Preparing the base for lacquering
5. Lacquering
6. Finishing

1. Preparation of Lacquer-sticks

Lac is heated directly on fire. Waste pieces of turned *Hale* wood serve as fuel. The fuel is placed in an iron pan and set fire to.

A maximum quantity of the molten lac which two identical splinters (the craftsmen specially prepare these splinters) can possibly lift is taken and heated to attain a plastic condition (Plate 3-a). In this state the lac will not run out of the splinters making it easy for mixing other ingredients to it. The semi-molten lac is kneaded at the splinters end to which is added lithopone paste half the quantity of lac (Plate 3-b). It is kneaded once again to ensure a thorough mixing, all the time the splinter being held over fire to maintain the

lac's plastic condition. Lithopone paste is prepared by adding lithopone power to water.

After these two ingredients are mixed thoroughly colours are added in powder form in quantities that would give the desired shade (Plate 3-c). The mixture then assumes the consistency of rubber. When the mixture is sufficiently hot and before solidifying it is removed from the splinters (Plate 3-d) by hand and a long stick of coloured lacquer $\frac{1}{4}"$ thick and $1\frac{1}{4}"$ wide is drawn (Plate 4) and cut into piece 6" to 8" in length. The craftsmen can thus prepare 4 to 5 sticks of a particular colour at a time. These sticks cannot be preserved long and must be used within a month. Thereafter the lac becomes hard and is rendered unfit.

2. Preparing the Hale Wood for Turning

Logs of *Hale* wood are cut into billets 6" to 8" in length with a handsaw or a circular saw (Plate 5-a). These billets are kept in sawdust of the same wood for about a fortnight for seasoning. This seasoning is nowadays rarely done as it entails time. The edges of the billets are chiselled off and the corners and all superfluous wood removed by an adze (Plate 5-b). These operations done, the billet assumes the shape of a cylinder and is ready for turning. The piece to be turned is called the 'work'.

Most of the pieces made at Channapatna are of cylindrical shape. Disc like pieces made are wall panels, and calendar plates. Pieces to be turned are fixed to the lathe by means of a cup chuck. The cylindrical billet is chiselled at one end to fit exactly into the cup. The advantage of this method is that it renders easy working on the piece at the cut surface of the loose end. The work being supported only at one end, the length of the work has to be inevitably limited as otherwise true running at the free end becomes well nigh impossible under the pressure of turning tools. However, the type of articles turned are such that this in-built restriction on the length of the work does not operate as a serious disability on the productive capacity of the industry, except of course that bigger articles will have to be turned one at a time, while small articles can be turned in quite a large number from a single piece of wood and later separated.

In hand lathes the work has to be supported at the free end by the fixed dead centre, and in consequence any scooping of wood to be done at the free end presents difficulties.

The prepared end of the work is driven into the cup chuck by hammering (Plate 6-a). The work being secured in the chuck the spindle is allowed to turn with the work.

3. Shaping the Wood on the Lathe

The cutting tools, even though possessing cutting ends of differing shapes are all similarly operated, having the support of a tool rest.

To turn a cylinder, the operator feeds the cutting tools along the revolving work so that a thin continuous chip is scraped out of the wood. By dint of practice the operator is able to feed the tool in such a manner that a uniformly thin layer of wood is removed from the work.

First the *Mattuli* is set for taking a heavy cut lengthwise along the cylindrical piece of wood (Plate 6-c). The cutting edge makes an angle less than 90 degrees with the work axis. This facilitates a free flow of the chip away from the work. The *Mattuli* has a straight edge and this is to facilitate the chip to flow towards the top of the tool face at right angles to it. Next *Uguruli* is used adjusting its cutting edge to be at an acute angle. Even here the chip as it cuts, flows freely towards the top of the tool face. This tool is made to operate in a slow and continuous forward movement such that it keeps tackling bit by bit that part of the wood piece which yet remains unworked.

The angle, the cutting edge of the tool makes with the work axis determines the width and thickness of the chip. The smaller the angle the broader will be the chip taken out. As superfluous wood has to be removed over a lengthy surface in the process of turning, the workmen so manoeuvres the tool that it takes of the maximum width of wood.

To facilitate turning disc-shaped pieces, a work-holding accessory called face plate which comprises a disc-shaped casting with slots for bolts is used with the help of which the work piece is securely fastened to the flat front piece.

For making holes a *Bhairige* or *Hejjuli* (a drill) is employed. This is fed axially into the revolving

work. For a bigger bore the *Thoduvauli* is fed axially into the revolving piece. This hole boring tool which is supported on the tool rest is held firmly in a manner that it is driven along a line parallel to the work axis to make a cylindrical hole. The deeper the hole required to be made the longer will have to be the bar as it has to traverse freely the entire length. In order to avoid possible damages hole is bored in the work before operating the cutting tools on its outer surface (Plate 6-b). However, final cut of the bore is taken just before lacquering this portion (Plate 7-d).

In hand lathe, the *Chandrike* carrying the work rotates between two stationary centres, and holes are made at the centre of the free end of the work to enable it to be fixed firmly. If the hole is not wanted after finish the end having the hole is turned to decimate and then cut off. Hand lathe is ideal for turning slender work pieces.

4. Preparing the Base for Lacquering

The need for the working of cutting tools ceases when the final cut is taken out from the work piece (Plate 6-d). Thereafter by constant moving of the sandpaper sideways on the revolving work a smooth uniform surface is secured and thus the turner prepares the ground for lacquering (Plate 7-a).

5. Lacquering

After the base for lacquering is prepared, the craftsman presses the coloured lac-stick prepared as explained earlier against the revolving work (Plates 7-b and 8-a). The lacquer melts due to the heat produced by friction, and gets deposited on the wood surface. The skill of the craftsman enables him to press the stick, as by instinct, in such a manner that the colour spreads in a uniform layer. However, small spots and blisters cannot altogether be avoided.

6. Finishing

The lacquered piece is then subjected to buffing which means pressing dry screwpine leaf on the revolving piece (Plate 7-c) which helps an even and effective spreading of lacquer on the turned piece, the lacquer ultimately attaining a lucid polish. The buffing by screwpine leaf helps the ware take a polish of rich brilliance.

The work thus completed is cut off with the help of a *Koyyuli*, a diamond point cutting tool (Plate 8-b) and is taken out of the lathe (Plate 8-c).

Articles which need ornamentation with designs and also figures which need marking of facial features will have to undergo a further operation namely painting. The artist does this painting with prepared paints and a sable brush (Plates 8-d & 9).

Calendar plates are painted with designs before lacquering. While lacquering, lithopone and colour are not used. The transparent lacquer gives it a lustrous finish.

Mostly the articles are uniformly coloured in a single shade. A few of the articles like pen-holders are coloured in double shades. Fancy articles are, however, ornamented by bands of several colours.

Designs

Even as late as 1950, the craftsmen knew little about designs and the articles made till then were deemed finally finished with lacquering. The prevalent notion was that the charm of this ware lay in its colour scheme and the added attraction the designs imparted to lacquer pieces never occurred to them. Syed Nizam, a master craftsman of the locality, after having had his training in Japan introduced this innovation. The technique which the local people call 'Japanese Technique' is now extensively used. The craftsmen, however, used to paint in the earlier days, designs on calendar plates and were then lacquering it with transparent lacquer. This technique is called 'Mysore Technique'.

Geometrical patterns such as straight and zig-zag lines, dots, square, rectangular and rhombic frets, mathematical signs such as +, × and flowers, creepers, continuous loop coils, etc., are common designs adopted. These designs are painted in several combinations according to the fancy of the artist. However, when once a design is evolved, it is adopted over a sufficiently long period till such time as another design is prepared by the master artist.

Calendar plates carry scenic designs. These are more the products of the fertile imagination of the artists. On table lamps a dancing lady or other such figure is painted.



A vegetable-hawker.

Articles Produced

Articles made by the craftsmen of Channapatna can broadly be divided into the following four categories:

- 1. Decorative pieces
- 2. Toys and dolls
- 3. Sports and games
- 4. Stationery articles

1. DECTORATIVE PIECES

The main items coming under decorative pieces are flower-vases, powder-bowls, table lamps, salt and pepper-cellars, tobacco-jars, napkin-rings, egg-cups, vessel sets, bowls, calendar-plates, wall panels, wall-vases, etc.

Flower-vases (Plate 12-a, b & c)

This is a common item manufactured in the power-sector. These are made either to look like a bottle or in cylindrical and bamboo paterns of varying sizes. The long cylindrical hollow in the centre having a tin container is meant to contain the flower stalk. Designs which are mostly flowers and creepers are painted on these vases after lacquering.

Powder-bowls (Plate 12-d)

Powder-bowls are turned in round shape and lids are provided. The inner surface is lacquered black. The outer surface of the container and the lid are ornamented with geometrical designs and flowers.

Table Lamp (Plate 11)

Table lamps of varying heights are turned and lacquered with light colours. The designs painted are usually a dancing lady and other character figures. The lamp holder is at the top and provision is made for the wire to pass in the centre of the piece.

Bowls

Both the inner and outer surfaces of this hollow dish are lacquered. The outer surface is painted with flowers and geometrical designs.

Salt and Pepper-cellars (Plate 13-c)

The salt and pepper-cellars—they usually go in pairs—are made to resemble piggies, English couple, American couple, vendors, Begum and Nawab, onion heads, bamboo figures, egg shape, etc. They are popular these days.

Tobacco-jars

These are containers for preserving tobacco. They are made in uniform shape but in varying sizes. These pieces find a market in the U.S.A. whereto they are also exported. Both its inner and outer surfaces are lacquered and designs of flowers and geometrical patterns are painted on the outer surface and on the lid.

Napkin-rings

This is another common item of manufacture in the power-sector. After reducing the wood to a cylindrical shape, a wide hollow is scooped out in the centre and the inner surface is lacquered in black and the outer surface in other colours. Designs painted on the outer surface consist of geometrical patterns and flowers.

Egg-cup

This is a small cup suitable for holding hen or duck egg. Both the inner and outer surface of the cup are lacquered in a single colour. The outer surface is finished with simple designs. Cups are also available without designs.

Vessel Set (Plate 13-a)

This is a toy set consisting of 5 pots of varying sizes turned individually piled one above the other in the order of their size. The biggest one is placed at the bottom.

Calendar-plates

The wood used for making calendar-plates, is yellow teak. After the plate is turned, designs of natural scenery are painted. A square wooden socket is fixed to serve as a carrier for the date-cards.

Wall Panels

Wall panels are turned in round and painted with scenic designs. The piece after painting is again mounted on the lathe and transparent lacquer is applied.

Wall-vases (Plate 13-d)

A single or double cylindrical flower-vase is fastened on a turned and lacquered plate. A ring is provided for facilitating the piece being hung on the wall.

2. TOYS AND DOLLS

The chief items in this category are Balancing doll, Character dolls, Cooking sets, Toy-steam Engine, Toy-Plane and such others.

Balancing Doll

This toy consists of two parts, the stand and the doll with a narrow round bottom. Two thick wires are fixed on both sides of the doll and the wires carry lacquered wooden balls at the free ends. The doll when placed on the stand moves about in a state of balance when a slight nudge is given by the finger.

Character Dolls (Plates 16 & 17)

These pieces which represent human figures will be in sizes 3" to 4". The facial features are painted to depict different ethnographic groups. The common themes are Negro, African, Tibetan, Hungarian, Nepali, Muslim, Punjabi, Mysorean and Marwadi couples. Besides, sets portraying Kathakali dancers, Radha-Krishna, Rama-Lakshmana and Sita, Snake charmer, Nagaswara players, Shahanai players, Marwadi, Keerthanakar, fruit vendor, fortune teller, lady carrying water pot, vegetable-hawker, fruit-hawker are also made.

These toys were first made in the latter part of the last decade. They have now become very popular and are extensively produced.

Cooking-sets (Plate 13-b)

Miniature cooking vessels popularly known as 'Channapatna toys' are being made since quite a long time. A toy set contains about 24 pieces made up of a well, a grinding stone, mortar and pestle, vessels, lids, rolling pins and the like.

Toy steam engines (Plate 14-a), aeroplane (Plate 14-b), cup and ball, rattle, cars, telephone, etc., are also made for the children to play with.

3. SPORTS AND GAMES

Kolata sticks, handles for skipping rope, chessmen, dice sets are made in the hand-sector.

Kolata Sticks

These are a pair of turned sticks of about a foot long with lacquered bands of variegated colours. These are popular among female children for *Kolata* play.

Skipping Handles

These are a pair turned pieces of wood about 5" long with a hollow centre for the rope to pass through. These are lacquered with double or triple shades of colour.

Chessmen

A chessmen set consists of 32 pieces half in green and half in red. Instead of figure heads which are difficult to turn, pieces are made in different shapes to represent knight, queen, elephant, horse, castle and pawns.

Dice Set

A dice set consist of 16 pawns four in each of green, yellow, red and black colours. Dice are made of horn, ivory or metal.

STATIONERY ARTICLES

Stationery articles are made by the craftsmen in the hand-sector. Two common items among them are the pen-holders, and the beads for abacus. Pin-cushions, paper-weights, rulers, ink-stands and rubber stamp holders are the other articles produced and there is really a good demand for them in North India.



A fruit-hawker.

CHAPTER III

ECONOMIC AND GENERAL ASPECTS

Cost of Production

The following details regarding the cost of production have been collected from the authorities of the Pilot Production Centre. The cost structure holds good even for private units:

I. Item of manufacture: Flower-vase (bottle shape)			III. Item of manufacture: Cooking set		
No. of pieces turned: 36			No. of sets made: 72		
Cost of raw materials:			Cost of raw materials		
	Rs.	Rs.		Rs.	Rs.
<i>Hale</i> wood	15.72		<i>Hale</i> wood	12.54	
Lac	1.44		Lac	5.76	
Lithopone	0.44		Lithopone	0.72	
Colours	0.47		Colour	0.72	
Sandpaper	0.20		Sandpaper	0.80	
<i>Talegari</i>	0.06		<i>Talegari</i>	0.12	20.66
Enamel paint	0.44				
Tin containers	9.00	27.77	Cost of labour:		
			Wages to turners		60.00
Cost of labour:					
Wages to turners	34.00		Packing materials:		
Wages to artists	21.00	55.00	Containers of palmleaf		3.00
Total		82.77	Total		83.66
Cost of production per piece is	Rs. 2.30		Cost of production per set is	Rs. 1.16	
Selling price per piece is	Rs. 2.85		Selling price per set is	Rs. 1.50	
Profit per piece is	Rs. 0.55		Profit per set is	Rs. 0.34	
II. Item of manufacture: Salt & Pepper-cellars (egg shape)			IV. Item of manufacture: Dolls (Japanese couple)		
No. of pieces made: 72			No. of pieces made: 75 pairs		
Cost of raw materials			Cost of raw materials		
	Rs.	Rs.		Rs.	Rs.
<i>Hale</i> wood	11.76		<i>Hale</i> wood	14.85	
Lac	2.16		Lac	1.00	
Lithopone	1.02		Enamel paints	3.50	
Colours	0.62		Sandpaper	0.50	
Sandpaper	0.60		<i>Talegari</i>	0.15	20.00
<i>Talegari</i>	0.15	16.31			
Cost of labour:			Cost of labour:		
Wages to turners		20.00	Wages to turners	45.00	
			Wages to artists	35.00	80.00
Total		36.31	Total		100.00
Cost of production per piece is	Rs. 0.50		Cost of production per pair is	Rs. 1.33	
Selling price per piece is	Rs. 0.65		Selling price per pair is	Rs. 1.50	
Profit per piece	Rs. 0.15		Profit per pair is	Rs. 0.17	

The proportion of the raw materials cost to labour can only be arrived at for particular types of pieces. It is 33 : 67 for flower-vase, 45 : 55 for salt and pepper-cellars, 25 : 75 for cooking sets and 20 : 80 for dolls. Turning and the artist's work mainly contribute to the cost of labour. The cost of raw materials never exceeds the cost of labour and under normal conditions 33 per cent is spent on raw materials and 67 per cent on labour.

In power-sector profit motive is an inescapable factor as hired labour only is employed. In hand-sector the work is done by household labour and as such labour charges and profit get mixed indistinguishably.

Capital

The total investment made by the units engaged in this craft at Channapatna is about Rs. 2,14,000. An apportionment of the capital as between power and hand-sectors will throw some interesting light:

Out of this investment the power-sector accounts for Rs. 1,64,000—Rs. 1,14,000 being in fixed assets and Rs. 50,000 in working capital. The fixed assets are either in the shape of buildings (Rs. 46,000) or in the shape of machinery and tools (Rs. 68,000). Ten units are located in owned buildings and 10 in rented buildings.

In the hand-sector the investments total about Rs. 50,000—Rs. 35,000 representing fixed assets and Rs. 15,000 working capital. Most of the households in the hand-sector do their job in their residences without earmarking any particular portion for it. About 25 per cent of the establishments have, however, put up separate work sheds within the compound of their houses. A few who are cramped for space have rented worksheds away from their residences where they carry on the trade individually maintaining their separate identity. The capital investment in this sector aggregates Rs. 20,000 on buildings and Rs. 15,000 on lathes and tools.

The investment on buildings is 40 per cent in hand-sector and 28 per cent in power-sector. This higher percentage of investment on buildings in the hand-sector is due to the fact that the units of production in this sector are numerically more compared to the power-sector. In power-sector

machinery and tools account for 40 per cent of the total investment while it is only 30 per cent in the hand-sector. This is explained by the fact that a very high price is required to be paid for tools in the power-sector as compared with the hand-sector. Working capital represents 30 per cent in both the sectors.

Production

The total production of lacquer articles at Channapatna during 1964-65 is valued at Rs. 12,00,000. About 40 per cent of it is from the hand-sector and the rest from the power-sector.

Decorative pieces take precedence in the power-sector and stationery articles in the hand-sector.

Marketing

In the early stages of the industry the items manufactured were limited and were intended primarily for local sales mostly at the railway-station and the bus stand.

As the production increased with new entrants to the field and also the advent of power-lathes, new markets had to be explored. Two local dealers visited the cities of Bangalore and Mysore to find a wider market for these articles.

These decorative pieces are now available in all key centres of the country and the Government is also doing all that it can to give a push to their sale. They are arranged to be sold in the Arts and Crafts Emporium and Khadi Bhavan of Bangalore, Victoria Technical Institute and Khadi Bhavan of Madras, at Khadi Bhavans in Calcutta and Bombay and also at the Central Cottage Industries Emporium, Delhi.

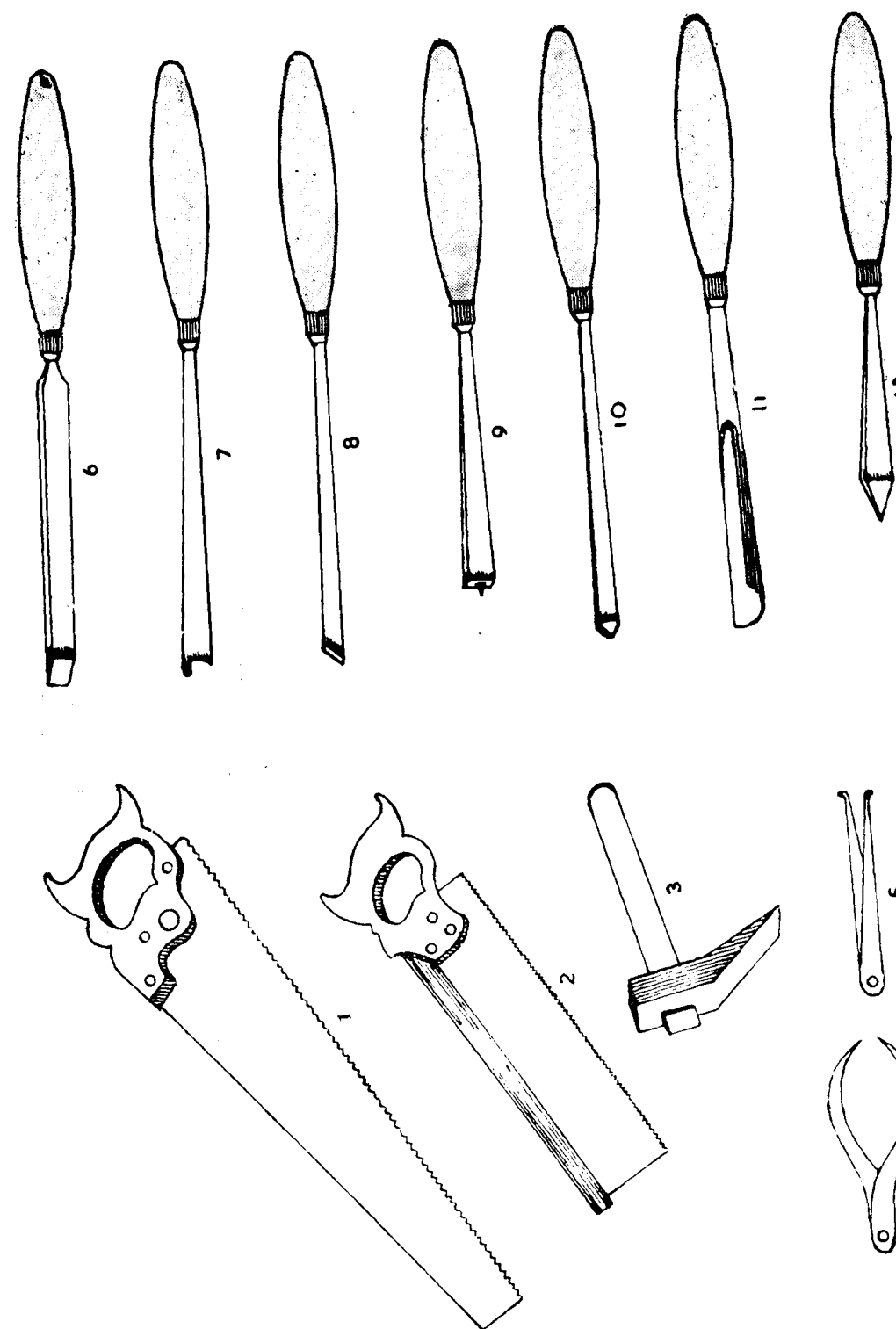
There is a greater demand for these articles in North India, and 75 per cent of the production is sent to centres in the North. The South consumes the rest. The local sales are, however, meagre.

There are 4 establishments at Channapatna engaged in the retail sale of lacquerware. Three of them are located in the Mahatma Gandhi Road and one in the bus stand. There are 6 wholesalers in the town, three of whom are local persons and three are from Punjab. All have their establishments at Channapatna.

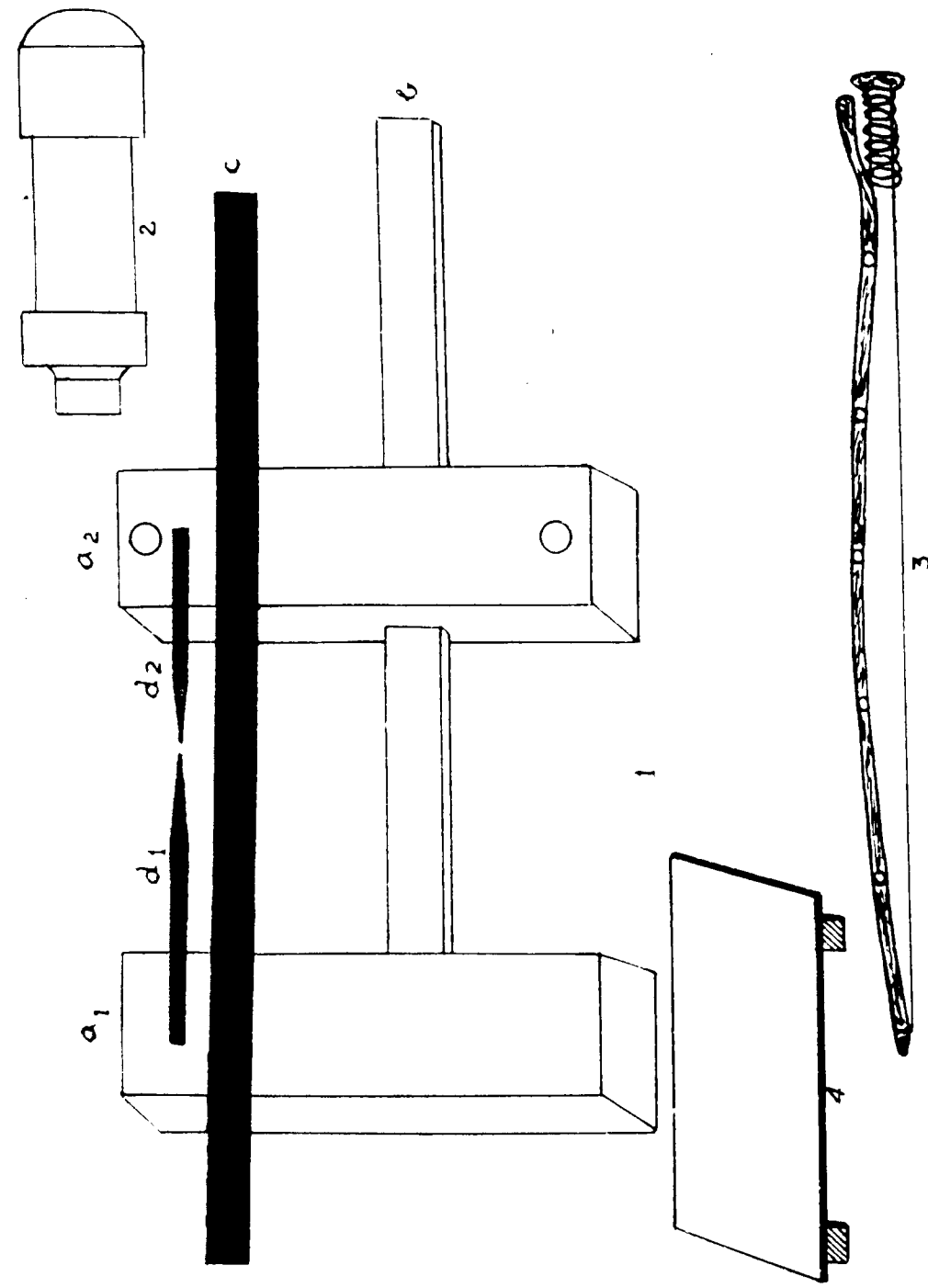
The dealers buy all the finished products of the hand-sector. A few units in the power-sector also

LACQUERWARE

PLATE I



Tools used by the craftsmen in the craft of lacquerware.
1. Handsaw. 2. Tenon saw. 3. Adze. 4. Compass for measuring outer diameter. 5. Compass for measuring inner diameter. 6. Mattuli. 7. Uguruli. 8. Pakkuli. 9 and 10. Bhairige (Hajjuli). 11. Thoduvauli. 12. Koyyuli.



1. Main frame: *a*₁, *a*₂. Parallel wooden bars. *b*. The bar on which the right parallel bar is movable.
c. Tool rest. *d*₁ *d*₂. Spikes which serve as centres for holding the work.
2. *Chandrike*. 3. The bow. 4. The low stool on which the craftsman sits while operating the lathe.

Hand Lathe (*Patadi*)



a. Heating of lac to plastic condition at the end of two splinters specially prepared. *b*. Mixing of lithopone paste to semi-molten lac. *c*. Mixing of colour to lac-lithopone mixture. *d*. Removing of coloured lacquer from the splinter.



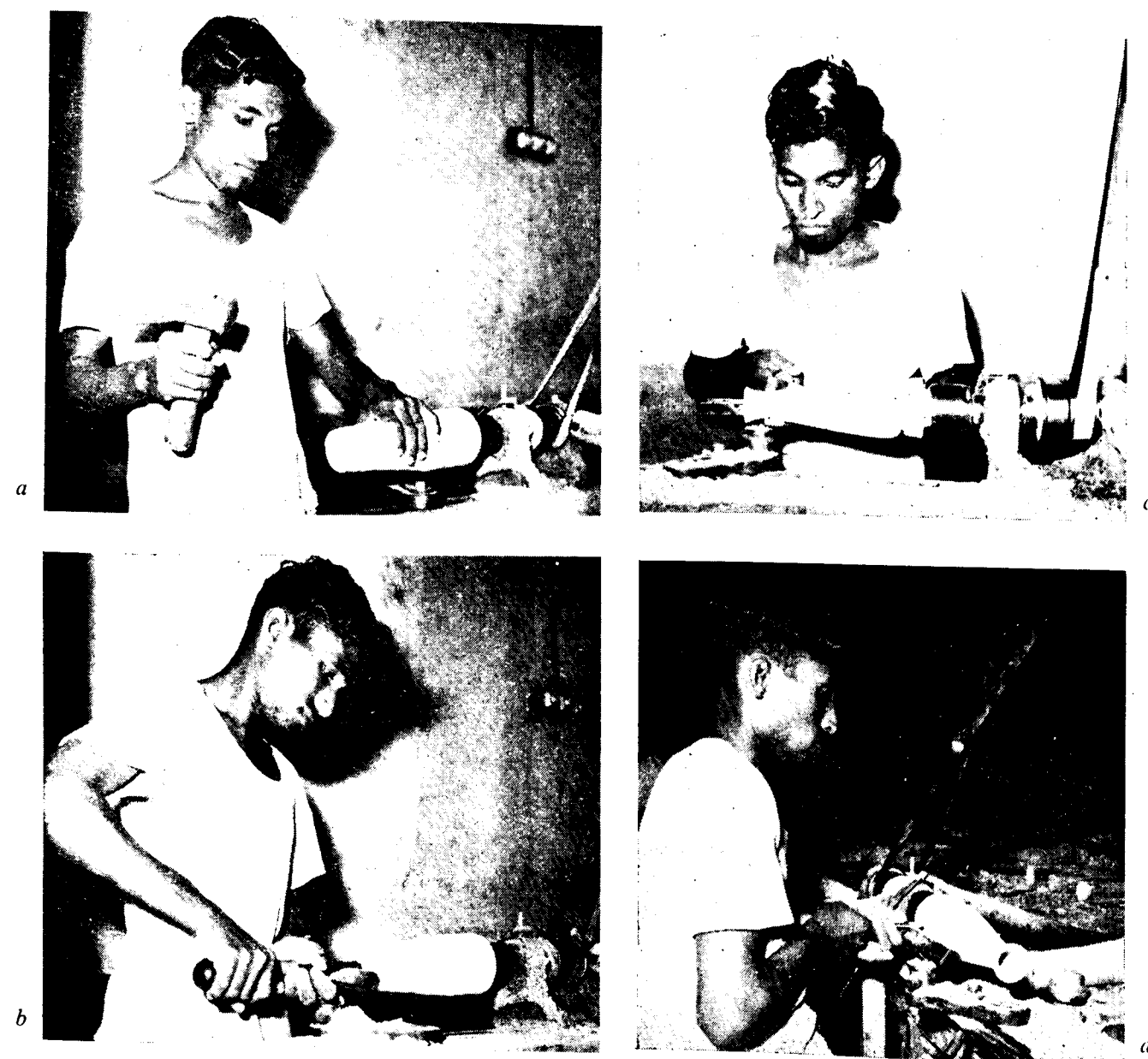
Drawing of Lacquer-stick.



a. Cutting of *Hale* wood into billets with a circular saw.

b. Removing of edges and superfluous wood from the billet of *Hale* wood by an adze.





a. Driving the work into the cup chuck by hammering. *b.* Boring the hole in the work before operating the cutting tools on its outer surface. *c.* Taking of a cut lengthwise along the cylindrical piece of wood with *Mattuli*. *d.* Taking out a final cut from the work piece by a cutting tool.



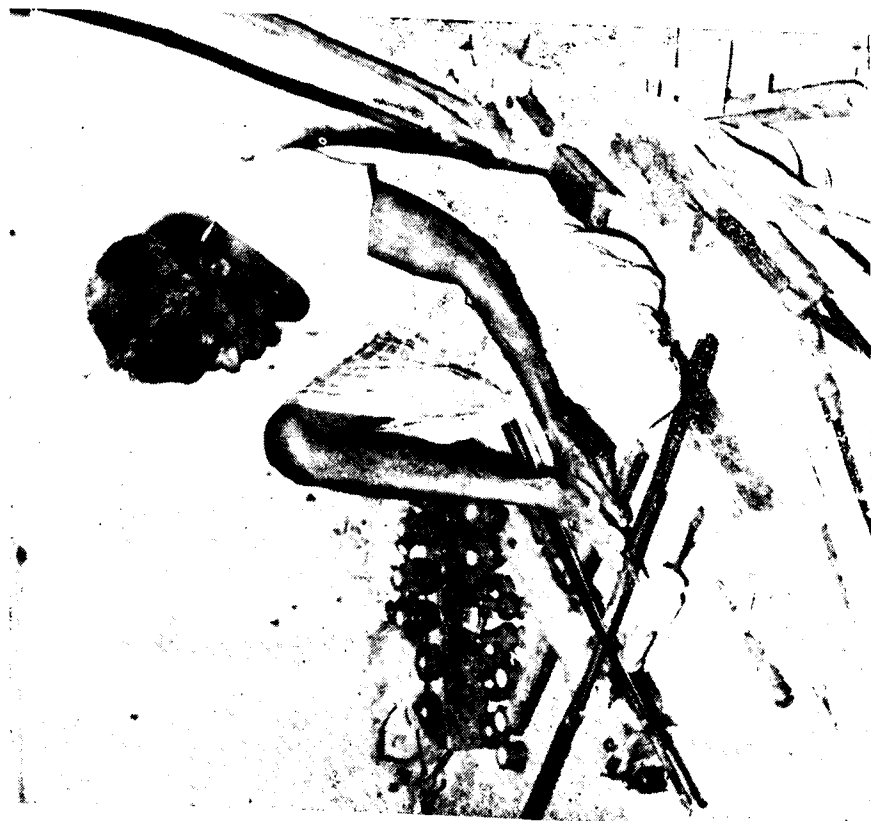
a. Preparing the base for lacquering by constant moving of the sandpaper on the revolving work to give it a smooth uniform surface. *b.* Lacquering the work by pressing the coloured lacquer-stick against the revolving work. *c.* Buffing of the piece after lacquering by pressing dry screw pine leaf on the revolving piece. *d.* Taking the final cut on the inner surface before lacquering.



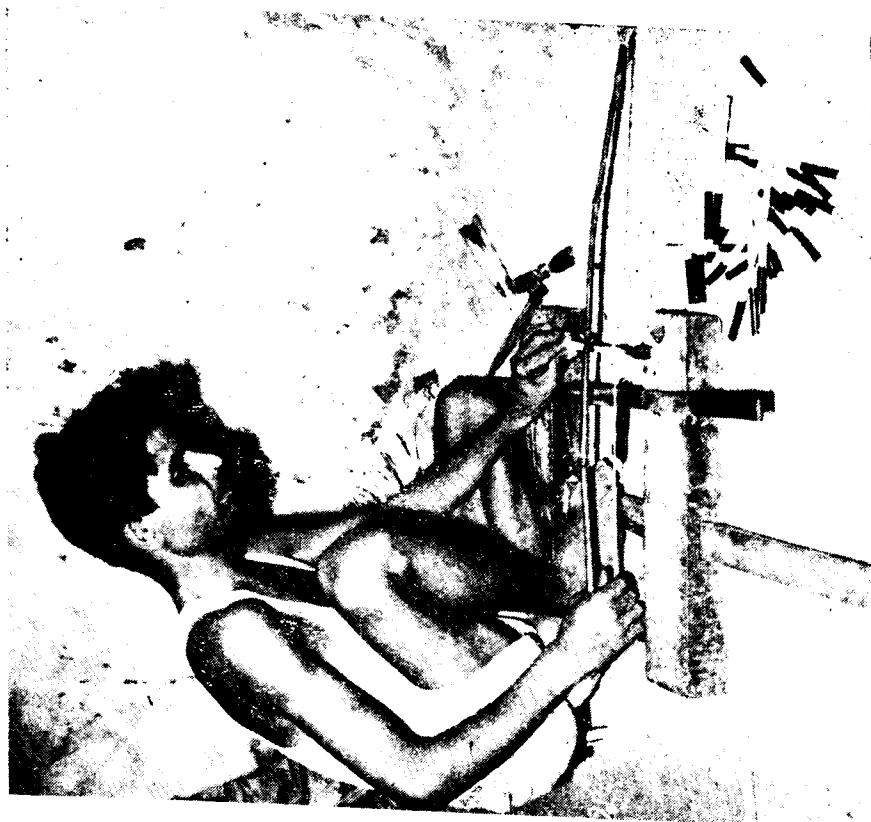
a. Lacquering the inner surface of the work. *b.* Cutting off the work with the help of *Koyyuli*, a diamond point cutting tool. *c.* The work being taken out of the lathe. *d.* The finished piece being painted with a simple design.



Artists at work.
a. Painting of snake-charmer. *b.* Painting in progress on napkin-ring. *c.* Painting of a tray. *d.* Painting of Santa Claus.



h. Turning of a vassel for the cooking-set, on a hand lathe.



a. Turning of pen-holders on a hand lathe.



A lacquered table lamp.

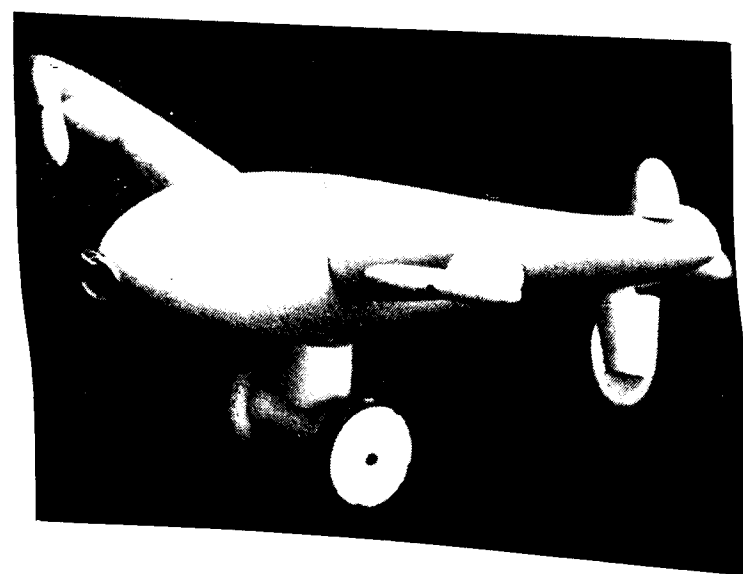
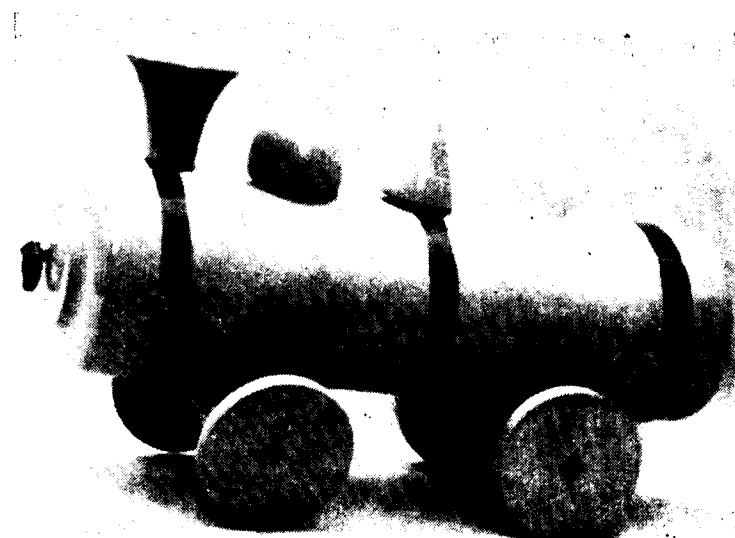


a. Flower-vases—bamboo pattern. *b.* Flower-vase—bottle shape.
c. Flower-vases—jug and cylindrical shapes. *d.* Powder-bowl with lid.

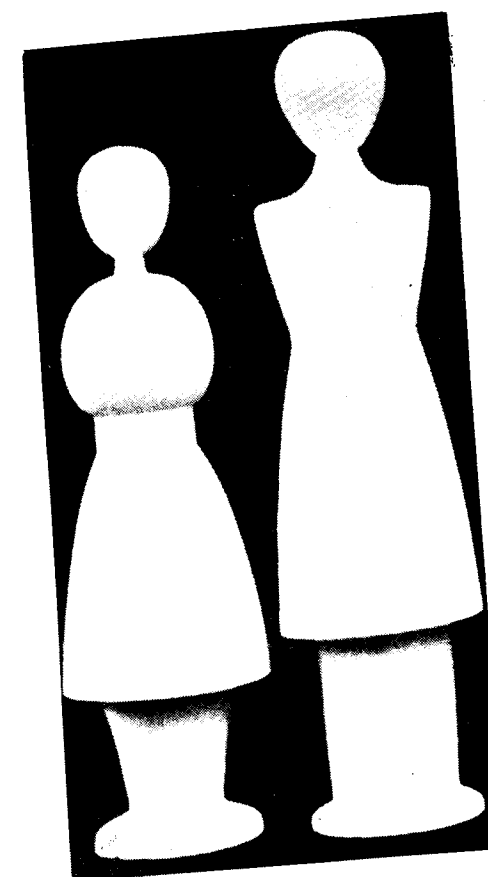
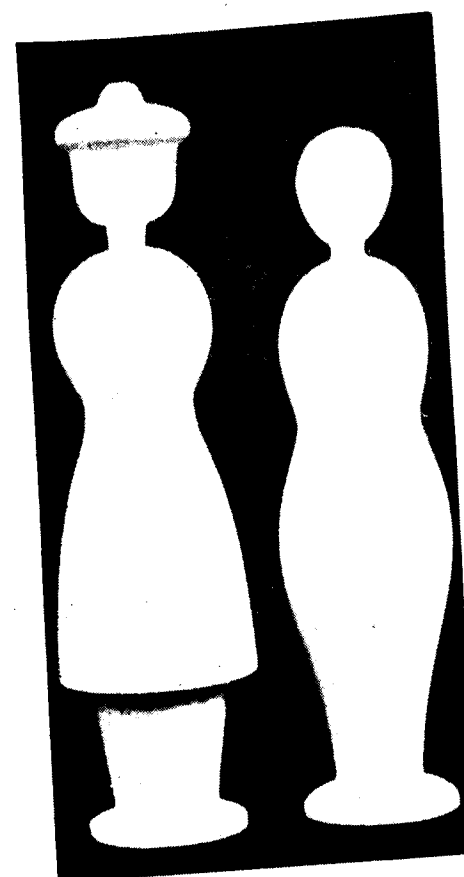


a. A vessel set consisting of five pots. *b.* Cooking-set, popularly known as 'Channapatna toys'. *c.* Egg shaped salt and pepper-cellars. *d.* A wall-vase.

a. Toy steam engine.



b. Toy aeroplane.

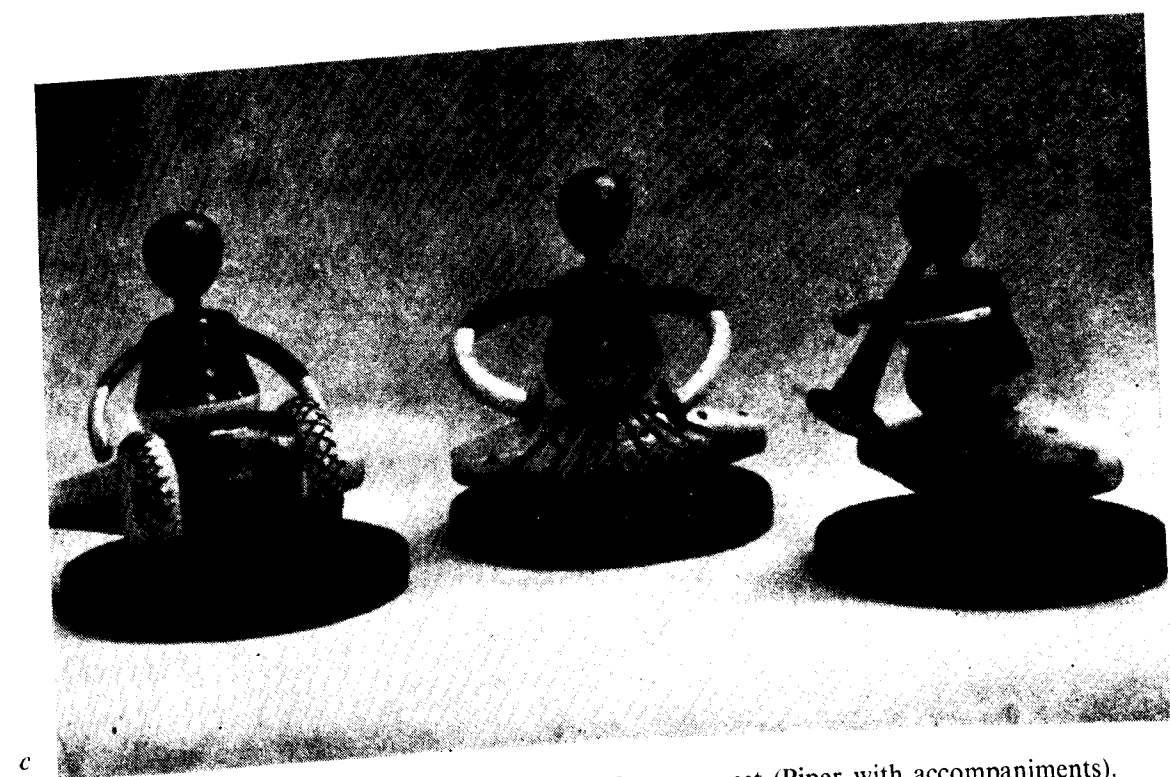
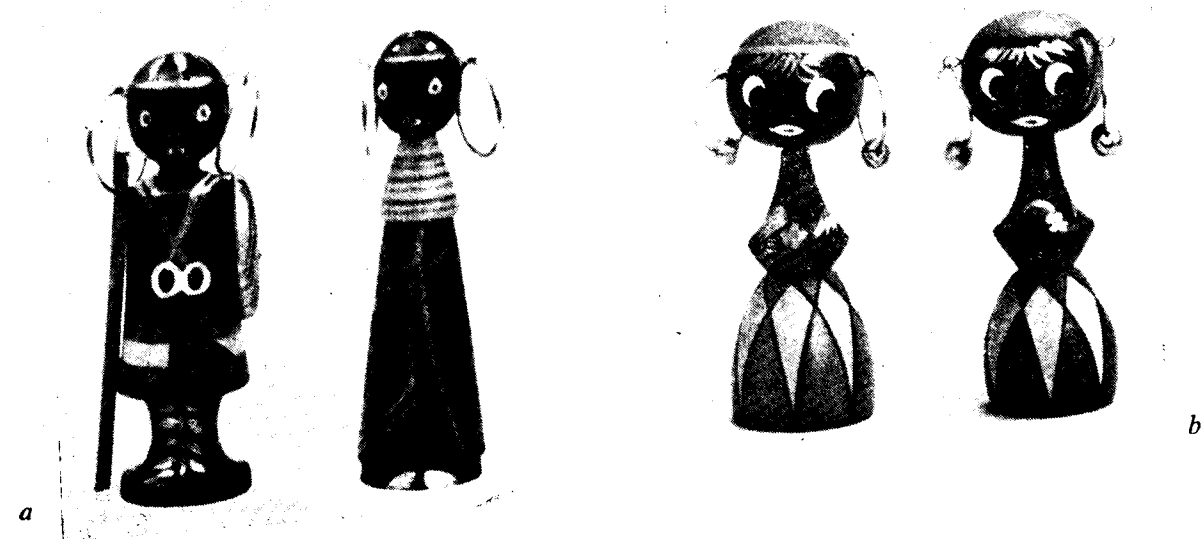


Turned dolls before lacquering.



a. Kathakali dancers.

b. A Pot-lady.



a. African couple. *b.* Negro couple. *c.* Nagaswara set (Piper with accompaniments).



Palm leaf and cardboard containers.

sell them the products. Leading manufacturers in the power-sector have, however, their own arrangements for direct supply to dealers and emporia.

Packing Containers (Plate 18)

Finished products of lacquerware are packed in baskets of *valepatti* (palm leaf). In the recent years, they are packed in cardboard boxes specially made for their packing by a local manufacturing unit. These, however, do not supplant completely the *valepatti* which is still in use.

Valepatti and cardboard containers with these wares are packed in dealwood cases and transported to out stations by lorry and train.

Co-operative Society

There is a co-operative society by name Akhil Shahi Lacquerware Kushala Kala Sahakara Sangha Limited, rendering assistance to producers of lacquerware. This co-operative society was registered on January 25, 1962 and membership is open only to lacquerware workers of Makkan. Its activity centres mainly around helping sales promotion of the ware produced by member craftsmen. The co-operative society also plays a useful role in supplying raw materials required for the craft on credit basis.

There are 127 members in the Co-operative Society and they hold 166 shares of value Rs. 5 each. The paid-up share capital is Rs. 571. The affairs of the co-operative society are managed by an elected committee. A paid secretary attends to all correspondence and its trade activities.

The co-operative society has received a grant of Rs. 1,500 from the Government of Mysore and a loan of Rs. 5,000 towards its capital. The loan has yet to be repaid.

The trading accounts of the Co-operative Society for the last two years are as follows:

	1963-64 (Rs.)	1964-65 (Rs.)
Opening stock	223	151
Purchases	3,373	7,207
Sale	3,465	5,484

The craftsmen in Makkan are not fully utilising the facilities of this institution. Many dispose of

their product direct to local dealers thus depriving the co-operative society of its legitimate income and allowing it to languish. A better appreciation on the part of the craftsmen of the role the co-operative society is intended to play would help to place this institution on a better and more even keel.

Training Centres

There are two institutions in Channapatna imparting training in lac-turnery. One is a very old institution and the other was started only two years ago.

Artisan Training Institute

With the aim of fostering the indigenous crafts and fine arts, the Government of Mysore started industrial training schools at different centres as early as 1892. One such centre was established at Channapatna about 1902. The courses of study to begin with were carpentry, smithy and making of *Veena* wires.

As already mentioned Baba Saheb Miyan Saheb one of the Superintendents of the training school at Channapatna introduced lac-turnery also as a course of study for the benefit of local Chitragars.

The name of the institution was later changed as 'Rural Artisan Training Institute' and it now goes by the name of 'Artisan Training Institute'. The courses of study in this Institute at present are lac-turnery and carpentry. In lac-turnery, 25 candidates are taking training.

Candidates aged between 12 and 18 years are considered for admission to the course. The duration of the course is 2 years. The scheme envisages training during the first 18 months in the institute followed by a further training of 6 months at Sri Chamarajendra Technical Institute, Mysore. Till now, no batch has been sent to Mysore and this part of the scheme has yet remain only on paper.

Candidates for the course are sponsored by the Block Development Officers and also selected by the Superintendent of the Institute. A stipend of Rs. 30 per month is paid to a trainee who is sent from the Block area while local trainee receives Rs. 20. Selected candidates have to give an undertaking to refund entirely the stipend received in the event of their discontinuance in the middle.

Candidates trained at the Institute would have gained such a sound theoretical and practical knowledge of the craft that they find no difficulty in working independently on hand and power lathes and producing pieces of fair average quality. They are first trained to turn wood on hand lathes and taken on in the advanced stages to turn on power lathes. The candidates are also given a basic knowledge of painting lacquered pieces.

There is no follow up programme for the trainees but arrangements exist to provide them with a tool kit at fifty per cent subsidised rates after successful completion of the course.

There are at present 12 trainees in the first year or Junior batch. All of them are from places round about Channapatna and none from households in the craft.

In the second year or Senior batch there are 13 candidates. Among them 2 are from craftsmen families and the rest from families of other occupations.

Lacquerware Training Institute for Women

A training centre at Yelekeri in Channapatna town was established by the State Social Welfare Department in 1963. This locality for starting the centre was chosen as 65 Harijan households here are engaged in lac-turnery and are turning out beads for abacus on hand lathes. There are 120 workers in these households including women. Two instructresses who have had their training at the Central Handicrafts Development Centre, Bangalore, train the students. Admission to the Institute is restricted to Harijan women.

The first batch of ladies underwent training in this Institute from August 1963 to December 1964. The duration of training is 12 months from January to December. However, the training period of the first batch had to be extended by 5 months due to late receipt of power lathes. The second batch is undergoing training now. The intake is 20 and this full quota is taken in the present batch. The previous batch too had its full complement. Each trainee is paid a stipend of Rs. 50 per month.

Most of the trainees are illiterates. They are therefore taught the practical way of making the pieces, and not its theoretical aspect.

The Institute is equipped with 21 hand lathes, a circular saw, a power drill and 6 power lathes each with a 0.5 H.P. motor.

The articles made by the trainees are being allowed to accumulate in the Institute and no thought has been bestowed for their disposal.

Pilot Production Centre

A Pilot Production Centre for lacquerware attached to the Artisan Training Institute under the control of the Superintendent is functioning at Channapatna since 1961. There are 6 turners and one artist working in it. All of them are paid wages on piece rate basis. The centre owns the following equipments:

		Value (Rs.)
1. Power lathes with tools	6	750
2. Motor	1	595
3. Starter	1	50
4. Iron stands	1	90

Articles produced at this centre are sold at the show-room attached to the Institute. They are also supplied against orders to the Arts and Crafts Emporium, Bangalore; Arts and Crafts Emporium, Mysore; Handicrafts and Handloom Export Corporation, New Delhi; Handicrafts Emporium, Trivandrum; Khadi Gramodyog Bhavan, Ooty; Co-operative Export Marketing Association, Bombay; Central Cottage Industries Emporium, New Delhi and to Handicrafts Development Corporation, Madras.

The trading account of this centre from 1961 onwards is furnished below:

	1961-62 (Rs.)	1962-63 (Rs.)	1963-64 (Rs.)	1964-65 (Rs.)
Production	299	5,388	6,308	7,614
Sales	280	4,247	5,231	4,553

Though a progressive increase in production is noticeable from year to year there has been no proportionate increase of sales. The sales have dwindled badly during 1964-65. The show-room needs to be shifted to a more central and busy place somewhere near the bus stand. If the Municipal authorities lease out one of their shops for the purpose it may go a long way to boost up sales.

Case Studies

Details of a few representative households with the general expenditure pattern are given below:

1. A household of a factory owner

Sri Gundappa is the owner of Karnataka Toys Factory started in 1945. The unit is equipped with 8 lathes and a 3 H.P. motor. He hails from Sringeri in Chikmagalur district and belongs to the Shivalli Brahmin caste. He was a lineman in the Electricity Department and came to Channapatna on transfer in 1935. He was an artist too and this craft naturally attracted him. He resigned his job and started the factory obtaining a loan of Rs. 2,000 in the premises in which it is now functioning. The loan has since been discharged. His family consists of 5 members: Self (55), 2. Wife (42), 3. Son (22), 4. Son (18), and 5. Brother's son (12). [The figures within brackets denote the age, in years, of the members.] He is staying in Channapatna with his brother's son. His wife and two sons are at Bangalore. Both the sons are studying. His brother's son who is staying with him though a student is learning the craft during his spare time outside class hours.

His factory is having 6 turners. He attends to the art part of the job. He has engaged for the factory a building on a monthly rent of Rs. 20. As three of his family members are at Bangalore he remits to them a major portion of his earnings. According to him the average monthly earnings exceed Rs. 300 per month.

Average monthly expenditure:		Rs.
Items		
1. Food (cereals)		25
" (non-cereals)		10
2. Drinks		30
3. Fuel and lighting		10
4. House rent		15
5. Clothing		20
6. Pan, tobacco, etc.		..
7. Other items (including remittances)		250
Total		360

II. A household of an employee in a factory

Sri Abdul Razak is a turner and is an employee in one of the lacquerware factories. He is aged 36 years and has completed S.S.L.C. course. He learnt the craft from his uncle.

There are 8 members in his household. Self (36), 2. Wife (23), 3. Son (8), 4. Daughter (1), 5. Brother (3), 6. Brother (19), 7. Father (58), 8. Mother (52). His father deals in cocoons and both his brothers are tailors. The family lives in owned house. Sri Razak turns mostly character dolls and flower vases.

The total earnings of this household from all sources, viz., trading, tailoring and employment in lac-turnery is about Rs. 240 a month, Sri Razak's contribution being about Rs. 80 or 33 per cent of the total.

Average monthly expenditure:		Rs.
Items		
1. Food (cereals)		100
" (non-cereals)		20
2. Drinks		30
3. Fuel & lighting		10
4. House repair		2
5. Pan, tobacco, etc.		28
6. Clothing		30
7. Other items		30
Total		250

The deficit is mostly made up by credit purchases.

III. A household of a craftsman working on a hired lathe

Sri Muniswamy Rao is also one to be engaged in lac-turnery. He has hired a lathe in one of the factories on a monthly rent of Rs. 10. Prior to taking up this trade he worked as a postal peon and a lorry driver. His father was an attender in a local school.

His is a 7 member household consisting of: Self (40), 2. Wife (35), 3. Son (15), 4. Son (13), 5. Daughter (9), 6. Son (7), and 7. Daughter (4).

He makes character dolls and sells them locally and to dealers at Bangalore. He realises on an average about Rs. 220 per month out of which Rs. 40 is spent away on raw materials.

Average monthly expenditure:		Rs.
Items		
1. Food (cereals)		60
" (non-cereals)		20
2. Drinks		30
3. Fuel and lighting		12
4. House rent		10
5. Clothing		20
6. Pan, Tobacco, etc.		15
7. Other items		13
Total		180

It is a 8 member household. The head of the household is Sri Cheluvajiah. The members of the household are: Self (44), 2. Wife (36), 3. Son (20), 4. Son (17), 5. Daughter (15), 6. Daughter (9), 7. Daughter (9) and 8. Son (6).

This is a household in Makkan. The household consists of 11 permanent members. The head of the household is Sri Syed Abdulla. They are Muslims and their mother tongue is Urdu. All speak Kannada also. The eleven members of the household are: Self (28), 2. Wife (20), 3. Daughter (1), 4. Father (60), 5. Mother (52), 6. Brother (25), 7. Brother's wife (20), 8. Brother's son (0), 9. Sister (20), 10. Brother (17) and 11. Brother (15).

The household is owning the house in which it resides. The house has mud walls and thatched roof and is valued at Rs. 1,500. It is neither electrified nor served by taps.

The head, his wife, his brother and brother's wife (Sl. Nos. 6 and 7) and his sister (Sl. No. 9) are engaged in the craft. The household owns 4 hand lathes with accessories on which the investment made totals about Rs. 100.

The household produces mostly pen-holders and supplies them to local dealers. The average monthly production is of the value of Rs. 330 out of which Rs. 50 is spent on raw materials.

Average monthly expenditure:

Items	Rs.
1. Food (cereals)	120
,, (non-cereals)	20
2. Drinks	40
3. Fuel and lighting	10
4. House repair	2
5. Clothing	23
6. Pan, Tobacco, etc.	30
7. Other items	35
Total	280

V. A household in Yelekeri

This is a household in the locality of Yelekeri of the town. They are Harijans and speak Kannada.

The head of the household was working on hand lathe and now has joined a factory as a turner. The two sons aged 20 and 17 work on hand lathes and produce beads for abacus. The daughter aged 15 years is undergoing training in the Lacquerware Training Institute for Women in the same locality where she gets a monthly stipend of Rs. 50.

The household is put up in its own house. The house is mud walled with country tiles roof. It is neither electrified nor has tap. The average earnings of the household is Rs. 200 a month.

Average monthly expenditure:

Items	Rs.
1. Food (cereals)	85
„ (non-cereals)	10
2. Drinks	20
3. Fuel and lighting	10
4. House repair	3
5. Clothing	22
6. Pan, tobacco, etc.	15
7. Other items	35
Total	200

The situation in which each individual is employed determines his earnings. Power-sector owners are in the higher income group. Next to them come independent workers who have obtained lathes on hire. Still lower are the skilled employees of the power-sector. The lowest rung is occupied by those engaged in the hand-sector.

CHAPTER IV

CONCLUSION

The facts and figures that have come to be gathered during the survey make it abundantly clear that the lacquerware industry at Channapatna bids fair to flourish with each succeeding decade. The production is seen to have registered an all time high in the year 1964. Employment of mechanised techniques in the manufacturing process has given this craft an edge over many other sister crafts. A wide range of quality articles of an improved type to cater to a variety of tastes are being manufactured subsequent to 1950. This development marks a healthy and desirable turn in the fortunes of this industry. Being art pieces of decorative value there has been a steady and unceasing demand for them from dealers of art pieces and curios whose show-cases they richly adorn, temptingly inviting the connoisseur to step in and make a selection.

The sustained efforts that are being made by the All India Handicrafts Board and other statutory bodies established by Government at all important centres for display and sale of indigenous craft products have also helped in no small measure, to boost up sales.

The human desire for possession of art pieces which are a status symbol buttressed by the affluence many a family has derived as an aftermath of war exerted no mean influence in building up an assured market for handicrafts products generally. Lacquerware due to its low price has come to gain the most by this favourable psychological attitude of the people. The wide publicity and advertisement given to these products due to the active participation of bulk stockists in all important exhibitions in the country has done no little to strengthen their sale. As quite a number

of decorative pieces serve as utility articles too there has been enhanced demand for them.

In spite of all the favourable factors enumerated above the craftsmen have their own problems too. On account of the dwindling supplies of *Hale* wood in the forests round about, and the need to import this primary raw material from distant places its price is pushed up. The cost of imported raw materials also, particularly of lithopone which is essential for lac-sticks has almost trebled during the last few years. The craftsmen expect the forest department to come to their rescue and launch an intensive programme for raising *Hale* plants in the nearby forests.

The utilising of the seasoning plant installed in the Artisan Training Institute is felt to be expensive adding considerably to the cost of wood. Most of the craftsmen do not also have the wherewithal to make bulk purchase of wood equal to the capacity of the seasoning plant. Hence they are compelled to use unseasoned wood which results in the article loosing shape, and consequent wastage. This difficulty would to a great extent be overcome if arrangements are made for supplying seasoned wood to the craftsmen through co-operative societies.

If past achievement is any index the craft has doubtless a successful future. The craftsmen on their part will have to develop an attitude of self-reliance. They should also be quite receptive to changes in buyers' tastes. They should be ever eager and ready to avidly adopt improvements in techniques and methods which experience may dictate or which may be evolved as a result of research and development taking place alround.

APPENDIX I

LIST OF LACQUERWARE PRODUCING ESTABLISHMENTS IN POWER-SECTOR, AT CHANNAPATNA

1. Oriental Industries

2. The Mysore Pride Products

3. Kanva Lacquer Works

4. United Lacquer Works

5. Navarang Lacquer Works

6. Dowlathkhan's Toy Factory

7. Mysore Wood Turning and Toys Works

8. Hindustan Art Industries

9. Universal Art Industries

10. Ahmed Hussain's Factory
11. Karnataka Toys Factory

12. Sri Laxmi Toys Factory

13. Kalpana Industries

14. Vijendra Industries

15. Mankoji Rao's Factory

16. Venkatappa's Factory (1)

17. Venkatappa's Factory (2)

18. Mehaboob Shariff's Factory

19. Jagannath's Factory

20. Kalchowda's Factory

APPENDIX II

PRICE LIST OF LACQUERWARE ARTICLES

	Rs.		Rs.
1. Flower-vase (bottle shape)	2.00 to 4.00	23. Gorkha couple	1.50
2. Flower-vase (bamboo pattern)	3.50 to 4.50	24. Mangolian couple	1.50
3. Vessel set (3 pots)	2.50	25. Tibetan couple	1.50
4. Vessel set (5 pots)	3.50	26. Japanese couple	1.50
5. Powder-bowls	1.75 to 2.50	27. Fortune teller	0.75
6. Egg cup	0.75	28. Marwadi	0.75
7. Napkin-ring (ornamented)	0.65	29. Fruit vendor	2.00
8. Napkin-ring (plain)	0.50	30. Kathakali	2.00
9. Band set	3.50	31. Radha Krishna	2.00
10. Cooking-set	1.50	32. Rama set	2.00
11. Balancing doll No. 1	1.25	33. Keerathanakar	2.00
12. Balancing doll No. 2	1.00	34. Lady with pot	1.10
<i>Pepper and salt-cellars</i>		35. Lady with basket	1.10
13. Piggies	2.50	36. Nagaswara set	4.75
14. English couple	2.50	37. Snake charmer	2.00
15. American couple	2.50	38. Vegetable-hawker	1.50
16. Vendors	2.50	39. Fruit-hawker	1.50
17. Begum & Nawab	2.50	40. Table lamp	7.50
18. Onion heads	3.00	41. Cigarette-case	2.00
19. Bamboo figures	2.00	42. Cup and ball	0.65
20. Eggs	1.30	43. Bowls	2.50 to 5.00
<i>Character dolls</i>		44. Toy engine	0.90
21. Negro couple	1.50	45. Toy plane	1.75
22. African couple	1.50	46. Tobacco-jars	4.00 to 8.50
		47. Pin cushions	1.00 to 2.00
		48. Pen-holders	0.06 to 0.12

EDUCATIONAL WOODEN TOYS
OF BELGAUM

CHAPTER I

INTRODUCTORY

Introduction

Painted figures of birds and animals in wood are made for the amusement of the child. The most commonly found of these toys are dogs, horses, elephants, cats, deer, etc., and birds such as parrots, peafowl and domestic fowl. Though these toys are produced mainly for the child's amusement they do indirectly serve as important aids to sharpen the child's sense of perception and understanding. The mental and psychological training to be obtained through the medium of toys has on scientific reasoning been recognised, to be quite essential in the early years of childhood. The toys besides fulfilling their designed role of providing pleasure to the child afford scope for the growth of creative impulses of the child.

The child is generally introduced in its infancy to toys, particularly the rattle, which serves a double purpose. It helps the infant to fix its eyes on the rattle from which the sound emanates and simultaneously inculcates a sense of hearing in it.

A child apart from appreciating in a toy its contour, sound and colour also gets familiarised with animal forms and human figures. The toys produced include wild animals and familiarisation with them which our children do not find around in the normal life excites their curiosity and widens their knowledge of nature's beauties and varieties.

It is common place experience that female children play with toys of household articles such as cooking utensils and this no doubt instinctively initiates them into domestic duties. The male children on the other hand play with toy implements which their elders use.

Educational Wooden Toys

The motif for educational wooden toys are animals such as elephant, deer, tiger, lion, camel, giraffe, etc., which are normally maintained in zoo gardens under conditions approximating their

natural habitats for the pleasure and education of children and also such domesticated animals as cow, buffalo, goat and sheep and birds such as fowl, sparrow, duck, peacock, etc. They are cut from wood and painted in bright and variegated colours in a manner as to be most appealing to the children. These toys are also provided with wheels so that the toddler may drag them with him wherever he goes. Children do take keen interest in pieces that move on wheels. Amusement apart, these toys depicting animal, bird and other human forms have a distinctive educational value too in that they help the children to acquaint themselves with objects they see and hear around and helps promoting in them a sense of social value.

Toys, which represent persons in the act of doing their jobs are of special interest as visual aids to education. These toys which are made by lacquerware workers of Channapatna cover a wide range of products. As a separate monograph on lacquered toys has been presented in the same volume, this monograph is confined to a study and description of toys which may appropriately be termed 'Fret Toys'.

Fret Toys

Toys are generally made in Mysore out of such materials as clay, cotton, soap stone, metal etc. But toys made of wood are quite distinct and apart from others in that they are more convenient for children to handle.

Toys described in the monograph on 'Painted Wooden Toys of Gokak' and 'Painted Wooden Toys of Kinnal' have no doubt considerable educative value. So also are articles carved out of rosewood and sandalwood. But these are valued more as decorative pieces than toys.

Fret toys could in the true sense of the term be characterised as educational wooden toys. They are made of plywood and solid wood and worked

easily on fret machine. The cheapness of the materials used in making them and the simple way in which they are turned on fret machines have contributed to their price being low and within the reach of persons with moderate income. These toys have the additional advantage of not causing injuries to children as would the sharp metal edged ones. Toy animals and birds made of plywood are strong and durable. Also the bringing out of essential likeness to the original with this material is easy. Paints and colours can also be effectively used.

Centre of Production

Belgaum is the centre where fret toys are made. This is the headquarters of Belgaum district. It is a chief military centre. It is situated at 15°52' N. latitude and 74°42' E. longitude and at an altitude of 2260 feet above the sea level. The place enjoys a pleasant and healthy climate. Among the 6 cities in Mysore State having a population of over one lakh Belgaum is one. The area of the town is 3 sq. miles and the population according to 1961 Census was 146,790 for the City and Cantonment combined.

Belgaum is situated on Bangalore-Poona railway line at a distance of 611 kms from Bangalore and 395 kms from Poona. The town is connected by road with many important places like Bangalore, Poona, Bombay, Panjim, Bagalkot, Vengurla etc. For purposes of municipal administration the city has been divided into Civil and Cantonment areas.

Cotton weaving is one of the industries of the town, the others being making of copper vessels and spinning and dyeing raw silk. Light Engineering Industries are being established in the town during recent years.

The town is of considerable historical importance. The fort on the outskirts of the town, just a mile on the east, is a relic of the past. The main attractions of the fort are the Asad Khan's Safa mosque and the three Jain Bastis found inside it.

Being at the meeting point of the roads from Mysore, Maharashtra and Goa the place has come to be recognised as an important commercial centre.

History of the Craft at Belgaum

Local enquiries have revealed that the first fret toy was made by Krishnoji Hanumantharao Renake at Munoli a village in Soundathi taluk of Belgaum district. The informant is Namadev Hanumantharao Renake, the elder brother of Krishnoji Hanumantharao Renake and a cloth merchant in Munoli village.

Krishnoji Hanumantharao Renake commenced his business of making photo and picture frames out of plywood in 1920. He used the bowsaw to cut the wood and the patterns on the frame. As the work had to be done entirely by hand it took an unconscionable long time to make a piece. When he visited Bombay in 1922 he saw a Hobbies' fret machine. Immediately on seeing this machine the idea entered his head that a change over to machine in his trade too would save labour and maximise output. The machine served as a model for his fabricating one to suit his trade. After return to Munoli, Sri Renake availing the services of a local carpenter devised a wooden grip or holder for the fretsaw frame and had the whole unit connected to a sewing machine in such a manner that the treadle supplied the motive power for the saw to ply. Sri Renake himself being a creative mechanic had little difficulty in further improving the machine. After perfecting the technique, he made several such machines. The fret machines in use at present in Belgaum and other parts of the district are the ones made by Sri Renake.

The waste wood pieces released in the making of photo frames had no use except to be burnt as firewood. Sri Renake thought of utilising these waste strips also more gainfully and started making animal figures out of them. He made several such figures and to improve their appearance painted them. These pieces found a ready and extensive sale in the Belgaum market. This highly encouraging response made him change over from making photo frames to toy making.

Sri Renake employing the assistance of a few local persons was making toy animals and birds at Munoli upto 1928 whereafter he moved to Bombay. In 1942 he returned to Belgaum scared by rumours that Bombay had become vulnerable to bombing.

Sri Renake continued his avocation of toy making in Belgaum till 1954. During this period he trained a few apprentices six of whom are even now pursuing the trade at Belgaum.

Sri Renake left Belgaum in 1954 to take up a job in Lokesh Industries at Dahanu where he still continues.

Establishments

There are now 6 establishments producing fret toys at Belgaum. Of these 5 are proprietary con-

cerns and the remaining one is a production-cum-training centre. The workshops of the proprietary concerns are located in the residential premises of the households.

Three of them were established in 1954, the fourth in 1961 and the fifth in 1963. Two persons who were pursuing the craft as independent workers have become employees in the new concern established in 1963.

The training-cum-production unit is functioning since 1959.

CHAPTER II

TECHNIQUES OF PRODUCTION AND ARTICLES PRODUCED

Raw Materials

The basic materials that go into the making of plywood toys which are of a simpler design are not many and expensive. Plywood¹ and solid wood are the two basic essentials in the industry the others being paints, nails, sandpaper and fret saw blades.

Plywood

This is the material from which educational wooden toys are made. Its advantage lies in its being considerably stronger than ordinary planks and at the same time easily worked with by a fret saw. Plywood sheets manufactured by the various factories are freely available in local shops at Rs. 0.50 per sq. ft., but the local craftsmen go in for empty tea cases for their requirement of wood with a view to keeping down the cost.

Solid wood

Single shape figures are cut out of solid block of wood $\frac{1}{4}$ " thick. All the toys are mounted on a batten provided with wheels. The batten is a bar of solid wood the length of which varies according to the length of the figure. *Booraga* is particularly used for making these battens and it owes this preference to its cheapness and easy availability.

Paints

Factory made oil stains which are obtainable in a wide range of colours are used in painting the toys. The painting may be done either by smearing with a brush or by spraying with a gun. Red, white, lemon chrome, blue and black are the common colours used. By a suitable and judicious blending other richer hues such as green, rose, chocolate are also derived in different shades and grades.

Turpentine

It is used as a medium for dilution, since paint in its normal viscosity is unsuited for use in a spray gun.

Nails

Nails are required for fastenings and fixings. Wheels are fixed to the axle or batten by means of nails. Nails are used for general type of joinery also. Nails of lengths varying from $\frac{1}{2}$ " to 1" and of gauges 17 and 20 are generally in use.

Sandpaper

Smoothing the surface of the wood for a fine finish and preparing the surface for painting are done with abrasive paper.

Fret Saw Blades

Although this appropriately constitutes a tool the recurring expenditure involved due to its frequent breakage and replacement puts it on a par with any other raw material which goes into the production of the article. As such the craftsman reckons it as one of the raw materials. Fret saw blades are available from local hardware merchants at Rs. 0.25 per dozen.

Tools

Among the tools of the artisan the fret machine is of prime importance. Other tools used are wheel cutter, drill, vice, plane, handsaw, screw driver, hammer, pliers, files, spray gun and brushes.

Fret machine (Plate 1)

This is a treadle machine and its operation is similar to that of a sewing machine (Plate 2). Its lower part consists of a treadle and a driving wheel while its upper part comprises a fly wheel and a frame to hold the saw. The fly wheel is connected to the driving wheel by a belt. As the fly wheel rotates it imparts an up and down movement to the arms of the frame holding the fret saw blade.

The arms of the frame are made of wood. The fret saw blade is fitted vertically between the ends of the frame in clamps specially designed for the purpose. The blade of the fret saw being narrow it

is capable of negotiating quicker curves. It cuts piercing in the wood also.

As fret work involves cutting fine curves the use of fret saw blades is an indispensibility. The wooden arms of the machine make an up and down movement. A table called 'tilting table' is provided at the machine top as a rest for the plank to be cut. As a holding down foot is not provided for in the machine, care is taken to see that the impact caused by the stroke of the saw does not shake the plank fed to the machine. The cutter has to blow off the dust collected on the wood every now and then to ensure clear visibility of the outline marked on the wood. The strokes of the fret saw blade are controlled by regulating the speed of the treadle.

Wheel Cutter (Plate 6-a)

Wheels are made by cutting a number of circles of the same size in plywood. Such a work can be undertaken if wood can be cut in packs. But the inferior quality of the fret blade precludes cutting wood in packs. Wheels are a special feature of these toys. Wheel cutter is therefore a felt want for this craft. It is a simple construction made to order in the local foundries. Wheels of size ranging from 1" to 2" in diameter can be made with the aid of this machine. The centre bit of the machine holds the wood firmly. The turning crank at the top imparts motion to a movable strip carrying a cutting bit at the other end of the shaft. The hard and sharp steel bit cuts the wood into the shape of a wheel.

Drill

This is needed to make holes in the wood. This simple tool makes fine holes through wood. For normal work a table drill or even a hand drill will do.

Hammer

Driving nails into plywood is to be done with care and a pin hammer is used. Nails are driven with gentle strokes. For general purposes a cross-pene hammer is used.

Vice

During the drilling operations and assemblage of parts and while nailing, the use of vice is essential.

Spray Gun

The use of a spray gun ensures even spread of paint, and the time and labour involved is also considerably lessened when compared to what it would for painting with a brush. Compressed air is utilised to force out the liquid paint through the jet. The air is sucked through air hose attached to an air pump. The spray gun is of cup type. Pressure on the trigger releases the atomised paint through a nozzle. It is not tiresome to work with a spray gun.

The craftsmen use manually operated spray gun the cost of which is comparatively less. This tool will have to be kept clean and special attention is devoted to this job. As the paint should not clot in the spray gun, it is cleaned thoroughly after use. The presence of even a particle of dust in the nozzle will cause an uneven jet.

Brushes

Brushes cannot altogether be avoided. A flat brush is more handy for painting large areas. A fitch is useful in picking out small mouldings and similar parts of toys. The pencil brush comes into use for marking such details as eyes, ears, of the figure.

Apart from these essential tools many other tools such as pliers, handsaw, screw driver, files, plane are also needed by the craftsmen.

To begin with a craftsman is required to invest on tools about Rs. 400 as detailed below:

	Rs.
1. Fret machine	210
2. Wheel cutter	25
3. Drill	30
4. Vice	30
5. Spray gun	40
6. Brushes	5
7. Handsaw	10
8. Hammer	5
9. Files	10
10. Plane	15
11. Screw driver	2
12. Pliers	3
13. Others	15
Total	400

1. A board consisting of a number of thin layers of wood glued together.

Techniques of Production

Fret toys can be classified into two types. The first type is cutting figures in single shape and the second is cutting a number of components and later assembling the figure. The principles adopted in both are the same. However, each figure will have to receive its own special treatment.

The working details can be explained in the following nine stages:

1. Transferring of outline.
2. Cutting of figure.
3. Smoothing.
4. Assembling of components.
5. Cutting of wheels.
6. Fixing of wheels to batten.
7. Preparing the surface for painting.
8. Painting.
9. Finishing.

1. Transferring of Outline

In the case of a single shape figure its outline is transferred by placing a template on the solid wood $\frac{1}{4}$ " thickness and drawing a pencil marking all along its edge (Plate 3-a). Templates of the figures are made either in thick cardboard or tin sheets. Templates not only help the craftsmen to mark the outline of the figures on the wood but also ensures avoidance of wastage.

Fret saw blade being narrow it is very easy to cut with it plain flowing curves whether in one direction or in a serpentine form. As the figures of toys to be cut have curves of flowing nature making of several cuts on the same piece has been avoided.

The template is held firmly with one hand (usually left) and with the other marking is made around the edges of the template thus obtaining the cutting line. While marking outlines of several figures or several outlines of the same figure on a single board care is taken to allow sufficient space in between the dividing lines. The pencil tip must be pointed as otherwise the pattern is liable to lose its sharpness.

2. Cutting of Figure

After the outline is marked on the wood, it is cut with a fret saw blade operated on the fret machine (Plate 3-b). Careful treadling will transmit as required light and heavy strokes to the blade. The cutting should be a little outside the markings

made on the plywood sheet *i.e.*, on the so called waste side of the outline. The fret saw blade is brittle and cannot withstand heavy pressure.

The manner of cutting even in respect of the second type *viz.*, figures cut in components and then assembled is not different from what has been described above. The templates of the components of the figures are placed on the wood and outlines are marked around so as to obtain the cutting line. The wood is cut closely along these markings with the fret saw blade.

3. Smoothing

After the figure or the components of the figure is cut, the sharp edges and corners should be smoothed or rounded off. This is done by giving the rough edge and cut sides a good rubbing with sandpaper.

4. Assembling of Components

Assembling of the several component parts of the figure in correct positions with suitable joints so as to avoid any oddity manifesting itself in the finish calls for both skill and experience. The sides of the body of the figure are attached to a core which happens to be a treated scantling. The component parts are assembled by nail jointing (Plate 4-a).

5. Cutting of Wheels

Wheels are cut out of plywood with the aid of wheel cutter (Plate 6-b). Plywood is placed on the bottom plank of the wheel cutter where it is held securely by the central bit. When the handle of the crank at the top of the wheel cutter is turned a movable strip at the other end of the stem rotates and cuts the wheels.

6. Fixing of Wheels to Batten

The wheels are fixed to the batten and the figures are mounted on it. The craftsmen either make the battens themselves or get them made by local carpenters. A hole is made at the centre of the wheel with the help of the drill. The batten is fixed in the vice and the nail is introduced through the centre hole and is driven into the batten by light strokes of the pin hammer. The wheel is fixed to the batten by employing nails of 1" length of 17 gauge. The batten is of size $6" \times 1" \times \frac{3}{4}"$ to $9" \times 1\frac{1}{4}" \times 1"$. A long groove runs in the

centre of the batten and the projection of the foot of the figure acts as a tongue to secure a tight hold in the groove of the batten.

7. Preparing the Surface for Painting

Fret toys are painted with oil stains. These paints are best applied with brushes. To obtain a fine finish the surface of the wood should necessarily be smoothed. The smoothing is done with sandpaper (Plate 4-b).

8. Painting

After preparing the surface, the priming coat of paint which forms the base is applied with a brush, until it soaks into the grains of the wood (Plate 5-a). As plywood avidly absorbs paint there should be more than one course of the under coat of flat paint. When the under coat of paint becomes sufficiently dry it is rubbed well with sandpaper. The finishing coats of paints are adjusted to suit the colour scheme of particular figure and for this both spraying and brush painting are done.

Paints used for spraying should be diluted with turpentine to a workable thickness. There is no rigid formula for dilution and in this the worker is guided by his own experience.

While spraying, the portions not to be sprayed are covered with stencils of tin sheets. The uncovered portion is sprayed to produce the desired effect (Plate 5-b).

9. Finishing

The figure is fixed on the batten fitted with wheels. It is not also uncommon to fix the wheels to the batten after mounting the figure (Plate 7-a). Wheels are painted usually in black or blue colours.

Marking of eyes, ears, and ornamentation painting is done with a pencil brush (Plate 7-b). With this is reached the final stage of work.

Articles Produced

Among the toys made at Belgaum single shape figures of animals and birds take priority over others both in number and their moving in the market. These toys are made to represent animals like cow, buffalo, dog, cat, horse, elephant, deer and also wild beasts like lion, tiger, bear and such other denizens of the forest. The figures of birds include cock, peacock, parrot, duck and the like. All the figures are generally presented in a standing manner, the heights varying from 5" to 6".

Materials used

The materials used in the making of these toys consist of solid wood of $\frac{1}{4}"$ thickness and 6" square for the figure, a batten of size $6" \times 1" \times \frac{3}{4}"$ to mount the figure and plywood of size 3" square for the wheels. 1" nails of 17 gauge and paints are the other items that go into their making.

Working details

The figure of the animal or bird is cut from the solid wood after marking the outline with the help of template. The sharp edges and corners of the cutting are thereafter rounded off.

The figure is smoothed on both the sides by rubbing well with sandpaper, and the surface is then prepared for painting. A priming coat of paint is applied with a flat brush. After drying, the painted surface is again smoothed using sandpaper. A second coat of the paint is applied. When this second coat of paint dries up, paint spraying is done to suit the colour scheme. The colours are so used as to produce a natural effect. The imagination of the craftsmen sometimes runs riot.

The wheels are painted in blue or black and are fitted to the batten. The projections of the legs of the figure are fitted into the long groove in the centre of the batten. Thereafter with the help of a pencil brush eyes, mouth, nose, ears are marked with black paint. Ugly gaps of paints are rectified. The figure is given a symmetrical finish on both the sides. This completes the making of single shape figures.

JOINTED TOYS

Apart from single shape toys number of other playthings are made in fret work. These can be characterised as 'jointed toys' as they are made by joining together component pieces individually made. Jointed toys are made to depict animals, birds and toy vehicles. The production process of the popular varieties have been explained in the following paragraphs.

DUCK (Plate 8)

This toy is provided with an oscillating head for the delight of the children. A touch by the finger makes the head oscillate and gives a life like effect.

Materials used

In the making of duck the materials needed are as follows:

1. Plywood of size $12'' \times 8\frac{1}{2}''$ for the two sides of the body and also the 4 wheels.
2. Solid wood of size $8'' \times 6'' \times \frac{1}{4}''$ for the core piece, the head with the neck, and the cleat. The core piece is the part to which the body pieces are attached and the cleat is the device that facilitates the fixing of wheels.
3. Nails of $\frac{3}{4}''$ length of 20 gauge for joining the component pieces and nails of $1''$ length of 17 gauge for fitting the wheels.
4. Paints are the other requisites for this piece.

Working details

The component parts of the duck viz., two sides of the body and the 4 wheels are made from plywood and the neck with head, a core piece and a cleat are made from solid wood. The wheels are cut with the aid of wheel cutter and the rest on the fret machine. The rough edges and corners of the cuttings are rounded off. The two component pieces of the body are attached by setting the core in between. The piece of head with neck and the body are smoothened by sanding down. These pieces are painted in pale yellow colour. The second coat of paint is applied after the first coat dries up. Wheels are painted in blue. By proper masking, the body is sprayed with chocolate colour to represent the wings. The work is further proceeded with after the paints are completely dry. A hole is bored in the neck and connected to the body by a nail which acts as a fulcrum and allows the head to swivel freely.

The duck, at the bottom, is fitted with cleat to which the wheels are fixed. Finishing is given by marking the eyes in black paint and the beak in red with pencil brush.

Duck is the common item of bird to be provided with an oscillating head, and the other to be so made is the peacock (Plate 10) for which also the process adopted is similar.

ELEPHANT (Plate 9)

Among the animal toys this is a commonly manufactured item. The head of the elephant with its triumphant trunk oscillates by a slight touch of the finger.

Materials used

The materials that go into the making of the elephant are the following:

1. Plywood of size $30'' \times 4''$ for two side pieces of the body and for 4 wheels.
2. Solid wood of $\frac{1}{4}''$ thick of size $6'' \times 5''$ for the head with trunk, tail.

A piece of core which forms the back of the elephant.

Two pieces of cleats on which the figure is supported and which serve as axle holders.

3. Nails of $\frac{1}{2}''$ and $\frac{3}{4}''$ length of 20 gauge for joining of component pieces and nails of $1''$ length of 17 gauge for fitting wheels.
4. Paints blended to slate colour, orange, white and black.

Working details

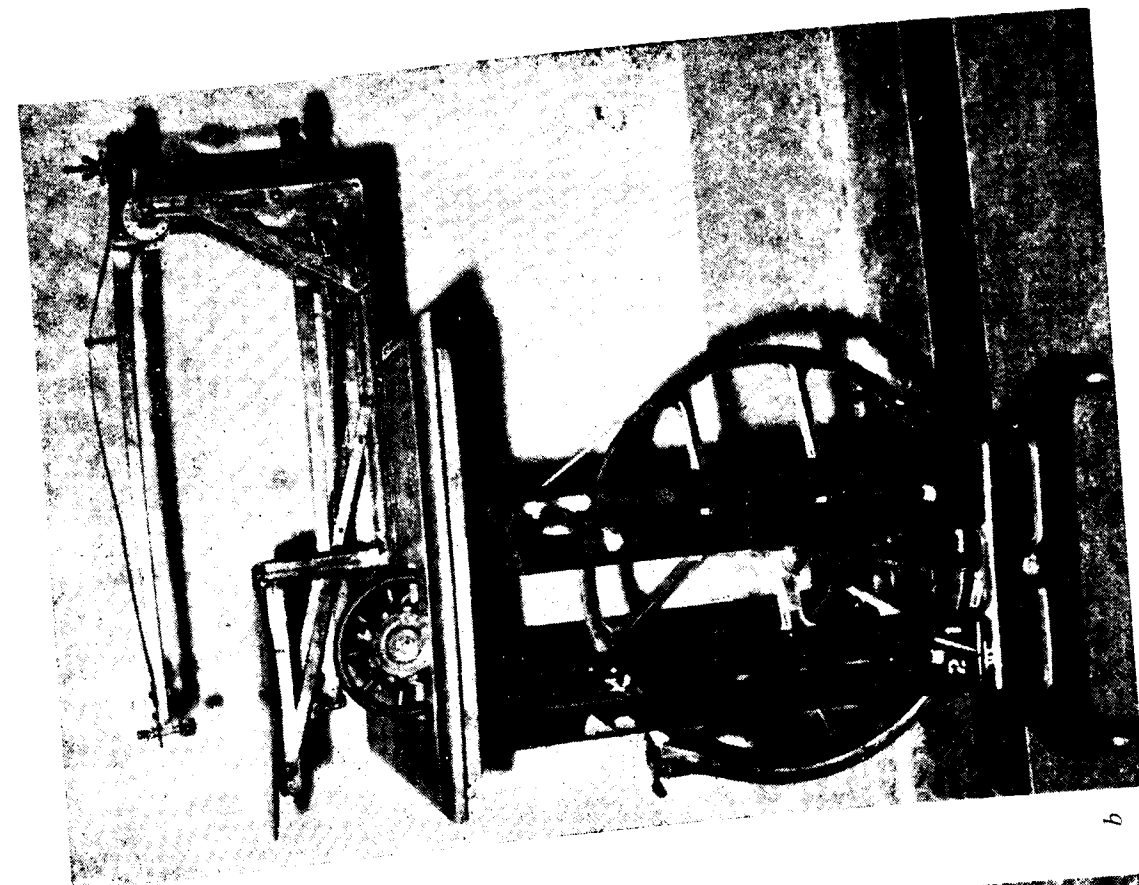
After marking the outlines on the wood the components are cut carefully on fret machine. Wheels are cut on the wheel cutter. All the rough edges and sharp corners are smoothened by using sandpaper. The two side pieces of the body are attached to each other by means of the core piece which also make for the back of the elephant. component pieces viz., the body, the tail and the head with trunk are rubbed with sandpaper and the tail fixed to the body. A priming coat of slate colour is applied to the body as well as the head with trunk. After the priming coat has dried another coat is applied. By making the unwanted portions, orange and white paints are sprayed. The legs are then attached to the cleat and wheels are fitted. After making a hole with a drill, the head is fixed to the body and the attaching nail makes for a free swiveling movement of the head. The ears and eyes are marked in black by using a pencil brush, thus completing the making of the elephant.

BULLOCK CART (Plate 12-a)

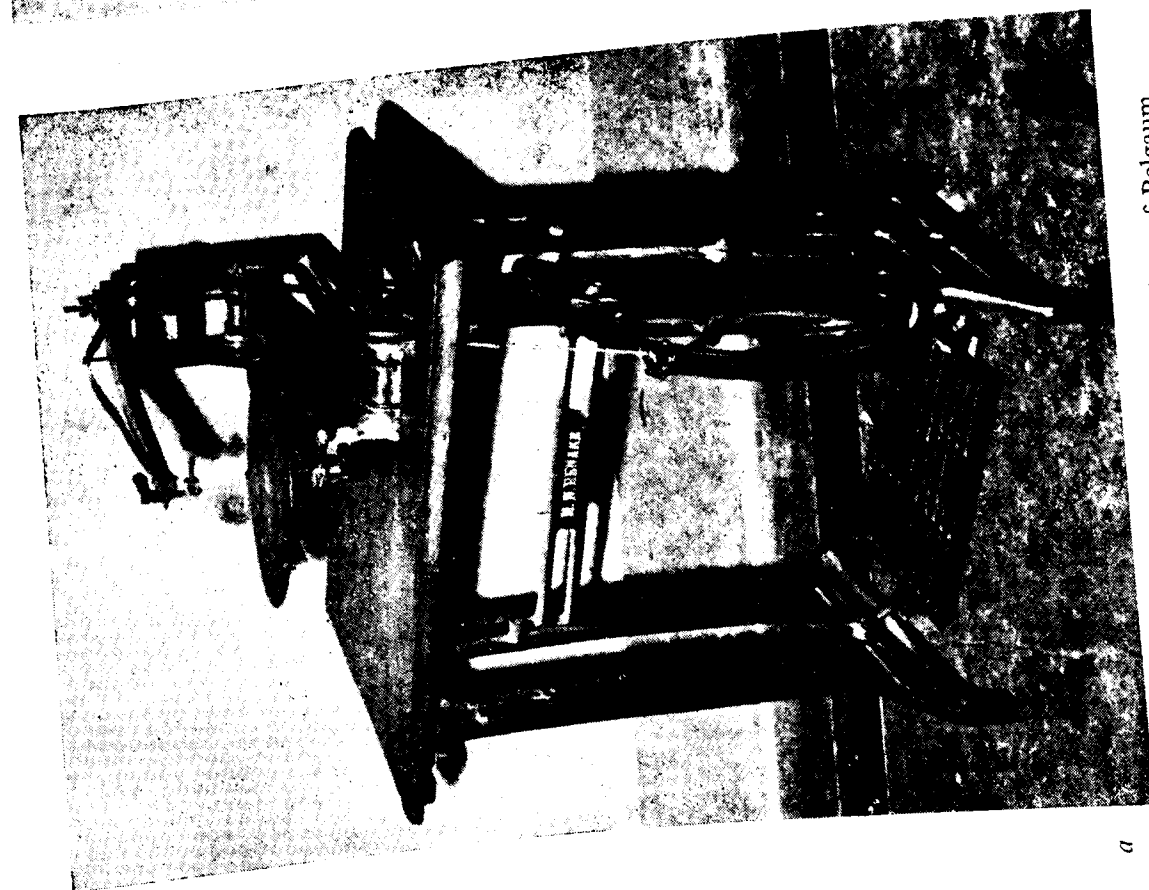
A two wheeled vehicle drawn by a single ox or a pair of oxen.

Materials used

The materials used in the making of this piece are as follows:



b. Side view of the fret machine.



a. Fret machine used by the toy makers of Belgium.



The operation of fret machine is similar to that of a sewing machine.



a. Transferring of outline. The outline is transferred by placing a template on the wood and drawing a pencil marking all along the edge of the template.



b. The outline being marked on the wood, it is cut with a fret saw blade operated on the fret machine.



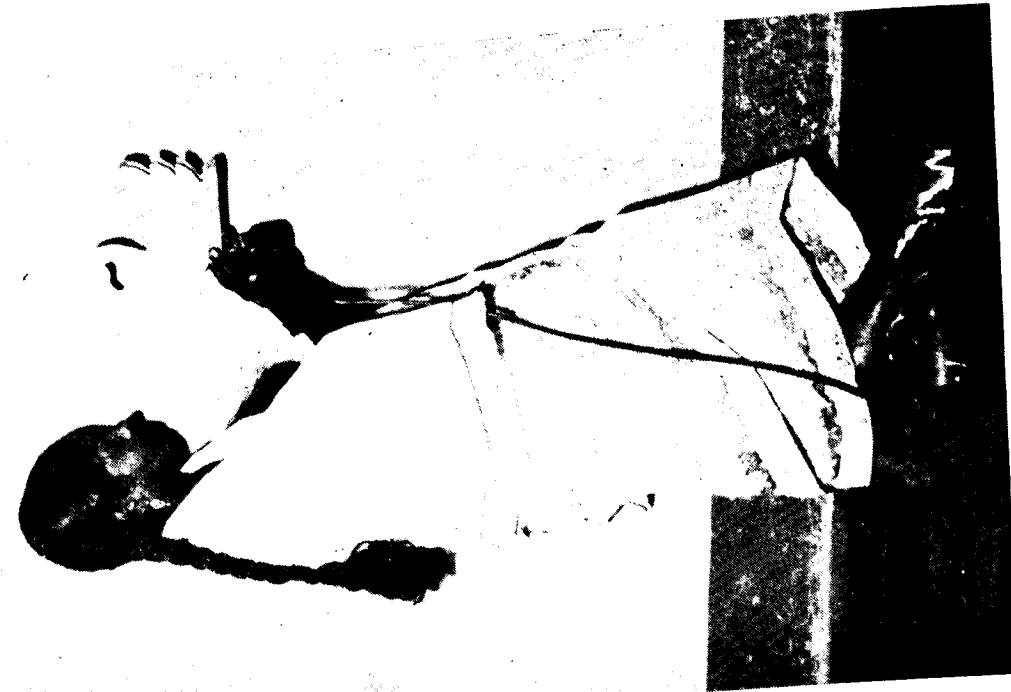
a. The component parts of the toy are assembled by nail jointing.



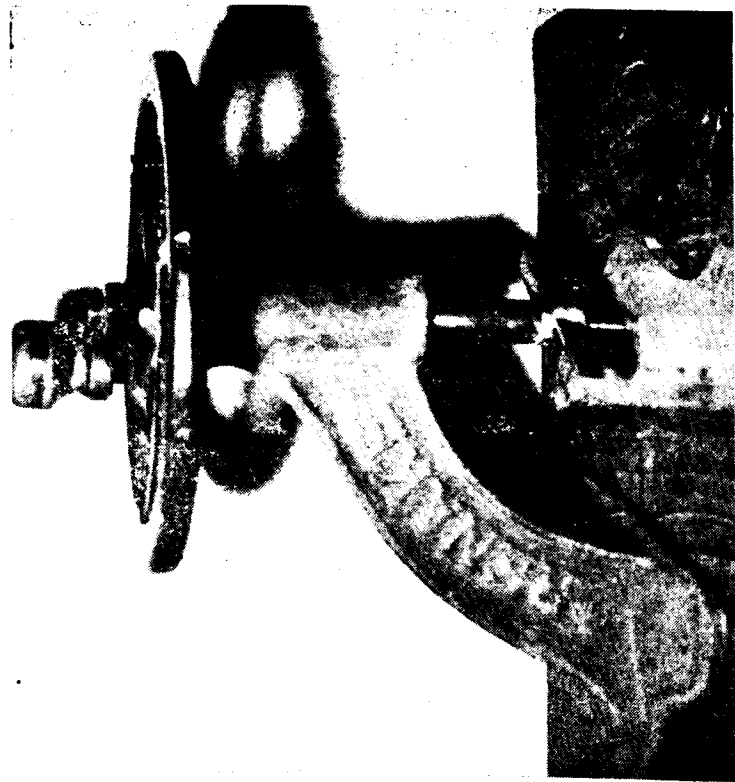
b. Preparing the surface for painting by sanding down with sandpaper.



a. Application of paint with a brush.



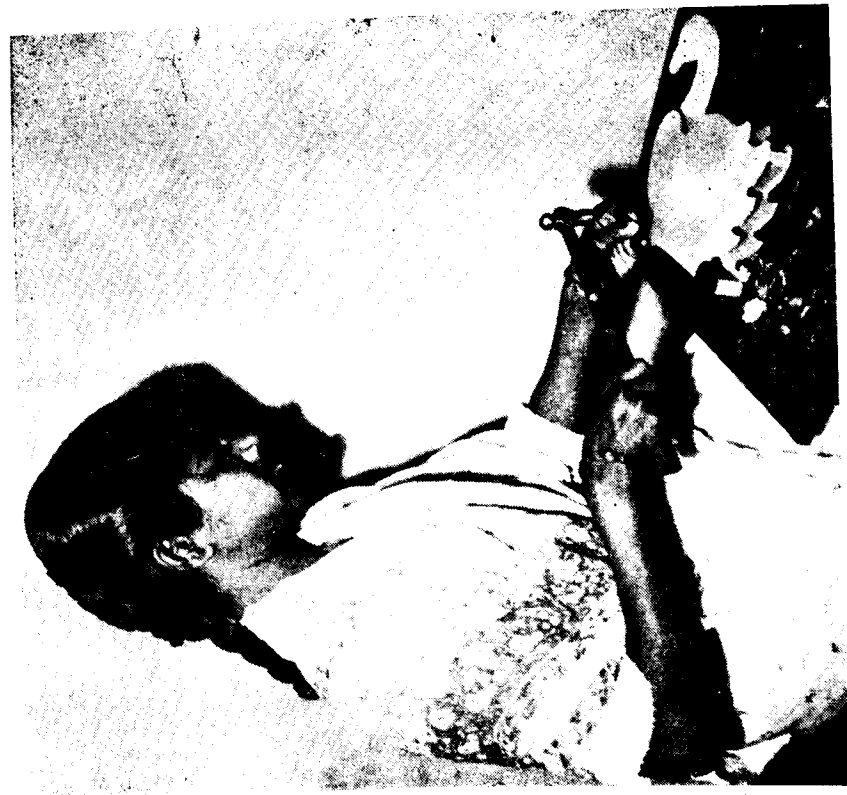
b. Applying paint by spraying.



a. The wheel cutter.



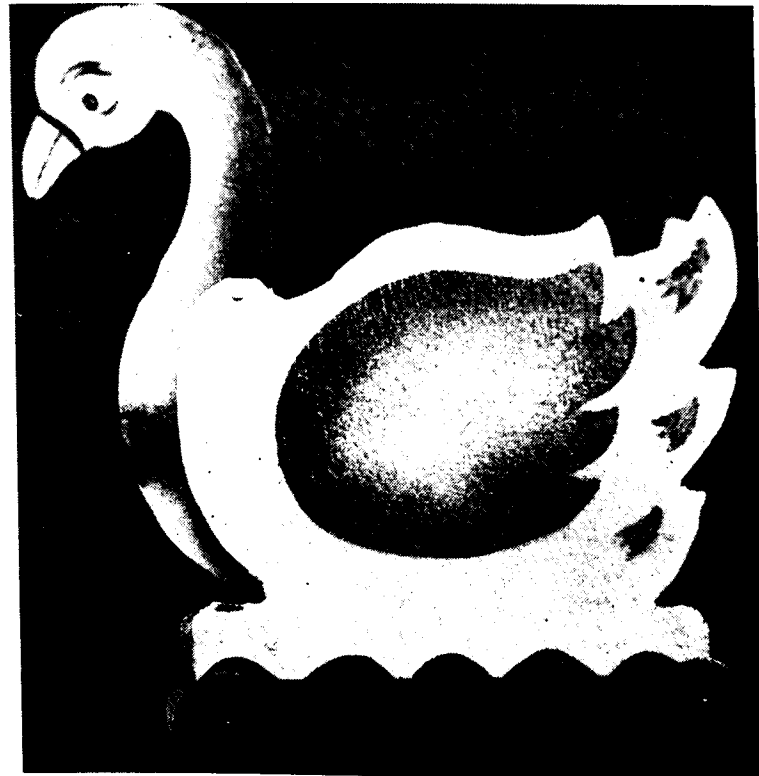
b. Cutting of wheel with the aid of a wheel cutter.



a. Fitting of wheels.



b. Marking of eyes with a pencil brush.



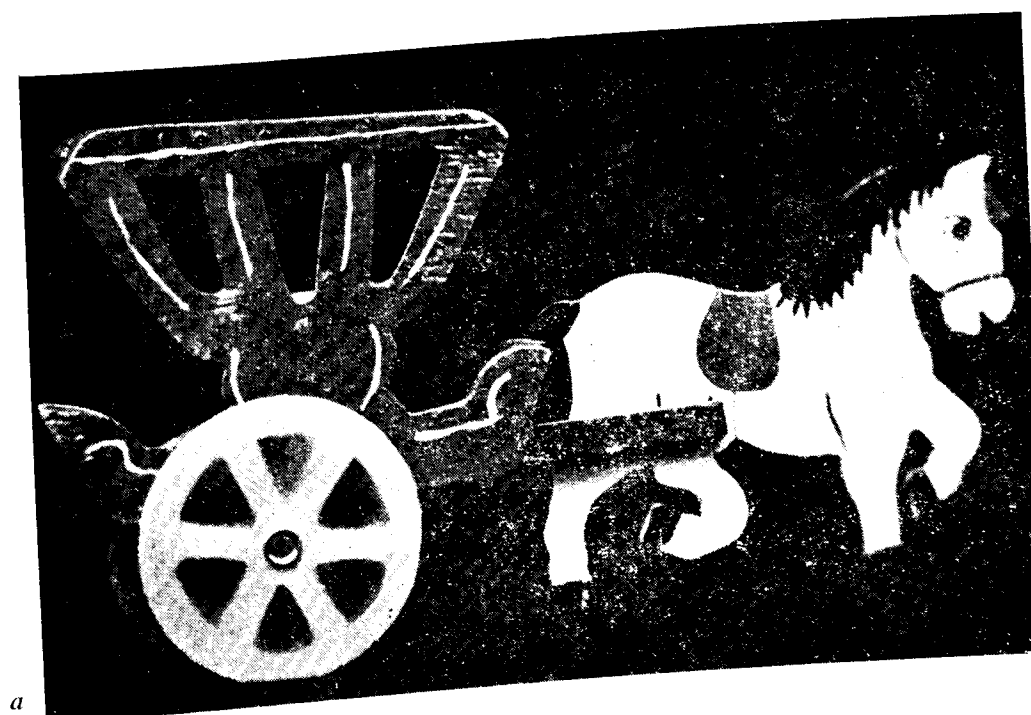
Duck provided with oscillating head.



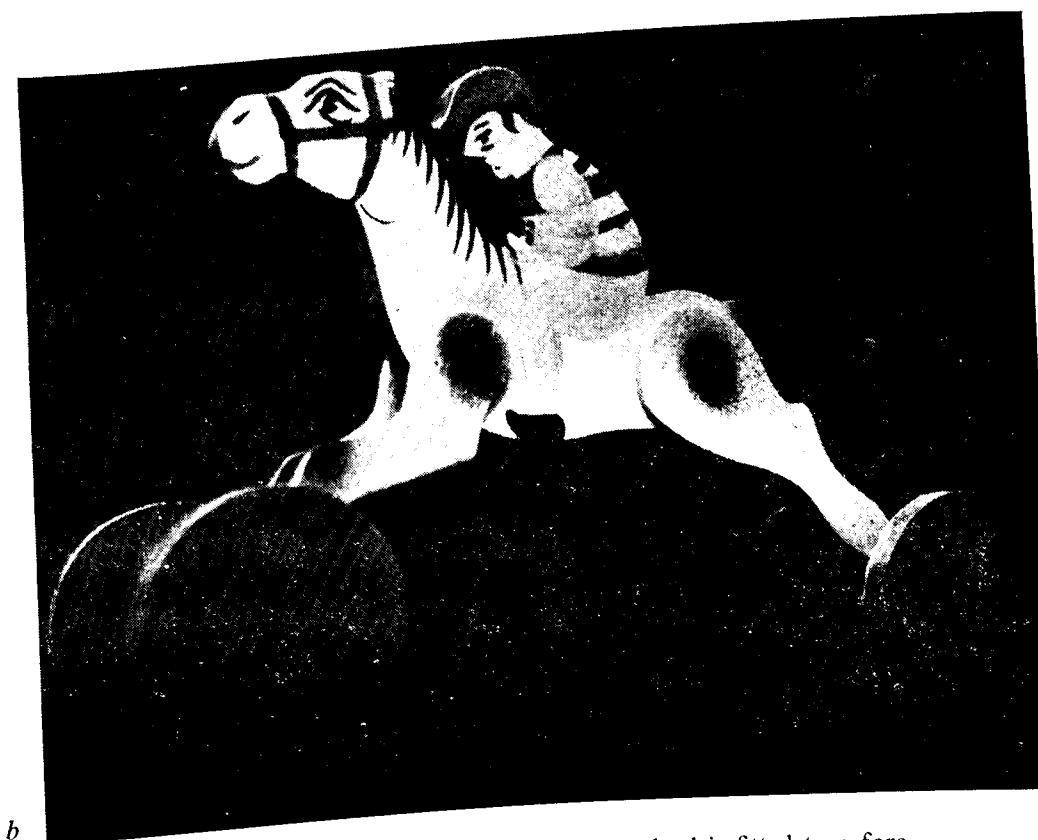
Elephant with oscillating head.



Peacock—another jointed toy.

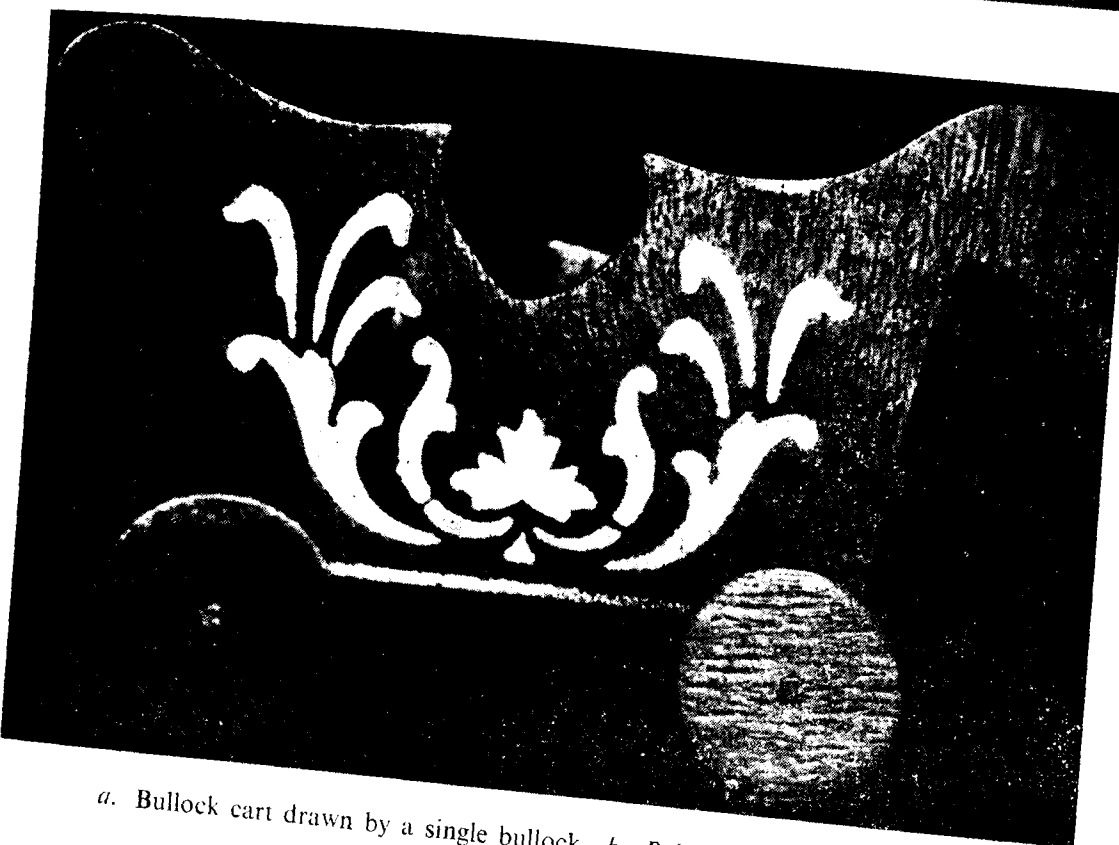
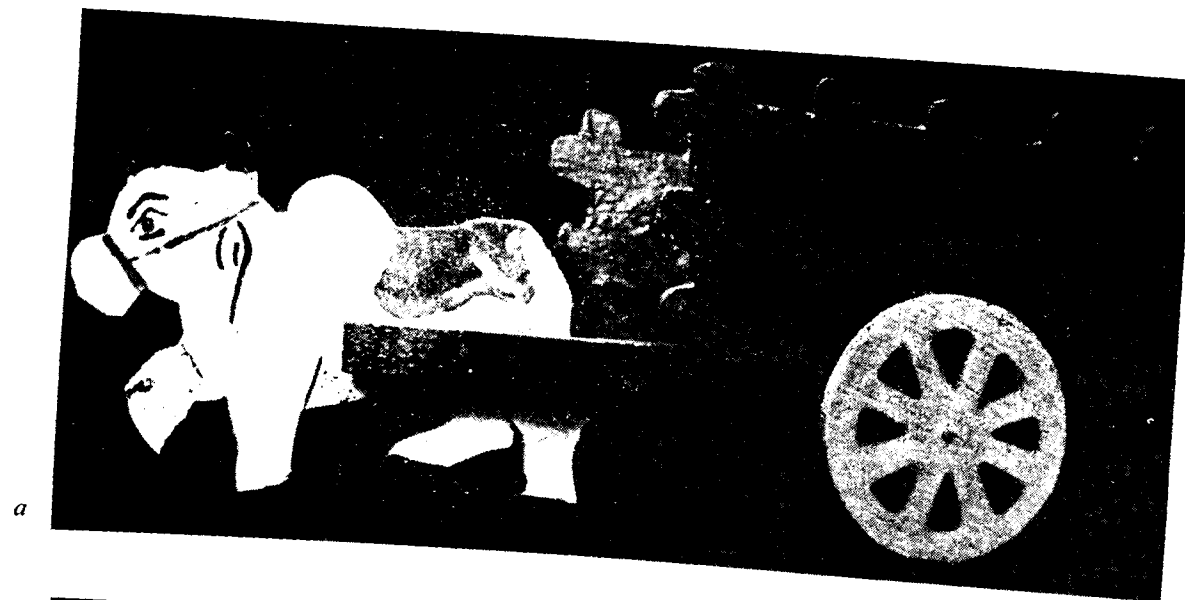


a



b

a. Two wheeled horse cab. An extra wheel is fitted to a fore legs to facilitate movement. b. A racing horse with jockey.



a. Bullock cart drawn by a single bullock b. Bahagadi--- a toy perambulator.

1. Plywood of size $24'' \times 3\frac{1}{2}''$ for two sides of the cart, for the ox, 2 wheels and for a yoke.
2. Solid wood of size $5'' \times 3\frac{1}{2}'' \times \frac{1}{4}''$ for the floor, a cleat for fixing below the floor for fitting the wheels and a shaft for attaching the animal to the cart.
3. Nails of $\frac{3}{4}''$ length and 20 gauge for joining the components and nails of $1''$ length and 17 gauge for fitting the wheels.
4. Paints.

Working details

After drawing the outlines on the wood, the component parts are cut from plywood as well as solid wood and smoothened by sandpaper. The cleat is fixed below the floor of the cart and the sides are fixed to the frame. The wheels are fixed to the cleat below the floor of the cart and the cart is painted blue. The ox is painted white and the wheels in vermillion. Two coats of colour are applied, the first being the priming coat and the second the finishing coat. After applying the priming coat, the surface is smoothened of all roughness. The cart, wheels and the side frames of the cart are sprayed in chocolate colour. The eyes, horns, tuft of tail are marked in black with the pencil brush. That finishes the making of the bullock cart. The same working details are followed for a double bullock cart also.

HORSE CAB (Plate 11-a)

It is a two wheeled vehicle drawn by a single horse.

Materials used

The materials used are:

1. Solid wood of size $6'' \times 3'' \times \frac{1}{4}''$ for front and back pieces of the cab, 2 pieces for the shaft for fixing the horse to the cab and a cleat to fix below the floor of the frame for fitting the wheels.
2. Plywood of size $24'' \times 3''$ for a horse, 2 side pieces, a floor of the cab, two wheels of $2\frac{1}{2}''$ diameter each.
3. Nails of lengths $\frac{1}{2}''$ and $\frac{3}{4}''$ of 20 gauge for joining components and $1''$ length nails of 17 gauge for fitting the wheels.
4. Paints of variegated colours.

Working details

The figure of the horse, parts of the cab, wheels and cleat are cut out and smoothened with sandpaper. The cleat is fixed below the floor of the cab. The figure of the horse is attached to the cab by shaft.

The cab is painted in richly variegated colours and the wheels are given contrast colours. The figure of the horse is painted white. After applying the final coat of paint on the priming coat, the frames of cab and wheels are sprayed by masking the unwanted area. With the pencil bursh eyes, nose and reins of the horse are marked. The two wheels are fitted at the two ends of the cleat below the floor of the cab. This completes the horse cab.

Working exactly the same way deer cabs are also made.

DOUBLE DECKER BUS

The double decker toy bus made by the craftsmen has only the outward form of it and the missing of such essential details as seats, steering makes it a little removed from the original and less attractive.

Materials used

The materials that go into the making of it are the following:

1. Plywood of size $12'' \times 11''$ for two sides of the body, another piece of plywood of size $13'' \times 13''$ for the chassis and for 4 wheels and bonnet.
2. Solid wood of size $18'' \times 16''$ for top, back, and front pieces and 2 cleats for axles.
3. Nails of $\frac{1}{2}''$ and $\frac{3}{4}''$ length of 20 gauge for assembling the components and nails of $1''$ length of 17 gauge for fitting the wheels.
4. Paints.

Working details

The components are cut from plywood and solid wood. After smoothing the parts with sandpaper, the two sides of the body and the top are assembled. Bonnet piece is joined at front on the right side. The back piece is attached at the back of the vehicle. The cleat for axles are attached below the chassis. The joinings of the body and top, at front as well as at back are filed to round

them off. The whole unit is assembled on the chassis. After assemblage, the vehicle is painted red and the sides are sprayed with yellow colour after masking unwanted areas. The head lights are marked in white paint. The mudguards are given a black shade. The wheels are painted blue and fitted to the axle cleats.

BABAGADI (Plate 12-b)

This is a toy perambulator.

Materials used

The materials required are:

- 1. Plywood of size 18"×3" for 2 sides, bottom and 4 wheels.
- 2. Solid wood for front and back ends, 2 cleats as axle holders and an extra piece for the pushing handle.
- 3. Nails of ½" and ¾" length of 20 gauge for assembling components and nails of 1" length and 17 gauge for fitting the wheels.
- 4. Paints.

Working details

The component pieces are cut from wood on the fret machine while the wheels are cut with the wheel cutter. The pieces are smoothened by sanding down, and the rough edges are rounded off. The side pieces are fixed to the two end pieces one at front and the other at the back. Two cleats which are the axle holders are fastened in place and nailed on the bottom. The pushing handle is fixed to the body. After preparing the ground in the usual way, the priming coat and coat of red paint are applied. The wheels are painted blue. After masking, white paint is sprayed on both the sides. The wheels are fitted to the axle holders.

HORSE WITH RIDER (Plate 11-b)

The toy of horse in running posture with the rider on the back is quite a delightful piece to the youngster.

Materials used

- 1. Solid wood of size 11"×6"×¼" for the body of the horse with rider, two cleats on which the figure has to be supported and also for axle holders and 4 wheels.
- 2. Plywood of size 17"×3" for 4 legs of the horse.
- 3. Nails of ½" length of 20 gauge for fixing the legs to the body of the horse at one end and to the supporting cleat at the other. Nails of 1" length of 17 gauge for fitting the wheels to the cleats which serve as axle holders.
- 4. Paints.

Working details

The figure of horse with rider and without legs is one piece and it is cut from solid wood. The wheels and axle holders are also cut from solid wood. The 4 legs are cut from plywood. The sharp edges of the components are rounded off. The legs are fastened to the body of the figure at the thigh joints while the hoof ends are fastened by nailing to the two supporting cleats which also serve as axle holders. The figure is painted grey or white after preparing the ground by giving a good rubbing with sandpaper. The bridle and the saddle are sprayed in orange. Ears, mouth and eyes are marked in black. The wheels are painted blue and fitted to the axle holders.

CHAPTER III

ECONOMIC AND GENERAL ASPECTS

Cost of Production

The making of educational wooden toys is a more or less mechanical calling for no specialised skill or imagination. These toys are produced with little care to quality and the only criterion seems to be cheapness for the product to move easily in the market.

The cost of production detailed below is based on the information furnished by the local craftsmen.

- I. Item of manufacture: Cock.
size : 6"
design : Single shape.
No. of pieces made : 18

Cost of raw materials:	Rs.	Rs.
1. Plywood	0.25	
2. Solid wood	0.60	
3. Fret saw blades	0.13	
4. Nails	0.12	
5. Sandpaper	0.05	
6. Paints, & turpentine	0.65	1.80

Cost of raw materials per piece is Rs. 0.10
Selling price per piece is Rs. 0.37

- II. Item of manufacture: Duck.
size : 8"
design : Oscillating head.
No. of pieces made : 20

Cost of raw materials:	Rs.	Rs.
1. Plywood	1.12	
2. Solid wood	1.13	
3. Fret saw blades	0.18	
4. Nails	0.20	
5. Sandpaper	0.10	
6. Paints & turpentine	1.67	4.40

Cost of raw materials per piece is Rs. 0.22
Selling price per piece is Rs. 0.75

- III. Item of manufacture: Double decker bus.
size : 6" (height)
Design : Toy miniature.
No. of pieces made : 15

Cost of raw materials	Rs.	Rs.
1. Plywood	1.00	
2. Solid wood	1.60	
3. Fret saw blades	0.25	
4. Nails	0.25	
5. Sandpaper	0.20	
6. Paints & turpentine	1.20	4.50

Cost of raw materials per piece is Rs. 0.30
Selling price per piece is Rs. 1.00

The cost analysis reveals that more than 30 per cent of the cost of production goes towards raw materials. If the work is entirely done by household labour, it may be assessed that 70 per cent of the total selling price would be the profit that the toy maker earns. A skilled worker of the craft earns Rs. 3.00 a day if he works as a hired labourer. The earnings of an independent worker is about Rs. 3.00 to Rs. 4.00 per day.

Capital

The capital required to be invested is only on tools. Two of the establishments have installed 0.5 H.P. motor each. They cannot afford to acquire raw materials in bulk. The capital investment on tools of all the households engaged in the craft aggregates Rs. 2,500. The investment on raw materials is about Rs. 1,800 during the period of this study. The source of capital is the self earnings of the craftsmen.

Production

During 1963-64, educational wooden toys valued at Rs. 10,000 were produced in Belgaum. Toys valued at about Rs. 610 were produced at the Dolls and Toys Making Centre. No special preference or importance is attached to any particular type. Demand determines the production.

Households of Toy Makers

At Belgaum 5 households are pursuing the craft of making educational wooden toys. Of these 5 households, 2 are carrying on the craft employing hired labour and the other 3 by household labour. There are 2 hired workers in the first establishment and 6 in the second. Among the 6 workers of the second establishment, 2 were independent toy makers till as late as 1963.

The 5 households consist of 24 persons of whom 6 are males, 5 are females and 13 are children below 14 years of age. Toy making is the principal means of livelihood for all the households. In 3 of the households the females assist in making toys and in others they attend exclusively to domestic work.

Of the 5 households, 1 is a 2 member household, 1 is a 4 member household and 3 are 6 member households.

Three of the households are in the income group Rs. 100-150 a month, one household earns about Rs. 200 a month and the other about Rs. 300 a month.

Of the total earnings, about 30 per cent is spent on raw materials. A major portion of the income is spent on essential items such as food, rent and clothing. Very little is spent on recreation.

A Case Study

Sri Devendra Krishnoji Homkar is an independent toy maker at Belgaum. He is aged 34 years. He belongs to the caste of Namadev Simpi, an occupational caste with tailoring as its hereditary occupation. His father was a tailor. His mother-tongue is Marathi. All the members of the household know Kannada.

The household of Sri Homkar consists of 4 members, the head (Sri Homkar), wife aged 28 years, a daughter aged 11 years and a son aged 6 years. The head has studied up to 4th standard in Marathi and upto 2nd standard in Kannada. His wife has passed the 7th standard in Marathi. The daughter and son are studying in 6th and 1st standards respectively.

Sri Homkar learnt the craft of toy making (fret work) under Sri Renake, the founder of the craft. After his apprenticeship under Sri Renake,

Sri Homkar married the daughter of Sri Renake. Smt. Homkar holds a certificate in tailoring. She assists her husband in toy making and also makes ladies' wear. They work in their residence. The tools owned by Sri Homkar include fret machine, wheel cutter, spray gun, etc., the cash value of which may come to about Rs. 400.

Sri Homkar started his own establishment in 1954 as Sri Renake left Belgaum for Dahanu. In this establishment, toys of all types are made. Toy making is the principal occupation of this household and tailoring is a subsidiary occupation. They have no specific timings but would mostly be working during all time of the day.

Sri Homkar is staying in the house owned by his father-in-law without paying any rent. He owns 4.00 acres of land which has been leased out and receives a crop rent of 5 quintals Jowar.

Following is the household income and expenditure of Sri Homkar for the calendar year 1964.

Income	Rs.	Expenditure	Rs.
1. Toy making	1,800	1. Food (cereals)	600
2. Tailoring	120	.. (non-cereals)	125
3. Crop Rent	200	2. Drinks	240
		3. Fuel & lighting	180
		4. House rent	..
		5. Clothing	200
		6. Other items	235
		7. Purchase for production	540
Total	2,120	Total	2,120

All the members of the household take tea both in the morning and in the afternoon and two meals a day at about 1 p.m. and at 8 p.m. The morning tea includes little snacks also.

The toys produced by Sri Homkar are directly sold to local dealers. He has no commitment with any dealer for monopoly sale and is free to dispose of his wares as he likes.

Marketing

The fret toys made in Belgaum are mostly sold locally. The producers supply the toys to dealers who in turn sell them to local clientele. Only one of the producers carries the toys to certain chief centres in Dharwar and Belgaum districts for sale.

The manufacturers are eager to dispose of the articles immediately they are produced and are hesitant to run the risk of storing them for more propitious times. The scope for export is pretty little as the production is scanty and the quality of the product is also not such as to offer scope for developing an outside market.

Dolls and Toys Making Centre

The 'Dolls and Toys Making Centre' at Belgaum is the first of its kind in the State, and is under the control of the State Government. This was established under the aegis of the Government of India.

This Centre came into existence on the 15th day of June, 1960. The scheme envisages the training every year of 20 ladies in doll and toy making. The scheme under 'Dolls' relates to soft toys and under 'Toys' relates to fret work. The duration of the course is 12 months commencing from June every year.

The Centre is under the control of an Instructress. Apart from her, the staff include an artist, an Assistant Instructor for fret work and an Assistant Instructress for dolls.

So far, 4 batches of students have been trained and the fifth batch is now undergoing training. In the first batch the trainees numbered 25 and in the subsequent batches including the one currently under training, it has come down to 20.

The trainees are divided into two groups of 10 each. The working hours are from 10.30 a.m. to 1.30 p.m. and again from 2 p.m. to 5 p.m. Training is imparted on both the disciplines in alternate batches.

Each trainee is paid a monthly stipend of Rs. 25. An examination is held at the end of the course and successful candidates are awarded certificates.

Admission to the course is restricted to ladies. Applicants must be between 16 and 25 years of age and should be able to read and write Kannada or any other language.

Selection of candidates is made by the Assistant Director of Industries and Commerce, Belgaum and the Instructress in-charge of the Centre after a personal interview. Preference is given to candidates in the lower income group and widows. The selected trainee is required to give an undertaking to refund the entire stipend drawn in the event of her failure to complete the full term of the course.

A subvention of Rs. 27,000 is given by the Government to this Centre of which Rs. 21,000 is for meeting the recurring expenditure and Rs. 6,000 the non-recurring expenditure.

The toys and dolls made by the trainees are sold by the Centre at its show-room and the visitors to the Centre mostly buy them. The sale price for the piece is fixed by the Instructress subject to the approval of the Assistant Director of Industries & Commerce, Belgaum. It is fixed on the basis of the total expenditure incurred on raw materials to which is added 6.25 per cent overhead charges. Nothing is charged for labour as the pieces are made by the trainees as part of their training.

The trainees at this Centre make fret toys or educational wooden toys from start to finish and for dolls they need the assistance of the artist particularly at the finishing stages.

Co-operative Society

As a follow up programme to trainees of the Dolls and Toys Making Centre, a Co-operative Society at Belgaum styled the 'Jyothi Arts & Crafts Sahakari Uthpadaka Sahakara Sangha' has been organised. The Co-operative Society was registered on the 11th day of June, 1964. It is a statutory requirement that the trainees of the Dolls and Toy Making Centre should become members of the co-operative society. The shares are each of Rs. 10 value. There are 105 members. The co-operative society has yet to take up work of production on a more organised basis and it is only then that it will be better able to serve its purpose of providing work for those who are trained in the craft of educational wooden toys.



CHAPTER IV

CONCLUSION

The educational wooden toys produced in Belgaum have a crude finish. It may also be a misnomer to call them educational wooden toys. No serious thought appears to have been bestowed till now for making articles which by their colour and form would stimulate the hidden faculties in children and in this sense their educational value is highly circumscribed.

Their negative virtue of improper finish and crudity is striking even to the layman's eye. The manner in which the trade is being plied at present by the artisans would make any student interested in this craft feel that there is much leeway to be made in the direction of improving their quality and salability. These craftsmen have yet to take advantage of the research that is being conducted at the Development Centre for Educational Wooden Toys, Bombay, for improving their quality and range.

The prime requisite of these educational wooden toys is their proportion of size and their impressive finish. The form and colour should necessarily be natural, lifelike or true to the original. There is scope for considerable improvement in the articles produced at Belgaum.

Though the craft is about two decades old in Belgaum, only a few persons have been attracted

to take it up as an avocation. Those who are in the trade continue in the old groove making no effort to improve their quality or value in any way.

None of the persons trained in the 'Dolls and Toys Making Centre' has shown any enterprise to start a venture of her own. They have preferred the less risky line of offering themselves as employees in the production unit attached to the co-operative society and looking forward to its expansion through Governmental subvention for absorbing them.

Local dealers are also not sufficiently enterprising to create conditions favourable to the production of quality and useful toys. In consequence inferior toys are dumped on the market with limited sales. A better market will be assured if only effective steps are taken by the craftsmen to adopt the suggestions for quality promotion made by the Development Centre for Educational Wooden Toys at Bombay on which much research is being done.

The craft can only have a future if men in the line make efforts at producing toys of high quality giving up their present erroneous notions that cheaper toys find a more easy market.

APPENDIX I

PSYCHOLOGICAL APPROACH TO COLOUR AND FORM IN CHILD EDUCATION*

Children are an integral part of the nation, whose future is dependent on the training they receive when they are young. We are in duty bound to assure our children a thorough Education based on the Psychological effects of Colour & Form, so that they may grow up to be useful citizens.

The psychological effects of Colour & Form leave an indelible impression on the mind. The great importance of the corresponding effects these have on the receptive minds of children at the tender pre-school age have inspired the scientific designing of these Educational Toys, with a view to creating a healthy feeling on their minds, which are to be carefully nurtured through the various phases of its development.

The obtaining of our Independence has not resulted in much progress for our country, because we have not gone to the root cause of all the troubles that confront us; which is a sad lack of proper education.

What is the use of Independence if there is no progress. True, we have built big industries and made much progress in many fields, but what about the Cultural Advancement which makes man understand his fellow men, and teaches love of ones neighbour and loyalty to the nation. These are the ideals that must rank high.

India has produced one of the finest cultures in the World but to harp on old glories, will not take us anywhere.

We can continue the richness of our heritage, by giving attention to the wealth of our Nation—our CHILDREN. Our Country lags behind others in the field of Education because we are satisfied to have a cheap imitation of things foreign. Through well brought out books visual aids and toys our future citizens could play their way through Education. The Psychological point of view must always be in the forefront of our thoughts. The encouragement of the talents inherent in a child, rather than the imposition of something alien to his tastes would bring fast results.

Being aware of the circumstances we just cannot sit back and blame someone else. It is we who must set things right to have good results without which there would be no progress and without this fundamental progress of our children, our Independence would mean nothing.

Through Independence we have gained power, and now the need of the hour is Knowledge. The knowledge is light, by means of which we can see and understand the nuances of life.

To gain this knowledge and to use it in our daily life, there is only one way, and that is to give to our Children a solid Educational Foundation from a Psychological point of view, from the very start of the use of their senses.

To achieve this, in designing these Educational Toys, the basic shape is searched out carefully, clarified and simplified,

to show the character of the animal or bird. The reason for broad simplification is because the child's thinking power differs according to age and the young mind does not grasp detail which if incorporated in the early stage would only tend to mar the beauty and balance which are inherent in the basic form.

These characteristics are not readily intelligible to youngsters because of the constant movement of an animal or bird. Even if placed in a cage, the lighting effects tend to distort the shape.

Hence the need for designing the toys in stages suitable to the age of the child, and in two dimensions only. If these are eliminated and the final stage thrust on the child's mind the reasoning power is not allowed free aesthetic movement, and a true appreciation of form colour and line is thereby thwarted.

For older children the third dimension will be introduced through the magic of movement. This series of Educational aids, covers all age groups upto to 14 years, starting with simple movement toys for new born babies. Advance subjects such as Science, Business, Life, History, Drama, Geography etc. are fully covered by the 3500 odd designs. As the present generation of children tend to be smarter, too much strain at an early age cramps the mind, hindering development.

The psychological effect of Colour and Form have not received serious attention, with the result that a bad sense of design is displayed in the toy manufactured to-day, and this is further degraded by the crude colour and proportions.

The meagre knowledge displayed by the designer in every aspect of work, and a blind disregard for the effects this would have on the minds of children is indeed a deplorable feature of our present day world.

Our cultural heritage has been lost completely. We have fallen so low that we have to start from the most elementary stage.

Our pride at copying foreign things (and that too badly) has resulted in a dearth of misconceived notions of what modernity means. I feel it my duty to express myself strongly, as this ugliness has manifested itself in things manufactured all over India, and this should be discouraged forthright.

Our children will not get the right type of Education if these things continue to flood the markets. The utter filth that has swept the bookstalls by way of cheap books on crime, sex and romance are now helping to create a debased and sexually perverted class of Indian Society.

We have to make a tremendous effort to achieve this great aim, and I request the Educational Authorities, the Headmasters and Teachers to take serious interest in the Scientific spreading of knowledge.

* A pamphlet published by the Development Centre for Educational Wooden Toys, Bombay.

APPENDIX II**LIST OF EDUCATIONAL WOODEN TOY MAKERS
AT BELGAUM**

1. Deccan Toy Works, Jade Galli, Sahapur, Belgaum.
2. D. K. Homkar, 131, Sampaji Road, Kasbag, Belgaum.
3. G. S. Nasthe, Sahapur, Belgaum.
4. M. N. Renake, Belgaum.
5. M. H. Biligi, Near Rex Theatre, Belgaum.

Training-cum-Production Centre:

1. Dolls and Toys Making Centre, Belgaum.

APPENDIX III**LIST OF SHOPS WHERE EDUCATIONAL WOODEN
TOYS ARE AVAILABLE FOR SALE**

1. Mahila Vastu Bhandar, Maruthi Galli, Belgaum.
2. Biligi Stores, Maruthi Galli, Belgaum.
3. Navarang Stores, Maruthi Galli, Belgaum.
4. Udaya Vastu Bhandar, Maruthi Galli, Belgaum.
5. Vanitha Vastu Bhandar, Maruthi Galli, Belgaum.

PAINTED WOODEN TOYS OF GOKAK



A tray with assorted fake fruits.

CHAPTER I

INTRODUCTORY

Introduction

Fake fruits and vegetables are made of wood at Gokak. These are popularly known as 'Gokak Toys', though they are kept in the houses as display articles and rarely used by children as toys. Gokak toys are popular throughout India and the articles are available in the Handicrafts Emporia of all key centres.

Gokak

Gokak is a municipal town and taluk headquarters in Belgaum district. It is about 42 miles to the north-east of Belgaum and can be reached by bus. Belgaum is the district headquarters of Gokak. The town is connected by bus with many other important centres like Dharwar, Hubli, Bijapur etc. Gokak Road which is about 8 miles from the town is the nearest railway-station. The station is on the Bangalore-Poona line at a distance of 664 kilometres (411 miles) from Bangalore. The town is being supplied with electricity since 1953 and water is supplied through taps since 1960. The area of the town is 2.8 sq. miles and its population according to the 1961 Census is 21,854.

Gokak is on the right bank of river Ghataprabha. The confluence of the rivers Ghataprabha and Markandeya is about a mile towards the north-west of the town. To the west and very close to the town is a hill called 'Mallikarjuna Gudda' with a fort in dilapidated condition. The climate of the town is temperate throughout the year.

There are 4 cotton ginning factories and 5 oil mills in the town. It is also a commercial centre. Jaggery produced in the rural parts round about Gokak is marketed here. A weekly market is held at Gokak every Thursday.

Gokak was famous for its paper and wooden toy making. Now it is famous only for toy making and the craft of paper making has declined. However, its reputation for weaving has not declined

and handloom weaving is carried on by about 350 households on 400 looms. About 200 cotton sarees are produced per day at Gokak.

The Gokak falls which attract a large number of tourists are 4 miles from the town on the way to Gokak Road. Tourists visit the spot during August and September. Close to the falls is situated the Gokak Mill, a cotton spinning factory, established in 1887, employing about 5,000 persons. About 300 persons of Gokak are employed in the mill. The Karnatak Health Institute at Ghataprabha is about 8 miles from Gokak.

History of the Craft

The craft of toys making at Gokak is about 200 years old. The Bombay Gazetteer for 1884 refers to Jingars as follows¹. "They are said to have been brought into Belgaum about a century and a half ago by one Bhimrav son of Anandappa the headman of Kagal in Kholapur. Bhimrav's grandson Bapu Jingar, a skillful painter and wooden toy maker was patronised by a chief of Kholapur about eighty years ago. He lived for ten years in the service of the prince and after his patron died he went to Gokak and lived among his relations, maintaining himself by making wooden toys, palanquins and the Abdgirs or ornamental umbrellas which are carried over native chiefs. It was he who taught his relations how to make wooden toys."

According to this report the craft is practised by Jingars since the last decade of eighteenth century.

Another village of Belgaum district where the craft was carried on was Deshanur. Deshanur is 1½ miles from Deshanur cross, which is about 18 miles from Belgaum on Belgaum-Gokak road. The craft was carried on by a single Jingar about fifty years ago. Gopalappa was the last Jingar on whose demise the craft came to an end at

¹. Gazetteer of the Bombay Presidency, Volume XXI, Belgaum, 1884, Page 350.

Deshanur. Gopalappa had two daughters and an insane son. The daughters were married and the son passed away. As such there was none to continue the craft at Deshanur. Some of the articles made by Gopalappa are still preserved by a few households at Deshanur.

Jingars

The craft of toy making is carried on as a hereditary occupation by persons belonging to the community of Jingars. All the households of Jingars are located in one street in the town, namely Guruvarepet, which got its name from the day on which the weekly market is held here. There are 6 households of Jingars at Gokak. According to the report of an old man of the community there were about 20 households of Jingars at Gokak in the first decade of this century. He reported that some of them became victims to the plague during 1911. To confirm his statement the death register maintained at the Municipal Office was referred to. Death of 720 persons from plague has been recorded during 1911 and this lends some credence to the statement.

Jingars are found in the districts of Belgaum, Raichur and Dharwar. It is reported that the word Jingar is derived from the Persian 'Jin' a saddle, and the traditional occupation of the caste was saddle making. The native saddle was made with cloth, felt, cotton, rope etc., and involved a knowledge of handicraft. It is said that they belong to the stock of Somavamsha Kshatriyas. They attained great importance as saddle makers when there was demand for saddlery by the armed forces of the native rulers. With the decay of the occupation of saddlery they have been forced to take up the making of wooden toys, painting of temples and such other occupations.

The surnames of the Jingars at Gokak are Somavamshi, Sunvane and Chavan. But the surnames Somavamshi and Sunvane have changed to Chitari as they were so addressed by the local persons to indicate that they were engaged in the craft of painted toys.

The surnames are exogamous and attention is paid to the surnames while regulating marriages. Jingars at Gokak are not aware of their *Gothra* or clan to which they belong. A member of this community can marry his sister's daughter, or his

father's sister's daughter or his mother's brother's daughter. The housewives of the Jingars at Gokak have come from Dharwar, Nargund, Rabkavi, Jath and Hubli. Jingars in those places engage themselves in carpentry, painting and in such other allied occupations.

The family deity of the Jingars at Gokak is Jyothirlinga at Kedaralinga near Kholapur. They observe the feasts of Yugadi, Dasara, Deepavali, Gokulastami etc. They take oath to Yellamma. They are habituated to bathe on all days and wear the sacred thread.

Widow remarriage is not permitted among Jingars, but this restriction is not applicable to a widower. Polygamy was in vogue in olden days, but it has gone out of vogue now. The thread ceremony for boys is celebrated at the age of 8-10. Local Brahmins officiate as their priests. The dead are cremated and the dead bodies of very young persons and children are buried.

As a class Jingars are non-vegetarians. Persons taking intoxicants among them are not held in contempt. However, after the advent of prohibition, Jingars at Gokak have forcibly given up this habit.

For about 3 months in a year the Jingars are busy in making images of Ganesha out of clay. According to Hindu custom the image of Ganesha is worshipped on the Chaturthi day of Bhadrapada month of every year and later immersed in a tank or well. Every year a fresh image is needed for worship. This has given scope to Jingars to make the images every year.

The clay used by the Jingars of Gokak is of a special type known as *Shede*. *Shede* is available at Javalgeri about 15 miles from Gokak. *Shede* is grey solid pieces and when left in water for 8-10 hours becomes dough. Cotton is mixed to the dough and the mixture beaten with a mallet till cotton is thoroughly mixed with clay. The mixed dough is kneaded well with hands. Images of Ganesha are made by hands as well as by moulds. The pieces made by hands cost Rs. 2 to Rs. 5 and those made by using moulds cost Rs. 0.25 to Rs. 0.75. The images made at Gokak by these craftsmen are sold at Gokak and also in the villages round about. This is a seasonal occupation to the Jingars and they are assisted by their ladies in the preparation of raw materials.

Two Groups of Craftsmen

The craftsmen are classified into two groups viz., those who are carrying on the craft as a hereditary occupation and the new entrants. Till the end of last decade the craft was carried on by the Jingars alone. Since 1956 onwards it is carried on by other persons who are trained in the craft. The hereditary craftsmen work independently in their household premises. But the new entrants work in a common place as employees of the production unit of the co-operative society on piece work basis.

Households of Hereditary Craftsmen

There are 6 Jingar households at Gokak and the population being 30, with 7 males, 9 females and 14 children who are below 14 years of age. The 7 males are gainfully employed and are engaged in making palanquins, toys etc. Of the 6 households, one consists of a woman only. She makes images of Ganesha out of clay. Being alone she works at them for about 6 months in the year. She maintains herself solely from the income of this occupation. Her average monthly income is Rs. 25. The gainfully employed persons of the other 5 households make toys and a variety of articles like images of Gowri which is worshipped on the day of Thadige in Chaitra, images of Lakshmi for pooja on Deepavali day, animal heads like ram, deer with their natural horns, masks of human and animal heads used by persons on occasions like Moharrum, village festivals and other gatherings. They make palanquins used in the temples during festive occasions. They paint the temples and other buildings. The Jingars are popularly known as toy makers but they derive their income from these odd jobs. They charge Rs. 200-300 to make a palanquin and each household will be having on hand one or two orders for making palanquins. For three months

of the year they are busily engaged in making of clay Ganeshas. They invariably undertake orders to paint temples. Their income derived from toy making does not exceed 40 per cent of the total income from all sources. They are hardly engaged in making toys for about 4 months in a year. Toy making cannot be regarded as a principal occupation of Jingars whether from the point of view of income or from the point of view of time involved.

Households of Non-hereditary Craftsmen

The population of the households of the 14 non-hereditary craftsmen is 84 made up of 32 males, 25 females and 27 children. Of the 32 males, 31 are gainfully employed. 14 are toy makers who work on piece wages in the production unit of the co-operative society and 17 others are engaged as tailors, carpenters, shop assistants, clerks and agricultural labourers or Tur dal pounders. Of the 27 children, 8 are students and others are still very young. On an average, one from each household has toy making as an occupation. But if the household is taken as the unit for consideration, seven have toy making as the principal occupation and the seven others are carrying it on as a subsidiary occupation.

Establishments

There are 6 establishments in all, engaged in the craft of toy making. Five are inherited proprietary establishments and one is started on a co-operative basis. Work in the proprietary establishments is carried on purely by household labour and in their household premises. Artisans of the production unit of the co-operative society work as labourers in the premises of the building of the co-operative society on piece work basis. The wage rate is fixed for each type of article made by the artisans and a list indicating the wage per article is given in Appendix II.

CHAPTER II

TECHNIQUES OF PRODUCTION AND ARTICLES PRODUCED

Raw Materials

The chief raw material used in the craft of toy making at Gokak is *Hariwala* wood. Other materials used as essential to the craft are *Polkhi* and *Hale* woods, *Banajurige* twigs, bamboo, alum, gum, *Sunaburule*, chalk powder, *Balayi* (soapstone), *Safed* (zinc white¹), drawing paper, carpenter's glue, steel wire, yarn, *Kalnaru*, oils, paints and colour powders.

Hariwala wood (Erithrana indica)

This wood is available in all the parts of India. Because of its invariable and extensive use in the making of toys at Gokak, it is not found in the areas round about 25 miles radius of Gokak. It is planted in the coffee plantation as a shade bearing tree to coffee plants and in betel vines. After driage the weight of the wood gets reduced by 75 per cent and the dried wood is very light. *Hariwala* is a medium sized tree. Its bark is greenish yellow, smooth and shining. However, this wood is not suitable for turning works.

The craftsmen buy the trees from private individuals on whose land the trees grow. It is stated that formerly land owners used to give it free to Jingars as the tree could not be used for firewood because it emitted too much of smoke and soot when burnt. Now the price of a standing tree is Rs. 25 to Rs. 30. It is transported to Gokak in bullock carts. Two trees can be transported in a cart at a time. The hire charges for a cart come to Rs. 15. The tree is left in the sun for about an year for seasoning. The weight of a tree just cut would be about 10 maunds and after driage it would be 2.4 maunds.

Polkhi Wood (Givotia rottleri formis)

This wood, superior to *Hariwala* wood, is used in the making of human and animal figures. The tree of *Polkhi* is found in the forests round

about Gokak. The craftsmen bring it usually from Sutaghatti forest by paying a licence fee of Rs. 0.25 per tree to the forest department. It is brought to Gokak by bullock cart and the hire charges for transportation is Rs. 10.

Hale Wood (Wrightia tinctoria)

This wood is also found in the forests round about Gokak. It is sold by weight at the depot in Gokak run by the Forest Department and the price is Rs. 1.12 per maund of 82½ lbs. This wood is suitable for turning on lathes and is extensively used for manufacture of lacquerware. In the craft of toy making this wood is used for making beaks, legs of birds and like parts of animals.

Banajurige

It is a bushy plant which grows widely in the hill near Gokak. Wood cutters bring the twigs of this plant in headloads and sell them to the craftsmen. The cost per head load of the twigs is Rs. 1.50. *Banajurige* twigs are used for peduncles and pedicels of fruits.

Bamboo

It is sold by the local dealers and 2 pieces of full length are sold per rupee. The thin pieces with the outer cover of bamboo are used for scale leaves of onion and garlic. The splinters of bamboo are used as pegs to facilitate painting of articles.

Alum

Alum is used for making fake grapes. This is got from local dealers and the cost per lb. is Rs. 0.37.

Gum

Solid gum is essential in the preparation of liquid gum. It is sold in the local shops and the cost per lb. is Rs. 2.00.

Sunaburule

Sunaburule is a type of brittle stone available on the bank of streams and rivulets of the locality. Pebbles of *Sunaburule* are collected by the craftsmen themselves. This is needed for preparing *Khadi*.

Chalk

This raw material with liquid gum is applied on the pieces before painting. It is sold in the local shops at Rs. 0.50 per lb.

Soapstone

It is locally called *Balayi*. This material is used as a lustrous agent. Articles which need no glaze of varnish are treated with the paste of soapstone. It is sold in local shops by weight at Rs. 0.70 per seer of 80 tolas.

Zinc white

This material is called *Safed*. This is used for the same purpose of making the painted piece lucid. Articles which are to be treated with varnish for glaze are treated with zinc white and soapstone cannot be used for such pieces as varnish on soapstone darkens the article. Zinc white is sold in powder form at Rs. 2.50 per lb.

Drawing paper

This is very essential in making fake leaves on fruit peduncles. The cost of 24 sheets of drawing paper is Rs. 3.12 in the locality.

Glue

It is known as *Vajra* or *Saras*. It is used as an adhesive in gluing wooden pieces and to fill up creases and such other defects on wood. Its cost per lb. is Rs. 1.00.

Steel wire

Steel wires are assential components, particularly in giving natural shape to leaves. Steel wire of 16 gauge which cost Rs. 2.00 per lb. is used for pedicels of fake fruits and vegetables. Wire of 20 gauge which cost Rs. 1.50 per lb. is used for midrib and petiole of leaves.

Yarn

Weaving yarn of 20 counts is used for tying the steel pedicel with peduncle and also the yarn is wound round the steel wire which constitute

petioles as bare wire cannot hold paint. The cost per *Gudhie* or skein of yarn is Rs. 1.00.

Kalnaru

Kalnaru is a fibre available in the neighbouring villages of Gokak, at Rs. 3.00 per seer of 80 tolas. This fibre is used for root hairs of fake onion, garlic and for coir on cocoanuts.

Oils

Kerosene oil and cocoanut oil are mixed, poured into a small cylindrical tin which is sealed by soldering. This tin with oils is kept inside the fake cocoanut, which when shaken makes a sound as made by the milk in a real cocoanut.

Colour Powders

Synthetic colour powders and crystals are indispensable in the preparation of paints. The powders and crystals are available in the local shops. The colours used in the preparation of paints are:

Rose (*Gulabi*)
Lemon chrome (*Pivdi*)
Middle chrome (*Gadad pivdi*)
Orange chrome (*Sindhri pivdi*)
Magenta (*Koppi*)
Chinese blue (*Khada nili*)
Coronation red (*Inglik*)

Rose is sold as a powder in tin of 310 grams and the cost per tin is Rs. 2.00. Lemon chrome and middle chrome are powders sold in cartons of 410 grams and the cost per carton is Rs. 1.37. The cost per carton of 200 grams of magenta crystals is Rs. 12.00 and that for chinese blue is Rs. 2.37 for 150 grams. A tin of 454 grams of coronation red costs Rs. 2.62.

Tools (Plate 1)

Tools used in the craft of toy making at Gokak are mostly those produced in the factory. The artisans purchase them either from local dealers or from dealers at Belgaum. Hand tools alone are used by the craftsmen. The tools they use either cut or abrade. Cutting is done with saws, chisels, adze, planes, drills and abrading with files (and also sandpaper). Besides these cutting and abrading tools, vice, pincers, pliers, anvil, oilstone, ruler, try square, marking gauge, enamel bowls, brushes are also used.

1. A fine white powder (zinc oxide) used as a non-poisonous, permanent pigment to form a base in paint manufacture.

Saw

Handsaw 30 inches long, tenon saw 14 inches long and panel saw 18 inches long are used. Hack saw is used for cutting steel wires and such other materials. Handsaw is used for general purpose and for fine cutting either a panel saw or a tenon saw is used.

Chisels

Firmer chisels of widths $\frac{1}{8}$ to 2 inches are used by the craftsmen for chopping out, paring and such other work.

Plane

This tool is used for touching down and smoothing the surface of wood by paring, for removing shavings of uniform thickness from it. The jack plane used by the craftsmen consists of a firmer chisel to which a back iron is attached and fixed securely in a wood plane.

Adze

This is a cutting tool having an arched blade at right angles to the handle and is useful in removing the edges of cut billets.

Hand Drill

This is used for making holes in the wood. The bits used are several types so as to enable making the type of hole which each situation may warrant in the course of making the article.

Rasps and Files

The bulk of surplus wood being removed with adze and chisels, rasps and files are used for further rounding in order to bring the wood to shape. The rasp is coarser than the file and is used in the preliminary stages. The types of files used by the craftsmen are round, triangular and flat.

Vice

This is an instrument with steel jaws which holds in a firm grip the wooden piece while it is being worked.

Pincers

This is a tool consisting of two arms meant for holding things lightly and for pulling out nails.

Pliers

This is also a kind of pincers for holding or bending things.

Anvil

Anvil is a heavy block of iron, needed for shaping of steel wire and such other purposes.

Oilstone

This is a smooth surfaced stone used to sharpen the edge of the chisels.

Ruler

Rulers made of wood graduated with inches and fractions of an inch are used by the craftsmen.

Try square

This is a precision tool used to determine and mark square corners.

Hammer

Hammer is needed for driving nails. The craftsmen use Warrington pattern hammers of $\frac{1}{4}$ lb. to 1 lb.

Enamel bowls

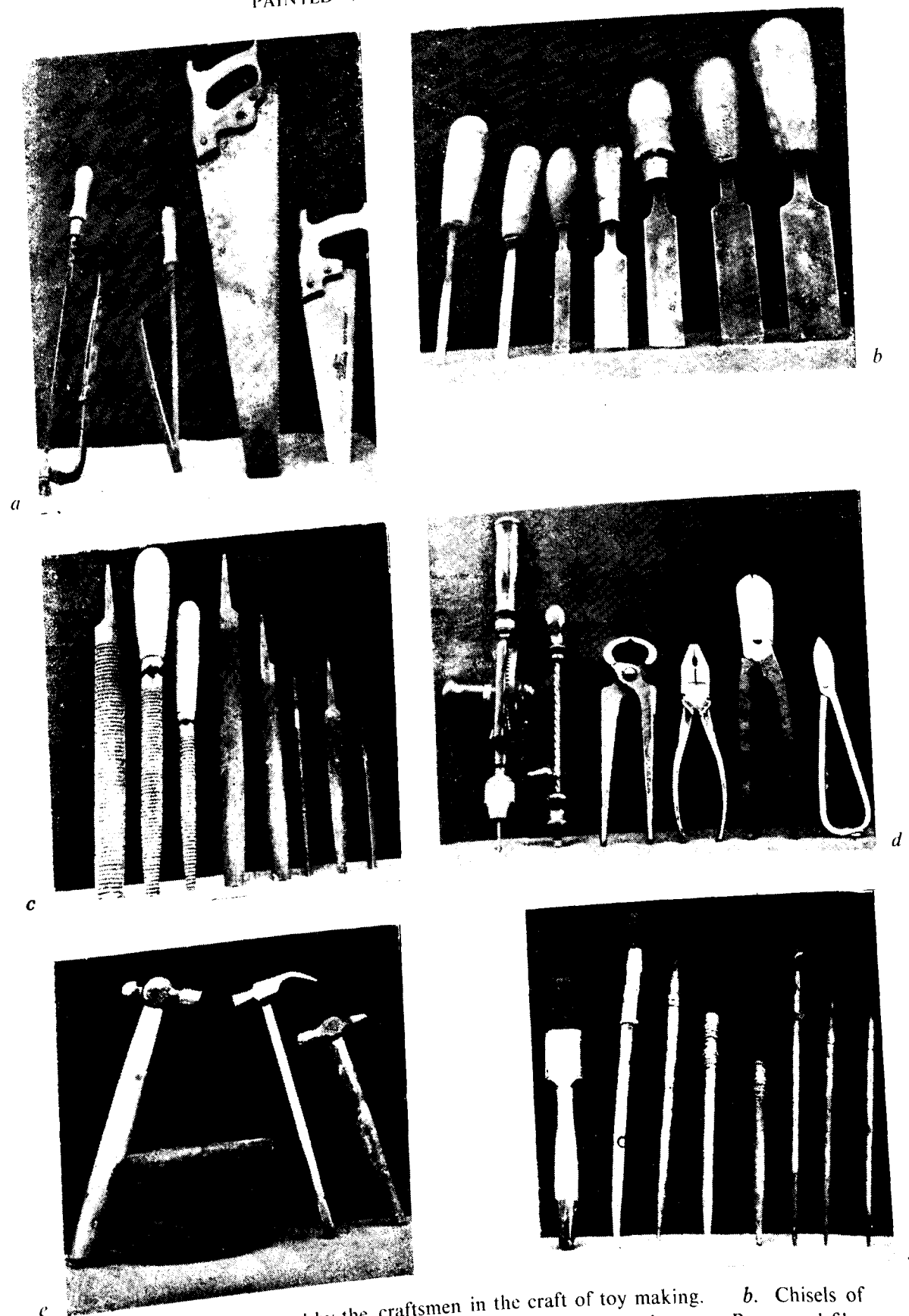
These are receptacles for mixing paints.

Brushes

Brushes are necessary for applying paint. The craftsmen use both factory made and home made brushes.

The cost of the tools are detailed below:

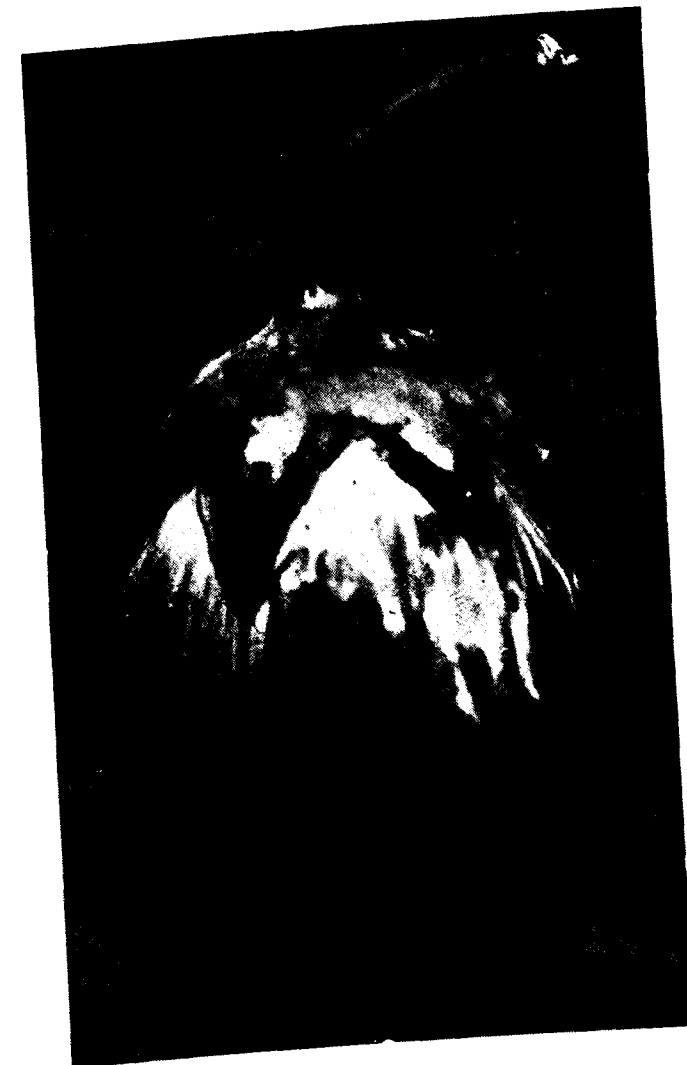
	Rs.
1. Saw	5.00 to 30.00
2. Chisels	1.25 to 4.00
3. Plane	5.00 to 27.00
4. Adze	8.50
5. Hand drill (and bits)	20.00
6. Rasps	3.00 to 8.00
7. Files	2.00 to 7.00
8. Vice	35.00
9. Pincers	3.00
10. Pliers	3.00
11. Anvil	5.00
12. Oilstone	6.00
13. Ruler	2.25
14. Try square	4.00
15. Hammer	2.00 to 3.00
16. Enamel bowls	1.00 to 2.50
17. Brushes	0.50 to 2.00



a. Varieties of saws used by the craftsmen in the craft of toy making. b. Chisels of various types and sizes used for removing the superfluous wood. c. Rasps and files used for smoothing the surface of the wood. d. Use of tools like drill, pincers, metal cutters is an indispensable necessity. e. Hammers and anvil are also essential in this craft. f. Brushes, both factory made and home used for colouring the toys.



Clever handling of the brush.



A lump of wood has assumed the natural shape and colour of a brinjal in the deft hands of a skilled artisan.



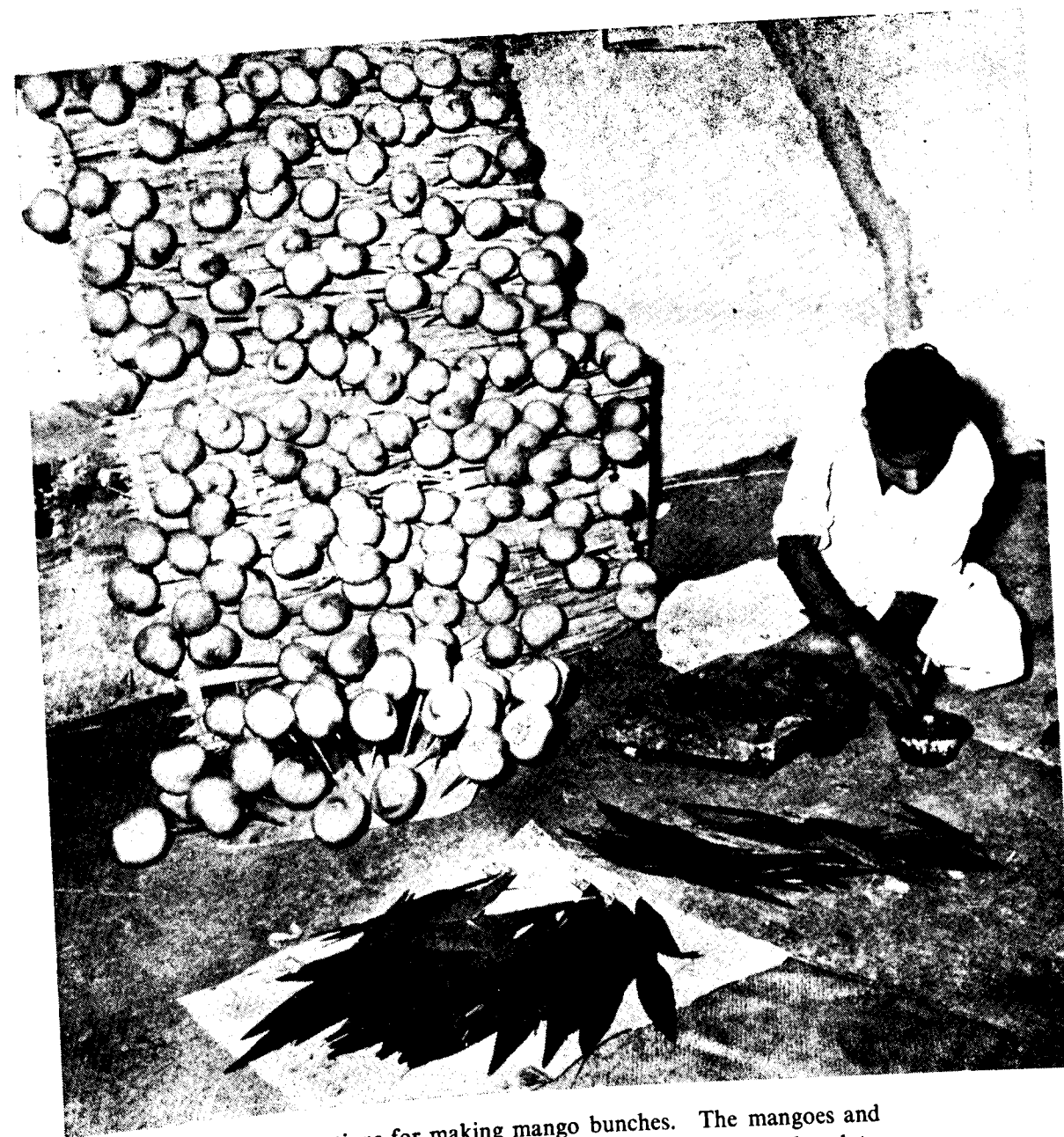
Two craftsmen at work giving final touches to the fake brinjals.



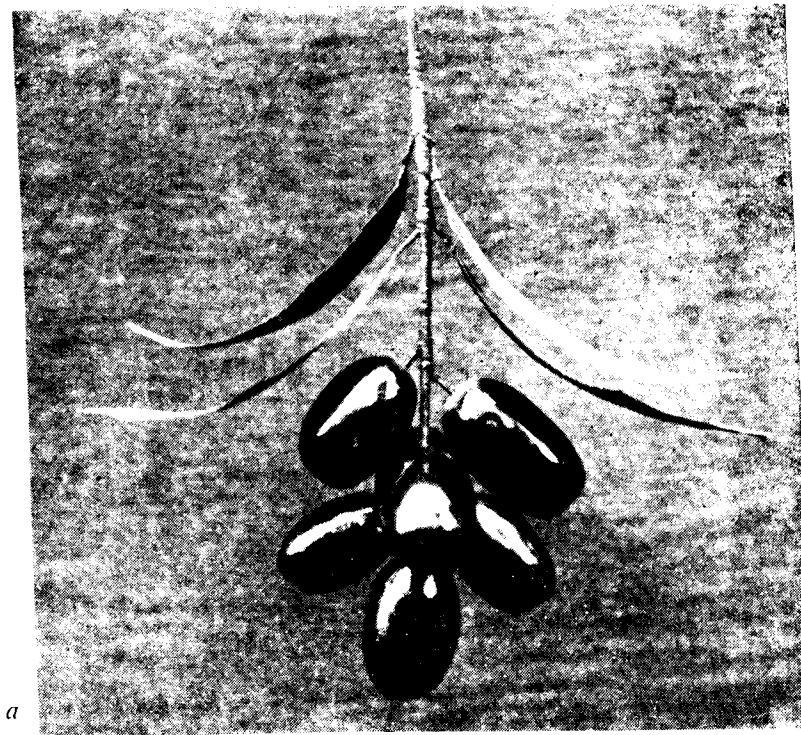
Tamarind pods in the making.



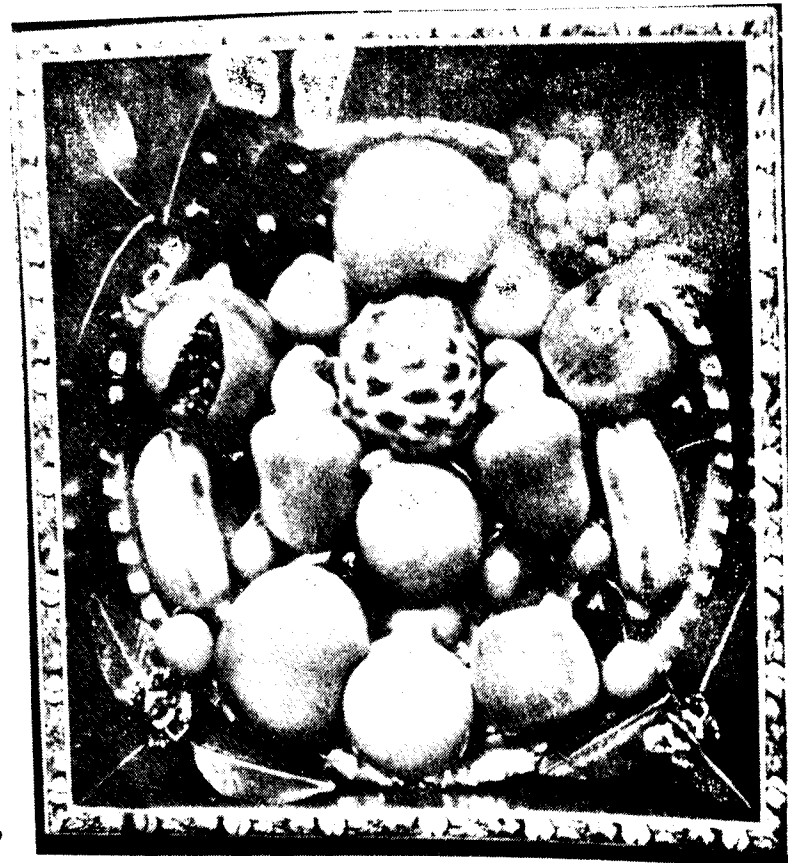
Making bunches of pomegranates.



Preparations for making mango bunches. The mangoes and leaves to be attached to the bunches are seen in the plate.

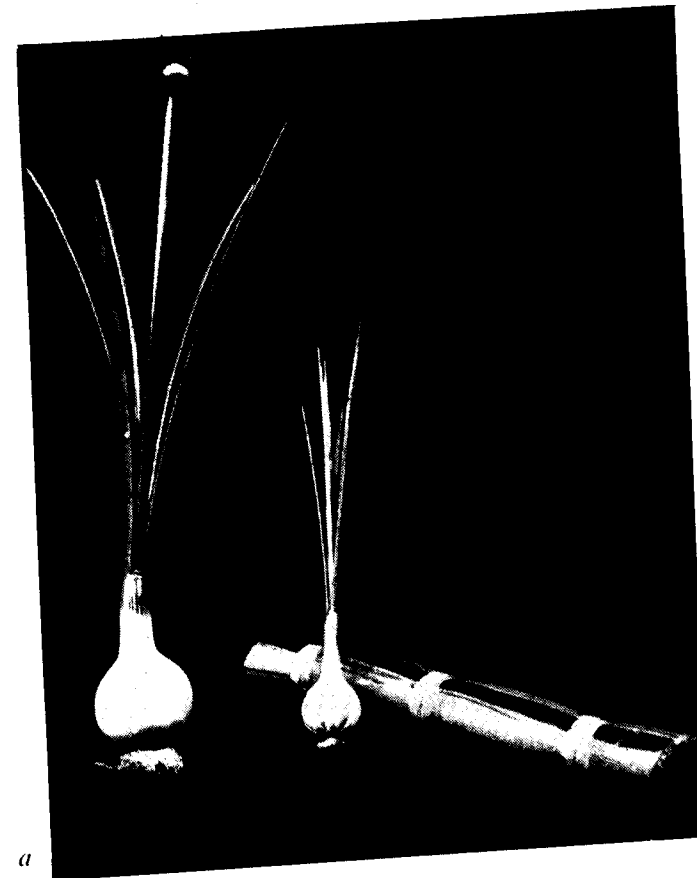


a



b

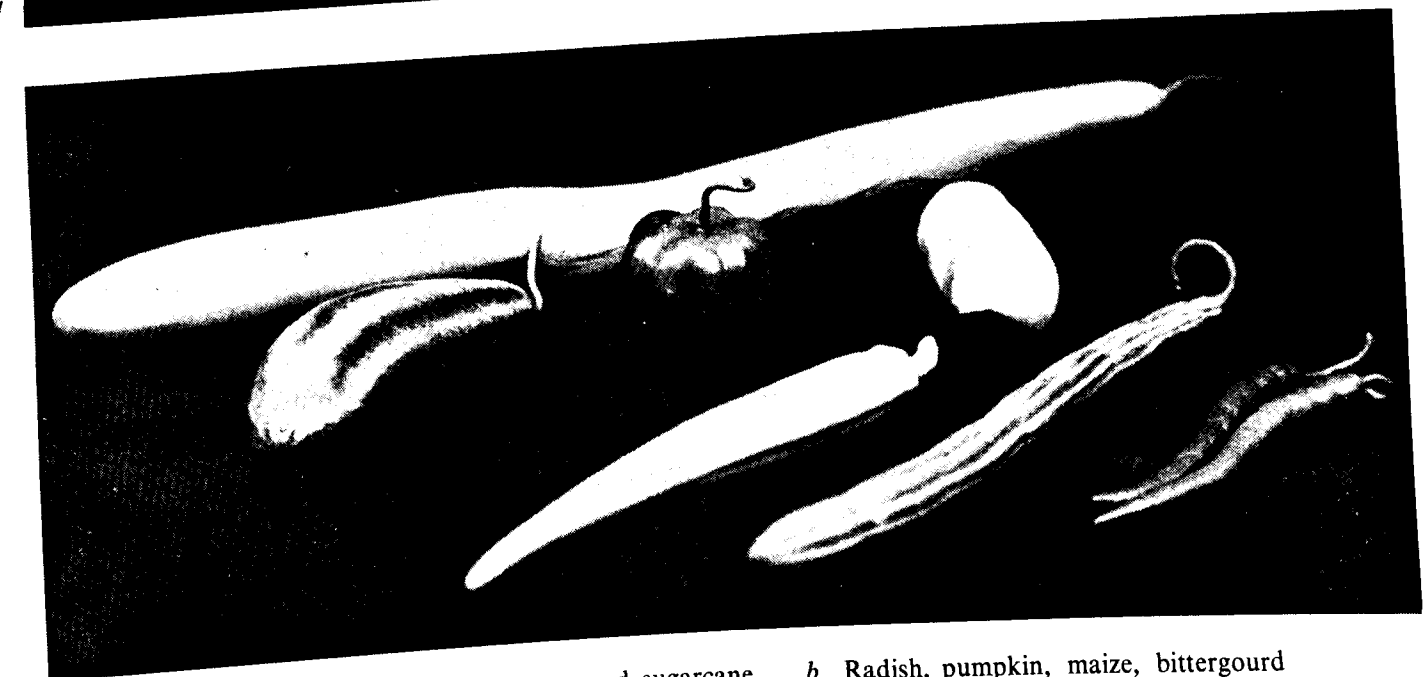
a. Jamboo bunch. b. Fruit-box containing a tray of assorted fruits.



a



b



c

a. Onion, garlic with scale leaves and sugarcane. b. Radish, pumpkin, maize, bittergourd and gourd. c. Snake gourd, cucumber, capsicum, lady's finger, drumstick and green chillies.

Techniques of Production

The production process of toys can be explained in nine stages of work:

1. Preparation of liquid gum.
2. Preparation of *Khadi*.
3. Preparation of chalk dough.
4. Preparation of paints.
5. Preparation of leaves, pedicels and peduncles.
6. Reducing the wood to shape.
7. Application of *Khadi*.
8. Application of paints.
9. Finishing.

1. Preparation of Liquid Gum

Solid gum is dissolved in water. The solution is filtered with a piece of thin cloth. The craftsmen preserve liquid gum for ready use to serve as a medium for the preparation of paints.

2. Preparation of *Khadi*

Pebbles of *Sunaburule* are crushed to small pieces and ground into powder. The powder is sieved by means of a thin piece of cloth. A paste is made of this fine powder with water. This paste is mixed well with liquid gum in the proportion 3 : 1 and the mixture is filtered. This product is known as *Khadi*. This viscous liquid is used to give coatings to the outer smooth surface of the wood.

3. Preparation of Chalk Dough

A dough of chalk powder is made in water and the dough is mixed with liquid gum in the proportion 3 : 1. This solution is filtered by means of cloth. The chalk dough is applied on the coating of *Khadi* preceding the application of paints.

4. Preparation of Paints

Paints are prepared by the craftsmen themselves from synthetic colour powders and crystals. These powders and crystals constitute the pigment of paints whereas liquid gum constitutes the medium. The powdered pigment is dissolved in liquid gum in an enamel bowl.

A paste is made out of soapstone by rubbing it with a little water on a whetstone. This paste or an emulsion of zinc white in liquid gum is added to the prepared paint before use.

Mixing of one of these lustrous agents to the paint helps give the articles the requisite gloss in finish. Zinc white is used when the application of varnish after painting is required and the soap stone when the application of varnish is not required.

After the mixing of the lustrous agent, the paint is tried on a test piece for the perfection of it blending which the experienced eye of the craftsmen is able to readily detect. The craftsmen are adepts in the blending of colours.

5. Preparation of Leaves, Pedicels and Peduncle

Leaves resembling the natural ones are cut out from sheets of drawing paper. Green paint is applied over the cut piece with a brush and allowed to dry. Thin steel wire is placed in the position of the mid-rib and a narrow piece of paper is pasted over it so as to firmly keep fixed the wire in the position. Yarn smeared with gum is wound round the base of the wire to represent the stalk which again is mounted on peduncles by tying some of them together by yarn smeared with gum. A fine coating of green paint is applied at the joints.

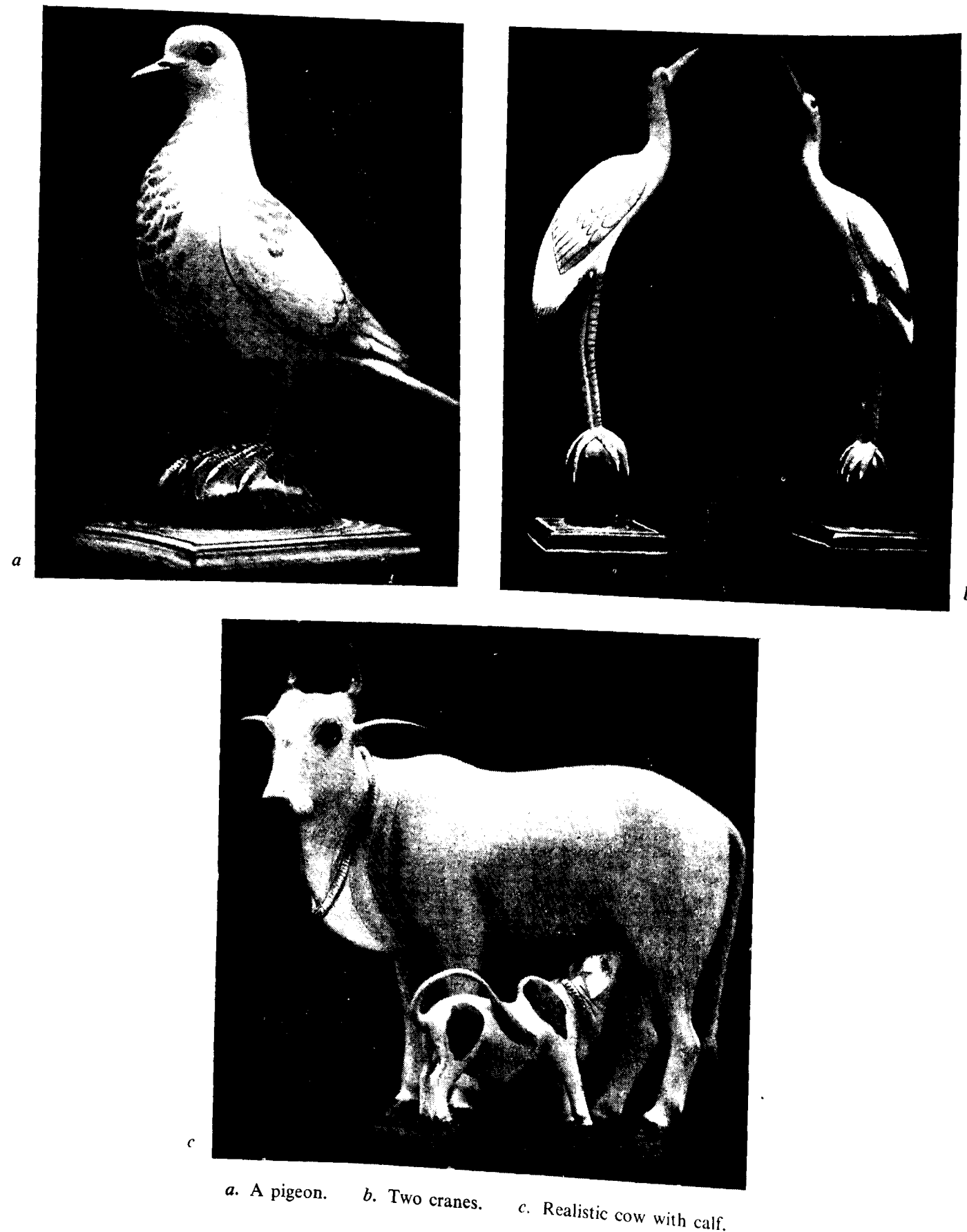
Banajurige twig is used in making peduncle. The twigs of *Banajurige* are peeled off and are smoothed by means of files and sandpaper of grades 1 and 0. After smoothing, green paint is applied with the help of a brush. When two pedicels are to be made a steel wire is fastened to the twig by means of yarn in such a manner that it presents the appearance of a peduncle with two pedicels. The ends of pedicels are inserted into the holes made in the fake fruits. The entire piece would thus constitute a bunch of two fruits.

The first five stages are only preparatory and the regular work starts from the sixth stage.

6. Reducing the Wood to Shape

Seasoned *Hariwala* wood is cut to pieces of required size by means of a handsaw. The edges of the cut pieces are chiselled off. The pieces are brought to the shape of the intended fruit or vegetable by removing the superfluous wood with the aid of rasp and further smoothing it by a file.

The defects in the wood are covered with glue. Pieces of kraft paper are pasted on the glued patches, without which *Khadi* coatings will not properly stick.



a. A pigeon. b. Two cranes. c. Realistic cow with calf.

A hole is made in the shaped piece with an awl at the stalk end into which is inserted a bamboo splinter to serve as a handle and facilitate the application of chemicals and paints. The craftsman holds the handle in his left hand and the brush in his right hand while applying chemicals and paints to the pieces (Plate 2).

7. Application of Khadi

Khadi is applied on the piece 4 times, sufficient time being allowed for it to dry well after each application. After four coatings of *Khadi* the piece is again smoothened by country files. (On a round wooden piece about half a foot in length glue is smeared and a handful of sand is spread over to stick to the glue. This makes a rough surface as that of a sandpaper.) The piece is further smoothened with sandpaper of grades 1 and 0.

The ground being well prepared the piece is coated with chalk dough twice, each time after sufficient drying. Chalk dough acts as a good base for painting.

The process upto this stage is common to all types of articles and thereafter they require different treatment depending on the characteristics of their natural prototype.

8. Application of Paints

Four coatings of paints prepared as explained above, are given. Paints are applied with brushes. The needed light and shade effects are also brought out quite well.

9. Finishing

On completion of painting, a thin coating of varnish is applied on the piece. When a shading effect is to be achieved the particular portion is

rubbed with cotton containing the colour powder used for the piece.

The work relating to single pieces ends with this stage. For making bunches, the fake fruits are attached to the pedicels and are tied to the peduncle to which fake leaves are also tied. (Plates 4 to 7).

Articles Produced (Plates 3 & 8 to 10)

Articles made by the hereditary craftsmen during the last century were human and animal figures, birds, vegetables and fruits. In the Bombay Gazetteer is given a list of 144 items produced by the Jingars. The articles enumerated are mostly human figures at work depending upon their caste and occupations. The list is reproduced in Appendix III for the delectation of those interested in such information.

Out of these 144 articles (Appendix III), only 50 continue to be made even now and the human figures at work are not in vogue at present. Articles made at present are bunches and single fruits of mango, guava, custard apple, *ramphal*, pomegranate, cashewnut, jamboo, *jujbee*, apple, plantains, orange, *mosambi*, pineapple, watermelon, *bhamper*, lemon, *Karabuja*, papaya, fig, and wood apple. The other items of manufacture are tamarind pods *gajalimbe*, cocoanut, sugarcane, brinjal, gourd, radish, snake gourd, bitter gourd, drumstick, onion, garlic, pumpkin, cucumber, sweet potato, lady's finger, capsicum, chillies, carrot, quadrupeds and birds include cow with calf, parrot, pigeon, crane, cock and cobra. Price of each of the articles prevailed during the period of survey has been given in Appendix II.

Description of 42 articles with the colours used in the making of paints for the respective articles, lustrous agents added to the paint and the colours employed for shading are given below:

Sl. No.	Article	Description	Colours used in the making of paints	Lustrous agents added to paints	Colours employed for shading
1	2	3	4	5	6
1.	Mango bunch	2 fruits of equal size at the end of 2 pedicels of a peduncle consisting of 3 leaves.	Lemon chrome and orange chrome	Zinc white	Coronation red and Green
2.	Grapes bunch	(i) 25 fruits at the end of 25 pedicels of a peduncle consisting of 3 leaves. (ii) 10 fruits at the end of 10 pedicels of a peduncle consisting of 1 leaf.	Lemon chrome and chinese blue "	— —	— —
3.	Guava bunch	2 fruits (one ripe and another unripe) at the end of 2 pedicels of a peduncle consisting of 4 leaves.	Lemon chrome and chinese blue	Soapstone	—
4.	Custard apple	1 fruit at the end of a pedicel consisting of 4 leaves.	Lemon chrome and chinese blue	Zinc white	—
5.	<i>Ramphal</i>	1 fruit at the end of a pedicel consisting of 2 leaves.	Orange chrome	Zinc white	Coronation red.
6.	Pomegranate bunch	1 fruit at the end of a pedicel and 1 unripe fruit at the end of another pedicel of a peduncle consisting of 18 leaves.	Lemon chrome	Zinc white	Coronation red.
7.	Cashewnut fruit bunch	2 fruits of equal size at the end of 2 pedicels of a peduncle consisting of 3 leaves.	Lemon chrome and orange chrome	Soapstone	Coronation red.
8.	Jamboo bunch (Plate 7-a)	7 fruits at the end of 7 pedicels of a peduncle consisting of 4 leaves.	Magenta	Soapstone	Soot
9.	<i>Jujbee</i> bunch	7 fruits at the end of 7 pedicels of a peduncle consisting of 7 leaves.	Lemon chrome	Soapstone	Coronation red.
10.	Apple	1 fruit at the end of a pedicel of a peduncle consisting of 2 leaves.	Lemon chrome	Soapstone	Coronation red and Green
11.	Plantains bunch	A bunch consisting of 5 plantains.	Lemon chrome	Soapstone	Green, soot and magenta.
12.	Orange	Single fruit	Orange chrome	Zinc white	Green
13.	<i>Mosambi</i>	Single fruit	Lemon chrome	Zinc white	Green
14.	Pineapple	Single fruit	Lemon chrome and orange chrome	Soapstone	—
15.	Water melon	2 pieces: a fruit with a cut.	Chinese blue and lemon chrome	Soapstone	Green
16.	<i>Bhamper</i>	1 fruit at the end of a peduncle consisting of 3 leaves.	Lemon chrome	Zinc white	—

Sl. No.	Articles (Concl.)	Description	Colours used in the making of paints	Lustrous agents added to paints	Colours employed for shading
1	2	3	4	5	6
17.	Lemon bunch	2 fruits at the end of 2 pedicels of a peduncle consisting of 3 leaves.	Lemon chrome	Zinc white	—
18.	Karabuja	Single fruit	Lemon chrome	Zinc white	Green
19.	Papaya	Single fruit	Lemon chrome	Zinc white	Green
20.	Fig	2 fruits at the end of 2 pedicels of a peduncle without leaves.	Lemon chrome and chinese blue.	Zinc white	Green
21.	Wood apple	1 fruit at the end of a peduncle consisting of 7 leaves.	Lemon chrome and chinese blue	Zinc white	Green
22.	Tamarind pod	2 pods of tamarind at the end of 2 pedicels of a peduncle consisting of many leaves.	Lemon chrome and chinese blue	Soapstone	—
23.	Gajalimbe	1 fruit at the end of a peduncle consisting of 3 leaves.	Lemon chrome and chinese blue	Zinc white	—
24.	Cocoanut	Single	Sonagiyami (a colour powder)	—	—
25.	Brinjal	Single with pedicel	Magenta	Zinc white	Black
26.	Lugffa	Single	Lemon chrome and chinese blue	Zinc white	—
27.	Snake gourd	"	"	Soapstone	—
28.	Drum stick	"	"	"	—
29.	Lady's finger	"	"	"	—
30.	Chillies	"	"	"	—
31.	Capsicum	"	"	"	—
32.	Pumpkin	"	"	"	—
33.	Cucumber	"	Orange chrome	"	—
34.	Sweet potato	"	"	"	—
35.	Carrot	"	Magenta	"	—
36.	Radish	"	Orange chrome	"	—
37.	Onion	Single with scale leaves	—	"	—
38.	Garlic	"	Coronation red	"	—
39.	Maize	"	"	"	—
40.	Sugarcane	Single with corns visible	"	"	—
		A piece of 1 foot with 3 annulus	Lemon chrome, chinese blue and magenta	"	—
41.	Fruit box (Plate 7-b)	A box of 14" square with sides of 6" height. It is closed on all sides, with a glass covering in front with arrangements to hang on the wall. The box contains an aluminium tray of assorted fruits (2 mangoes, 2 guavas, 2 plantains, a bunch of grapes, a bunch of jamboo, 1 custard apple, 1 pomegranate with its pips visible, 2 fruits of cashewnuts, 5 jujbee fruits, 2 figs and 1 apple).			
42.	Vegetable box	A box similar to the fruit box consisting of vegetables in place of fruits. The vegetables in the tray are brinjal, gourd, maize, tamarind pod, radish, bitter gourd, drum stick, onion, garlic, cucumber, sweet potato, lady's finger, capsicum, chillies and carrot.			

CHAPTER III

ECONOMIC AND GENERAL ASPECTS

Cost of Production

The working cost of a few important articles made by the craftsmen is detailed below. The employees of the co-operative society are expected to maintain an account of raw materials used by them in the production of articles. A craftsman makes several pieces at a time. If the articles are of large

dimension the number of pieces would be less and vice versa the smaller articles are made in large numbers. The statements of the quantity and cost of raw materials given hereunder, are arrived at after making a thorough reference of the records maintained by the craftsmen of the co-operative society.

I. Item of manufacture: Pomegranate bunch			
Description: One fruit at the end of a pedicel and one unripe fruit at the end of another pedicel of a peduncle consisting of 18 leaves.			
No. of pieces made: 164			
Cost of raw materials:	Rs.	Rs.	
Hariwala wood	6.25		
Chalk powder	0.30		
Gum	0.80		
Glue	0.20		
Zinc white	1.00		
Steel wire	9.60		
Lemon chrome	2.40		
Chinese blue	0.80		
Coronation red	0.64		
Orange chrome	0.80		
Varnish	4.50		
Others	7.71	35.00	
Cost of raw materials per bunch		0.21	
Wages per bunch		1.37	
Selling price		1.85	
Society's profit		0.27	

II. Item of manufacture: Mosambi			
Description: Single fruit			
No. of pieces made: 25			
Cost of raw materials:	Rs.	Rs.	
Hariwala wood	1.00		
Glue	0.10		
Chalk powder	0.10		
Sandpaper	0.08		
Zinc white	0.25		
Middle chrome	0.40		
Others	1.50	3.43	
Cost of raw material per piece		0.14	
Wage per piece		0.62	
Selling price		1.00	
Society's profit		0.24	

III. Item of manufacture: Ramphal			
Description: One fruit at the end of a pedicel consisting of 2 leaves.			
No. of pieces made: 63			
Cost of raw materials:	Rs.	Rs.	
Hariwala wood	21.25		
Gum	1.20		
Chalk powder	0.22		
Zinc white	1.00		
Drawing paper	0.12		
Sandpaper	0.16		
Lemon chrome	0.80		
Middle chrome	0.96		
Orange chrome	0.40		
Chinese blue	0.16		
Coronation red	0.16		
Others	4.00	30.43	
Cost of raw materials per piece		0.48	
Wage per piece		1.31	
Selling price		2.00	
Society's profit		0.21	

IV. Item of manufacture: Jujbee bunch			
Description: Seven fruits at the end of 7 pedicels of a peduncle consisting of 7 leaves.			
No. of bunches made: 30			
Cost of raw materials:	Rs.	Rs.	
Hariwala wood	4.27		
Chalk powder	0.25		
Zinc white	0.06		
Drawing paper	0.24		
Sandpaper	0.08		
Lemon chrome	0.50	5.40	
Cost of raw materials per bunch		0.18	
Wage per bunch		0.69	
Selling price		1.25	
Society's profit		0.38	

V. Item of manufacture: Mango bunch

Description: Two fruits of equal size at the end of two pedicels of a peduncle consisting of three leaves.

No. of bunches made: 50

Cost of raw materials:	Rs.	Rs.
<i>Hariwala</i> wood	6.25	
Chalk powder	0.20	
Gum	0.60	
Glue	0.20	
Zinc white	1.00	
Drawing paper	0.60	
Sandpaper	0.24	
Steel wire	2.10	
Lemon chrome	1.30	
Coronation red	0.40	
Middle chrome	0.16	
Chinese blue	0.30	
Varnish	4.00	
Others	3.00	20.35
Cost of raw materials per bunch		0.41
Wage per bunch		1.37
Selling price		1.85
Society's profit		0.07

VI. Item of manufacture: Coconut

Description: Single pieces

No. of pieces made: 107

Cost of raw materials:	Rs.	Rs.
<i>Hariwala</i> wood	9.50	
Gum	2.00	
Glue	0.20	
Oil tins	26.90	
Middle chrome	0.40	
Others	6.00	45.00
Cost of raw materials per piece		0.42
Wage per piece		1.31
Selling price		2.25
Society's profit		0.52

VII. Item of manufacture: Plantains bunch

Description: A bunch consisting of 5 plantains

No. of Pieces made: 25

Cost of raw materials:	Rs.	Rs.
<i>Hariwala</i> wood	15.50	
Gum	0.50	
Glue	0.15	
Chalk powder	0.25	
Sandpaper	0.16	
Lemon chrome	0.30	
Middle chrome	0.50	
Chinese blue	0.10	17.46
Cost of raw materials per bunch		0.70
Wage per bunch		2.00
Selling price		3.00
Society's profit		0.30

VIII. Item of manufacture: Custard apple

Description: One fruit at the end of a pedicel consisting of 4 leaves.

No. of pieces made: 56

Cost of raw materials:	Rs.	Rs.
<i>Hariwala</i> wood	5.00	
Gum	1.20	
Chalk powder	0.10	
Glue	0.10	
Zinc white	0.50	
Sandpaper	0.16	
Drawing paper	0.24	
Steel wire	0.80	
Lemon chrome	0.56	
Middle chrome	0.08	
Others	3.26	12.00
Cost of raw materials per piece		0.21
Wage per piece		1.37
Selling price		1.85
Society's profit		0.27

IX. Item of manufacture: Jamboo bunch

Description: Seven fruits at the end of 7 pedicels of a peduncle consisting of 4 leaves.

No. of bunches made: 27

Cost of raw materials:	Rs.	Rs.
<i>Hariwala</i> wood	3.75	
Gum	0.40	
Drawing paper	0.24	
Sandpaper	0.16	
Steel wire	0.54	
Lemon chrome	0.40	
Chinese blue	0.08	
Magenta	0.24	
Varnish	4.50	
Others	3.19	13.50
Cost of raw materials per bunch		0.50
Wage per bunch		1.12
Selling price		1.75
Society's profit		0.13

X. Item of manufacture: Pumpkin

Description: Single pieces

No. of pieces made: 10

Cost of raw materials:	Rs.	Rs.
<i>Hariwala</i> wood	1.75	
Gum	0.40	
Chalk powder	0.10	
Glue	0.10	
Sandpaper	0.08	
Lemon chrome	0.16	
Orange chrome	0.16	
Others	2.25	5.00
Cost of raw materials per piece		0.50
Wage per piece		1.62
Selling price		2.50
Society's profit		0.38

It is clear from the above statements that of the total cost of production the major part consists of wages. The cost of raw materials works out from 13 per cent to 25 per cent and that of wages from 82 per cent to 75 per cent. The margin of profit of the co-operative society is very meagre. It is out of question to cut down the expenses on raw materials. If the selling price is increased the wages will also increase correspondingly. Increase in production to a very tangible extent, if that were possible, seems to be the only way to increase the earnings of the co-operative society.

Capital

Total productive capital invested in the industry is about Rs. 17,385 of which Rs. 2,537 is invested on fixed capital like tools and equipments and Rs. 14,848 is invested on circulating capital. The break downs of the capital investments between the proprietary concerns and the co-operative society are as follows:

	Tools and equipment (Rs.)	Circulating capital (Rs.)	Total (Rs.)
Proprietary concerns	850	2,000	2,850
Co-operative Society	1,687	12,848	14,535
Total	2,537	14,848	17,385

Of the total investment on tools and equipments, 33 per cent is covered by the proprietary concerns and 67 per cent is covered by the co-operative society. Of the circulating capital only 13 per cent is accounted for by the proprietary concerns and 87 per cent is from the co-operative society.

Production

The estimated cost of finished products by all the establishments at Gokak, during 1961-62 was Rs. 12,000.

Marketing

Jingars, the hereditary craftsmen, make articles to order and rarely have with them ready stock of articles for sale. When an order is placed with

them, they receive a small advance from the party concerned. A craftsman usually has on hand several orders at a time, and maintains himself with the amounts of advance received in respect of these orders. He pays very little attention to deliver the finished articles in time. As all the households had this habit of delaying the execution and delivery of articles, the consumers had to wink at it for want of an alternative. The co-operative society gets the articles done by its workers and displays them for ready sale. As the consumers prefer to have articles available for ready purchase, they prefer to make purchase from the society. After the establishment of the co-operative society, the scope for making fake fruits and vegetables has dwindled so far as Jingars are concerned. However, it has not completely disappeared.

Economic Conditions

The hereditary craftsmen are not fully engaged in toy making. They also engage themselves in the making of palanquins, cradles and undertake orders of painting. They make images of Ganesha during the season. The earnings from toy making constitute about 40 per cent of the total earnings.

The monthly income of the single member household is Rs. 25. Two households earn each Rs. 125 a month, each of 2 other households earn Rs. 150 a month and one household earns about Rs. 200 a month.

All the 6 households are living in their own houses. Of these two are provided with electric lights. The constructions are mud walled and roofed with country tiles. No house is provided with tap and latrines. The flooring is of mud smeared with cowdung. Part of the living area is used for storing both raw materials and finished products of their craft. They are hardly in a position to keep the premises clean.

The monthly income of the households of new entrants range from Rs. 60 to Rs. 350 depending on the number of gainfully employed persons in the respective households.

Particulars regarding the caste, household size with sex breakdowns, workers with details of occupations, average monthly income from all sources and percentage of income from toy making to the total income of the household are detailed below:

House- hold No.	Caste	Household Size				No. of workers	Occupational details of workers	Average monthly income from all sources	Percentage of income from toy- making to the total income
		Total	Males	Females	Children				
1	2	3	4	5	6	7	8	9	10
1.	Lingayat	12	3	2	7	2	Toy maker-1, Carpenter-1.	100	60
2.	Lingayat	7	4	2	1	4	Toy maker-1, Shop Assts.-2, Sweet Master-1.	120	50
3.	Panchala (Goldsmith)	2	1	1	..	2	Toy maker-1, Agr. Labourer-1.	65	76
4.	Lingayat	12	4	2	6	3	Toy maker-1, Fret worker-1, Compounder-1.	150	33
5.	Maratha	5	2	2	1	2	Toy maker-1, Agr. Labourer-1.	80	63
6.	Gondali	8	3	3	2	3	Toy maker-1, Peon-1, Carpenter-1,	160	31
7.	Muslim	6	3	1	2	3	Toy maker-1, Clerk-1, Bangle seller-1.	350	14
8.	Lingayat	1	1	..	..	1	Toy maker-1,	60	100
9.	Brahmin	8	2	3	3	2	Toy maker-1, Tailor-1.	110	54
10.	Lingayat	5	2	2	1	3	Toy maker-1, Tur dal pounder-1, Agr. Labourer-1.	120	50
11.	Devanga (Weaver)	8	3	2	3	3	Toy maker-1, Weavers-2.	80	36
12.	Gondali	3	1	2	..	1	Toy maker-1.	60	100
13.	Maratha	3	2	1	..	2	Toy maker-1, Chowkidar-1.	100	30
14.	Maratha	3	1	2	..	2	Toy maker-1, Tailor-1.	80	72

Of the 14 households one is put up in quarters free of rent given to it for services rendered by the members of that household in a temple, 9 are staying in their own houses and 4 are living in rented houses. Only one of the 14 houses is provided with electric lights. None of them are provided with tap and latrine. The structures are

mud walled with roof of country tiles. The flooring is mud smeared with cowdung.

The craftsman households spend nearly 70 per cent of their income on food items, and 30 per cent on consumer goods. The percentage of expenditure on food items has roughly an inverse relationship with the increase in income. So much

so, the relative expenditure on consumer goods other than food items increases with increase in income.

The hereditary craftsmen are not trained in the craft in any institution. Their knowledge of the craft has been handed down in the families from their progenitors. The new entrants are all trained at the Government Lacquerware School, Gokak, under a master craftsman. Unlike the hereditary craftsmen, who are engaged in the craft off and on against special orders, these trained persons are engaged in the making of toys like fake fruits and vegetables throughout the year. Of the 14 new entrants, 7 are engaged in making fret work toys also. Two out of 7, are in this field since 4 years and 5 have taken up this avocation hardly a quarter prior to the survey period. The 5 households have spent Rs. 2,100 towards the investment on fret machine and tools. Fifty per cent to this invest has been given to them as subsidy by the Development Block. They attend to the fret work after their day's work in the co-operative society. This is a new venture of these craftsmen and no inference can be made at this stage.

The hereditary craftsmen work in their own houses and the new entrants in the co-operative society. The space set apart for work in this co-operative society is insufficient for about 14, working together now. The hereditary craftsmen who have to keep stock of raw materials and the finished products, find it difficult to keep their dwellings which are also used as workshop tidy and their house would therefore be usually littered with rubbish.

Co-operative Society

The Chitragar Co-operative Society at Gokak registered on June 28, 1949 originally consisted of members belonging to the communities of Jingars (Chitragars), Badigars (carpenters) and Medars (basket makers). Later on Badigars and Madars left this co-operative society and formed their own co-operative societies. Since then the society named 'The Gokak Chitragar Co-operative Society Ltd.,' and consists of the hereditary Chitragars and trained toy makers.

There are 73 members on the roll, of whom 6 are dead. One has surrendered his shares. Actually there are 67 members of whom 2 are sympathisers. All the persons trained in toy making at the Gokak Lacquerware School have become members of the society. Out of the 67 members, 40 (including the 2 sympathisers) are staying at Gokak and the others are scattered over different villages of Belgaum district. Of these 67 members of the society only 24 are engaged in the craft of toy making. Seventeen of them are at Gokak, 2 are at Inchal, 2 are at Lakshmeswar and one each at Bagevadi, Nagnur and Tallur. However, 7 members who are staying in Gokak are engaged in other occupations, but work in the co-operative society on request when it has to supply articles against a heavy order. They can be deemed to be casual workers of the craft as they cannot even be treated as regular part time workers of the craft.

The value per share is Rs. 5 and the paid up share capital is Rs. 2,985. The following statement shows the financial position of the co-operative society from 1956 to 1962.

Particulars	1956-57 (Rs.)	1957-58 (Rs.)	1958-59 (Rs.)	1959-60 (Rs.)	1960-61 (Rs.)	1961-62 (Rs.)
1. Share capital	1,775	2,320	2,320	2,985	2,985	2,985
2. Reserve fund	98	98	98	98	113	145
3. Working capital	1,938	2,418	2,418	13,418	14,838	14,535
4. Purchase of raw materials	582	1,405	802	1,135	2,011	1,437
5. Sales of finished goods	2,047	2,223	3,087	7,253	10,408	9,309
6. Wages paid	773	801	1,447	3,863	6,445	7,077
7. Profit	157	160	787	1,897	1,687	265

The production unit of the above society commenced working on January 26, 1956. There are 14 members in this unit. They work in a common place set apart in the premises of the Society. A set of tools like chisels, files etc. are given to each worker with a wooden box to keep them. Tools of high price such as vice etc., are to be used as common tools. The raw materials are also supplied by the society. At one time the craftsman makes a particular type of article and the number of pieces that he makes depends on the size of the articles, as this turns out to be a profitable proposition, when he makes articles in large numbers. The wages to be paid for a particular type of article is given in the Appendix II. When a craftsman takes up work of a particular type of article, the wages that he would earn is calculated, and he is paid an advance every Thursday, which is the local shandy day. The advance ranges from Rs. 5 to Rs. 15. This advance is very helpful to the craftsmen for their day-to-day expenditure. When all the pieces are ready, the exact amount of wages is calculated and the craftsman is paid the amount after deducting the advances paid to him.

The affairs of the society are managed by a committee consisting of a chairman and 6 members. A paid manager-cum-salesman attends to work relating to the correspondence and sales, of the co-operative society. An overall picture of the consumption of raw materials, wages paid and the production of the co-operative society during the last three years are given hereunder:

	1959-60 (Rs.)	1960-61 (Rs.)	1961-62 (Rs.)
1. Consumption of raw materials	1,119	1,450	1,386
2. Wages paid	3,863	6,445	7,077
3. Production	4,982	7,895	8,463

There is a steady increase in the production which is clear from the accounts shown above.

The total working capital of the co-operative society is Rs. 14,535. Out of this amount, Rs. 1,687 is invested as fixed capital, the remaining Rs. 12,848 being the circulating capital.

The products of the co-operative society are sold to customers at the society's show-room in Gokak

and supplies are made, particularly to handicraft emporia, against orders. The sales were more during the year 1960-61 as products worth Rs. 5,000 were sent to the United States of America during that period.

The co-operative society has received a loan of Rs. 6,800 from the Government. Rs. 550 had been given towards the share capital which has been paid back. Rs. 6,250 is a loan towards the working capital payable in 10 yearly instalments with an interest of 2.5 per cent per annum. The co-operative society has paid 3 instalments.

In the production of articles the wages of the craftsmen account for more than 75 per cent of the cost of production. Even then the earnings of a craftsman works out hardly to Rs. 2.00 a day and that for a 10 hours working day cannot be deemed to be very satisfactory as compared with the earnings of any other occupation. In the Gokak Mill a labourer with a regular attendance of 26 days gets about Rs. 85 a month. Perhaps the comparatively smaller earnings from the toy making craft constitutes the reason why many of the trained craftsmen, nowadays would prefer some other occupation to toy making. The salesman of the society reported that customers invariably comment on the high prices of the articles. It is noteworthy that the society is getting a meagre profit out of sales. The problem of low wage rate is worrying the craftsmen and such of them as are still occupying themselves with this craft say that they are carrying on this craft for want of a suitable alternative. All the same it would be difficult to suggest an increase of wage rate which in turn would result in higher prices of finished goods.

Training Centre

It was on December 6, 1949 that the 'Lacquerware School' was started at Gokak by the Government of Bombay. (Till the Reorganisation of States on November 1, 1956, Gokak was in the Bombay Presidency.) In this School, training was imparted to candidates in toy making. A local Jingar, who was a master craftsman, was the instructor in this School. The duration of training was 2 years. Between the years 1949 to 1959, in all 59 candidates were trained in 5 batches consisting of 10, 10, 12, 12 and 15 candidates respec-

tively. Training was imparted over a period of two years. For the first batch a stipend of Rs. 25 to local candidates and Rs. 30 to outside candidates were granted. They were reduced to Rs. 20 and Rs. 25 respectively in the case of the candidates of subsequent batches. The Lacquerware School was merged with the Rural Artisan Training

Institute started during 1959 in Gokak. In this Institute training is imparted in lacquerware and the old syllabus relating to toy making has been dropped. So, at present, there is no institution providing training in toys making and no person is working as an apprentice in the co-operative society.

CHAPTER IV

CONCLUSION

Till the end of the decade that is over, it was thought that Jingars alone could carry on this craft of toy making and others were incompetent to practice it as the craft required an artistic bent of mind. The new entrants have proved by their work and worth that with practice any person interested in this type of work can take it up, and acquaint himself well in the craft.

The hereditary craftsmen feel that there is an encroachment on their special field of work, and fear that in the long run this encroachment may go to the extent of their losing their special avocation. Some of them even go to the extent of flaunting a belief that the valuable secrets of their trade have been divulged by one of their own ranks to others and this unfortunately has landed them in the present predicament. It seems it is high time they give up thinking too high of themselves or that their calling is one which others cannot follow easily and become active members of the co-operative society to promote production and sales of toys. The co-operative society is experiencing considerable hardships to make supplies against bulk orders to the emporium. This being

the case it will be well and in their own interests too if they make efforts to secure other agencies also in addition to the emporium to promote sales of their products.

After the Lacquerware School merged with the Rural Artisan Training Institute, toy making was dropped from the course of training and persons interested in learning this craft do not have the chance or scope to get any training on modern lines in the craft. The low wage rate paid by the co-operative society to the artisans discourages even those trained in the field from continuing to practice the craft. It is not therefore surprising that there is a noticeable tendency among those trained for this craft to look forward to switching over to tailoring or work in shops as assistants or in the mills as labourers. The conditions under which persons trained in making painted wooden toys for which Gokak is famous, are such that unless a comprehensive scheme for encouraging this craft is brought into force in the near future, the craft may disappear completely with the present generation of workers.

APPENDIX I

LIST OF CRAFTSMEN AT GOKAK

Hereditary Craftsmen

- | | |
|---------------------------|------------------------|
| 1. Anandappa A. Chitari | 5. Gajanana R. Chitari |
| 2. Gurunath A. Chitari | 6. Vasudev V. Chavan |
| 3. Balakrishna A. Chitari | 7. Panth V. Chavan |
| 4. Maruthi Rao P. Chitari | |

Craftsmen who work in the Co-operative Society

- | | |
|------------------------------|----------------------------|
| 1. Basavlingaiah P. Poojari | 8. Srisail M. Ashtagi |
| 2. Halappa S. Bagevadi | 9. Govind G. Mute |
| 3. Irappa L. Suthar | 10. Gadigeppa G. Hirekudi |
| 4. Mallikarjun B. Hathabaki | 11. Shanmukha R. Kabanuri |
| 5. Chandrakant L. Kothekar | 12. Shivaji R. Gurudkar |
| 6. Balarnath T. Igave | 13. Shankar S. Chowdri |
| 7. Abdul Mazid Buddannanavar | 14. Pandurang G. Rangsubhe |

APPENDIX II

PRICE LIST OF GOKAK TOYS

(Wage rate per unit to the workers is also given)

Sl. No.	Article	Price per unit (Rs.)	Wage rate per unit (Rs.)	Sl. No.	Article	Price per unit (Rs.)	Wage rate per unit (Rs.)
1	2	3	4	1	2	3	4
1.	Mango bunch	1.85	1.37	23.	Gajalimbe	2.00	1.31
2.	Grapes bunch (i)	5.25	3.50	24.	Cocoanut	2.25	1.31
	do (ii)	3.00	1.75	25.	Brinjal	1.50	1.00
3.	Guava bunch	1.60	1.12	26.	Lugffa	1.50	1.00
4.	Custard apple	1.85	1.37	27.	Maize	1.50	1.00
5.	Ramphal	1.85	1.31	28.	Radish	1.50	1.00
6.	Pomegranate bunch	2.00	1.37	29.	Sugarcane	1.50	1.00
7.	Cashewnut bunch	1.85	1.12	30.	Snake gourd	1.00	0.69
8.	Jamboo bunch	1.50	1.12	31.	Bitter gourd	1.00	0.69
9.	Jujbee bunch	1.75	0.69	32.	Drum stick	1.00	0.69
10.	Apple	1.25	0.81	33.	Onion	1.25	0.81
11.	Plantains	1.25	0.81	34.	Garlic	1.00	0.69
12.	Orange	3.00	2.00	35.	Pumpkin	2.50	1.62
13.	Mosambi	1.00	0.62	36.	Cucumber	0.50	0.31
14.	Pineapple	1.00	0.62	37.	Sweet potato	0.50	0.20
15.	Water melon	4.00	3.00	38.	Lady's finger	0.50	0.31
16.	Pumple moses	2.75	1.62	39.	Capsicum	0.50	0.31
17.	Lemon bunch	2.50	1.62	40.	Chillies	0.25	0.15
18.	Karabuja	1.25	0.81	41.	Carrot	0.25	0.19
19.	Papaya	1.50	1.00	42.	Fruit box	35.00	—
20.	Fig	1.50	1.00	43.	Vegetable box	30.00	—
21.	Wood apple	1.25	0.81	44.	Cow with calf	18.00	14.00
22.	Tamarind pod	1.45	1.00	45.	Crane	1.50	0.87
		1.60	1.12				

PAINTED WOODEN TOYS OF GOKAK

APPENDIX III

LIST OF ARTICLES PRODUCED BY THE JINGARS OF GOKAK
DURING THE LAST CENTURY

- | | |
|---|--|
| 1. A Brahmin, his wife and child. | 46. A Dasayya beggar. |
| 2. A Maratha, his wife and child. | 47. A horn blower. |
| 3. A Vani, his wife and child. | 48. An old man and an old woman. |
| 4. A Vani at work. | 49. A Puranik or reciter of hymns. |
| 5. A cultivator. | 50. Four wrestlers. |
| 6. A weaver. | 51. A snake charmer. |
| 7. A blacksmith. | 52. A Sudgad-Shiddi or sexton. |
| 8. A potter. | 53. A Lamani or carrier with his wife. |
| 9. A goldsmith. | 54. A Mena. |
| 10. A tailor. | 55. A palanquin. |
| 11. A calico printer. | 56. A Mogalai carriage. |
| 12. A Nilgar dyer. | 57. A chopdar or mace bearer. |
| 13. A Bandhgar dyer. | 58. A Pattovala or person. |
| 14. A Kurubablanket weaver. | 59. A Kazi or Musalman priest. |
| 15. A Teli oil presser. | 60. A Mulla or Musalman school master. |
| 16. A butcher. | 61. A Parsi. |
| 17. A comb maker. | 62. An Emperor. |
| 18. A Barber. | 63. Five princes. |
| 19. A washerman. | 64. Five richmen. |
| 20. A Bhisti or water carrier. | 65. A Brahmin bathing. |
| 21. A Bhisti with his water bag. | 66. A cow. |
| 22. A Burud or basket maker. | 67. An elephant. |
| 23. A vadar with his cart. | 68. A camel. |
| 24. A banker. | 69. A panther. |
| 25. A Jingar or harness maker. | 70. A she-buffalo. |
| 26. A painter. | 71. A she-goat. |
| 27. A shoe maker. | 72. A he-goat. |
| 28. A woman spinning cotton. | 73. A ram. |
| 29. A woman ginning cotton. | 74. A tiger. |
| 30. A school mistress. | 75. A bear. |
| 31. A Kasar putting bangles. | 76. A boar. |
| 32. A Patvegar twisting silk. | 77. A stag. |
| 33. A well for watering. | 78. A deer. |
| 34. A water spring for bathing. | 79. A hare. |
| 35. A well for drinking. | 80. A jackal. |
| 36. A Koravanji with her child. | 81. A mouse. |
| 37. A liquor seller. | 82. A scorpion. |
| 38. A Mang or a carrier of dead cattle. | 83. A Heggana or rat ape. |
| 39. A snuff maker. | 84. A lizard. |
| 40. A dancing girl. | 85. A snake. |
| 41. A Jangam or Lingayat priest. | 86. A large serpent. |
| 42. A Chalvadi with bell and ladle. | 87. A parrot. |
| 43. A Bairagi or ascetic. | 88. A dove. |
| 44. Gondhalis or beggars. | 89. A sparrow. |
| 45. A Kid-bid-joshi or gipsy. | 90. A starling. |

PAINTED WOODEN TOYS OF GOKAK

APPENDIX III — *Concl.*

- | | |
|-------------------------------------|------------------------------------|
| 91. A crane. | 118. An orange. |
| 92. A crow. | 119. A papnas pumelo. |
| 93. A hen. | 120. A Sitafal or Custard apple. |
| 94. A cock. | 121. A Bhendi. |
| 95. A lion. | 122. A brinjal. |
| 96. A Kamadhenu or cow of paradise. | 123. A gourd. |
| 97. A tas, a kind of sky-lark. | 124. Garlic. |
| 98. A fish. | 125. Chillies green. |
| 99. A tortoise. | 126. Chillies red. |
| 100. A crab. | 127. A Padval or snake gourd. |
| 101. A bunch of mangoes. | 128. A ratal or sweet potato. |
| 102. A bunch of plantains. | 129. A Dodke. |
| 103. A jack fruit. | 130. Tondle, a vegetable. |
| 104. A watermelon. | 131. A cucumber. |
| 105. A pomegranate. | 132. A Kavai or wood apple. |
| 106. A fig. | 133. Mahulung a fruit. |
| 107. A Jujbi fruit. | 134. Papai, a fruit. |
| 108. An almond. | 135. Ramfal or sweet sop. |
| 109. A sugarcane. | 136. A white gourd. |
| 110. An apple. | 137. A Gajar. |
| 111. A tamarind pod. | 138. Cassia fistula pod. |
| 112. A bunch of grapes. | 139. Karle or bitter gourd. |
| 113. A pineapple. | 140. A radish. |
| 114. A pair of maize heads. | 141. A carrot. |
| 115. A guava. | 142. Shevga or horse radish pod. |
| 116. A cashewnut. | 143. An Avala or emblic myrobalan. |
| 117. A lemon. | 144. A Karvand or corinder. |

PAINTED WOODEN TOYS OF KINNAL

CHAPTER I

INTRODUCTORY

Introduction

Kinnal village is in Koppal taluk of Raichur district. It is neither a road side village, nor it is situated too far into the interior. The village is just 8 miles from Koppal town, the nearest railway station on Hubli-Guntakal line and is about 125 miles away from Raichur. The approach road from Koppal to Kinnal is a fair weather road, not being fully metalled. It is motorable only when the weather is favourable. Two buses ply five times a day between Kinnal and Koppal. This vehicular traffic stops on rainy days, when the road becomes marshy and slippery.

The area of the revenue village is 5.6 sq. miles and its population according to 1961 Census is 5,460. Kinnal is by no means a very backward village and can boast of a few public and private bodies and institutions. It is administered by a Panchayat. The village has a Government Middle School, a dispensary and a sub-post office. In this village there are also 28 provision stores, 13 cloth shops, 19 tea shops and 10 petty shops. With such a number of shops and stores in it, Kinnal bids fair to be deemed a well developed village. Added to these a weekly market is held every Sunday. A Kacha cinema house is there and a pucca building for it is under construction. However, the village is neither electrified nor provided with water taps. A stream that winds its way close by the village, is the main source of water supply to this village.

The houses in the village are mostly mud constructions and they are in linear clusters. Among the population in this village there are Brahmins, Lingayats, Devangas, Chitragars (Jingars), Upparas, Kumbars, Dombars and Medars.

Among the industries in this place mention must first be made of weaving industry. Kinnal was at one time a handloom production centre and supplied handloom goods to neighbouring areas. But here, as elsewhere, this handloom industry, which flourished at one time crumbled before the

onslaught of mill goods. This industry is now dragging on a lingering existence, the weavers engaging themselves in weaving sarces and choli pieces to cater mainly to the needs of the rural population in and around Kinnal.

Next to weaving comes the toy making industry. The work of making toys is indeed better called a craft than an industry. The Chitragars of the locality are engaged in making these toys which have become justly famous for their beauty and skill in craftsmanship in and around Kinnal.

The other handicrafts in the village are blanket weaving by Kurubas, pottery by Kumbars and making of combs out of horn by Dombars.

Among these industries existing in this village it is only the craft of toy making which deserves special study.

Chitragars

The Chitragars of Kinnal who are engaged in the craft of toy making belong to the same class as the Jingars in Gokak. They feel that the word 'Jingar' is not apt to connote their occupation.

There are 27 households of Chitragars in this village. An old man of the community reported that the Chitragars settled at Kinnal about 2 centuries ago. They are migrants from Kushtagi, a neighbouring taluk headquarters. Their customs and habits are the same as those of the Jingars of Gokak. Chitragars of Kinnal have entered into marriage alliances with their castemen found in Raichur and Bellary districts. However, there has been no marriage alliances between the Chitragars of Kinnal and the Jingars of Gokak. There does not appear to be any real prohibition for such marriages taking place, and it is only a matter of chance that such marriages have not taken place so far.

The articles made by the Chitragars of Kinnal may be broadly grouped under categories: (1) palanquins and cradles, (2) images of deities

including those of several 'devathas' kept round the *Rathas* (Cars or chariots). (3) Toys of animals and birds, (4) fake fruits and vegetables.

Palanquins and cradles might be made by carpenters also, but the articles made by Chitragars are characterised by an artistic finish and workmanship lacking in those made by the carpenters. Images of deities, specially 'grama devathas' (village deities) made by the Chitragars of Kinnal are to be found in every village of the district. The demand for such articles has dwindled in recent years and of late the Chitragars are engaged mostly in making toys of animals, birds, fruits and vegetables.

Households of Chitragars

The 27 households of Chitragars at Kinnal account for a population of 206. Sixty are adult

males, 52 are adult females and 94 are children below 14 years of age. Of the 60 males, 59 are gainfully employed and one is a student. Twenty nine of them are toy makers, 21 are cradle and palanquin makers, 8 are carpenters and one has for his occupation the hiring out of drama scenery. Of the 52 females, 41 are gainfully employed and 11 are housewives. Nineteen of the females gainfully employed make cow-heads and toys out of cowdung, and 22 of them assist the craftsmen. Of the 94 children only 3 help their parents in their work.

Of the 27 households, 26 carry on the craft of toy making. It is the principal occupation for 12 households, for the others it is a subsidiary occupation. The other occupations carried on are occupations allied to toy making like making of cradle, palanquins, and such others.

Raw Materials

The chief raw material used in the craft of toy making at Kinnal is *Polkhi* wood. The other raw materials used in this craft are *Hale* or *Halagathi* wood, *Hire Bevu* wood, Tamarind seeds, *Sunaburule*, sawdust, rags of jute bag, gum, carpenter's glue, cloth and synthetic colours.

Polkhi wood (Givotia rottleriformia)

Polkhi is the wood most commonly used in this craft. The craftsmen used to get their supplies of wood from the log fellers and wood cutters. Now they get the wood through the co-operative society formed by them. Wood is bought by the co-operative society from timber merchants and for the first time sanction has been given by the Forest Department for their procurement. A trunk of *Polkhi* wood of 5 ft. length is sold for Rs. 3.50 by the co-operative society.

Hale wood (Wrightia tinctoria)

Hale or *Halugathi* wood is used for making articles in which turning work is involved. Mostly this wood is employed in making cradles. The wood is collected from the unreserved forest area and sold in billets by the co-operative society. Four billets of 2 ft. length each, cost a rupee.

Hire Bevu wood

Hire Bevu wood is used in the making of planks (*Mane*) and pedestals for images. *Hire Bevu* tree is bought by the co-operative society from land owners, whose lands have these trees. The co-operative society gets the wood well treated before it is supplied to its members. A plank of *Hire Bevu* wood of size 72" × 12" × 1" is sold for Rs. 3.00.

The annual requirement of all types of wood for the craftsmen of this centre is about twelve lorry loads of 50 tons each.

Tamarind Seeds

This is necessary for making *sari*, a paste. The cost of one seer (measure) of tamarind seeds is

CHAPTER II

TECHNIQUES OF PRODUCTION AND ARTICLES PRODUCED

Rs. 0.06. Persons engaged in the collection of this material sell this to the craftsmen.

Sunaburule

Sunaburule is essential in the preparation of *Bilidu*. The cost of *Sunaburule* is Rs. 1.00 per basket of medium size.

Sawdust

This is supplied to the craftsmen by the timber sawyers at the cost of Rs. 1.00 per gunny bag. This is one of the ingredients in making *Kitta*.

Jute rags

This is another ingredient necessary in the preparation of *Kitta*.

Gum

Solid gum is used in making liquid gum. It is available in the local shops at Rs. 1.12 per lb.

Glue

Carpenter's glue is also necessary in this craft. It is available in the local shops at Rs. 1.25 per lb. It is employed as a vehicle in the making of paints from synthetic colour powders.

Cloth

On the layer of *Kitta* on the toy, old and thin cloth of cotton is pasted.

Synthetic Colour Powders

Burnt sienna, raw sienna, lemon chrome, oxide green, emerald green and ultramarine are the synthetic colour powders employed in the making of paints. Also, oil colour tubes of the colours of scarlet, burnt sienna and lemon chrome are used in the making of paints. These powders constitute the pigment of the paint whereas liquid gum and glue constitute the vehicle. When paints are to be made of *Alaku* or metallic powders, French polish is employed as the vehicle. Enamel paints of the colours mentioned are also used by the craftsmen when the article requires a lustrous finish. However, enamel paints are sparingly used as the cost

of these paints is high. Retail sale price of the colour powders and paints sold by the co-operative society are given hereunder:

		(Rs.)
Raw sienna	500 gms.	0.56
Burnt sienna	500 gms.	0.56
Lemon chrome	500 gms.	5.25
Emerald green	500 gms.	2.50
Oxide green	500 gms.	3.50
Ultramarine	Packet	0.62
Oil colour tubes (any colour)	Dozen	3.00
Crystals (<i>Alaku</i> or metallic powders)	Tola	1.00
Bronze powder	Tola	0.44
Enamel paints (enamel white, aluminium, p.o. red)	100 ml. tin	1.81
Varnish	500 ml.	2.20
Aluminium foil	sheet	0.12

About Rs. 4,000 worth of colours and paints are utilised by the craftsmen of Kinnal annually.

Tools

The tools used in this craft of toy making at Kinnal are mostly those manufactured in factories. The tools are available to the craftsmen from the local dealers. Most of them are carpenters' tools like saw, chisels, files, jack plane, hammer, etc. The requirement and the prices of tools given for the centre of Gokak will hold good for this centre also. Craftsmen of Kinnal make their own brushes out of tuft in squirrel's tail. The tufts of squirrel's tail are fixed at the end of a bamboo splinter and are tied with yarn smeared with gum. The making charges per brush is about Rs. 0.25. As they are hereditary craftsmen and are engaged in the craft since a long period, tools in their possession at present have been purchased when needed or when the old ones became worn out. They have not purchased them all at one time.

After the establishment of the co-operative society at Kinnal, tools worth Rs. 2,000 have been supplied by the Development Block to these craftsmen at subsidised rates. As such, many of the craftsmen own vices, drills, blowers and such other improved tools. Prior to the supply of these tools, they were managing with the ordinary tools. One household has invested about Rs. 1,000 on

tools and machinery (a hand operated lathe). Eleven households have invested about Rs. 150 each over tools and other 12 households have invested Rs. 75 each.

Techniques of Production

The production process can be set in the following twelve stages of work. The first five stages are preliminary where the chemicals and paints needed are prepared and the rest are stages of actually making the toys.

1. Preparation of liquid gum.
2. Preparation of *Sari*.
3. Preparation of *Kitta*
4. Preparation of *Bilidu*.
5. Preparation of paints.
6. Reducing the wood to shape.
7. Assembling the pieces.
8. Daubing of *Kitta*.
9. Pasting of cloth.
10. Application of *Bilidu*.
11. Painting.
12. Finishing.

1. Preparation of Liquid Gum

Solid gum is powdered and soaked in water till it completely dissolves. The solution is filtered for removal of suspended impurities.

2. Preparation of *Sari*

Sari is a paste made of tamarind seeds. Tamarind seeds are pounded into tiny pieces and soaked in water for about 12 hours to soften. The softened pieces are taken out from water and ground into a paste on a hard surface by means of a grinding stone (Plate 1-a). The paste is boiled in water to a dough called *Sari*. It is used as an adhesive in the craft and also in the preparation of *Kitta*.

3. Preparation of *Kitta*

Kitta is a sticky substance made of *Sari*, sawdust and jute rags. Jute rag is soaked in water for 12-15 hours, after which it is slivered into pieces with a chisel. These pieces are then dried and rubbed by hand on a hard surface to reduce them to powder. The jute rag powder and sawdust are mixed to *Sari* and the mixture beaten with a mallet till the ingredients get thoroughly mixed. The final mixture is known as *Kitta* which constitutes an

important item in the manufacture of toys. This sticky dough is daubed on the articles after assembling the several components of a particular piece. The daubing of *Kitta* is very essential as without it the components may not hold together for long and may fall out. Besides, the layer of *Kitta* on wood sets right all mal-formations.

4. Preparation of *Bilidu*

Bilidu is made by using *Sunaburule* in the same manner as it is done by the craftsmen of Gokak. At Gokak the same product is denominated as *Khadi*. Pebbles of *Sunaburule* are pulverised by a grinding stone (Plate 1-b). The powder is sieved with a thin piece of cloth and to this fine powder is added a little water to form a paste. Out of this paste, pats of *Bilidu* are made and kept in reserve for ready use.

Pats of *Bilidu* are pounded and mixed with liquid gum and glue, and ground well for a thorough mixing (Plate 2). This mixture is known as *Gachu*. *Gachu* is employed in embossing on the figures after finish, details like bangles worn on the wrists, chains around the neck, earrings and such other ornaments (Plate 3-c).

5. Preparation of Paints

Synthetic colour powders of burnt sienna, raw sienna, lemon chrome, oxide green, emerald green and ultramarine are employed in the making of paints. Also oil colour tubes of the colours of scarlet, burnt sienna and lemon chrome are used for making paints. These powders constitute the pigment while liquid gum and glue constitute the medium. The powder of the particular colour is dissolved in liquid gum by stirring well with finger in an enamel bowl.

When paints are to be made of *Alaku* (metallic powders) the medium employed is French polish.

Enamel paints in the colours mentioned above are also used by the craftsmen when the article requires a lustrous finish. However, enamel paints are sparingly used in view of the high cost.

6. Reducing the Wood to Shape

Polkhi wood is cut into blocks according to the size of the figure. In the craft of sandalwood carving and rosewood carving a whole figure is carved from a single block. In the case of *Polkhi* wood it is quite different. The wood is very light and does

not afford a smooth ground for carving. The figure has to be made by assembling several pieces. Body, head and pinion of figures of birds are of wood and legs are of wire.

The pieces forming the several components of the figure, carved from the cut pieces of wood are smoothened by using rough and smooth files.

7. Assembling the Pieces

The component pieces after smoothing are assembled using nails. Where wire is used, as in joining legs and horns of animals, it is straight away fixed in the wood.

8. Daubing of *Kitta*

After assembling the several components of a figure, *Kitta* is daubed by hand all over the piece (Plate 3-a). A layer of *Kitta* on wood will be of $\frac{1}{8}$ " thick and that on wires is pasted till the wired portion attains the thickness proportionate to the wooden piece.

Kitta being daubed, the figure is smoothened by light filing.

9. Pasting of Cloth

After making the surface of the figure smooth, pieces of thin cotton cloth are pasted on it (Plate 3-b) by using *Sari* made of tamarind seeds. Care is taken to paste the cloth in such a way that no wrinkle is formed. To improve the grip of the paste, the cloth is rubbed with a round stone with smooth surface.

10. Application of *Bilidu*

The pieces of cloth being pasted on the figure, *Bilidu* is applied on it by means of a brush. Three coatings of *Bilidu* are applied, each coating being applied after the previous one has sufficiently dried up. *Bilidu* serves as a base for painting.

11. Painting

Prepared paints are applied on the figure by means of a brush with all care (Plate 3-d). There is no standard colour scheme and it mostly depends on the craftsmen's fancy.

12. Finishing

After completing the painting, eyes, mouth and such other features are marked and final touches are given to the figure.

Articles Produced

The articles produced in the past by the craftsmen of Kinnal were mostly the likenessess of human figures at work, for example a lady milking a cow, a brahmin with tambura, a Shikari set, Harischandra set, a cultivator ploughing and the like. The articles now made by them are mainly the following:

Figures or Gowri, Lakshmi, Saraswathi playing on Veena, Garuda, Hanumantha, Ganesha (Vinayaka), Shiva-Parvathi, Keelu Gowri, animal figures like dog, cat, deer (Plate 10-b), goat, bear, hare (Plate 10-c), elephant, horse, cow, bull and birds like peacock, crane, pigeon and cock (Plate 10-a). The figure of cobra (Plate 10-d) is a common enough production of the craftsmen and there is good demand for it.

Keelu Gowri (Plate 4)

An image of Gowri of 28 inches height in its standing posture. It consists of 12 pieces. The main is head to waist and the other pieces are shoulders-2, hands (from elbow to wrist)-2, palms -2, thighs-2, legs-2, diadom-1. The cost of an image ranges from Rs. 25. to Rs. 36.

Mantapa Gowri (Plate 5)

An image of Gowri in sitting posture on a swing attached to a frame. The image is made of 6 pieces, body-1, head-1, hands-2, shoulders-2. The size of the image is 6 inches and its cost is Rs. 9.50.

Ganesha (Plate 6)

Image of Ganesha (Vinayaka) is made in sitting posture on a throne by assembling 20 pieces. The size of the image is 24 inches and its cost is Rs. 20.00.

Shiva and Parvathi (Plate 7)

Images of these deities is a set of Shiva and Parvathi in sitting posture with Nandi in front. A Prabhavali is attached at the background. The cost of this set is Rs. 44.00.

Lakshmi (Plate 8)

Image of Lakshmi is made in standing posture on a pedestal. The height of the pedestal is 3 inches and that of the image is 18 inches. The image is made by assembling 9 pieces and its cost is Rs. 25.00.

Saraswathi (Plate 9)

Image of Saraswathi in sitting posture and playing on Veena is an assemblage of 17 pieces. The

image is mounted on a pedestal of 4 inches height and the height of the image from toe to diadom is 18 inches. The cost of this image is Rs. 25.00.

Garuda

In standing posture the image of Garuda is mounted on a pedestal of height 1 inch and the height of the image itself being 22 inches. The image is made of 12 components and is sold for Rs. 11.00.

Hanumantha

This image is made by assembling 12 components and is mounted on a pedestal of 1 inch. The height of the image is 20 inches and its cost is Rs. 11.00.

Quadrupeds dog, cat are made of 6 components, head and body-1, legs-4, tail-1; deer and goat are made of 8 components, head and body-1, legs-4, tail-1 and horns-2; elephant is an assemblage of 9 components, head and body-1, legs-4, trunk-1, tusks-2, tail-1; horse is made by assembling 9 components, body-1, head-1, legs-4, ears-2, tail-1; 'Basava' or bullock is made of 12 components, head-1, body-1, neck-1, legs-4, horns-2, ears-2 and tail-1. The quadrupeds are made in sizes 6 inches to 9 inches in height and the prices range from Rs. 3.00 to 10.00 depending on size and workmanship.

Peacock, pigeon, cock consist of 5 pieces each, body-1, head-1, pinion-1, legs-2. A crane together with these pieces requires an extra piece for the neck. The cost of these figures range from Rs. 3.00 to Rs. 10.00.

The craft is carried on by the craftsmen in their household premises, also part of living rooms are used for this purpose. No separate workshop is set apart for this enterprise. The structures of their dwellings are mud walled and roofing is flat mud terraced. Sky lights are provided in the roofs for enough light to come in. Storing of raw materials and finished goods are made in the household premises only. Each house has only a limited space for dwelling. Storage of raw materials and articles in various stages of progress does not encourage scrupulous cleanliness in the houses.

The craftsmen work from sun rise to sun set without following any strict timings. As the village is not electrified and so much so the houses of the craftsmen, they do not have sufficient lighting facilities to carry on their work during nights.

CHAPTER III

ECONOMIC AND GENERAL ASPECTS

Cost of Production

At Gokak the cost of work could be easily worked out as the craftsmen working in the production unit of the co-operative society had maintained detailed accounts. At Kinnal the craftsmen made the articles from the raw materials in their possession and have not maintained any account regarding the quantity or cost of raw materials consumed by them in their household enterprise. They purchase raw materials as and when they find them necessary and use them up in making the articles. Besides, purchases are also made at several frequencies. However, experienced craftsmen were interrogated in regard to several points relating to information regarding the cost of manufacture of articles and the details collected are appended below:

- I. Item of manufacture: 'Mantapa Gowri'
Size: 12"
No. of days required for making: 3
No. of persons engaged: 1
Selling price to Society: Rs. 7.00

Cost of raw materials:	Rs.	Rs.
Wood	0.50	
Tamarind seeds	0.12	
Cloth	0.12	
Metal foils	0.50	
Colour and paints	0.64	2.00
Others		
Earnings of the craftsman work out to Rs. 1.67 a day.		

- II. Item of manufacture: 'Keelu Gowri'
Size: 28"
No. of days required for making: 8
No. of persons engaged: 1
Selling price to the Society: Rs. 25.00

Cost of raw materials:	Rs.	Rs.
Wood	1.00	
Tamarind seeds	0.50	
Colours and paints	2.00	
Others	2.50	6.00
Earnings of the craftsman work out to Rs. 2.37 a day.		

- III. Item of manufacture: 'Garuda'
Size of the figure: 22"
No. of days required for making: 3
No. of persons engaged: 1
Selling price to the Society: Rs. 8.00

Cost of raw materials:	Rs.	Rs.
Wood	0.50	
Tamarind seeds	0.25	
Colour and paints	1.00	
Others	0.37	2.12
Earnings of the craftsman work out to Rs. 1.96 a day.		

- IV. Item of manufacture: 'Deer'
Size of the figure: 8"
No. of days required for making: 3
No. of persons engaged: 1
Selling price to the Society: Rs. 5.87

Cost of raw materials:	Rs.	Rs.
Wood	0.25	
Tamarind seeds	0.25	
Colour and paints	0.75	
Others	0.12	1.37
Earnings of the craftsman work out to Rs. 1.50 a day.		

Difficulty has been experienced to assess the working costs in general terms. The price of an article is fixed on its workmanship.

However, on a broad analysis the expenditure on raw materials may be put down at 20 to 30 per cent of the total cost. Wages form the major constituent of cost structure. They account for 70 to 80 per cent of the total cost. As wages form the major constituent of the cost structure and the craft being carried on by household labour, there is very little scope for the craftsman for incurring loss, though the profits may be small.

The selling price of an article is never fixed. Often times articles are sold for a price which is lower than the normal cost. The craftsmen's need for ready cash will be the reason for such a sale in most cases.

Capital

The productive capital investment in the industry is about Rs. 9,000 of which Rs. 4,000 is investment on fixed stock like tools etc., and Rs. 5,000 on raw materials. The craftsmen buy raw materials in limited quantities and a craftsman's household possesses raw materials worth Rs 50. to Rs. 100 at a time. They buy all types of wood on cash and other materials on credit basis from the local shops. As the craft is carried on in the craftsman's house itself there is no exclusive investment on building or workshop so far as this craft is concerned. The work is carried on almost entirely by household labour. It has been observed that no loan has been incurred by any craftsman (excepting the credit purchase of raw materials) to improve his craft. The capital invested is drawn from the private resources of the craftsmen themselves.

Production

The craftsmen produce a wide range of choice articles. It is not practicable and even if practicable it will not yield intelligible results if figures are worked out as to the quantity of articles produced in any reference period. It is estimated that articles worth Rs. 40,000 in all have been produced at Kinnal during 1961-62. This figure can be accepted as an average also. Of the amount of Rs. 40,000, 25 per cent has to be set apart for raw materials. The other 75 per cent or Rs. 30,000 is the amount earned by the craftsmen of this centre during 1961-62.

Marketing

Articles are made by the craftsmen mostly to order and so the problem of marketing is none too complicated. However, finished products are sold through the co-operative society and also by individual craftsmen directly to consumers. No

middleman is allowed a hand in the marketing of goods. A few of the craftsmen sell the toys at the fairs held in several places of Raichur district and also dispose of them by hawking in the towns in Bellary and Dharwar districts.

The finished pieces of toys are wrapped in newspaper and are kept in soap cartons and baskets. While transporting them, they take the cartons or baskets with them in bus. When articles are to be sent to an out station they parcel them after packing with sufficient padding in dealwood boxes. The parcel, depending on the size of the package, is sent either by post parcel or railway parcel from Koppal. When customers take delivery of the articles at the village itself they make their own arrangements for the transportation of goods.

As mentioned earlier, articles are mostly made to order. In other cases the craftsmen try to dispose of the finished products as early as possible. They cannot afford to retain the finished products with them for a period of more than a month. This being the fact the question of storing the finished articles for a longer period does not arise.

Households of Craftsmen and Economic Conditions

Of the 27 Chitragar households at Kinnal, 26 are engaged in the craft of toy making. One household is eking out its living by hiring out drama sets. However, toy making is not the sole occupation of any household. Besides toy making, they also make palanquins, cradles and images of Gods and Goddesses. Details regarding the household size with sex breakdowns, number of workers, number of workers engaged in the craft of toy making, toy makers' assistants, cradle and palanquin makers, cowdung toy makers, carpenters and average monthly earnings of the households are given in the table on the following page.

PAINTED WOODEN TOYS OF KINNAL

House hold No.	Household size			No. of workers	Toy makers	Toy makers' assistants	Cradle & palanquin makers	Cowdung toy makers	Car-penters	Average monthly earnings (Rs.)	
	Total	Males	Females								
1	2	3	4	5	6	7	8	9	10	11	12
										1	200
											120
											120
1.	16	6	5	4	5	1	4				30
2.	7	1	2	4	3	2	1		2		100
3.	7	2	1		3			1		1	150
4.	3	1	2		5	1			1	2	300
5.	6	2	3	1	3						80
6.	9	2	2	5	12	7	5				100
7.	19	7	6	6	7	5	2				60
8.	9	5	2	2	2	1	1				100
9.	6	1	1	4	1				2	1	120
10.	6	1	1	4	3				2		70
11.	7	2	1	2	6	2	2		1	2	75
12.	8	3	3	2	3			2			80
13.	6	1	3	4	2						50
14.	6	1	1	4	3	2	1				120
15.	7	2	1	6	4	1		1	2		80
16.	9	1	2	6	3			1	1		55
17.	9	2	1	2	5	1	2	1	2		65
18.	7	3	2	3	3			3			60
19.	6	1	2	3	3					1	80
20.	7	2			1			1	2		70
21.	1	1		5	3			2			80
22.	9	3	1	1	3	1		2		1	145
23.	4	3		2	3			4	1		70
24.	6	1	3	4	5			1		1	
25.	10	4	2	6	2						
26.	8	1	1								
Total	198	59	50	89	102	29	22	21	22	8	

In the 26 households engaged in the craft of toy making there are 102 workers. Twenty nine are toy makers, 22 are toy makers' assistants, 21 are cradle and palanquin makers, 22 are cowdung toy makers and 8 are carpenters.

The articles made by the artisans are for domestic use, in the sense that they are used as display and decorative pieces in the houses of the consumers.

The craftsmen work on all days of the year, provided they have work on hand. Festival days are the only exceptions to this. They work briskly if the orders are heavy, otherwise they work for two to three hours a day and spend the rest of the day anyhow. If the society reaches a position wherein it can buy all the articles supplied by the craftsmen, the latter will be engaged in the craft throughout

the year. It is for want of a sure purchaser that the craftsmen, at times, stop their work till the articles made by them are sold out. They also make Ganesha out of clay, but that is only a seasonal occupation for a few days in the year during the month of Sravana.

The average monthly income of 2 households are in the income group Rs. 26-50, 16 households are in the income group Rs. 51-100, 6 households are in the income group Rs. 101-150, one household is in the income group Rs. 151-200 and the income of the other household is more than Rs. 200. The income of a household depends not only on the number of workers in the household but also the type of toy or article that the household makes. Cowdung toys are sold for meagre prices ranging from Rs. 0.06 to Rs. 0.25.

About 50 per cent of the persons in all the 26 households of the craftsmen are workers, who are earners and earning dependants. In spite of having so many earning members the craftsmen households are hardly making both ends meet. Except one, the households have not made any new assets. One household has acquired 8 acres of agricultural land from its earnings. No other household owns land. They have to buy all their requirements from cereals to clothes. About 70 per cent of the total expenditure made by the craftsmen households is on foodstuffs. Of the remaining 30 per cent, about 10 per cent is spent on pan, supari and tobacco products, about 8 per cent is spent on clothes and 12 per cent is spent on other consumable goods. The percentage of expenditure on consumable goods other than foodstuffs increase as the income of the household is increased.

The 26 craftsmen households live in their own houses. The structures are mud walled and the roofs are flat mud terraced. The flooring is mud smeared with cowdung. Sky light is provided in the roofs for sufficient sun light to come in. They clean their household premises every day, but the job they do does not give them any scope to maintain the houses in a clean condition.

The economic condition of the craftsmen has forced them to take the assistance of their children and a boy or a girl hardly studies beyond the primary school stage. Their income is, as considered by them, to be by and large, enough to meet their normal needs. But when a marriage is to be celebrated, a craftsman usually has to run for a loan, and it then takes several months to clear it off. However, craftsmen are careful to avoid such loans, so far as that is possible. They make credit purchases in the local shops, and the outstanding amount due to these shops from the craftsmen households is not worth mentioning.

Five of the craftsmen households consist of head, wife and unmarried children; 3 households consist of head, wife, married sons and other members; 7 households consist of widowed head, married sons and other members; 9 households consist of head, wife, children and other members; 1 household consists of widowed head and unmarried children and another household is a single member household.

After their part of work during the day, in the evening craftsmen spend about an hour or so in the society, meeting and gossiping with their co-craftsmen. Occasionally they visit the cinema house in the village. Some spend their time in the Village Panchayat Office in reading the newspapers and listening to the community radio.

Co-operative Society

The "Chitragar Industrial Co-operative Society" at Kinnal was registered on 18-3-1958. The society has on its roll 29 members. The value of a share of this society is Rs. 20. The paid-up share capital is Rs. 180. Since its inception the society has been audited just once for the period 1958-59. The audit reports for the subsequent years has not yet been prepared.

Though the number of members on the roll is 29, all the Chitragar households have not taken part in the formation of the co-operative society. Only 12 households have taken shares in this society and the number of members from each of these households are 6, 1, 2, 2, 1, 7, 3, 1, 1, 2, 1, and 2 respectively.

The society has received a loan of Rs. 6,800 from the Government in the year 1960 for its working capital. The loan amount has to be paid back in 10 yearly instalments with an interest of 2.5% per annum. The society has so far returned Rs. 900 towards principal and Rs. 170 towards interest. It has received a subsidy of Rs. 3,600 from the Handicrafts Board to meet the expenditure of pay and allowances of the staff of the co-operative society and also to meet the other establishment charges. Tools worth Rs. 2,000 were supplied to the craftsmen of this centre through this society and 75 per cent of this amount was treated as subsidy.

The object of this co-operative society is to safeguard the interests of the Chitragars of Kinnal and to promote the sales of the toys produced by them. This society also procures wood from the Forest Department and supplies it to the craftsmen irrespective of members or non-members of the society. Arrangements are also made by it for the supply of raw materials like colours, paints, metallic foils, to Chitragars.

PAINTED WOODEN TOYS OF KINNAL

During 1960-61 the society purchased from the craftsmen finished toys worth Rs. 5,419 and sold toys worth Rs. 3,734 during the same period. During 61-62 it purchased finished articles worth Rs. 3,023 and sold during the same period articles worth Rs. 3,741. The stock of finished goods with the co-operative society as on 27-6-1963 was Rs. 2,223. The purchase and sales of raw materials and tools made by the co-operative society during the years 1960-61 and 1961-62 are as follows:

	Raw materials		Tools	
	Purchase	Sales	Purchase	Sales
1960-61	824	435	383	338
1961-62	626	931	322	250

The stock of raw materials and tools in the co-operative society as on 27-6-1963 were Rs. 1,253 and Rs. 88 respectively.

Though this society keeps a margin of profit ranging from 20 to 25 per cent, the income from this source of profit is not at all sufficient to meet its running expenses. Had there not been any subvention from the Central Handicrafts Board, perhaps, the society would not have been functioning as well as it is doing now. As the sales are not considerable the scope for earning profits is limited.

Besides, of the total goods produced by the artisans only 10-15 per cent are marketed through the co-operative society. The major portion is sold by the craftsmen themselves direct to the purchasers. The co-operative society is thus far from being self-supporting. It does not run a production unit. If such a unit could be attached to it, the position, in all likelihood, will change for the better.

Training Centre

From March 1958 to February 1959, a batch of 20 candidates were trained at Kinnal in toy making. These candidates are all Chitragars and from the village proper. A master craftsman of Kinnal was appointed as Instructor on Rs. 125 a month. The trainees were paid a stipend of Rs. 30 a month. Training was imparted to them in producing fake fruits, vegetables and animals out of wood. The sanction for this training centre was for a period of one year only and as such it was closed down soon afterwards. However, the scheme was taken up by the Rural Artisan Training Institute at Koppal and the Instructor of the Kinnal Training Centre was requested to handle the training class. Unfortunately he was not prepared to go over to Koppal. In these circumstances, the training section of toy making in the Rural Artisan Training Institute is not progressing.

CHAPTER IV

CONCLUSION

The fact that the craftsmen are pursuing the trade inspite of all its vicissitudes and are creating conditions favourable to their progenies also taking up the same avocation is indicative of their deep and unswerving respect to their hereditary craft. No earnest efforts have been made by any so far to switch over to any other occupation though expression is given often times to a feeling of the craft being a drudgery. In the conditions now obtaining, there is hardly any scope for improvement in their living conditions. The competition they have been compelled to face in the market

after the advent of plastic toys has no doubt hit this industry which now seems to be falling on evil days. Yet these products by virtue of their durability and natural appearance can, doubtless, hold their own in the field if only steps are taken to organise the craft scientifically and place it on a sound footing. The handicraft experts should, therefore, bestow their serious and earnest thought to the matter and suggest ways for resuscitating the craft and make it adequately paying for those who practise it.

APPENDIX I

LIST OF HOUSEHOLDS OF CHITRAGARS AT KINNAL

- | | |
|-------------------------------|--------------------------------|
| 1. Bhimasenappa H. Chitrakar | 15. Laxmanappa K. Chitrakar |
| 2. Hemabhadrapa P. Chitrakar | 16. Ramachandrapa V. Chitrakar |
| 3. Ramachandrapa P. Chitrakar | 17. Hemanna R. Chitrakar |
| 4. Rindappa R. Chitrakar | 18. Kishtappa V. Chitrakar |
| 5. Gayyamma | 19. Gangappa T. Chitrakar |
| 6. Bullamma | 20. Ramachandrapa Chitrakar |
| 7. Doddappa R. Chitrakar | 21. Venkatappa V. Chitrakar |
| 8. Seenappa R. Chitrakar | 22. Ganjappa P. Chitrakar |
| 9. Venkatappa R. Chitrakar | 23. Giriappa R. Chitrakar |
| 10. Sahadevappa V. Chitrakar | 24. Adivappa K. T. Chitrakar |
| 11. Govindappa V. Chitrakar | 25. Hanumanthappa C. Chitrakar |
| 12. Pampanna B. Chitrakar | 26. Mailarappa H. Chitrakar |
| 13. Venkatappa N. Chitrakar | 27. Huchappa P. Chitrakar |
| 14. Bhimavva | |

APPENDIX II

LIST OF SKILLED CRAFTSMEN OF KINNAL

- | | |
|-----------------------------------|--------------------------------|
| 1. Hanumanthappa B. Chitrakar | 16. Gopalappa S. Chitrakar |
| 2. Venkanna B. Chitrakar | 17. Venkatappa R. Chitrakar |
| 3. Kishtappa B. Chitrakar | 18. Venkateshappa V. Chitrakar |
| 4. Laxmanappa B. Chitrakar | 19. Ramanna V. Chitrakar |
| 5. Ramappa B. Chitrakar | 20. Vasappa V. Chitrakar |
| 6. Ramachandrapa P. Chitrakar | 21. Nemanna V. Chitrakar |
| 7. Rindappa R. Chitrakar | 22. Sahadevappa Chitrakar |
| 8. Renukappa R. Chitrakar | 23. Venkobappa N. Chitrakar |
| 9. Mailarappa Chitrakar | 24. Bhadrappa V. Chitrakar |
| 10. Seenappa R. Chitrakar | 25. Ramachandrapa V. Chitrakar |
| 11. Krishnamurthappa S. Chitrakar | 26. Tokappa R. Chitrakar |
| 12. Doddarangappa S. Chitrakar | 27. Hemanna R. Chitrakar |
| 13. Sannarangappa S. Chitrakar | 28. Gangappa G. Chitrakar |
| 14. Kanthappa S. Chitrakar | 29. Thulasappa A. Chitrakar |
| 15. Narayanappa S. Chitrakar | |



a



b

a. Tamarind seeds soaked in water are ground to a paste on a hard surface by means of a grinding stone. b. Grinding of *Sunaburule*.



Preparation of *Bilidu*.



a. Daubing of *Kitta* on an image for holding its components. *b.* Pasting of cloth on *Kitta* by means of *Sari*, the glue made of tamarind seeds. *c.* Embossing ornaments on the material *Gachu*. *d.* Painting.



Keelu Gowri
Size 28 inches.



Mantapa Gowri
Size of the image 6 inches



Ganesha (Vinayaka)
Size 24 inches.



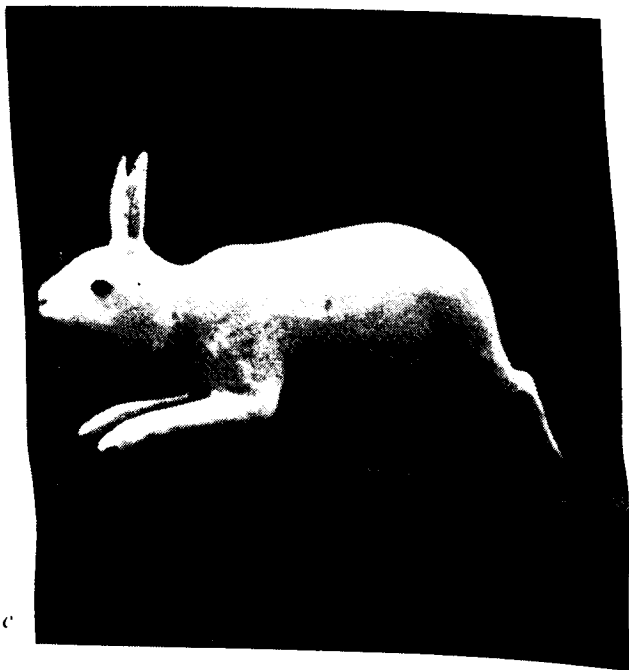
Shiva and Parvati. Nandi is also seen in the front.
The *Prabhavali* is intricately designed and coloured.



Lakshmi — Goddess of Wealth
Size 18 inches.



Saraswathi — Goddess of learning
Size: 18 inches.



a. A country Cock. *b.* An adult stag with long horns. *c.* A Hare in the running posture.
d. A Cobra with raised hood.

LIST OF AGENTS FOR THE SALE OF GOVERNMENT OF INDIA PUBLICATIONS
(As on February 1964)

Agartala			
Laxmi Bhandar Books & Scientific Sales . . .	(Rest.)		
Agra			
National Book House, Jeoni Mandi . . .	(Reg.)		
Wadhwa & Co., 45, Civil Lines . . .	(Reg.)		
Banwari Lal Jain, Publishers, Moti Katra . . .	(Rest.)		
English Book Depot, Sadar Bazar, Agra Cantt.	(Rest.)		
Ahmadnagar			
V.T. Jorakar, Prop., Rama General Stores, Navi Path	(Rest.)		
Ahmedabad			
Balgovind Kuber Dass & Co., Gandhi Road . .	(Reg.)		
Chandra Kant Chiman Lal Vora, Gandhi Road .	(Reg.)		
New Order Book Co., Ellis Bridge . . .	(Reg.)		
Mahajan Bros., Opp. Khadia Police Gate . .	(Rest.)		
Sastu Kitab Ghar, Near Relief Talkies, Patthar Kuva,			
Relief Road . . .	(Reg.)		
Ajmer			
Book-Land, 663, Madras Gate . . .	(Reg.)		
Rajputana Book House, Station Road . . .	(Reg.)		
Law Book House, 271, Hathi Bhata . . .	(Rest.)		
Vijay Bros., Kutchery Road . . .	(Rest.)		
Krishna Bros., Kutchery Road . . .	(Rest.)		
Aligarh			
Friends' Book House, Muslim University Market .	(Reg.)		
Allahabad			
Superintendent, Printing & Stationery, U. P.			
Kitabistan, 17-A, Kamala Nehru Road. . .	(Reg.)		
Law Book Co., Sardar Patel Marg, P. Box 4 . .	(Reg.)		
Ram Narain Lal Beni Modho, 2-A, Katra Road .	(Reg.)		
Universal Book Co., 20 M. G. Road . . .	(Reg.)		
The University Book Agency (of Lahore), Eligin Road	(Rest.)		
Wadhwa & Co., 23, M. G. Marg . . .	(Rest.)		
Bharat Law House, 15, Mahatma Gandhi Marg .	(Rest.)		
Ram Narain Lal Beni Prashad, 2-A, Katra Road .	(Rest.)		
Ambala			
English Book Depot, Ambala Cantt. . . .	(Reg.)		
Seth Law House, 8719, Railway Road, Ambala	(Rest.)		
Cantt. . . .	(Rest.)		
Amritsar			
The Law Book Agency, G. T. Road, Putligarh. .	(Reg.)		
S. Gupta, Agent, Government Publications, Near	(Reg.)		
P. O. Majith Mandi . . .	(Reg.)		
Amar Nath & Sons, Near P. O. Majith Mandi .	(Reg.)		
Anand			
Vijaya Stores, Station Road . . .	(Rest.)		
Charto Book Stall, Tulsi Sadan, Stn. Road . .	(Rest.)		
Asansol			
D.N. Roy & R.K. Roy, Booksellers, Atwal Building	(Rest.)		
Bangalore			
The Bangalore Legal Practitioner Co-op. Society			
Ltd., Bar Association Building . . .	(Reg.)		
S.S. Book Emporium, 118 Mount Joy Road . .	(Reg.)		
The Bangalore Press, Lake View, Mysore Road,			
P.O. Box 507 . . .	(Reg.)		
The Standard Book Depot, Avenue Road . .	(Reg.)		
Vichar Sahitya Private Ltd., Balepet . . .	(Reg.)		
Makkala Pustaka Press, Balamandira, Gandhinagar	(Reg.)		
Maruthi Book Depot, Avenue Road . . .	(Rest.)		
International Book House P. Ltd., 4-F, Mahatma			
Gandhi Road . . .	(Reg.)		
Navakarnataka Publications Private Ltd., Majestic			
Circle . . .	(Rest.)		
Bareilly			
Agarwal Brothers, Bara Bazar . . .	(Reg.)		
Baroda			
Shri Chandrakant Mohan Lal Shah, Raopura .	(Rest.)		
Good Companions Booksellers, Publishers & Sub-			
Agent . . .	(Rest.)		
New Medical Book House, 540, Madan Zampa Road	(Rest.)		
Beawar			
The Secretary, S.D. College, Co-operative Stores Ltd.	(Rest.)		
Belgharia			
Granthlok, Antiquarian Booksellers & Publishers			
(24-Parganas), 5/1 Amlica Mukherjee Road .	(Reg.)		
Bhagalpur			
Paper Stationery Stores, D.N. Singh Road . .	(Reg.)		
Bhopal			
Superintendent, State Government Press			
Lyall Book Depot, Mohd. Din Bldg., Sulthania Road	(Reg.)		
Delite Books, Opp. Bhopal Talkies . . .	(Rest.)		
Bhubaneswar			
Ekamra Vidyabhaban, Eastern Tower Room No.3	(Rest.)		
Bijapur			
Shri D.V. Deshpande, Recognised Law Booksellers,			
Prop. Vinod Book Depot, Near Shiralshetti Chowk	(Rest.)		
Bikaner			
Bhandani Bros. . . .	(Rest.)		
Bilaspur			
Sharma Book Stall, Sadar Bazar . . .	(Rest.)		
Bombay			
Supdt. Printing and Stationery, Queens Road			
Charles Lambert and Co., 101, Mahatma Gandhi			
Road . . .	(Reg.)		
Co-operator's Depot, 5/32 Ahmed Sailor Bldg., Dadar	(Reg.)		

b

List of Agents—*contd.***Bombay—*Contd.***

Current Book House, Maruti Lane, Raghunath Dadaji Street	(Reg.)
Current Technical Literature Co. P. Ltd. India House, 1st Floor	(Reg.)
International Book House Ltd., 9, Ash Lane, M. G. Road	(Reg.)
Lakkani Book Depot, Girgaum	(Reg.)
Elpees Agencies, 24, Bhangwadi, Kalbadevi	(Reg.)
P.P.H. Book Stall, 190-B, Khetwadi Main Road	(Reg.)
New Book Co., 188-190, Dr. Dadabhai Naoroji Rd.	(Reg.)
Popular Book Depot, Lamington Road	(Reg.)
Sunder Das Gian Chand, 601, Girgaum Road, Near Princes Street	(Reg.)
D.B. Taraporewala Sons and Co. (P) Ltd., 210, Dr. Dadabhai Naoroji Road	(Reg.)
Thacker and Co., Rampart Row	(Reg.)
N.M. Tripathi Private Ltd., Princes Street	(Reg.)
The Kothari Book Depot, King Edward Road	(Reg.)
P.H. Rama Krishna and Sons, 147, Rajaram Bhuvan, Shivaji Park Road No. 5	(Rest.)
C. Jamnadas & Co., Booksellers, 146-C, Princess St.	(Reg.)
Indo Nath and Co., A-6, Daulat Nagar, Borivli,	(Reg.)
Minerva Book Shop, Shop No. 1/80, N. Subas Road	(Reg.)
Academic Book Co., Association Building, Girgaum Road	(Rest.)
Dominion Publishers, 23, Bell Building, Sir P. M. Road	(Res.)
Bombay National History Society, 91 Walkeshwar Road	(Rest.)
Dowamadeo and Co. 16, Naziri Building, Ballard Estate	(Rest.)
Asian Trading Co., 310, the Miraball, P.B. 1505	(Rest.)

Calcutta

Chatterjee & Co. 3/1, Bacharam Chatterjee Lane	(Reg.)
Dass Gupta & Co. Ltd., 54/3, College Street	(Reg.)
Hindu Library, 69 A, Bolaram De Street	(Reg.)
S.K. Lahiri & Co. Private Ltd., College Street	(Reg.)
M. C. Sarkar & Sons Private Ltd., 14, Bankim Chatterjee Street	(Reg.)
W. Newman & Co. Ltd., 3, Old Court House Street	(Reg.)
Oxford Book & Stationery Co., 17, Park Street	(Reg.)
R. Chambray & Co. Ltd., Kent House, P. 33, Mission Road Extension	(Reg.)
S.C. Sarkar & Sons Private Ltd., I.C. College Square	(Reg.)
Thacker Spink & Co. (1933)P. Ltd., 3, Esplanade East	(Reg.)
Firma K. L. Mukhopadhyaya, 6/1A, Banchha Ram Akar Lane	(Reg.)
K.K. Roy, P. Box No. 10210, Calcutta-19	(Rest.)
Sm. P. D. Upadhyay, 77, Mukhtar Babu Street	(Rest.)
Universal Book Dist., 8/2, Hastings Street	(Rest.)
Modern Book Depot, 9, Chowringee Centre.	(Rest.)
Soor & Co., 125 Canning Street	(Reg.)
S. Bhattacharjee, 49, Dharamatala Street	(Rest.)
Mukherjee Library, 100 Sarba Khan Road	(Reg.)
Current Literature Co. 208, Mahatma Gandhi Road	(Reg.)
The Book Depository, 4/1, Madan Street (1st Floor)	(Rest.)
Scientific Book Agency, Netaji Subhas Road	(Rest.)
Reliance Trading Co., 17/1 Banku Bihari Ghose Lane, District Howrah	(Rest.)
Indian Book Dist. Co., 6512 Mahatma Gandhi Road	(Rest.)

Calicut	
Touring Book Stall	(Rest.)
Chandigarh	
Superintendent Govt. Printing & Stationery, Panjab	(Reg.)
Jain Law Agency, Flat No. 8, Sector No. 22	(Reg.)
Rama News Agency, Bookseller, Sector No. 22	(Reg.)
Universal Book Store, Booth 25, Sector 22D	(Reg.)
English Book Shop, 34, Sector 22D	(Rest.)
Mehta Bros. 15-Z, Sector 22B	(Rest.)
Tandan Book Depot, Shopping Centre, Sector 16	(Rest.)
Kailash Law Publishers, Sector 22B	(Rest.)
Chhindwara	
The Verma Book Depot	(Rest.)
Cochin	
Saraswat Corporation Ltd., Palliarakav Road	(Reg.)
Cuttack	
Press Officer, Orissa Sectt.	(Reg.)
Cuttack Law Times	(Reg.)
Prabhat K. Mahapatra, Mangalabag P.B. 35	(Reg.)
D. P. Sur & Sons, Mangalabag	(Rest.)
Utkal Stores, Balu Bazar	(Rest.)
Dehra Dun	
Jugal Kishore & Co., Rajpur Road	(Reg.)
National News Agency, Paltan Bazar	(Reg.)
Bishan Singh & Mahendra Pal Singh, 318 Chukhuwala	(Reg.)
Utam Pustak Bhandar, Paltan Bazar	(Rest.)
Delhi	
J. M. Jaina & Brothers, Mori Gate	(Reg.)
Atma Ram & Sons, Kashmeri Gate	(Reg.)
Federal Law Book Depot, Kashmeri Gate	(Reg.)
Bahri Bros., 188, Lajpat Rai Market	(Reg.)
Bawa Harkishan Dass Bedi (Vijaya General Agencies) P.B. 2017, Ahata Kedara, Chamalian Road	(Reg.)
Book-Well, 4, Sant Narankari Colony, P.B. 1565	(Reg.)
Imperial Publishing Co., 3, Faiz Bazar, Daryaganj	(Reg.)
Metropolitan Book Co., 1, Faiz Bazaar	(Reg.)
Publication Centre, Subzimandi	(Reg.)
Youngman & Co., Nai Sarak	(Reg.)
Indian Army Book Depot, 3, Daryaganj	(Reg.)
All India Educational Supply Co., Shri Ram Bldgs., Jawahar Nagar	(Rest.)
Dhanwant Medical & Law Book House, 1522, Lajpat Rai Market	(Rest.)
University Book House, 15, U.B. Bangalore Road, Jawahar Nagar	(Rest.)
Law Literature House 2646, Balimaran	(Rest.)
Summer Brothers, P.O. Birla Lines	(Rest.)
Universal Book & Stationery Co., 16 Netaji Subhas Marg	(Reg.)
B. Nath & Bros., 3808, Charkhawalan (Chowri Bazar)	(Rest.)
Rajkamal Prakashan P. Ltd., Faiz Bazar	(Reg.)
Premier Book Co., Printers, Publishers & Book-sellers, Nai Sarak	(Rest.)
Universal Book Traders, 80, Gokhale Market	(Reg.)
Tech. & Commercial Book Coy., 75, Gokhale Market	(Rest.)

List of Agents—*contd.***Delhi—*concl.***

Saini Law Publishing Co., 1416, Chabiganj, Kashmeri gate	(Rest.)
G. M. Ahuja, Booksellers & Stationers, 309, Nehru Bazar	(Rest.)
Sat Narain & Sons, 3141 Mohd. Ali Bazar, Mori Gate	(Reg.)
Kitab Mahal (Wholesale Div.) P. Ltd., Faiz Bazar	(Rest.)
Hindu Sahitya Sansar, Nai Sarak	(Rest.)
Munshi Ram Manohar Lal, Oriental Booksellers & Publishers, P.B. 1165, Nai Sarak	(Rest.)
K. L. Seth, Suppliers of Law, Commercial Tech. Books, Shanti Nagar, Ganeshpura	(Rest.)
Adarsh Publishing Service, 5A/10 Ansari Road	(Rest.)

Dhanbad

Ismag Co-operative Stores Ltd., P.O. Indian School of Mines	(Reg.)
New Sketch Press, Post Box 26	(Rest.)

Dharwar

The Agricultural College Consumers Co-op. Society	(Rest.)
Rameshaya Book Depot, Subhas Road	(Rest.)
Karnataka Sahitya Mandira of Publishers and Booksellers	(Rest.)

Ernakulam

Pai & Co., Cloth Bazar Road	(Reg.)
South India Traders, C/o Constitutional Journal	(Reg.)

Ferozepur

English Book Depot, 78, Jhoke Road	(Reg.)
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Gauhati

Mokshada Pustakalaya	(Reg.)
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Gaya

Sahitya Sadan, Gautam Budha Marg	(Reg.)
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Ghaziabad

Jayana Book Agency	(Rest.)
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Gorakhpur

Vishwa Vidyalaya Prakashan, Nakhes Road	(Reg.)
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Gudur

The General Manager, The N.D.C. Publishing & Printing Society Ltd.	(Rest.)
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Guntur

Book Lovers Private Ltd., Kadriguda, Chowrasta	(Reg.)
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Gwalior

Supdt. Printing & Stationery, M.B. Patankar Bazar, Laskhar	(Reg.)
Loyal Book Depot, Patankar Bazar, Laskhar	(Rest.)
M. C. Daftari, Prop. M. B. Jain & Bros., Book-sellers, Sarafa, Laskhar	(Reg.)

Hubli

Pervaje's Book House, Koppikar Road	(Reg.)
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Hyderabad

Director, Government Press	(Reg.)
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Hyderabad—*concl.*

The Swaraj Book Depot, Lakdikapul	(Reg.)
Book Lovers Private Ltd.	(Rest.)
Labour Law Publications, 873, Sulthan Bazar	(Rest.)

Imphal

Tikendra & Sons, Bookseller	(Rest.)
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Indore

Wadhawa & Co., 56, M. G. Road	(Reg.)
Swarup Brother's Khajuri Bazar	(Rest.)
Madhya Pradesh Book Centre, 41, Ahilya Pura	(Rest.)
Modern Book House, Shiv Vilas Palace	(Rest.)
Navyug Sahitya Sadan, Publishers & Booksellers, 10, Khajuri Bazar	(Rest.)

Jabalpur

Modern Book House, 286, Jawaharganj	(Reg.)
National Book House, 135 Jai Prakash Narain Marg	(Rest.)

Jaipur

Govt. Printing & Stationery Department Rajasthan Bharat Law House, Booksellers & Publishers, Opp. Prem Prakash Cinema	(Reg.)
Garg Book Co., Tripolia Bazar	(Reg.)
Vani Mandir, Sawai Mansingh Highway	(Rest.)
Kalyan Mal & Sons., Tripolia Bazar	(Reg.)
Popular Book Depot, Chaura Rasta	(Rest.)
Krishna Book Depot, Chaura Rasta	(Rest.)
Dominion Law Depot, Shah Building, P.B. No. 23	(Rest.)

Jamnagar

Swadeshi Vastu Bhandar	(Reg.)
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Jamshedpur

Amar Kitab Ghar, Diagonal Road, P.B. 78	(Reg.)
Gupta Stores, Dhatkidih	(Reg.)
Sanyal Bros., Booksellers & News Agents, Bistapur Market	(Rest.)
Sahyog Book Depot	(Rest.)

Jhunjhuna (Raj.)

Shashi Kumar Sarat Chandra	(Rest.)
Kapram Prakashan Prasaran, 1/90 Nendhan Niwas Azad Marg	(R.)

Jodhpur

Dwarka Das Rathi, Wholesale Books and News Agents	(Reg.)
Kitab-Ghar, Sojati Gate	(Reg.)
Choppra Brothers, Tripolia Bazar	(Reg.)

Jullundur

Hazooria Bros., Mai Hiran Gate	(Rest.)
Jain General House, Bazar Bansanwala	(Reg.)
University Publishers, Railway Road	(Rest.)

Kanpur

Advani & Co., P. Box 100, The Mall	(Reg.)
Sahitya Niketan, Shradhanand Park.	(Reg.)
The Universal Book Stall, The Mall	(Reg.)
Raj Corporation, Raj House, P.B. 200, Chowk	(Rest.)

List of Agents—Contd.

Karur	Shri V. Nagaraja Rao, 26, Srinivasapuram	(Rest.)
Kodarma	The Bhagwati Press, P.O. Jhumri Tilaiya, Dt. Hazaribagh	(Reg.)
Kolhapur	Maharashtra Granth Bhandar, Mahadwar Road	(Rest.)
Kota	Kota Book Depot	(Rest.)
Kumta	S.V. Kamat, Booksellers & Stationers (N. Kanara)	(Reg.)
Lucknow	Soochna Sahitya Depot (State Book Depot)	(Reg.)
	Balkrishna Book Co. Ltd., Hazratganj	(Reg.)
	British Book Depot, 84, Hazratganj	(Reg.)
	Ram Advani, Hazratganj, P.B. 154	(Reg.)
	Universal Publishers (P) Ltd., Hazratganj	(Reg.)
	Eastern Book Co., Lalbagh Road	(Reg.)
	Civil & Military Educational Stores, 106/B Sadar Bazar	(Rest.)
	Acquarium Supply Co., 213, Faizabad Road	(Rest.)
	Law Book Mart, Amin-Ud-Daula Park	(Rest.)
Ludhiana	Lyall Book Depot, Chaura Bazar	(Reg.)
	Mohindra Brothers, Katcheri Road	(Rest.)
	Nanda Stationery Bhandar, Pustak Bazar	(Rest.)
	The Pharmacy News, Pindi Street	(Rest.)
Madras	Superintendent, Government Press, Mount Road	(Reg.)
	Account Test Institute, P.O. 760, Egmore	(Reg.)
	C. Subbiah Chetty & Co., Triplicane	(Reg.)
	K. Krishnamurthy, Post Box 384	(Reg.)
	Presidency Book Supplies, 8, Pycrofts Road, Triplicane	(Reg.)
	P. Vardachary & Co., 8, Linghi Chetty Street	(Reg.)
	Palani Parchuram, 3, Pycrofts Road, Triplicane	(Reg.)
	NCBH Private Ltd., 199, Mount Road	(Rest.)
	V. Sadanand, The Personal Bookshop, 10, Congress building, 111, Mount Road	(Rest.)
Madurai	Oriental Book House, 258, West Masi Street	(Reg.)
	Vivekananda Press, 48, West Masi Street	(Reg.)
Mandya Sugar Town	K. N. Narimhe Gowda & Sons	(Rest.)
Mangalore	U. R. Shenoy & Sons, Car Street, P. Box 128	(Reg.)
Manjeshwar	Mukunda Krishna Nayak	(Rest.)
Mathura	Rath & Co., Tilohi Building, Bengali Ghat	(Rest.)
Meerut	Prakash Educational Stores, Subhas Bazar	(Reg.)
	Hind Chitra Press, West Kutchery Road	(Reg.)
	Loyal Book Depot, Chhipi Tank	(Reg.)
	Bharat Educational Stores, Chhipi Tank	(Rest.)
	Universal Book Depot, Booksellers & News Agents	(Rest.)
Monghyr	Anusandhan, Minerva Press Building	(Rest.)
Mussouri	Cambridge Book Depot, The Mall	(Rest.)
	Hind Traders	(Rest.)
Muzaffarnagar	Mittal & Co., 85-C, New Mandi	(Rest.)
	B. S. Jain & Co., 71 Abupura	(Rest.)
Muzaffarpur	Scientific & Educational Supply Syndicate	(Reg.)
	Legal Corner, Tikmanio House, Amgola Road	(Rest.)
	Tirhut Book Depot	(Rest.)
Mysore	H. Venkatramiah & Sons, New Statue Circle	(Reg.)
	Peoples Book House, Opp. Jagan Mohan Palace	(Reg.)
	Geeta Book House, Book-sellers & Publishers	(Rest.)
	Krishnamurthipuram	(Rest.)
	News Paper House, Lansdowne Building	(Rest.)
	Indian Mercantile Corporation, Toy Palace Ramvilas	(Rest.)
Nadiad	R. S. Desai, Station Road	(Rest.)
Nagpur	Supdt., Government Press & Book Depot	(Reg.)
	Western Book Depot, Residency Road	(Reg.)
	The Asst. Secretary Mineral Industry Association, Mineral House	(Rest.)
Nainital	Coural Book Depot, Bara Bazar	(Rest.)
Nanded	Book Centre, College Law Central Books, Station Road	(Rest.)
	Hindustan General Stores, Paper & Stationery	(Rest.)
	Merchants, P.B. No. 51	(Rest.)
	Sanjoy Book Agency, Vazirabad	(Rest.)
New Delhi	Amrit Book Co., Connaught Circus	(Reg.)
	Bhawani & Sons, 8F, Connaught Place	(Reg.)
	Central News Agency, 23/90, Connaught Circus	(Reg.)
	Empire Book Depot, 278, Aliganj	(Reg.)
	English Book Stores, 7-L, Connaught Circus P.O. B. 328	(Reg.)
	Faqir Chand & Sons, 15-A Khan Market	(Reg.)
	Jain Book Agency, C-9, Prem House, Connaught Place	(Reg.)
	Oxford Book & Stationery Co., Scindia House	(Reg.)
	Ram Krishna & Sons (of Lahore) 16/B, Connaught Place	(Reg.)

List of Agents—contd.

New Delhi—Concl'd.	Sikh Publishing House, 7-C, Connaught Place	(Reg.)
	Suneja Book Centre, 24/90, Connaught Circus	(Reg.)
	United-Book Agency, 31, Municipal Market, Connaught Circus	(Reg.)
	Jayana Book Depot, Chhaparwala Kuan, Karol Bagh	(Reg.)
	Navayug Traders, Desh Bandhu Gupta Road, Dev Nagar	(Reg.)
	Saraswati Book Depot, 15, Lady Harding Road	(Reg.)
	The Secretary, Indian Met. Society, Lodi Road	(Reg.)
	New Book Depot, Latest Books, Periodicals, Sty. & Novelles, P. B. 96, Connaught Place	(Reg.)
	Mehra Brothers, 50-F, Kalkaji	(Reg.)
	Luxmi Book Stores, 42, Janpath	(Rest.)
	Hindi Book House, 82, Janpath	(Rest.)
	People Publishing House (P.) Ltd., Rani Jhansi Road	(Reg.)
	R. K. Publishers, 23, Badaon Pura, Karol Bagh	(Rest.)
	Sharma Bros, 17, New Market, Motinagar	(Reg.)
	Aapki Dukan, 5/5777, Dev Nagar	(Rest.)
	Sarvodaya Service, 66-A, Rohtak Road, P.B. 2521	(Rest.)
	H. Chandson, P.B. No. 3034	(Rest.)
	The Secretary, Federation of Association of Small Industry of India, 23-B/2, Rohtak Road	(Rest.)
	Standrd Booksellers & Stationers, Palam Enclave	(Rest.)
	Lakshmi Book Depot, 57, Regarpura	(Rest.)
	Sant Ram Booksellers, 16, New Municipal Market Lady Colony	(Rest.)
Panjim	Singhals Book House P.O. Box 70, Near the Church	(Rest.)
	Sagoon Gaydev Dhoud, Booksellers, 5-7 Rua, 3 Idc Jameria	(Rest.)
Pathankot	The Krishna Book Depot, Main Bazar	(Rest.)
Patlala	Supdt. Bhupendra State Press	(Reg.)
	Jain & Co., 17, Shah Nashin Bazar	(Reg.)
Patna	Supdt. Government Printing (Bihar)	(Reg.)
	J.N.P. Agarwal & Co., Padri-Ki-Haveli Raghunath Bhawan	(Reg.)
	Luxmi Trading Co., Padri-ki-Haveli	(Reg.)
	Moti Lal Banarsi Dass, Bankipore	(Reg.)
	Bengal Law House, Chowhatta	(Rest.)
Pithoragarh	Maniram Punetha & Sons	(Rest.)
Pondicherry	M/s Honesty Book House, 9 Rue Duplex	(Reg.)
Poona	Deccan Book Stall, Deccan Gymkhana	(Reg.)
	Imperial Book Depot, 266, M. G. Road	(Reg.)
	International Book Service, Deccan Gymkhana	(Reg.)
	Raka Book Agency, Opp. Natu's Chawl, Near Appa Balwant Chowk	(Reg.)
	Utility Book Depot, 1339, Shivaji Nagar	(Rest.)
Pudukottai	Shri P. N. Swaminathan Sivam & Co., East Main Road	(Rest.)
Rajkot	Mohan Lal Dossabhai Shah, Booksellers and Sub-Agents	(Reg.)
Ranchi	Crown Book Depot, Upper Bazar	(Reg.)
	Pustak Mahal, Upper Bazar	(Rest.)
Rewa	Supdt., Government State Emporium V.P.	(Rest.)
Rourkela	The Rourkela Review	(Rest.)
Saharanpur	Chandra Bharata Pustak Bhandar, Court Road	(Rest.)
Secunderabad	Hindustan Diary Publishers, Market Road	(Reg.)
Silchar	Shri Nishitto Sen Nazirpatti	(Rest.)
Simla	Supdt. Himachal Pradesh Government	(Reg.)
	Minerva Book Shop, The Mall	(Reg.)
	The New Book Depot, 79, The Mall	(Reg.)
Sinnar	Shri N. N. Jakhadi, Agent, Times of India, Sinnar (Nasik)	(Rest.)
Shillong	The Officer-in-Charge, Assam Govt. B.D. Chapla Bookstall, P.B. No. 1.	(Rest.)
Sonepat	United Book Agency	(Reg.)
Srinagar	The Kashmir Bookshop, Residency Road	(Reg.)
Surat	Shri Gajanan Pustakalaya, Tower Road	(Reg.)
Tiruchirapalli	Kalpana Publisher, Wosiur	(Reg.)
	S. Krishnaswami & Co., 35, Subhash Chander Bose Road	(Reg.)
	Palamiappa Bros	(Rest.)
Trivandrum	International Book Depot, Main Road	(Reg.)
	Reddiar Press & Book Depot, P.B. No. 4	(Rest.)
Tuticorin	Shri K. Thiagarajan, 10-C, French Chapai Road	(Rest.)

List of Agents—concl'd.

Udaipur

Jagdish & Co., Inside Surajapole (Rest.)
Book Centre, Maharana, Bhopal Consumers, Co-operative Society Ltd. (Rest.)

Ujjain

Manak Chand Book Depot, Sati Gate (Rest.)

Varanasi

Students Friends & Co., Lanka (Rest.)
Chowkhamba Sanskrit Series Office, Gopal Mandir Road, P.B. No. 8 (Reg.)
Glob Book Centre (Rest.)
Kohinoor Stores, University Road, Lanka (Reg.)
B. H. U. Book Depot (Rest.)

Vellore

A. Venkatasubhan, Law Booksellers (Reg.)

Vijayawada

The Book & Review Centre, Eluru Road, Governpet (Rest.)

Visakhapatnam

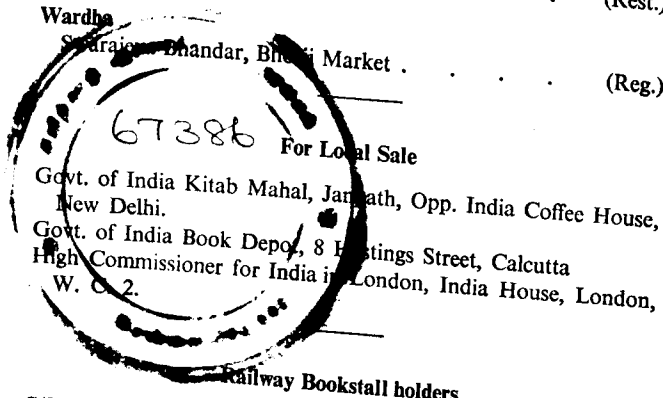
Gupta Brothers, Vizia Building (Reg.)
Book Centre, 11/97, Main Road (Rest.)
The Secy. Andhra University, General Co-op. Stores Ltd. (Rest.)

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S. Parag Bhandar, Bhamburda Market (Reg.)



Govt. of India Kitab Mahal, Janpath, Opp. India Coffee House, New Delhi.
Govt. of India Book Depot, 8 Hastings Street, Calcutta
High Commissioner for India in London, India House, London, W. C. 2.
Railway Bookstall holders
S/S. A. H. Wheeler & Co., 15, Elgin Road, Allahabad
Gahlot Bros., K. E. M. Road, Bikaner
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M. Gulab Singh & Sons Private Ltd., Mathura Road, New Delhi

Foreign

S/S. Education Enterprise Private Ltd., Kathmandu (Nepal).
S/S. Aktie Bologat, C. E. Fritzes Kungl, Hovobokhandel, Fredsgation-2 Box 1656, Stockholm-16 (Sweden)
Reise-und Verkehrsverlag Stuttgart, Post 730, Gutenbergstra 21, Stuttgart No. 11245, Stuttgart den (Germany West).
Shri Iswar Subramanyam 452, Reversite Driv Apt. 6, New York, 27 NY.
The Proprietor, Book Centre, Lakshmi Mansions, 49, The Mall, Lahore (Pakistan).

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The Asst. Director, Extension Centre, Kapileswar Road, Belgaum
The Employment Officer, Employment Exchange, Dhar.
The Asst. Director, Footwear Extension Centre, Polo Ground No. 1, Jodhpur.
The O. I/C., Extension Centre, Club Road, Muzaffarpur
The Director, Indian Bureau of Mines, Govt. of India, Ministry of Mines & Fuel, Nagpur.
The Asst. Director, Industrial Extension Centre, Nadiad (Gujarat)
The Head Clerk, Photozincographic Press, 5, Finance Road, Poona.
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The O. I/C. Extension Centre, Industrial Estate, Kokar, Ranchi.
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The Registrar of Companies, Kerala, 50, Feet Road, Ernakulam.
The Registrar of Companies, H. No. 3-5-83, Hyderguda, Hyderabad.
Registrar of Companies, Assam, Manipur and Tripura, Shillong.
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Registrar of Companies, Punjab and Himachal Pradesh, Link Road Jullundur City.
Registrar of Companies, Bihar, Jamal Road, Patna-1.
Registrar of Companies, Raj & Ajmer: Shri Kamta Prasad House 1st Floor, 'C' Scheme, Ashok Marg, Jaipur.
The Registrar of Companies, Andhra Bank Building, 6 Linghi Chetty Street, P.B. 1530, Madras.
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Registrar of Companies, Orissa, Cuttack Chandi, Cuttack.
The Registrar of Companies, Gujarat State, Gujarat Samachar Building, Ahmedabad.
Publication Division, Sale Depot, North Block, New Delhi.
The Development Commissioner, Small Scale Industries, New Delhi.
The O. I/C., University Employment Bureau, Lucknow.
O. I/C., S.I.S.I. Extension Centre, Malda.
O. I/C., S.I.S.I. Extension Centre, Habra, Tabaluria, 24-Parganas.
O. I/C., S. I. S. I. Model Carpentry Workshop, Piyali Nagar P.O. Burnipur.
O. I/C., S.I.S.I. Chrontanning Extension Centre, Tangra 33, North Topsia Road, Calcutta-46.
O. I/C., S.I.S.I., Extension Centre (Footwear), Calcutta.
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Asst. Director, Extension Centre, Krishna Distt. (A.P).
Employment Officer, Employment Exchange, Jhabua.
Dy. Director Incharge, S.I.S.I. C/o Chief Civil Admn. Goa Panjim.
The Registrar of Trade Unions, Kanpur.
The Employment Officer, Employment Exchange, Gopal Bhavan, Mornia.
The O. I/C., State Information Centre, Hyderabad.
The Registrar of Companies, Pondicherry.
The Asst. Director of Publicity and Information, Vidhana Soudha (P.B. 271), Bangalore.