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CENSUS OF INDIA 1961

VOLUME X

MAHARASHTRA

PART VII-A (4 & 5)

HANDICRAFTS IN MAHARASHTRA

WOODEN TOYS OF SAVANTVADI
AND
COIR ROPES OF ACHARE
DISTRICT RATNAGIRI

Prepared by
THE MAHARASHTRA CENSUS OFFICE, BOMBAY

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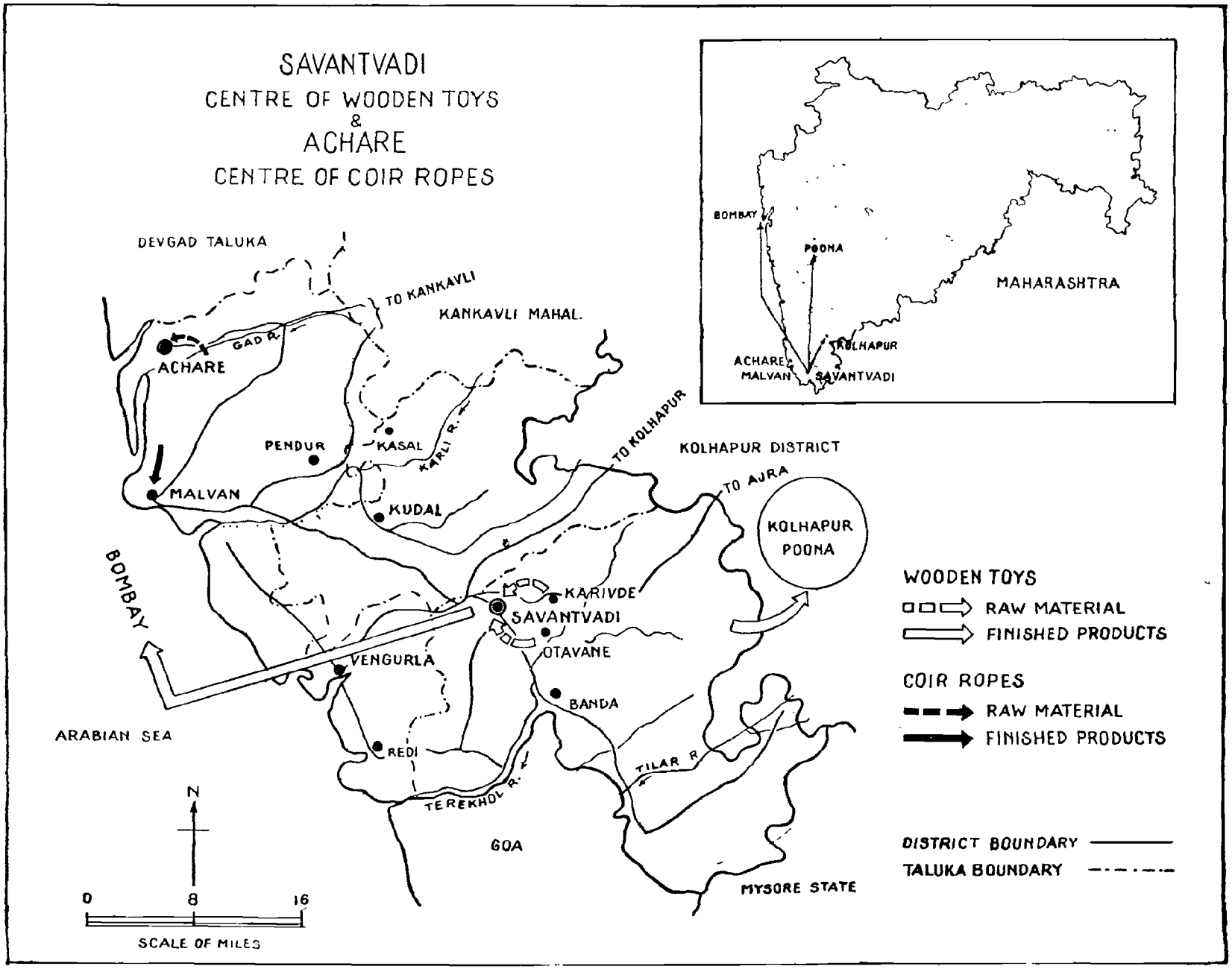
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25 Volumes of District Census Handbooks in English

25 Volumes of District Census Handbooks in Marathi

Alphabetical List of Villages and Towns in Maharashtra in Marathi

Map showing Location of
Savantvadi and Achare
District Ratnagiri


SAVANTVADI
CENTRE OF WOODEN TOYS
&
ACHARE
CENTRE OF COIR ROPES
DEVGAD TALUKA
TO KANKAVLI
KANKAVLI MAHAL
GAD R.
ACHARE
PENDUR
KASAL
KARLI R.
MALVAN
KUDAL
TO KOLHAPUR
KOLHAPUR DISTRICT
TO AJRA
KOLHAPUR
POONA
BOMBAY
KARIVDE
SAVANTVADI
OTAVANE
VENGURLA
BANDA
ARABIAN SEA
REDI
TILAR R.
TEREKHOL R.
GOA
MYSORE STATE
N
0
8
16
SCALE OF MILES
BOMBAY
POONA
MAHARASHTRA
KOLHAPUR
ACHARE
MALVAN
SAVANTVADI
WOODEN TOYS
RAW MATERIAL
FINISHED PRODUCTS
COIR ROPES
RAW MATERIAL
FINISHED PRODUCTS
DISTRICT BOUNDARY
TALUKA BOUNDARY

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 demaded that household industry should be separately investigated for a proper accounting of the nation's manpower resources and its specific contribution to the national income. The 1961 Census therefore asked a special series of questions on household industry, input of family and hired labour, and the periods over which household industry is conducted. It was felt, however, that an enumeration of the total number of establishments and their industrial classification would be incomplete without a proper description of what they produce and how they produce. It was important to make an assessment of the limits of rigidity within which traditional skill operates. This could be obtained by studying the caste, occupational, social and economic stratifications, the limitatioin 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 18th 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 Co-operative 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. Streess 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 enquiry 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 co-ordination between the Central and State Census offices in the matter of exchange and processing of information, documentation and investigation of assisting each other with trained investigators and in editing and finalizing drafts, layouts, presentations.

Mention has been made of a questionnaire in three parts and thirty questions. The idea was to make a beginning with empirical, analytical studies based on a structured questionnaire which would replace general descriptive accounts that had obtained so far. The primary aim was to obtain a picture as much of the artisan himself as of his craft, to obtain a perspective of the artisan and his craft in his social and economic setting, the extent to which tradition bound him and the winds of change ruffled him, the extent of his mobility and immobility, the conditions of market, credit, new contacts and 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 to hold up the mirror to hereditary skills struggling with the dialectics of tradition and change.

Thus the first part of the questionnaire, purporting to be a village schedule, sought to take account of the size and population of the village, its remotenses 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 inter-dependence 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 co-operative 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 co-operative 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 manufctured 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 pattern 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 sub-divided into many questions. The Family Schedule for non-practising artisan families contained 21 questions. There were schedules for the study of co-operative 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 judgment 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 talukas, 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 organized 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

This part of the Census Report presents monographs on the " Wooden Toys at Savantvadi " and " Coir Ropes at Achare " which are from the following seven handicrafts selected for detailed study in Maharashtra :—

(1) Himroo Weaving at Aurangabad, district Aurangabad.

(2) Clay Images of Ganapati and Images of Plaster of Paris at Pen, district Kolaba.

(3) Kosa Silk at Ganeshpur, district Bhandara.

(4) Wooden Toys at Savantvadi, district Ratnagiri.

(5) Coir Ropes at Achare, district Ratnagiri.

(6) Silver Ornaments at Hupari, district Kolhapur.

(7) Glass Bangles at Tarapur, district Thana.

For various reasons it has not been possible for the Maharashtra Census Office to strictly follow the scheme referred to by the Registrar General, India, *in* his " Foreword ". The prescribed village schedules could not be canvassed and, therefore, statistical tables based on the village-wise statistical survey covering all household industries with special emphasis on rural arts and crafts were not prepared. The scope of the study was restricted to (*i*) collection of data on important aspects of crafts, viz., sources of raw material, fuel, service condition, wages, processes involved in manufacture, market for finished products etc., at the selected centres only from the manufacturing establishments and households connected with the selected crafts and (*ii*) tabulation of data regarding household industries including arts and crafts from columns 4 to 8 of the Census Houselists according to a codified list of Common Household Industries prepared by the Registrar General's Office on the basis of the Indian Standard Industrial Classification. The data collected under the former formed the basis of the monographs on seven selected crafts and the tables prepared from the Census Houselists showing for each village, taluka and district the distribution of establishments and workers of different household industries classified upto minor group codes of the Indian Standard Industrial Classification are published in Part II of the District Census Handbooks.

We are very much grateful to Shri Asok Mitra, Registrar General, India, for his encouragement and inspiring guidance to us in various Census assignments including the Rural Craft Studies. Our thanks are due to Dr. Roy Burman, Officer on Special Duty, and Late Mrs. Ruth Reeves of Handicrafts section of the Registrar General's Office for their valuable suggestions to improve the monograph.

The survey was conducted by Shri V. D. Kulkarni, Statistical Assistant under the supervision of Shri V. B. Sawant, Deputy Superintendent of Census Operations. During the period of the survey valuable assistance was rendered by Shri Korgaonkar, Book-seller, Savantvadi. We are indebted to His Highness Shivram Raje Bhonsale, M.L.A., Sarvashri R. W. Parulkar and B. P. Sabnis for allowing us use of some of the photographs and coloured transparencies which no doubt have enriched the publication.

Sarvashri N. Y. Gore, Tabulation Officer and K. K. Akolkar, Investigator, rendered valuable assistance in drafting of this monograph. The maps and line drawings appearing in this monograph are prepared by Shri S. Y. Pradhan, Draughtsman.

We are grateful to Shri S. A. Sapre, Manager and the staff of the Government Central Press, Bombay, for excellent printing and in bringing out this monograph in reasonable time inspite of various commitments.

BOMBAY :
15th August 1967

D. V. RANGNEKAR

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WOODEN TOYS OF SAVANTVADI

CHAPTER I

INTRODUCTION

Savantvadi, also known as Sundarwadi or Wadi, derives its name from its natural beauty as also perhaps from the ancient Sawant family that shaped its destinies through ages. With well-wooded hills on all sides of the town, the highest Wadi Peak of Narendra on the west rises 1,200 feet above the sea-level and presents the spectacle of a beautiful garden.

The town is situated on 16° 20′ north latitude and 73° 45′ east longitude in the Konkan region, a strip of land which stretches from Bombay to Goa on the western coast of India and separated from the main-land by the Western Ghats. It has a long coast-line and the land is intersected by many rivulets. It is a low flat country and is subject to the south-west monsoon with a very heavy rainfall. Naturally Konkan is pre-eminently a land of agriculture. However, narrowness of the valleys the sharp slope and heavy rainfall have combined to make the soils shallow and generally not fit for intensive cultivation.

The town of Savantwadi stands 316 feet above the sea-level and has an average rainfall of about 150 inches with maximum temperature of 93° F in the month of May and minimum 69° F. in the month of January. The town was founded by Phond Sawant in 1670, after whom it is perhaps also named. It was built over rocky uneven ground served by ravines and water courses. It is 19 miles west of the base of the Sahyadris and 17 miles east of Vengurla port. A lake (Moti Talao), 31 acres in area having a depth of over 6 feet and built in 1874, is in the centre of the town. The town is fenced on most sides by ditches, ravines, stone walls and bamboo thickets. Juna-Bazar, the oldest part, said to date from the time of Lakham Sawant (1641-1665 A.D.), lies to the south-east of the town.

The territory in and around Savantvadi which was declared as Jahagir of Phond Sawant in 1627 was under the control of Chalukyas in 6th, 7th and 8th centuries. In 10th century it passed on to the Yadava and in the 13th century to Chalukyas, in the 14th century to Vijayanagar and in the 15th century to Shri Desai of Kudal. It was under the rule of Portugese in 1510. Savantvadi, the capital of the erstwhile State was conquered by Britishers in 1819 but now forms part of Indian Union as one of the important towns of Ratnagiri District.

Savantvadi, covering 2·12 square miles is a taluka and sub-divisional headquarters in Ratnagiri District, having its own Municipality established in 1931, with the necessary civic amenities. The town has been electrified and is connected with important places aud towns such as Ratnagiri, Kolhapur, Satara, Belgaum, Poona, Bombay and Panjim by road. The nearest port, Vengurla and the nearest railway station, Belgaum, are at distances of 17 and 62 miles, respectively.

The population of the town, according to the 1961 Census, is 15,120 (7,439 males and 7,681 females) and that of 1951 being 12,451 (5,916 males and 6,535 females). This represents an increase of 21·44 per cent in the course of a decade as against 23·60 per cent for Maharashtra State.

The table below shows the distribution of population according to workers and non-workers and that of workers by nine broad industrial categories:—

Board Industrial Categories	Description	Total Persons	Males	Females
Workers—				
I	As cultivator	301	162	139
II	As Agricultural Labourer.	42	14	28
III	In Mining Quarrying, Livestock Forestry, Fishing, Hunting, Plantations, Orchards and allied activities.	31	24	7
IV	At Household Industry.	553	169	384
V	In Manufacturing other than Household Industry.	527	510	17
VI	In Construction .	46	45	1
VII	In Trade & Commerce.	721	653	68
VIII	In Transport, Storage and Communications.	274	270	4
IX	In Other Services .	1,665	1,299	366
	Total workers ..	4,160	3,146	1,014
	Non-workers ..	10,960	4,293	6,667
	Total Population .	15,120	7,439	7,681

It will be seen from the above table that 4,160 or 27·51 per cent of the population of the town constitutes workers as against 36·43 per cent and 31·75 per cent for urban areas of Maharashtra and Ratnagiri District, respectively. Out of the total workers, 8·25 per cent

are engaged in Agriculture and 25·96 per cent in manufacturing goods either at their own houses or elsewhere. Persons engaged in Other Services and Trade constitute 40·02 and 17·33 per cent respectively, of total workers.

Mono-cultural economy of the surrounding areas hardly provides any full-time employment opportunity for its population and it has, therefore, led to migration of the male working population. This explains the greater preponderance of females in the working age-group i.e. 15-59. The sex ratio proportion of females for 1,000 males for the town is 1,033 and for its working age--group population it is 1,110. Further, proportions of workers in the secondary and tertiary sectors in the town are higher than those of urban areas of the Ratnagiri District and that of tertiary sector is higher than that in the urban areas of the State. Nearly one-fourth of the working population in the town is engaged in manufacturing activities, and of these sizable proportion is engaged in Bidi making either as principal or subsidiary activity.

It cannot be denied that the agricultural land available in Savantvadi town which works out to 0.99 acre per head, is too small for cultivation and maintenance of an average family.

Savantvadi is a land of rich forests which arounds in trees of great economic value. The forest area forms 8.61 per cent of the total area of Savantvadi Taluka. Numerous varieties of wood such as teak (*Tectona grandis*), black wood (*Dalbergia lafifolia*), Pangara (*Erythrina indica*), Kala Kuda (*Wrightia tinctoria*), Mango (*Mangifera indica*), Jackfruit (*Artocarpus integrifolia*) are found in abundance in the forests. No doubt, therefore, wood has become one of the medium of expression of art at Savantvadi. *Chitaris* of Savantvadi who are hereditary painters engaged in painting of wooden toys and imitation fruits, and clay images, especially Ganapatis, have earned a name for their art through centuries though other castes such as *Sutars*, Marathas and Saraswats are also engaged in the craft. There are about twenty households of *Chitaris* in the town. The *Chitaris* have derived their name from their inherent and best workmanship in colouring. The carpenters or *Sutars* also known as Maya Panchals, deserve special mention for their workmanship. In addition to the excellent carving in wood, and preparation of toys, these carpenters who have inherited their skill for generations produce beautiful household goods such as *churners*, wooden seats, etc. from wood.

Though mechanical and modern toys are making a serious in-road in the traditional handmade toys in India, we still find that the latter have not been completely displaced by the former in the Indian markets. This may, perhaps, be due to love for traditional crafts among peoples of vast rural areas which are still not economically well developed and which constitute bulk of the customers for handmade toys.

CHAPTER II

HISTORY AND ORIGIN

Art of a particular period of time helps to decipher its contemporary culture. Arts in India through the ages have helped to reconstruct the past glory of India, as it has done elsewhere. Toy making is one of such arts which gives us an idea of the period in which it flourished and the part of the country where it thrived in the past and its glory.

In spite of the differences prevailing among the peoples of the world, created by such factors as times, space, race and religion, the study of toys from various countries and of different periods of time convinces us that all these differences are artificial and they sink when we begin to consider the similarity of human sentiments in the early life of humanity. The toys, whether handmade simple ones or mechanical ones, certainly help to improve the mental and physical development of a child.

Toys were found in the excavations carried out in the Indo-Gangetic Valley, *viz.*, Mohenjo-Daro and Harappa, which give us a clear idea of the human child playing with a toy as early as the period of Indus Valley civilisation which flourished according to the accepted opinion from 2500 B.C. to 1700 B.C.

Wood perishes early and thus cuts link with the past of the art of making toys from wood. But it can be safely traced through the literary works and wood decorations in architecture which show that this art was well developed since a long period.

In ancient India carpenters acquired a social status and were called "*Sutradhar*", measuring tape-holder. They were mentioned in the Rig-Veda and in times of Manu, and were recognised as a separate caste. Wood carving is mentioned in "Brihat Sanhita" and the "Shilpa Shastra". These two books describe the seasoning and felling of the trees, seasoning of wood and making different kinds of articles out of it.

In early classical Sanskrit, Pali and Ardhamagadhi literature of Hindus, Buddhists and Jains, many references are found of toys made of wood, which were popular and apparently had a very ancient lineage. A toy named kridanak was given to the son of Shiv Skandh as mentioned in "Varah Puran". In "Brahmananda Puran", it is stated that toys *viz.*, two birds, Mayur (peacock) and Kukkut (cock), were given to Skandh to play with. There is also a reference of the game tip-cat (Vita) in "Adiparva", Chapter 131.17 of the *Mahabharat*.

In ancient and medieval period most of the things bring handmade, were works of art, possessing individuality, variety and artistic finish. The ancient tradition is found even to-day through the Jajmani System in village, locally known as *Balutedari* system which gave security to the artisans who could develop their art in close touch with civilisation. In the *Balutedari* system the craftsmen prepared different toys and were paid for their services in kind. This system is now being gradually replaced by payment of money. The Indian village economy which has been a barter economy in the past and continues to be so to some extent even at present brings face to face the person who manufactures the goods and the one who uses them. A personal contact is thus established between the two and the tastes and preferences of the consumers were reflected in the size, shape and quality of goods produced. With the elimination of barter economy which existed under the guise of *Balutedari* system in some parts of Maharashtra, the personal contact is vanishing. Special efforts are, therefore, to be made to know the likes and dislikes of customers.

To-day craftsmen of Gujarat, Punjab, Kashmir, Uttar Pradesh, Rajputana, Madhya Pradesh and Mysore are famous for their excellent workmanship in wood work of high quality. Toys and images of deities from ivory and sandalwood are made now-a-days in Mysore. Banaras toys are famous for their colouring work. At Madurai and Bellary beautiful toys are made from teak and red wood. Toys made of wood and beautifully coloured are produced at Kondapalli in Andhra Pradesh. In addition to the wooden toys the craftsmen of Kondapalli prepare *Dashavatar* sets representing the ten incarnations of Vishnu with a high artistic craftsmanship. Bengal wooden toys are famous for their interesting economy of form and traditional decorations. In Bengal Lac Varnish is used for the durability of the toys and to preserve their colours. In certain areas of the Hyderabad region, now in Andhra Pradesh, crude toys of wood are made. Cow-dung and saw-dust compound are applied to the rough wooden dolls with glue or tamarind pulp. Dolls of Bharatpur are famous for their large varieties. Toys of Gokak in Mysore State deserve special mention for the best workmanship and artistry.

In Maharashtra toys are made at Akola, Poona, Bombay and other centres including Savantwadi in Ratnagiri District. The craftsmen at Savantvadi do

not use power operated machinery to produce the toys but all the processes are carried out manually. The industry at Savantvadi truly satisfies the test of a cottage industry by its very nature.

The town of Savantvadi has been famous for different kinds of handicrafts. The craftsmen of Savantvadi revealed their true artistic ingenuity in the making of articles described below:—

(1) *Articles made from grass.*—This craft was started by Jingars in 1840. They were working as saddlers, sheath makers and arms polishers. According to the suggestion of a British Officer stationed at Savantvadi, the ornamental and feather work was taken up before 1850. In 1880 there were 75 workers who were engaged in producing caskets in different shapes, fans with or without handles, baskets, table lamp stands (from *vala* grass), etc. But now only a few workers are engaged in it. This is because of decreasing demand for the articles as also there being no market for them outside Savantvadi.

(2) *Round playing cards* (*Ganjifa*).—Two kinds of *ganjifas*, *hukmi* or *changkanchani* with 96 cards, and Dashavatari with 120 cards, used to be prepared by about 22 *Chitaris* in 1760. Another set with 52 cards also used to be prepared. These cards were richly decorated and painted. The making of these cards is an intriguing process. The diameter of the card is from 4 to 5 inches. Pieces of thin cloth are pasted in three layers with gum like substance prepared from tamarind seeds. They are then coated with liquid chalk repeatedly until white surface is obtained. It is then rubbed with stones to get a polished and smooth surface. The pieces are then trimmed to circular shapes and painted. Their backs are coated with dull vermilion and lacquer to make the card thick, stiffer and less susceptible to dust. It takes a considerable time, skill and patience to make these cards. The paper required for the cards was imported from Kolhapur. A few Marathas, Shimpis and Vanis had also taken to the art. The goods were mainly sent to Bombay and Upghat areas comprising Kolhapur, Satara, Sangli and Poona Districts. With the advent of modern and cheaper playing cards, this craft has now received a set-back and only one person, Shri Pundlik Govind Chitari by name is now engaged in it.

(3) *Smoking Hubble-Bubbles* (*Gudgudis*).—These were also prepared by some carpenters. The hubble-bubble consists of 4 parts, the coconut shell (*beli*) the standing tube (*meru*), the tobacco bowl (*chilim*) and the pipe (*nali*). The coconut shell (*beli*) was sometimes polished and ornamented with silver. It was artistically designed by inlaying amalgam of silver and garlic juice, as an adhesive. The standing tube (*meru*) and pipe (*nali*) were made of teak or white wood on turning lathe which required considerable skill. The hubble-bubble was painted with colour dust locally named " Chinese Red " which was then available at 3 tolas for 16 paise Indigo was also used. The art of making hubble-bubble is no more followed.

(4) *Horn work.*—Before 1880, thirty to thirty-five different kinds of fancy articles were used for *Abhisheka* (dropping water over idols) and for keeping gun-powder and prepared by a few carpenters using considerable skill from bison's horns. The prices of the horns varied according to size from Rs. 2 to 8. The horns were partly found in Savantvadi itself and partly brought from Malabar. The left horn is more useful as a water horn in religious ceremonies, and fetches a higher price. The horn is heated on a temparate fire and then softened with coconut oil and wax to make it malleable. The required articles are then made from it by using different kinds of chisels and other instruments such as scrappers, files, etc. The articles made from bison's horns are lotuses, caskets for keeping idols, cups, trays, small lamps (*niranjan*), ink-stand, pen-stand (*kalamdan*) and different types of animals. The demand for these articles is diminishing day by day. Now these articles are made only if someone places an order for presentation. This art is also gradually vanishing.

(5) *Flowers and Garlands.*—These are made from wood and from the root of a bush locally called " Bhend ", found on the banks of lakes and rivers. While cutting the roots, the person has to apply oil to his body to prevent leeches infesting the roots from sucking his blood. " Bhend " is peeled into very thin sheets by sharpened knife and coloured appropriately. They are then given a shape of a bud, flower etc., and placed in a row tied with thin wire. A coloured paper is pasted on the wire to screen its presence. The " Bhend " is also brought from Kalghatagi in Dharwar District or from Halyal and Sirsi villages of Kanara District of Mysore State. The " Bhend " costs about Rs. 25 to 30 for 1½ md., or about 56 kilograms. The demand for these articles is, however, limited to the local market only and so this craft is at present pursued by a few *Chitaris* only.

(6) *Bahulya* (*wooden dolls*) *and Supalya* (*small winnowing fans of Bamboo*).—These toys are used as play-things by children, mostly girls. The dolls are fashioned by some carpenters and others from Kunkeri

and other villages of Savantvadi Taluka and winnowing fans are prepared by Mahars of Savantvadi. They are purchased and further processes are carried out by Chitaris and others at Savantvadi. This craft is said to be in existence since a long period.

(7) *Imitation fruits.*—These are prepared from wood and coloured realistically by the *Chitaris* with best workmanship. The fruit models closely resemble the fresh fruits and defy all attempts of detection. The imitation fruits had formerly a market throughout the Bombay Presidency.

(8) *Lacquered toys and furniture.*—This art was introduced in Savantvadi by the *Chitaris* prior to 1840. The articles, especially, a full set of toys, used to be presented to a newly married girl by her father-in-law. Wooden seats (*pats*) and toy cradles are also prepared. Quality household articles like *polpat* (a board for making *chapatis*), and *latne* (a rolling pin), churners, spoons, etc., are also made by the carpenters at Savantvadi mostly from "Hed" (Adina cordifolia) wood which is found in abundance in Savantvadi. The other materials, viz., lac and colouring stuff are imported from Bombay. The demand for these articles, however, does not appear to be increasing.

The use of lac might have probably suggested the use of word "lacquer ware" for describing these toys. His Highness Rajasaheb Shrimant Shivaram Savant Bhonsale, M.L.A., has a large collection of well known articles of lacquer-ware and other articles which give the past glimpses of the handicrafts at Savantvadi.

The history of development of toys at Savantvadi is very interesting. There is, however, no written literature or any written documents regarding the development of the industry though the craft had the patronage of the Ruler of the State. The reported history of the craft is as follows:—

The origin and development of toys at Savantvadi date back to 1880. As referred to in the earlier paragraphs. Hubble-Bubbles were made at Savantvadi in the past. The two parts, namely, the standing tube (*Meru*) and pipe (*Nali*) of wood were made on a wooden turning lathe. Sarvashri Sonawadkar, Kalelkar and Kudalkar, Maya Panchals by caste, were the only artisans engaged in this craft. Shri Mhapsekar, a Vaishya by caste, and Shri Kelkar, a Brahmin by caste, started production of handmade toys. His Highness, the Raje Saheb, the Ruler of the erstwhile Savantvadi State, periodically visited the manufacturing establishments and inspired the workers to prepare different articles. As desired by him, paper weights, flower pots and vases were produced on turning lathes in 1885 with any one colour either red, green or black being commonly used. The painting work was done by *Chitaris.*

During the period 1885-1890 some distinguished state visitors, mostly Europeans, frequently visited the place and guided the artisans by giving them different designs. They used to place orders for costly wooden articles for presentation to their relatives and friends on the eve of marriages, or festivals. The articles manufactured were thus exported to foreign countries through the Political Agent stationed at Savantvadi. From 1890 onwards the manufacture of *songti* (*a die*) i.e., a small wooden piece with conical shape used for playing and toys in different colours was taken up and produced on a large scale. The multi-colours made in Germany were used and obtained it is said, through the Agents of Havero Trading Company, Bombay. Lac in charming shades was first introduced in 1895. These manufactured articles were purchased locally and displayed by Shri Baburao Kelkar in his shop who is said to be the pioneer shop-keeper dealing in these articles. Subsequently he employed certain artisans and started his own establishment. Till then the artisans used to manufacture the articles individually at their own houses. Different kinds of designs and shapes were introduced by Shri Kelkar after studying the trend of different markets. With the expansion of markets, the articles also used to be nicely packed in cardboard boxes. Other individuals being attracted to this trade also started their own concerns.

Manufacture of imitation fruits from wood also started simultaneously. Round about 1910 the industry at Savantvadi was said to be at the peak of its prosperity and enjoyed the full support of the then Ruler of the State. The oldest establishments were converted into limited concerns. In the period 1920-1925 there were three limited companies engaged in the manufacture of wooden articles, namely: (1) Apte Industrial Work Ltd. (1918), (2) Kudalkar Industrial Work Ltd. (1918) and (3) Kelkar Toys Work Ltd. (1920). Toys, *Ganjifa* and fruits were manufactured in the Apte Industrial Works which had a total strength of 40 workers (including 18 skilled artisans). Cabinets, furniture, toys, wooden seats, *supalya* (winnowing fans) and wooden dolls were the main articles manufactured in the Kudalkar Industrial Work which had a total strength of 90 workers including 30 skilled ones. About 60 persons including 22 skilled workers, were engaged in producing furniture, racks, baskets, etc. in the Kelkar

Toys Work. An oil engine was offered by the Raje-Saheb of the State to Shri Kelkar for running the turning lathe. But it was not found suitable for lacquer work articles. These limited companies were however, liquidated in 1928 and the master craftsmen started their own small establishments. These establishments also fell on evil days because of slump period and were ultimately closed in 1930 due to lack of market and the individual craftsmen started the work in their own houses.

Amongst prominent individual artists, mention may be made of Sarvashri Kalelkar who had 30 turning lathes, Otawanekar who owned 2 lathes, and Satoskar and Sonawadekar who owned one lathe each. They all belonged to Maya Panchal caste. Their art of manufacturing beautiful articles was very much recognised, appreciated and patronised. Shri Kudalkar has received merit certificates and medals for his best workmanship of lacquer ware and toys from the Industrial Companies abroad during the period of 1918 to 1925 while Shri Kalelkar obtained certificates and medals from the rulers of different Indian States from 1925 to 1937 for his art of toy making and horn work. This bears ample testimony to the excellence in craftsmanship of the craftsmen who made these articles with exquisite skill.

The articles were exhibited in 1925 in the Poona Industrial Exhibition through the State authorities and were well advertised. Agricultural show at Belgaum held in 1937 also provided a good opportunity for exhibiting the articles which were displayed in the Savantvadi State stall. This gave necessary publicity to the art. Shri Ramchandra Bhivaji Kalelkar was a recipient of a gold medal as the toy made by him on a turning lathe was adjudged the best on show in the exhibition. The craft was at the pinnacle of its prosperity in 1910 but started declining since 1930. Again it flourished since 1942 onwards and reached the peak of its prosperity in 1945 in which year articles worth Rs. 1,50,000 were produced. Again it started decaying from 1948 and has not yet recovered.

The craft appears to have received a set-back in 1948 due to defective channel of trading. The middlemen advanced money to the craftsmen, collected the finished goods and consigned them to Bombay. The craftsmen throughout remained in the dark about the correct value of their products and the extent of the demand in outside markets which resulted in the craft once again falling on evil days. Some of the other reasons for the decay of the craft are :—

(1) The main raw material viz., wood which could be obtained abundantly from the forest area free of cost is no longer said to be available freely.

(2) The prices of raw material have gone up resulting in the rise in the cost of production.

(3) The demand for the products, which can never be said to be necessaries of life, has slackened due to their relative high prices and change in taste amongst the purchasers.

(4) Flooding of the markets with analogous plastic goods is another reason for the set-back of this craft. The plastic toys are more popular among the consumers on account of their better finish, relative low cost, etc.

(5) The craft no longer received the same support from the Ruler of the State which it had prior to the State's merger with the Indian Union in March 1948.

The present monograph deals with the following crafts viz. :—

(*a*) Wooden toys.
(*b*) Wooden imitation fruits,
(*c*) *Supalya* (winnowing fans), and
(*d*) Wooden dolls.

The description of raw materials, processes of production, details of craftsmen families, etc., in respect of above crafts are given in this monograph.

Specimens of
fruits prepared from wood at Sawantwadi
are illustrated on the following three pages.



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CHAPTER III

RAW MATERIAL AND TECHNIQUE OF PRODUCTION

This Chapter gives the description of raw materials and other auxiliary materials required for manufacturing wooden toys, wooden imitation fruits, *Supalya* (winnowing fans) and wooden dolls. The various stages involved in manufacturing these wooden articles are also mentioned in detail in this Chapter. Finally a short description of the articles produced and of the workshop in which these articles are produced is given.

Raw Material

(1) *Wood.*—Wood of different trees, light in weight is used in manufacturing of toys. Those manufactured on turning lathe need a special variety of wood of white-wood tree or " Kala Kuda " (Wrightia Tinctoria). This tree is also known as "Dhudhi-Kalakuda", "Pal", and " Khirani ". It is scattered in Mysore, Rajputana and Banda in Uttar Pradesh. About 10 to 15 years back, it is said that wood of "Hed" (Adina cordifolia) was commonly used for making toys on turning lathe due to its qualities of susceptibility to seasoning, very evenly grained, moderately hard, etc. It is, however, not used now-a-days for making toys for it develops cracks in a short period, though it is used in manufacture of furniture. The white-wood trees are found in abundance in Savantvadi and in the nearby forests. The tree is purchased and felled generally in the rainy season as otherwise its wood is infested by moths and other insects. The price of a tree with a circumference of about 3 to 4 feet at the trunk is about Rs. 10 to 15. The artisans, however, prefer to buy head-loads of approximately 1·50 mds. of this wood for Rs. 1·50 to 2·00 from the local persons belonging to Dhangar caste who gather or cut the wood from the forests. Wood with knots or bends or which has developed cracks is not useful for the manufacture of toys. The wood is stacked under a roofed room to prevent it from developing cracks due to sun. The wood is chipped while in wet state by saw and adze and cut into small pieces 15 inches in length each. This also helps the drying of the chunks of wood in 15 to 20 days, where it would otherwise take 1 to 2 months. Lacquer work is not possible till the wood is completely dried.

For manufacture of imitation fruits the Indian coral tree (Erythrina Indica), locally known as ' Pangara ' is usually preferred. This wood is very light in weight and very easy to scrape with a file. The wood is white to gray in colour and in the centre it is brown. It is sufficiently durable and soft for making many articles. The trees are found in abundance in the open country and hill forests of Savantvadi. The tree with 3 to 4 feet circumference at the trunk is available for Rs. 6. The price of ready-made workable wood is Re. 0·75 per cubic foot and is available from the local saw mills. The felling of the trees is undertaken on the eve of Diwali Festival (October-November) and the felled trees are kept in the open for exactly one year to dry. The bark of the wood falls off during its drying stage. The wood is then stored in roofed rooms above the ground surface to prevent from infection from other insects.

The wooden dolls are prepared from the wood of " Biba " tree commonly called as " Marking tree " (Semecarpus anacardium). These dolls are, however, not made at Savantvadi but are brought from Kunkeri, a village at a distance of 4 miles from Savantvadi and other villages, though they are coloured at Savantvadi. The wood of ' Biba ' tree is very brittle and is white in colour. The sap of the leaves or of the wood causes irritation on human body. It is, therefore, cut right from the roots and then cautiously cut into smaller pieces of 15 inches or so, rubbed in earth and kept for 2 to 3 days in erect position to allow the harmfull juice from it to flow out. The bark is then removed from the wood which is then ready for doll making. This tree is also grown in the forests.

The small branches, blades or sticks of guava tree (Psidium Guyava) are generally used as petiole of the fruits or pedicels of the bunches of fruits. This material is locally available free of cost.

In making *Supalya* (small toy winnowing fans), thin splints of bamboo are used. These bamboos are available throughout the forest area and in the open country. There are three varieties, namely, (1) *Velu*, (2) *Kalak* and (3) *Vasa*. It is said that the variety of bamboos locally named " Kapashi " or " Mes " is most useful for preparing winnowing fans. Bamboos grown on rocky soil, it is said, have knots at short intervals while those growing on other soils have knots at a distance of 15" to 18" from each other. The latter variety of bamboo is mostly used. The bamboos are cut in any season except the bright half of any month. There is a superstitious belief that if the bamboos are cut in the bright half of a month, they get affected by a disease locally called " Barad ". The hollow bamboos which are less than one year old with cavity inside are considered to be good for obtaining very thin splints of required breadth. The splints generally do not break due to the moisture contents. The tender and moist

bamboos which are large in diameter as compared to others are peeled within 2 days from their felling so as to get the maximum breadth with minimum thickness of the splints. The bamboos are available at Re. 0·75 to Re. 1·00 each. The artisans at Savantvadi prefer bamboos from village Karivde which is 3 miles away.

(2) *Colours.*—Colours which play an important part in the manufacturing process of toys are available locally and are also imported from Bombay and Kolhapur. The artisans themselves prepare some colours on rare occasions as they are supposed to be more durable and attractive. Black colour is prepared from the black soot of Kerosene oil lamps. Other colours such as red, yellow, green, etc., are prepared from the leaves or juice of some trees. The method and the ingredients for making these colours as also the names of the trese etc., were not disclosed as the craftsmen treat the processing and materials used for making colours as trade secret. However, all the artisans do not prepare the colours themselves because of the labour and time involved but use, on the other hand, ready-made colours available in the market. Aniline dyes are usually used for colouring of toys while synthetic colours are used for colouring of imitation fruits. Indian made colours, known as lake colours, are used for making of imitation fruits. These colours are —

(*i*) *Green colour*—prepared from a proportionate mixture of yellow colour and indigo.

(*ii*) *Yellow colour*—available locally. Its price is Rs. 4.00 per kg.

(*iii*) *White*—(Oxide of zinc) available locally or from the Waldie's Zinc Pigments Ltd., Konnagar India. Its price is Rs. 1·12 per 500 grams.

(*iv*) *Cochineal*—available from local market at the rate of Rs. 3·50 per packet of 8 tolas.

Other colours with "Horse brand" known as "Crimson lake 5 B republic" colours available locally are also used.

For colouring toys, aniline colours (foreign as well as Indian) are used. The colours are mixed with lac and made into small sticks before they are ready for use. Only water colours are used. Foreign colours are costly and some times not readily available and hence Indian colours are also used. Gum which is available locally at Rs. 2 to Rs. 2·25 per lb. is mixed with colours prior to their application to the toys. Varnish, a necessary ingredient for giving shining finish to the toys is purchased locally. A varnish tin containing 0·455 litres (Lotus brand, Jalsico products) is available for Rs. 2 a tin. Some artisans also prepare varnish. The method of preparing varnish is described elsewhere in this report.

(3) *Coloured earth.*—Coloured earth, locally known as "*pili mati*" is used in the manufacture of imitation fruits. The earth is mixed with powdered tamarind seeds and made into a paste. This earth is found in abundance at village Otavne, 5 miles from Savantvadi. It is dug from the pits with crowbars and pickaxes in the summer season. The price of this earth varies from Rs. 1·50 to 2 per bag of one hundredweight. Only half the quantity of the earth in these bats is useable as the rest is wasted due to the hard crystal contents in it.

(4) *Tamarind seed.*—Tamarind seed paste is used for the coating on the toys along with "shed" or used in lieu of gum. It is available locally or brought from Belgaum. The price is 6 paise per kilo.

(5) *Other minor materials.*—Other minor materials required are thread or thin iron wire used in the making of leaves on the stems of the imitation fruits ; waste paper and worn out cloth, mostly of saris, required to be pasted on *Supalya* of fruits before they can be subjected to the process of colouring, used post cards utilised for making leaves; lithophane, locally called 'Bolu Dagad' used in the preparation of colours; button lac, locally called '*Chapi Lakh*' used in the making of lacquer wares; nails etc., which are available locally. The units of raw materials and their prices etc., are given in Appendix 1.

In order to preserve the artistic nature of the products of the craftsmen, an attempt is always made to protect them from outside elements. In respect of toys, paints, varnishes, etc., are manufactured and applied to toys in order to retain their original shape, colour, lustre, etc. The process of the preparation of these paints etc., is always kept a trade secret. However a brief description of the same is given below:—

(1) '*Shed*' *or paste.*—The yellow coloured earth, '*pili mati*', is sifted in a wire gauge sieve to separate the foreign elements such as mica, sand, stone, etc. This particular type of clay is considered to be suitable as it contains an ingredient, locally known as "*Kupinder*" stones. The foreign elements are rejected and the remaining clay is mixed with water. This mixture is filtered through a thin cloth and the filtered water so obtained is used. After every two hours this process of filtering is done for the required number of times and the mud like consistency which appears at the bottom of the pot in residual form is collected. The ball of this mud is covered with a piece of cloth and kept in a basket at least for 4 to 5 days so as to allow the last drop of water contained in it to drip out. The covering of cloth on the clay ball also helps to protect the ball from dust and

other unwanted elements while it is in wet stage. It is then again kept in open for 8 days, to dry. Tamarind seeds are pounded into powder and allowed to be soaked for a couple of days. The tamarind seed paste is then pressed in a "*Ragada*" (stone mortar and pestle) and made into a ball which, when mixed with required quantity of water, becomes sticky, like gum. The clay ball referred to earlier is then pounded into powder. The powdered earth is mixed with sufficient water and the mixture is shaken for half an hour in order to make it into a paste. The tamarind pulp is then mixed with the paste of the clay in the ratio of 1:10. The mixture is decanted and when the material settles down, the surface water is poured out. The solid material at the bottom is then made into balls which are later dried and stocked. The process is labourious and involves special techniques.

(2) *Khal or Chikki.*—The tamarind seeds in shell are pounded and made into powder and kept immersed in water for one and a half hours. The pulp so obtained is then pressed in a "*Ragada*". It is then mixed with sufficient water and kept boiling on fire. While boiling care has to be taken, by frequent stirring, to prevent the mixture from burning. The paste is shaken and when it thickens and becomes sticky like gum it is allowed to cool down. This paste is made use of as gum.

(3) *Lambi (Putty or Glue).*—It is an adhesive substance used for filling the cracks developing in wood. The *Lambi* is made from "Pili Mati" by mixing it with the pulp of tamarind seeds. This mixture, after it is heated on fire, is made into a thick paste. The difference between *Khal* and *Lambi* is one of thickness. The latter is more solid than the former.

(4) *Lac-colour pieces.*—These colour sticks are made in different colours. The lac available from the local market is made into powder and sifted in a wire gauge sieve. It is then mixed with proportionate quantity of water and stirred well so that it should mix up fully. It is then kept on fire. After some time colour dust is mixed with it. The compound is then taken on a flat wooden board and beaten by a stick so as to mix the colour thoroughly. The flat sticks of required length (approximately 1/2" to 6") are made before the compound cools down. The sticks are then cooled and stocked. This is a labourious work because the sticks are made while the compound is in hot molten stage.

(5) *Varnish.*—As the price of tinned varnish available in the market is high, some craftsmen prepare varnish themselves. This indigenous varnish, according to local craftsmen, is more durable and attractive, and hence the artisans use it in large quantity. Red kerosene oil is mixed with a kind of resin locally named "*Ral*" (shellac). One kilo of *Ral* is mixed with one bottle of kerosene oil containing 22 ozs. This compound is boiled until it is converted into sticky substance like gum. This varnish is used only in its molten stage with the help of cloth or brush.

(6) The leaf of "*Khara Kewada*" (Pandanus Ordoratissimus). It is used for giving a final finish to the coloured articles made on turning lathe. There are two varieties of this bush locally named as *Kewada* (white) and *Ketaki* (yellow). The former variety is used. It is found in abundance on the sea-coast. The bushes of *Khara Kewada* get ripened at the time of *Gokul Ashtami* (July-August). The leaves are cut in the months of January-February and are rolled after removing the thorns. This roll is kept under the sun for two months and then stocked in straw in a warm place in order to protect the hardness of the horizontal lines of the leaf from becoming smooth and mild. This stock has to be used within a period of three years, otherwise it loses its property. Both sides of the leaves are used for spreading the colour evenly on the surface of toys etc. During summer a little water is splashed on it before use. One headload of *Khara Kewada* is available locally at Rs. 1·50 to 2. The *Khara Kewada* can also be used in place of sand paper to obtain smooth surface of the toy.

(7) *Brushes.*—Brushes of goat's hair are made by craftsmen themselves engaged in making imitation fruits, because of the high prices of the ready-made brushes available in the market. It is also claimed that these brushes are more useful and durable for colouring of imitation fruits. The hair from a goat skin are sufficient to make 60 brushes. The price of a goat-skin is approximately Rs. 10. The goat hair after some chemical processes are tied by a thread to bamboo strips and smeared with gum. Gum is applied repeatedly for required times and allowed to dry.

Manufacturing of Toys on Turning Lathe

Wooden toys, which are used mostly by girls in their game of "*Bhatukali*", discussed elsewhere, are manufactured on turning lathe. Some decorative articles e.g., incense-stick stand and utility household articles like rolling pin, churners, etc., are also manufac-

tured by these craftsmen on turning lathe. These wooden articles are lacquered by process known as Lac-Turney.

Cylindrical blocks are cut from the logs with a tool called *Tasani* (adze). The blocks are made into pieces of requisite size with a hand saw. The artisan sits on the floor in front of the lathe and proceeds with his operations. The wooden piece approximately 1 to 1½ feet long and 4″ to 6·5″ in circumference is fixed between the points or pivots of the hand operated lathe. The wooden piece is balanced horizontally with iron pivots. Mule of the *Sangada* (hand propelling lathe). It is adjusted by moving the left hand block of the *Sangada* or the right hand side block through the slits and the piece of wood is fixed with the iron pivots. Tool rest is used to make sure that the log of wood is fixed exactly horizontally and also for using the tools which give required shape to the piece of wood. The lower part of the tool rest is firmly held by the craftsman under his thigh. A heavy weight, usually a stone slab, is kept on one side of the *Sangada* so that it should not move while it is working. When the cylindrical block of wood is adjusted on the *Sangada,* a portion of it, about 4″ in length, usually the one on the left hand side of the craftsman, is smoothened with a "*Patali*" (chisel). This smooth portion of the block of wood is then coiled three to four times by string for propelling the lathe. When all the required number of articles are prepared from the block of wood, this portion (i.e. 4″ in length) is useless and goes as a waste. The block of wood is marked after measuring it by callipers, at required distances according to the size of the articles to be turned out with the tool called "*Kanta*" for making different articles out of it. The piece is usually marked at 7 places to make 7 articles out of it, each article having a diameter of about 1½″ to 2″ and height about 1½″. Different grades of strings are used for propelling the lathe for different kinds of toys. At the time of giving rough shape to the block of wood a thicker string is used but if any minute or intricate design is to be carved, thinner strings are used for propelling the lathe. The unskilled worker, who pulls the string and releases it at regular intervals, sits at a distance of about 2½ feet from the turning lathe. Therefore, a string 2·00 yards in length, is used for propelling. The unskilled labourer must have the knowledge of the speed required for different processes of turning. As stated earlier, seven articles each having 1½″ to 2″ diameter and about 1½″ height are turned out from a wooden piece of 1 to 1½ feet in length and 4″ to 6½″ in diameter. The piece is marked at equal distances according to the size of the individual article with the help of callipers. Then the artisan starts operating the first article from the marked portion of the piece at the extreme right side of it. The portion of the wood is smoothened by applying gauge against it, while the piece is revolving. There is no chronological order of the articles to be turned out but it depends upon the will of the artisan to turn out any article as he desires, but once he decides the article to be made, then the required number of the same article is usually turned out from the log of wood fixed to the *Sangada.* After applying gouge it is turned into desired shape with a sharp flat chisel which is pressed against its surface. Thus the artisan starts with a large tool and goes over the work several times with tools of finer and finer edges till he perfects his work in every detail of shape and curve. Thus he uses first the tool called "*Patali*" to make the surface smooth and then employs the tool called "*Churane*" to get the surface of the article, say, a pot. Then the surface is shaped with *Arhgol* to give the concave shape to the article. The "*Gol-Hatyar*" is used to shape the neck of the pot. Some lines are drawn near the neck of the pot with a tool called "*Kanta*". The lip of the pot is carved with "*Gol-Hatyar*". After shaping the outer side of the article, the artisan starts scooping out of the inner side of the pot. He uses "*Waked-Kanta*" to obtain the hollowing of the pot. For hollowing the most inner side of the pot he uses "*Tapeche Hatyar*" which involves careful applying of the tool. A slight mistake on the part of the artisan will produce a defective article. All these processes are carried out while the block of wood is revolving and by pressing the different tools against the piece of wood. Then a leaf of *Khara Kewada,* or sand paper is pressed on the revolving article to obtain a smooth surface and to remove unevenness. All these processes involve considerable strain on the eye as the articles to be turned out are very small in size and the artisan has to undertake a very minute work of carving. It is, therefore said, that the eyesight of the artisan fails early in his life.

Colouring

Colouring is the main and last process of the article turned out on the lathe. Colouring is done with the lac-coloured sticks prepared by the craftsmen themselves. These sticks are prepared of lac, litho-phane and various aniline dyes. The required coloured lack stick is pressed against the article while the log of wood, now in the form of an article, is in motion. The sticks get melted by the heat generated through the high speed with which the piece of wood revolves. Sesamum oil is applied to the iron pivots of the *Sangada* to prevent the wooden piece from catching fire due to the heat generated in the process and it also serves as a lubricant. In

winter season charcoal fire is sometimes held near the lac-stick to help it melt quickly. The lac-sticks are pressed against the toys till the designs are completed in all the required colours, the light colours preceding dark ones to get a shading effect. Thus the pot is given red colour first and then green colour is given. No double coating of any colour is required in this process. To impart an even coating and a shine, a piece of *Kewada* leaf to which a little coconut oil is applied is pressed against the lacquered portion. The horizontal grains of the blade of the leaf are useful for mixing the different colours and getting the shading effect. It also helps to obtain a glazing effect on the toy. Thus for a pot, two colours, red and green, are given and the borders of the colours are " mixed " with each other on that part by pressing the *Khara kewada* leaf on the border of two colours. The green colour serves as a border design while red colour is the principal colour of the pot. No colour is applied at the base of the pot. Colouring is also not essential for the inner side of the pot. The skill of the craftsman lies in mixing the different colours and obtaining the desired shading effect. The pot thus completed is then cut off, from the remaining piece by the *Chirane*. The remaining piece is then again fixed in the iron pivots by adjusting the blocks of the *Sangada* and then the craftsman starts his operations for the second article right from the beginning. Thus one article is completed in all respects and the worker takes up the next article to be made from the block of wood. For making vases the lid is separately carved. Making of tops and scraping of hollow space require more skill. In case of tops, the nails are used after removing the head and are fixed at the centre of the base. The colours used in this craft, it is stated, are quite bright at the time of application but gradually fade out.

A list of articles contained in the two sets (i.e. a small set with 12 articles and the complete set with 20 articles) is given in Appendix 2. The craftsmen at Savantvadi do not use modern power operated machinery to manufacture their goods. All the processes are done by hand.

The processes involved in making of imitation fruits are described below :—

Stage 1.—The logs, cut out of the trunk of branches of a tree by a rip saw are made into blocks or clumps of required sizes. These blocks are left to dry under shade for seasoning. When the wood is seasoned the small blocks are cut to the sizes of the fruits. Thus to make an imitation wooden apple of 10" circumference and 3½" in height, he cuts a square block of 4" × 4" size or a cylindrical block of 4" in length and required circumference with a hand saw. Many a time he has not to take actual measurement of the block of wood required to prepare a particular imitation fruit but he can imagine what kind of an imitation fruit can be made from a given wooden block. In the preparation of any fruit, he usually keeps a margin of 1/5" all around the fruit. An iron bar approximately 2' high with a circumference of 3" is embedded in the ground about ½' to 1' deep. The iron bar does not allow the block of wood to slip while working. The craftsman then starts scooping the wooden block by means of a file or chisel etc. held in his right hand while his left hand is engaged in holding the block in position against the iron bar. The shape of the fruits is scooped out with the chisel and other carpentry tools. Different kinds of files are used for scraping out the clumps until the rough shape of the fruit is obtained. Thus to make the wooden apple, he first scoops out the square block and gives it a shape of a ball . He uses adze (*Tasani*) for his work, then scrapes the conical portion by the edge of a plane (*Randha*) and then applies the half round file (*Ardhgol-kanas*) to obtain the rough shape of an apple. The upper portion of the wood apple where the stem is to be fixed is scooped out by a chisel (*patali* or *chirani*). He has also to use other carpentry tools in making of various imitation fruits. The rough surface thus obtained is smoothened with a file and sand paper. The nails (with or without heads) graded number 2 are used to prevent the further expansion of cracks, if any, found on the wood. If the crack is a large and one which cannot be repaired, the rough shaped fruit bearing the crack is not taken for further processing but split into two parts at the crack and used for other suitable imitation fruit. In no case a block of wood is wasted. The rough shaped fruits are prepared by the craftsmen of Maratha caste who do not undertake further processing but sell the fruits to *Chitaris* for further processing. The sale price of a set of 27 rough shaped imitation fruits is Rs. 4·25 and that of a set of 60 rough shaped imitation fruits is Rs. 9·50. They also sell a single variety in numbers, the price of which depends upon the size, shape, etc.

Stage 2.—The rough shaped fruit is again scraped by a file until it gets the right shape and size by the *chitaris*. The cracks and pores of the chipped wood are filled in with *lambi*. Nails are driven in, if required, to prevent the further expansion of cracks in the wood as discussed in Stage 1. The nails fixed in the earlier stage are examined and replaced, if necessary,

to prevent further expansion of the crack. It is then smoothened with sand paper. Care is taken to scrape only the required portion of the clump in order to get the correct shape of the fruit. The fruit is then smeared with sticky paste of tamarind (*khal*) by fingers. This helps aslo to obtain a very smooth surface of the fruit. The pieces of cloth are then pasted all along the portion of the fruit. Tissue paper was used previously but as the price of the paper is high, worn out cloth of loose texture is used now-a-days. This cloth is pasted on the fruit to prevent the possible future damage to wood inside and to screen the heads of nails, if any, used and pores still remaining on the surface. The cloth is pasted on the fruit in such a way as to defy detection after it is painted. The cloth coat makes it more durable. One more coat of *khal* is then given to the fruit by 1½" brush and then it is kept under the sun to dry.

Stage 3.—After it is dried completely, the fruit is coated five times with *shed* i.e., paste made of coloured earth and tamarind pulp by a brush of 1½". The fruit is allowed to dry after every successive coat. A hole is made into the fruit, if required, at its stem with a scriber and it is supported on 6" stick which is then fixed on a wooden board. At time 10 to 15 fruits are thus supported on bamboo sticks fixed on a wooden board. The fruit is then polished by a polish paper or sand paper graded 1½" number till the last three coats of the *shed* (paste) are removed. The fruit is now ready for colouring.

Stage 4.—Colouring process is supposed to be the main process in the making of imitation fruits, as it is the colour which gives charm and a touch of reality to them. Different kinds of water paints are used. Green, yellow and white colours are more in use. In addition to the brushes available in the markets handmade brushes are also used for colouring. The dust colours are mixed in water with required quantity of gum. *Litho-phane* locally named "*Bolu Dagad*" is rubbed on "*Sahan*" (a plain slab of stone) with water. The paste so obtained is also mixed with the colours to give a glazing effect. A thin coat of white colour is first given, followed by two more coats of the required colour. For multi-coloured articles. the colour which covers the major portion of the fruit is coated twice and only one coat of the remaining colours is given to produce a light and shade effect. Handmade brushes are generally used for giving colours which cover the major portion of the articles while ready-made brushes available in market are used to give other colours. The colouring work is generally carried out in a dim light as, it is believed, the prepared colours get slightly changed in full light. After colouring, the fruits are rubbed by a woollen cloth to give them a shining. A piece of an old woollen blanket also serves the same purpose. Some craftsmen, on the other hand, use horns and very smooth stones to rub the articles instead of woollen cloth. Fruits of the same type, numbering 10 to 15, are painted at one time. In making fruits with odd shapes such as cashew-nuts, pine-apples, etc., all the processes described above are first undertaken for each part, and then the parts are fixed together properly with the sticky tamarind paste. Thus the green tuft of the pine-apple is made separately which is then set up in the fruit. In case of cashew-nuts the fleshy portion or the pedicels or the flower stalks of the nuts and the nuts are made separately. The nut is then fixed on the fleshy portion at its proper place. Making of a gourd, bitter gourd or drum sticks, etc., require more artistic ability and special skill. The beauty of these imitation fruits lies in their close resemblance, both in size and appearance, to the real ones.

Making of Leaves

Making of leaves is also important in this craft. The fruits with leaves present natural beauty. The leaves are prepared from used post-cards. The post-cards are scissored and made into the shape of the leaves. A thin iron wire is kept on the leaf so scissored up to its centre in such a way that at least 1½" of the wire is left outside at the bottom of the leaf. A piece of worn out cloth is wound around the wire with tamarind paste before pasting it on the leaf. The wire so coated is then pasted on the leaf with tamarind paste and a piece of waste paper. The leaves are then coloured with the appropriate green colour in natural state and the veins and veinlets of the leaves are drawn in yellow. The leaf is then smeared twice with varnish to give a glazing effect. While making petioles also the above processes are followed.

Stem or Pedicel

The thick pedicel is made of a strip of guava wood (*peru*). Both the ends of the guava strip are pointed. The extreme end of the wire of the leaf is then tied at the required distance to the pedicel with thread. Worn out cloth is pasted around the pedicel at the joints to make the thread invisible. Care is taken while fixing the leaf to the pedicel that the pasted side with waste paper and wire of the leaf faces inside towards the stem. The leaf is fixed to the pedicel at an angle of less than 60°. This also helps to make the waste paper pasted



A craftsman applying " Khal " to wooden fruit



A craftsman painting a wooden fruit



A craftsman painting a wooden fruit while his wife is preparing flowers out of 'Bhend' tree



A craftsman of wooden fruits in his shop-cum-workshop

on the leaf, invisible. Required number of leaves are thus tied to the pedicel which is then covered by worn out cloth and is coated with " shed ". It is then appropriately coloured. The pedicel is fixed into the fruit at its proper place.

In respect of stems without leaves, they are prepared out of wire by coating it with *Khal* and coated with worn out cloth. It is then appropriately coloured and fixed to the fruit.

While preparing a bunch of fruits, stems of fruits are made of wire. These stems are tied with wire to a strip made out of guava wood and covered by pasting worn out cloth as above around the joints as well as around the strip. The stem is then coated with " shed " and coloured by brushes.

All the imitation fruits and vegetables are made of wood with the exception of grapes and black-plum (*jambhul*) which are made of resin and ginned cotton. In respect of making a bunch of the grapes, and making of black-plum, all the processes are carried out by the *Chitaris* themselves. The making of a bunch of grapes is different from that of other fruits. Required quantity of resin is melted in a pot. When the resin is melted completely ginned cotton balls attached to the end of a thin wire are dipped into the molten resin. Dipping is repeated four to five times to get the required size and shape of a grape. After every dip it is cooled so that it should become tough. The wires are then tied together to make a bunch. As the resin is somewhat transparent the inside cotton ball resembles the seed and the outer part as the fleshy portion of the grape. Preparing of grape requires special skill.

A list of articles included in the two sets (i. e. small set with 27 articles and the complete set with 60 articles) is given in Appendix 3.

Manufacturing of Supalya

The toy winnowing fans are manufactured from tender bamboos. The bamboo is split up into four equal parts with a tool called " Pal " (scythe) and wetted for a day or two. Thin splints of required thickness are then split out of the split bamboos. They are again split to form fine strips which are used as 'warp' and 'weft' of a *Supali*. The 'warp' and 'weft' strips are of equal thickness and width. The splints are splashed with water before they are used in making *Supalya*. Each strand of approximately $2\frac{1}{2}'$ long is woven alternately over and under the other. After every small bit of the *Supali* has been woven the portion is pressed by the same tool with its blunt side to eliminate any unevenness between the rows of weaving. The weaving starts from the " head " of the *Supali* and when the required size of the upper portion of the head is obtained the weaver turns the upper portion of the head to 90° and continues till the end. The splints are woven in such a way that the weaving produces double walls which form some space in them and in which sand or small stones are deposited. The edges are neatly scissored and trimmed and the cut-ends are utilised for other *Supalya*. The edge of the splints of the woven *Supali* are inserted in the adjoining warp or weft. The borders of the two walls are then covered with a thicker strip and fixed by means of a very thin strand which works as a thread. Holes, through which this thin strand passes to bind the splints are formed at the required distances and corners along the border of the *Supali* by a scriber made of bone. The bone-scriber is only used to make holes at the borders of the *Supali* instead of an iron one for no specific reason. The two walls of the *Supali* are joined by binding them. The firm binding of the thick strip around the two walls does not allow falling out the sand or small stones deposited within. The sand particles or small stones produce sound when the *Supali* is shaken. The *Supalya* are made by Mahar women who do not undertake the further processing but sell them to the owners of establishment that paint them.

The " raw " *Supali* is smeared with tamarind paste. Small pieces of thin worn out cloth are spread. The cloth pieces are pasted in such a way that one piece of cloth does not overlap the other over the surface of the *Supali* which is smeared with tamarind paste and rubbed with stone so that it may not get pasted on the *Supali* unevenly. A big piece of cloth is not suitable for while rubbing, it may itself create unevenness. All the portions of the *Supali* are thus covered with small pieces of cloth and rubbed so that they should adhere to the *Supali* firmly. A thin coat of tamarind paste is then given to the *Supali* by a brush. This coating also helps to make its surface very smooth. The *Supali* is then kept under the sun for a day to dry. After the *Supali* is dried completely, it is coated twice with " shed " and again allowed to dry under the sun for a day. On the next day it is splashed with water and immediately rubbed with a horn or a smooth stone to smoothen the surface. It is then coloured with water colours. Two coatings of yellow colour are first given to the *Supali* and then various geometrical designs are drawn on its upper side in different colours, especially red. The back of the *Supali* is only painted yellow. It is then allowed to dry. After complete drying it is coated with varnish to give a glazing effect.

Manufacturing of Dolls (*Bahulya*)

The dolls, *Bahulya*, are made out of the wood of Biba tree (*Semecarpus anacardium*) and finishing touches to them i.e., painting, etc., are given at Savantvadi. The craftsmen carving out the dolls do not aim at having exact representation of human form but they strive towards simplification. They bring out features that impart mere suggestive expressions and leave out the minute details. The details of limbs, ear, nose, etc., are vaguely carved out. The dolls are, therefore, merely suggestive of human form lacking final details of the component parts. These unfinished dolls are purchased by the Savantvadi craftsmen at the rate of Rs. 1·60 per hundred and after undertaking further processes inclusive of colouring, sell them locally or export to other markets at the rate of 6 paise per doll by retailer and Rs. 3·50 per hundred at wholesale price.

The unfinished dolls are first kept under the sun to dry completely. They are then smeared with a thin coat of tamarind paste and again allowed to dry. After drying completely they are coated with "shed" with a 1½" brush. Then they are again allowed to dry. To secure a smooth surface the dolls are splashed with water and rubbed with a horn or a smooth stone. No cloth is wrapped around the dolls before colouring as in the case of imitation fruits or winnowing fans. Two coats of required colour are given to the dolls. Yellow colour is mostly used as the body-colour, black for the hair and red for painting the saree. After every colouring the dolls are allowed to dry. After all the colours have completely dried one coat of varnish is given. The back of the doll is always flat, unfinished and unimpressive. It is neither smoothened nor painted.

Tools and Appliances

Brushes.—Brushes are used in this craft for applying colours, *shed* and tamarind paste to the imitation fruits, small winnowing fans and dolls. In addition to the handmade brushes made of goat hair, "Camba" brand brushes of German make are also used. Brushes made in foreign countries are available at Bombay from Rs. 2 to 5 each, according to their grades. Indian made brush (1½" brush) is used for colouring and pasting of *shed* etc. This brush is available at Rs. 2·50 locally. The home made brushes are used for thin coatings of costly colours. They do not cost more than a rupee per brush.

Sangada (*wooden turning lathe*).—This tool is used for making lacquer-ware articles. This is a crude type of lathe. It is handmade and prepared out of wood by the craftsmen themselves. It is also available at Rs. 40 from the local carpenters.

Carpenter's Tools

The tools employed by the craftsmen are simple and in many shapes and sizes. Generally the tools are made of steel blade with wooden handles.

The tools in use are :—

(1) *Saws.*—Hand saws are used to get requisite sizes of blocks from wood.

(2) *Tasami* (*adze*).—It is a sort of axe used for chipping the wood.

(3) *Farashi or Patali* (*Chisel*).—This tool is employed for planing the wood

(4) *Goib or Ardhgol* (*Gouge*).—This is used to give shape to an article.

(5) *Kanta or Arli* (*pointed Chisel*).—This tool is used for shaping and cutting purposes. It has a pointed end from which it derives the name "Kanta" (thorn).

(6) *Chirane or Chaurashi* (*Flat Chisel*).—This tool is used for decorative carvings on wooden articles. The tool at Serial No. 3 above and this tool are similar except that the former has a wide sharpened end.

(7) *Wakadkanta* (*Bent pointed Chisel*).—This tool is employed for carving the inner side of the article to obtain hollow space inside and has a pointed and bent steel end.

(8) *Ardhagoal* (*Half Round pointed Chisel*).—This tool is also used to obtain the hollow space in the article. Unlike the "Wakadkanta" this tool makes the inner surface smooth and even.

(9) *Tapeche Hatyar* (*Flat Chisel*).—It resembles the tool at Serial No. 3 but is used for finishing the article by smoothening.

(10) *Gol Hatyar* (*Round Chisel*).—This tool is employed for hollowing the article like that at Serial Nos. 7 and 8. This tool is employed at the beginning to carve out a hollow portion in the article and other tools are employed later on.

(11) *Girmit* (*Country drill*).—This tool is employed to make holes whenever necessary. It has a wooden handle having a set of 8 bits. The handle is propelled by rope when it is to be employed. The required bit is fixed in the handle.

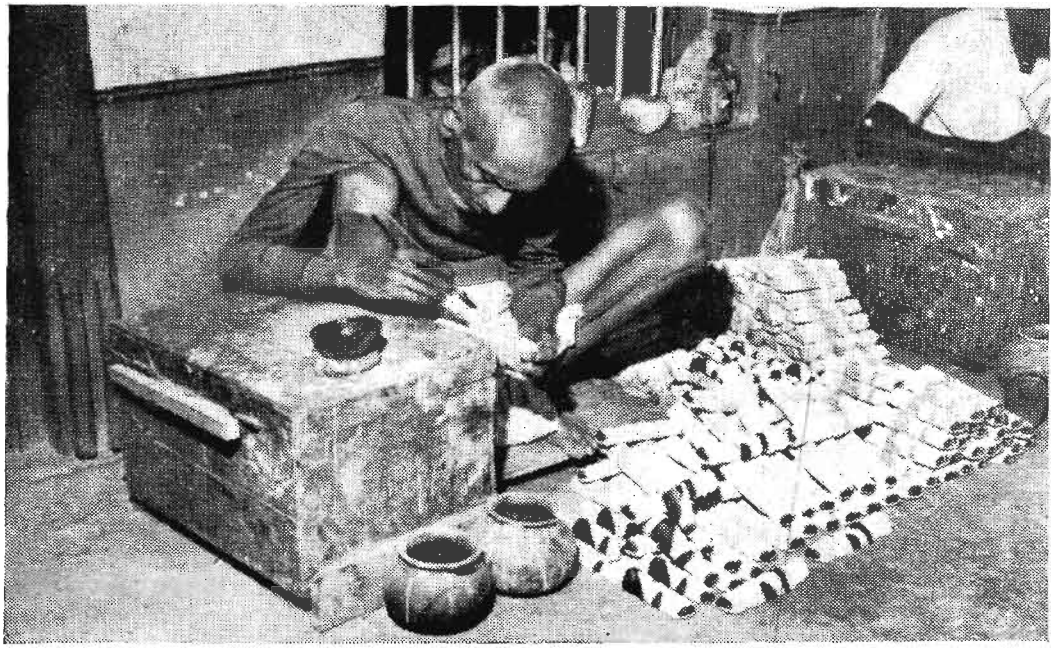
(12) *Randha* (*Plane*).—It is made of a wooden block and has a slit or cavity in the middle for having verticle space at the centre to fixing plane. This tool is employed for smoothening the surface of the wood or scrapping off unwanted portion from it.



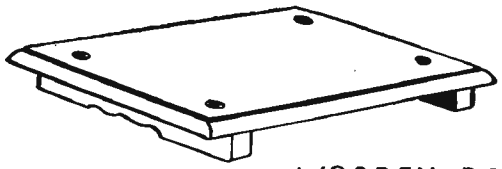
A worker preparing a " Supali "



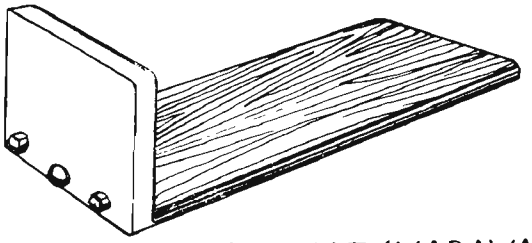
The painting of " Supali " (Toy winnowing fan) in progress.



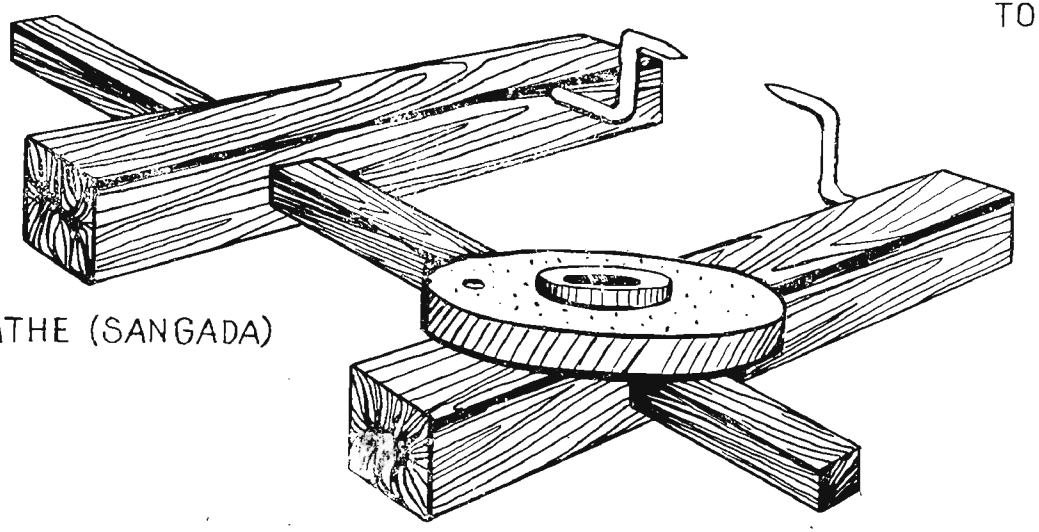
A worker painting wooden dolls.



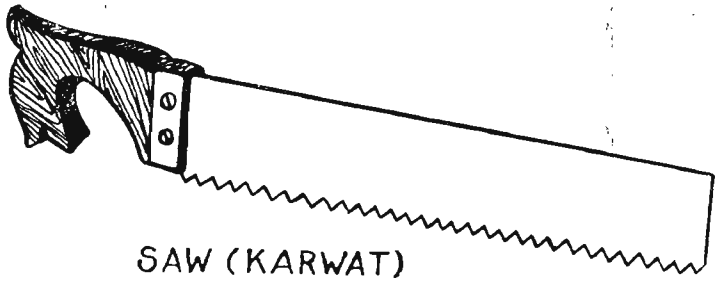
WOODEN BOARD (PAT)



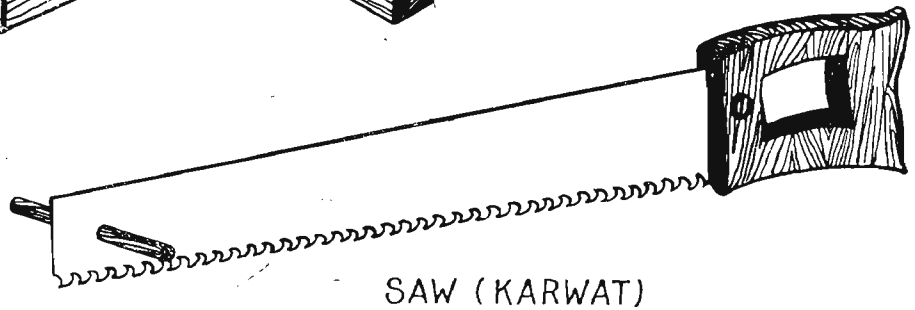
TOOL REST (WADAWAN)



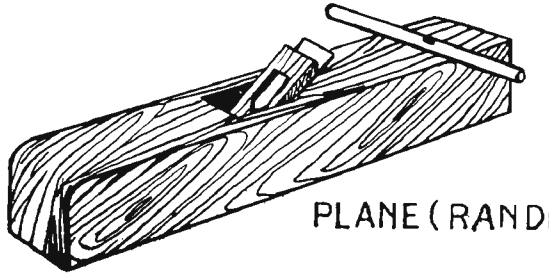
WOODEN TURNING LATHE (SANGADA)



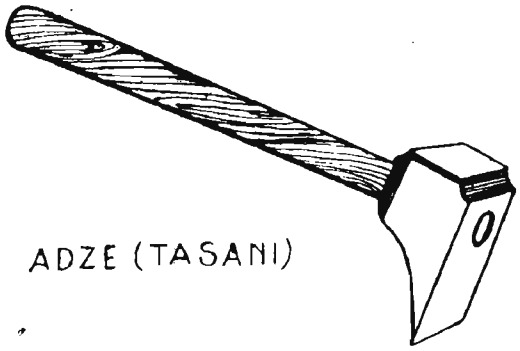
SAW (KARWAT)



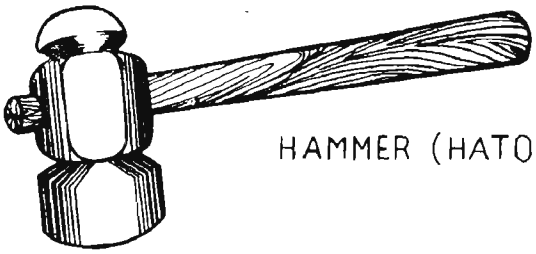
SAW (KARWAT)



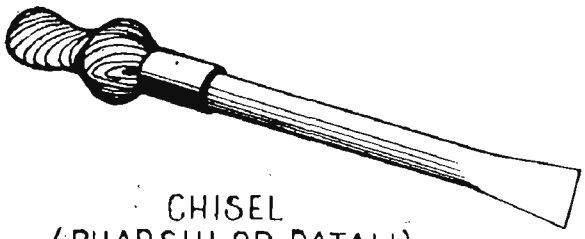
PLANE (RANDHA)



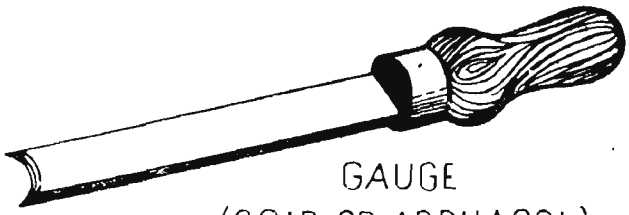
ADZE (TASANI)



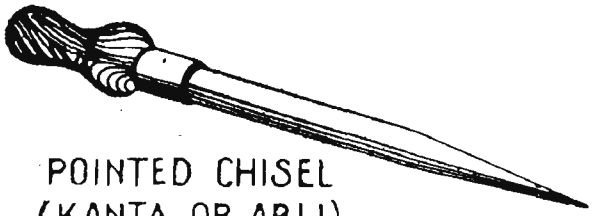
HAMMER (HATODA)



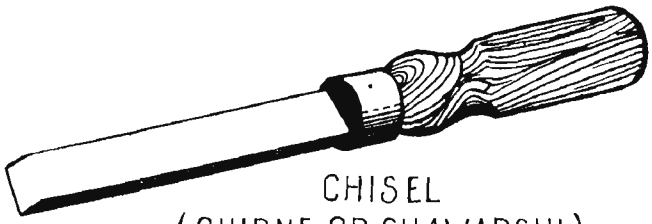
CHISEL
(PHARSHI OR PATALI)



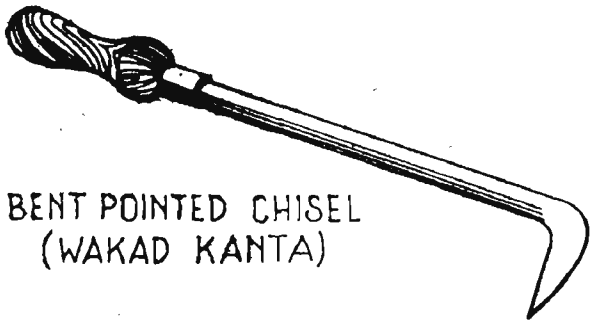
GAUGE
(GOIB OR ARDHAGOL)



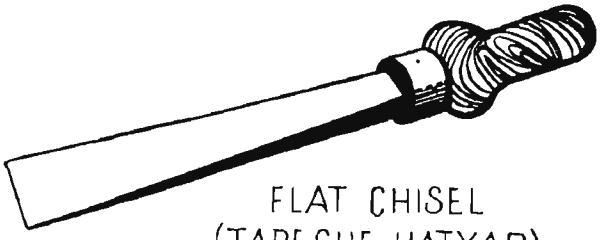
POINTED CHISEL
(KANTA OR ARLI)



CHISEL
(CHIRNE OR CHAWARSHI)



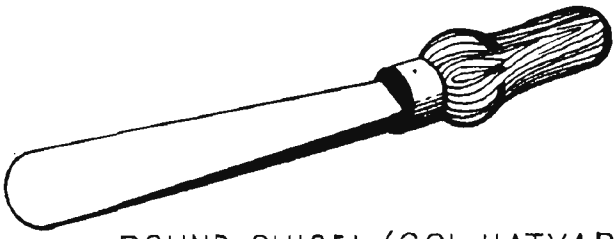
BENT POINTED CHISEL
(WAKAD KANTA)



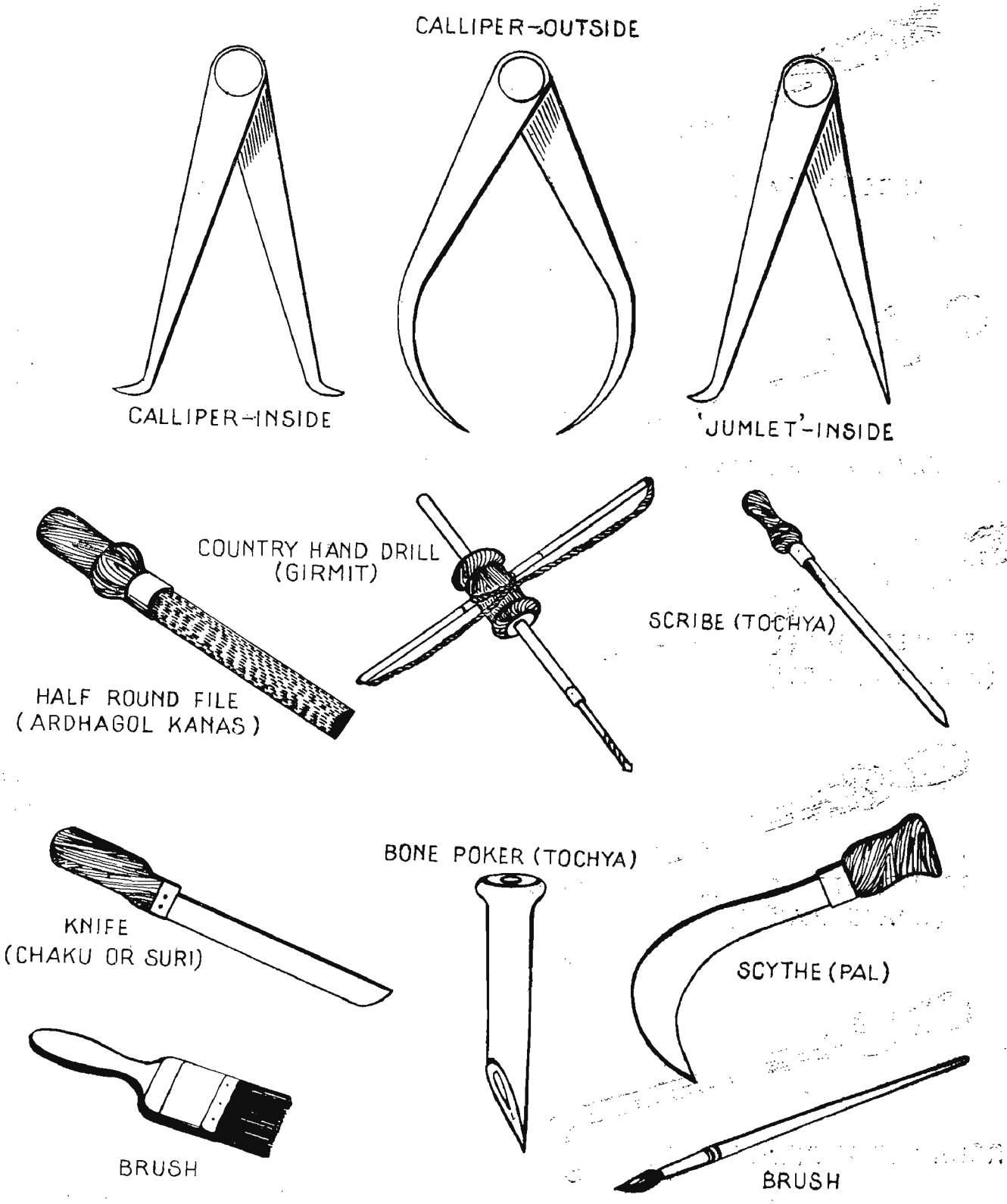
FLAT CHISEL
(TAPECHE HATYAR)



ROUND EDGE POINTED CHISEL



ROUND CHISEL (GOL HATYAR)



Tools and Implements

(13) *Fairs of Callipers inside, outside and Compass.*—These are measuring instruments and are employed whenever necessary.

(14) *Kanas* (*Files*).—Six kinds of files are in use for different purposes. One of them is used for sharpening the saw-teeths and is called saw file. It is flat and triangular in shape. The round file (*Gol Kanas*) is used for craping round objects. Half round file (*Ardhgol Kanas*) is used for giving shape to the wooden fruit. Blasted file is used for smoothening the surface of the wooden fruit and the rasp *i.e.*, *marfa* is used for scraping of large quantity of wood.

(15) *Hat-Karwat* (*Hand Saw*).—This saw is used for cutting wood and making requisite size of blocks.

(16) *Choti Karwat* (*Small Saw*).—This tool is used to cut the small blocks in required sizes.

(17) *Tochya* (*Scribe*).—It is a handmade tool of iron used for making holes of less depth than those made by a *Girmit* i.e., country drill.

(18) *Chaku or Suri* (*Knife*).—It is used for filling the cracks with "*lambi*".

(19) *Tochya* (*Poker*).—It is made of bones and is used to make holes in small winnowing fans to tie both the edges of double woven *Supali* with a thin bamboo strip which functions as a thread.

(20) *Pal* (*Scythe*).—The tool has a curved blade, edged on the concave side of it, and is fixed into a short stright wooden handle. It is used for cutting bamboos, for making strips and to smoothen them.

(21) *Hatoda* (*Hammer*).—This is made of steel block and has a wooden handle. It is used for fixing nails, etc., in the cracks of the imitation fruits.

Tools bearing serial Nos. 1, 3 to 10, 13 to 16 are brought from Bombay, though they are locally available. The other tools are available locally. The tool at serial No. 19 is made by the craftsmen themselves. The tools at serial Nos. 2, 12, 17, 18, 20 and 21 are sometimes purchased from the local blacksmiths. The tools at serial No. 16 are required to make articles on turning lathe. The tools bearing serial Nos. 1, 2, 11 to 17 are used by the craftsmen engaged in giving rough shape of fruits to the blocks of wood. The *Chitaris* use tools at serial Nos. 14, 17, 18 and 21. The only tools used for making raw winnowing fans are *Tochaya* at serial Nos. 17 and 19 and *Pal* at serial No. 20.

These tools are mostly of steel and have wooden handles.

The details of tools along with other particulars such as price, expected life, etc., are given in Appendix 5.

Other Material

Bamboo sticks and wooden boards are required for keeping imitation fruits while coating and colouring. These are made by the craftsmen themselves. Kitchen utensils such as brass bowls, mortar and pestles are required for pounding tamarind seeds and making paste. Dishes and bowls are used for keeping colours. Sand papers are used for smoothening the surface. Woollen rags are required to rub the surface of the artificial fruits to give shining. Wire gauge sieves are used to sift the coloured earth. Hammer is used for powdering the tamarind seeds, coloured earth, etc. Scythe and axes are required for cutting the wood. Cotton string of different thickness are used for propelling the lathe. Five varieties of this string are required *viz.*, $\frac{1''}{16'}$ $\frac{3''}{32'}$ $\frac{1''}{8'}$ $\frac{3''}{16'}$ and $\frac{1''}{4'}$. The string is locally available at Rs. 3 per pound. For sharpening the carpenter's tools "*Gunya Dagad*" (a kind of stone) is required. It is available in the local market. Large baskets are used for keeping unfinished articles as well as finished ones. Finished articles are also stocked in cup-bosrds.

Packing Material

Wooden cases used for packing are locally available at Re. 0·75 to Rs. 3. The article is covered with waste paper, available locally at Re. 0·75 per kilo. It is then packed in a wooden case with grass or straw padding which is locally available at Re. 0·50 per head load. Paper boxes are used for packing the articles made on turning lathe. Large baskets are used for keeping small winnowing fans and dolls.

Workshop

Almost all the craftsmen work in their residential premises. The piece wage earners, however, work at the workshops of their employers. Only two owners of establishments have separate workshops in addition to the place of work in the premises of their residential houses. The verandah is generally used as a workshop. This makes it convenient for the craftsmen to have the raw material at hand. The fruit makers require a small place for their workshop. An area $8' \times 8'$ of the verandah generally is used by them. This facilitates the sale of the finished articles to visitors when he is at work. The houses of these fruit makers are situated in a lane called "*Chitar Ali*". The craftsmen working on turning lathe, work in the open space in front of their houses, which are fenced by a wall or in the front room of their residential houses. The *Sangada* requires more sapce, the area required for the workshop being $15' \times 15'$.

From the above description it is clear that the workshops are generally located in the verandahs or in front

rooms of the residential houses. Therefore, the craftsmen can avail of the benefit of open air, sufficient light, good ventilation, etc. The work needs sufficient light but not the direct rays of the sun because, it is said, the colours fade out. The front side of almost all the workshops is open and faces towards the north. This also helps to get rid of the direct rays of the sun and the showers of the rains.

Small wooden toys, made on turning lathe, are used by girls for the game of "*Bhatukali*". This is one of the group games generally played by two parties of girls in which adults sometimes participate as helping hands. While playing this game, two wooden dolls are selected, one for the bride and the other of the bridegroom. The girls belonging to one party claim the bride while the girls from the second party associate themselves with the bridegroom. The main function is the performance of marriage of the two dolls which is celebrated with much festivity and ends with a marriage dinner "cooked" in the small wooden pots. Thus, the toys are associated with the ceremonial customs of the society. These mock wedding ceremonies are important in the organisation of the "*Bhatukali*" or children's cooking party game, which has been played since the olden days.

Articles and designs

The wooden pots manufactured on the turning lathe, as play things, are available in two sets. The first set includes 12 small sized articles which are imitations of domestic articles. The second set is of 20 articles inclusive of the first set. These articles are truly play things for boys and girls.

In addition to the above play things for children, the craftsmen engaged in making toys on turning lathe, also produce *songatya* (dice), a toy, bat and ball, tit-tat, utility articles in various designs, etc. These are *Udbatti* (incense-stick) stands in various designs and shapes, flower-pots, etc. Flower-pots in the shapes of a small coconut or a fish with open mouth or alike are produced.

There are two kinds of sets of imitation fruits. The half set, as is locally known, includes 27 different kinds of fruits. To this set of 27 articles 33 articles are added which make a full set. Some imitation fruits are made into bunches. The imitation fruits are nicely painted and they resemble the natural fruits both in size and appearance which make them of immense educational value too. However, the craftsmen have not added any new article to the set.

The "*Thaki*" dolls as they are called, manufactured at Savantvadi depict strong and determined Maharashtrian woman in her appearance. The female doll depicts village woman from higher strata of society with her hands clasped near the waist. The characteristics of the race and culture of the regional people are generally noticeable in the appearance of the dolls produced in a particular region. They have also their local names such as "*Thaki*" in Maharashtra. "Gangavati" in Rajasthan and "Kalchandika" in Bengal.[1] The dolls are the dumb companions of girls who satisfy their inner feeling by performing their marriages. The tradition of the daughter of the household performing the marriage ceremony of "*Thaki*" dolls is widespread in many parts of India and is frequently induced by the elders. It perhaps reflects as much the values of the society as the inner leanings of the girls. The dolls of Savantvadi are made of equal size and shape and there are no varieties or designs in them.

Toy winnowing fans made here are used as play things by girls or even by the children as it produces sound, when shaken. Different kinds of geometrical designs are drawn on these winnowing fans to attract the children. There is no difference in size, shape or type of the winnowing fans tool. Toy winnowing fans and dolls are said to be used in up-ghat districts of Satara, Kolhapur, Sangli, etc., for offering to the female deities in fulfilment of vows made. They are, therefore, in great demand during the period of fairs held in the up-ghat districts.

In addition to the above, household articles such as churners, wooden seats, rolling pins and small round wooden board (*polpat*), spoons, etc., are prepared. Rolling pins are lacquered at both the ends. The wooden seats (i.e., *pat*) are painted artistically with decorative and floral designs. The wooden seats are of four sizes. Different kinds of geometrical designs are drawn on the wooden seats. *Khadavas* (wooden slippers) are also prepared.

The craftsmen of Savantvadi have not changed their pattern of articles according to the prevailing trend nor have they changed the designs of the articles. The reason for the static condition in designs and pattern of the articles may be perhaps due to the lesser demand of wooden articles in the market itself.

[1] A Journey through Toy Land by K. S. Dongarkery pp. 45, 46.

CHAPTER IV

CRAFTSMEN FAMILIES

During the period of the survey (13th December 1962 to 23rd December 1962), information regarding number of households which were engaged in the manufacture of wooden toys, wooden imitation fruits, dolls and *Supalya* etc. was collected. It was seen that 36 households were engaged in this craft in one way or the other and provided full time or part time employment to 44 workers. These 36 households can be grouped under the following four categories depending upon the nature of work undertaken by them :—

(*i*) Those manufacturing wooden toys ;

(*ii*) Those manufacturing half finished wooden imitation fruits ;

(*iii*) Those manufacturing rough *Supalya* from bamboo chips ; and

(*iv*) Those obtaining the above from the (*ii*) and (*iii*) categories of artisans and paint them, after some processing, in appropriate colours.

On the basis of this classification, the following table shows the distribution of households engaged in the craft by nature of work, total population under each category of work as also number of workers at Savantvadi :—

Nature of work done	Number of households	Total Population			Number of workers		
		P	M	F	P	M	F
Manufacture of wooden toys	4	25	14	11	6	4	2
Manufacture of half finished wooden imitation fruits.	3	23	15	8	3	3	..
Manufacture of raw *Supalya*	10	44	20	24	10	.	10
Painting of half finished wooden imitation fruits, dolls, *Supalya*, etc., after some processing.	19	91	40	51	25	19	6
Total	36	183	89	94	44	26	18

It is the last category of work that engages the maximum number of workers (25). Of the total workers engaged in all the sections of the craft, 59·09 per cent are males and 40·91 per cent are femeals.

The castewise break-up of the workers engaged in each category of work is given in the following table :—

Name of Caste	Workers engaged in									
	Manufacturing of wooden toys		Manufacturing of half finished wooden imitation fruits		Manufacturing of raw *Supalya*		Painting of wooden fruits dools, *Supalya*, etc.		Total	
	M	F	M	F	M	F	M	F	M	F
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Sutar (Maya Panchal).	3	2	...	...	...	...	2	...	5	2
Maratha ...	1	...	3	..	..	..	8	..	12	...
Chitari ...	...	...	..	..	..	..	9	6	9	6
Mahar ...	...	...	...	..	..	10	..	..	..	10
Total ...	4	2	3	...	..	10	19	6	26	18

It will, thus be seen that the craft is confined to four different castes amongst Hindus only. It is quite in conformity with what is seen elsewhere in Maharashtra that the manufacutre of " raw *Supalya* " should be restricted to the Scheduled Caste and amongst them to femeales only. The numbers of workers of *Chitari* caste is highest while those from Sutar (Maya Panchal) caste is lowest. No female from Maratha caste are employed in the craft.

All the 36 households which are engaged in this craft do not treat the craft as their only occupation as they follow some other economic activity which is, in some cases, a principal occupation. Thus, we find that only in respect of 13 households, this craft is the only source of income. The number of households which have more than one occupation but in whose case the manufacture of wooden toys, imitation fruits, etc., is the principal activity is 7. The remaining 16 households follow the

craft purely as a secondary occupation. The following table which shows the distribution of households by different category of work in the manufacture of wooden toys and by principal or secondary activity at Savantvadi confirms these findings:—

Nature of work in which engaged	Number of Households engaged in: Manufacturing wooden toys	Manufacturing of wooden imitation fruits (half-finished.	Manufacturing of raw *Supalya*	Painting of wooden imitation fruits, dolls *Supalya*, etc.,	Total
Whether the activity is principal or subsidiary—					
(*i*) Principal occupation without any subsidiary one.	3	..	..	10	13
(*ii*) Principal occupation with other subsidiary one.	1	..	..	6	7
(*iii*) Other work is principal while the one in which engaged is subsidiary.	..	3	10	3	16
Total ..	4	3	10	19	36

The nature of secondary work followed by the members of the households mentioned at serial No. (*ii*) and (*iii*) of column 1 of the above table is given below:—

(*a*) Repairing of guns,
(*b*) Installation of oil engines,
(*c*) Cultivation,
(*d*) Transportation of goods,
(*e*) Miscellaneous labour,
(*f*) Manufacturing of baskets, etc.,
(*g*) Bidi making,
(*h*) Employment in a printing press.

The 36 households have amongst them 183 members which means that the average size of the household is 5·08 as against the average household size of 5·04 for the town of Savantvadi.

The following table shows the total number of members, household size, number of earners and number of dependants per earner for each category of work of the craft:—

Nature of work (1)	Number of households engaged (2)	Total population (3)	Household size (4)	Total* number of earners (5)	Total number of non-earning dependants (6)	Number of non-earning dependants per earner (7)
Manufacture of wooden toys ..	4	25	6·25	6	19	3·17
Manufacture of half finished wooden imitation fruits.	3	23	7·67	9	14	1·56
Manufacture of raw *Supalya* ..	10	44	4·40	22	22	1·00
Painting of wooden imitation fruits, dolls, *Supalya*, etc.	19	91	4·79	27	64	2·37
Total ..	36	183	5.08	64	119	1·86

*This also includes unpaid family workers.

The number of dependants per earner is considerably high (3·17) in respect of households engaged in the manufacture of wooden toys while it is lowest among those which are manufacturing raw *Supalya* (1·00). Of course, the mere fact that a particular group of households has to support more dependants per earner does not mean, *per se*, that their economic conditions are bad since we have not taken into account the wages of the earners continuity of job, etc., of these earners. The above data are presented in a slightly different manner in the following table which provides the distribution of households engaged in the manufacture of wooden articles at Savantvadi by nature of work done and number of earners in a household.

Number of earners in household (1)	Number of Households engaged in: Manufacturing of wooden toys (2)	Manufacturing of imitation fruits (half finished) (3)	Manufacturing of raw *Supalya* (4)	Painting of wooden imitation fruits, dolls *Supalya*, etc. (5)	Total (6)
1 ..	2	....	1	13	16
2 ..	2	1	6	4	13
3 ..	....	1	3	2	6
4 ..	....	1	....	....	1
Total ..	4	3	10	19	36

*This includes unpaid family members.

Thus a little less than 50 per cent households have only one earner in the household and as such the number of dependants per earner in such household is also high, i.e., 3·06. If the wages received by such earners is also low as compared to those obtained in other branches of economic activity, then the economic condition of such households of this branch of the craft is bound to be very bad.

This craft is essentially a cottage craft or a household craft and this fact is borne out by the following table where the distribution of 44 workers of the craft by their class of worker is shown :—

Nature of work in which engaged	Employer*		Employee**		Single Worker†		Family Worker††		Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Manufacture of wooden toys	1	..	1	.	2	..	..	2	4	2
Manufacture of half finished imitation fruits	..	..	..	..	3	..	..	..	3	..
Manufacture of raw *Supalya*	..	..	..	..	..	10	..	..	..	10
Painting of wooden imitation fruits, dolls *Supalya*, etc	3	..	5	..	11	..	..	6	19	6
Total ..	4	..	6	..	16	10	..	8	26	18

**Employer*—An employer is a person who employs other on payment in order to perform an economic activity in which he is engaged.

***Employee*.— An employee is a person who usually works under some other person for salary or wages in cash or kind.

†*Single Worker*.—A single worker is a person who works by himself and who in his turn is neither employed by any one else nor does he employ any one else, not even members of his household, except casually.

††*Family Worker*.—A family worker is a member who works without receiving wages in cash or kind, in any industry, business or trade conducted mainly by the household and ordinarily does at least one hour of work every day during the working season.

Thus the majority of the workers engaged in the craft, 59·09 per cent are single workers, i.e., those, who are neither employers nor employees.

Looking at the figures of " Employers " and " Employees " it is clear that the craft is essentially a household craft.

The following table shows the distribution of workers in the craft engaged in different activities by the nature of work, skilled and unskilled :—

Nature of work in which engaged	Total		Skilled		Unskilled	
	M	F	M	F	M	F
Manufacture of wooden toys.	4	2	3	..	1	2
Manufacture of half-finished imitation fruits.	3	..	3	..	..	..
Manufacture of raw *Supalya*.	..	10	..	10	..	..
Painting of wooden imitation fruits, dolls, *Supalya*, etc.	19	6	19	..	..	6
Total ..	26	18	25	10	1	8

It will be observed that out of total workers as many as 79·5 per cent workers are skilled workers. Since the nature of work in respect of these crafts-require special skill and ability, it is not surprising to expect large proportion of skilled workers engaged in the craft. In respect of male workers, the percentage of skilled workers is very high i.e. 96·2 per cent while in case of female it is 55·6 per cent only.

The distribution of workers in the craft by broad age-groups is given in the table below :—

Age-group	Manufacture of wooden toys	Manufacture of imitation fruits (half finished)	Manufacture of raw *Suplya*	Painting of wooden imitation dolls *Suplya*, etc.	Total
0—14..	..	..	..	..	..
15—34..	..	2	1	4	7
35—64..	6	1	9	18	34
65+ ..	..	..	..	3	3
Total ..	6	3	10	25	44

The percentage of workers employed in the age-group 35—64 is the highest (77·27). There is not a worker in the age group 0—14. It may perhaps mean that the households are either not inclined to put them in this craft though persons of this age-group are employed in other branches of economics activity at Savantvadi

or that the necessary requisites like high skill, dexterity and maturity excludes employment of persons in this age-group.

Since the craft is run on a hereditary basis and the skill required in it is acquired through observation and, practice the level of general education as is understood does not play any significant role in the growth of the craft. It is seen that 52·27 per cent of the workers in the craft are literate and rest are illiterate as illustrated below :—

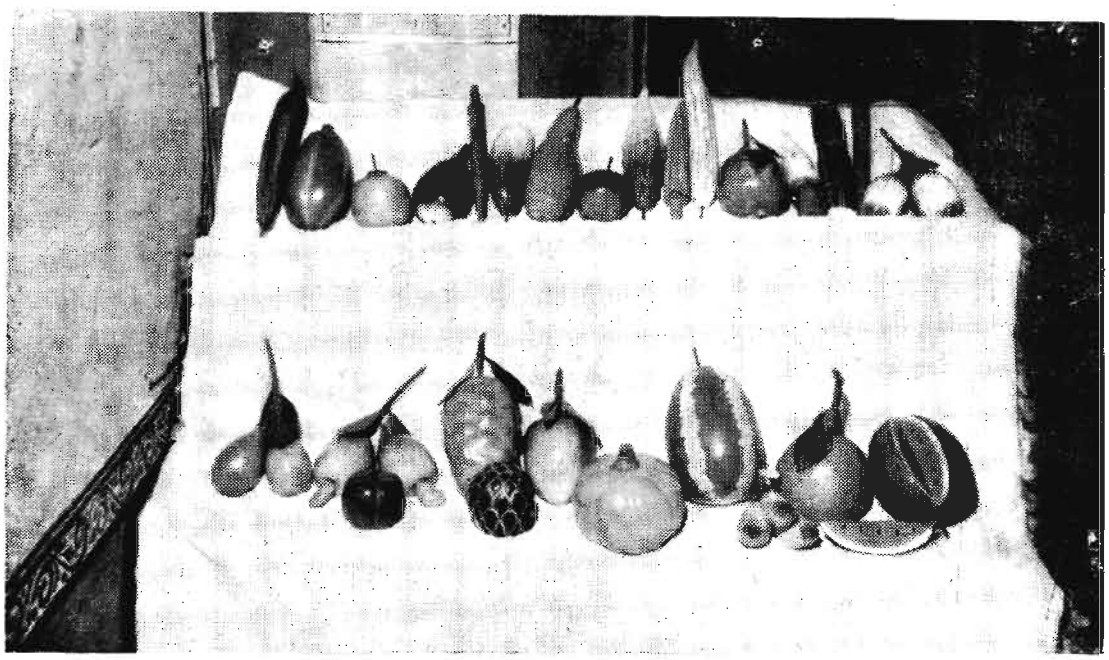
Nature of Work in which engaged	Number of Workers	
	Illiterate	Literate
Manufacture of wooden toys ...	3	3
Manufacture of imitation fruits (half-finished).	—	3
Manufacture of raw *Supalya* ...	9	1
Painting of wooden imitation fruits dolls, *Supalya*, etc.	9	16
Total ..	21	23

Master Craftsmen

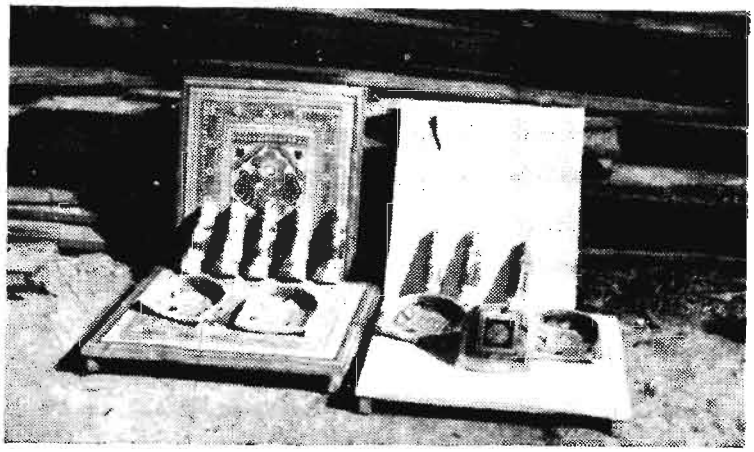
The skill of a worker in this craft lies in painting the toys and imitation fruits in natural colours. There are, however, two persons in Savantwadi who have distinguished themselves in this craft. They are awarded Shilpi Kendra Awards, Bombay, in October 1965. These two craftsmen are :—

(*i*) *Shri Pundlik Govind Chitari.*—He is 65 years old and is the only craftsman who is engaged in manufacturing *Ganjeefas* or playing cards, an art which will be extinct after him. Lack of demand for these playing cards is primarily responsible for the decay of this craft.

(*ii*) *Shri Balu Sakharam Chitari.*—He is 45 years old and manufactures wooden imitation fruits. He is assisted in his craft by his wife also. He has learned this craft from his father. In the rainy seasons when the work of imitation fruits is temporarily suspended he prepares clay images of Ganapati.



Finished Products (Wooden Fruits)



Finished products — (i) Wooden dolls, (ii) Winnowing fans, (iii) Low stools.



The only craftsman who manufactures "Ganjeefas"

CHAPTER V

ECONOMICS OF THE CRAFT

There are at present three craftsmen engaged in making toys with the part-time assistance of unpaid female members of the household. Only one of these craftsmen has employed a worker on daily wages. There are three artisans who are engaged in giving rough shape of imitation fruits to the chunk of wood. Five craftsmen of *Chitari* caste are engaged in the further processes of making of imitation fruits with the part-time help of the female members in their households There are in all 19 households, engaged in further processes involved in completion of dolls and winnowing fans in addition to making of other household utility articles and imitation fruits. Some of them have employed workers who work either on piece-rate basis or daily wage basis and are full-time workers. There are ten female workers engaged in preparing unfinished small winnowing fans from bamboo strips. They are all part-time workers.

All the above concerns and establishments are of proprietary nature. None of the establishments or concerns is registered under the Factory Act or Shops and Establishments Act and none functions under a co-operative fold.

All these establishments purchase raw material from the local market or get it from Bombay and sell their products directly to consumers or dealers concerned. They do not receive any advance for raw materials from the dealers concerned. The artisans are thus, free from the hold of trader financiers and undertake the risks of trade themselves. The craftsmen, however, being not conversant with accounts matter do not keep accounts of production. It was, therefore, very difficult to obtain information about the monthly and yearly production and its cost. Estimated figures are, however, obtained. Some of the artisans were also reluctant to give the production figures and the cost even orally. Under the circumstances, there was no alternative but to rely on estimates and approximations in several cases. The expenditure incurred on production and the articles produced by each of the concerns are given in the table on page 23 after consulting the owner-proprietor of the respective concern. The data collected refers to the month of January 1963.

The cost of articles, not only includes the cost of raw materials and labour charges but also such other items as interest on loan, depreciation charges of tools, implements, wastage of finished products, etc. An attempt is made here to find out the cost of production of toys produced on wooden lathes at Savantwadi. In the table given on page 23 labour charges are not shown since there is only one person employed on salary basis (Rs. 25·00 per month) and the earnings of the households is all that is left out of the proceeds of the goods sold after meeting the expenses on raw material, auxiliary articles, etc.

The cost of production of (i) articles manufactured on turning lathe, (ii) raw imitation fruits and (iii) finished fruits is given in the table on page 23.

There appears to be no wide variation in the expenditure on raw material or other material used by these three concerns which are engaged in producing toys on turning lathe. It will also be seen from the table that the expenditure incurred on the basic raw materials for all the three establishments together constitutes 86·60 per cent of the total cost of production whereas the percentage of the expenditure incurred for other material comes to 5·11 per cent of the total cost. The important raw material *i.e.*, wood, required more amount *i.e.* asmuch as 38·54 per cent of the total cost of production. Colour and Lac are other important raw materials which require 26·90 per cent and 20·30 per cent of the total cost of production, respectively. The expenditure on strings required for propelling the lathe amounts to 2·47 per cent of the total cost. Fuel is required to make lacquered colour-stricks, the expenditure on which constitutes 1·33 per cent of the total expenditure. Thus it will be seen that the major expenditure is incurred on the raw materials such as wood, colour, lac, whereas amounts spent on fuel, kewada leaf, etc., are considerably less.

It is also seen from the table on page 23 that the artisans are more inclined towards producing a set of 12 articles than a set of 20 articles. Out of these three concerns, the first one produces more articles because it has one full-time employee whereas the second one is producing a small number of sets as he is employed in other occupation though the working hours of the concerns are generally 9 hours a day. The table also indicates that these concerns receive Rs. 101·30 (excluding labour charges of Rs. 25), Rs. 16·69 and Rs. 72·50, respectively, as their earnings inclusive of the profit margin of the artisans and " wages " of their unpaid family female workers who participate in the work as part-time workers. Thus the average earnings per concern work out at Rs. 63·50.

The following table is introduced to study the earnings per man-day for all these concerns. The man-days utilised in establishment at serial No. 1 are inclusive of those of the employee too :—

Remuneration per man-day (period: January 1963).

Establishment No.	Total Sale price	Total cost excluding labour charges	Total earnings	Working days	Total man-days	Earning per man-day
	Rs.	Rs.	Rs.			Rs
1	135 00	33 70	101 30	30	60	1·69
2	25·00	8·31	16 69	10	15	1·11
3	96·00	23 50	72 50	30	53	1 37

There are two full-time workers in the first establishment. The second establishment was running only for 10 days during the month. The owner has worked for full-time and was helped by a part-time worker. In the third establishment, the owner is a full-time worker. The other worker worked full-time for 16 days and part-time for 14 days. Thus the man-days utilised by these concerns are 60, 15 and 53, respectively. The range of the earings per man-day is Rs. 1·11 to Rs. 1·69. The total cost for the concern at serial No. 1 is calculated without taking into consideration the labour charges paid to the employee. If it is taken into consideration the cost of production comes to Rs. 58·70 (i.e. including Rs. 25·00 paid to the employee) which means that the concern gained Rs. 76·30 only for 60 man-days (inclusive of the said labourer) and the earnings per man-day works at Rs. 1·27 only.

(ii) Cost of raw imitation fruits

Monthly production and the cost of production incurred by the three establishments engaged in the production of raw imitation fruits is presented below. The cost of production includes expenditure on raw material, other polishing materials, depriciation value of tools and implements, etc. No expenditure is incurred on sales tax, or on packing, transportation, etc., and consequently these are not taken into consideration while calculating the cost of production. Similarly no allowance is made for expenditure on rent as the concerns are run in owned houses.

A glance at the table shows that the raw material constitutes 82·51 per cent of the total cost of production. The major expenditure incurred on wood works out to 73·79 per cent of the total cost of production. The other expenditure constitues 17·49 per cent of the total cost. The total cost of the production is Rs. 36·59 for producing goods worth Rs. 114·75. Only one artisan is working full-time in each establishment which means that the establishments were running for 15, 24 and 8 days, respectively, in the month under reference. The earnings per man-day ranges from Rs. 0·97 to Rs. 2·93.

(iii) Cost of finished fruits

As said earlier these rough imitation fruits are sold to other artisans who are engaged in the further processes of the imitation fruits. The table on pages 23 shows the cost of production and the extent of total products manufactured during the reference month *i.e.* January, 1963. The cost of production is inclusive of expenditure on raw materials, fuel and packing charges, depreciation value of tools and implements and establishment charges. As no taxes are levied on sale of the products and no other expenses are incurred such as transportation of raw material etc., no amount is shown under that head. The labour charges are not paid by any concern expect the one at serial No. 4 which pays Rs. 10 for a set of 27 articles to its piece wage earner. The charges paid were Rs. 60 in the reference month, but are not shown in this table under the cost of production. The same charges are, however, accounted for the calculation of the cost of production while presenting the annual output and cost of production thereof.

Cost of production and total production of raw imitation fruits for the month of January 1963 at Savantvadi.

Establishment No.	Raw material		Other expenses		Total Expenses	Total Production				Total Value of production	Net Income Col.11 Col. 6.	No. of man-days required to produce items of Col 7 & 9	Earings per man-day
						A set of 27 articles		A set of 60 articles					
	Wood	Nails	Sand Paper	Miscellaneous expenses		No. of sets	Value	No. of sets	Value				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.		Rs.
1	15 00 (75·72)	1·75 (8·83)	1·50 (7 57)	1·56 (7 88)	19 81 (100 00)	15	63·75	..	..	63·75	43 94	15	2·93
2	8·00 (74·07)	1·00 (9·26)	0·88 (8·15)	0·92 (8·52)	10·80 (100·00)	8	34·00	..	..	34 00	23·20	24	0·97
3	4·00 (66·89)	0·44 (7·36)	0·38 (6·35)	1·16 (19·40)	5.98 (100·00)	4	17·00	..	..	17·00	11·02	8	1·38
Total ..	27·00 (73·79)	3·19 (8·72)	2·76 (7 54)	3·64 (9·95)	36·59 (100·00)	27	114·75	..	..	114·75	78·16	47	1·60

Note.—Figures within brackets indicate percentages of cost of production under different heads.

Statement showing the cost of production and total production for the establishments manufacturing toys on wooden turning lathe for the month of January 1963

Establishment No.	Raw Material								Other aterial				Other expenditure such as depreciation values and establishment charges etc. in Rs	Total cost of production	Products				Total (Col. 17+ Col 19)	Net Income (Col. 20—Col. 15)
	Wood		Colour and chemicals		Lac		Nails		String	Cocoa nut-oil	Khara Kewada	Fuel			Small set of 12 articles		Large set of 20 articles			
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount							No. of sets	Sale Value	No. of sets	Sale Value		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	cft.	Rs.	Tolas	Rs.	Tolas	Rs.	Tolas	Rs	Rs	Rs.	Rs.	Rs	Rs.	Rs.		Rs.		Rs	Rs.	Rs.
1	13·50	13 50 (40 06)	47·50	9·50 (28·19)	112 00	7 00 (20 77)	64 00	0·31 (0·92)	1·00 (2·97)	0 25 (0 74)	0 19 (0·57)	0 50 (1·48)	1 45 (4 30)	33·70 (100 00)	40	100 00	10	35 00	135·00	101 30
2	2 45	2 45 (29·48)	8 10	1 62 (19·50)	20 00	1 25 (15 04)	13 33	0 06 (0 72)	0·25 (3 01)	0 06 (0·72)	0 03 (0 36)	0 06 (0·72)	2 53 (30 45)	8 31 (100 00)	10	25 00	.	.	25 00	16·69
3	9·30	9·30 (39·57)	32·50	6·50 (27 66)	81·00	5 05 (21 49)	40 00	0 19 (0 81)	0 37 (1·57)	0 18 (0·77)	0 15 (0 64)	0·31 (1 32)	1·45 (6 17)	23 50 (100 00)	30	75 00	6	21 00	96·00	72·50
Total	.. 25·25	25 25 (38 54)	88 10	17·62 (26·90)	213 00	13 30 (20 30)	117 33	0 56 (0·86)	1·62 (2·47)	0·49 (0·75)	0 37 (0·56)	0 87 (1·33)	5 43 (8 29)	65 51 (100·00)	80	200 00	16	56·00	256 00	190 49

Note.—(1) Figures within brackets indicate the percentage distribution of cost on various items to the total cost of production

(2) Since only one concern employs one person the labour charges paid to him (Rs 25 00) per month are not shown in the above Table All the workers of the concerns are of the household to whom actual wages are not paid.

Statement showing the cost of production and total production for the month of January 1963

Establishment No.	Cost of Production																Total cost of production (Col. 2 to Col 16)	Total Production				Total Sale price (Column 19+ Column 21)	Net earnings (Column 22—Column 17)	Remarks
	Raw material												Other Expenses					A set of 27 articles		A set of 60 articles				
	Rough imitations	Colour and chemicals	"Shed"	Gum	Varnish	Thread	Wire	Paper	Cloth	Tamarind seeds	Post cards	Nails, resin and ginned cotton	Fuel	Packing Charges	Others			No of sets	Sale price	No. of sets	Sale price			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)		(17)	(18)	(19)	(20)	(21)	(22)	(23)	
	Rs.	Rs.	Rs	Rs.	Rs	Rs.	Rs	Rs.	Rs.	Rs	Rs	Rs	Rs	Rs.	Rs.	Rs.	Rs.		Rs.		Rs	Rs.	Rs	
1	34 00 (32 84)	40 00 (38 63)	6 00 (5·79)	3·75 (3 62)	2 00 (1 93)	0 75 (0 72)	1 25 (1 21)	0 37 (0 36)	1 25 (1·21)	0 18 (0 17)	0 06 (0 06)	(1 69) (1·63)	(1·00) (0·97)	10·50 (10 14)	0 75 (0 72)	103 55 (100 00)		4	108 00	2	130 00	238 00	134 45	
2	17 00 (32 56)	20 00 (38·31)	3 00 (5 74)	2 00 (3 83)	1·00 (1 91)	0 25 (0 48)	0 50 (0 96)	0 12 (0 23)	0 50 (0 96)	0 06 (0·11)	0 03 (0·06)	0 50 (0 96)	0 50 (0 96)	6 00 (11·49)	0 75 (1 44)	52 21 (100 00		4	108 00	.		108 00	55 79	
3	4 25 (29 33)	5 00 (34 51)	0 75 (5 18)	0 50 (3 45)	0 25 (1 72)	0 25 (1 72)	0 25 (1 72)	0 06 (0 42)	0 25 (1·72)	0 03 (0 21)	0 02 (0·14)	0 38 (2·63)	0 25 (1 72)	1 50 (10 35)	0 75 (5·18	14 49 (100·00)		1	27 00	.		27 00	12 51	
4	24 00 (32 03)	30 00 (40 03)	4 00 (5 34)	3 00 (4 00)	1 00 (1 33)	0·38 (0·51)	0 75 (1 00)	0 19 (0 25)	0·50 (0 67)	0 09 (0 12)	0 03 (0·04)	0 50 (0 67)	0 75 (1 00)	9 00 (12 01)	0 75 (1 00)	74 94 (100 0)		6	162 00			162·00	87·06	Rs. 60 are paid to the piece wage earner
5	32 00 (31·22)	40 00 (39 03)	5 50 (5 37)	3 88 (3·79)	1·50 (1 46)	0 88 (0·86)	1·25 (1·22)	0·31 (0·30)	1·00 (0 97)	0 15 (0 15)	0·06 (0 06)	1·62 (1·58)	1 25 (1 22)	12 00 (11 71)	1 09 (1·06)	102 49 (100 00)		6	65 00	1	65 00	227·00	124 51	
Total	111 25 (32 00)	135 00 (38·83)	19 25 (5·54)	13 13 (3·77)	5 75 (1·65)	2 51 (0·72)	4 00 (1·15)	1 05 (0·30)	3 50 (1 01)	0 51 (0·15)	0 20 (0 06)	4 69 (1·35)	3 75 (1 08)	39 00 (11 22)	4 09 (1 17)	347·68 (100·00)		21	567 00	3	195 00	762 00	414 32	

Note.—Figures within brackets indicate percentages of total cost of production under different heads

It will be seen from the table that 86·53 per cent of the total expenditure is spent on raw material. All the concerns taking together have spent 1·08 per cent and 11·22 per cent of the total expenditure on fuel and packing charges, respectively. The larger amounts are spent on colours and rough shaped fruits which constitute 38·83 per cent and 32·00 per cent of the total expenditure, whereas amounts spent on post card, wire, paper and cloth are considerably less.

The earnings of these concerns varies from Rs. 12·51 to Rs. 134·45 for January 1963.

The table in the next column is introduced to study the earnings per man-day. The cost of production in column 3 does not include the amount spent on labour charges or wages paid to the piece wage earner.

Serial No.	Total sale price Rs P.	Total cost of production Rs P	Net income Rs P	Working days	Man-days utilised	Earnings per man-day Rs. P.
1	238 00	103 35	134 45	30	62	2 17
2	108 00	52 21	55 79	16	32	1 74
3	27 00	14 49	12 51	6	9	1 39
4	162 00	74 94	87 06	24	48	1 81
5	227 00	102 49	124 51	28	56	2 22

The remuneration per man-day varies from Rs. 1·39 to Rs. 2·22.

The estimated production and the cost of production on various items are given in the following table. The information relates to the year 1962. The depreciation value of workshops, rent and other establishment charges are merely based on approximation. It is very difficult to calculate the same for the three concerns engaged in making of finished small winnowing fans and dolls as these establishments are producing other goods such as wooden seats and wooden kitchen articles in the same workshop and with the same tools. However, the data has taken in a very broad approximation.

Statement showing the Yearly Outturn and Cost of Production during the year 1962.

Details	Production			Cost of Production						Net Income
	Quantity	Sale-Price	Raw Articles	Raw Material	Other Expenditure	Rent, depreciation value of tools and workshops, etc.	Packing charges	Labour charges	Total cost of production	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
(A) Articles on turning lathe—										
1. No. of Establishments (3)										
2. Production—										
(*i*) Set of 12 articles (Quantity in No. of sets)	772	1,930	...	427	51	61	...	166	705	1,225
(*ii*) Set of 20 articles (Quantity in No. of sets)	204	714	...	181	28	18	...	75	302	412
(*iii*) Other articles (Quantity in Dozen) ...	222	809	..	205	17	22	..	72	316	493
Total (A) ...	1,198	3,453	..	813	96	101	..	313	1,323	2,130
(B) Making of imitation fruits—										
1. No. of Establishments (5)										
2. Production—										
(*i*) Set of 27 articles(Quantity in No. of sets) ..	196	5,292	1,208	145	49	41	294	500	2,237	3,055
(*ii*) Set of 60 articles (Quantity in No. of sets)	16	1,040	91	251	9	8	48	..	407	633
Total (B) ..	212	6,332	1,299	396	58	49	342	500	2,644	3,688
(C) Making dolls and small winnowing fans—										
1. No. of Establishments (10)										
2. Production—										
(*i*) Dolls (Quantity in thousands).	35	1,225	560	267	13	8	35	158	1,041	184
(*ii*) Small winnowing fans (Quantity in thousands) ..	18	1,800	450	743	54	11	18	170	1,446	354
Total (C) ..	53	3,025	1,010	1,010	67	19	53	328	2,487	538
Grand Total (A+B+C)	..	12,810	2,309	2,219	221	169	395	1,141	6,454	6,356

It will be seen that it is more remunerative to produce articles on turning lathe than any other kind of production. The earnings of artisans, their unpaid family workers, if any, and the margin of profit is 61·69 per cent of the total sale price in case of articles produced on turning lathe, whereas it is only 15·02 per cent of the sale price in case of making dolls. The remuneration in respect of imitation fruits and small winnowing fans is 58·24 per cent and 19·67 per cent of the sale price respectively.

On an average, an establishment engaged in making articles on turning lathe receives Rs. 710 per year and establishment engaged in making imitation fruits receives Rs. 738 per year.

In the year 1961 there were two establishments engaged in making articles on turning lathe. They have produced articles worth Rs. 4,800. In the year under reference, *i.e.*, 1962 there are three establishments which have produced articles worth Rs. 3,453.

In the year 1961 there were nine establishments engaged in producing of imitation fruits and they produced articles worth Rs. 6,625, whereas there are only five establishments in the year 1962 which have produced articles worth Rs. 6,332.

This indicates that the industry of making articles on turning lathe is diminishing whereas the industry of making of imitation fruits has made a slight progress.

The following two tables have been introduced to give an idea of the cost in making one set of articles on turning lathe. The raw material and other expenses have been shown with quantity and its value required in making of a set. However the rent of workshop, depreciation value of tools and the labour charges are not taken into consideration while calculating the expenses.

Cost of production of one set of 12 articles of wood on turning lathe is given below:—

Particulars	Unit	Quantity	Value of quantity shown in col. (3)
			Rs. p.
A. Raw Material—			
1 Wood			1·00
2 Colour and Chemicals ...	Tola	2·50	0·50
3 Lac ..	Tola	6·00	0·38
4 Nails			0·06
B. Other Materials—			
1. Thread	Yard	2·00	0·12
2. Coconut Oil ..	Tola ...	1·00	0·06
3. Khara Kewada ..	Bundle	0·02	0·04
4. Fuel ..	Bundle	...	0·03
C. Packing Material (if used)—			
1. Boxes	No.	2·00	0·12
Total Expenditure ..	..	..	2·31
Sale Price	..	..	5·00

Source.—Figures in respect of the year 1961 have been taken from the draft report of the All India Handicraft Board, New Delhi.

It will be seen from the above table that a worker can receive Rs. 2·69 per set with the help of one unskilled unpaid household member.

The following table is presented to have an idea about the expenditure incurred to produce one set of 27 articles, i.e., imitation fruits.

One set of 27 imitation fruits can be made within 4 days from start to finish by a craftsman with the help of one unskilled family member.

Particulars	Unit	Quantity	Value
			Rs. P.
A. Raw Material—			
(1) Rough shaped fruits ..	No.	27·00	4·25
(2) Tamarind seed ...	Kilo	0·50	0·03
(3) Coloured earth ...	Hundred-weight.	0·50	0·75
(4) Used post cards ...	No.	25·00	0·02
(5) Worn out clothes ...	Yard	0·50	0·25
(6) Thread	Bundle	1·00	0·25
(7) Nails	Lb.	0·25	0·38
(8) Iron wire	Lb.	0·20	0·25
(9) Waste paper ...	Kilo ..	0·08	0·06
(10) Colour, sand chemicals ...	Kilo ...	0·50	5·00
(11) Varnish	Tin of 0·485 litre.	0·12	0·25
(12) Gum	Lb.	0·25	0·50
B. Other Material (Fuel, etc.)			0·25
C. Packing material (Boxes, straw, etc.)		—	1·50
Total Expenses		—	13·74
Sale Price		—	27·00

The above table shows the earnings as Rs. 13·26 per set of 27 articles. Thus, a worker in this craft earns Rs. 3·32 per day with the help of one unskilled family member.

The following table is introduced to study the earnings of artisans who undertake the making of raw imitation fruits :—

Particulars	A set of 27 imitation fruits	A set of 60 imitation fruits	Six bunches each containing 7 bananas	A bunch of 25 grapes
	Rs. p.	Rs. p.	Rs. p.	Rs. p.
A. Raw Material ..	1·12	2·19	1·37	0·62
Wood	1·00	2·00	1 12	..
Nails	0·12	0·19	0·25	..
Cotton .. .	..	..	..	0·06
Wire .. .	..	..	..	0·25
Rasin (Ral) ..	..	..	..	0·31
B. Other Material ..	0·12	0·31	0·25	0·31
Polish Paper ..	0·12	0·31	0 25	0·06
Fuel etc.	..	..	..	0·25
Total (A + B)	1·24	2·50	1·62	0·93
Sale Price	4·25	8·50	3·62	3·00
Earnings	3·01	6·00	2 00	2·07
Hours required (Hrs.) ..	8·00	16·00	8·00	12 00

It will be seen that these artisans receive on an average Rs. 3·00 per day for making the set of imitation fruits. One of the artisans reported that the making of banana fruit is not profitable as one gets thereby only Rs. 2 per day. Similarly making of bunches of grapes does not appear to be profitable as compared to other as one earns Rs. 2·07 for which 12 hours are to be utilised.

As regards the artisans who are engaged in making small winnowing fans, it is stated that an artisan can make 25 raw *supalya* per day from a piece of bamboo costing Re. 0·31. These *supalya* are sold to other artisans for further processing for Re. 0·62 whereby he earns Re. 0·31 per day.

Prices

The prices of raw materials are always fluctuating but the sale price of the products is constant. These factors affect considerably the profit or the remuneration.

The imitation fruits, as we have seen earlier, are sold mostly in two sets, having 27 articles and 60 articles, respectively. These sets are sold at Rs. 27 and Rs. 65 respectively, including packing charges. The imitation fruits are also sold individually in retail and the prices vary from article to article, according to the size, art and colour used. Plywood boxes (empty cases of tea) are used for packing the goods to be exported.

Articles produced on turning lathe are also sold in two sets having 12 and 20 articles, respectively. The price of a set of 12 articles is Rs. 2·50 whereas the other set is sold at Rs. 3·50. Tops (finished articles) are sold at the rate of Rs. 12 per hundred. The sets are sold by the dealers generally in cardboard boxes locally. The prices of other articles of utility are fixed according to the size, shape and design of the article.

Dolls and *supalya* are generally sold to traders at the wholesale rate of Rs. 3·50 per hundred while the retail price per doll is Re. 0·06. The *supalya* are sold at the rate of Rs. 10 per hundred. The retail price of one *supali* is Re. 0·12.

The prices are fixed generally by keeping a margin of profit ranging from 10 per cent to 60 per cent. The margin of profit kept for imitation fruits is approximately 60 per cent and that of articles produced on turning lathe is 55 per cent of the total cost of production. In fixing price for dolls and *supalya* margin of net profit is kept as 15 per cent of the total cost of production. The margin of net profit includes the net earnings of the proprietor, craftsmen and wages of their unpaid family workers.

The prices of imitation fruits go up at the time of *Ganesh Chaturthi* festival due to more demand. In other seasons the prices more or less remain constant.

Wages

There are only 6 persons who are working as employees in this craft and most of them are unskilled workers. Thus there is no practice of wages being fixed for specific operations as the craft is managed mostly by members of the household. However, to get an idea of the remuneration earned by workers in this craft, the following data will be useful. The basis of the data is the presumptive wages, which the employer will have to pay if he engages paid workers for doing a job. The craftsmen generally work for 8 hours a day except in the case of making small winnowing fans which is not a whole time work. In this branch they work for about 4 hours a day.

Category of Worker	Manufacture of toys	Manufacture of imitation fruits	Manufacture of winnowing fans	Painting of imitation fruits, etc
	Rs.	Rs.	Rs.	Rs.
Skilled ..	2·00 to 2·50	2·00 to 2·50	0·31	1·00 to 3·00
Unskilled	0.75 to 1·00	1·00	....	....

The wages may at a glance appear to be quite high but we must take into consideration the continuity of employment in this craft. There is not enough work available for the workers for all the year round. Thus on many days the workers have either to remain idle or seek some other work. This is particularly so is

the rainy season when the colouring of the articles has to be suspended due to moist weather. Certain workers work in this craft on a contract basis and their remuneration is as follows:—

(*i*) Colouring of dolls—Re. 1·00 per hundred.

(*ii*) Colouring of small winnowing fan—Rs. 3·00 per hundred.

A worker can paint 100 dolls or 50 winnowing fans a day.

The following table shows the total working days (approximate) in a year for different sections of the craft:—

NATURE OF WORK			
Manufacture of toys	Manufacture of imitation fruits	Manufacture of small winnowing fans	Colouring of imitation fruts, toys, etc.
April and May (Peak period) 60 days.	January to May (Peak period)—160 days.	January to April—75 days only.	January to May (Peak period)—160 days.
June to October (Slack season)—75 days.	June to September (Slack season)—60 days.		June to September (Slack season)—60 days.
November to March (Average season)—110 days.	October to December (Average season)—60 days.	...	October to December (Average season)—60 days.
245 days.	280 dyas.	75 days	280 days.

The peak period for all the sections of the craft is generally April and May when the marriage season is in full swing as also the various fairs that are held in different parts of the State. There is also demand for toys and other articles from visitors who spend their summer holidays in the town. The wooden toys are purchased for the children at the bazars held at the time of fairs and the sets of imitation fruits are given as presents to the newly married couples by their friends and relatives. In rainy season the work is suspended because, as mentioned earlier, colouring work cannot be undertaken due to moist weather. However, whenever there is a little respite from rain, the workers proceed with the craft.

Market

Marketing is the key stone in the progress of any craft and its progress depends to a great extent on the expansion of the market. The imitation fruits used to be exported to foreign countries of Europe, Africa and Arabia through the agents at Bombay. An agent-*cum*-trader stationed at Bombay used to come often to Savantvadi to purchase the imitation fruits and exported them to Arabia. These articles were sold in the local and Indian markets also.

The Indian markets were dominated by the foreign markets and were flooded with foreign imitation fruits especially of celluloid and plastic. This resulted in a fall in demand for these goods. They also suffered due to lack of adequate funds for carrying on their crafts. This was also an important handicap in the way of the artisans in competing with the foreign toys in the Indian and foreign markets. Plastic toys which are cheap and attractive have hit the markets of these toys severaly. Another factor which contributed towards the shrinkage of markets for these goods seems to be lack of proper and sufficient publicity of these articles. The Poona Industrial Exhibition of 1925 and Agricultural Show at Belgaum in 1937, no doubt, gave some fillip to the industry during the period from 1925 to 1940. The ex-rulers of the princely states of India praised the articles and patronised the industry in the same period. Still due to lack of publicity there is not much export out of India.

At present the imitation fruits are marketed in the big cities in Maharashtra State or in the neighbou ring States.

The imitation fruits are used for presentation purposes and hence only rich persons can afford to purchase them. Bombay, Belgaum and Kolhapur are the important markets for these imitation fruits. The visitors to Savantvadi also purchase these fruits from the craftsmen or from the local shops at Savantvadi. There are seven shops dealing in trade of these toys at Savantvadi. Persons from Savantvadi who have migrated to Bombay are also customers for these fruits.

The toys made on turning lathe have only Indian markets since the past. However, other articles such as chess-board, stands for incense stick (*Agarbatti*) were exported to foreign countries through the agents at Bombay. The toys are manufactured in a manner which have attended sanctity by age, old usage and tradition. The craftsmen did not change their pattern with the changing time for want of proper guidance and patronage. The new methods of production were not introduced or invented due to the traditional conservatism and poor financial condition of the craftsmen. The artisans of Savantvadi did not keep in touch with the new trends in production. The markets were also flooded with articles which were cheap and attractive. Due to non-availability and high prices of foreign colours, colours made in India are used which fade away after some period of time thus spoiling the get-up of the articles.

At present the toys are kept in local shops. The local dealers purchase the toys from the craftsmen and sell to customers. The craftsmen engaged in producing toys on turning lathe sell their products to shop-keepers in the local market only as they can get ready cash by the transaction. They have no capacity to wait till

they get money by selling the goods in outside markets as their means are limited. Other dealers generally purchase the toys in the month of October to May and sell them in the fairs held in the up-ghat districts. These toys are also sold through the agent-*cum*-traders in cities like Bombay, Belgaum and Kolhapur.

The dolls and *supalya* are sold by the traders who make a bulk purchase from the craftsmen. However, these articles have no foreign markets. The Indian markets are also flooded with plastic dolls which are handy and more attractive. This has also affected the market for these articles in India. These toys are mostly sold during the period of the fairs held in up-ghat districts.

The manufacturers do not come in direct contact with the consumers due to the presence of middle man, the dealer or the agent-*cum*-trader and hence the customers cannot be convinced that the product is not only good and durable but also artistic and cheap. The demand is, therefore, not likely to revive and increase. The condition of the trade and its comparative prosperity may be said to be on the whole poor and it requires constant encouragement and help to bring it back to the level occupied by it in its prosperous days. The main reasons for this backward condition of the craft seems to be lack of publicity and change of taste among the people due to modern fashions.

CONCLUSION

The general impression is that the craft is not making any great progress since a few years primarily due to lack of demand for the goods produced and partly due to the fact that no efforts are made by the craftsmen to popularise their goods. There is not a single Co-operative Society of the workers in the craft which can undertake the job of increasing the sales of the toys, imitation fruits, etc. The lack of demand for these articles is the manifestation of the superiority and durability of modern mechanical toys of plastic, rubber, etc., over those produced at Savantvadi. The children of urban centres do not, it seems, have a liking for the handmade toys which can be operated without a mechanical device. The cost of the toys, as compared to those of other toys of rubber, plastic, etc., is also relatively high and so very few persons would buy them. The severe competition from the modern toys has no doubt hindered the progress of the craft. The persons who are engaged in this craft have also not made, it seems, any effort to add new designs, or new items to the list of toys made by them since generations. If the craft is to survive keen competition, the shape, size, etc., of toys must suit the changing pattern of the toy industry elsewhere in the country. It is said that the toys of Savantvadi did not get due publicity elsewhere in the State and other States of India which it deserves. These toys can, therefore, be exhibited at the various exhibitions held in parts of the State from time to time as also at the important fairs held annually at such places as Nasik, Pandharpur, Tuljapur, etc.

The 1965 awards of Shilpi Kendra, Bombay to two craftsmen of Savantvadi engaged in this craft should help in popularising the products of the craft elsewhere in the State.

The market for imitation fruits has always been a limited one because of their high price. A set of 27 fruits costs Rs. 27 while a set of 60 fruits costs Rs. 65. A person with average means cannot afford to spend so much amount on these fruits which are only " show pieces ". Moreover, most of the items are mainly meant for display and since they cannot be kept in the open or hung on a wall, they require, generally, an almirah with glass panes so that others can view them from outside. In these days of paucity of housing accommodation, it is difficult to have a space for keeping an almirah which itself is a costly piece of furniture. No doubt, these sets of fruits are given as a gift on the occasion of marriage, etc., but the modern utility articles like stainless steel utensils, electric iron, etc. have largely displaced these sets as a wedding gift. The craftsmen could not succeed in selling their goods in foreign markets for many reasons, the main being lack of publicity and effective marketing system.

The scope for the " *supalya* " (small winnowing fans) was always limited because of its very nature. They could not be sent to far away places because of the proportionately high cost of transport. This fact is also borne out by the fact that all the households which are engaged in the manufacturing of " Raw *Supalya* " are not wholly dependent on this craft which is a subsidiary one for these households.

In conclusion, it appears that though this craft with all its branches may not make great progress by way of expansion of business, etc., yet it is not likely to vanish completely in the immediate future on account of a deep feeling of attachment towards it in the hearts of the workers. They will see that it is pursued, though not as a main occupation.

APPENDIX I

Details of raw materials used in the craft

Serial No.	Name of raw material	Local name	Unit	Price per unit (Rs.)	From where procured
(1)	(2)	(3)	(4)	(5)	(6)
1	Hale wood	Kala Kuda	(*i*) Log of wood with 3 to 4 feet circumference at the trunk. (*ii*) Cubic foot (*iii*) Head load of 1 50 mds.	10·00 to 15.00 1 00 1·50 to 2·00	From forests near Savantvadi. Local saw mills. Local wood cutters.
2	Wood of Indian Coral Tree	Pangara	(*i*) Log of wood with 3 to 4 feet circumference at the trunk. (*ii*) Cubic foot	6 00 0·75	From forests near Savantvadi.
3	Jack wood	Phanas	Cubic foot	5·00	Do.
4	Mango wood	Amba	Cubic foot	1·50	Do.
5	Bamboo	Mes or kapashi bamboo.	Number	0·75 to 1·00 each	Karivde village in Savantvadi Taluka.
6	Gum	Dink or Gond	Lb.	2·00 to 2·25	Local shops.
7	Varnish	Varnish	Tin of 0·455 litre	2·00	Do.
8	Yellow colour	.....	Kilo	4·00	Local shops or Kolhapur, Bombay.
9	Red lead	.....	Packet of 40 tolas	4·00	Do.
10	White colour	....	Packet of 500 grams	1·12	Local shops.
11	Cochineal	....	Packet of 8 tolas	3·50	Do.
12	All colours of Goat brand	.....	Tola	1·25	Do.
13	All colours (made in England)	....	Lb.	42·00	Do.
14	All colours: Cow brand and Bell brand.	....	Packet of ½ lb.	1·25	Do.
15	Red colour (made in German)	....	Tin	40·00	Do.
16	Coloured earth or yellow earth	"Pilimati" or "shed".	Bag of one hundred-weight.	1·50 to 2·00	Otavane village in Savantvadi Taluka.
17	Tamarind seeds	Chinchoka	Kilo	0·06	Local shops or from Belgaum.
18	String	Dora	Reel or Gundi	0·25	Local shops.
19	Thin iron wire	Tar	Lb.	1·25	Local shops or from Belgaum.
20	Waste paper	Raddi	Kilo	0·75	Local shops.
21	Worn out cloth	Chindhya	Piece of Sari	1·00 to 1·25	Do.
22	Post cards	Post cards	Hundred	0·10	Do.
23	Lithophane	Bolu Dagad	Kilo	1·00	Do.
24	Lac	Chapi-Lakh	Lb.	3·50 to 4·00	Do.
25	Nails	Khile	Lb.	1·50	Do.
26	Red kerosene oil	Mati Tel	Tin of 4 gallons	7·00	Do.
27	Resin	Ral	Kilo	2·00	Do.

APPENDIX 2

List of articles made on Wooden Lathe

Serial No.	Name of article	Local name	Number of articles in the set	Remarks
(1)	(2)	(3)	(4)	(5)
1	Grinding wheel with handle	Jate-Khunta	1	
2	Low wooden stool and rolling pin ..	Polpat-Latne	1	
3	Pitchers	Budkuli	1	
4	Pot	Handa	1	
5	Vase with cover	Barni-Zakani	1	These articles are included in a small set of 12 articles.
6	Pot with cover	Peep-Zakani	1	
7	Tumbler	Pela	2	
8	Top	Ari-Bhowara	1	
9	Mortar and pestle	Ukhal-Musal	1	
10	Whirling (small play thing)	Bhingari	1	
11	Hearth	Chool	1	
12	Flowerpot	Kundi	1	
13	Tumbler	Ubha-Pela	1	
14	Measure of 1/2 Lb.	Pawsher Map	1	Additional items included in the small set so as to make a complete set of 20 articles.
15	Casket for keeping vermilion, etc. ..	Karanda	2	
16	Bottle	Batali	1	
17	Egg	Ande	1	
18	Griddle	Tawa	1	

APPENDIX 3

List of items included in a set of 27 imitation fruits

N. B.—(1) The cost of 27 fruits and 60 fruits is Rs. 27 and Rs. 65, respectively.
(2) The retail price of each item included in the sets is give in column 5.

Serial No.	Name of article	Local name	No. of articles included	Retail price
(1)	(2)	(3)	(4)	(5)
		1st Set		Rs.
1	A cluster of bananas	Keli	7	3·50
2	A bunch of mangoes	Amba	5 with 3 leaves	3·50
3	Citron	Mhalung	1 with 2 leaves	1·50
4	Pompelmoose or Shaddock	Papanas	1 with 2 leaves	1·50
5	Pomegranate	Dalimb	1 with 2 leaves	1·25
6	Bullock's Heart fruit	Ramfal	1 with 3 leaves	1·25
7	Custard apple	Sitafal	1 with 3 leaves	1·25
8	A bunch of guava	Peru	2 with 2 leaves	1·25
9	A bunch of rose-apple	Jamb	2 with 2 leaves	1·25
10	A bunch of cashew-nut	Kaju	2 with 2 leaves	1·25
11	Papaya	Papai	1	1·25
12	Orange	Santra	1	0·75
13	Apple	Safarchand	1	0·75
14	Watermelon	Kalingad	1	2·50
15	A fruit resembling muskmelon	Chibud	1	2·00
16	Sugarcane	Oos	1	1·25
17	Bottle Gourd (white)	Pandhara Bhopala	1	1·50
18	Red pumpkin	Lal Bhopala	1	2·00
19	Brinjal	Wange	1	1·25
20	Chillies (Big size)	Dhabu Mirachi	1	0·62
21	Bitter Gourd	Karle	1	0·88
22	Cucumber	Kakadi	1	0·88
23	Ridge Gourd	Dodake	1	0·75
24	Snake Gourd	Padval	1	0·75
25	Lady's-finger	Bhendi	1	0·62
26	Drum stick	Shevgyachi Sheng	1	0·50
27	Radish (without leaves)	Mula	1	0·75
		***2nd Set**		
1	A bunch of chikku	Chikku	2 with 2 leaves	1·25
2	A bunch of lime	Limbu	2 with 2 leaves	1·25
3	A bunch of oranges	Naringe	2 with 2 leaves	1·25
4	A bunch of grapes	Draksha	25 with 2 leaves	3·00

*This includes 27 items from the 1st set

Serial No.	Name of article	Local name	Number of articles	Retail price
(1)	(2)	(3)	(4)	(5)
5	A bunch of black plum	Jambhul	5 with 2 leaves	1·25
6	A bunch of unripe mangoes	Kairi	3 with 2 leaves	2·00
7	A bunch of mangosteen	Kokam	2 with 2 leaves ...	1·25
8	A bunch of marking nut	Biba	2 with 2 leaves	1·25
9	Pineapple	Ananas	1 with 10 to 15 inflorescenses	3·50
10	Jackfruit	Phanas	1	5·00
11	Musk melon	Kharbuj	1	2·00
12	A kind of fruit	Shendad	1	2·00
13	A kind of fruit	Jambur	1	0·88
14	Peach	Saptalu	1	0·75
15	A corinda fruit	Karwanda	1	1·25
16	A species of orange	Mosambi	1	0·88
17	Fig	Anjir	1	1·25
18	Coconut	Naral	1	3·50
19	A bunch of tamarind fruit	Chinch	1	1·50
20	Wood-apple	Kawath	1	1·00
21	Sweet potato ..	Ratale ..	1	0·88
22	Potato	Batata	1	0·75
23	An ear of maize	Maka-Kanis .. .	1	1·50
24	Tomato	Tomato	1	0·75
25	Garlic	Lasun	1	1·00
26	Onion	Kanda	1	1·00
27	A kind of vegetable	Khar samar sheng	1	0·75
28	French beans	Ghewada	1	0·50
29	Lime	Id-Limbu	1	1·25
30	Carrot	Gajar	1	0·75
31	Long brinjal	Lamb Wange	1	1·50
32	Red chilly	Lal Mirchi	1	0·88
33	A kind of fruit	Karmal	1	0·75

APPENDIX 4

Time required to make one piece of imitation fruit

The artisans engaged in making imitation fruits do not undertake all the processes of a single set or of an article at a time in continuous manner. However one of the artisans was requested to undertake all the processes one by one.

NAME : Jack fruit (*Phanas*) SIZE : 9″×6″

Serial No.	Stage of work	Time Required
(1)	(2)	(3)
		Hr. Min.
1	Giving rough shape to the chunk of wood	0 30
2	Smoothening surface with applying putty and scraping by file ..	0 20
3	Applying tamarind paste and wrapping worn out cloth ..	0 20
4	For drying	0 30
5	Applying "Shede" or paste of coloured earth for five times and drying after every coating	0 40
6	Polishing for obtaining very smooth surface	0 20
7	Colouring	0 30
8	Polishing	0 05
	Total time taken ..	3 15

APPENDIX 5

List of tools and implements used in manufacturing wooden toys, imitation fruits, supalya and dolls

Serial No.	Name	Local name	Price	Expected life in years
(1)	(2)	(3)	(4)	(5)
			Rs. P.	
1	Turning Lathe	Sangada	40·00	50
2	Hand Saw	Hat Karwat	4·50	20
3	Rip Saw	Karwat	18·00	10
4	Big Saw	Mothi Karwat	12·00	10
5	Small Saw	Choti Karwat	4·00	10
6	Adze	Tasani	12·00	15
7	Chisel	Farashi or Patali	5·00	10
8	Gouge	Goib or Ardhagol	7·00	10
9	Pointed Chisel	Kanta or Arli	4·00	10
10	Flat Chisel	Chirne or Chaurashi	4·00	10
11	Bent Pointed Chisel	Wakad Kanta	6·00	10
12	Half Round Pointed Chisel	Ardhgol	6·00	10
13	Flat Chisel	Tapeche Hatyar	5·00	10
14	Round Chisel	Gol Hatyar	4·00	10
15	Country drill	Girmit	14·00	10
16	Plane	Randha	10·00	10
17	Calliper (inside)	Compass	2·00	20
18	Calliper (outside)	Compass	2·00	20
19	Compass	Compass	2·00	20
20	File	Kanas	4·00 to 8·00	5
21	Scribe	Tochya	1·00	5
22	Bone Poker	Tochya	0·25 (Usually collected free).	1
23	Knife	Suri or Chaku	0·50	5
24	Scythe	Pal	3·00	4
25	Hammer	Hatoda	2·00	10
26	Brush	Brush	1·00 to 5·00	1 to 3

COIR ROPES OF ACHARE

CHAPTER I

INTRODUCTION

Achare is a village and port on the small creek of the same name situated on 17° 05′ North latitude and 73° 55′ East longitude. It lies on the north-west boundary of Malvan Taluka about 10 miles to the north of taluka headquarters. In 1555 A.D. Achare was a scene of Portuguese victory over the Bijapur troops. The village was captured by the British in 1818 A.D. It is now in Malvan Taluka of Ratnagiri District and is covered by National Extension Service Stage I Block of Malvan, district Ratnagiri.

The village has its own Village Panchayat which manages the civic affairs of the village. There is no electricity or protected system of water supply in the village but it has other amenities such as Post and Telegraph Office, dispensary and educational institutions. There are four primary and four middle schools wherein education is imparted in Marathi medium. There is only one private high school run by a local institution. Bi-weekly bazars are held in the village on every Thursday and Sunday.

The chief object of archaeological interest in the village is its ancient Rameshwar Temple which is still in good condition. The village fair held in the month of March lasts for 15 days and is well attended. In addition to the usual devotees, the fair is also attended by the inhabitants of the neighbouring and remote villages scattered over an area of 15 to 20 miles. Another noteworthy feature of the village is the river "Achare" which rises in a spur of Sahyadri range near Phonda Ghat and meets the Arabian Sea near this village forming a creek that affords anchorage to small country crafts in fair weather and has a local importance in trade and fisheries. It is a small river in the sense that it has few tributaries and length of about 30 miles. A prominent headland separates the estuary of this river from that of the Devgad river. The river is navigable only up to a few miles.

The village is connected by road to the market places like Phonda and Kankavli, a Mahal headquarters in the same district. Transportation by bullock cart and trucks is possible during October to May and December to May, respectively. This is due to the non-existence of *pucca* roads. The State Transport buses ply regularly in fair weather from this village to other important towns and cities like Kankavli, Devgad, Malvan, Kolhapur, etc. The *pucca* road is at a distance of 4 miles from this village. Launches are anchored in the creek twice a week, i.e., on Thursday and Monday in fair weather. Transport to other ports like Bombay, Ratnagiri, by means of country crafts and ferry steamers is possible in fair weather. The nearest railway station is Kolhapur, at a distance of 92 miles to the north-east of the village, which is connected by a road. Thus, the village is connected only in fair weather both by road and sea and is cut off in rainy season.

The latest Census (1961) places the village population at 4,910 comprising 2,150 males and 2,760 females. In 1951 the total population of the village was 5,648. This shows a decrease of 13·07 per cent over a period of ten years. The substantial part of this decrease is perhaps attributable to migration of local population to Bombay which is about 175 miles away by sea.

The population of the village as per 1961 Census is divided into workers and non-workers, the former being further sub-divided into nine broad industrial categories of workers as follows :—

	Category of Worker	Population		
		Persons	Males	Females
I.	As Cultivator ..	1,042	439	603
II.	As Agricultural Labourer ...	128	55	73
III.	In Mining, Quarrying, Forestry Livestock, Fishing, etc.	120	115	5
IV.	At Household Industry ...	34	13	21
V.	In Manufacturing other than Household Industry.	29	29	...
VI.	In Construction ...	10	10	..
VII.	In Trade and Commerce ..	131	29	102
VIII.	In Transport, Storage and Communications.	54	54	..
IX.	In Other Services ..	140	103	37
	Total Workers ..	1,688	847	841
	Non-Workers ..	3,222	1,303	1,919
	Total Population ..	4,910	2,150	2,760

It will be seen from the above table that about 69·31 per cent of the total workers are employed in Agriculture, of these 61·73 per cent. are cultivators and 7·58 per cent. are agricultural labourers. Another

noteworthy feature having a sociological significance is the uneven sex ratio which indicates preponderance of females over males. There are 1,284 females per 1,000 males. This may be due to the fact that a large number of males who owe their origin to this village live outside Achare, most of them having migrated to Bombay for earning their livelihood. The percentage of workers is only 34·38 per cent of the total population of the village. "Other Services" account for 8·29 per cent of the total workers. A very small percentage of the population, i.e., 3·73 per cent of the total workers is engaged in Household Industry and in Manufacturing other than Household Industry.

The literacy percentage of the village is 46·35 per cent which is quite high. There are in all 1,105 households in 958 houses in the village as per 1961 Census. The average size of the household is 4·44.

The village Achare is spread oblong on both the sides of the road from Ratnagiri to Malvan. Some of the houses stand in their own compounds with their fruit and coconut gardens fenced on all sides. The houses are inclusters or hamlets, though in every cluster the individual houses are scattered. The village is split up into 12 clusters or hamlets as listed below:—

Serial No.	Name of Hamlet	Percentage of total population (Approximately)	Major Occupation
1	Jamdulwadi ..	3	Cultivation and Coir-rope making.
2	Dongare No. 1 ..	4	Cultivation
3	Dongare No. 2 ..	3	Do.
4	Pirwadi ..	14	Do.
5	Dewulwada ..	6	Cultivation, Carpentry.
6	Nagochiwadi ..	1	Cultivation.
7	Pirawadi ..	20	Fishery.
8	Bhandarwadi ..	7	Cultivation.
9	Kazi Wada ..	9	Cultivation.
10	Chawadi ..	5	Cultivation, Trade, Tailoring.
11	Hirlewadi ..	19	Cultivation, Fishery and Coir-rope making.
12	Goudwadi ..	9	Cultivation.
	Total ..	100	

Out of the twelve hamlets mentioned above, Chawadi is supposed to be the main hamlet. Jamdulwadi is an island which is cut off from the main village by a channel less than a quarter of a mile broad. The island at low tide is connected with the village by a ridge of sand. There are only three hamlets having a sea coast out of which only two have creek water. Hirlewadi is one of the hamlets having sea coast and creek water. Water from the creek is supposed to be good for coir industry as compared to river or sea water.

Persons of different religions, Hindu, Muslim, Christian are to be found in the village. Amongst Hindus Gabits, the sea-fishermen and sailors are important local communities who run the country crafts that still carry a bulk of the coastal sea trade in goods and passengers. Bhandaris, are also engaged in fishing and they manufacture coir products by way of secondary occupation. In the past, Bhandaris used to supply the former pirate chiefs with most of the fighting men though their main occupation was sailing. Gawade, another community amongst Hindus, was engaged previously in manufacturing salt from the sea-water.

In Achare the exploitation of land is both for horticulture and agriculture. The gardens of coconut, plaintains, jackfruits and cashewnuts are planted near the houses and fenced while the rice fields lie a little away from the houses though in some areas they come right up to the house steps. The total area of the village is 2,239 acres out of which 815 acres are utilised for non-agricultural purposes and 642 acres are under coconut trees. It is estimated that there are about 25,000 coconut palms in the village. Out of these the two hamlets, namely, Jamdulwadi, and Hirlewadi account for 9,000 and 8,000 coconut trees, respectively.

Coir is made from the fibres of coconut husks, This craft which is primarily a cottage craft in Maharashtra State is concentrated in the coastal area. The sea board of the coastal tract is densely shaded by coco-palms. The concentration of any industry is mainly governed by (*i*) availability of raw material and (*ii*) possession of natural facilities. Many of the villages including Achare in Malvan taluka and Vengurla Mahal of Ratnagiri District possess natural facilities for retting the coconut husks. However, a very small percentage of coconut husks is utilised for the extraction of coir. A substantial portion of it is either burnt as fuel or thrown away. If all the available coconut husks were used for extracting coir it would not only avoid the waste of a valuable raw material but will also add to the national wealth and provide employment to local population.

There is ample possibility of developing the coir industry on an extensive scale in Achare due to considerable area under coconut plantation there. If the industry is developed at Achare it would provide remunerative employment to many people in Achare and in rural areas along the coast.

It has been said that there are many advantages of the tough golden coir due to its durability and damp

resisting qualities. Moreover, it has the capacity of giving comfortable coolness in torried heat and providing warmth in cold weather thereby retaining a refreshing crispness under all conditions. The coir fibre is very much suitable for the manufacture of ropes required for ships. No wonder that coir rope has been able to hold its own, notwithstanding the influx of other ropes produced from jute, hemp, agave, etc.

History and Origin

The art of rope making was very much developed even before five thousand years. The existence of the coir industry mainly depends upon the easy availability of raw material. Coir which is the raw material for ropes is extracted from the husks of coconut fruits and as such this industry is mainly prevailing in the area where ample plantations of coconut palm trees exist.

It is said that India had the largest area under coconut plantation in pre-war days. Now Philipine islands lead in coconut plantation. In India, 1·5 million acres of land is under coconut plantation and the approximate yield of coconut is estimated at 330 crores.

This craft of rope making from coir is mainly concentrated on the west coast in India. The statement below shows the total quantity of coir fibre and fibres for brushes and brooms exported to other countries from India for the last 4 years :—

Year	Coir Fibre		Fibres for Brushes and Brooms	
	Quantity	Value	Quantity	Value
	Kg.	Rs.	Kg.	Rs.
Ending March 1963 ..	1,258,223	16,16,796	254,588	3,65,902
Ending March 1964 ..	981,181	12,22,859	95,776	1,32,119
Ending March 1965 ..	1,477,976	17,52,741	551,707	8,44,379
Ending March 1966*..	1,014,918	12,35,187	400,982	4,26,882

*The figures relate to the export of coir fibre raw and coir fibre processed; not spun.

Source: Monthly Statistics of the Foreign Trade of India.

This craft is developed on a large and a scientific basis in the southern coastal districts of the country. It is one of the most important cottage industries in Kerala State.

The coastal tract of Maharashtra State has nearly 20,000 acres under coconut plantation. Coir making industry is essentially a cottage industry in this State comprising production of various articles from coir fibres. It is in its infancy in the State, though prevalent in all its coastal district. It is mainly concentrated in the districts of Ratnagiri and Kolaba where ample plantation of coconut trees exists. The area in acres under coconut plantation in the State and in coastal districts is given in the table below:—

Year	Name of District				Total for Maharashtra
	Greater Bombay	Thana	Kolaba	Ratnagiri	
1960-61 ..	700	300	1,900	16,800	19,700
1961-62 ..	700	300	1,900	16,600	19,500
1962-63 ..	700	300	1,900	76,900	19,800

Source: Season and Crop Report Table IV-A.

It will be seen from the above table that 16,900 acres are under coconut plantation in Ratnagiri District in 1962-63. Coconuts yield raw material for the coir craft which may give occupation to a vast number of people in the district of Ratnagiri if it is developed on a large scale as there is a relatively larger area under coconuts in this district. Many inhabitants of the talukas of Ratnagiri, Malvan and Vengurla Mahal in Ratnagiri District already pursue this craft. The easy availability of the raw material, *viz.*, coconut husks, existence of creeks supplying the required quality and quantity of salt water and the marketing avenues for ropes seem to have contributed to the establishment and growth of the craft at these places.

In Malvan Taluka coir industry is pursued at many places besides Achare. They are :—

(1) Wayangani, (2) Tondavali, (3) Revandi, (4) Hadi, (5) Dhamapur, (6) Kalse, (7) Bandivade, (8) Masure, (9) Deobag and (10) Malvan.

Coir extraction centres were opened by the Department of Industries, Government of Maharashtra, at Dhamapur and Malvan, for a period of one year during the last decade.

The history of coir craft at Achare is shrouded in the past and there is no precise information available as regards its origin and development nor can it be had either from the old gazetteers or other authentic sources. It is, however, learnt from the old craftsmen that the craft has been in existence at Achare at least during the last few centuries. As regards the latest development and history of coir and rope making, it is stated, the craft was at the peak of its prosperity in 1948 after which it fell on evil days and has not recovered so far. It received a further set back in 1960 when the great cyclone uprooted many coconut trees in the village. The craftsmen from one Acharekar family were famous for the skill in rope-making some 15 years back.

CHAPTER II

WORKSHOP, TOOLS, RAW MATERIAL AND TECHNIQUE OF PRODUCTION

This Chapter is sub-divided into two parts. The first part consists of discussion on workshop, tools and implements employed in the craft, raw material and its preparation while the discussion on the processes involved in the manufacture of different kinds of ropes appears in the second part. The second part also includes the information on articles, their grades and prices, etc.

Workshop

The various operations involved in this craft are carried out within or round about the residential houses of the craftsmen. This may be do to the fact that the processes of manufacture being not very complicated the craftsmen find it more convenient to work at home where the female members of their families can also help in the production. The pits for retting the husks, have, however, to be dug in the creek. The coconuts are usually peeled under the shed of a tree near the craftsman's house. The beating of retted husks is done generally under a tree in the house compound. All the remaining processes are carried on in the open verandah of the house.

Tools and Implements

Simple tools are employed for making ropes at Achare. Almost all the tools are made locally.

(1) *Khadu.*—This is a small rope loop about 2 feet in length made of coir. It is used by the worker while climbing the coconut tree. The rope loop guards against the climber slipping down while climbing the tree. One loop can be used for about two months. It is available locally for 12 paise. However, almost all the climbers use home made rope loops.

(2) *Akadi.*—It comprises a coir rope with an iron hook. The rope attached to it is tied to the waist and the iron hook suspended from it holds the scythe while the climber is climbing the tree. This is locally available at Re. 0·50 to 0·75 and lasts for about 5 years. The craftsmen themselves prepare the *Akadi.*

(3) *Scythe.*—This is made of iron and is available locally. Spadix bearing coconuts are cut with the scythe. The handle of the scythe is about 6" and blade about 1' in length. It is also used for peeling the coconuts. It costs Rs. 2 to 3 and lasts for about 10 years. The blade is sharpened eight times in a year. It is prepared by the local blacksmiths.

(4) *Baskets.*—Baskets, made of bamboo, are required for transporting the husks from one place to another. These are locally available for Re. 0·25 from the basket-makers. One basket can serve for twelve months.

(5) *Spade.*—Spade is used for digging the pits required for retting the husks. It is also used for re-opening the filled in pits. The wooden handle of the spade is about 2 to 3 feet long while the blade (8" × 7") is made of iron. The spade is available locally from blacksmiths for Rs. 5.

(6) *Pendus.*—It resembles a spear and is planted in the ground with its point upwards and is used for peeling off the husks. It consists of a solid wooden rod about 3 feet in length embedde in the ground. The pointed blade made of iron is fixed at the top of the wooden rod. The size of the blade is approximately 6" long and 2" to 3" broad in the middle. This instrument is handmade and prepared locally. It costs about Rs. 2 to 3 and gives service for a period of seven to eight years. The blade is sharpened twice a year. The blade is available from the local blacksmiths and the rod from carpenters.

(7) *Iron Bar (Pahar).*—This is a round iron bar pointed at both ends with an approximate length of 3'. It is used in lieu of *Pendus.* The iron bar costs Rs. 10. The pointed edge is sharpened twice a year. This is available locally from the blacksmiths.

(8) *Kudati.*—It is like a mallet made of wood round in shape and 1½' long. One end of it is a little narrow and is used as a handle. It is used for beating the retted husks for separating the outer bark. It is home-made or bought from local carpenters. It costs 25 paise. The life of one *Kuati* is a couple of years.

(9) *Kambi or Sali.*—The heap of dried coir is beaten by this instrument to mix up the short and long fibres together. Pith and cork are also separated from the fibres by beating them with the *Kambi.* This is made of the outer bark of the trunk of the betelnut tree. The instrument is flat, about 3" to 4" in thickness, 8" to 10" in breadth and 4 to 5 feet long. It can also be purchased for Rs. 1·50 to 2 from local carpenters. One *Kambi* can be used for 10 years.

(10) *Farfara.*—This instrument, made of wood, is used for making rope from the cord by twisting. It is available from the local carpenters and is cost is Rs. 4. It can served for 4 to 5 years. It is a wooden frame of 4½' × 1½' with three shafts fitted into it horizontally at equal distance. A cord is coiled on the two shafts at

the top. The top shaft revolves in both directions while the second and third shafts revolve in one direction only while propelling. The cord to be twisted is hooked to the hook fixed at one end of the second or third shaft.

Raw Material

The coconut palm which for many centuries past had the distinction of being styled *Kalpa Vriksha* (a tree which yields whatever is desired), an eulogistic epithet given by the inhabitants of coconut producing area, still continues to dominate the tropical scene.

It is, however, a well known fact that India is not producing sufficient fruits for her requirements and therefore, has to depend on the imports of coconuts, coir goods etc., from other countries such as Ceylon, Malaya, etc.

From an economic point of view this tree is by far the most important tree in the Konkan Tract. The coconut gardens are situated on the sea coast and on the beds of sandy deposit of silt brought down by the rivers. The soil of the river silt being much richer the gardens are proportionally more valuable.

As regards the coconut trees at Achare, it is stated that the coconut palm starts giving fruits from the 10th year of its plantation. During the next 10 years it has the capacity of bearing 20 to 25 fruits per year. In the next 30 years it produces nearly 60 to 70 fruits and for another 50 years from its plantation the yield starts decreasing. The life of a tree is stated to be about 100 years. Fruits of one well grown up tree can be purchased for Rs. 30 to 35.

Coir extracted from the coconut husk is the basic raw material for the craft at Achare. It is, therefore, necessary to have an idea of the number of coconut trees possessed by the craftsmen's households. Each establishment represents one household of craftsman. Thus the number of establishment is equal to the number of craftsmen's households. Two households of craftsmen do not own any coconut trees. They have, however, taken trees on lease. There are in all 456 coconut trees, both yielding and non-yielding coconuts owned by 29 households and 166 coconut trees in the 1·85 acres of land held by the remaining two households. Out of these 419 trees are said to be giving fruits. About 80 coconut trees, it was stated, can be planted in one acre. The annual production of coconuts from the 419 fruit bearing trees is 10,770, i.e., on an average each tree yields about 25 nuts.

The following table indicates the possession of fruit bearing trees:—

No. of trees	No. of households	Total No. of trees
1 to 5	7	29
6 to 10	13	86
11 to 15	3	42
16 to 20	3	55
21 to 25	1	22
26 to 30	2	60
31 to 40	....	....
41 to 50	1	50
51+	1	75
Total ..	31	419

It is seen from the above table that 41·9 per cent. households possess 6 to 10 trees and only 4 households possess trees more than 25 each. The maximum number of trees held by a single household was 75 and the minimum 3. The average number of trees per household works out to be 13·5. The majority of the households, however, hold less than the average stated above.

There is no fixed season for the yield of the coconut fruit as it is a perennial fruit bearing tree. Approximately one spadix emerge every month from the bunch of the tree. It is observed that each tree has approximately 10 to 15 spadices or '*Pend*' (a cluster of coconuts) as is called locally, out of which one-third bear 4 to 6 coconuts per spadix while the rest do not bear any fruit. They are plucked after 12 months from their bearing. The coconuts are usually plucked twice a year though in some cases they are plucked thrice a year. In the Malabar coast of Kerala State it is plucked six times a year. As stated earlier the annual average yield per tree is 25 to 30 coconuts. The production is low as compared to the general yield in Thana District in Konkan which is 34·06 coconuts per tree for trading purposes[1] (1961-1962). The fruits are allowed to dry while they are on the tree only. They are harvested either in the months of Bhadrapad (August-September) or in Phalguna (March-April). They are also plucked in the month of November.

The nuts of the coconut tree are most important. The fruit is about 20 cm. to 30 cm. long trigonously obovoid or sub-globular, three sided and one seeded drup. The coconut fruit is botanicaly known as

[1] *Source* : "Basic and Current Agricultural Statistics of Maharashtra State" published in 1964 by Agricultural Department, p. 74.

a "fibrous drupe", as its mesocarp is fibrous with stony endocarp encosing a large seed. It consists internally of the endospermous kernel with the embryo embedded in it and externally protected by the fruit coat known as the pericarp. The pericarp consists of three distinct and well defined regions i.e., the epicarp the outermost layer of the fruit, the mesocarp, the middle one of the three layers of the fruit and the endocarp (which develops in the shell in a matured fruit).

Immediately below the outer most region of the fruit known as epicarp is the fleshy portion known as the mesocarp which in the young fruit is astringent and in rare instances sweet and edible. This region turns into fibres in well developed and matured fruits. Its thickness varies from 2 cm. to 15 cm. The outer husks, i.e., the epicarp and the mesocarp are retted and the fibre extracted from them is used in coir industry.

Collection of husks, retting, extraction of fibres, preparation of yarn and making of ropes are carried on a cottage industry basis. As stated earlier the well known coir fibre used extensively all over world is not a true bast fibre like hemp or like cotton. It is extracted from the husks of coconut fruit harvested for copra trade. The complete nut as it grows on the tree is considerably larger in size than the coconut sold for consumption. The coconut is completely enveloped by the dense fibre packing which in turn is covered by the outer bark constituting the husk.

The coconut fruits are classified locally on the basis of their age at the harvesting period. These are:—

(1) *Shahala* (*very tender coconut*).—These are coconuts plucked in unripe stage nearly 6 months from the bearing and are used only for drinking the sweet water therein and for eating the soft copra by extracting it with fingers or spoon.

(2) *Dhare* (*tender coconut*).—These are tender coconuts plucked in unripe stage nearly 8 months from their bearing. These are also used only for drinking water though a juice can be extracted by crushing the copra. This coconut cannot last for more than 15 days.

(3) *Mahal* (*ripe but not dried*).—These are ripe coconuts and last for a long time. The coconut harvested after 10 months from its bearing is called "Mahal". These coconuts are supposed to be good for extraction of fibres.

(4) *Kotari* (*dried coconut*).—These coconuts are allowed to dry on the trees only and are plucked after 12 months from their bearing. These are mainly used in household consumption and for trading purposes. Coir cannot be extracted from these coconuts.

Selection of Nuts

The coconut takes about 10 or 12 months to ripe. For getting quality fibre, the nuts should have been plucked when they are about 10 months old. If they plucked at a tender age the fibre will be weak and if they are plucked when they are fully ripe the quality of the fibre deteriorates and the separation of fibres becomes difficult. Completely dried or immature nuts are, therefore, avoided for the extraction of fibre. Nuts about ten months old are plucked from the tree and kept ready for husking. For plucking the nuts from the tree, the climber wears a *Khadu*, the rope loop, around his feet and *Akadi*, the iron hook, hangs from his waist. The iron hook holds the scythe. The *Pend* or spadix is cut off right at the base with the help of the scythe Before starting the husking operations the tender or over-ripe nuts are sorted out from the lot. Only males climb the trees for plucking coconuts from the trees.

Husking

It is very essential that the nuts should be husked within two to three days after plucking them and care is also to be taken to see that the husks are not left in the sun for a very long time before they are dumped in a pit for retting, else they get dried with the result that they are not properly retted and the fibres extracted from them are of inferior quality. The nuts are husked with the help of a pointed spike (*Pendus*) or iron bar (*Pahar*) which is embedded firmly in the ground approximately to the depth of 6″ to 12″.

The husks are peeled by striking the nuts against the sharp edge of the spike or the iron bar. When the quantity of nuts to be peeled is small they are peeled with the help of a scythe. The nuts are peeled according to the natural segments of the husks. These are locally termed as *Sodane*. After extracting the husks from the nuts the pith still adhering to the nut is removed. This pith is locally called *klshi* and is used as fuel. The price of matured nuts at the time of survey was Rs. 25 per hundred while coconuts without husks were sold at Rs. 15 to 20 per hundred. The peeling



A view of Jamdulwadi, a hamlet of Achare



A craftsman is peeling coconuts to remove husks.



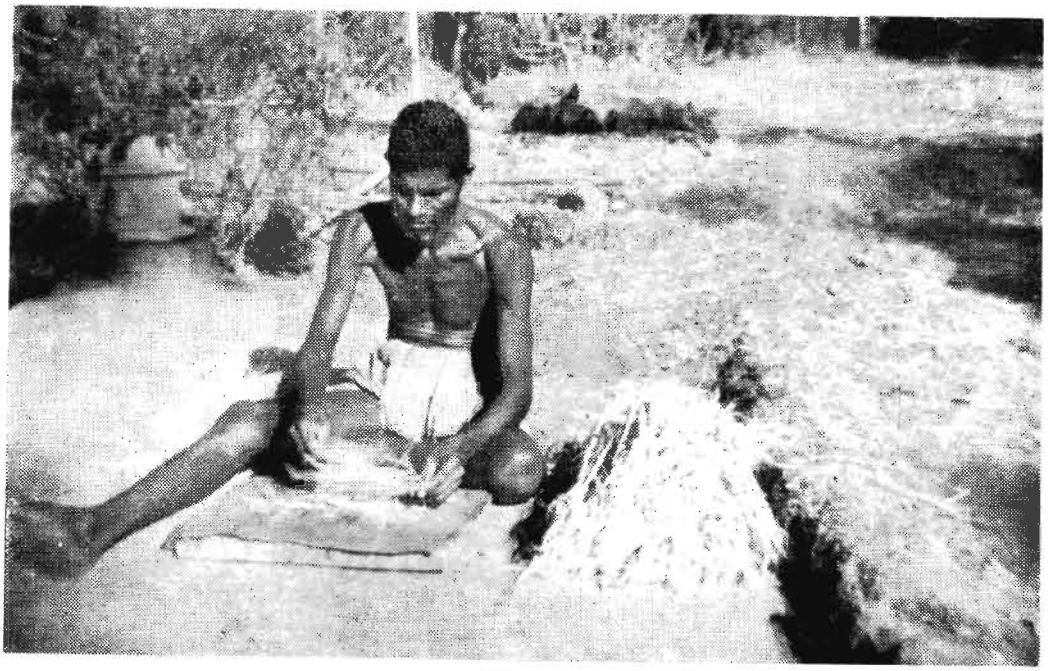
Coconut husks are deposited in pits near the back waters of the Creek for retting.



The retted husks are cleaned so as to remove dirt, etc



The retted husks are beaten with a mallet to remove pith, etc



A craftsman makes "Dashas" (Sliver) with the help of which two ply cord (Sumbha) are prepared

of coconuts is generally carried out by males. The workers engaged in coir rope making at Achare also purchase unretted husk, retted husk and prepare coir as raw material for making ropes. Unretted and retted husks are available locally whereas prepared coir is brought from Masure and Bandivade villages of the same taluka. The coir fibre is available at 50 paise per seer.

Pits

Pits used for retting the husks are basin-shaped and are dug with the help of a spade in the sandy creek within the reach of gentle tidal action of the back waters. The pits are provided with channel to allow water to flow in and out with the rise and fall of the tide. The tidal waters remain in the pit for about 10 hours every day.

Ordinarily, the bottom of the pit is sandy. The husks are weighted down with mud to prevent them from floating when water is admitted into the pits. The size of the pit depends upon the quantity of husks to be retted. The husks of 500 coconuts, require a pit 3 feet in depth and a circumference of 8 feet at the surface. Husks of one thousand coconuts are usually retted in one pit at a time.

Retting

Steeping the husks in water and keeping them in that condition for a period of 6 to 12 months or till they turn into a condition to be treated for the easy separation of the fibre is technically known as 'retting'. The fibres are embedded in the husks in a mass of elastic cellular cork like pith which binds them together and makes them difficult to separate when the husks are fresh. Even if the fibres are separated in raw condition by some mechanical means, it is found that the chemical decomposition of the matter is incomplete and the resulting fibres change colour when exposed to the sun and the air. In fresh condition the interior of the husks is of light colour and fairly soft, the cells of the pith being filled with plant juice. When the husks dries this juice undergoes changes, becomes insoluble and imparts to the fibre and pith a darkish permanent colour. This has to be avoided as the market value of the fibre materially depends on the completeness of the disintegration of the fibres and freedom from any colouring matter.

It is not definitely known what action exactly takes place in the process of soaking the husks, but it is common knowledge that on the expiry of the retting period, the husk is in such a condition that with a few mallet beats, the fibre gets separated from the pith. It is necessary that the water in which the husks are steeped is subjected to the periodical changes brought about by the action of ebb and flow.

The time required for retting varies with the temperature of the water and its salinity. It takes a longer time for the husks to ret during winter and rainy seasons, while retting period is considerably short in summer. Although retting can be done in fresh water, better fibre is obtained by retting in "brackish" water. Average retting period is eight to ten months, but the husk can be kept in saline back water for as long as a period as 2 years without any change in the quality of the fibre. There is no definite season for retting coconut husks[1].

There are 5 different ways in which coconut husks can be retted. They are :—

(1) Pits are dug on the banks of the river, creek, canal, etc., where water can flow in and flow out at regular intervals. The husks are deposited in the pits, each one holding any number depending upon its depth and size. The husks are covered with mud and in order that they should remain at that position, stones are placed on them.

(2) Husks can be retted by keeping them in an enclosed fencing from all sides in shallow water. The husks do not move away because of the fencing.

(3) Another method of retting of husks is to keep them in a coir net which is suspended mid-way in water in rivers or lakes. The net is held in stationary position by means of a rope whose one end is tied to the net and the other to a tree, etc.

(4) Sometimes husks are retted by embedding them in pits and the pits are covered with clay or mud.

(5) A frame is prepared by means of *Cadjans*, twigs or fronds and husks are placed on it in a pile. Coconut leaves and mud are placed on them so as to cover them completely and are allowed to float in lake water or pond.

The retting of husks can be done by chemical processes also which are described below in short :—

(1) *The Nanji Process.*—Partially crushed green or dry husks are treated under steam pressure with a mixture of lime or sodium sulphate or sodium carbonate, containing trace of aluminium sulphate for a period of one to two hours whereby the fibres are loosened from the pith and separated by washing.

(2) *The Elod and Thomas Process.*—The crushed husks are twice immersed in hot water slacked lime or similar substances being added during the second immersion to avoid discoloration. The fibres are then separated by mechanical means.

1 "Coir Industry in Bombay State" (1952), by G. C. Kannat, Fibre Officer, Poona, pp. 9-10.

(3) *The Rowell Process.*—The husks are put in high steam pressure. The fibres come out loose from the inner chambers.

(4) *The Van der Jagt Process.*—Husks are opened in special machines, boiled with a weak solution of caustic soda and squeezed. The compressed fibres are then reopened, softened and cleaned. It is claimed that the fibres can be extracted in less than two hours by this process.

(5) *Hayes Gratze Process.*—Husks after being split into section by special cutting machines are immersed in water, pressed or rolled and then boiled in a solution or water and H. G. lonised Oil. Coconut oil can be used for the preparation of ionised oil.

The main advantages claimed by the chemical process are the saving in time, a higher yield and greater unformity in quality of the products in addition to the fact that the process can be used in areas where retting in back water is not possible.

At Achare neither the mechanical nor chemical processes of retting are followed but the husks are deposited in the pits dug in the creek immediately after the peeling of husks is over. The water of the creek is poured successively upon different portions of the earth till it is conceived to the sufficiently impregnated with saline matter, which is judged by its brown colour. This work is generally carried on by the males while the females help by carrying the baskets of split husks to be deposited in the pits, etc.

Extraction of Fibres

When the husks are fully retted which is made known by the smell and black colour of the mud coat on the pit the retting bed is opened up. At Achare the husks are left retting from 8 to 10 months though some remove the husks even after 6 months. When the husks are removed from the pit, they are washed with water to remove the mud or slime and also the odour. They are then carried to a convenient place, usually in the open air under a shed or a tree for beating them into fibres.

The retted husks are not generally exposed to the sun for a long period as it discolours the fibres and makes their separation difficult. The fibres are tender and require moderate beating. This work is, therefore, carried on generally in the early morning and usually by females. To remove the outer rind and to free the fibres from pith and cork, locally known as "*Ghub*" the retted husks are beaten on a wooden block with a mallet or *Kudati* as it is called locally, without injuring the fibres. The outer skin (*Tarphal*) is then peeled out. This operation detaches the fibres thoroughly. The pithy matter (*Ghub*) is then shaken out and the fibres are allowed to dry. The beating work is done in the morning before taking bath as the dirty particles of the cork and pith are thrown on the body of the worker during the process of beating. A woman beats husks of about 100 coconuts in a day of 8 hours and earns wages from 50 paise to 75 paise.

Willowing

The coir fibres after drying are piled up in a heap and again beaten with a long slender stick called *Sali* or *Kambi* so as to remove unwanted pith etc., from the fibres. This is called willowing. The beating by a *Sali* or *Kambi* also helps to mix up the short and long fibres together. The quality of the fibres extracted depends mainly upon the proper retting of husks. At some places, this work is done by a willowing machine.

At Achare willowing machine is not employed. If the machine is employed the coir produced will be of a higher grade as it detaches the pithy particles completely. The fibres are merely separated from each other by hand which process is locally termed "Kisane". The fibres are then allowed to dry for a day or two. After complete drying of the fibres they are kept ready in heaps for further operations i.e., of preparation of slivers (*Dashas*).

Readymade coir fibres are available at Rs. 6 per maund and are some times brought from Masure and Bandivade villages.

Manufacturing Process

The entire operations of rope making at Achare are carried out by manual labour without the help of machinery.

The fibres produced, as stated earlier, are spun into yarn. The spinning is done by the old method. Even the spinning wheel is not used but it is done usually by hands. Before making two-ply cord *Sumbha* it is necessary to make *Dashas* or slivers.

Making of Dashas (Slivers)

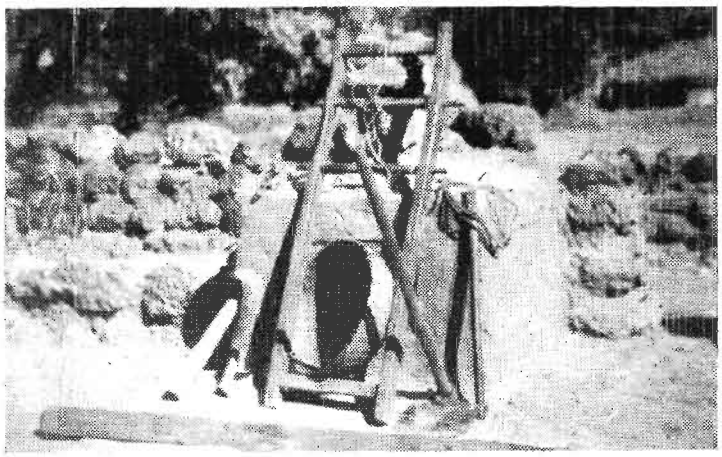
The usual practice is to roll the fibres into short length of 12″ to 15″. They are rolled on wooden boards or on plain surface of the ground. Ash is applied to the palms by the worker while rolling the fibres into *Dashas*, and giving them a clockwise twist by hand. Care is taken while spinning to regulate the counter-twist so as to prevent entanglement of other stands.



The two ply cord (Sumbha) are twisted on a "Farfara" to make a rope.



A craftsman working on a 'Farfara'.



Tools and Implements used
in manufacturing Coir Ropes



Finished Product (Rope)

Making of Sumbha

When sufficient quantity of slivers has been made, two *Dashas* are first taken together in hand and made into a yarn of two-ply *Sumbha* by giving a counter twist using both the palms.

When the counter twist reaches the end of the cord so prepared further pieces of *Dashas*, which are ready, are added one after the other, counter twist by hand being continued till the required length of yarn is reached. When the required length of say 25 to 30 yards is reached the yarn is reeled in the form of a hank and a knot is made at the end. This hand spun yarn has always a soft twist. The yarns are sorted out into various grades according to their thickness, colour and twist and reeled into separate hanks. Several such hanks are spread and rolled into a bundle. A bundle of yarn usually weighs about 30 lbs.

It is seen that about 3 to 4 lbs. of coir yarn (*Saumbha*) could be spun by a person in a day. The constant rubbing of the fibres by hand irritates the plams of the workers. A worker cannot, therefore, spin continuously throughout the day. Though the yarn prepared from the coir is capable of being used in making mats, bags, etc., they are used only for making ropes at Achare.

Rope Making

Varieties of ropes used for different purposes are prepared from the yarn produced as above from the coir slivers. Rope laying process consists of twisting strands together to form the required rope. In all the rope laying operations the ropes are twisted in direction reverse to that of the strands. Since the effect of twisting the compact rope structure is to untwist the strand structure because of the reverse twist, the rope laying operation must not only provide a means for twisting the rope, but must also furnish an additional means for restoring twist to the strands. The twisting of the rope is designated after-turn.

Making of Rajju (Rope) for drawing water from a well.—The prepared two-ply cord (*Sumbha*) is over-twisted as above with the help of an instrument called " Farfara ". One end of the cord is fixed to a tree or to a pole which is fixed firmly in the ground while the other end of the *Sumbha* is fastened to a hook fixed to a revolving shaft of the " Farfara ". The instrument has two revolving shafts at a distance of 1½ feet to 2 feet from each other which enable to twist two cords at a time without entanglement of each other. There is another shaft above these two revolving shafts with hooks which is used for coiling the propelling rope. The rope is coiled around the first shaft having hooks and the shaft above (which has no hook) in such a way that while propelling alternately by both the hands the shaft that holds the hook is rotated in one direction only and thereby the cord fixed at the hook is twisted. The " Farfara " is a wooden square frame which is kept in a vertical position and supported by the foot of the worker while his two hands are engaged in propelling the rope coiled round the topmost shaft, and the one below it, of the " Farfara ". This way the two-ply cord (*Sumbha*) is twisted clockwise to add the sufficient twist which is then made into a rope by more twisting together of the overtwisted cord with palm.

The length of one rope (*Rajju*) is 10 yards. It is, therefore, necessary that more than 30 yards of over-twisted cord should be required to make one rope of this variety. The workers do not use three different cords, each having more than 10 yards length, but use only one cord having more than 30 yards length. The twisted cord is approximately divided, but not cut, into three parts. The end of the first part and the start of the second are taken in hand and are twisted in reverse direction using both the palms until the worker reaches to the end of the second part. The start of the third part and end of the rope so prepared are again taken in hand and given a counter twist to make a rope. After completion a knot is made at the end. Thus the rope contains three cords of two-ply each. The rope is then smoothened by rubbing it with coir fibres. It is stated that the counter twist helps to restore the twist of two-ply cord and make the rope compact.

Making of Dave (Rope for tethering the cattle).—While making this variety of rope, a cord of three-ply is used. The process of making three-ply cord is the same as that of the two-ply cord, only one more set of slivers being added. The instrument, " Farfara " is used to add more twist to the cord. This rope has a length of 1·50 yards. Two cords of required length are taken in hand and twisted by giving a counter twist to the cord and made into a rope. Two ropes of this form are made and they are then twisted into one rope by both the palms. When the worker reaches approximately one yard of this rope, a knot is made and the remaining portion is left untwisted. Knots are also made at both ends of the rope. The rope is then smoothened with coir fibres.

Making of Wal or Nangardor (Big Rope).—While making this rope an iron ring is used for binding the ends of the five cords. The cords are first over-twisted on a " Farfara " and then they are simply twisted together without making any effort to add additional strand turn. The rope thus prepared is then smoothened with coir fibres and knots are made at both ends. The length of this rope is approximately 4 yards.

In addition to making ropes and *Sumbha* (two-ply cord), the craftsmen at Achare plait the leaves of coconut

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tree (*zape*) and prepare broomstick (*Zadu*) from the midribs of the leaves.

Articles, their Grades and Prices

A few varieties of ropes are made from the coir at Achare. They are utility articles of daily use :—

(1) A two-ply cord (*Sumbha*) : The cord is capable of being used in many cases. These are mainly required in operations of cultivation. They are sold at Rs. 16 per maund.

(2) A rope for drawing water from a well (*Rajju*) : It is generally 10 yards in length and is sold 62 Paise each.

(3) A rope for tethering cattle (*Dave*) : These ropes are used only for tying cattle. They are 1·50 yards in length. Each such rope costs 38 Paise.

(4) A rope for plough (*Wal or Nangardor*) : These ropes are used for ploughs and for towing launches etc. The length of each rope is 4 yards.

Grades

The ropes at Achare having a compact from and hard twist with necessary smoothness are supposed to be better. While grading the ropes the colour of the fibre is taken into consideration. White coloured fibres are supposed to be better than the red coloured ones. The grades of the ropes also depend upon the coir fibres used for them.

The grades of coir yarns are determined by the factors such as colour, evenness of twist, ropes being free from pith and other extraneous matters.

The rope producers of Achare do not themselves grade the coir yarn and no rules exist for their gradation. The coir yarns are graded by the exporting houses and factory owners. Usually the number of strands required for a width of 36 inches matting divided by 20 gives the grade or score of the yarn, i.e., when 300 strands are required to make a matting of 36" width, the yarn used for its manufacture is called " 15 score " (15×20 score=300). There are four varieties of coir: (1) The best coir without any pith termed as Cochin fibre or Ceylon fibre, (2) The lustrous coir fibre, (3) The slightly reddish or greyish fibre containing some pith, (4) Interior quality fibre mostly dark in colour and containing more pith. The following are the sub-grades :—

(1) A. Coarsest 300 to 350 feet per lb.

(2) A. A. 350 to 400 feet per lb.

(3) A. A. A. 400 to 450 feet per lb.

The coir yarn from Achare can be graded as 15 score. The yarns are, however, not further sub-graded at Achare.

CHAPTER III

CRAFTSMEN FAMILIES

Rope making is essentially a cottage craft. Most of the workers engaged in the craft work at home during their spare time. In all 31 households are engaged in this craft at Achare with 57 workers, of which 18 are males and 39 females. Only in the case of 3 households it is a principal occupation while the remaining 28 households pursue it as a subsidiary occupation.

This craft is mainly concentrated in two hamlets of this village, *viz.*, Hirlewadi and Jamdulwadi the craftsmen from Hirlewadi hamlet prepare different varieties of ropes while those in Jamdulwadi are engaged in making ropes of two-ply cord only.

The craftsmen procure the raw materials required for the manufacture of ropes themselves and goods are produced as per orders received form the customers. All the craftsmen are Bhandaris by caste. Their traditional occupation is sailing from which they appear to have derived their surnames such as " Sarang", " Tandel ", etc. Maynak, the first admiral of the fleet of Chhatrapati Shivaji Maharaj,the great Maratha Ruler was a Bhandari by caste. The Bhandaris left their traditional occupation some time in the 17th Century and switched over to tapping of palm trees, coconut trees, agriculture, fishery, rope making, etc. There are approximately 200 households of Bhandaris in this village.

The distribution of the Bhandari households engaged in rope making at Achare by household size and number of earners and earning dependents is given in the following table:—

Household size	No. of households	Total Population	Number of— Earners	Earning dependents	Non-earning dependents
1	2	2	2	..	..
2	6	12	6	3	3
3	4	12	4	3	5
4	5	20	6	9	5
5	2	10	2	2	6
6	5	30	5	6	19
7	2	14	2	4	8
8	4	32	5	10	17
9	..	..	..	..	..
10	..	..	..	..	..
11	..	..	..	..	..
12	1	12	1	3	8
Total ..	31	144	33	40	71

We thus, find that the average size of households engaged in rope making is 4·65. The percentage of earners to total population of the households is 22·92 per cent while non-earning dependents form 49·30 per cent of the total population. The remaining 27·78 per cent are earning dependents. It is further seen that there are 1·06 earners per household who have to support 1·21 earning dependents partially and 2·15 non-earning dependents fully. It may be mentioned that the persons who are shown either as earners or earning dependents in this table work in rope making as also in other occupations like cultivation agricultual labour, etc.

The following table shows the distribution of households by number of earners per household and total number of earners, earning dependents and non-earning, dependents:—

No. of earners per household	No. of households	Total	Number of— Earners	Earning dependents	Non-earning dependents
1	29	132	29	35	68
2	2	12	4	5	3
Total ..	31	144	33	40	71

Thus the majority of the households, *viz.*, 93·55 per cent have only one earner each, and it is only in the case of 2 households that there are two earners each.

It is an acknowledged fact that a number of families in Ratnagiri District have to depend upon the remittances received from their relatives who stay outside the village, especially at Bombay. Achare can be no exception to this. An attempt was made to collect data on remittances received by the 31 households engaged in rope making during the year ended on 15th June 1963. It is revealed that 17 of these households received remittances of Rs. 4,680 during the year. This amount does not represent any repayment of loans etc., but is purely an amount which a relative working outside has sent to the households for meeting day to day expenses. The distribution of 17 households by amount of money received is given in the following table:—

Range of amount received	No. of households.
0—99	1
100—199	5
200—299	2
300+	9
Total ..	17

On an average a household received Rs. 275 per yea by way of remittances from outside.

The distribution of the craftsmen households on the basis of household expenditure grou ps is given below:—

Serial No.	Expenditure group (monthly)	No. of house-holds	Average expenditure per household (monthly)	Source of income (yearly)						Average income per household (monthly)
				Cultivation	Agricultural Labour	Fishery	Coir Industry	Others	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	0—25 ..	4	20	275	175	40	72	....	562	11.71
2	26—50 ..	10	41	690	900	143	498	265	2,496	20.80
3	51—100 ..	16	72	3.370	910	1,985	805	2,768	9,838	51.24
4	101—150 ..	1	125	300	....	...	150	....	450	37 50
	Total ..	31	....	4,635	1,985	2,168	1,525	3,033	13,346	

It will be seen from the above table that a little more than half the number of households are concentrated in the expenditure group of Rs. 51 to Rs. 100. There is only one household spending Rs. 101 to 150 per month whereas 12·90 per cent of the total number of households are spending Rs. 25 or less than Rs. 25 per month towards their household expenditure. The difference between average monthly income and average monthly expenditure shows that these households cannot earn sufficient for their household expenditure and as such they have to depend either on remittances from relatives at Bombay and elsewhere or on loans.

The distribution of households according to their principal and subsidiary means of earnings and their earnings is given below :—

Serial No.	Principal Work	No. of House-holds	Income from Principal and Subsidiary Work						Ungainful Income, Remittance, Pension, Loan, etc.	Total
			Culti-vators	Agricultural Labourers	Fishery	Coir Industry	Others	Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Cultivation ..	12	2,530	300	408	583	155	3,976	3,194	7,170
2	Agricultural Labour ..	7	440	1,115	180	140	115	1,990	1,210	3,200
3	Fishery ..	5	985	210	1,550	293	....	3,038	420	3,458
4	Coir Industry ..	3	....	160	10	379	13	562	300	862
5	Services as Khalashi ..	3	480	200	20	90	1,670	2,460	180	2,640
6	Services as Postman ..	1	200	....	. ..	40	1,080	1,320	. ..	1,320
	Total ..	31	4.635	1,985	2,168	1,525	3,033	13,346	5,304	18,650

The above table indicates that the major income is derived from cultivation (it includes income from horticulture also). The second important source of income is miscellaneous services such as transport, postal, etc. The income from coir industry is negligible, as low as 11·43 per cent of the total gainful income. It is also observed that majority of households, *viz.*, 12 or 38·71 per cent derive their major income from cultivation. Three or 9.68 per cent of the households have returned making of coir ropes as their principal occupation. The unearned income comes to 28·44 per cent of the total amount received from all sources last year. On an average, a household received Rs. 431 per annum from gainful occupation. Thus, taking into consideration the family size as 4·65 *per capita* income works out to Rs. 92·69. The *per capita* income is considerably less as compared to that of the State.

The distribution of non-earning dependents (i.e., non-workers) by type of activity is given below :—

Type of Activity	No. of Persons
Disabled persons ..	3
Old persons	6
Infants and children not attending school.	22
Persons engaged in household duties.	8
Full-time students	32
Total ..	71

The information on outstanding loans in respect of 31 households was collected as on 15th June 1963 and it was revealed that 25 out of the 31 households or 80·65 per cent were in debt to the tune of Rs. 5,740. The average debt per indebted household was Rs. 229·60. The following table shows the reasons for which the loans were taken. It is seen that the total number of households in column 2 will exceed the figure of 25 because the same household in some cases has been counted more than once due to receipt of loans for two different reasons.

Reasons for taking Loan	No. of households	Amount Rs.
(1) Normal household expenditure.	23	2,925
(2) House construction ..	3	1,200
(3) Marriage of members of household.	3	830
(4) Illness of members of household.	2	625
(5) To expand fisheries ...	1	60
(6) Education ..	1	100
Total ...	33	5,740

It is significant to note that no one had taken any loan for improving the output of rope or for purchasing tools and implements used in the craft. The maximum debt incurred was Rs. 300 and the minimum Rs. 25. An amount of Rs. 160 (Rs. 100 for construction of house and Rs. 60 for the development of fisheries) was taken as a loan from the Government while the remaining amount of the loan was advanced by relatives.

The following table shows the distribution of the workers engaged in rope making by broad age-groups :—

Age-group	No. of Workers		
	Total	Males	Females
TOTAL . ..	57	18	39
0—14	3	..	3
15—34	24	8	16
35—54	21	6	15
55—74	9	4	5

The distribution of workers engaged in rope making at Achare by educational level is given in the following table :—

Educational Level	No. of Workers		
	Total	Males	Females
TOTAL	57	18	39
Illiterate	30	5	25
Literate without educational level.	9	4	5
Primary or Junior Basic ...	18	9	9

We have already seen that this craft is not a principal source of income for 28 households and the members of these households who are engaged in the craft follow different occupations.

The 73 earners and earning dependents from the 31 households working in this craft work as Labourers in their own fields, in fishery, etc. The following table shows the different occupations of these 73 workers and how many of them follow rope making either as a principal or as a subsidiary occupation :—

Occupation followed	No of earners following the occupation in col. 1 as a principal activity	No. of earners out of col. 2 who follow rope making as a subsidiary activitiy
Cultivation ..	30	27
Agricultural Labour	15	11
Fishery ..	5	2
Rope making	16	....
Others ..	7	1
Total ..	73	41

CHAPTER IV

ECONOMICS OF THE CRAFT

We have already stated that only 31 (out of 1,105 households in Achare) or 2·8 per cent of the total number of households in the village are engaged in this craft. The total investment in respect of tools and implements is very small since the craft is more labour intensive than capital intensive. A household needs the following tools and implements to start the craft provided it possesses the necessary skill to make the rope :—

Description	Minimum number required	value
		Rs.
Khadu	1	0·12
Akadi	1	0·75
Scythe	2	5·00
Baskets	2	0·50
Spade	1	5·00
Pendus or Iron Bar	1	10·00
Kudati	2	0 50
Kambi	2	3·00
Farfara	1	4·00
Total ..	13	28·87

Since most of the operations are carried out either in the open space near the residential house or in an open verandah of the house which is not used for any other purpose, there is no extra investment in land or buildings. No rent has to be paid for the use of pits in which the husks are deposited for retting nor for the open land where the beating of the husks is done. Moreover, the craftsmen treat this occupation as a subsidiary one to be performed in their spare time to supplement their income. The following table will show the distribution of households by period in years since the present heads of the 31 households engaged themselves in this craft :—

No. of years the present heads of craftsmen households are engaged in this craft	No. of households	Percentage
Less than 2 years	1	3·23
More than 2 years but less than 5 years.	2	6·45
More than 5 years but less than 10 years.	7	22·58
More than 10 years but less than 15 years.	5	16 13
More than 15 years	16	51·61
Total ...	31	100·00

Thus in respect of more than half the number of households their present heads are engaged in the craft for more than 15 years.

None of these households employs any outside labour to work in the craft except occasionally to pluck the coconut fruits from trees for which they are paid on contract basis. It was revealed that Rs. 20 were paid for this work during the year ended on 15th June 1963. The members of the households also assist other workers engaged in the craft.

Since the craft is carried on as a cottage industry it is not covered either by Factory Act, 1948 or Shops and Establishments Act, 1950. There is no Co-operative Society of the workers engaged in the craft.

The yield of coconut fruits from the coconut trees possessed by the craftsmen, households at Achare during the year ended on 15th June 1963 was reported to be 10,670 nuts. Of these, 6,175 nuts were husked and these husks were used for rope making. The value of the husks of 6,175 nuts at the current market price (retail) works out at Rs. 61·75. In addition, the craftsmen purchased unretted husks of 3,350 coconuts and retted husks of 2,000 coconuts during the year valued at Rs. 33·50 and 80·00 respectively.

Four maunds (40 seers each) of coir was also purchased valued at Rs. 24·00 during the said period. The coir rope making craft at Achare thus consumed raw material worth Rs. 199·25 during the year ended on 15th June 1963 as under :—

Particulars	Quantity consumed	Rate	Value
			Rs.
Husks of coconuts.	6,175 coconuts.	Re. 1·00 per quantity of husks of 100 coconuts.	61·75
Unretted husks ..	Husks of 3,350 coconuts.	Do. ..	33·50
Retted husks ..	Husks of 2,000 coconuts.	Rs. 4 per quantity of husks of 100 coconuts.	80 00
Coir Fibre ...	4 maunds ...	Rs. 6·00 per maund.	24·00
		Total ...	199·25

The craftsmen had to pay Rs. 20·00 as labour charges for plucking the coconuts from the trees, etc. Thus the total expenses towards raw material and labour charges worked out at Rs. 219·25. On this investment the craftsmen produced the following quantity of ropes of different varieties during the above period :—

Particulars	Quantity produced	Rate	Value
			Rs.
Two-ply cord ..	54·75 maunds	Rs. 16·00 per maund.	876·00
Rajju, i.e., rope for drawing water from well.	6,080 yards.	Re. 0·62 per rope of 10 yards.	376·96
Dave, i.e., rope for tethering cattle.	1,535 yards.	Re. 0·38 per rope of 1·5 yards.	388·87
Rope for plough ..	1,700 yards.	Re. 0 25 per rope of 4 yards.	106 25
		Total ..	1,748·08

After deducting the expenses we find that the craft earned an income of Rs. 1,528·83 during the year. The total number of man-days required to produce these goods was 1,785. The following table shows the distribution of the households which have put in various hours of work each day (average) and the number of days worked during the year :—

No. of days worked in the year	No. of households which have worked on an average		
	2 hours a day	3-4 hours a day	More than 4 hours a day
Less than 15 days	1	..	..
15 days to 30 days	5	1	..
31 days to 45 days	2	1	..
46 days to 60 days	5	5	..
61 days to 75 days	..	2	..
76 days to 90 days	1	5	..
91 days to 120 days	1	..	..
More than 120 days	..	..	2
Total ..	15	14	2

Most of the households do not work for more than 4 hours a day and all of them do not get work for more than 4 months. Thus we find that the economic impact of the craft on the village is almost negligible.

Market

The ropes are sold at the bi-weekly village market held on every Sunday and Wednesday. They are mostly sold directly to the consumers, though a small percentage is purchased by the retailers in the village who in their turn sell to villagers who come for marketing on days on which the village market is not held. It is seen that the ropes made at Achare are not sold at markets outside the district for many reasons, the main being that they are not of a high quality. Secondly the transport charges are also heavy as compared to the cost of production.

Wages

Since there is no practice of employing hired workers in this craft, it is rather difficult to calculate the wages of the different workers in the craft. There is no hard and fast rule about the number of hours to be worked in a day in this craft since it is carried on during the spare time of the workers. If we follow the total earnings and deduct the amount spent on raw material and labour we get the net earnings of the craft.

In this case, the net earnings are Rs. 1,528·83 and in all 1,785 man-days were spent. Thus Re. 0·86 were earned per day per worker. This may seem to be an attractive wage but we must take into account the number of days on which one gets work, the continuity of work, etc., and it will be seen that it is not a remunerative job. This is the main reason why more workers are not attracted to this craft.

CONCLUSION

The rope making at Achare is not an important craft either from the point of view of providing employment to the workers or the income derived from it. This craft received a great set back in the year 1960 when the great cyclone of May 1960 uprooted thousands of coconut trees in and around the village. The damage caused by the cyclone has not been completely restored since it takes about 10 years for a newly planted coconut tree to start bearing fruits.

The tools and implements used in this craft are most primitive and even the spinning wheel has not been introduced. This has naturally affected the output of ropes apart from their quality. The craftsmen complain that there is not now sufficient supply of coir fibre so as to warrant the introduction of machinery in rope making but this does not seem to be true because even before 1960 when the supply position of the coir fibre was better than at present they were not using machinery for preparing ropes.

There are about 25,000 coconut trees in the village but the craftsmen households make use of coconut husks of 622 trees only (husks of coconuts of 456 owned trees and husks of coconuts of 166 leased in trees). Even in case of these 622 trees, all of them are not fruit bearing. Only 419 trees bear fruits. At an average rate of 25 to 30 coconuts per tree per year, the village produces about 6 lakhs coconuts, the husks of which should be available for rope making. However all the coconuts cannot be kept earmarked for rope making. Some coconuts are bound to be consumed as "Shahale" while others as ripe ones in which case the husks of such coconuts are not suitable for rope making. We find that in one year the 31 households consumed husks of 6,175 coconuts for rope making which is about 1 per cent of total coconuts produced in the village. It is true that unretted husks of 3,350 coconuts and retted husks of 2,000 coconuts were used in rope making besides 4 maunds of coir fibre. Presumably a huge quantity of husks has been burnt as fuel. If this could be stopped by making an alternative arrangement for fuel, the rope making craft will flourish.

The craftsmen have not made any attempts to manufacture other products such as mats, carpets, manufacture of idols out of pith etc., which are being done elsewhere in Kerala, successfully. In order to undertake these new lines of production two things are essential, *viz.*, availability of quality husks and trained craftsmen. The former can be had from the trees of the village itself provided the retting of husks is done scientifically, by allowing more time for retting. The craftsmen can be trained at the workshop at Aronda in Savantvadi Taluka or at Vengurla. All that is needed is a determined will to make use of all the available coconut husks. Thus if the craft is made more broad based it will give substantial employment to the people of the village which is feasible because this area is of one crop only and they have ample time to spare. The rope manufactured at Achare are used mainly for drawing water from well, or used in the plough of an agriculturist, etc. The ropes required for ships and country crafts should be manufactured at Achare or at least those required by country crafts. The demand for such ropes should be high in view of the increasing activities of country boats.

The coir at Achare has been tested by the Fibre Officer of the Co-operative Department of the Government of Maharashtra and has been proved to be as good as that obtained in Kerala. The coir from Achare bleaches well and takes colours in attractive shades when dyed. It is, therefore, rather surprising that this craft should not have made any head-way in the village though the raw material is available and the technique of production of new articles like mats, carpets, etc., can be acquired.