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CENSUS OF INDIA 1961

VOLUME X

MAHARASHTRA

PART VII-A(2)

HANDICRAFTS IN MAHARASHTRA

CLAY IMAGES OF GANAPATI AND IMAGES OF PLASTER OF PARIS

Prepared by

THE MAHARASHTRA CENSUS OFFICE, BOMBAY

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CENSUS OF INDIA 1961

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FOREWORD

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

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

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

Thus, in the first circular of 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 3 parts was recommended for canvassing. It was suggested that information on this questionnaire, village by village and area by area, might either be obtained through the regular departmental channels of the State Government, or through the newly set up Census organisation, or through the hierarchy of the newly created Panchayats. Stress was laid on the need of photographic documentation and illustration of designs, shapes and forms not only by photographs but with the help of line drawings or sketches together with a full description of the materials used.

Almost the whole of 1960 and the first half of 1961 were spent in organising and taking the Census count, although several States even during this period had not allowed the grass to grow under their feet but made exploratory studies and decided in their minds how the inquiry should be organised. A series of regional conferences held in Trivandrum, Darjeeling and Srinagar in May and June 1961 revealed much enthusiasm among State Superintendents to proceed with the survey, but the need of separate staff and equipment was felt at the same time as the realization dawned that this was much too serious an 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 remoteness from or proximity to centres of trade and commerce, in short, the degree of isolation in which the artisan worked, and the relative strengths of various communities in the village which would afford clues to social interdependence and the prevalence of the JAJMANI system. The second part was devoted to artisan communities in the village ; the several castes of artisans, the number of families in each, the total number of workers, males and females, the extent of 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 manufactured goods, the extent to which they produced themselves or depended on others, their contacts with other communities and the specific forms of production and commerce through which these contacts were maintained.

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

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

Investigations conducted between September 1961 and May 1962, including a study group of all States and the Social Studies Division in December 1961 at Delhi, stimulated many of the States into going in for a much enlarged schedule. The revised village schedule itself, the counterpart of the first part of the February 1960 schedule, contained 19 large sections containing elaborate and probing questions. The Family Schedule for practising artisan families similarly contained 19 main questions each 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.

ASOK MITRA,
Registrar-General, India

NEW DELHI :
July 30, 1964

PREFACE

This Part of the Census Report presents a monograph on the " Clay Images of Ganapati and Images of Plaster of Paris " which is one of the following eight 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) Coir Ropes at Achare, district Ratnagiri.

(5) Glass Bangles at Tarapur, district Thana.

(6) Silver Ornaments at Hupari, district Kolhapur.

(7) Wooden Toys at Savantvadi, district Ratnagiri.

(8) Musical Instruments — flute, at Amravati, district Amravati.

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 villagewise 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 eight 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 Crafts Studies. Our thanks are due to Dr. Roy Burman, Officer on Special Duty (Handicrafts and Social Studies), of Registrar General's Office for his valuable suggestions to improve the Monograph.

The survey of this craft was undertaken in the months of May-June 1962 and valuable assistance was rendered to us by Sarvashri N. G. Deodhar, V. G. Deodhar and G. B. Londhe who are engaged in this craft. Our thanks are due to Shri N. P. Khanawilkar, Lecturer, Sir J. J. School of Art, Bombay, for his valuable suggestions in regard to technical aspect of rubber moulds described in this Monograph.

The survey was carried out by Shri V. D. Kulkarni, Statistical Assistant, under the supervision of Shri N. Y. Gore, Tabulation Officer. The maps and line drawings appearing in this Monograph are prepared by Shri S. Y. Pradhan, Draughtsman. We are grateful to the Directorate of Publicity, Government of Maharashtra, in allowing Shri S. M. Yadao their Staff Photographer to take photographs published in this Monograph. His excellent photographs has no doubt enriched the publication. The entire work of the survey of selected handicrafts was carried out under the guidance of Sarvashri G. G. Laulkar and V. B. Sawant, Deputy Superintendents of Census Operations.

We are thankful to Shri S. A. Sapre, Manager, Government Central Press, Bombay, for the expeditious printing of the Report.

BOMBAY :
28th February 1966.

D. V. RANGNEKAR
RUTH REEVES

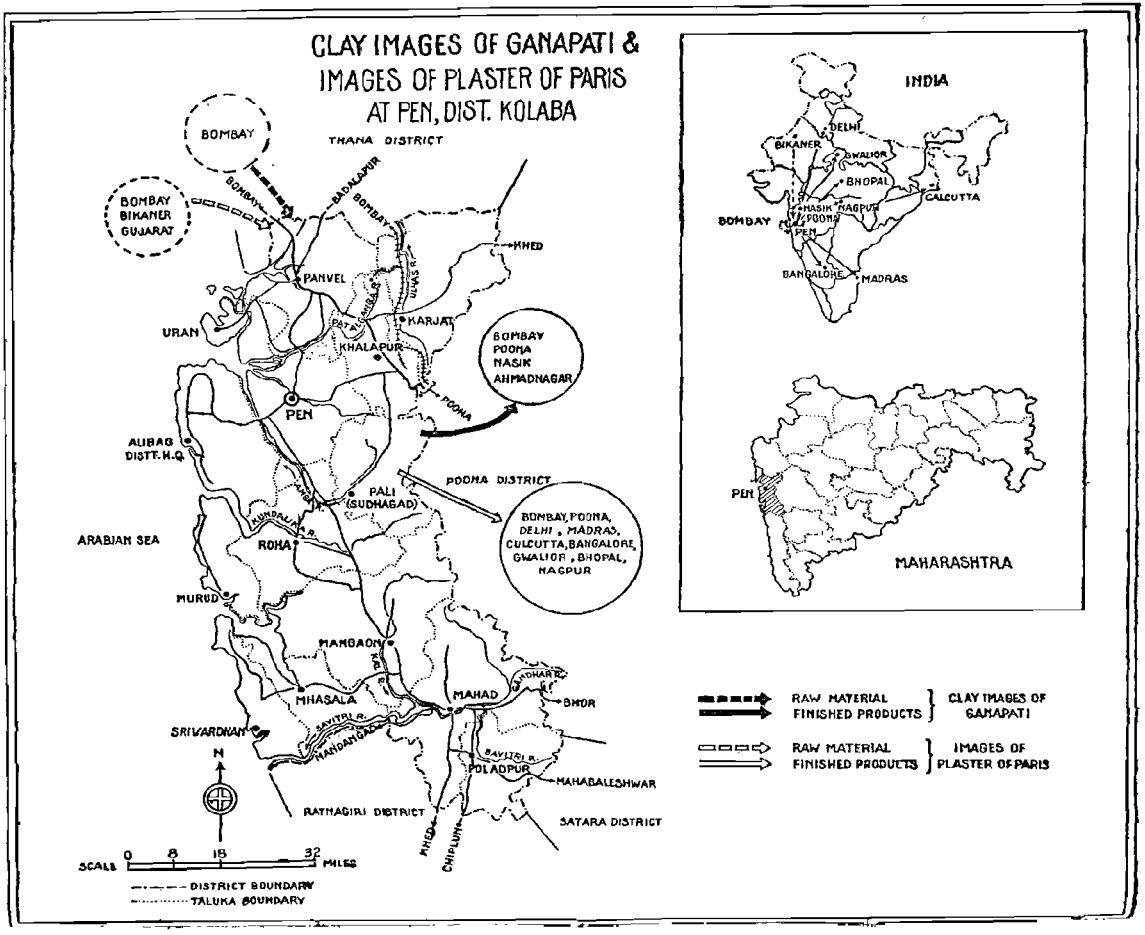
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PEN, THE CENTRE OF CLAY IMAGES


CLAY IMAGES OF GANAPATI &
IMAGES OF PLASTER OF PARIS
AT PEN, DIST. KOLABA
BOMBAY
BOMBAY BIKANER GUJARAT
THANA DISTRICT
BOMBAY
BADLAPUR
BOMBAY
KHED
PANVEL
URAN
KARJAT
KHALAPUR
BOMBAY POONA NASIK AHMADNAGAR
POONA
PEN
ALIBAG DISTT. H.Q
PALI (SUDHAGAD)
PUNE DISTRICT
BOMBAY, POONA, DELHI, MADRAS, CULCUTTA, BANGALORE, GWALIOR, BHOPAL, NAGPUR
ARABIAN SEA
ROHA
MURUD
MANGAON
MAHASALA
MAHAD
BHOR
SRIVARDHAN
POLADPUR
MAHABALESHWAR
RATNAGIRI DISTRICT
SATARA DISTRICT
SCALE 0 8 16 32 MILES
DISTRICT BOUNDARY
TALUKA BOUNDARY
INDIA
DELHI
BIKANER
GWALIOR
BHOPAL
CALCUTTA
BOMBAY
NASIK
NAGPUR
POONA
PEN
BANGALORE
MADRAS
PEN
MAHARASHTRA
RAW MATERIAL
FINISHED PRODUCTS
CLAY IMAGES OF GANAPATI
RAW MATERIAL
FINISHED PRODUCTS
IMAGES OF PLASTER OF PARIS

CHAPTER I

INTRODUCTION

Pen, which is a taluka headquarters in Kolaba district with a population of 10,462 persons as per 1961 Census, lies to the south-east of Bombay City and is 65 miles away from it. It is situated on 18° 40′ N. and 73° 05′ E. and is on the bank of Bhogavati creek, about 10 miles from its mouth. At high water spring tides, the creek is navigable for boats upto forty tons to Antora, a mile and a half below Pen. The Bhang Bandar or neap tide port is four miles below Pen. A built road joins Pen with Antora. The "Mira Dongar" which is a broken and irregular line of hills between the western belt of hills and the Sahyadri is just adjacent to Pen. Pen is on the bus route from Bombay to Mahad which is also a taluka headquarters of Kolaba district. It is also connected by road to Poona, Alibag, Karjat, Dharamtar, etc. Khopoli is the nearest railway station at a distance of 20 miles. Pen has its own municipality with facilities such as water supply, electricity, etc. There is also a Post and Telegraph office.

Pen is the centre of considerable traffic between the Deccan and the sea-coast. Trucks come down the Sahyadris along the Khopoli Road bringing tobacco, molasses, pepper, and onions and taking salt and rice.

In Prakrit form of Marathi "Pene" means a halting place. In historical times Pen was under the rule of the Silaharas of Shri Sthanak (Thana) from 9th to the 12th century and subsequently it passed under the control of the Yadavas. As Silaharas rarely acted as sovereign rulers and acknowledged the successive suzerainty of Gujarat in the north, Karnatak in the south, Pen is often referred to as belonging to their respective dominions. When Shayastakhan was sent against Sivaji (1663 A.D.), a detachment of the Moghal army had been kept at Pen but it was subsequently routed by him. In 1668 Pen is mentioned as a port which acknowledged the Moghal as its superior, though it lay in Sivaji's territories. Parvatibai, the wife of Sadasivrav Bhau, the hero of the battle of Panipat (1759-1761), hailed from the Kolhatkar family of Pen which incidentally had taken active part in inciting the imposter of Bhau to rise against Savai Madhavrav (1774-1795). In 1819 the easy communication with Bombay and with the Deccan by the Bor pass made Pen an important centre. Its chief prosperity lay in its salt beds. There was a considerable export of rice to Bombay (*Revenue Diary*, 142 of 1819, page 2570). A number of carved stones about the town appear to belong to an unusually large temple of about the hirteenth or fourteenth century.[1]

In 1827, according to Captain Clunes, Pen had 171 Brahmin, 64 Khatri, 63 Maratha, 41 Prabhu, 34 Kasar, 26 Vani and 24 Sonar families. The 1872 Census returns show a total of 6,514 persons, of which 5,912 were Hindus, 392 Musalmans and 210 others. The 1881 return shows a total of 8,082 or an increase of 1,568. Of these, 7,302 were Hindus, 458 Musalmans, 201 Bene-Israels and 121 others.[2]

Pen is known for its idol making industry and toys of clay mixed with saw dust. The handmade toys and images reflect the culture and tradition of the people whereas those produced in modern factories show the marvels of science. Idols and wall-plates of Gods and Goddesses in Hindu and other religions are made in Plaster of Paris at Pen. These are known for the delicacy of their expressions and other effect. Images of famous historical and legendary personalities in different countries are also made.

The Hindu pantheon is crowded with strange Gods and Ganapati is not the least strange among them. "With a plump body, a round belly, this god with an elephant head and trunk has selected the pretty little mouse as his *vahana*[3] (mount)". The god Ganapati has four hands in which he holds different objects like a lotus, a mace, a conch-shell, etc. He is the Hindu god of wisdom and sagacity and there is in his expression an understanding and perspicacity that command respect and inspire affection. Even an ordinary craftsman modelling the images of Ganapati out of clay, somehow almost unconsciously brings out these qualities of the deity.

The art of manufacturing images and toys out of simple clay has been acquired by the present generation of craftsmen from the past generations. The artists of Pen were called to Poona for carving of Ganapati images in stone on the gate of the famous Shaniwarwada, the administrative nerve centre of the Peshwas (1713-1818).

[1] District Gazetteer, Kolaba District, Vol. XI, pages 915-918 (1964).
[2] *District Gazetteer, Kolaba District, Old Volume*, page 354 (1883).
[3] Temples and Legends of Maharashtra by M. S. Mate, page 1.

In other words, the outstanding skill of the craftsmen at Pen is an heritage from their forefathers.

The art of Plaster of Paris image making is practised today by many communities such as Brahmins, Marathas, Agris, etc. The colouring or painting which is an integral part of the process of manufacturing these images is undertaken by artists irrespective of age and community. The community-wise break-up of the craftsmen both engaged in image making as well as in painting of the images is given below :—

Name of community	Number engaged in manufacturing images of Plaster of Paris and Painting of the images (1961)		
	Total	Males	Females
Hetkari Bhandari	6	6	..
Maratha	72	60	12
Brahmin	8	8	..
Agri	13	13	..
Sonar	10	10	..
Gurav	9	9	..
Kalan	4	4	..
Warik	3	3	..
Kumbhar	2	2	..
Chambhar	2	2	..
Sutar	1	1	..
Teli	1	1	..
Wani	1	1	..
Total ..	132	120	12

So far as making of Ganapati images is concerned it is a seasonal work which engages the craftsmen from June to September and during the season nearly 40 establishments engaging about 400 persons work in the craft. One establishment, *viz.*, that of Shri G. B. Londhe, prepares Ganapati images throughout the year and employs 12 persons whose distribution by sex and community is given below :—

Name of community	Number engaged in manufacturing clay images of Ganapati and Painting of Ganapati Images (1961)		
	Persons	Males	Females
Total	12	11	1
Maratha	5	5	..
Brahmin	4	3	1
Sutar	1	1	..
Koli	1	1	..
Kumbhar	1	1	..

" Clay is a cheap and easily manipulated material for modelling, with which we have for ages made dolls and images of great beauty and design and execution. Before the Vedic deities filled the temples, the primitive non-Vedic gods, the Yakshas (a class of demi-god) and the Yakshanis (a class of demi-goddess) in the forms of pretty clay toys, satisfied the craving of the human soul for the Divine, and then later on shared in the temples the devotion offered to the Puranic gods and goddesses."[1]

The earliest reference to ancient toys dates back to the Indus valley civilization which flourished from 2,500 to 1,700 B.C. Terracotta toys of human figures, animals and birds have been excavated at Mohonjo Daro and Harrappa which have a striking similarity in more than one respect with the clay toys made in Indian villages by the present day potters. With the kind permission of the ' Archaeological Survey of India, New Delhi ', photographs of four Terracotta figures and a Terracotta bull found in the excavation of Mohonjo Daro have been reproduced in this monograph which will give an idea of what is said above. The existence of clay toys such as bulls with oscillating heads manipulated by string-pulling which are amongst the most aesthetically distinguished finds at Mohonjo Daro bear testimony to the mechanical bent of mind of the potters of India's chalcolithic period.

Clay toys produced during different periods represent the costumes and activities of those particular eras and many of the ancient toys were made not only for play things but for information.

Today, the chief centres of production of figures of clay, suitably painted, are at, Krishnagar and Calcutta in West Bengal, Poona in Maharashtra and Lucknow in Uttar Pradesh. Modelling of highly realistic fruits in clay thrives as an art indigenous to Lucknow and Agra in Uttar Pradesh. The clay images of today produced in Maharashtra, West Bengal and Uttar Pradesh bear ample testimony to the skill of our craftsmen. Some of the dolls are painted and dressed up in fine muslins and silk fabrics. The fruit models made of clay are very similar to a fresh stock of fruits from fruit orchards. The names of a few important centres in Maharashtra where clay toys and images are produced are Bombay, Bassein, Pen, Akola, etc.

The last hundred years have brought about a complete revolution in the art of clay toy and image making. New media like India rubber, celluloid, Plaster of Paris and plastics have been introduced to a large extent. Consequently the handmade toys modelled in clay

[1] The Arts and Crafts of India and Pakistan by Shanti Swarup, 1957, page 76.

or carved in wood have gradually receded into background in many countries and recently in India. The mechanical toys have largely replaced the artistic handmade toys and there is no doubt that today toy-making by hand has assumed less importance and is no longer the profitable industry, it was formerly.

It is interesting to know the development of the art of clay image making at Pen. The worship of Ganapati (Elephant God) is a religious rite. In Konkan, Ganapati is a household deity amongst many Hindus. Every religious function is inaugurated by the worship of Ganapati and no new business venture is ever embarked upon without first seeking his blessings. Being the god of wisdom and sagacity he is said to impart intelligence to those who worship him and lend success to their temporal undertakings.

According to information collected from different establishments at Pen, the art of Ganapati image making in clay, was rather the hobby of individuals who pursued it not so much for making money as for producing rare pieces of art on the eve of Ganesh Chaturthi (August-September), an important Hindu festival.[1] They found their art a reward in itself because it was a matter of personal satisfaction. Since the clay images of Ganapati are held to be very sacred and as they are assigned to water after the worship is over, it is not possible to reproduce a few photographs of the idols which were prepared in the past, in this report.

The craftsmen also prepare clay images of animals and fruits by way of hobby. Shri N. G. Deodhar is reported to be the pioneer artist in the field at present who has introduced the use of Plaster of Paris in place of clay as the raw material for preparing decorative images. Clay was substituted by Plaster of Paris in preparing toys and images of animals, etc. in 1940. The Prabhat Film Company placed an order at Pen for a a supply of 500 bust size images of Saint Dnyaneshwar for their mythological picture of the same name. The images were produced with the help of Plaster of Paris moulds which were introduced for the first time in making images. These bust size images of Dnyaneshwar were sold at Re. 1 per image to the Prabhat Film Company which demonstrated them in different villages and towns of Maharashtra to advertise their picture.

Subsequently, the Ganapati images also were prepared out of Plaster of Paris but they were for decorative purposes only and not meant for worship on Ganesh Chaturthi festival. Even today 99 per cent images of Ganapati are prepared out of clay and not out of Plaster of Paris. In 1940, the then Governor of Bombay visited Pen and placed an order for making a bust of the late Sir (then Mr.) Winston Churchill. On the advice of the Department of Industries, Bombay, images of Lord Buddha were moulded at Pen which enjoyed good sale in Bombay. In World War II, the import of celluloid toys from Japan was prohibited and this opened a good market at Bombay for toys made of Plaster of Paris. Models of animals and birds in this material also commanded good sales as toys. The moulds were originally prepared out of Plaster of Paris but as they were not found to be durable, experiments on rubber moulds were made and were finally used in 1952-53. Now, with the help of rubber mould inlaid in Plaster of Paris mould, it is possible to get a large number of representations without any damage to the mould.

Shri V. K. Phadke, the reporter of *Loksatta*, a daily newspaper published from Bombay, has given an early account of this craft in an issue of that newspaper of September 1964. According to Shri Phadke, the images of Ganapati were prepared a hundred years ago out of grey clay available in the nearby hills. The colours used in painting the images were also procured out of black soot, lime, turmeric, flowers of Palas tree (*Betea frondose*), etc. For polishing the images, the leaves of such tree as *sag* (Teak wood) and *kharvati* were used. Though the price of images used to be very meagre yet the image making was a profitable occupation because the customers used to place before the image such things as a cocoanut, *vida*, *supari*, *dakshina* etc. before carrying the image home for worship. These articles used to go to the image makers who were mostly Kumbhars (potters) and thus it was a paying business for them, as they used to remain partially idle in the rainy season. Slowly this art was, however, taken up by members of other communities also.

It will be of interest to trace the location of this craft at Pen. It is already mentioned that the Kolhatkar family of Pen was related to the Peshwas of Poona who were the great worshippers of Ganapati and the festival of Ganesh Chaturthi used to be celebrated on a grand scale at Poona by the Peshwas. Since a majority of the families of Pen were Brahmins, the festival had a firm footing at Pen also. The clay available at the local hills was, however, not of a superior quality. Bombay is, however, quite near to Pen and ships which used to visit Bombay for carrying cargo to upper India,

[1] A description of this important Hindu festival in Maharashtra is given in Appendix 1.

especially Gujarat, used to bring clay from there as a ballast and the merchants used to sell it at throw away prices at Bombay. This clay was most suitable for Ganapati images. Thus the main raw material became available at Bombay. At that time however there were no roads linking Pen with Bombay. But the traffic between Pen and Bombay was carried by boats from Bombay to Antora port which is only $1\frac{1}{2}$ miles away from Pen. In those days Ganapati images used to be carried from Pen to Antora by headload and from Antora to Bombay by boats. But with the construction of road between Bombay and Pen, the raw materials and finished products are now carried by trucks. Poona is just 65 miles away from Pen and is also a good market for Ganapati images. Thus due to the peculiar circumstances prevailing in those times, Pen became one of the important centres of manufacturing of Ganapatt images.

CHAPTER II

TECHNIQUE OF PRODUCTION

Raw Materials

The important raw materials required for the manufacture of clay images of Ganapati and rubber and Plaster of Paris moulds and images of Plaster of Paris are given below :—

(*a*) *Clay.*—Clay, which is the basic raw material, plays a vital part in this craft. It is imported from Bhavnagar, a district place in Gujarat State, to Bombay from where Pen obtains its supplies. Formerly it was imported from Kathiawad and Porbundar in the State of Gujarat. It is commonly called 'earth' or 'modelling' or 'Ganapati clay'. There are different grades in this clay as also different shades, *viz.*, grey, white, etc. This clay is useful both for preparing models for casting images and is also used for making Ganapati images. Thus not only the models of the Ganapati image are made out of this clay but images of Ganapati are also cast in this clay by means of moulds. It is also used in Film Studios for purposes of modelling and is known as '*shadu*'. The manufacturers of Ganapati images purchase this clay from local traders. It is available in jute bags, each containing 6 to 8 maunds of clay, the rate being Rs. 5 to 6 per bag. This clay is sticky and most suitable for moulding purposes as its semi-solid moulded mass does not stick into the womb of the moulds, or to the palm of the artist during the process of moulding. If kneaded, ordinary clay made into a solid mass develops cracks after drying and so it is not considered useful for image making. The local clay available on the sea-coast in abundance is also not useful for image making either as on drying it begins to develop cracks due to its brine content. Moreover, due to this brine content in the local clay, the colouring, *i.e.*, painting of the finished product also becomes difficult as the colours either fade or change into quite different shades upon drying.

In the past, this clay used to be imported in the form of small stones and had to be pounded before it could be used. However, now-a-days it is purchased in grinded form and can be readily used.

(*b*) *Plaster of Paris.*—The Plaster of Paris is another raw material used for the production of more refined images and moulds for making images. Clay shrinks and the model prepared out of it also shrinks. Plaster of Paris does not shrink and the size of the cast prepared from the mould remains the same as that of the original model.

Manufacturers of clay images of Ganapati use Plaster of Paris only for preparing the moulds of different shapes and parts of the images to be cast, as they do not shrink like clay images and clay moulds.

Formerly, Plaster of Paris was imported from Saurashtra, Karachi (in Pakistan), Abyssinia, Afghanistan and Italy. At present, however, it is imported from Saurashtra and Kutch region of Gujarat, and Bikaner in Rajasthan. The Plaster of Paris imported from Abyssinia and Italy was, of course, of better quality. Plaster of Paris is manufactured from gypsum by chemical process. There are several varieties of Plaster of Paris but generally the following three of them are available in the market :—

(*i*) *Inferior quality.*—It has more hardness and is generally used in Film Studios for preparing moulds of big models. It is available at Rs. 14 to Rs. 15 per cwt.

(*ii*) *Superior quality.*—This is used for making Plaster of Paris images of figures with finer details and for making statues. Its price ranges from Rs. 18 to Rs. 22 per cwt.

(*iii*) *Dental white quality.*—It is chemically analysed and is generally used in hospitals. It is gypsum rock which is mixed and heated to eliminate the water contents in it. The result of this heating process is a fine white powder which readily absorbs water and when mixed with water sets hard. Gypsum is also used in the manufacturing of cement.

(*c*) *Rubber.*—Rubber which is required to prepare moulds for Plaster of Paris images is procured from the Swastik Rubber Products, Poona, and is called 'Swastik Rubber compound'. It is available at Rs. 4·90 per litre. There are three varieties known as A, B and C compounds. The third variety, *i.e.*, 'C' is generally given free to those who purchase A and B compounds.

(*d*) *Colours.*—The different types of coloured pigments required for painting the images of Plaster of Paris and clay images of Ganapati are brought from Bombay and are available in the four forms as shown in the Table on next page.

(*e*) *Gum.*—Gum is mixed with these colours before use. There are several varieties of gum but generally

two varieties are used, *viz.*, large and small crystals. Large crystals of gum, called "*ghati gond*", country gum obtained from gum-Arabic tree, are dissolved in water and mixed with lake colours. The approximate price of gum is Rs. 2 per lb.

(*f*) *Fibres.*—Cotton flock used for reinforcing the rubber moulds and coir generally used for strengthening the plaster cast are available in the Bombay market at Re. 1·00 to Rs. 1·50 per kg.

(*g*) *Iron wire.*—These are used when Ganapati images of big size have to be prepared. These iron wires or strips are inserted inside the image in such parts as hands, legs, etc. to keep the body erect. Such wires are called 'armature' in the technicians' language.

Serial No.	Item	Unit	Brand	Price per Unit
(1)	(2)	(3)	(4)	(5)
				Rs.
1	Liquid colours or wet crystals (Poster colour)	.. Fluid ounce	.. Windsor & Newton Ltd., England	2·50
2	Colour powder or dry crystals (Lake colour)	.. 1/4th Lb.	.. Enayat & Bros., Bombay	.. 2·50 to 3·25
3	Tube colours	.. Small size Tube	.. Windsor & Newton Ltd., England..	1·50 to 2·00
4	Bronze powder (Gold, Copper, Silver), oil soluble.	Lb. ..	.. Crown, Queen, Tiger, etc. Enayat & Bros., Bombay.	10·00 to 14·00

NOTE.—'China' clay and black soot obtained from a kerosene lamp are also used as colouring materials.

Manufacturing Process

In the past, each Ganapati image was prepared individually since the use of moulds was not known. It was a time consuming process and a laborious one too. The introduction of moulds prepared out of Plaster of Paris has increased the out-put of images and also added to their quality.

In order to prepare a mould, first a model has to be built up. The art of modelling is very much of an individual art and the only tools required by the creative modeller are a receptive imagination, knowledgeable fingers, and a sharp knife and "*koranis*" for carving. The artist commences the realisation of his icon through visualising the drawings or pictures he has of them and by thinking about each and every major and minor part of the image to be made. He starts his work only after the attainment of self identification with the image he plans to produce. The skill of the modeller lies in converting a painted picture of his model on paper, into a lively three dimensional model in clay. Generally, these pictures are printed ones, especially those appearing on calendars. Sometimes a photograph is also supplied to the modeller.

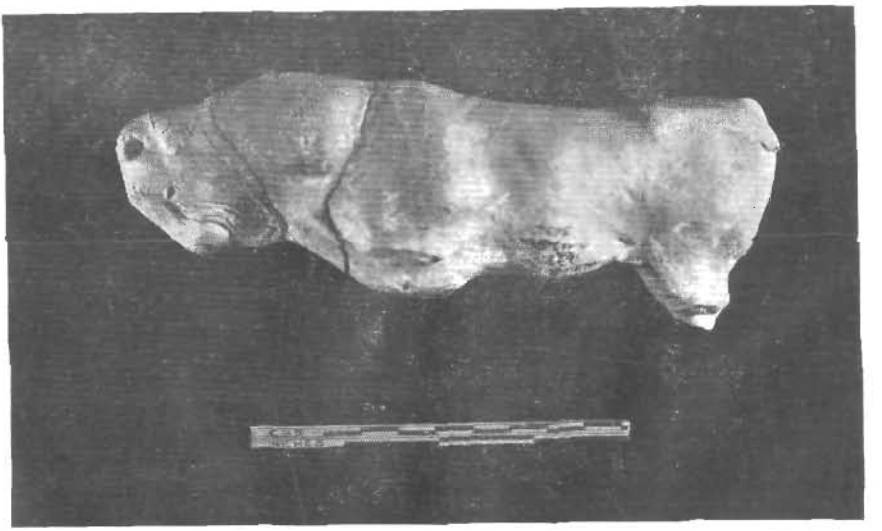
The following paragraphs describe the process by which the moulds of Plaster of Paris are prepared for purposes of casting clay images of Ganapati and rubber moulds for images in Plaster of Paris.

The Ganapati images are not generally made of Plaster of Paris because they do not sink when immersed. Therefore though their moulds are made of Plaster of Paris the cast is always produced in Bhavnagar clay. Rubber moulds are not used for making Ganapati images. Different sizes of Plaster of Paris moulds are available with the manufacturers of Ganapati images. The work of preparing Ganapati images in the normal course of events starts in the month of June. The colouring process starts in August nearly one month prior to the Ganesh Chaturthi festival. The images of Ganapati are required for worship on Ganesh Chaturthi which falls on Bhadrapad Sud 4 (August-September). Previously made master moulds and the different piece-moulds of Plaster of Paris are assembled for casting an image. Before pressing clay into the moulds, powder of "Shankhajira" (soft marble rock powder) is sprinkled in profuse quantity in the womb of each and every part of the Plaster of Paris mould so that the moulded

CLAY IMAGES FOUND AT MOHENJO-DARO



Terracotta figures



Terracotta Bull

Courtesy: Archaeological Survey of India, Government of India, New Delhi



Prabhat Kala Mandir, manufacturers of clay images of Ganapati and images of Plaster of Paris



Akshaya Kala Kendra, manufacturers of images of Plaster of Paris only

MANUFACTURING PROCESS



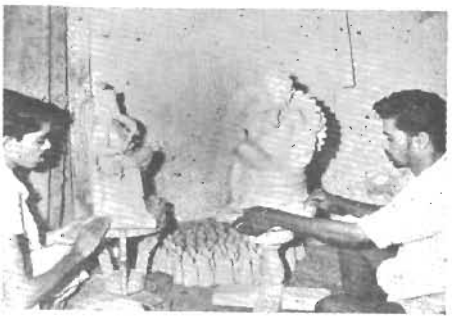
Pressing of clay into the wombs of the moulds of Plaster of Paris for different parts of Ganapati image.



Removing different pieces of moulds off the half-finished image.



Smoothing the image with a wooden Korani



Polishing the image by a piece of sand paper



Dusting the image

PAINTING



Spray painting of Ganapati image



Colour painting of Ganapati image



Packing of finished images

TRANSPORT



Loading the packages for transport to market

PREPARING OF PLASTER OF PARIS



Pounding of pieces of Plaster of Paris by wooden mortar and pestle.



Sifting of the powder of Plaster of Paris through a wire gauze sieve.



Mixing of the powder in water for pouring in a rubber mould.



Pouring the paste into the rubber mould

FINISHING OF THE PLASTER OF PARIS IMAGES



Peeling off the rubber mould



Cleaning the rubber mould after extraction of the image



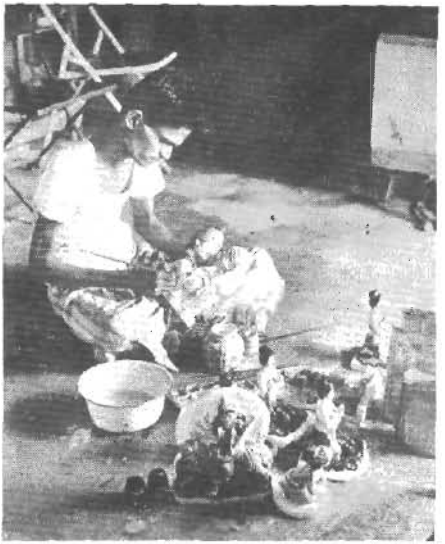
Polishing the image by a piece of sand paper



Filling the air-bubbles or rectifying minor defects by a steel Korani and Plaster of Paris powder.

PAINTING OF THE PLASTER OF PARIS IMAGES







Painting of the images

A FEW IMAGES OF PLASTER OF PARIS



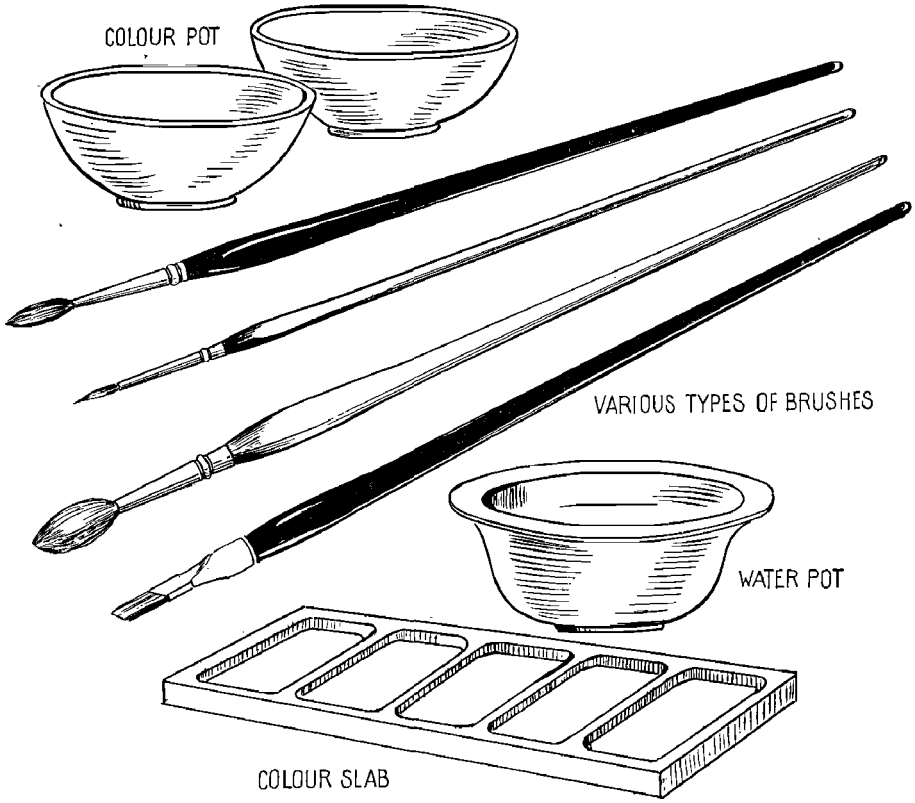
Goddess 'Laxmi'

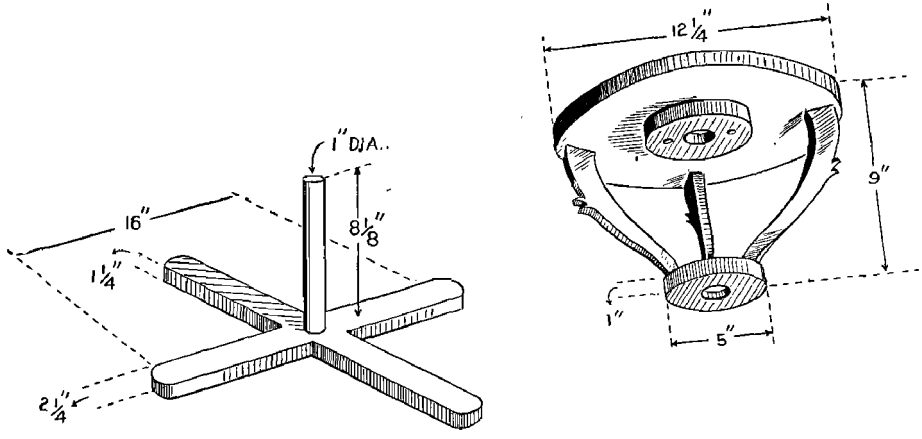


Goddess 'Saraswati'

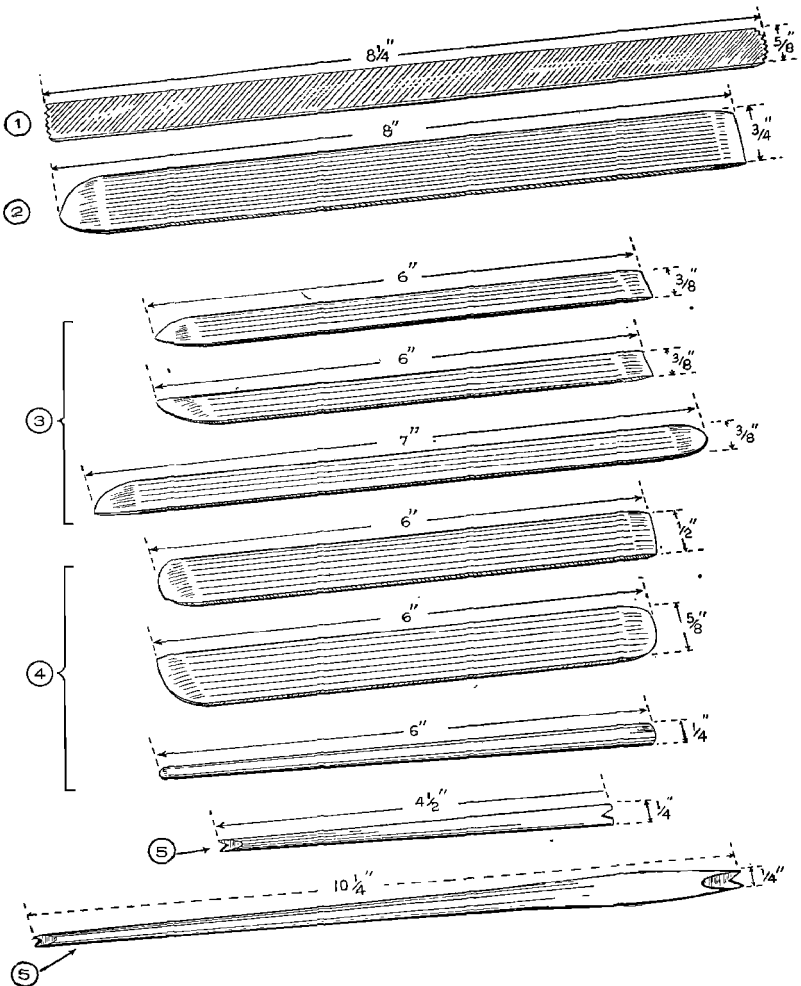


A Dancer


COLOUR POT
VARIOUS TYPES OF BRUSHES
WATER POT
COLOUR SLAB



FIRKI OR CHOUKI (REVOLVING TEA-POY)



1. STEEL KORANI (ALSO CALLED KHAVNI) USED FOR MODELLING
2. WOODEN KORANI USED FOR CARVING SEAT, CAN BE USED BY BOTH ENDS
3. WOODEN KORANI FOR DELICATE WORK AS THAT OF EYES, FINGERS, NOSE, NAILS ETC.
4. WOODEN KORANI USED FOR ORDINARY WORK
5. WOODEN KORANI USED FOR ENGRAVING THE ORNAMENTS

image should easily come out without sticking to the inner walls of the mould. The image is extracted from the moulds and elevations, if any, formed on the areas where the moulds were joined are smoothened by the *korani*. The colouring process is the same as in the case of the images of Plaster of Paris.

Some artisans make the Ganapati images from the start to the finish in their own workshops. Some others, however, give the work of moulding the images to others as a job work and receive back the crude images to which they give the finishing touch and paint them in appropriate colours. The rate at which this job work is done depends upon the size of the Ganapati image. It ranges from Rs. 15 to Rs. 25 per hundred images of different sizes.

The process which is followed in preparing a model for Ganapati images is described below :—

The kneaded clay, as described earlier, is rolled between the modeller's hands. Coils of it are arranged in conical formations and kept ready for shaping the image on the revolving stool called *Firki* or *Chauki*. Four signs at equal distance from one another are made on this conical coil by the *korani* made of steel. The topmost part of the coil is used for shaping the head and crown; the second part is used for shaping the neck and chest; the third is used for making the belly, and the fourth portion of the conical coil is used for carving out the seat of the image and its legs. The incomplete image on the revolving stool is supported by clay on all sides. By applying extra clay and dampening the image with water, the face, hands, legs, etc., are shaped. Naturally, the craftsman cannot prepare all these anatomical parts of the Ganapati image at one time. He has to wait till each shaped portion dries (i.e. becomes leather hard) before he can take up the other parts one after the other in succession. When the rough modelling of all the anatomical parts is thus made, he starts carving the details of each. When starting his model the modeller begins from the bottom, or from the ground and with his hands proceeds to capture a rough shape in clay of the model he desires. He uses a steel *korani* for the base of the image. When the rough model becomes hard he finalises the shape. The engraving of the crown, the ornamental details of the body, different shapes of trunk, and the required position of the legs, after which, Ganapati's seat and hands are then finalised by the craftsman with the help of the wooden *korani*, working, figuratively speaking, like a magic wand.

Once the model is prepared, the moulds of Plaster of Paris are made. The process of preparing the moulds of Plaster of Paris for Ganapati images is given below.

Plaster of Paris Moulds for Ganapati Images

Moulds are made from Plaster of Paris which when mixed with water sets hard very quickly. The time for absorption of the water contents in it depends upon the heat given to the crystals in the kiln. The usual proportion used is 2¼ lbs. of Plaster of Paris to two pints of water. A mud-like consistency is then prepared out of clay by mixing water with it and it is kneaded to remove air bubbles. A line dividing the back of the model from the front is then carefully marked vertically around the model from one side to the other. The back half portion of the clay model thus marked including its sides is then smeared with a mixture of soap and castor-oil and the model is laid on its back on the lump of wet kneaded clay prepared earlier. The model so laid in the lump of wet clay is pressed firmly into it so as to embed the model up to the line marked on it separating the front of the model from its back. The exposed front portion of the model is then in its turn smeared with sweet oil and soap mixture. A square frame of wooden boards of sufficient dimension is then made around the model embedded in clay frame upto the top and a thin paste of Plaster of Paris is poured on the exposed portion of the model. It is then left for a while to allow the Plaster of Paris to set. The mould and the model are then inverted and the kneaded clay in which the model was embedded is removed so as to expose the other half of it. About four to eight or more holes, technically called 'wombs' are scraped out with knife on the walls of the mould around the front half portion of the model. This is done so that when the Plaster of Paris is poured on the other half of the model it will automatically cast studs fitting into the holes or 'wombs' which will enable the two pieces (the front and the back) of the moulds to be keyed together. The thin paste of Plaster of Paris is then poured on the back portion of the model (now exposed) encased in the wooden frame in level with its brim. The whole thing is then left for a while to allow the Plaster of Paris to dry. The surrounding wooden frame is removed when the Plaster of Paris has set. The two halves of the mould are then separated and thanks to the coating with soap and sweet oil the model inside is removed, *en masse*, if possible, or in separate pieces.

The price per mould varies from Rs. 15 to Rs. 20. One Plaster of Paris mould can be used for three to

four years and nearly 250 images can be cast from it. In some cases the different parts of the Ganapati model are separated from the body by cutting them at the joints by means of a sharp knife. Thus the hands, the face, etc., are separate from the body. Separate moulds of Plaster of Paris are then prepared for each of the four hands, the face and the body in the same way as in the case of moulds of Plaster of Paris described above. After the casting of each hand is completed these are assembled together. Their assemblage eventuates in a complete image of Ganapati. Pieces of sticks of bamboo are inserted by way of hold-fast reinforcement while assembling the different hands of the body of the image, if required. The extremities of the hands to be joined are scratched and dampened before joining, in the absence of the use of pieces of the bamboo strips. The mould for the central portion of the body is commonly referred to as the " master mould " whereas moulds for individual parts of the body are called " piece moulds ". The pieces are numbered so as to enable the artist to join the moulds to each other with pieces of sticks of bamboo in their proper places. It may also be mentioned that the trunk of Ganapati is cast straight and its terminal end twisted towards the left or right before it is thoroughly dried as desired by the prospective buyer. All the piece moulds and the master mould taken together are called " Peti ".

Model making for Images of Plaster of Paris

Formerly Bhavnagar clay had to be pounded with the help of a wooden pestle and mortar and then sifted in a wiregauze sieve. However, the clay that is now purchased by the modeller is, as stated earlier, already grinded and hence the craftsman has only to sift it in a wiregauze sieve so as to get rid of small stones, etc. It is then kneaded and kept for two to four hours to make sure that the air bubbles in the kneaded clay disappear. The prepared clay, in a solid mass, fit for modelling into required sizes and shapes, is kept covered with moist jute rags. A prepared clay ball of the required size is then made and forcibly thrown by the modeller on a revolving stool or a turn-table (tea-poy) to obtain the required consistency. The turn-table or revolving stool has a firm base and it has a round disc placed on a rod which is fixed in the centre of the stand at the base. The round disc can be revolved by hand so that when the craftsman has finished modelling the front of the clay image and has to model or smoothen the back or side, he has just to turn the disc and need not change his position every now and then. A small quantity of water is splashed on the ball of clay so thrown on the turn-table, if required. The modeller has to keep his hands and clay wet all the time, otherwise the clay will stick to his hands. He then slowly builds up a rough overall form of the image beginning from the base and proceeds upwards. He uses both his hands and the modelling tools for this purpose and works in rapt attention towards the artistic development of the model, its proportions, its smooth exterior and its richness of ornamental details in order to make it a replica of the painted or printed picture on paper he has selected for modelling. His thumb and fingers play a magic part in shaping the physical curves of the model. The modeller takes about 10 days to produce the perfect model of his dreams. In case of a more complicated model he takes about a month's time. As a short cut to modelling many an artist buys readymade and often very attractive clay images from the market and use them as their models for preparing the moulds.

At other centres plastilina is also used as a material for modelling whereby very intricate details can be brought to a high point of refinement, it being available at Rs. 3·50 per lb. Needless to say, it does not require any wet cloth to be wrapped around it to keep the model damp till the modelling is completed.

Rubber Moulds for Images of Plaster of Paris

As an improvement on the Plaster of Paris moulds, which sometimes do not carry the impressions of the minute details of the models sharply and clearly enough, rubber moulds are now-a-days used. The casts prepared from Plaster of Paris moulds require more finishing and carving and it also takes more time to take out the casts from the moulds. A thin rubber mould responds far better than does a Plaster of Paris one for reproducing every minute detail of the model on the moulded images. The actual process of making the rubber moulds is shrouded in mystery since it is treated as a top trade secret. The following information is, however, gathered from the hearsay reports.

The processes involved in the making of rubber moulds are somewhat reminiscent of those carried on in the making of metal casts, hollow or solid, the rubber-latex being used instead of bees wax. This metal casting technique is known as the *cire perdue* method of hollow casting and in India it is an ancient art which has been known to metal casting artisans for five thousand years. The basic principle of *cire perdue* casting revolves around the mechanical replacement of an object originally modelled in bees wax or a wax-like substance, with metal.

When the clay model is completely dry it is placed on a flat wooden board and smeared with a mixture of cocoanut oil and soap to enable easy removal of the clay coat on the model when it is afterwards coated with clay to the required thickness. The thick coat of clay is given to the most intricate designs on the model in order to get every minute detail on the rubber mould. A paste of Plaster of Paris powder prepared in water is then poured or applied with brush to the clay coated model to give a "cover" or mould of Plaster of Paris. The paste gradually sets hard and when the required thickness is obtained by successive pouring of the paste, the clay coated model along with the mould on it is allowed to dry. After complete drying of the Plaster of Paris cover, as it is locally called, the flat wooden board placed under the model is removed and the model without clay coating on, is taken out of the plaster cover or mould. Care is taken while extracting the clay coated model from the Plaster of Paris cover to see that the model does not break or any of its parts gets loose and the Plaster of Paris mould or covering is then cut vertically from top to bottom thus dividing it into two halves if the model is large and complicated. The clay coat on the model is then carefully removed from it taking proper precaution to see that the details of the original model are not affected or disturbed. A hole is made at the top of the Plaster of Paris cover which works as a funnel for pouring the rubber-latex. The model is then inserted into the Plaster of Paris cover and kept on a flat wooden board. The plaster cover does not touch the model but there is an empty space between the two caused by the removal of the clay coat. The fluid rubber, a proportionate mixture of A and B compound, is then poured through the hole at the top of the plaster cover into the empty space between it and the model. The thickness of the rubber mould depends upon the thickness of the clay coat because the liquid rubber occupies the empty space between the plaster cover and the model after the removal of the clay coat and takes the precise thickness of it. Utmost care is taken to see that every nook and corner of the empty space between the model and the plaster cover is properly filled in, failing which the rubber mould is wasted. For complicated models, required number of holes are sometimes made into the plaster cover at given places, *viz.*, above the curves and intricate designs on the model. This enables the craftsman to pour the fluid rubber exactly over such designs or curves on the model and ensures perfect "casting" so to speak. This also works as an adhesive which obviates the possibility of the rubber sheath becoming dislocated and thus slipping out of its proper place. The fluid rubber synchronises perfectly and sets forming a continuous rubber sheet covering the model. This rubber mould is very highly valued as it carries the minutest details of the original model inside it in negative form which later serves to give the positive impressions of moulded images. The model encased in the rubber mould is kept to dry in the shade for a period of 3 to 4 days under normal weather conditions, or from 8 to 10 days when humidity is more. The fluid rubber must completely dry or else the rubber mould will not give correct impression on the model and both time and material will have been wasted. The model thus covered with the rubber sheet is then extracted from the plaster cover. The plaster cover and the model are sometimes preserved to facilitate the preparation of additional rubber moulds in future, if needed.

In modernised establishments, the following processes are carried on during the making of rubber moulds. The model is smeared with castor-oil to serve as a non-adhesive agent. A mixture of 'A' and 'B' compounds is prepared and is sprayed or brushed on the model one to five times as required. The component parts of these 'A' and 'B' compounds, being trade secrets, could not be known. The rubber coated model is allowed to dry and is recoated several times during the course of seven days or so. The final thickness of the rubber coat ranges from 1/10" to 1/16". If necessary, the rubber coatings can be reinforced by applying a thick coat of cotton wool. After the desired thickness is obtained, the model is kept in the open to dry for 8 hours. The rubber mixture is self-vulcanising and the mould is kept in an oven at a temperature of 70° C for 1½ hours, or 100° C for 1 hour. If it is not possible to make arrangements for getting the above temperature the mould can be kept warm for 3 days. The rubber is pulled to see if the rubber coating is quite tough and elastic and does not elongate when permanently set. The mould is then ready for stripping off the model. If necessary, for intricate designs, the rubber mould is required to be cut so as to open it out easily and get the model removed without breakage or damage. After removing it from the model, the rubber mould is examined to see whether it is thoroughly vulcanised from the inside also. If not, the mould is kept in hot water 80° C to 90° C for 20 minutes. The rubber mould may be fixed in one or two pieces of plaster shell so that its shape will be maintained at all times. Stiffer and thicker moulds may not require any plaster shell for support. The latex coated model is now ready for recasting the Plaster of Paris moulds.

The further process followed in making of the Plaster of Paris moulds which serve as an outer case from the thickly latex-coated model is described below :—

The required number of the pieces of the plaster moulds to be prepared are first determined by taking into consideration the different portions of the model having intricate designs or curves, etc. Sections are formed on the body of the model according to the number of piece moulds required, with thin clay-walls. These sections are filled with paste of Plaster of Paris after first smearing the portion of the rubber coated model with the solution of soap and oil. When the paste sets hard, the clay walls are removed. The required number of wombs at the required distances are scraped in the breadth of the piece moulds which form studs in the adjacent piece moulds. When all the piece moulds are thus prepared, they are removed from the latex-coated model. Sometimes, if the piece moulds are numerous and very small, a shell of Plaster of Paris is prepared. All the piece moulds on the latex-coated model are smeared with soap and cocoanut oil and then a paste of Plaster of Paris is spread or applied to them by brush for making the outer shell. While making this outer shell the same process is undertaken as described earlier for piece moulds. All the piece moulds are separated from the latex-coated model. The inside latex-coating, or the rubber mould, is then scissored vertically on the back side from the top only. It is next unfolded and the clay model inside is either removed *en masse* or in pieces.

One-Piece Moulds (Images and Decorative Plaques)

One-piece moulds are used for casting small figures and wall plates. This mould is prepared only for the front portion of the image, as the back is not open to view. Latex is coated on the front of the model made of clay and its sides, leaving the plain portion at the back untouched. After applying a mixture of sweet oil and soap as a non-adhesive substance, the model with the coating of latex thereon, is placed on a wooden board. A square frame of wooden sticks is prepared, keeping nearly 2″ of space around the above model. A thin paste of Plaster of Paris is then poured on the latex-coated model so as to cover the most elevated portion of the limbs and form a layer of 2″ over it. This is done so as to form a case or cover for the rubber mould. Once the Plaster of Paris has been set, say after 15-20 minutes, the Plaster of Paris cover is extracted from the latex coated model and the rubber mould from the clay model. The rubber mould is examined to see if it carries all the impressions of the model correctly. The remaining processes in finalising the rubber mould are the same as described earlier.

Images of Plaster of Paris

The following stages of work are involved in preparing the articles and/or images made of Plaster of Paris with the help of rubber moulds.

Stage I—Preparing Plaster of Paris powder

The greenish-coloured gypsum crystals are broken by a hammer into a sand like texture which is then heated in the kiln. The crystals of Plaster of Paris are spread in tin trays in a layer of less than one inch thickness. Ten trays are kept side by side in the wood-fuelled kiln at a time. The trays are removed after 2 to 4 hours when the broken crystals become white in colour which denotes that they are completely baked. They are then allowed to cool. The resultant cool sand like plaster is crushed in a wooden mortar with a pestle and then it is sifted through a wire-gauze sieve. The result of this process is a fine white powder which readily absorbs water. For want of their own kilns most of the establishments give the Plaster of Paris crystals to bakeries for this process, the baker's charges amounting to Rs. 2 per cwt. of crystals of Plaster of Paris.

Stage II—Preparing the Paste of Plaster of Paris

Sufficient water has to be added to the fine white powder to form a soft paste which is made into a fluid paste when the artisan is ready to pour it into the mould. In other words, the paste is prepared as and when actually required by reason of the fact that it sets hard very quickly.

Stage III—

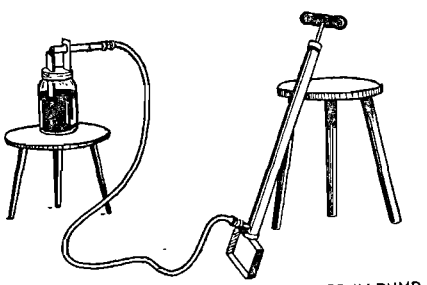
The rubber mould is encased in the Plaster of Paris mould and is reinforced by binding the two halves of the Plaster of Paris mould together with wire or thread to ensure that the rubber mould remains firmly encased within its womb until the image is completed. The mould is then kept in an inverted position with the open portion on its bottom facing upwards. Before the rubber mould is encased in the Plaster of Paris mould, castor-oil is applied to the inner side of the rubber mould so as to make it easy to extract the image undisturbed. The Plaster of Paris paste is then poured through the open orifice at the bottom into the hollow portion inside. After pouring the paste into the mould, it is given a good shake so that each and every corner of it is completely filled up with the fluid paste. The paste gradually sets hard. The two halves of Plaster of

Paris moulds are then untied and separated after 5 to 10 minutes have elapsed. The rubber mould is then carefully peeled off from the inner article so as not to disturb even the most minute designs impressed on the image.

The image at this stage is not dried up completely. If the minute impressions have not correctly appeared on the image, the artist sets right the defects on the design with his engraving tools made of bamboo splints. Foreign elements or unwanted impressions technically termed as " Seam-marking ", are smoothened out from the image with the same tool. Air bubbles formed on the surface of the image are filled by applying a thin paste of Plaster of Paris. The levelling and smoothening of the article is carried on at this stage while the image is still wet. Even in the mould-made image, the artist's own artistic sensibility plays a part in refining the details with his carving tools. Both his trained and innate sense of colour are ultimately used to give life and a sense of reality to the image. The image so moulded is then allowed to dry in the sun. In the rainy season an oven fuelled with coal is used for drying them. Both the rubber and Plaster moulds are preserved for future use after cleaning. The rubber moulds are cleaned with water and used again. The Plaster of Paris moulds which act as a cover need no cleaning.

Stage IV—Colouring

After the Plaster of Paris image is dried completely in the sun for a day or two, it is polished with sand paper of " zero " number grade as it is commonly referred to. Prior to colouring, iron *koranis* are used for carving out minor details, smoothening curves, further engraving, etc. Even details of facial wrinkles or the texture of the clothes worn by the images are impressively carved by these *koranis* in the skilful hands of the artisans. Care is naturally taken not to disturb the ornamental and other details. Dusting of the image is done by brush or small bits of rags or spun cotton. The image is now ready for colouring, this being the important process of enlivening the image. The image is whitewashed by an India brush $\frac{1}{2}$" in width with China clay and water, which is well known as the fine white clay used in making porcelain. The China clay is kneaded with water in order to get the workable consistency which is used for the overall whitewash coating. Even a thin wash of plaster mixed with mica flakes gives a cool and charming effect. Mica flakes are crushed and the semi-powder substance is kept in a piece of cloth and it is secured by a knot (पुरचुंडी). It is then dipped in water which is kept in a vessel and rubbed against the left palm by holding it in the right hand. The mica thus dissolved in water is added to the mixture of Plaster of Paris. Spray coating is applied with a mixture of *shadu* (earth resembling chalk) or lime mixed with water. This whitewash is called *safeda*. On the *safeda* coating two more coats of body colour, i.e., pink, green, white, red, or yellow, are applied. The back part of the image is coated with blue or red colours. One more coat of mica is given to the image. The mica coating is commonly called *chakakt*. The shading effect is obtained by applying dry colour powder with a brush or spun cotton. Shading is necessary to give colour effects in the round given shapes and forms. In a few cases liquid colour made of colour crystals is also used for shading. For the shading of the cheeks of female images, especially, dry colour powder is artfully applied with spun cotton and rubbed in with gentle pressure. The painting of different parts of the image in different appropriate colours is next taken up. Various kinds of colour crystals mixed with water and gum are applied in this process. Clothes and crown are painted mostly in yellow, red or green. Hair are painted black with a few shades of white. In colouring, the painting of the face is of crucial importance. This includes the painting of eyes, eyelids, lips, with other parts of the face, for which tube colours are used to give the image a realistic appearance. Lifelike expressions on face are painted by the artists in more costly colours. Varnish is applied only to the crown and hair. The crown is painted in golden colour, the varnish being added to give it a shine.



SPRAY PUMP

Tools and Appliances

Brushes.—The following paint brushes made in England and Germany are particularly used for the best workmanship :—

Windsor and Newton—

(1) No. 8 sable hair brush, used for body colouring.

(2) No. 6 sable hair brush, used for shading and colouring seat.
(3) No. 4 sable hair brush, used for shading.
(4) No. 3 sable hair brush, used for colouring the hair of the image.
(5) Nos. 1 and 2 sable hair brush, used for face decoration and artistic designs.
(6) No. 0 sable hair brush, used for colouring of eyes.

Kamba—
(7) No. 3 for colouring hair.
(8) No. 4 for Varnish.
(9) No. 5 (303) for Varnish.
(10) No. 12 for colouring seat, etc.
(11) ½" brush when colours are applied on large surfaces.

Wash brushes for covering large surfaces are available for Rs. 3 to 7, sable hair brushes are available for Rs. 2 to 5 and flat hair brushes are available for Rs. 5 to 10.

Brushes of sable hair are used for water colouring as they are more durable and the colours flow out easily from them.

Koranis.—The *koranis* are handmade. For carving dry clay images the iron *koranis*, or *koranis* made of oak wood, are used. They are in various sizes ranging from 4" to 10" in length with flat, round or pointed forms of different thickness. These are available also in the market at Re. 0·12 to Re. 0·25 per *korani*. Iron *koranis* are also made from the metal ribs of old umbrellas. These wooden and iron *koranis* are shaped at their working ends at different angles to suit the requirements of the individual craftsman.

Both ends of the bamboo *koranis* can be used, their function being to smoothen the surface or to extract unwanted areas when the clay image is in the damp stage. With the help of a *korani* the artist can design and model the clothes of the image, such as dhotis, shirts, etc.,

Sketches of some of the important *koranis* are given in this report.

Firki or Chauki (Revolving Teapoy).—This is a handmade wooden teapoy used in the clay modelling stage for working on unfinished images, which can be revolved on all sides as required by the modeller. It is also used while painting the clay images of Ganapati.

Other Material.—Glass and metal dishes and pots are used for keeping colours. Racks are used for keeping the finished or incomplete articles, and/or for drying the images made. Spun cotton is used instead of a brush for shading with colouring powders. Small pieces of rags are used for dusting the images. Sand paper is used for finishing the rough surface of the casts and is available at Rs. 2 to 4 per dozen. Buckets and bottles are used for storing water and small bottles are used for keeping costly made up colours. The clay is kept in jute bags. Wire gauze sieves are used to sift the powder of Plaster of Paris and clay. Tin-trays are used for keeping the crystals of Plaster of Paris. Hammer, spade and large iron crowbars are used for crushing Plaster of Paris crystals and also for use in the kiln. A wooden mortar and pestle are also used for powdering the crystals of Plaster of Paris. A list of important tools and implements required is given in Appendix 2 at page 23.

Workshop

The five establishments engaged in making images of 'Plaster of Paris' at Pen have in all 3,648 sq. ft. of plinth area in their workshops housed in different buildings. In all 132 workers are employed in these five concerns and every worker gets approximately 28 sq. ft. of sitting space at his place of work. Generally the ground floor of the building is used for storing raw material like Plaster of Paris, wooden cases and other stores. The chief artist called the mastercraftsman also uses the ground floor as a quiet place to design his models. First storey in each building which is airy and sufficiently ventilated is used for storing the finished products on racks, drying of images and for colouring, etc.

The Kalpana Kala Mandir and the Prabhat Kala Mandir which are the leading establishments in manufacturing images of Plaster of Paris have their own show-room-*cum*-offices and a common kiln. The other establishments making Plaster of Paris images take the help of baker's kilns in the town as has already been pointed out.

The kiln is the integral part of the workshop. It is built in a room measuring 18′×8′×15′, half of which is occupied by the kiln. In simple terms a kiln is an oven operated by a wood fire. It is erected on the ground and its furnace is at least a waist high. The furnace is built of bricks around an empty space in which tin-trays are deposited for baking purposes. The kiln measures 6′ × 4′ × 3′ from inside. The front door of the kiln measures 3′×3′. The chimney measuring 10′ in height with 1½′ in diameter is fixed at the top of the kiln on the furnace.

N.B.—Items Nos. 1 to 6 of the tools are of English make, items 7 to 10 are made in Germany, and item 11 is made in India.

Articles and Designs

Ganapati Images of Clay.—The sizes of the clay Ganapati images vary from 6 inches to 4 feet and numbers are given to images according to their heights. Ganapati images are of various designs such as those seated on (1) Pea-cock, (2) Lion, (3) Rat, (4) Sofa, or other seats, etc. They have also the background of Shiva-Parvati images, or cows, or other sacred animals. The general make-up, clothing, etc., of each Ganapati image often reflects the different political, social and religious ideologies of the devotees who order them. It is not rare, for instance, to find Ganapati images with a Gandhi cap, a turban, or without a cap with nicely parted hair. Some images may also feature a spinning-wheel, while others may depict him carrying a tri-colour flag. Thus do these images reflect various tastes and ideologies. At Pen, however, Ganapati images in traditional form are more in vogue.

In the last generation, customers were not much interested in the anatomical proportions of Ganapati images. Now the trend has changed towards the images having anatomical proportions. The agent-*cum*-trader receives suggestions and complaints from the customers. He in his turn communicates the liking of the customers to the manufacturer who prepares the images accordingly. The Ganapati image having four hands in the traditional setting and size is very much in demand.

Plaster of Paris images.—There are more than one hundred and fifty varieties of articles and images of Plaster of Paris manufactured at Pen. These varied articles are used as table and wall decorations and for presentation purposes. Images of Gods, Goddesses and Saints, Sohni Mahiwal, Omar Khayyam with his beloved, etc., are used as decorative articles by people with varying tastes. Now-a-days, the images of Gods and Goddesses are not so much in demand as other articles of exotic and amorous appeal, which depict the "wine, woman and song", or mythological and other love scenes.

These images are available in different sizes which vary from 2 inches to 18 inches in length or breadth. Generally, there are four types of images, namely : (1) busts, (2) figurative statues and (3) Plates which are either, (*a*) plain, or (*b*) mounted in glass frame. The height of each statue ranges from 4 to 12 inches. Plates are of two types. Some plates are without glass cases and are meant for wall decoration. Some others are framed and encased in glass. In certain cases the customers bring various pictures having the background of scenes from foreign countries with foreign motifs. These pictures are then suitably changed or altered to Indian background with Indian motifs and images of Plaster of Paris are prepared accordingly.

CHAPTER III

CRAFTSMEN FAMILIES

While discussing the composition of craftsmen and their working conditions *viz.*, their earnings, hours of work, etc., we will have to study them under two different categories, i.e., (*i*) those who are solely occupied in the manufacture of clay images of Ganapati and (*ii*) those who are engaged in the production of images of Plaster of Paris. The latter establishments, though not seasonal, suspend their work temporarily from June to September partly due to moist weather and partly due to the diversion of their skill towards making Ganapati images.

Craftsmen Families engaged in the Manufacture of Ganapati Images

So far as manufacturing of Ganapati images is concerned a definite figure of workers engaged therein could not be obtained because it is a seasonal occupation and nearly 40 establishments employing about 400-500 workers work in them for a period of 3 to 4 months from June to September. There is, however, one permanent establishment, *viz.*, of Shri G. B. Londhe which manufactures Ganapati images all the year round as seen earlier. The number of employees in this establishment is 12. During the season many persons possessing the required skill but otherwise engaged in other occupations like cultivation, trade, services, etc., enter this field. As the majority of workers engaged in this craft are seasonal workers, the details about their ages, educational levels, etc., could not be collected.

Wages.—The average daily wages earned by the workers in this particular branch of the craft are as shown below :—

Item of work	Daily wages earned by	
	Skilled worker	Unskilled worker
	Rs.	Rs.
Moulding of Ganapati images from Plaster of Paris moulds.	1·50	1·00
Polishing	....	0·75
Spraying	1·00	0·75
Colouring	2·00	....
Miscellaneous	....	0·75

Facilities available to the workers.—Since the work of manufacturing Ganapati images is done in one's house and mostly as a household enterprise, little facilities of permanent character, *viz.*, urinals, bathrooms drinking water supply, rest room, etc., are made available to the workers. All the activities from the kneading of the clay to the colouring of the Ganapati images are carried out only in the house and the workers squat on the ground while performing their work.

Maximum number of workers are engaged at the close of the season when the uncoloured images are taken up for colouring. The colouring of the images is generally done at the fag end of the season as the indigenous colours do not generally last for more than a fortnight or so. However, the manufacturers, now-a-days, cover their images after colouring, with bags prepared out of plastic sheets (polythene) which enables to keep the lustre and freshness of the colours. This also enables them to take up the work of colouring some two months before the Ganapati festival, whereas in the past they used to commence it only some 15 to 20 days prior to Ganesh Chaturthi.

The following are the master-craftsmen in the manufacture of Ganapati images at Pen :—

(1) Shri N. G. *alias* Rajabhau Deodhar.
(2) Shri V. G. Deodhar.
(3) Shri G. B. Londhe.
(4) Shri B. H. Tamboli.
(5) Shri G. P. Biwalkar.
(6) Shri P. K. Saste.
(7) Shri V. G. Pitale.
(8) Shri B. B. Kumbhar.
(9) Shri D. L. Hazare.
(10) Shri N. B. Bandiwadekar.
(11) Shri V. D. Londhe.
(12) Shri R. K. Londhe.

Craftsmen Families engaged in making Images of Plaster of Paris

At Pen there are five establishments engaged in the manufacture of Plaster of Paris images as stated below :—

Name	Year of inception	Average number of workers (1961)
(1) Prabhat Kala Mandir	.. 1933	.. 56
(2) Kalpana Kala Mandir	.. 1958	.. 44
(3) Laxmi Kala Niketan	.. 1959	.. 10
(4) Akshaya Kala Kendra	.. 1960	.. 16
(5) Ganesh Kala Niketan	.. 1959	.. 6
	Total	.. 132

They also make Ganapati images of Bhavnagar clay during the monsoon months (*i.e.*, June to September), preceding the Ganesh Chaturthi festival.

The break-up of these workers by sex, caste and skilled or unskilled category is given below :—

Serial No.	Caste	Workers					
		Total		Skilled		Unskilled	
		Males	Females	Males	Females	Males	Females
1	2	3	4	5	6	7	8
1	Maratha	60	12	27	....	33	12
2	Agri	13	....	3	....	10	....
3	Sonar	10	....	6	....	4	....
4	Gurav	9	....	6	....	3	....
5	Brahmin	8	....	3	....	5	....
6	Hetkari-Bhandari	6	....	4	....	2	....
7	Kalan	4	....	2	....	2	....
8	Warik	3	....	....	....	3	....
9	Kumbhar	2	....	....	....	2	....
10	Chambhar	2	....	....	....	2	....
11	Sutar	1	....	....	....	1	....
12	Teli	1	....	1	....	....	....
13	Wani	1	....	1	....	....	....
	Total ..	120	12	53	....	67	12

It is thus evident that Marathas form 54·55 per cent of total workers. Moreover all the female workers engaged in the craft belong to Maratha caste. This craft, it will be seen, is not confined to one particular caste as is generally seen in other crafts like handloom weaving, goldsmithy, etc. The introduction of moulds of Plaster of Paris and of rubber moulds have brought in a division of labour and has facilitated the employment of unskilled persons drawn from all communities.

The following table and the graph on page 16 show the average strength of workers engaged in this craft since 1940 to 1961 :—

Year	Average number of workers
1940	10
1941	14
1942	14
1943	18
1944	18
1945	18
1946	20
1947	25
1948	3
1949	12
1950	25
1951	30
1952	40
1953	40
1954	42
1955	44
1956	44
1957	44
1958	44
1959	92
1960	110
1961	132

It will be seen that the employment of workers in this craft which was fairly constant from 1952 to 1958, suddenly jumped up in 1959 and has maintained the upward trend. The craft had to face the competition

AVERAGE NO. OF WORKERS IN MANUFACTURING IMAGES OF
PLASTER OF PARIS AT PEN (1940-1961)
AVERAGE NO. OF WORKERS
0
20
40
60
80
100
120
140
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
1961

from the imported and more attractive articles of celluloid and plastics in 1947-48 and this is reflected in the number of workers engaged in the years 1948 and 1949. However the craft soon recovered due to the introduction of rubber moulds in place of Plaster of Paris moulds in the period 1952-53. The rubber moulds are superior to those of Plaster of Paris in many respects. Till 1956-57, the products of Pen were marketed in Bombay only. However they are now sold at such places as Delhi, Calcutta, Madras and this gave the necessary impetus to the craft.

The images of Plaster of Paris manufactured at Pen are re-touched now-a-days at Bombay and are exported to countries like United Kingdom, United States of America, etc.

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

Age-group	Persons		
	Total	Males	Females
0—14	..	..	..
15—24	61	60	1
25—34	60	56	4
35—44	8	1	7
45—59	3	3	..
Total ..	132	120	12

Since the skill required in this craft (i.e. in preparing the model or the rubber mould) is mostly original and in many cases hereditary the level of general education (as is understood by us) does not play an important part in this craft. In fact some of the skilled craftsmen have not studied beyond the primary level. The distribution of workers by educational level is as shown below:—

Educational level	Number of workers		
	Persons	Males	Females
Illiterate	29	17	12
Literate without any educational level.	21	21	..
Primary	57	57	..
Middle School	24	24	..
Matriculation	1	1	..
Total ..	132	120	12

The distribution of the workers engaged in this craft by their length of service and sex is as shown below :—

Duration	Number of workers		
	Persons	Males	Females
Less than 3 months ..	8	8	..
More than 3 months but less than 6 months.	5	5	..
More than 6 months but less than 1 year.	8	6	2
More than 1 year but less than 2 years.	21	18	3
More than 2 years but less than 3 years.	13	11	2
More than 3 years but less than 5 years.	46	41	5
More than 5 years ..	31	31	..
Total ..	132	120	12

It is thus seen that a little more than 58 per cent of the workers in this craft are working in it for more than three years. This continuity of job is essential for the steady progress of the craft.

Wages.—The wages are paid on daily basis and the payment is made on every Saturday evening, since the manufacturing units are closed on Sunday. A new entrant in the craft has to work as an apprentice under a skilled worker and has to do all sorts of odd jobs such as working at the kiln, carrying images from one craftsman to another, etc. The daily rates of wages paid to the workers doing different work are given below :—

Category of work	Average daily wage rates	
	Skilled worker	Unskilled worker
	Rs.	Rs.
Modelling	8·00	....
Moulding	3·00 to 4·00	....
Kiln work	1·75	1·00
Pounding	1·50	1·00
Pouring	2·00 to 2·80	1·60 to 2·00
Engraving	2·00 to 2·50	1·60 to 2·00
Polishing	1·50 to 2·00	1·35 to 1·50
Spraying	1·12 to 1·70	....
Colouring	2·00 to 2·90	1·25 to 2·00
Face decoration	2·50 to 3·10	....
Miscellaneous	....	0·75 to 0·90

An annual bonus is paid by two establishments only, *viz.*, Prabhat Kala Mandir and Kalpana Kala Mandir which are governed by the Factories Act of 1948, while the other three establishments are not covered by the said Act since they do not employ more than 20 workers.

The working hours are from 8-00 a.m. to 12-00 noon and 1-30 p.m. to 6-00 p.m. with a tea interval of 30 minutes at 4-00 p.m.

The worker is provided with a gunny bag on which he sits while performing the job. The tools and implements like brushes, *koranis*, etc., are provided by the owner of the establishment. In order to get full day's wages late comers have to work extra hours to make up the number of prescribed working hours. Overtime allowance is also paid.

The following workers engaged in this craft are considered as master-craftsmen :—

(1) Shri N. G. *alias* Rajabhau Deodhar.

(2) Shri V. G. Deodhar.

(3) Shri Bandu Jadhav.

All the three persons are experts in the preparation of models from which the rubber moulds are prepared. They also prepare the rubber moulds from the clay models.

CHAPTER IV

ECONOMICS OF THE CRAFT

The total cost of goods produced by an establishment includes not only cost of raw materials and wages paid to workers but also expenditure on such items as rent of land and buildings, interest on loans, depreciation charges of tools and implements, transport charges, etc.

Cost of Production of Ganapati Images of Clay

As seen earlier there is only one establishment that manufactures Ganapati images throughout the year. The average expenditure on raw materials, labour charges, etc., incurred by it during a period of one year is given below :—

Particulars	Cost
	Rs.
Raw material	2,000
Labour charges	4,500
Miscellaneous expenditure ..	500
Total ..	7,000
Sale value of goods manufactured ..	9,500

The labour charges are naturally high since the craft is more labour-intensive. Images of Ganapati are made at this establishment for nine months, *viz.*, from September to May and in the remaining three months (*i.e. June* to *August*) colouring of the images is done. Finishing touches are given just a few days before the Ganesh Chaturthi festival.

The cost of manufacturing clay images of Ganapati in different sizes is given below :—

Item	Size of Image of Ganapati	
	Small	Medium
	Rs.	Rs.
Cost of raw material ..	0·50	1·00
Labour charges	1·00	1·75
Miscellaneous	0·25	0·50
Total ..	1·75	3·25
ale value of the image ..	2·50	5·00

Market for Ganapati images.—The Ganapati images have a one-day market, *viz.*, on the Ganesh Chaturthi day (August-September) in contrast with the demand for articles of Plaster of Paris which have a market throughout the year. Transportation of Ganapati images to market involves a lot of breakage and hence their prices are inclusive of probable losses due to breakage.

In the past, when the transport by road was not as easy as it is today, the Ganapati images were first taken to Antora port by headload where they were deposited in country crafts which carried them to Bombay. The cost of transport used to be quite heavy due to the number of transhipments involved. The main market at Bombay was located at Gulalwadi but due to communal riots it was later shifted to Fanaswadi. Now-a-days the images are carried from the workshops at Pen to Bombay markets directly in motor trucks. The manufacturers hire small portions of shops at Fanaswadi, Gulalwadi, Parel, Dadar, etc., foi displaying their products a day or two before the Ganesh Chaturthi day. They have however to pay exhorbitant charges for the space allotted to them for use for 2 days. The charges are as high as Rs. 150 to Rs. 200 for a day, it is reported. They also carry with them a little amount of clay, colours, brushes, other tools, implements and equipment etc., so that minor repairs to images can be undertaken on the spot. The manufacturers sell their images till Bhadrapad Sud 4 (Mid-day) and carry back the images left unsold. In the past the manufacturers on their return journey, used to alight at Dharamtar port and proceed to Pen in Tongas (horse drawn vehicles). The members of their households at Pen used to eagerly await their arrival to know the outcome at the market. There is a belief that if it rained on Bhadrapad Sud 3 the images would fetch a good price.

The manufacturers even now, take on rent a portion of the shops at Girgaon, Dadar, Parel, etc., areas of Bombay for a day or two and sell the images. The market rates of images are now-a-days conveyed back to Pen by trunk telephone with the result that there is no thrill which used to be there in the past.

Cost of production of Plaster of Paris images.—The total capital invested in the five establishments which manufacture images of Plaster of Paris is estimated at Rs. 74,500, of which the share of fixed capital is Rs. 50,350. The following table shows the average monthly expenditure on raw materials, packing, labour

and transport charges as well as sale amount and profit for each of the five establishments in 1960-61 :—

Name of establishment	Average number of workers	Number of working days	Expenditure on raw materials, labour, etc.									Sale value	Profit	Column 14 expressed as a percentage of Col. 12
			Clay	Rubber	Plaster of Paris	Colour	Packing material	Transport	Labour charges	Miscellaneous	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Prabhat Kala Mandir ...	56	26	4	10	320	320	200	175	2,500	65	3,594	4,800	1,206	33·56
Kalpana Kala Mandir ...	44	26	4	10	320	320	200	150	2,200	65	3,269	4,500	1,231	37·66
Laxmi Kala Niketan ...	10	26	2	10	75	60	23	25	300	5	500	750	250	50·00
Akshaya Kala Kendra ...	16	26	5	25	320	240	150	85	900	60	1,785	2,500	715	40·06
Ganesh Kala Niketan ...	6	26	2	10	75	60	25	25	250	5	452	700	248	54·87

Thus we find that labour charges generally constitute 64 per cent of total cost while the share of raw material is nearly 23 per cent. Since the cost of tools and implements is very negligible, depreciation charges do not constitute a substantial factor in the cost of production.

The following statement is prepared in respect of two establishments where the data on expenditure of raw material, labour charges and sale value is given for the year 1960-61 :—

Name of establishment	Expenditure on				Sale value
	Raw Material	Labour	Miscellaneous	Total	
(1)	(2)	(3)	(4)	(5)	(6)
	Rs.	Rs.	Rs.	Rs.	Rs.
(1) Prabhat Kala Mandir.	5,200	24,000	4,000	33,200	46,000
(2) Kalpana Kala Mandir.	5,500	25,000	4,000	34,500	47,000

The amount in column 6 includes sale price of images sold during the year but which were prepared either during the year or in the previous years.

In order to give a more precise account of the cost of production the following data were collected in respect of one establishment for one week (15th May 1962 to 21st May 1962). It shows expenditure on various items, such as raw material, fuel, wages, etc.:—

Item	Expenditure	Percentage of total expenditure
	Rs.	
Raw material—		
(*a*) Plaster of Paris	80·00	
(*b*) Colour	80·00	
(*c*) Rubber	10·00	
	170·00	18·64
Fuel, Lubricant, etc.—		
Fuel	12·00	
Lubricant	2·50	
Polishing Paper	1·25	
	15·75	1·73
Packing material	54·50	5·98
Transport charges	80·00	8·77
Labour charges	500·00	54·82
Rent of buildings	11·25	1·23
Miscellaneous	20·50	2·25
Sales Tax	60·00	6·58
Total expenditure ..	912·00	100·00

During this week, 240 images of different types and sizes were manufactured and would fetch Rs. 1,200, if sold, thus realising a profit of Rs. 288 or about 32 per cent of total cost of production.

In order to work out the cost of production of an image of Plaster of Paris, the following data will be useful :—

Item	Description of the image		
	Navrang girl	Umar-khayyam	Shiv-Parvati
Raw material	1·12	1·12	0·50
Wages	2·50	2·75	1·25
Miscellaneous	0·50	0·57	0·25
Total ..	4·12	4·44	2·00
Sale Price	8·00	10·50	3·00

The prices of Plaster of Paris images vary widely according to their design, shape and variety. Even the introduction of two or more colours in the image increases the price of the item. A price list for different images is given in Appendix 3. Nearly 30 to 35 per cent margin of profit is included while fixing the price of articles. The traders are allowed a commission of 15 to 20 per cent of the price mentioned in the price list.

Time required to complete a few specific images is as follows :—

Description of Image	Time required for					
	Preparation of Plaster of Paris	Pouring of Plaster of Paris in Moulds	Engraving and removal of defects	Polishing	Spray painting	Colouring
1	2	3	4	5	6	7
A woman standing with a pitcher on head. Price—Rs. 16·00	1 hour	20 minutes	15 minutes	15 minutes	15 minutes	2 hours
A bust of Buddha 12″ × 7½″. Price—Rs. 8·00	1 hour	15 minutes	15 minutes	15 minutes	15 minutes	1½ hours
Radha-Krishna 11½″ × 8½″. Price—Rs. 9·00	1 hour	15 minutes	15 minutes	15 minutes	15 minutes	1 hour
An image of Saraswati 15″ × 8″. Price—Rs. 12·50.	1 hour	15 minutes	15 minutes	15 minutes	15 minutes	1½ hours

Marketing.—The sale of Plaster of Paris images was at its peak up to 1947-48 but thereafter, it had to face the competition from the more attractive imported articles of celluloid and plastics. It has once again increased its market after 1959-60. The demand for mythological images in the market declined from 1958-59 onwards but that for decorative articles gained momentum. The display of images of Plaster of Paris at different industrial exhibitions has given a fillip to this craft. At present the craft has to face competition from cheaper varieties of images of Plaster of Paris which are produced in various parts of India. The artisans of Pen have not patented their products as is done by Shri Hatkar of Bassein, in Thana District. The higher margin of profits in this craft has attracted many individuals to this craft though their products are not of a very high order.

Markets in India and abroad.—These articles are purchased only by the well-to-do because of their high prices. The peak season for sale of these articles is during the marriage season and festivals from November to May. Bombay, which was the only market for these products up to 1956-57, continues to be the main market even to-day. Since 1956-57 the articles are being sent outside Maharashtra to such places as Delhi, Calcutta, Madras, Ahmedabad, Bhopal and other prominent cities in India. In Bombay, Khadi Gramodyog Mandal, and its branches in other cities, is the main customer for these decorative and representation articles.

Out of five establishments, two establishments sell their products to the Khadi Gramodyog Mandal at Bombay through their agent stationed at Pen in addition to selling them to traders in different cities. Only three concerns sell their products, direct to the customers visiting these establishments, though in small quantity. It is seen that the main market is Bombay. 64 per cent of the total sale was marketed in 1960-61 in Bombay which includes the sale to Khadi Gramodyog Mandal, Bombay, which was as much as 20 per cent of the total sale.

Articles meant for export to U.K. and U.S.A. are processed at Bombay with pearl coating.

Transportation.—The transport of these articles needs very careful handling since they are very delicate. The goods are sent by road to Bombay, Poona, etc. Since Pen is very well connected to Bombay by road, lorries are always available for carrying goods to various places.

CONCLUSION

The demand for the images of Plaster of Paris and Ganapati will remain steady in the future. In fact with the rising standard of living there is every likelihood of people purchasing decorative and fancy articles to decorate their drawing rooms and walls of houses and the share of images of Plaster of Paris can certainly be considerable. Since the Ganesh Chaturthi Festival is a household celebration in practically every Hindu family especially in Western Maharashtra it is not likely that the demand for Ganapati images will fall. In fact it may go up steadily. Even though the output of the craft has a steady and assured market there are certain difficulties which come in the way of its expansion.

The proprietors of the units manufacturing images of Plaster of Paris and also those producing Ganapati images have expressed their concern at the non-availability of quality colours which are very essential for

the craft. In view of the foreign exchange crisis, good colours of foreign make are not available in the market at reasonable rates and those locally manufactured are said not to retain their effect for long. The manufacturers of Ganapati images, however, ensure the retention of colour effect of their images for a month or so by covering the images with bags of Plastic or Polythene sheets. They would like that the quality of the indigenous colours should improve.

The position regarding the brushes with which the images are painted is also similar. The indigenous brushes, it is stated, neither last long nor do their hair have uniform strength with the result that the get-up is not as effective as is obtained with the help of brushes manufactured in U.K. or Germany. It should be possible with some efforts to manufacture brushes of a high quality in India only.

The transportation of the images of Plaster of Paris as well as Ganapati images is not as great a problem as it was once though the loss due to breakages has to be borne by the manufacturers. Though the conditions have improved now due to road transport facilities whereby the goods can now be carried directly from their workshop to the retailer's stall yet the risk of damage due to breakage on way is always there. In the case of Ganapati images minor damage to hands, trunk, etc., can be repaired but the same cannot be done in respect of Plaster of Paris images.

There is one problem peculiar to the manufacturers of Ganapati images. Since they have a one-day market especially at Bombay, they have to take on hire a small space from out of regular shops at such important places like Dadar, Parel, Girgaon etc., in Bombay, but the rent of the space is very high. In many cases they have to pay Rs. 150 to Rs. 200 only for a day. A suggestion has been put forward by some of them that a few of the school buildings which are closed on Ganesh Chaturthi day may be converted into a " market yard " for sale of Ganapati images on this day, the manufacturers paying a reasonable rent to the school authorities.

There will be no dearth of skilled and unskilled labour as far as these crafts are concerned because their roots are firmly planted in many households at Pen. The introduction of rubber moulds in the case of Plaster of Paris images and Plaster of Paris moulds for Ganapati images, have additionally helped to a great extent to do away with much skilled work. Once the moulds are obtained, the further processes can be carried out also by an unskilled person. The colouring of the images, however, is an art and needs much skill. But it can be acquired by training and practice.

Since the manufacturing units of Ganapati images are not covered by the Factories Act of 1948, because of less number of workers in each unit (less than 20), there is no serious labour trouble. In most cases the family members work in this craft during the season. However the manufacturers of images of Plaster of Paris have voiced their concern over the same. There is, thus, a tendency among the employers to get the work done on contract basis so that they can avoid the operation of the labour laws, the labourers engaged on contract basis being not treated as regular employees.

There is no shortage of clay (*shadu*) which is required for the preparation of Ganapati images. In fact, in the past, the units manufacturing Ganapati images had to pound the clay which used to be sold in the form of small "stones". Now-a-days the clay is ground at the pit head and transported to Bombay in gunny bags. It has only to be sifted by means of wire-gauze sieves before use.



Ganapati idol being carried in procession for immersion



Immersion of Ganapati idols

APPENDIX 1

Ganesh Chaturthi Festival

This festival is observed in celebration of the birth of God Ganesh or Ganapati throughout Maharashtra on Bhadrapad Sud 4 (August-September), mostly by installing clay images of the deity, in many Hindu households.

Every fourth day of each fortnight is also observed by devoted Hindus as a day of fast, as ' Siddhi Vinayaki ', if in the bright half, and as ' Sankashti ', if in the dark half, of the month, when God Ganesh is worshipped and offerings and vows are made to him. ' Sankashti Chaturthi ' falling on a Tuesday or that in the month of Shravan (July-August) is observed with special devotion by a large number of people, when, if possible, the devotees go to any of the nearest important places such as Titwala in Thana District and Madh and Pali in Kolaba District where there are Ganapati temples.

The fourth day of the bright half of Bhadrapad is however the principal day dedicated to the worship of God Ganesh and his mount, the mouse, and is observed on a grand scale in most Hindu households, especially in the Konkan districts.

Ganapati is a God of learning and no religious work or festival in Maharashtra starts without paying homage to him first. Even the beginners start their learning with a bow or obeisance to God Ganapati in the terms ' *Shree Ganeshayanamah* ', meaning ' I bow to God Ganapati '. Ganapati is also believed to avert troubles, (' *Vighna harta* ') and so he has more devotees than any other Hindu Gods, excepting possibly, Lord Krishna in different forms. At the beginning of any worship, worship of Ganapati is obligatory.

As in the case of other festivals, all members of the household wake up early in the morning and after ablutions take a refreshing bath and set themselves to the task of making elaborate preparations for the worship of the deity which takes place at noon. In this case it consists of fetching flowers (red varieties being preferred), ferns and tip-leaves of 21 kinds and *durva* (grass shoots) in lots of 21, which number is very important in the worship of this deity, and other prescribed materials. This done, finishing touches are given to the reception hall where the Ganapati image is to be received and installed with a decorated dais surmounted with an ornamented arch overhung with rows of fruits and flowers known as ' Falavali ' and most important of all, the fetching and installing a well-sized clay image of Ganesh painted in colours and worshipping it under the guidance of a priest, at mid-day and offering prayers in his praise (*arati*). The principal food offering (*naivedya*) to the deity consists of a sweet preparation called ' Modak '. 21 *modaks* are served to the deity in a leaf plate on which other normal articles of food are served.

It is customary to consign the Ganapati images installed in different households to water, by carrying them in procession to the accompaniment of prayer songs and music and amidst shouts exhorting the deity to grace the devotees with its arrival early next year, either on the next evening or on the 5th, 7th, 9th, 11th and in some cases on 21st day, except at places where Gauri (the consort of Shiva, Ganapati's father), is installed along with Ganapati and worshipped with some pomp, where both the Ganapati and Gauri are consigned to water on the 7th or such other day as is prescribed therefor by the almanac. Till immersion the image of Ganapati is worshipped every morning and evening and *arati* prayers are offered. Prior to taking out the image for immersion the special worship called " Uttar Puja " is performed praying for the deity's blessing and entreating it to grace the household by its august presence early next year.

It was the late Bal Gangadhar Tilak, popularly known as Lokmanya Tilak who saw in this festival a great potential power that could be used to spread political ideas and social and religious reforms etc., and accordingly he took the initiative in organizing public festival of Ganapati images, lasting for 10 days. It was in the year 1894 A.D. that the practice of community celebrations of Ganapati festival came into vogue. During these 10 days, various social and cultural activities are held in front of the Ganapati images and it thus served the purpose of awakening the masses regarding their political rights and duties in those days. Even to-day these public functions play a very important part in building up public opinion through debates, lectures, symposium, etc.

APPENDIX 2

List of tools and implements used in the manufacture of images of Plaster of Paris and Ganapati images in one establishment

Serial No. (1)	Name (2)	Number (3)	Total Cost (4)
			Rs.
1	Bamboo Strips (Korani)	15	2·00 to 2·50
2	Iron Strips (Korani)	15	7·00 to 10·00
3	Iron Stick	1	2·00
4	Hammers	2	15·00
5	Wiregauze Sieves	3	6·00
6	Pestle and mortar	2	14·00
7	Knife	4	2·00
8	Brushes	104	260·00
9	Spray Pump	2	60·00
10	Chauki or Firki	12	60·00

APPENDIX 3

Price list of a few images of Plaster of Paris as in May 1962

AKSHAYA KALA KENDRA, PEN

Serial No. (1)	Name (2)	Size (3)	Coloured Pink and Ivory (4)	Multi-coloured (5)
			Rs.	Rs.
1	Buddha Sitting Big	12"×7 ½"	9·00	11·25
2	Buddha Double Kamal	11"×7"	5·00	6·00
3	Buddha Small No. 1	4 ½"×4 ½"	2·50	3·25
4	Buddha Small No. 2	4 ½"×4 ½"	2·50	3·25
5	Buddha Plate	8"×6 ½"	2·50	3·25
6	Elephant Fighting	8"×6"	3·00	3·50
7	Ganapati Bust Big	12"×8 ½"	4·00	5·00
8	Ganapati Bust Small	11"×8 ½"	3·00	3·50
9	Ganapati Plate	5"×3"	3·00	3·75
10	Gandhiji Bust	8 ½"×4 ½"	4·00	5·00
11	Gandhiji Plate	11"×8 ½"	5·00	6·50
12	Kanhayya	8 ½"×5 ½"	3·00	3·25
13	Kalpana No. 1	9 ½"×7 ½"	4·50	5·25
14	Kalpana No. 2	8½"×7 ½"	4·50	5·50
15	Kalpana No. 3	10" × 7"	5·00	6·00
16	Kashmiri Girl	9"×4"	4·00	5·00
17	Krishna Bust	10 ½"×5 ½"	6·00	8·00
18	Mother Child No. 1	10"×6"	6·00	7·50
19	Ram Sita Bust	10 ½"×6 ½"	6·00	7·00
20	Ram Sita Plate	10 ½"×6 ½"	3·50	4·50
21	Radhakrishna Bust No. 1	9 ½"×7 ½"	6·50	7·00
22	Radhakrishna Bust No. 2	12"×9"	10·00	11·00
23	Shankar Big	11"×7"	4·00	5·00
24	Shankar Small	4 ½"×4 ½"	2·50	3·50
25	Shankar Plate	8"×6 ½"	2·50	3·25
26	Shiva-Parvati No. 1	12"×12"	7·00	11·00
27	Shiva-Parvati No. 2	10 ½"×8 ½"	6·00	7·00
28	Shiva-Parvati No. 3	10"×6"	4·50	6·00
29	Saibaba No. 1	12"×9"	3·00	5·50
30	Saibaba No. 2	10"×8"	2·00	4·00
31	Venus Standing No. 1	15"×5 ½"	9·00	11·00
32	Venus Standing No. 2	14"×5"	6·00	9·50

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