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VOLUME IX

MADRAS

PART VII-A

HANDICRAFTS AND ARTISANS OF MADRAS STATE

iii ART METAL WARES OF TANJAVUR

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1964

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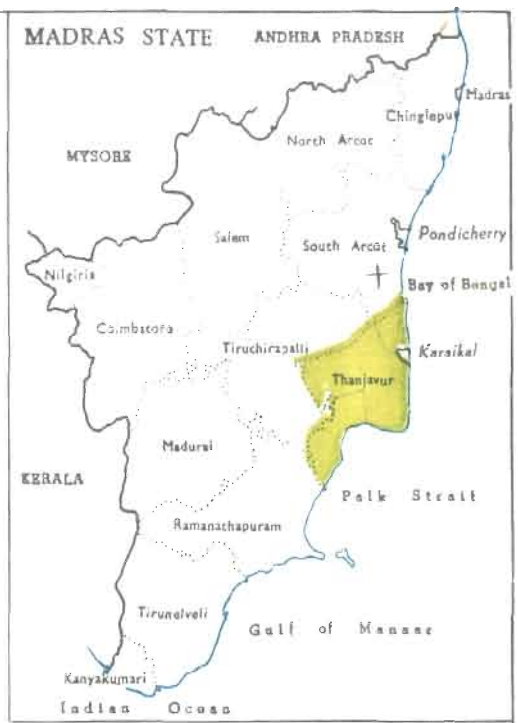
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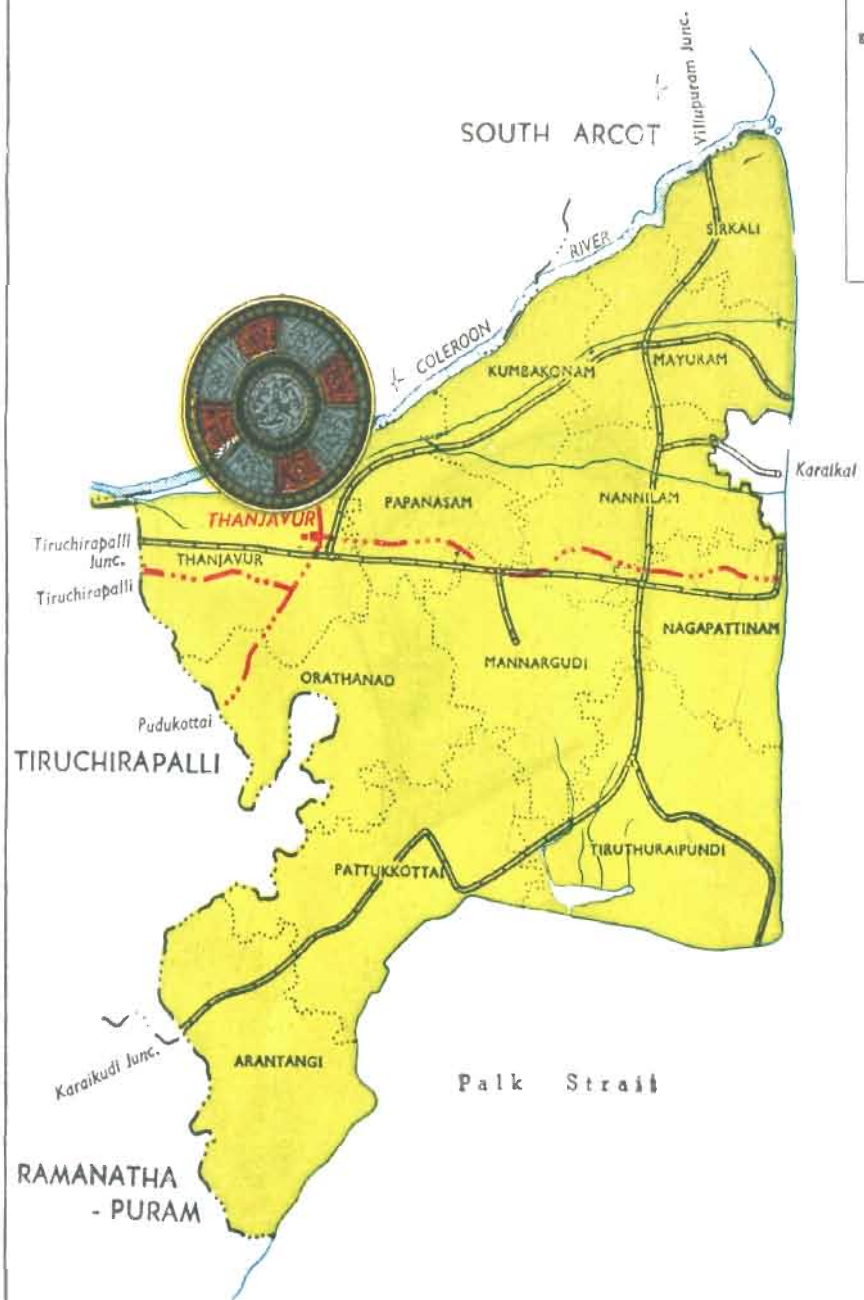
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LOCATION MAP
OF
THANJAVUR
THANJAVUR DISTRICT

Miles 10 0 10 20
10 0 10 20 Kilometres





REFERENCE

- District Boundary
- Taluk Boundary
- Railway Line (M. G.)
- State Highways
- River with Stream

FOREWORD

One of the major steps by means of which a developing economy seeks to sustain its growth is a rapid expansion of the internal market to absorb increases in production. A second step is to diversify the range of products that will yet restrain within manipulable limits the spiralling of rising expectations. One of the fields which demands immediate attention is traditional handicrafts. The glow of local and national pride, of interest in one's own traditions and a variety of emotional attitudes and preferences are invoked in aid of these basic aims. Nor are the aids themselves, even though they make a virtue of necessity, to be scorned as adventitous. The products, mostly handmade and rooted in the traditions of a nation's culture and economy, are often sources of the deepest satisfaction in everyday life. Apart from the question of its value as a social or ethical investment, opinion on which may differ, the resuscitation of these aids becomes all the more imperative in the preparatory stages of a developing economy (though not perhaps when these stages are traversed) on account of the fact that the tools employed are often timeworn and rudimentary, the pools of skill narrow, highly specialized and hereditary, being limited to certain communities or castes and not infrequently to a few families, and the capital-labour ratio associated with these products is favourable to a large population base experiencing large absolute increments which build up large reservoirs of underemployed and therefore cheap labour. Further, the transformation of traditional skill to modern skill either encounters a series of insurmountable difficulties or demands a degree of capital outlay quite beyond the means of a developing nation, which has to concentrate more on goods that will produce goods rather than produce the goods themselves.

There are other objective imperatives, which demand a sustained programme of support and expansion of the handicraft sector in a developing economy. Agriculture is still the mainstay and labour far from the desirable degree of mobility. The inadequate transport and communication network discourages exchange of goods and imposes a pattern of self-sufficiency upon village communities. The pattern of capital-labour ratio obtaining in traditional agriculture imposes itself automatically upon the complementary world of handicrafts and by effectively shutting out rapid improvements in technique ensures the products against disastrous slumps or extinction. In such a situation and on account of the fact that the sector itself is labour intensive, contributes substantially to the national income and causes minimum problems of dislocation, the promotion of handicrafts and expansion of their markets acquires an important place in development plans.

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

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

This and a review of the work of village surveys set the signal for the setting up of a Social Studies Division in September 1961 at the Registrar General's Office, manned by qualified research and investigating officers, technical persons, photographers, artists, draughtsmen and other trained personnel, headed by Dr. B. K. Roy Burman, Officer on Special Duty and assisted in an honorary capacity by Mrs. Ruth Reeves who had come by invitation from the All-India Handicrafts Board as early as 1960. Simultaneously State Census Superintendents were permitted to augment their staff according to their requirement.

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. In the meantime the Social Studies Division was able to organise and conduct a large number of central inquiries with the help of elaborately designed schedules, collect a considerable amount of research and library material with many thousands of cross classified index cards, a classified photographic library of about 15,000 accessions which grows daily, with similar complementary material in all State offices.

Mention has been made of 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 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 un-alterable 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, mutually stimulated the Social Studies Division and many of the States into going in for a much enlarged schedule. The revised village schedule itself, the counterpart of the first part of the February 1960 schedule, contained 19 large sections containing elaborate and probing questions. The Family Schedule for practising artisan families similarly contained 19 main questions each subdivided into many questions. The Family Schedule for non-practising artisan families contained 21 questions. There were schedules for the study of 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 judgement instead of being expected to see all the time through another pair of eyes.

This programme of survey of handicrafts and household industries has been fortified by several ancillary surveys, each one of which would deserve major attention. Along with the survey a compilation has been made of all handicraft centres in many States and an inventory prepared of skilled craftsmen. Photographic and other documentation has been built up to constitute what may now be regarded as the most considerable repository in the country. Elaborate and accurate maps of craft centres in taluks, tehsils and districts are either ready or under preparation. A full census of all fairs and festivals, weekly hats and markets, throughout India, has been taken and is being published for the first time. Andhra Pradesh has embarked upon a project of chronicling the social and religious antiquity and uniqueness of every fair and festival. A separate volume will be devoted to each district which promises to be of the utmost value to sociologists and orientalists. " Full statistics will be available in each District Census Handbook by each village of units of traditional and modern crafts and the number of workers engaged in each, arranged according to the Minor Groups of the Standard Industrial Classification". A full and complete inventory, replete with sketches and measurements of every object, has been prepared of exibits in museums of tribal crafts in India. There has been a fairly satisfactory survey of houses and buildings, indigenous architectural designs and use of local building material of the whole country. All this has been entirely a labour of love, patiently organised and executed under great strain and in disregard of health and comfort, for which I take this opportunity of expressing my appreciation and grateful thanks to my colleagues.

New Delhi,
January 20, 1964

ASOK MITRA,
Registrar General, India.

PREFACE

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

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

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

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

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

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

This volume entitled 'Handicrafts and Artisans of Madras State' is the result of his letter. As the survey in this State was begun before the Social Studies Division was set up in New Delhi, it has not been possible for me to follow the questionnaire evolved on an All India basis. I have followed my own method of study. It was my intention to collect information on all the Handicrafts practised in the State and build up tables for the State, district by district and taluk by taluk. Some work was done in this direction. But the project had to be

given up because of the difficulty involved in conveying a proper concept of handicrafts to different agencies filling in our schedules. So an attempt has been limited in preparing monographs on selected industries noted for their artistic appeal.

A detailed monograph on Silk Weaving at Kancheepuram has already been published. The present one is on Art Metal Wares of Thanjavur. Monographs on the following have been prepared and will be issued in due course:

1. Palm leaf products of Manapad and Nagore
2. Bronze Icons of Swamimalai
3. Woollen druggets of Wallajapet
4. Glazed pottery of Karigiri
5. Mats of Pattamadai
6. Bell metal and Brass metal work of Nachiarkoil
7. Wood carving of Madurai and Virudhunagar

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

This survey was conducted by Sri R. Jagannathan, the Research Assistant who has since left the Census Department and joined Indian Police Service. The work was supervised by Sri J. R. Ramanathan, M.A., B.L. Deputy Superintendent of Census Operations, who collected as much data as possible. Sri A. Mitra, Registrar General, Dr. Roy Burman and Mrs. Ruth Reeves have perused the draft and given useful suggestions which have no doubt improved the content of this Volume. I do hope that this venture will be of interest to the general reader.

Madras,
May 21, 1964

P. K. NAMBIAR,
Superintendent of Census Operations.



THE ART PLATE WITH A TRADITIONAL DESIGN. THE MAIN RELIEF IN THE CENTRE DEPICTS THE 'DANCING NATARAJA'.

ART METAL WARES OF THANJAVUR

CHAPTER I

GENERAL

THE DISTRICT OF THANJAVUR (known as Tanjore in the Pre-Independence era) is famous as a granary of Madras State. It was the city of the Chola Kings under whose guidance the South Indian civilisation reached its peak of glory. In Thanjavur, we find the early Hindu culture of South India preserved in various forms. It is noted for its musicians, craftsmen, acharyas and scholars. In its capital of Thanjavur town is preserved a peculiar art which consists in inlaying of silver on brass and copper, the type of which cannot be found anywhere else in India. Images of various shapes and designs depicting scenes of Hindu mythology or the various *avatars* (incarnations) of Vishnu and other Hindu deities are engraved and inlaid with silver. Boxes of brass plates engraved with silver and copper on the top and inlaid with velvet are also made. These manufactured articles can be seen in cities like Madras, Bombay, Delhi and Calcutta and even in foreign countries and are valued for skill and artistry. They adorn the drawing rooms of many elegant houses. They are treated as presentation articles on many festive occasions.

Introduction

2. Nothing definite is known about its origin. According to one source, Surfoji in his pilgrimage to the three holy centres of Prayag, Kasi and Ganga brought samples of Bidri plates common in North India. The pilgrimage is described in *Thirtha Yatra Lavanya*, a poetic memoir written in Marathi. Surfoji who ruled Thanjavur from 1712 to 1728 made the local Kammala community imitate the artistic beauty and workmanship of Bidri plate. Inspired by the challenge and in expectation of royal patronage, they made art plates similar to the Bidri plates. The original Bidri were specimens of inlay work in which silver and gold were inlaid in copper plates. The patterns were largely floral. In Thanjavur, however, the craftsmen substituted encrusting work for inlay which afforded them ample scope to depict their Gods and Godesses on the ornamental plates. The usual method was to encrust copper and silver over brass base plates. The plates were called Ganga Jumna plates, "Gangi Jamni," in Marathi, either because they were made in imitation of articles made in Ganges-Jumna basin or because they combined the two colours of white (silver) and golden or copper, which are symbolic of Ganges and Jumna. In fashioning the new plates, four craftsmen worked as a team. One was an expert hard-metal-worker, the other was a skilled jewel maker. The third was an expert diamond setter and the fourth was good in delicate metal work. This team made the modern art plate. This is the story of the origin of art plates current among the royal family of Thanjavur (Mahratta) and some families of artisans engaged in this work.

Origin of the Craft

3. "Industrial Arts of India" (Part II) by Birdwood, states that Bidri work was practised in a few centres of Kashmir, Gujarat, Punjab and also in Nizam's dominion where the popular name of the craft was 'kuft work'. According to the 'Indian Art' (1903), centres of Bidri production existed at Lucknow, Murshidabad, Purnea and Kashmir. According to Birdwood, the word Bidri Plate is from Bidar, a place in Nizam's dominion, now in Mysore State, where it was principally practised. This has no doubt thrown some light on the origin of the Bidri work. But whether the metal art work of Thanjavur developed as a refinement of Bidri Plate is still uncertain.

4. It is very difficult to verify the correctness of this version because no record has been kept by any one about the origin of this art. Surfoji has played a very important part in the development of arts of Thanjavur district and it is likely that he and his successors have given good encouragement to the local Viswakarma community in the manufacture of such articles and their improvement in technique and artistry. But it will be unsound to consider that the perfection of the Thanjavur plate can be attained by a simple trial by four craftsmen. No one can hold the view that Indian art which is largely a process of evolution than of discovery can be developed by royal patronage in such quick time. The oral tradition is unanimous that the art has a foreign origin in the sense that it was a copy of the engraved copper pots manufactured elsewhere, but the work of the plate reflects the genius of South India and the skill of the artisans of the Kammala community, a fact which will be evident to any one who has compared Bidri plates with Thanjavur art plates. We are, therefore, inclined to the view that the Thanjavur art plate was evolved by the artisans of Thanjavur district under the encouragement of the early Hindu Rajahs of Thanjavur and in the eighteenth century it had pronounced royal patronage from Surfoji and his successors. This is the view recorded in the District Gazetteer of Thanjavur published in 1933 and current in some families of artisans. In this connection it will be worth recalling that Surfoji and his successors have encouraged the development of the art and culture of Thanjavur district in various forms.

5. This art craft has been developed and preserved and handed down to the present generation by a community called Kammalars who have played a very significant part in the development of art in South India. The word Kammala is derived from Karma. There are five distinct sub-divisions among the Kammalas. They are as follows :

Kammalars

1.	Thattans	... ...	Gold and silversmiths
2.	Kannans	... ...	Copper and brass-smiths
3.	Kollans	... ...	Blacksmiths
4.	Thatchans	... ...	Carpenters
5.	Kal Thatchans	... ...	Stonesmiths

In religious persuasion, the Kammalas may be Saivathis and Vaishnavathis. But the majority are Saivathis. They speak Tamil except a small section of Vedugu Kammalas who speak Telugu. They wear sacred thread like the Brahmins and consider themselves as important as Brahmins. They have their own priest to officiate in their ceremonies. In some places they even have their own temples. This community which has zealously guarded the secrets of the craftsmanship has, fortunately for us, preserved it from extinction.

6. Originally during Surfoji's time, the practice of Thanjavur art plate making was confined to four families residing in Thanjavur. Recently a number of others have taken up this craft, but all of them belong to the Kammala community. In Venkoja's 'Tanjore Manual,' the following observations are found on this community.

"The Kammalas as a class are untruthful and unreliable. Punctuality is a virtue absolutely foreign to their nature. From unwillingness to let work go to others each undertakes a great deal more than he can do within anything like the time agreed on and so his customers are one and all disappointed and disgusted. As to honesty, no one counts upon absolute

security from adulteration in the materials entrusted to gold and silversmiths. To tamper with them is regarded as a privilege and an accusation gives no offence and discovery causes no blushing. They are as callous to imputations of dishonesty in their trade as they are sensitive to attacks on their caste privileges. Expressions of suspicion and distrust are received merely as a compliment to their skill in their craft. It must, however, be in justice stated that wholesale swindling is no part of the general character of the Kammalas. Their pilfering is generally restricted to a very small percentage."

Monopoly zealously guarded

7. These remarks will not apply to the present generation. But we cannot help pointing out one particular aspect of this community. This handicraft is confined to the few families belonging to this community and has never left the limits of Thanjavur town. Throughout the centuries this has been considered and treated as the monopoly of the members of the community. It was their policy to see that the knowledge and technique of this craft was not imparted to the members of other communities. In earlier days even other members of the community were not given the facility to learn this art. A story is current in the artisan circles that a Viswakarma declined to teach the craft even to his son-in-law. The son-in-law entered the pattarai, i.e., workshop of his father-in-law, in latter's absence and made an effort to learn the craft. When he was engaged in handling the tools, the father-in-law returned and enraged by the conduct of the son-in-law, took the hammer and injured the right forefinger of the son-in-law, so that the latter would never try to learn the craft. This unusual attitude was preserved by the community until about ten years ago. The Viswakarma community (a title assumed by this community) has now persuaded the artisans to share their knowledge with other members of the community in its larger interest. Even now, it remains the monopoly of the community.

Recent History

8. We have referred to the encouragement given by Surfoji and his successors to the development of this art. When the British administration was established in Thanjavur, this industry declined like other handicrafts. The art plate is necessarily an article of luxury intended for decorative purposes. Market was, therefore, limited and only persons of artistic temperament and tourists would purchase these plates. The artisan classes were not economically strong enough to maintain this craft, so the middle-men began to purchase the plates at a low prices and send them to places like Madras and Bombay. Even the profit from the limited market went to such middle-men. Even in the Thirties of this century one could have seen many of the craftsmen attempting to sell them to tourists even to the extent of plaguing them. It, however, enjoyed a temporary boom during the war years 1939-46 when these plates were in great demand among the foreign soldiers stationed in Vallam near Thanjavur and Tiruchirapalli. This period of boom was followed by a period of depression. Due to sudden decline in demand, some of the artisans took to jewellery as their primary occupation. With the establishment of the National Government, a definite encouragement was given to such crafts. The display of the art plates in various sales emporia opened by the Government in different parts of the country has made them known to the general public and has stimulated the demand for such articles. The establishment of a Co-operative Marketing Society in 1957 has stabilised the industry and more artisans are engaged in it. The bulk of these plates are now sent to the sales emporia located in Madras, Bombay and Delhi and a large number of them are purchased by foreign tourists visiting this country.

9. We have indicated that the local artisans while imitating a Bidri art plate have improved on the original. In Bidri plate the brass plate which formed the base, was cut with grooves and inlaid with decorated reliefs. The reliefs were on the same level as the surface of the plate. But in Thanjavur plate, the reliefs were encrusted on the base plates which facilitated the use of three dimensional figures thereby enlarging the scope of work. This is a distinct contribution made by the artisans of Thanjavur. Again in Bidri plates, the designs were only floral decorations. Instead of that, mythological figures were embossed amidst floral decorations. Thus the creative imagination of the local artisans has been super-imposed on the imported art and a product of great artistic value produced.

Contribution of Thanjavur Artisans

10. Twenty six families are now engaged in the production of art plates in Thanjavur town. The number of metal workers are thirty seven. It is practised as a household industry. The front verandah of the house (sometimes enclosed) serves as the workshop which is known locally as 'Pattarai'. Of these families, twenty two have their own pattarai and tools. Other four households who do not have any pattarai, work for other craftsmen on wages. No role is given to the women in this craft. But boys are engaged in giving such assistance as they can to the elders. Actually it is during this unpaid apprenticeship that the boys of the community get acquainted with the intricacies of this art under the guidance and supervision of their elders. It is how the craft technique and skill have been handed down from generation to generation and preserved as a family secret till today. Even now the workers are unwilling to demonstrate their workmanship before outsiders especially those who are likely to take up that work.

Organisation of the Industry

11. All these workers do not depend on the making of art plates for their livelihood, for many of them are expert jewellers as well as diamond setters. The preparation of art plate involves three types of skill which can rarely be found in one craftsman. The base plate can be prepared only by a heavy metal worker. The preparation of the reliefs can be done only by a jewellery maker and encrusting of the relief on the base plates needs the skill of a diamond setter. Thus it is a co-operative effort of the community. All the workers do not attempt every item of the work involved in the production of the plate. For instance, three households are exclusively engaged in the preparation of os-plates and relief sheets. (Os-plate is a local term which describes the basic design plate or the mould from which dyes are cast.) They are called *Nakasu velaikarargal.* They are not actively engaged in the production of art plates, but help others in the preparation of relief sheets in silver and copper. Two other households are exclusively engaged in the preparation of base plates. They buy brass sheets from the local market and cut them to the standard size and shape. These brass plates are then polished till the surface attains a certain standard of smoothness. They are then sold to the art plate makers who make the relief sheets out of copper and silver sheets and encrust them on the plate. The art plate makers do not themselves make the base plates, but buy them from the two households referred to earlier. But most of the households, however, make the relief sheets and do the embossing work and whenever they find that they have a large number of orders which they cannot themselves do, they engage the services of Nakasu workers for preparing the relief sheets. Thus the craft is based on a certain division of labour among the artisans.

Division of Labour



Designs are not worked out on the relief sheets directly. The reliefs are cast from the basic design plate popularly known as '*Os-plate*'. This is a thin copper plate on which the designs are worked out by repousse work. Picture shows an os-plate with the motif of dancing Nataraja.



Lead dyes are cast from the os-plate. The os-plate is set on a smooth sand bed with a clay border around.



Molten lead is poured slowly over the os-plate amidst the clay borders.



When the lead is cooled, it preserves the broad details of the design on its surface. Picture shows a lead-mould.

CHAPTER II

TECHNIQUE OF PRODUCTION

12. The art plate of Thanjavur has the following components :

(1) *The base plate* : This is made of brass and is one-eighth of an inch in thickness. On this, the relief work made of copper and silver sheets are encrusted.

(2) *Primary or main relief :* The primary or the main relief is encrusted in the central hollow portion of the plate and it is the main motif. This is made of silver and is larger than the subsidiary reliefs which are encrusted around it. It generally represents a God or a Goddess of Hindu mythology set against proper background.

Components of an Art Plate

(3) *Subsidiary reliefs :* These reliefs are made of silver and copper sheets and are encrusted on the rim of the brass plate all around the primary relief. In bigger plates, there may be a second round of subsidiary reliefs. These reliefs may represent a God or a Goddess or merely be floral decorations. The subsidiary reliefs made of silver and copper are encrusted on the rim of the plate alternatively so that a silver relief will lie between two copper reliefs.

(4) Floral decorations are engraved in between the outlines of primary and secondary reliefs. They generally consist of some motif that repeats itself. The motif may be of a flower, leaf or fruit.

13. In the production of an art plate, the following stages of work are involved :

(1) Preparation of the base plate ;

(2) Preparation of the reliefs through os-plates ;

(3) Encrusting the reliefs on the base plate and engraving the floral designs round the reliefs ; and

(4) Final touches with the chiselling and polishing.

The first three stages require obviously different types of skill and experience for each, rarely to be found in the same individual craftsman. The first stage is evidently the work of a heavy metal worker. The second stage calls for the talents and experience of a fine jewel maker and the third is typically the field of an expert diamond setter. The art metal craftsman of Thanjavur today will himself do the second and third stages of the work, but for the first stage, he has to rely on the heavy metal worker. There are, however, a few craftsmen newly drawn to the field of art plate manufacture, who can execute all the stages by themselves. But even to a casual observer, it is evident that their work lacks the nicety of finish wherever delicate execution is called for.

Craft Sequence

14. A typical craftsman buys brass sheets from the market and employs the services of a heavy metal worker, to cut plates out of the sheets in the size and shape in which he wants them.

Preparation of the Base Plate

The average thickness of the brass plates may vary from one-eighth of an inch to $\frac{3}{16}$ of an inch. Plates of varying diameters 5", 7", 9", 11", 16" and 21" are cut from the sheet metal. The heavy metal worker will also sink a circular middle portion of these plates, leaving a raised margin all around the rim at the periphery. Sometimes depending on the orders received, rectangular boxes, tumblers, pitchers and vases are made out of these plates. Please see the photos for the representative collection of the art wares produced in Thanjavur. They consist of articles of different sizes and shapes. But irrespective of the shape or the size, the brass plates form the basic material on which the craftsmen should work. The shape or the size of the art ware will not introduce any material change in the processes by which these plates are produced, though in actual working the individual craftsman will have to adjust his skill to the peculiarities of the particular product which he is fashioning. After cutting the plate of required size, it is polished in a country-lathe, till a smooth and shining surface is obtained.

15. The next stage is the planning of the design which is to be super-imposed on the base plate. It is a delicate job. It involves the selection of the designs and motifs and proper spacing of these on the plate to secure a pleasing and harmonious pattern.

Designs

Fortunately for him, there are certain well known reliefs and motifs with which he can compose his design. He can duplicate any relief including the primary relief with the help of os-plates, which we will be discussing later. He has a stock of os-plates of standard pattern. Whenever he evolves a new pattern, he has to prepare a new os-plate for that design. Similarly he has a repertoire of impression punches of various sizes to punch the motifs on the brass plate. When he selects a motif for which he does not have an impression punch, he first makes an impression punch with the particular motif on the working end. In actual practice, the ordinary craftsman uses the traditional motifs and designs. The os-plates and punches needed for the work form part of the equipment of the craftsmen. However, craftsmen who have some capital have attempted original designs and motifs and have also departed from the traditional mythological patterns with some appreciable success. Only such of those who do not have to depend on their work for their daily subsistence can afford to venture into regions which are definitely interesting and which give him greater artistic satisfaction. When the selection and composition of the design is completed, the next stage in the craft sequence is to prepare the relief sheets.

16. The relief sheets are not prepared directly but are cast from the basic design plate popularly known as os-plate. This is a copper plate on which the designs are worked by repousse work and it serves as the basic design for the preparation of the reliefs of the particular pattern. Preparation of the os-plate is an important stage of the work. For this purpose a thick copper sheet of required size is cut and firmly fixed on an asphalt bed with a wooden base. Asphalt is a kind of wax which can be easily melted and it has the hardness of sealing wax in normal temperature. The copper sheet is fixed on the asphalt bed by slightly heating the surface of the bed with a blow pipe and the copper sheet is made to rest on it firmly. Care is taken to see that it rests on an even and hard surface and that there are no air bubbles in between the copper sheet and the bed. Asphalt bed is warmed up with the blow pipe and levelled evenly with the help of a smooth iron rod or spatula. The copper sheet is then pressed and kept down with the handle of a hammer. Heavy weights are also placed on the metal surface till the bed becomes

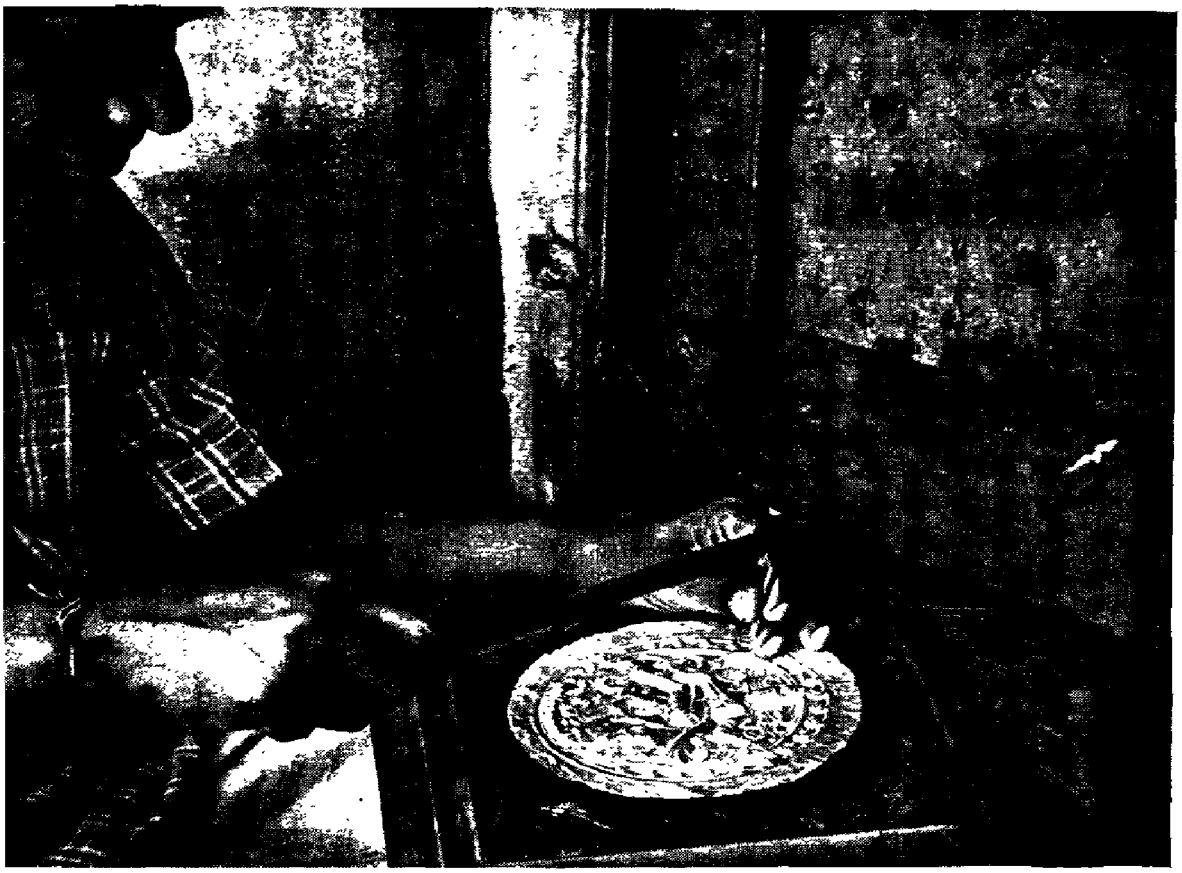
Preparation of Os-plate



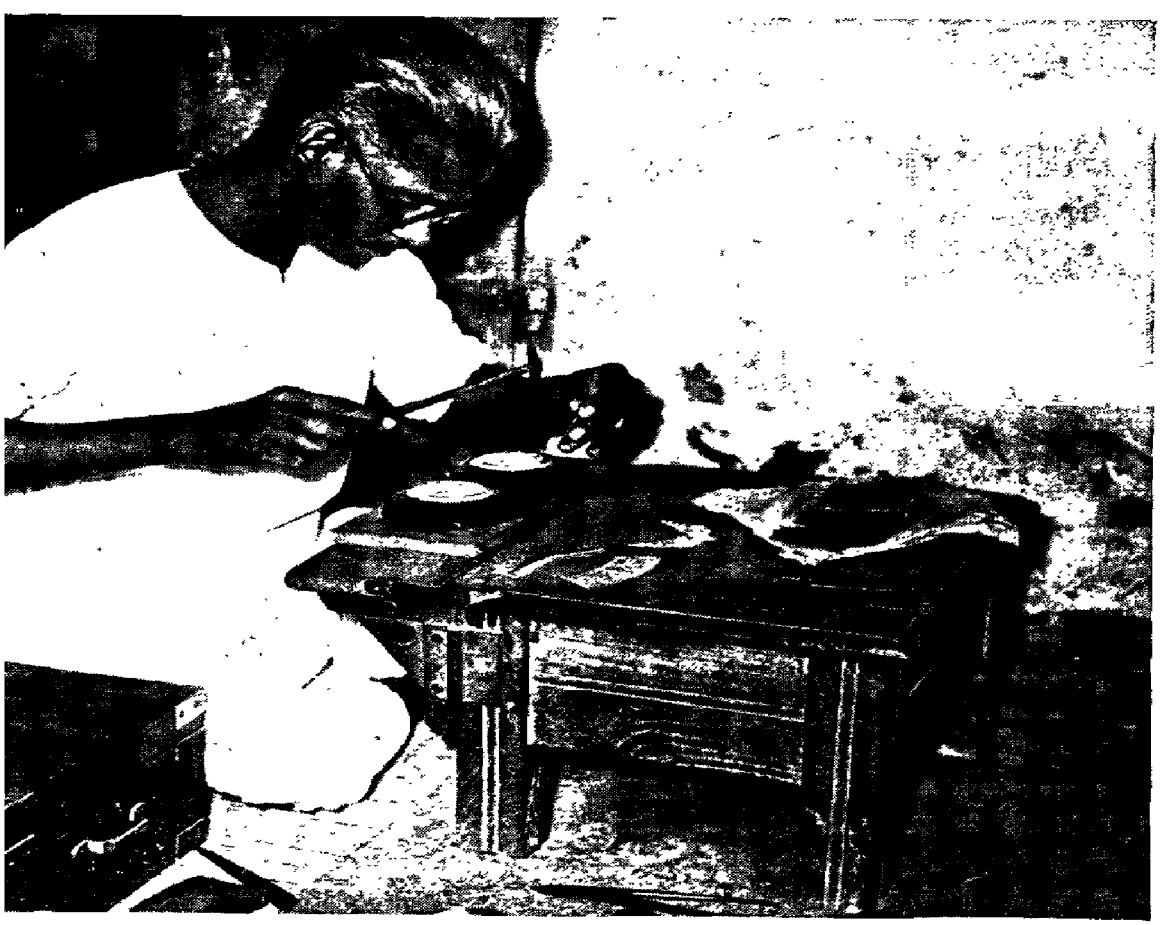
Two lead moulds are cast, one on the front and the other on the reverse side of the os-plate. These two lead dyes, which should fit in with each other tightly, are known among the craftsmen as the '*male dye*' and the '*female dye.*'



The thin silver sheet which is to be encrusted on the plate is pressed between the male and the female dyes, to get the impression of the design on the sheet. By this pressing between the male and female dyes, only a coarse impression with broad details of the design is obtained on the relief sheet.



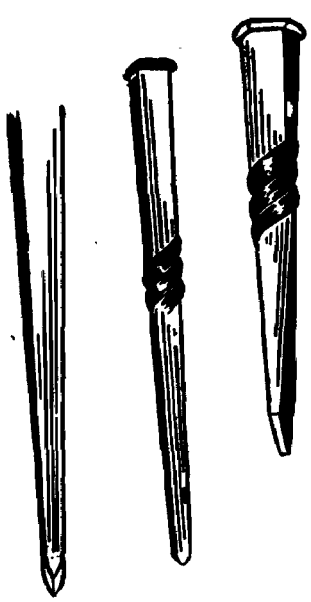
impression on the relief sheet is refined by delicate chiselling.



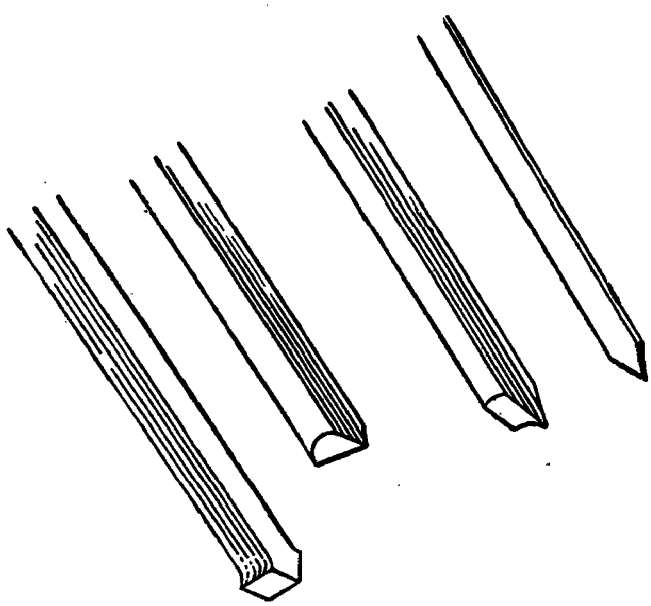
s fastened firmly on the Asphalt bed before the chiselling is done.

cool and hard and the copper plate is firmly set in it. The surface is examined inch by inch for the location of the air bubbles. Any air bubble left under the plate is located by a hollow sound which the metal gives when tapped. Any such place is heated once again either with a blow pipe or by placing a red hot iron over it and pressing down again to get a solid backing for the metal.

17. Having thus fastened the sheet to the asphalt bed, the craftsman proceeds to work on the surface of the metal sheet. He first traces out the design on the copper plate from the design paper with a copying pencil and then proceeds to obtain a firm impression of the design on the plate with the help of metallic tracers. He engraves an outline of the design on the sheet with the tracers. The tracers are held between the thumb and the first two fingers of the left hand. The third and the fourth fingers rest on the work to steady the hand. The tracer punch is held nearly perpendicularly, but leaning back a little from the direction in which it is to travel. The front corner of the working end of the punch is therefore a little lifted above the surface of the metal. The craftsman strikes blows with his hammer on the upper end of the punch perpendicular to the axis of the punch. The heel of the punch is driven into the metal and at the same time, the punch slides forward cutting a channel in the metal. Some of the displaced material is thrown in a ridge on either side of the traced line. Some of it is driven up in a ridge on the underside of the metal. The tracer, if held too perpendicularly, would not move at all, but will dig into and cut through the metal surface; or if held at too great a slope, the point will slip without making a channel. The correct angle is learnt only by trial and error. In making curves of very small radius, he tilts the tracer back further than usual, so that only the sharp-edged heel touches the metal. If the tracer in such cases is held at the usual angle, it will merely leave a series of tangential cuts and not a smooth curve.



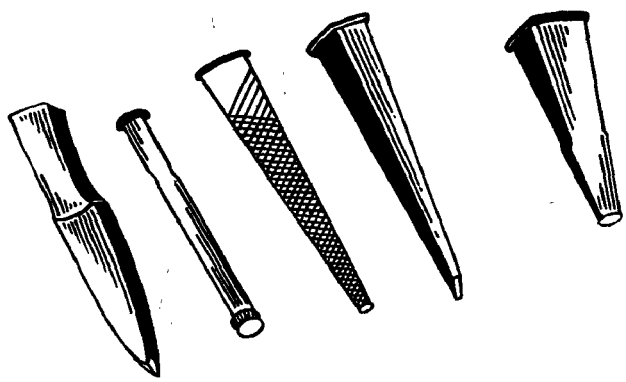
Tracer punches



Chisels for working the details of the design

18. The craftsman then proceeds to employ the second group of punches to work out the details of the design. In working the details he generally begins from the middle of the plate and proceeds gradually to the periphery, for in the course of the repousse work, the metal sheet will slightly stretch itself. If he starts from the periphery and proceeds towards the centre, the stretched out metal would come to form a bulge in the middle which is difficult to be neatly removed later on. The bossing and cushioning punches are handled much the same way as the tracers except that the hammer beating is stronger to achieve the desired elevations.

19. After finishing this stage of the work, the craftsman removes the metal sheet from the asphalt bed. The asphalt is slightly warmed for this purpose and the metal sheet stripped off the bed. The face that had been in contact with the bed is cleaned. The craftsman uses the third group of punches, viz., those with flat working ends for the chasing. Working generally on the background of the design, he makes the main relief sharp and crisp. He also uses the liner punches to give a varied texture to the background wherever it is necessary. In this process, he has to work on both sides of the plate with the bossing and cushioning punches. While punching is done on the reverse side, protuberance is formed on the front side and vice versa. This process is repeated till the elevations and bulges required for the broad details of the design are obtained.



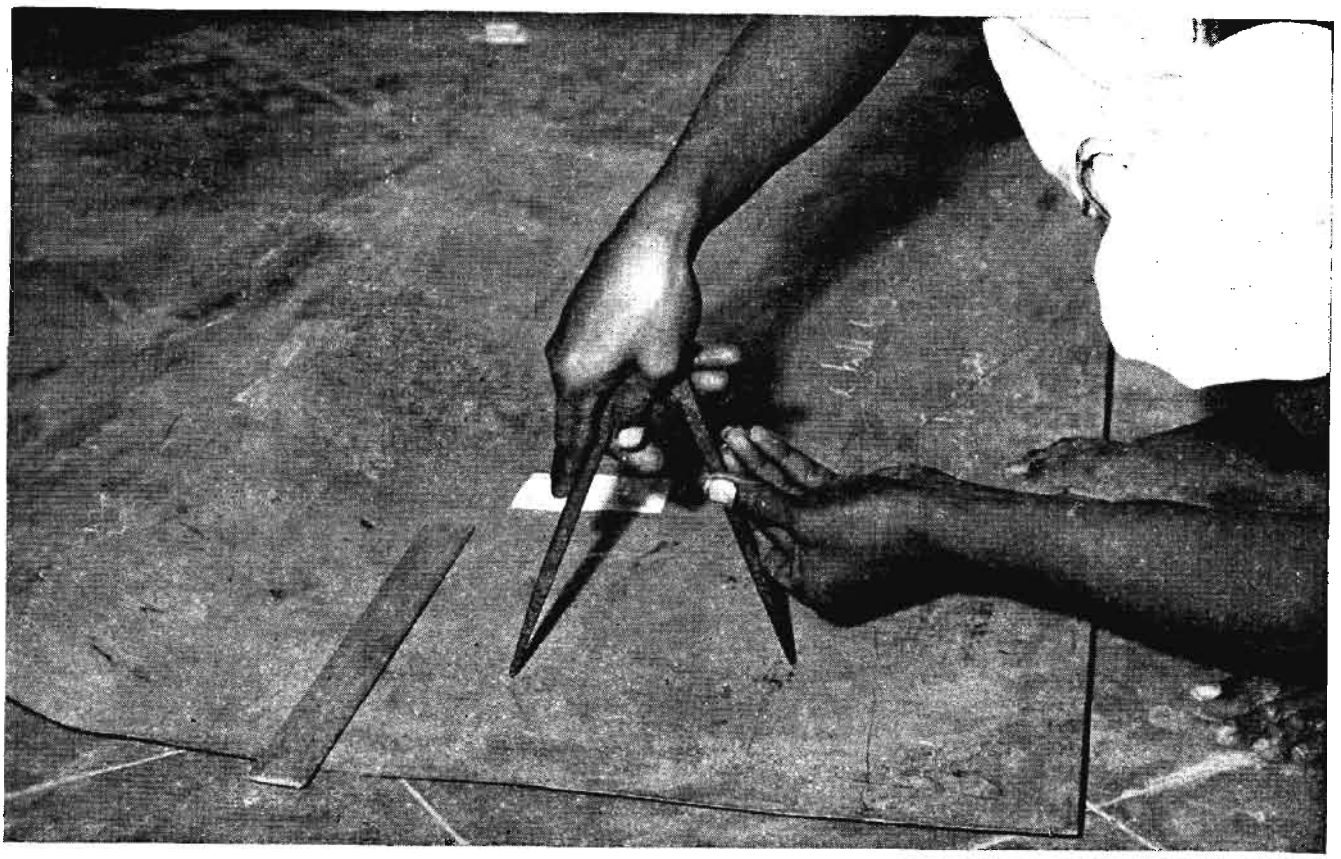
Bossing and cushioning punches

20. After preparing the os-plate in this manner, the craftsman proceeds to cast the lead dyes. Two lead dyes are cast on the os-plate, one on the front side and the other on the reverse side. The os-plate is set on a smooth sand bed with its surface covered with lime and a clay border is raised around the sand bed. Lead is melted and the molten lead is poured slowly over the os-plate amidst the clay borders. When the lead is cooled, it preserves the details of the design on its surface. The os-plate is then reversed and the process is repeated to get the mould of the reverse side which should fit in tightly with the mould of the front side. These two lead dyes are known among the craftsmen as the 'male dye' and 'female dye'.

Casting of Dyes

21. After this, silver and copper are cut into thin sheets of required sizes, and they are slightly heated to make them malleable. They are then pressed one by one, between the male and the female lead dyes, to get the impression of the design on the sheets. Care is taken to see that while pressing the relief sheet between the dyes, the surface does not give way or tear. Only a coarse impression of the design is obtained on the relief sheet, but any number of them can be taken from one set of dyes. The next stage in the preparation of the relief sheet is the chiselling and refining of the coarse impression. This again is a laborious process demanding a high degree of skill and dexterity. The craftsman has to work with chisels and punches of various

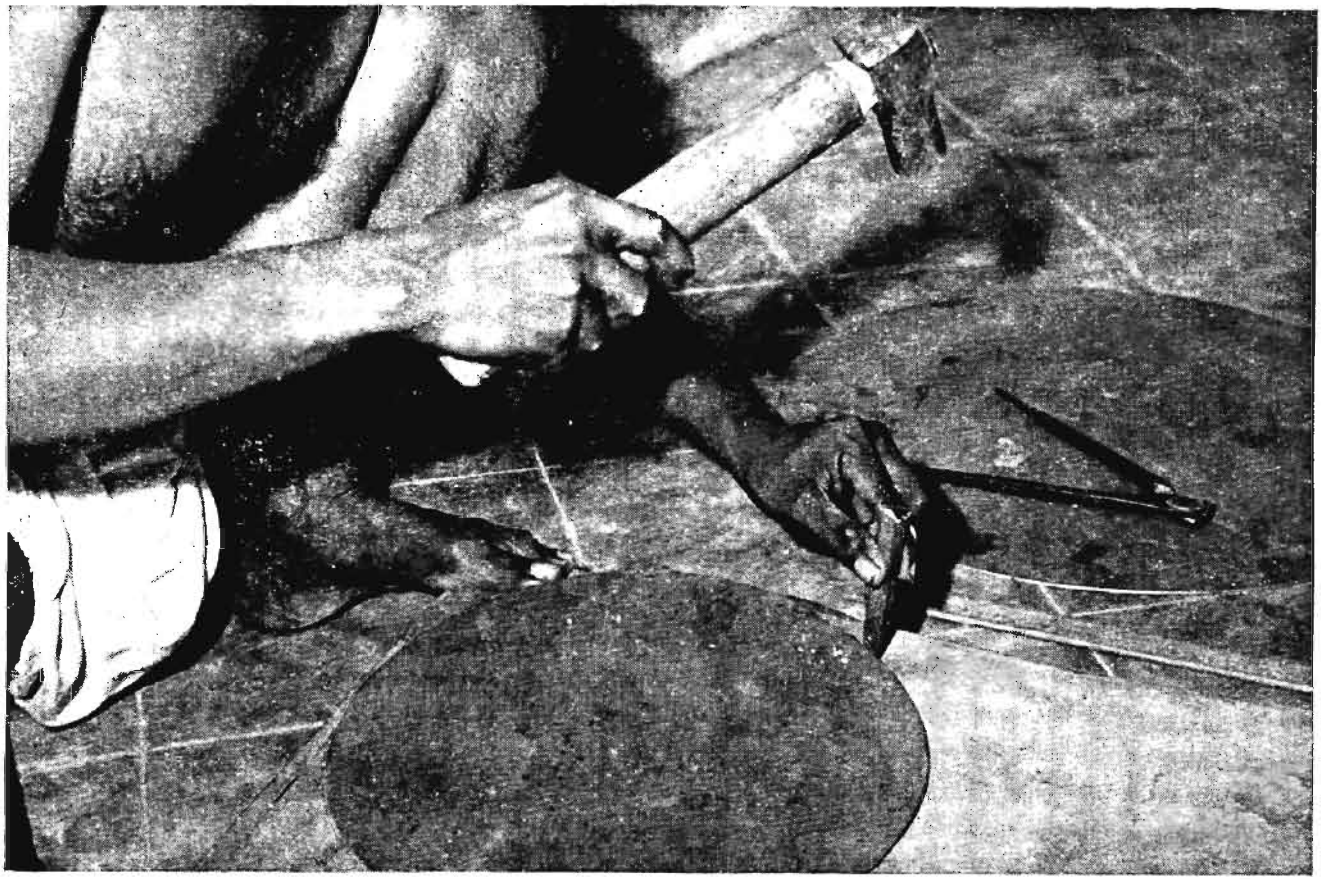
Preparation of Relief Sheets



The first stage in the art plate making is the preparation of the base plate. The base plate of required size is cut from the brass sheets purchased in the local market. Picture shows the workman marking out the size of the plate to be cut, on the brass sheet with the help of a compass and a scale.



The plate of required size is cut out of the brass sheet with the help of a hammer and punch.



A closer view of the operation



Cutting of brass plate in progress. The average thickness of the brass plate may vary from $\frac{1}{8}''$ to $\frac{3}{16}''$



After cutting out the plate, the rim or the edge of the plate is rounded off.



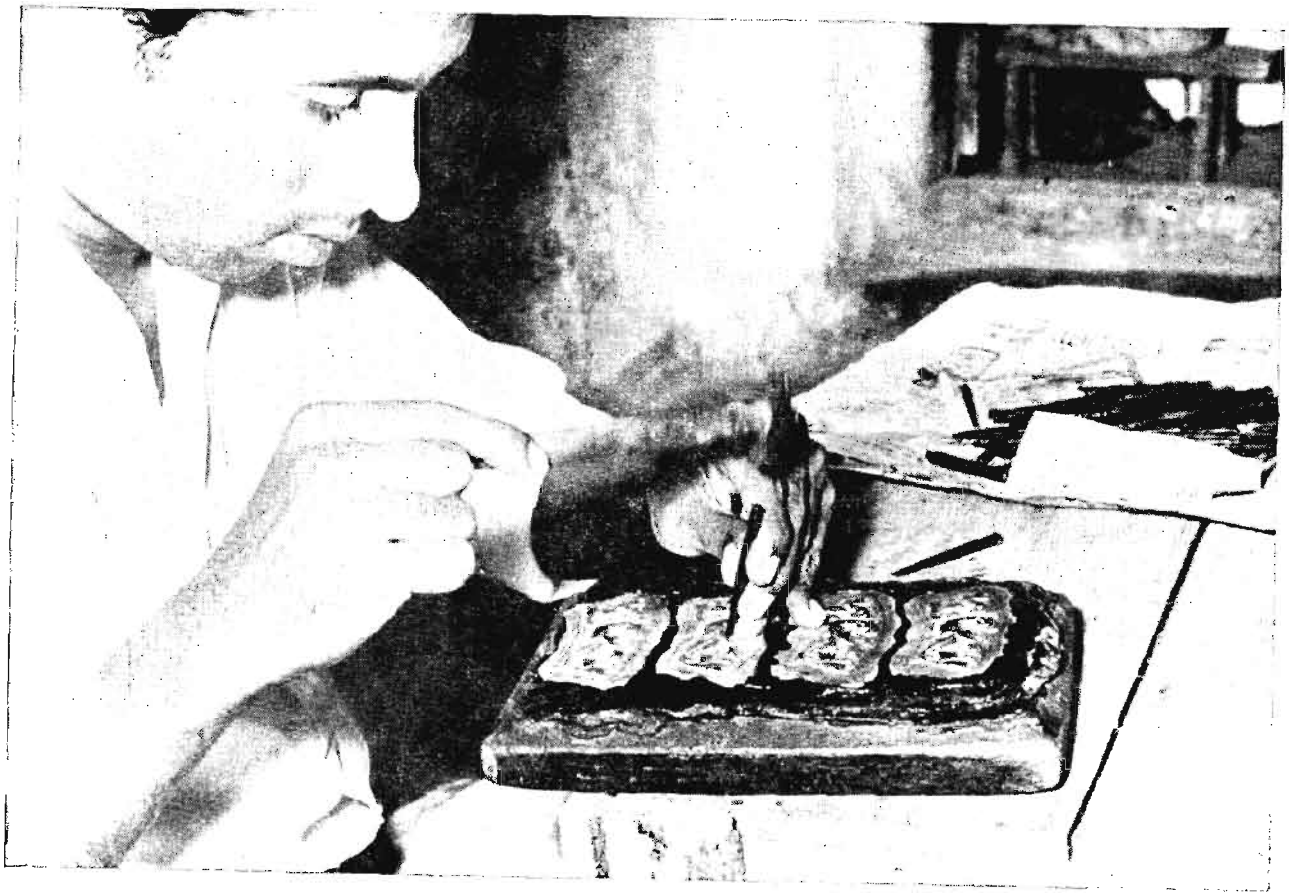
A circular middle portion is also sunk leaving a raised margin all around the rim.



The plate is polished till it acquires a smooth and shining surface.



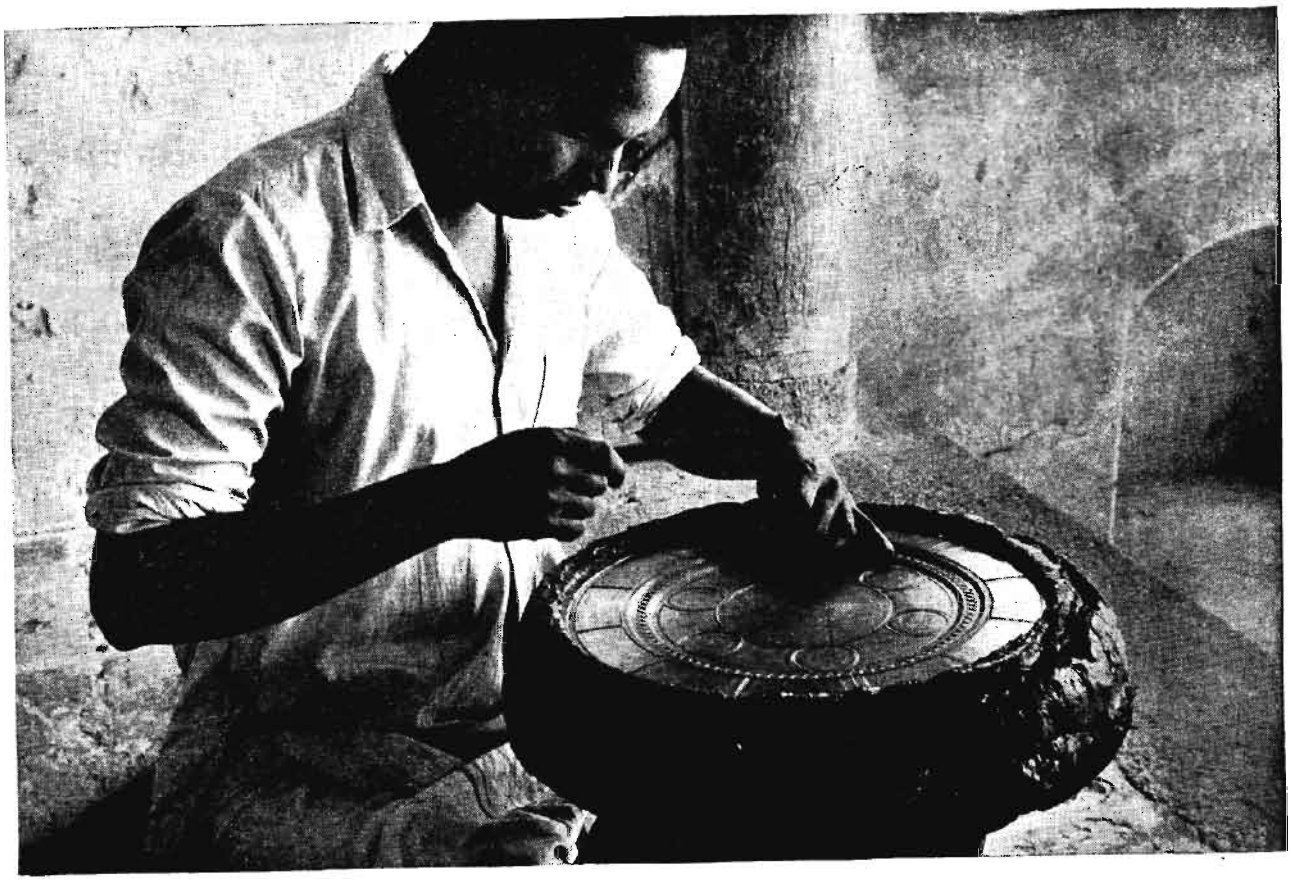
The polishing of the plate is done in a country lathe.



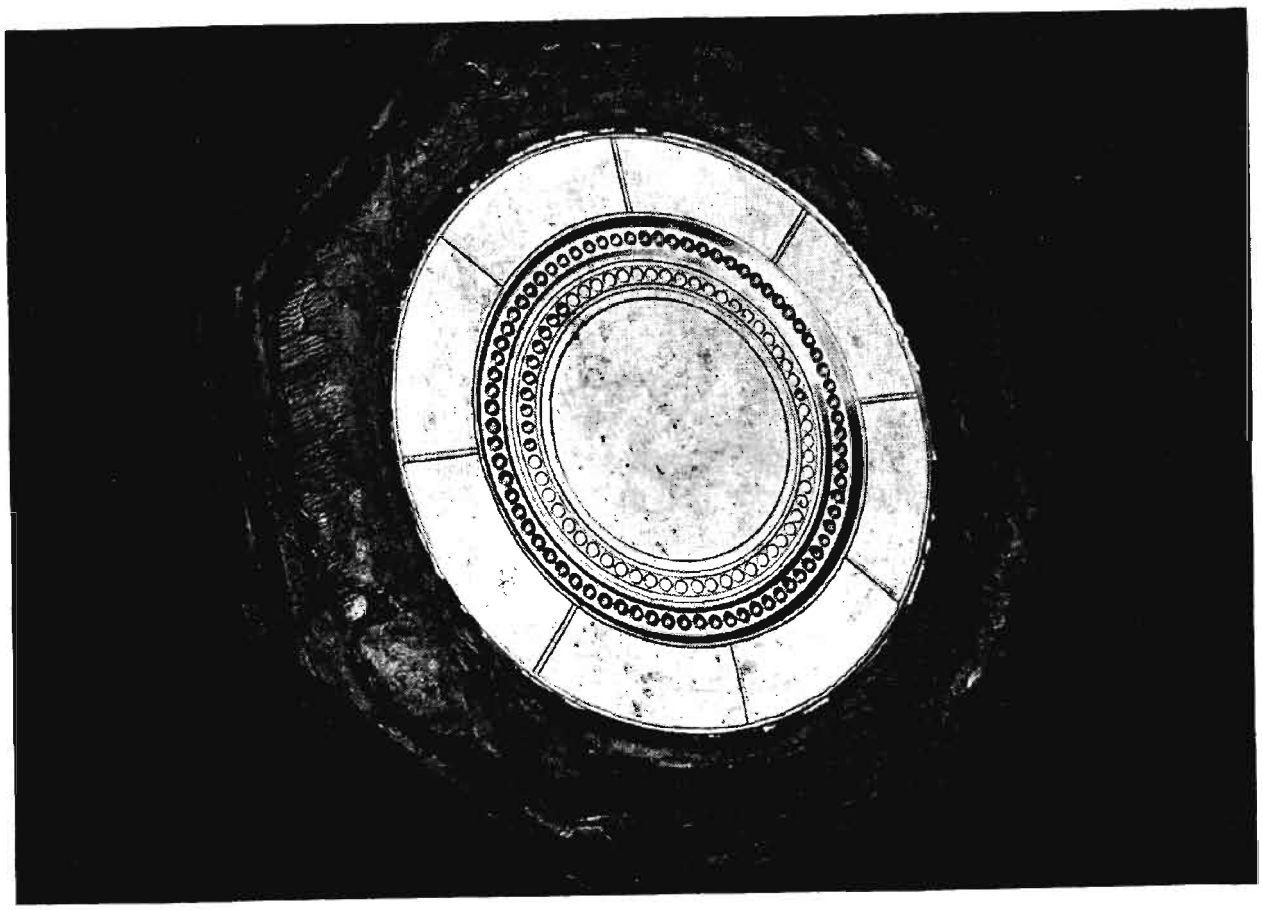
It is a laborious process demanding a high degree of skill and dexterity



The craftsman has to work with chisels and punches of various sizes, until a refined and finished figure is produced on the relief sheet



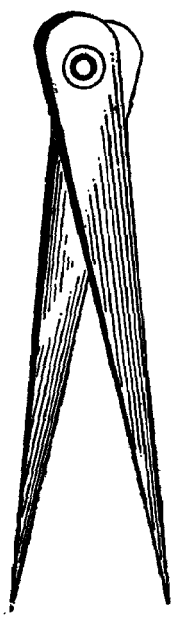
Next stage in the craft sequence is to entrust the relief sheets on the base plate. For this purpose, the base plate is firmly fixed on the Asphalt bed, exposing only the working surface



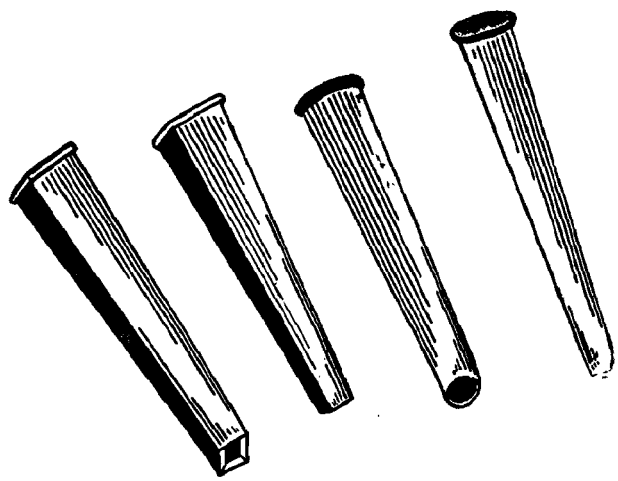
The areas where primary and subsidiary reliefs are to be encrusted, are marked out on the plate and grooves are cut The floral decorations in between the primary and the subsidiary reliefs are also worked with the impression punches

sizes until a refined and finished figure is produced. Then it is ready to be fixed on the base plate. The main relief and the subsidiary relief are thus obtained by using lead dyes for any number of art plates of identical designs to be prepared by them.

22. The next stage in the craft-sequence is to encrust the relief sheets on the base plate. For this purpose, the base plate is firmly fixed on the asphalt bed exposing the working surface. Cutting recesses and grooves in the base plates will involve a lot of hammering and plate should be set firmly against a solid background. He then marks out the areas with the help of a compass and a scale on the plate where the primary relief and subsidiary reliefs are to be super-imposed. He also marks out the portions where floral decorations are to be worked.



Compass



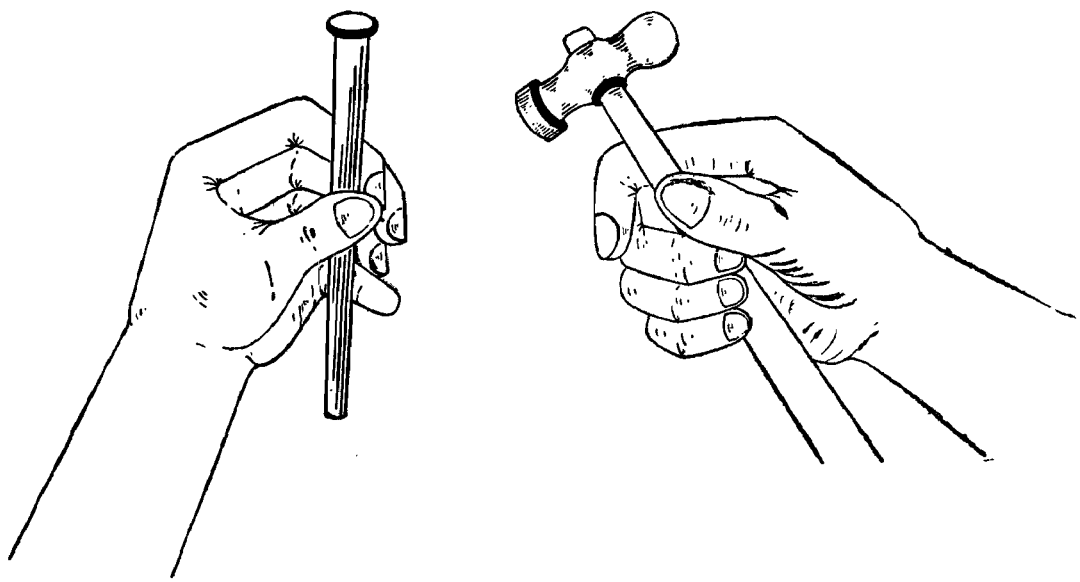
Impression punches

23. The contours of the designs are then marked on the plate with the impression punch which has the particular motif needed for the plate. When the impression punch is pressed with proper interspace and is hammered on, a deep impression of the motif is obtained on the plate. Such motifs punched one after another make up the decorative or floral design. The artisan has impression punches of various sizes having a variety of motifs.

The Art of encrusting

24. Next he cuts recesses along the contour lines with the lozenge shaped and sharp edged punches. To do this, he first marks the outlines and then deepens the lines. The grooves cut in the plate are slightly slanting so that small ridges are formed above the grooves for the relief sheet to be encrusted into the grooves and then to be rivetted by punching on the ridges. The relief sheet is taken and a slight rim at the edge of the sheet to a width of one-tenth of an inch or smaller, is bent slightly to facilitate the dovetailing of the relief sheet into the groove. The hollow depressions at the back of the relief sheet are filled with a locally prepared wax made of brick powder, castor oil

and frankincense. The relief sheet is placed on the earmarked portion of the base plate in such a way that the slightly bent rims of the relief sheet fit in well into the grooves and it is then rivetted by punching along the grooves. Thus the relief sheets are set firmly in the base plate.



25. Having set the relief sheets in the base plate, craftsman examines the relief sheets and refines any coarseness he may see, with the chisels and hammer. After these final touches, the plate is removed from the asphalt board by chipping through the side of the plate which came in contact with the asphalt board. Then it is polished and traces of asphalt removed. The plate is then washed in diluted sulphuric acid and then in soapnut powder and brushed with a soft wire brush. Thus the final product with shine, is produced.

Final touches



The work of encrusting in progress. The relief sheet is placed on the ear-marked portion of the base plate in such a way that the slightly-bent rims of the relief sheet fit in well into the grooves and it is then revetted by punching along the grooves.



The subsidiary reliefs made of copper and silver are alternatively encrusted on the rim of the plate and the primary relief made of silver is encrusted in the centre of the plate.



Having encrusted the reliefs on the base plate, the craftsman examines the relief sheets and refines any coarseness he may see, with the chisels and hammer The impressions are delicately refined during this final touches.



The finished plate is taken out of the Asphalt bed and washed in diluted sulphuric acid. It is also brushed with a soft wire brush.

CHAPTER III

RAW MATERIALS AND TOOLS

26. The main raw materials required for the making of the art plates are :

Raw Materials

1. Brass sheets out of which the base plate is made ; and
2. Thin copper sheets and thin silver sheets out of which the reliefs are made. These can be purchased in the local market.

The subsidiary raw materials required for the industry are :

1. Lead out of which the moulds are made ; and
2. Asphalt which is required for the base board.

The asphalt is a by-product of petroleum and it is imported from Vijayawada. A locally-made hard wax is also used for the base board as a substitute for asphalt which has become costly. This local wax is made out of a mixture of bdelium, known locally as *Kungiliam* castor oil and brick powder. The lead is purchased from the local market.

27. The tools required for the craft are the base board, the hammers, the punches and chisels. The base board consists of a wooden plank on which an asphalt bed to a thickness of about three to four inches is set firmly. The base plate is set on the asphalt bed before the workman begins to work on the plate. In making the os-plate also, the thin copper sheet is first fastened to the asphalt bed before the design is traced on the sheet. The base plate must be set firm against a solid background before the craftsman can work on it, because cutting grooves in the base plate and rivetting the relief sheets involve quite a lot of hammering and any shakes would hamper the delicate work. The base plate is set on the asphalt bed by warming up the surface of the asphalt bed with a blow pipe. The asphalt once cooled and set, gives a very solid backing for the metal and prevents any shakes while hammering. The base board with the asphalt bed is about one to one and half sq. ft. in area and the artisan can turn about the board any way in which he wants to work on the base plate.

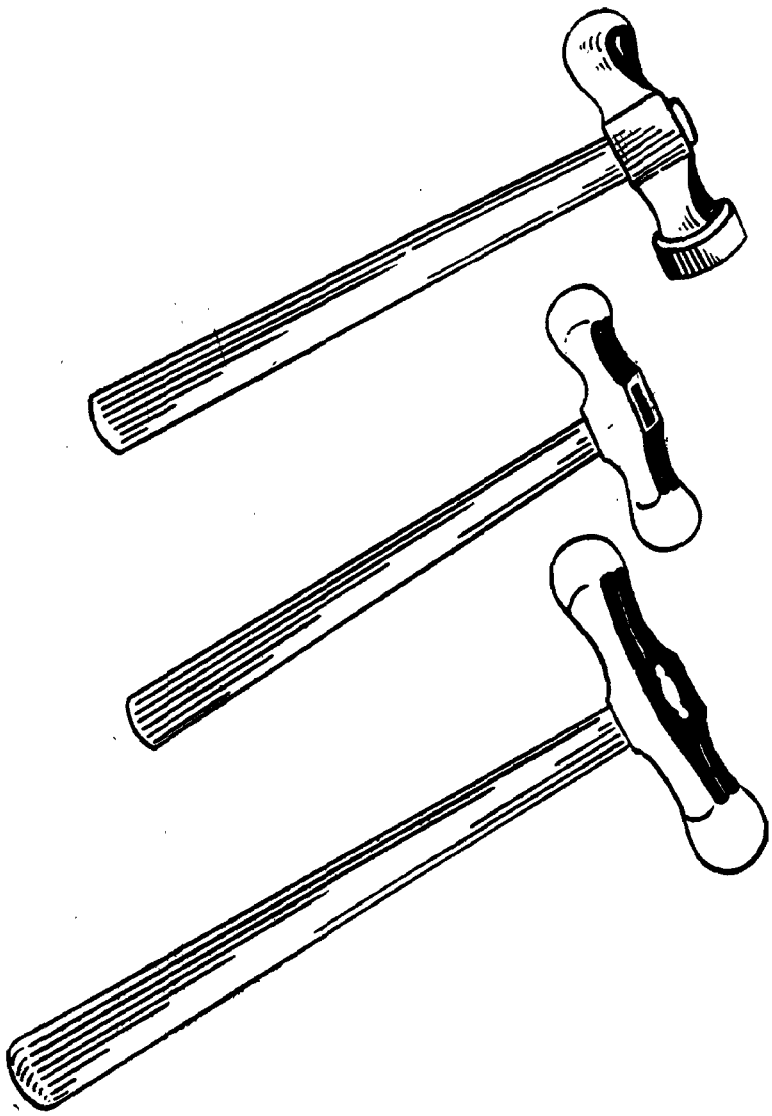
The Base Board

28. The other important item of tools is the number of hammers of varying sizes and weights made use of in the various stages of work. The hammers have flat working ends and are fitted with wooden handles. The light hammers are used in tracing the designs and in chiselling and the heavier hammers are used to cut grooves in the base plate and to rivet the relief sheets on the base plates.

Hammers

29. The most important item of the tools is the large number of punches and chisels which form part of the craftsman's repertoire. These large number of punches and chisels may be divided into four groups on the basis of the use to which they are put. Firstly there are the tracer punches which are used for tracing out the impression on the os-plate. These are sharp-edged punches. Secondly, there are the impression punches which are used in engraving floral decorations on the base plate. These impression punches have flat working ends with a motif or design carved

Punches and chisels

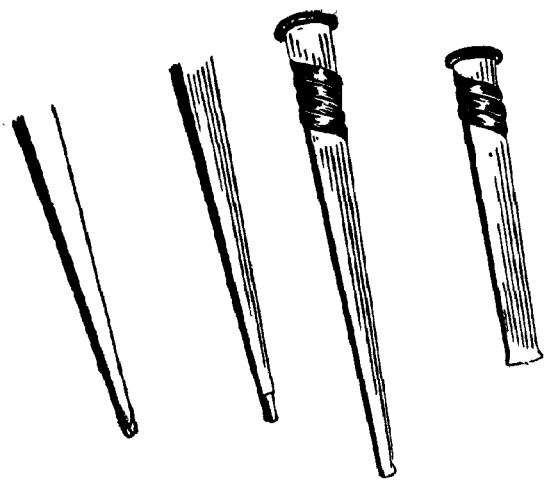


Hammers

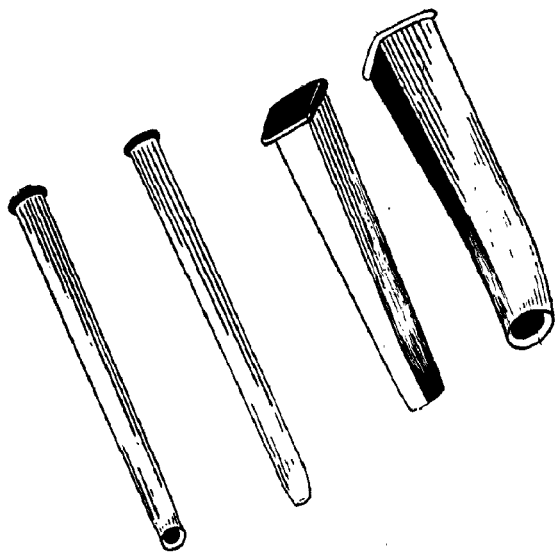
out at their working ends. When these impression punches are placed on the base plate and hammered on, firm impressions of the motif or design are obtained on the base plate. Thirdly, there are the chisels and the punches with pointed working ends. These are used in working the minute details of the design or motif and in refining the coarse impressions. Lastly, there are the bossing and cushioning punches with blunt working ends which are used in repousse work Each of these groups consists of a large number of punches of varying sizes and shapes. The punches are about four to six inches in length but vary in thickness. They have generally a thick middle section, so that the grip may be firm. The artisans buy these punches with unground working ends and get the local blacksmith to grind the working ends according to their personal requirements. These punches are bought at the rate of Rs. 2 per dozen.



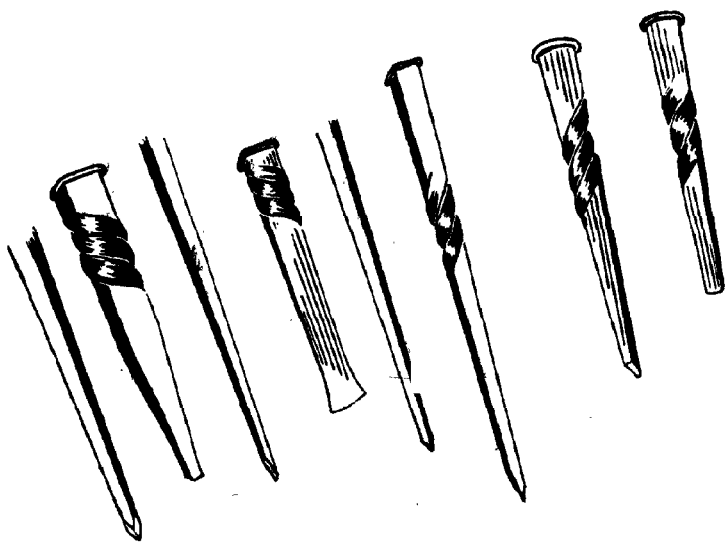
GIVING FINAL TOUCHES TO HIS ARTISTIC PRODUCT



Tracer punches



Impression punches

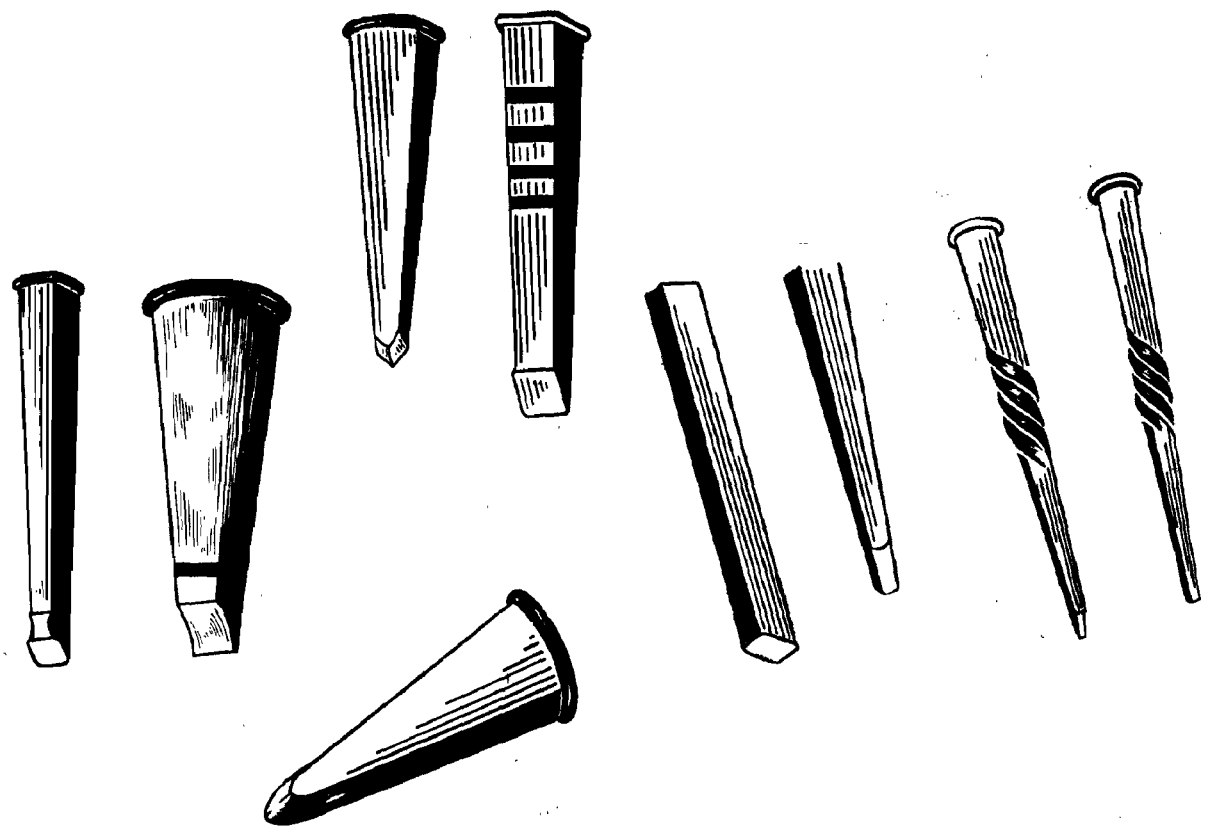


Chisels

30. The artisans of Thanjavur engaged in the art plate making confine themselves to the traditional designs which consist of mythological figures and floral decorations. They are generally conservative and do not attempt new designs because a fresh os-plate has to be made for every new design and it involves considerable amount of work. The craftsmen usually have a set of os-plates with the traditional designs and a number of relief sheets of identical design can be made from the same os-plate. The second difficulty in the matter of adopting new designs is the uncertainty

Designs

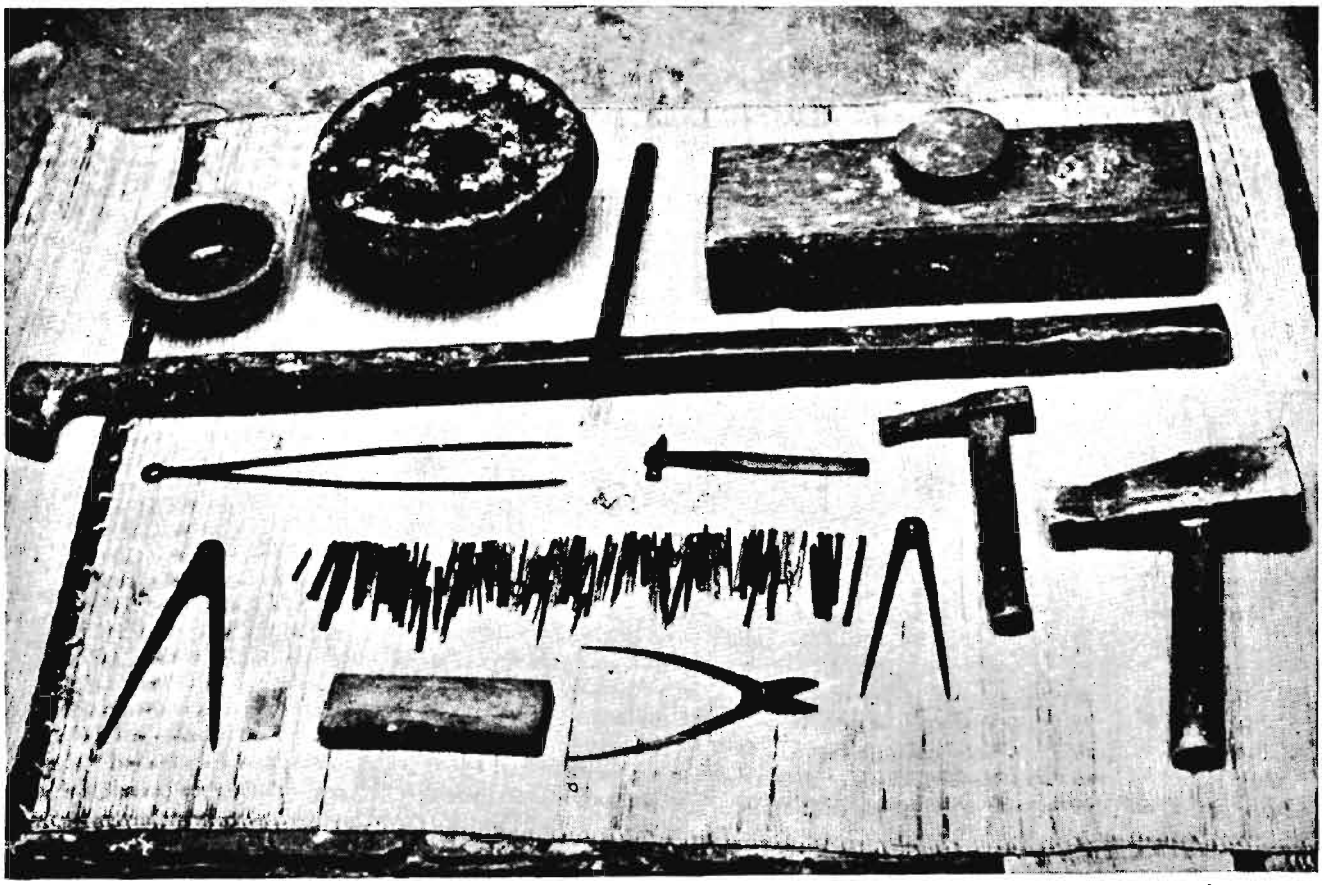
and marketability of new designs. Making of an art plate involves quite a lot of money and it sometimes represents all the available savings or capital of a craftsman. Having made an art plate at such great cost, the craftsman is eager to market the product at the earliest possible time. So he confines himself to the traditional designs and hesitates to take the risk of adopting new designs, unless specific orders are placed by the customers. As discussed earlier, the designs are traced out on the metallic sheets from the design paper. There are two good designers in the town who draw out beautiful designs and images on tracer paper. The artisans buy this tracer paper with the designs from those two designers in the town. A few artisans can draw their designs without any outside help.



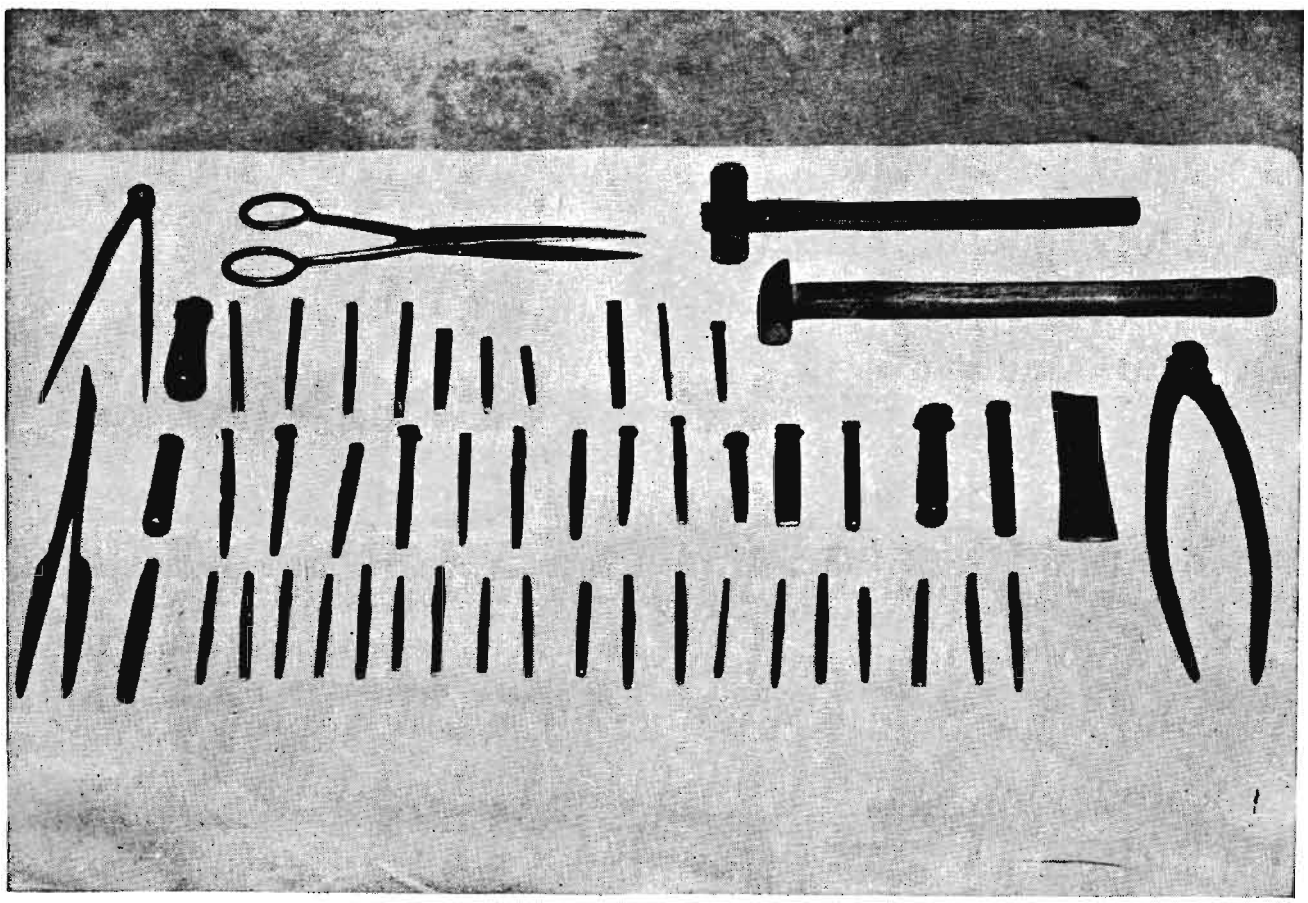
Cushioning punches

New Ventures

31. Though this ornamental work of engraving and embossing images and floral decorations was originally confined to making of plates, other articles like cups, tumblers, bowls, caskets and jewel boxes came to be made subsequently. In the case of these articles also, the base material is brass on which embossed reliefs made of copper and silver are encrusted. Of late, a few of the enterprising craftsmen who have sufficient capital to be invested have attempted new articles and have made ornamental ash-trays, mirror-stands, photo-stands and flask covers. This is the exception rather than the rule.



The tools required for art plate making consist of a number of punches, chisels and hammers. It also requires an anvil, compass, stove etc.



The punches and chisels used in art plate making



Thus the final product with shine is produced.

CHAPTER IV

ECONOMICS OF PRODUCTION

Cost of production and anticipated price

32. It would be interesting to analyse the economics of this craft, whether there is adequate wage for the craftsman and whether the art can survive without any external help. We have collected data including cost of raw materials, anticipated price and the margin available for craftsman's wages and profit. We give some examples which are detailed below :

Specimen No. I. (5" Art Plate)

	Rs.nP.
Cost of base plate ($\frac{3}{4}$ seer at the rate of Rs. 2.50 per seer) (1 seer=280 grams)	1.87
Cost of preparing the base plate	1.00
Cost of silver for the relief sheets (at the rate of Rs. 2.50 per rupee weight)	1.25
Copper	0.50
Cost of preparing the reliefs (wages to the Nakasu worker)	1.50
Number of days it requires to prepare the plate	2 days.

The net cost of raw materials works out to Rs. 3.62 for the 5" plate, and the cost to the craftsman including the wages paid to the Nakasu worker and heavy metal worker is Rs. 6.12. The plate may fetch in the market from Rs. 10 to Rs. 15 depending on the workmanship and the demand for it. The reward for the craftsman may range therefore from Rs. 2 to Rs. 4 per day.

Specimen No. II. (9" Plate)

	Rs.nP.
Cost of base plate (2 seers at Rs. 2.50 per seer)	5.00
Cost of preparing the base	2.00
Cost of silver for the relief sheets (4 × 2.50)	10.00
Copper	3.00
Cost of preparing the reliefs	6.00
Wastage	1.00
The net cost of the materials	19.00
Labour cost incurred by the craftsman	8.00
Total cost incurred by the craftsman	27.00
No. of days it took to prepare the specimen	3 days

There is no certainty about the price at which this specimen may be sold. The average price at which 9" plates have been sold before ranges between Rs. 40 and Rs. 60 depending upon the workmanship. The reward may be then taken to vary in the range of Rs. 4 to Rs. 10 per day of work done on the plate.

Specimen No. III. (11" Plate)

	Rs.nP.
Cost of base plate (3 seers)	7.50
Cost of preparing the base plate	5.50
Cost of silver for relief sheets (12 × 2.50)	30.00
Copper	3.00
Cost of preparing the reliefs	11.00
Wastage	1.00
The net cost of the materials	41.50
Labour cost incurred	16.50
Total cost to the craftsman	58.00
No. of days it took to prepare the specimen	5 days

The price at which this might sell is Rs. 80 to Rs. 85. This implies a minimum reward of Rs. 4.50 per day.

Specimen No. IV. (16" Plate)

	Rs.nP.
Cost of base plate	16.00
Cost of making the base plate	8.00
Cost of silver for the relief sheets (15 × 2.50)	37.50
Copper	5.00
Wastage	3.00
Cost of preparing the reliefs	50.00
Total cost of materials	61.00
Cost of labour incurred	58.00
Cost to the craftsman	119.50
Anticipated price	220.00
Average reward per day of work	6.50
No. of days taken to prepare the specimen	15 days

Specimen No. V. (22" Plate)

	Rs.nP.
Cost of base plate (27 × 2.50)	67.50
Cost of preparing the base plate	32.00
Cost of silver for the relief sheets (60 × 2.50)	150.00
Copper	5.00
Cost of preparing the reliefs	125.00
Wastage (pitch, asphalt etc.)	10.00
Anticipated price	700.00
No. of days it took to prepare the specimen	30 days

The reward for the craftsman works out to Rs. 10 per day of work.

Specimen No. VI. (8" Plate)

	Rs.nP.
Cost of base plate (7 × 2.50)	18.50
Cost of preparing the plate	27.00
Cost of silver for the relief (20 × 2.50)	50.00
Copper	5.00
Cost of preparing the reliefs	30.00
Wastage	5.00
Total cost of the materials	78.50
Cost of labour	57.00
Cost to the maker	135.50
Anticipated price	400.00
Reward per day of work	9.00
Total No. of days it took to prepare the specimen	30 days

Specimen No. VII. (Jewel box 6" x 4")

	Rs.nP.
Cost of base plate ($2\frac{1}{2}$ × 2.50)	6.25
Cost of preparing the box	17.50
Cost of silver and copper for the relief sheets	30.00
Cost of preparation of relief sheets	10.00
Anticipated price	120.00
Reward per day of work	8.00
No. of days required to finish the box	7 days

Specimen No. VIII. (Flask Cover 9")

	Rs.nP.
Cost of base plate (5×2.50)	12.50
Cost of preparing the base plate	20.00
Cost of silver for the relief sheets (6×2.50)	15.00
Copper	3.00
Cost of making the reliefs	15.00
Wastage	2.00
Anticipated price	85.00
No. of days to finish the articles	7 days

The reward works out to Rs. 2.50 per day of work on the flask.

These analysis may now be summed up in a tabular form.

Specimen No.	Cost of material as % of total cost	Cost of labour incurred as % of total cost	Ratio of cost to price %	Reward per day of work
				Rs.nP.
I	59.2	40.8	61.2	2.00
II	70.4	29.6	67.5	4.00
III	71.6	28.4	72.5	4.50
IV	51.5	48.5	54.3	6.50
V	59.7	40.3	55.6	10.00
VI	57.9	42.1	33.9	9.00
VII	56.9	43.1	53.1	8.00
VIII	48.1	51.9	79.4	2.50

33. It will be unsafe to draw any definite conclusion from these data. The cost of production will vary from time to time for each item. The proportion of raw materials can be varied. No wage is fixed for the Nakasu or the heavy metal worker, nor is the price guaranteed. The art plates are objects of art bought for their artistic value. A bumper sale in any season will be followed by a dull season when a craftsman unable to keep the article with him will be compelled to sell it at any price. There is no local market for this product. The craftsmen are unable to seek a distant market. As such they sell to a middle-man who sends them to places like Madras, Bombay, Calcutta and New Delhi. A certain amount of expenditure is involved in marketing these articles which cuts the profit of the craftsmen.

Fluctuating rewards

34. The middle-men referred to here, are not engaged in this trade all the time. They are usually jewellery merchants and business-men for whom this business is only secondary. Some of these middle-men are functioning in Thanjavur and in the neighbouring town of Tiruchirapalli. They do not function as money-lenders to these craftsmen but whenever they place specific orders for the products with the craftsmen, they make an advance of about 15 to 20 % of the anticipated price of the products to enable them to buy the raw materials. When the products are completed and delivered to the middle-men, the balance of the price is paid to the craftsmen. The middle-men, generally, do not advance any raw materials to the craftsmen.

The Middlemen

35. The normal channel of marketing for an industry of this type will be a Co-operative Marketing Society. The Thanjavur Art Plate Metal Workers' Co-operative Society was registered in 1st September 1957 and started its work in 24th November 1957. The object of the society was not only to improve the art metal industry of Thanjavur, but also to regenerate the economic conditions of the artisans employed in this hereditary industry. The establishment of the society was the direct result of the initiative taken by Sri T. K. Palaniappan, I.A.S., then Director of Industries and Commerce, who had a good idea of this industry and the artisans as he had worked as the Collector of Thanjavur. The society had a membership of 29 persons which has now risen to fifty nine. Out of them,

The Co-operative Society

only twenty two are art plate workers and the others are only the sympathisers belonging to Viswakarma community. The Government of Madras gave a loan of Rs. 4,000 to the artisans to help them to buy shares in the society. The society purchases articles from the members and executes orders placed with them by the various Government Sales Emporia throughout the country. Chief of them are The Central Cottage Industries Emporium at New Delhi, the Village Industries Emporium at Bombay and the Victoria Technical Institute at Madras. The paid-up capital of the society is Rs. 5,130. A subsidy of Rs. 2,000 was granted towards the reserve fund of the society by the Government of Madras and it is deposited in the Thanjavur Co-operative Central Bank. A working capital of Rs. 46, 250 has been advanced by the Government of Madras, which is to be repaid in ten years with 2½% interest. The services of a Co-operative Sub-Registrar have been placed at the disposal of the Society to work as its Secretary. The practice followed is that the members give their manufactured plates to the society for which an advance of 60% of the value of articles is paid to them. After selling the products, the society pays the balance to its members deducting 20% of the total cost as its commission. The annual production of the art plate is estimated at Rs. 36,000. During our revisit to Thanjavur in 1963, we found that the activities of the society had been slightly enlarged. The society now buys the base plates from the heavy metal workers specialising in that work and sells them to the art plate makers. The society also supplies some of the traditional designs to the craftsmen in need of them.

Problems of the Industry

36. Though the starting of the society has to some extent stabilised the economy of this handicraft, it has not solved all its problems. Its working capital is limited and whenever stocks accumulate, further purchases are suspended and the artisans again search for the middle-men for marketing their products. For instance, in December 1961 the society had spent all its working capital and suspended further purchases. The society is run more as a Government Department and finds it difficult to compete against the middle-men who make an effort to undersell their products in the market. The society does not advance any loan to the artisans to buy raw materials. Whenever the society suspends its purchases, the artisans are compelled to go to the middle-men and sell their products at a low price. No doubt, the establishment of the society has made a number of persons take to this craft. But the general economic condition of the craftsmen has not improved to any extent, because the role played by the society is necessarily limited.

Income levels of the Artisans

37. On an analysis of the incomes of the households engaged in this craft, we find four households have a monthly income of Rs. 300 and above, six have Rs. 150 and the rest have only an income of Rs. 75 to Rs. 150 per month. The concept of a monthly income will not apply to these artisans in strict sense. He has to sell his product before he can undertake the manufacture, of new articles and sometimes even to meet his daily expenditure at home. As long as the product remains unsold, the only means of livelihood he has, is to work for another craftsman as a daily wage earner. Spells of activity will sometimes be followed with spells of idleness and unemployment. Thus, the figures we have indicated do not reveal the actual economic conditions of the artisans. They are less favourable. So the lack of capital will always pursue a craftsman. Only persons with capital can thrive. The more capital the craftsman has, the better he thrives both by underselling his rivals and by producing more. The recent increase in the price of raw materials like silver and copper has increased the cost of production and the capital needs of the artisans.

CHAPTER V

CONCLUSION

38. The craft is one of our ancient decorative arts and is worth preserving on its artistic merit alone. To preserve the craft and develop it further, we consider the following measures are necessary :

Suggestions for Development

(1) The working capital of the Co-operative Society should be increased.

(2) The society should advance raw materials like silver and copper to the artisans and should give part of the anticipated price as wages for the labour, on production of the product.

(3) Efforts should be made to develop outside markets for the products of the industry.

The present estimate is that 60% of the products are purchased by foreign tourists visiting India and exported to foreign countries, the best buyer according to the artisans, being the United States of America. The possibility of expanding the foreign market should be considered.

39. According to a Hindu saying "the first, the best and the most perfect of instruments is the human hand". No better illustration of this statement can be found than in the art plate of Thanjavur. It is a creation of skill and workmanship with its own individuality. No machine or power is employed in its manufacture. To see a workman draw the details of the design, chisel out and refine the beautiful images and floral decorations thereby showing a high degree of skill, certainly enriches the aesthetic experience of an onlooker. The decorative art plate of Thanjavur which is a fine example of the artistic crafts of India, is worth preserving. Of all the arts we have surveyed in Madras State, we find this can be preserved because of its potential foreign market and its sound economy. More assistance should be forthcoming from the departments engaged in popularising of Indian handicrafts, if this ancient craft is to be stabilised as the material expression of our culture.

Conclusion

TABLE No. I

List of Rural Crafts and number of persons employed in production

Name of the craft	No. of villages or centres.	No. of persons employed in production		
		Persons	Males	Females
Art metal wares	One centre at *Thanjavur town*	37	37	...

TABLE No. II

Name of caste or community	No. of villages surveyed	Approximate No. of families	Total No. of adult workers			No. of families working under co-operatives	No. of families working in own houses
			P	M	F		
Viswakarma	One Centre at Thanjavur town.	26	37	37	...	Twenty-six adult members are members of the Co-operative Society	Twenty-two house holds work in own houses. Four household have no "Pattarai" of their own.

TABLE No. III

Raw materials

Name of articles	Main materials		Subsidiary materials		Raw materials imported	
	Name of materials	No. of villages engaged in the manufacture	Name of material	No. of villages engaged in the manufacture	Place from which imported	No. of villages engaged in manufacture.
Art metal wares	Brass Copper & Silver	...	Asphalt, Bdelium (Kungiliam) & Wax.	...	Asphalt from Vijayawada.	

TABLE No. IV

Designs

Name of articles	Number of villages engaged in manufacture including the sources from which they receive designs						Name of design		Colours used	
	Traditional	Self-designed	Middle-men who undertake marketing	Design Centres	Co-operative Sales Societies	Other sources	Name	No. of villages engaged in manufacture	Name of colour	No. of villages engaged in manufacture.
Art metal wares	The designs are in most cases traditional. A few modern designs such as cigarette-cases and ash-trays are made on specific orders.						Round plates, 'Panchapatras', Jewel boxes, Tumblers, Cigarette-cases, Ash-trays etc.	...	No colour is used in this craft.	...

TABLE No. V

Consumption and sale

Name of article	No. of villages which entirely produce for use		No. of villages producing both for personal use and sale	Villages which produce for sale in open markets		No. of villages where there are co-operative sales activities.
	Domestic use	Use for ceremonial purposes		Order of middle-men who advance money	Others	
Art metal wares	The articles are all decorative wares, and no article is specially intended for any ceremony.		All the households in Thanjavur produce only for sale.	The craftsmen take orders both from the middle-men and the consumers.		The Co-operative Society is a Marketing-cum-Credit Society.

TABLE No. VI

Cost of production, sale price and earnings

Name of article	No. of villages surveyed	Cost of raw materials	Cost of conversion into finished product	Average sale price of finished goods	Average earnings per worker
Art metal wares	Thanjavur is the only centre of this craft	Brass Rs. 2-50 per seer. Silver Rs. 2-50 per tola weight	Varies considerably as between different articles	...	Varies from Rs. 2-00 to Rs. 10-00 per day depending upon the type of article produced

TABLE No. VII

List of skilled craftsmen

Name of village or centre	Name of craft	Name of community	Name of skilled craftsmen
Thanjavur town	Art metal wares	Viswakarma	1. Nataraja Achari
			2. Periaswamy Pattar
			3. Ganesa Pattar
			4. Arumuga Pattar
			5. Ramaswamy Achari
			6. Muthuswamy Pattar
			7. Narayanaswamy Pattar
			8. Namachivaya Pattar
			9. Kumaraswamy Pattar
			10. Dharmalinga Pattar
			11. Shanmuga Pattar

APPENDIX I

Reproductions from

"PHOTOGRAPHS OF MADRAS ARTWARE"

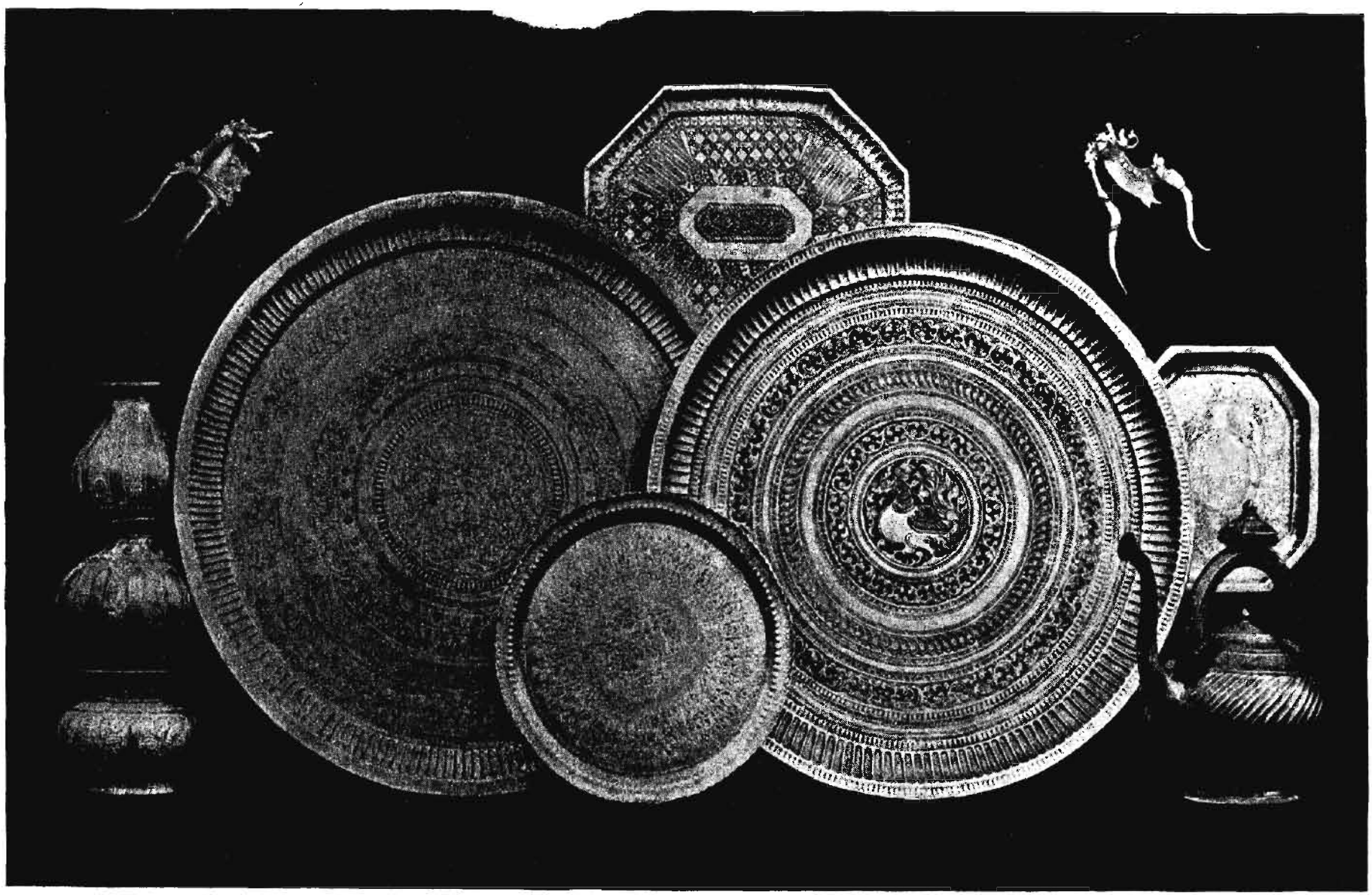
Published by the Autotype Company, London, 1886



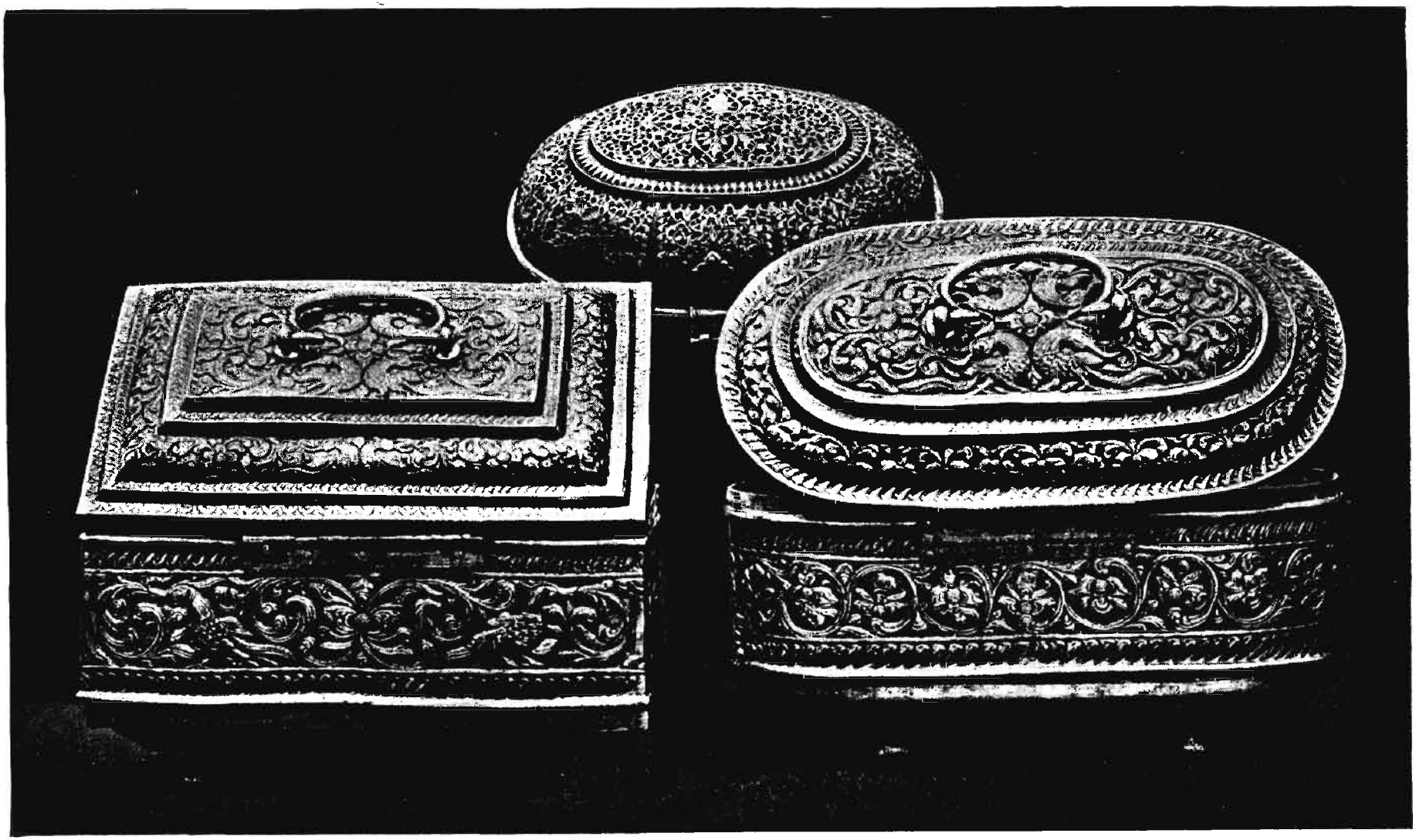
A group of Bidri-ware objects, reproduced from "Photographs of Madras Artware" published in 1886 by The Autotype Company, New Oxford Street, London.



Another group of Bidri-ware objects, reproduced from "Photographs of Madras Artware" published in 1886 by The Autotype Company, New Oxford Street, London.



The brass trays, reproduced from "Photographs of Madras Artware" published in 1886 by The Autotype Company, New Oxford Street, London.



Embossed and perforated brass caskets, reproduced from " Photographs of Madras Artware " published in 1886 by The Autotype Company, New Oxford Street, London.



Silver and copper encrusted brass objects from Tanjore, reproduced from " Photographs of Madras Artware " published in 1886 by The Autotype Company, New Oxford Street, London.



Silver and copper encrusted brass trays from Tanjore, reproduced from "Photographs of Madras Artware" published in 1886 by The Autotype Company, New Oxford Street, London.

APPENDIX II

ARTPLATES IN COLOURS



AN ART PLATE WITH A TRADITIONAL DESIGN. THE MAIN RELIEF IN THE CENTRE DEPICTS THE 'THIRUKALYANAM' – A SCENE FROM HINDU MYTHOLOGY.



ANOTHER ART PLATE WITH
A NEW DESIGN. THE SILVER RELIEF IN THE
CENTRE DEPICTS THE BUDDHA.



AN ART PLATE WITH A NEW DESIGN.
THE BRAHADEESWARA TEMPLE OF THANJAVUR
FORMS THE MAIN MOTIF OF THIS PLATE.



A REPRESENTATIVE COLLECTION OF THE ART METAL WARES
PRODUCED IN THANJAVUR.



THE ART PLATES OF THANJAVUR AS DISPLAYED IN THE
VICTORIA TECHNICAL INSTITUTE, MADRAS.



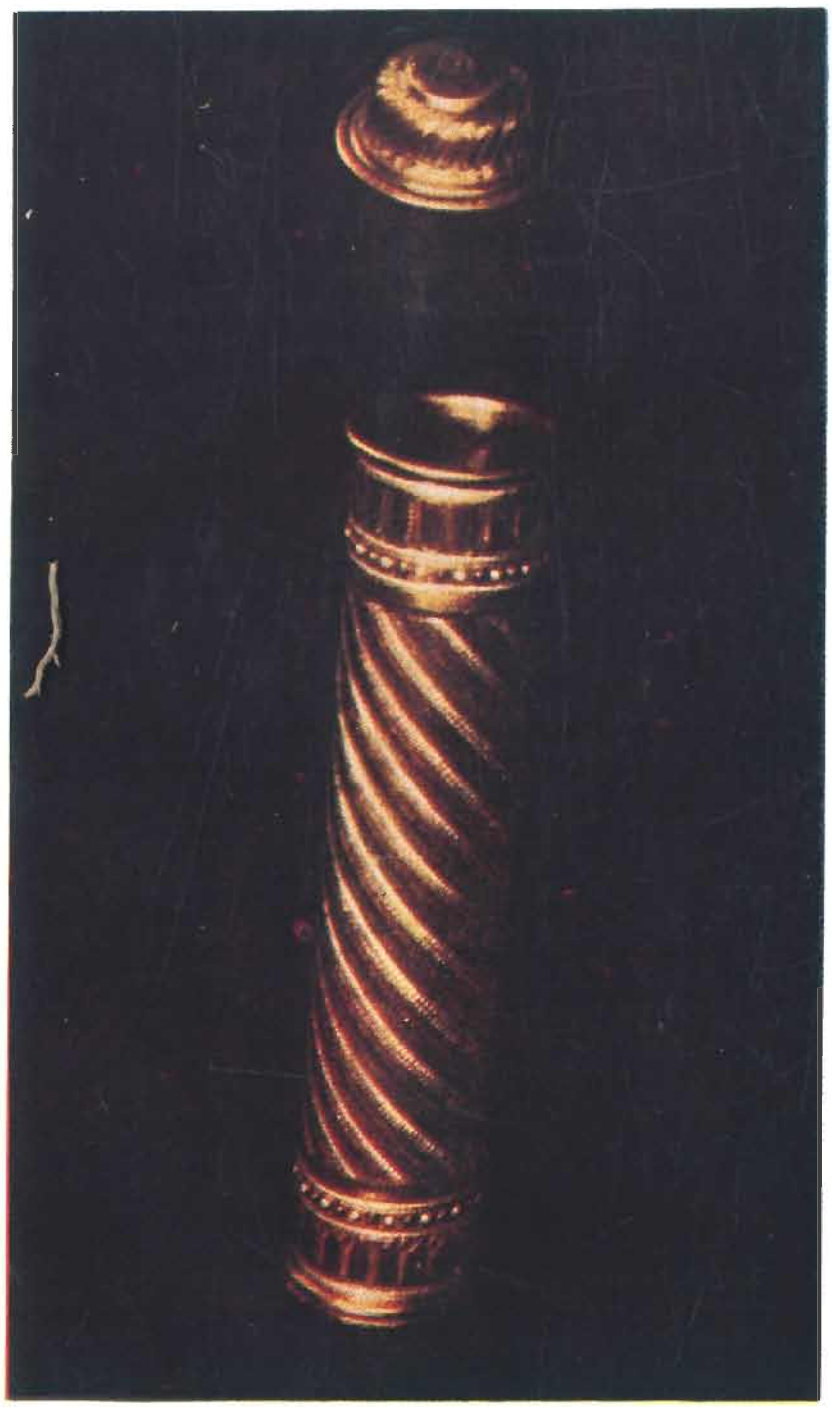
ANOTHER COLLECTION OF THE ART METAL WARES



ORNAMENTAL CIGARETTE CASES
PRODUCED IN THANJAVUR.



A FLOWER VASE.



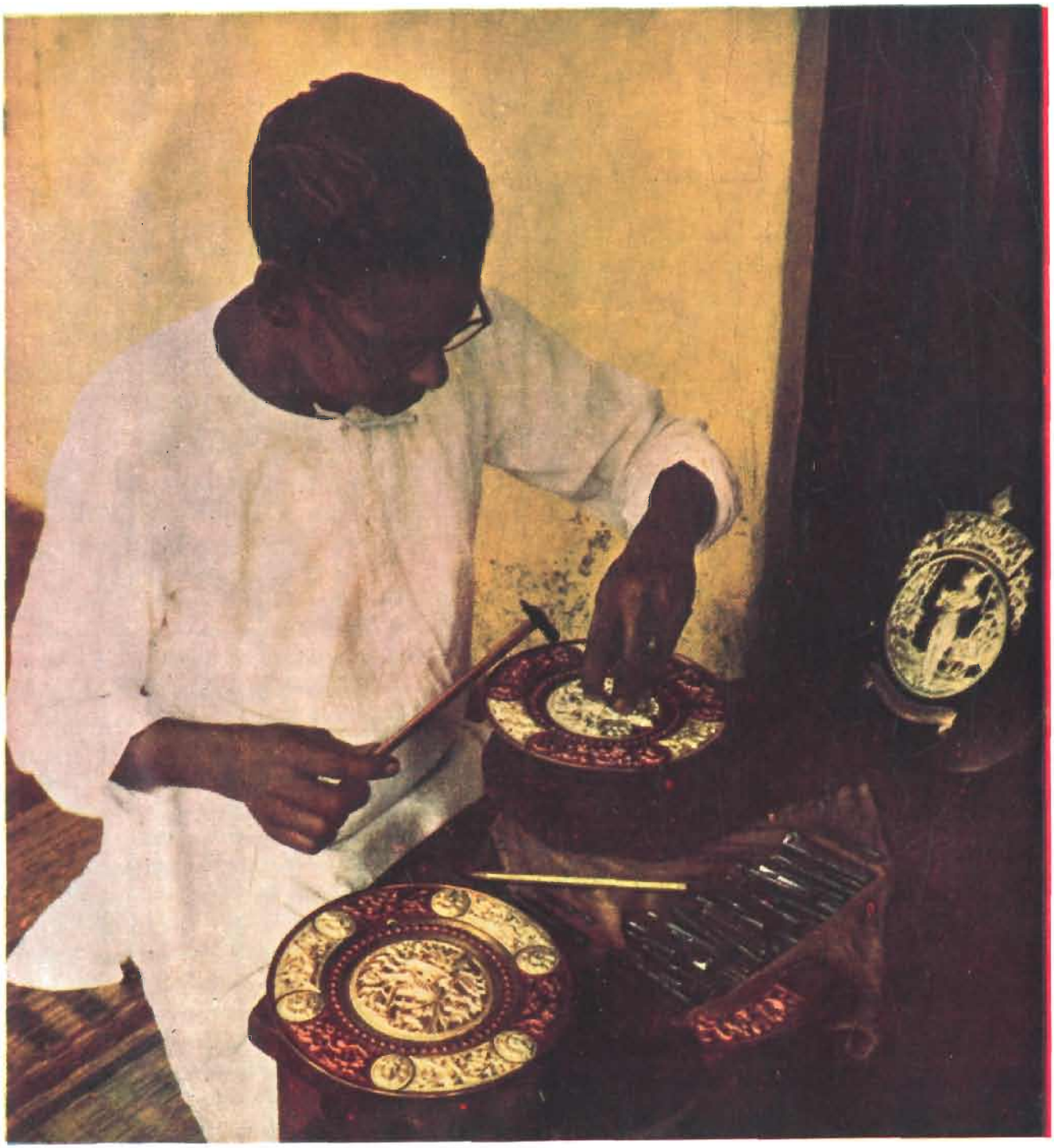
AN ARTISTIC CASKET



THE ORNAMENTAL BOWL PRODUCED IN THANJAVUR.



AN ORNAMENTAL PLATE PRODUCED IN THANJAVUR. THE RELIEFS DEPICT THE SCENES FROM HINDU MYTHOLOGY.



THE WORK OF ENCRUSTING IN PROGRESS