

CENSUS OF INDIA 1961

HIMACHAL PRADESH

Rural Craft Survey

Gold and Silver Ornaments

Field Investigation & Draft

by

LAKSHMI CHAND SHARMA

Editor

RAM CHANDRA PAL SINGH

of the Indian Administrative Service,

Superintendent of Census Operations
Himachal Pradesh Simla-5

Contents

PAGE

FOREWORD iii

PREFACE vii

ACKNOWLEDGEMENTS ix

MAP x

One—ORNAMENTS AND THEIR SIGNIFICANCE 3

Antiquity of the craft—Ornaments for adornment—Ornaments as an asset —Ornaments in present times—Occasion for removing ornaments—Religious tinge attached to Ornaments—Jewellery and certain superstitions—Some other superstitions—Declining tastes for old fashioned ornaments.

Two—THE ARTISAN COMMUNITY 7

Sunar—Legend about sunar—The Sunar Community, Hobbies and recreational activities—Training of craftsmen—Exchange of visits.

PAGE

Three—WORKSHOP AND TOOLS 13

Workshop—Tools—Die Stamps.

Four—RAW MATERIAL 53

Main Material—Subsidiary Materials.

Five—PROCESSES 59

Melting of old ornaments—Annealing—Designing—Soldering—Solder for silver ornaments—Solder for gold ornaments—Preparation of solders—Preparation of solder for joining grans of gold—Preparation of flux—Soldering process—Methods adopted to prevent disturbing of earlier solderings—Typical solution—Repousse decoration—Preparation of lac—Repousse process—Stamped decoration—Enamel work—Preparation of enamel—Pickling—Filing and polishing of ornaments—Methods of assaying gold and silver—Refining of impure metals.

Six—COST OF PRODUCTION 75

Working hours—Rates of wages—Payment of wages—Cost of ornaments.

Seven—ORNAMENTS AND DESIGNS 81

Ornaments for the head—Ornaments for the forehead—Ornaments for the ears—Ornaments for the nose—Decoration for the teeth—Ornaments for the neck—Ornaments for the upper arm—Ornaments for the wrists—Ornaments for the fingers—Ornaments for the ankles—Ornaments for the toes.

Eight—KINNAURI DESIGNS 95

Ornament.

Nine—SILVER SACRAMENTAL ARTIFACTS USED IN TEMPLES 101

Sacramental artifacts in temples—Puja patra—Musical Instruments.

ANNEXURES—

I *Ornaments and Jewellery—An extract from Encyclopaedia Britannica* .. 109

II *Castes of some sunar families* 111

III *Tehsilwise distribution of number of units of silver and goldsmiths in Himachal Pradesh* 112

IV *Skilled Craftsmen* 113

V *List showing cost of ornaments from 1961 to 1964* 117

VI *Survey Schedules of Crafts* 120

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 work* 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 fore-fathers 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 what. Because it was a labour of love, sought to be unobtrusively thrust on one's colleagues and because the inquiry itself was so vast that normally it would demand in any country as big a set-up, if separately established, as the Census organisation itself and that over a much longer period, and because it was almost a pioneer venture, nothing like it having been undertaken since the 1880's, it was decided to move towards a build up by stages, to let the inquiry unfold itself only as fast as my colleagues chose to ask for more.

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

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

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

Mention has been made of a questionnaire in three parts and thirty questions. The idea was to make a beginning with empirical, analytical studies based on a structured questionnaire which would replace general descriptive accounts that had obtained so far. The primary aim was to obtain a picture as much of the artisan himself as of his crafts 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 cooperative activity among them the extent of dependence upon employers and of wage or contract labour. There were questions on the raw materials used, the means of their procurement, the possible extent of dependence on others for raw materials, the extent of the material that artisans can handle within the limits of their skill. There were other questions on the exchange and flow of designs, the use of colours, the ancientness of the craft and legends associated, the colonization of the craftsman, on patrons and customers and on social and economic contact with the world inside and outside the village. Their 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' purse strings. Inquiries were to be made about the operation of middlemen and of cooperative societies, the people who gave new designs and demanded new products. Finally the several stages of production of the articles themselves were to be fully described including the final and finishing stage and a list of very skilled craftsmen of each community was to be furnished. The third part was devoted specially to tribal communities and designed to find out how self-sufficient or dependent they were on the production and supply of manufactured goods, the extent to which they produced themselves or depended on others, their contacts with other communities and the specific forms of production and commerce through which these contacts were maintained.

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

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

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

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

ASOK MITRA

Registrar General, India

NEW DELHI
July 30, 1964.

Preface

It was the expréss desire of the Registrar General of India, Shri Asok Mitra, ICS, to bring out monographs on the crafts of different parts of India. The foreward written by him lays down what we have set out to achieve as a by-product of the 1961 Census of India.

This volume is our tribute to the goldsmiths and silversmiths presently living and working in Himachal Pradesh. The craft has always fascinated me because of the elegance of artistry and decorative beauty that is so lavishly revealed in the ornaments produced in this particular area of India. Wrought in both gold and silver, they are commonly found in practically every home. It is as if all of the householders of the State truly believe that "An ornament is really a poem and the outcome of burning fire".

According to Dr. Mulk Raj Anand, "The demand for the products of the early goldsmiths' skill must have come from the natural desires of men and women to shine, to look glorious and to improve what nature had given them in form of the body into a shape that may radiate beauty or majesty or power".

My assignment has taken me to the work-shops of hundreds of Sunars (gold and silver smiths). It was fascinating to watch them working on gold and silver even though the different production stages of their work baffled me. In spite of the style changes in ornaments that have inevitably taken place in Himachal Pradesh since the turn of the century, there are still to be found many traditional jewellery and ornament designs which retain what one might call a timeless beauty. In this volume we have both verbally and visually recorded our observations about these ornaments before the indigenous designs and temple decorations become rare objects, or worse die out completely.

For over five years we trecked the length and breadth of Himachal Pradesh with notebooks and cameras collecting the material required to produce this monograph. Most of it has been collected by Lakshmi Chand Sharma or myself during these field expeditions. Herein is presented an assorted body of valuable written material as well as photographs and sketches which give an idea of the processing of the craft as well as of the Sunars' workshops in different parts of this Himalaya-based state.

This silversmiths' and goldsmiths' art like many crafts in India has come down from father to son and from son to grand-son, and in spite of the present day sophistication in jewellery and ornaments which comes inevitably in every period, in Himachal Pradesh this ancient craft has retained much of its ancient grandeur.

RAM CHANDRA PAL SINGH

Boswell, Simla-5.

November 2, 1965.

Acknowledgements

I would like to make a grateful acknowledgement to my colleagues and friends who helped me a lot in bringing out this publication on crafts.

I am ever so grateful to Mrs. Ruth Reeves, Hony. Advisor (Handicrafts), Office of the Registrar General India, who so kindly sent me some superb photographs of many old ornaments from that magnificient journal, "Art and Industry", which the Office of the Registrar General of India has preserved in its vast Photographic Library relating to the crafts and craftsmen of this country.

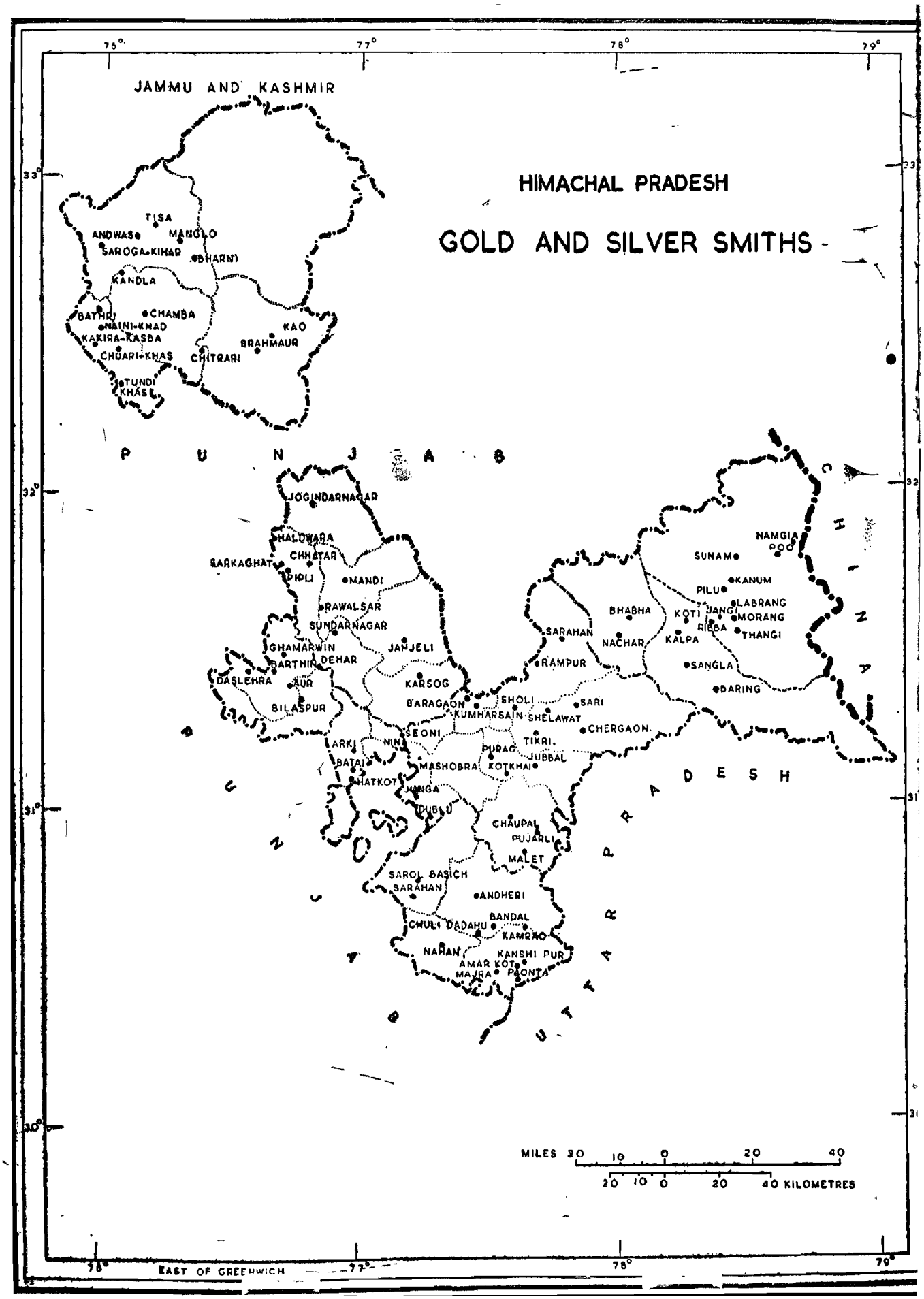
Om Chand Handa, B. S. Thakur and Dharampal Sood, Artists of this office have made many attractive drawings, sketches and have taken many beautiful photographs, for this volume and proofs have been read carefully by O. N. Bhutani and P. N. Sharma, Proof Readers.

My thanks are due to Shri K. C. Kapoor and Shri Amar Singh Juneja photographers of the office of the Registrar General, India, who took a number of good pictures of ornaments at Rampur and Mandi.

I am very grateful to Shri M. S. Srinivas of the Raghuveer Printing Press, Mysore, who so kindly permitted us to print extracts from Kautilyas *Arthasastras* translated by the late Shri R. Shamasastry.

RAM CHANDRA PAL SINGH

January 1, 1966.
BOSWELL, SIMLA-5.


HIMACHAL PRADESH
GOLD AND SILVER SMITHS -
JAMMU AND KASHMIR
PUNJAB
UTTAR PRADESH
CHINA
TISA
ANDWAS
MANGLO
SAROGA-KIHAR
BHARNI
KANDLA
BATHRI
CHAMBA
NAINI-KNAD
KAKIRA-KASBA
CHUARI-KHAS
CHITRARI
KAO
BRAHMAUR
TUNDI KHAS
JOGINDARNAGAR
SHALOWARA
CHHATAR
SARKAGHAT
PIPLI
MANDI
RAWALSAR
SUNDARNAGAR
GHAMARWIN
BARTHIN
DEHAR
JANJELI
DASLEHRA
SUR
KARSOG
BILASPUR
BARAGAON
KUMHARSAIN
SHOLI
SARI
SHELAWAT
CHERGAON
SEONI
ARKI
NIN
BATAL
MASHOBRA
PURAG
TIKRI
JUBBAL
KOTKHAI
HATKOT
JUNGA
DUBLU
CHAUPAL
PUJARLI
MALET
SAROL BASICH
SARAHAN
ANDHERI
CHULI
DADAHU
BANDAL
KAMRAO
NARAN
KANSHI PUR
AMAR KOT
MAJRA
PONTA
SARAHAN
NACHAR
RAMPUR
BHABHA
KOTI
KALPA
RIBBA
JANGI
LABRANG
MORANG
THANGI
PILU
KANUM
SUNAM
NAMGIA
SANGLA
DARING
MILES 30 10 0 20 40
20 10 0 20 40 KILOMETRES
EAST OF GREENWICH
76°
77°
78°
79°
33°
32°
31°
30°

Ornaments and their Significance

One

Antiquity of the craft

Gold and silver ornaments in their most crude form entered man's life when he first discovered these precious, bright and rare metals. For ages silver and gold have been used for ornaments. Ages ago, artisans learn also the art of making articles for adornment. These delicate articles in due course came to be known as ornaments and jewellery.

The origin of ornaments can be dated back to very ancient times. There is mention of gold and silver ornaments in all the *Vedas*, the *Ramayana*, the *Mahabharta* and many epics and dramas of early centuries. Many beautiful ornaments have been unearthed in excavations which reveal the grandour of Indian civilisation. sculptures and art relics of Bharhut, Bhuvaneshwar, Khajurao, Konarak, Sanchi and of many other places show that this magnificient jewellery was extensively used by both men and women in olden times. The wall paintings and sculpture of Ajanta and Ellora caves show magnificient details of ornaments worn in those times. These superb examples including those recently found in India's Harappan culture sites, tell us that ornaments of great beauty were in vogue in this country 5,000 years ago. Right from that period an unbroken continuity of evolution in the craftsmanship of India's artisans is discernible in ornaments. This is true all over India, Himachal Pradesh is no exception.

Ornaments for adornment

In this Pradesh we find old carvings, paintings and *rumals* scenes from the Indian epics embroidered in silk on cotton cloth which portray men and women wearing elaborate ornaments. There are hundreds of different ornaments and designs made in gold and silver. These, by inference, reveal the traditional designs skills of the hill jewellers. These ornaments have different names and vary in shape. Ornaments for the nose and neck as well as those worn on wrists and ankles, and on fingers and toes in different areas, are full of design and shape contrasts. There are ornaments of the lozenge shaped *digra, tomukch*, designed in the shape of a bean-leaf and peculiarly fashioned ear-rings which are made only for the people of a particular area.

Men and women of all ages have had a deep love for ornaments. Soon after birth, children are adorned with small bangles of silver, anklets, amulets and *taragi* a black thread to be tied round the waist with hollow beads of silver hung on it. Silver and gold presents are offered by relatives at this time.

After a few years, the piercing of ears ceremony known as 'Karan Vedha' ceremony, takes place. On this occasion small ear-rings are worn by the child. A girl's nose is pierced in her early childhood and a small gold ring is put in it. At the time of marriage the girl's parents give her jewellery and when it is a son's marriage a set of gold and silver jewellery for the bride is taken to her house by the bridegroom's family. The maternal uncles of a bride and bridegroom also present a few ornaments. There are certain articles of jewellery which are considered a symbol of '*suhag*'. They are *chak*, *churi*, ring, and a *tili*. Women of poor families around here use a nose ornament without exception. They may not wear any other ornaments.

There are always one or another colourful ceremony—fairs and festivals, and marriages when women put on their richest ornaments. Among the festivals, '*Karwa chauth*' is an important one, when all married women, in certain areas of the Pradesh fast and wear elaborate ornaments.

Another good occasion for married women to wear all their ornaments is when they go to their parents house after their years sojourn in the house of their husband's parents. Young and old are fond of wearing beaded necklaces, cuff-links, silver buttons and small gold ear-rings. At the time of marriages the bridegroom puts on old bangles known as *sulangan*, and there may be a necklace and ear-rings too.

Jewellery in India has always been a symbol of wealth. In the past, some quantity of gold or silver was sacramental gift to temples during special religious occasions. Charity in the form of gold and silver ornaments were offered even at death.

All eyes are naturally attracted to the sound of tinkling of ornaments which adds a great deal to the charm of a woman. In a family old persons and young husbands may recognise female members of the family just by the distinctive jingling sound of their ornaments. The following lines from the Journal of Indian Art and Industry on Indian Jewellery, give an interesting explanation:—

> "In Rajasthan, it is said that women are given foot bells, chains and tinkling anklets, not only to frighten snakes away when they move outside at night, but in order that their husbands may know where they are when they cannot be seen".

Ornaments as an asset

About 40 years ago there were times when gold and silver could have been bought at incredibly cheap rates. Silver used to be 14 to 15 annas a tola and gold was available at about Rs. 15 to 16 a tola. It was difficult during those days to earn a silver bit. People struggled hard to hoard or spend it for buying gold and silver and then converting the money into ornaments.

Money was hoarded in the shape of gold and silver. It was considered to be a solid form of saving. Whenever sad-days brought distressing woes and agonies to the unfortunate, it was jewellery which came to ones rescue. One could immediately go to the *mahajan* or *sahukar* (a village creditor) and borrow money by pawning ornaments.

Behari a famous Hindi poet has expressed the greatness of gold in the following couplet:—

> कनक कनक ते सौ गुनी मादकता अधिकाय ।
> वा खाय बौराय जग या पाय बौराय ।
> Kanak Kanak te Sau guni, madakta adhikae
> Wa khae baurae jag, ya pae baurae

"Gold (*Kanak*) is far more intoxicating than Stramonium (*Kanak*). Stramonium intoxicates only when it is eaten whereas the mere possession of gold makes one intoxicated."

Since the beginning of civilization the yellow metal has been a great favourite with women. Shelley has written remarkable lines on the shining ore:—

> "Commerce has set the mark of selfishness,
> The signet of its all-enslaving power,
> Upon a shining ore, and called it GOLD;
> Before whose image bow the vulgar great,
> The vainly rich, the miserable proud,
> The mob of peasants, nobles priests, and King,
> And with blind feelings reverence the power,
> That grinds them to the dust of misery."

Ornaments in present times

The famous gold control order of January, 1962, is one of the most well-known reforms by the Government. Papers were full of news about it. The times are now changing. There is a growing tendency to spend more on dress rather than on jewellery. Only a decade ago a woman carried ornaments weighing any thing from two to ten kilograms or more. This was perhaps because as people say jewellery restrains women from becoming coquettish. In certain parts of the Pradesh, even now, women wear even a heavy load of ear rings as would pull the lobes of their ears out of shape

On occasions of revelry and feasts armfuls of heavy bangles, *churs*, *dhagloos*, dozens of ear-rings and *kantais*, breasts rimming with beaded and silver necklaces and noses decorated with *longs* and *khundees* are still common. Even in their every-day lives these unsophisticated people wear costly ornaments. One has only to see these to believe what we are writing about.

But at the same time in Bilaspur, Lower Mahasu, Mandi and in certain parts of Sirmur, not only young women but even old women are evincing a distaste for this old and heavy jewellery. We see that *koka*, or *tili* or *long* of gold for the nose; *kanta* or ear-rings; a small silver *chak* on a thick braid of hair; a light necklace of gold or silver for the neck, and one gold-ring for a finger are now sufficient.

Occasion for removing ornaments

(*a*) *Death in the family*—To mark the deaths of relatives, ornaments are removed. This is an expression of mourning among women of our society. It is only at the time of death of some member of a family that women of the household take off their ornaments as a mark of mourning. In some areas, only a newly married girl who has not yet completed one year of her marriage, is allowed to keep her ornaments on if she loses a close relation. Removing of ornaments within a year of her marriage is considered a bad omen. At the end of the mourning period, generally for eleven days, all women, again, wear jewellery on an auspicious hour which may be fixed by the local priest.

(*b*) *Death in the ruling families of the past*—It was an abiding custom in the past that on the death of a person of the ruling family, the subjects of the State mourned. On such occasions women removed certain items of their jewellery for three, five or seven days.

Invariably when dead rulers were taken to the cremation ground they were decked with jewellery. These were removed however before the funeral pyres were lit.

(*c*) *Death of a husband*—In case of a husband's death the wife is bound to remove all her jewellery for at least one year, and may be even for the rest of her life. *Koka* or *tili* and other ornaments are removed and it is a pathetic sight to see a widow to remove her anklets, bangles, nose-ring, finger rings, necklace and the vermilion from her hair.

Religious tinge attached to ornaments

(*a*) *'Anant' for men and 'Saptami' for women*—Among the upper castes some men fast on *Anant Chaturdashi* and wear an *anant* on the right upper arm. Women fast on *Mukta Saptami* and wear *saptami*. *Anant Chaturdashi* and *Mukta Saptami* fall in the month of Bhadra during the bright fort-night. Villagers wear *anant* and *saptami* made of silver. A few would have it made of gold. *Anant* and *saptami* are like bangles and have fourteen and seven spiral marks on each.

(*b*) *Lakshmi-Pujan*—The Goddess Lakshmi, wife of lord Vishnu, is said to be an embodiment of wealth. On the *Deepawali* festival Hindus burn incense and pay homage to this Goddess. Ornament and coins are kept by them to worship her. Similarly on the occasion of *Sair*, on the first of Asvina, villagers think it auspicious to have a first glimpse of silver and gold ornaments as soon as they get up in the morning. A barber of the village goes from door to door on that morning carrying a plate in which, besides other things he keeps some ornament or an image made of silver or just a silver coin.

Jewellery and certain superstitions

(*a*) *Anklets or Baghnakh for the child*—In certain areas, a small black seed of a soap nut is half encrusted in silver sheet with an oval hook at the centre. This is tied to the left ankle of a child. It is believed that this helps in shielding the child from the dire effects of *evil eyes*. In addition, it serves as an ornament. Sometimes children wear a *baghnakh*—the claw of a leopard encrusted in gold and silver hung round the neck to ward off evil spirits believed to inhabit the cremation grounds.

(*b*) *Encrusted Amulet and Chauki*—Those who have beliefs in old superstitions, wear amulets or a talisman round their necks or tie them on their arms. These are encrusted in silver or gold or sometimes in copper. In Chamba district a similar amulet is worn by all the family members in case some one of the family dies without having a son. To ward off the curse of having no sons in the family all the members bathe in water which has been purified by the touch of gold.

In certain areas of Bilaspur and Mandi men and women wear charms round their necks. This is called *singi*.

In areas of Kinnaur many persons wear large rectangular and polygon shaped silver cases called *tua*, closed with designs and decorated with filigree work and turquoise stones. In these they keep a small copy of sacred hymns.

In certain areas of the lower hills, married women wear an ornament of a rectangular or a betel shaped *chanki* or *nam*, made of silver or a gold sheet. This is engraved with beautiful designs. In between the designs images of goddesses may also be engraved. This blesses the woman with

good health and keeps away evil. A similar *chauki* with an image of the late wife of her husband is also worn by the second wife. Villagers are superstitious and feel that if it is not worn, the spirit of the first wife would always haunt her.

Some other superstitions

(*i*) Gold or gold ornaments are not generally passed from hand to hand. It is believed this might lead to a quarrel.

(*ii*) Gold is normally not worn on the feet. This may perhaps be to show regard for the precious metal.

(*iii*) In case a woman feels irritation because of her nose ornament, that is considered to be bad omen and may bring bad news or news about the death of near ones.

(*iv*) Gold lost or found is an ill-omen and may bring severe sickness or sorrow in any form.

(*v*) *Guthara* a toe ring, is said to protect one from abdominal or rheumatic pains.

(*vi*) *Bichhu*—a smaller toe ring is said to protect its wearer from the sin caused by killing ants which are crushed under the feet unnoticed.

(*vii*) *Chhalla*—a thumb ring is worn for the husband's long life.

(*viii*) *Patha mundi*,—a plain silver ring without a circular joining is presented to the bride by her in-laws. It is never worn for it is meant to be kept in a jewel-box. It is believed that so long as it remains there she will not lose her ornaments.

(*ix*) Gold to many is a sacred metal. Some, while swearing, touch gold, worn as ear rings. This is to stress the truthfulness of their sworn statement.

(*x*) At the time of cremation, ear-rings or a gold nose ornament, or even gold teeth, may be left with the dead body when it is laid on the pyre. It is superstitiously believed that on the way to *Vaikunth-lok* after death, everyone is to cross 'Vaitarni' a mythical river where one has to pay something to the ferrymen. Every precious or sacred metal left is given to the ferrymen. Only then does one get ferried across.

(*xi*) Gold and silver ornaments such as *bulak, balian, mantikka*, and *sringarpati* may have some hollowed out and pointed silver or gold leaves. These are supposed to be leaves of the *Pipal* tree. The underlying idea of using these leaves is somewhat conventional. The *Pipal* or Bo-tree is an important religious tree mentioned in our Hindu mythology. Many Hindus pay respectful tribute to it. It is believed that underneath the branches of a *'Pipal'* tree nobody tells lies or does evil deeds. The tree would stand a witness to wrong doing.

(*xii*) Gold is considered one of the holy metals among the five gems and is customarily given in the mouth of the dead by Hindus. This forms a part of 'Panchratna'.

Declining tastes for old-fashioned ornaments

Tastes by infereuce, designs are often gradually replaced. Apart from old traditional ornaments new designs and fashions always creep in for bringing about a change. This is responsible for the declining taste of the people for old jewellery designs. Gradually the young folk have developed a taste for light and newly designed few ornaments, as well as for fewer of them.

Whatever may happen to the fashions or the shapes and designs of jewellery, it is certain, that a woman's love of personal adornment will never completely fade in the years to come. It will remain and remain for ever. In this connection, K.de. B. Codrington's remarks produced in "The Handicrafts and Industrial Art of India" seem to have justification :—

> "The fact that jewellery is a traditional form of wealth and that a man will hang his ear rings round his wife's neck and arms and anklets is not merely to be regarded as an unsocial antiquated form of hoarding. It is delightful and until the new world with its Cooperative Societies and Schools can give equivalent value in delight, it will certainly go on".

The Artisan Community

Two

Sunar

A goldsmith is commonly known as Sunar. In Bilaspur and in some parts of Mahasu, the artisans are known as *sonie* or *swarnkar*. The word has been derived from *sona* or gold. In Kinnaur it is the *domāngs* who like the sunars, prepare gold and silver articles and ornaments.

Legend about Sunar

Most goldsmiths have no knowledge about the origin of their community. A jeweller at Dadahu, in Sirmur, and another at Tikar in Rohru, hinted at a legendary tale, which they said, had been related somewhere in Hindu mythology. Once Goddess Durga Bhavani had blessed a devil with immortality. His body turned to gold. After some time there a bitter enmity arose between goddess Bhavani and the devil. He was inordinately proud of his immortality and although many times duels took place between the goddess and the devil, he could not be killed because he was so blessed. One day Goddess Bhavani was repenting her folly in giving the devil immortality and while in this desperate plight she began rubbing her hands with anger, where upon a man appeared before her and touched her feet. 'Who are you'? asked Durga Bhavani. The person replied humbly "I am *Mar* and was just born out of the sweat produced by the rubbing of your hands. I am here to help you kill the devil". Saying this he went out to kill him. Once he found the devil asleep under a tree. He went near him unnoticed and polished his nails to a brilliant shine. They gave off so much glare that one could see one's reflection in its sparkling brightness. When the devil woke up he felt delighted to see his bright nail. Just when he was most enjoying them. *Mar* appeard before him and told him it was he who had painted his nails. The devil was very pleased. Mār suggested to him that since the devil body was made of gold, he could make it even more beautiful if the devil was prepared to tolerate the heat of fire. The devil gladly agreed and went into the fire. As his body was of gold, he could easily remain in the fire for sometime. However, when his body became hot *Mar* found the proper opportunity and applied *SISA*, a metal which cuts gold into pieces. The devil's body melted into pieces and thus came to an end of the devil's life. The pieces of the body were utilised by *Mar* for preparing ornaments. He became a goldsmith.

Some silversmiths say that the custom of wearing ornaments originated from the period of King Ugrasain.

The sunar community

Sunar or Sonie indicates an artisan community. Our investigation shows that there are families of Sunars who do not make ornaments

whereas at many places other communities, Lohars, Rehares and more uncommonly, Brahmins, Khatris, Muslims and Rajputs, are also engaged in this work. There are some who, although they hereditarily belong to the Sunar's community, do not work as goldsmiths. For certain domestic circumstances they have left the trade. Even now there are some of the families who were jewellers in the past and took up this work as their main means of livelihood but with changed circumstances, they are now dependent either on trade, commerce or agriculture.

Any member of this community except those who, belong to scheduled castes, could enter the houses of higher castes without any restrictions. He is allowed to smoke with the same pipe or *hukka* which is used by them. Rustam J. Mehta in his book, "The Handicrafts And Industrial Arts Of India", has said that the Sunars hold an important 'place in the social hierarchy of India's working classes. In this context there is a reference in Kautilaya's '*Arth-Shastra*' which indicates his high reputation.

"विशिखा मध्ये सौवर्णिकं शिल्पवन्तमभिजातं प्रात्ययिकं च स्थापयेत ।"

This shows that "A goldsmith with a reputation for his birth, skill and reliable character was given a shop in the high road and was appointed the State goldsmith. Punishments are laid down for bad work and rewards for the fine work".

Because of this prestige in society it was apparently natural that the art of goldsmithy might have been learned by those who belonged to a higher castes. From generation to generation they continued to stick to the art of jewellery and are now referred to as *Brahmin Sunars, Khatri Sunars* or *Rajput Sunars*. There are families of Rajput Sunars in Village Pipli of Tehsil Sarkaghat and a family of a Brahmin Sunar is living in Kunihar. Families of Khatri Sunars are found in Nahan and in Village Bathri of Bhattiyat Tehsil. Between 15-20 families of Muslim Sunars live in Kihar and adjoining villages in Chamba District.

Some of the families among the Lohar (blacksmithy) community also make ornaments. This class of artisans is found in Kinnaur. The community is known as the *domang*. In certain villages of Mahasu, in the Sangrah area of Sirmur and the Chichot area of Mandi District, Lohars work as silversmiths. Some of them are even skilled enough to produce gold ornaments. Since there were no Sunars left to carry on with the business in village Deothi of Rampur Tehsil, Piari Lohar has apart from preparing agricultural implements, set up a separate workshop of his own for preparing ornaments, apart from preparing agricultural implements. In Brahmaur one of the Reharas prepares ornaments. In Kihar and surrounding villages there are a number of Muslim silversmiths who prepare good gold and silver ornaments.

These instances show that artisans who prepare ornaments do not necessarily belong to one community. During the past centuries certain conditions relating to a place and requirements of the local inhabitants made it suitable for the artisans of any caste or community to carry on with this trade. Some may have migrated to these areas. Other came for a while to carry out a seasonal business and returned to their homes. Some local people must have learned the art from them and taught new artisans in the villages. They gradually established themselves in the Pradesh. It was difficult to trace out the correct lineage about the settling of these communities. The details had passed into oblivion. The artisans simply say that they have been doing the job for ages. In a few cases some material has been collected.

In Tikri-Summar-Kot, a concentration of sunars is found. Because of this concentration the village is called *Sunaron-ka-gaon*. There are eight families of Sunars who claim to have come to the village three hundred years ago. Their subsidiary occupation is agriculture. These families still continue with their profession of silversmithy. In Salooni area of Chaurah Tehsil there are about 20 families of Muslim goldsmiths. They live in Bhandal, Diur, Jawans, Kihar and Sarog villages and claim to have come from Bhadrawal and Kashmir two centuries ago. Jewellers of Dadahu have come from a village near Ambala and settled there about 20 years back. Two families of Sunars living in Rampur came from Mandi about sixty years ago.

There are about 845 Sunars spread over the Pradesh. They are engaged either partly or exclusively in making ornaments. For approximately every two thousand persons there is one Sunar.

Hobbies and recreational activities

Village and town jewellers in Himachal Pradesh do not have any lavish means of entertainment. During the day they may be seen either sitting at their work or gossiping with the customers, or

passing the time by playing jokes, or making witty remarks for about an hour or two during the day. This seems to break the monotony for them. Mornings and evenings, they may offer prayers and assist family members in agricultural work or they may sit in the house and smoke *hukkas* or there may also be a game of chess, chaupar or cards.

Normally, there is one festive occasion in every month, which is good enough for these people to make merry. Festivals of Basant Panchami, Holi, Dewali, Dussehra and a few others add to their enjoyment.

Festival—On Basant Panchami, Sunars like other people, wear new clothes of yellow hues. They may put on yellow turbans or caps or shirt. However, Holi is the best occasion for sheer entertainment. On this day, the shop is closed and the Sunars participates in the party procession in which everyone is out to enjoy themselves by throwing dry and wet colours on each other.

Dussehra is another festival the Sunars enjoy. On Dewali they decorate the houses and worship goddess Lakshmi. On this day, ground rice is mixed with water. With this mixture, beautiful designs and motifs of foot-steps, flowers and human figures are painted right from the threshold to the room where the *Lakshmi pujan* is to take place. Lakshmi, the goddess of wealth, is adorned on this day and it is believed that through these foot-steps she comes into the house. As soon as it gets dark on that day, a long line of earthen lamps filled with mustard oil and the candle wicks are lighted. The Sunar, alongwith other members of his family, participates in all of these festivities with zeal and enthusiasm.

In Kinnaur District, various festivals like Phulaich, Jagra, Losar, Minthoko and Shukthoko take place during the year. For the members of the Domang community, who work as silversmiths and blacksmiths in that area, these occasions are the happiest days for merrymaking. They drink, dance and sing with an absolute gay abandon.

Fairs—Apart from these festivals, a number of fairs are held throughout the year, the Sunars may catch a glimpse of the panorama of human beings who visit them. Once in a while they watch what the fair holds and then they go around, forming in fun and frolic a song or dance, or just laughing. In some fairs the sunars have their own stalls and these are the most popular ones. They offer their customers fun, pleasure and profit.

Training of Craftsmen

In every Sunar family tricks of the trade generally pass from father to sons and then on to grandsons and so on. The son is trained at the hands of the father right from his childhood. He sees, observes and tries his hand at easier tasks such as fusing the metals, hammering them and cutting them into sheets. He is also trained to do simple soldering. After initial training, he is allowed to take up the soldering of valuable ornaments, applying enamels on them and doing other more precise and minute work. It takes quite a long time to learn all the techniques used in producing ornaments. These include many trade secrets.

During apprenticeship, the boy sometimes goes to other jewellers, who may be relatives or friends of the family and may be living in a far-off village. There he spends a few months and learns a great deal from them. It also adds to his experience to learn how to live with people other than his own family.

Sometimes, when a young man, for one reason or another is deprived of work opportunities at home, he goes to a relation or an acquaintance for receive training.

As a result of the change in the tastes of the people in regard to ornaments, coupled with the coming of the Gold Control Order, the Sunars are showing a certain reluctance to embrace their inherited profession. They are sad about the order but not about the trade. Many of the Sunars have plenty of jobs lined up for silver work but this gives little profit as compared to commissions where gold is required.

There is an old jeweller, Jeet Ram about seventy-two years old at Arki, who told an interesting story about the life and apprenticeship of his father. His father originally belonged to Mandi. While he was young, he lost his parents. At the age of ten, he left Mandi and went to Bilaspur. There he took apprenticeship in a jeweller's shop. He used to tell his son about the hard days and the cruelties he endured while learning. It was really difficult to learn the art from 'gurus' (teachers) in those days. Apart from the training he received, he also had to do household work. On completion of six or seven years' training, he was told that his master would arrange for his marriage provided he agreed to serve in his workshop for twelve years. He agreed promptly. As a result, he was married to a girl from Arki. Years passed but when he completed the eighth year of his

service, he felt as if he was at the end of his patience and endurance. Out of disgust, he flatly told his master that he could not continue with the work any longer, and with these words, he left him and went to his father-in-law's house. They arranged for him to stay permanently and have a set-up at Arki. Since then, about 120 years ago, their shop has been set up in this town.

Jeet Ram and his brother have a joint family. Both sit together in the workshop and work together. Jeet Ram married thrice. From the present wife, whom he married at the age of sixty-two, he has a son. His brother's eldest son, Hari Chand, did his matriculation from Arki. After that, he learned modern techniques of ornament making from one of his relations living at Nalagarh. It took him about a year to complete this training. Now he is able to produce ornaments featuring modern designs.

Fees for training—No fee is charged for the training imparted to the students. These trainees, however, contribute by bringing food rations from home. In some cases, the master even provides his pupils with food and clothing. In return, the trainee helps his master in all respects, be it in the household, in the fields or in the workshop. He has to be sincere, humble, keen and painstaking. Only then, would he be able to learn the art in the real sense from his master.

Exchange of visits

Off and on, the Sunars exhange visits with their relatives and acquaintances who live in other villages. In this way, one finds the chance to observe others at work. They sometime discuss matters of some particular process for 'making' an ornament and this adds to their knowledge and experience. Sometimes the visitor helps his host in making ornaments in his workshop.

Workshop and Tools

Three

The village goldsmiths and silversmiths work with but a few instruments and tools. Inspite of being equipped only with a set of old instruments, he produces fine jewellery. In Kinnaur *Domang* community makes its own set of tools. These are very rough and seem crude. But the art they produce is unique and wonderful. From fusing of metals to the finishing of ornaments, the Sunar does everything personally, seldom seeking the aid of others. Designing, enamelling, engraving, moulding, stone encrusting, die stamping and all the other processes, are done by him. In towns most of the processes involved in the making of ornaments production, are paced forward by means of some machinery and on the basis of specialisation. For example, the Sunar may simply prepare the skeleton of an ornament and then passes it on to the *chatera* for engraving; to the *kundansaz* for setting with stones; to the *meenasaz* for enamelling and so on. But a village jeweller does everything himself and for this he deserves all praise and admiration.

Besides making of ornaments jewellers have been producing jewellery for temple deities; sacrificial dishes and ornamental silver doors for temples, bells and instruments for temple orchestras, caparisons for horses and a number of other ornamental hings needed by the community and the ruling families. The faces of deities known as 'mohras' and silver palarquins are made by them. Here one finds, a profusion of silver. There may be a touch of gold. All this is the jeweller's art.

Workshop

A workshop is set up in a verandah. A room may be well exposed to day light. The essential implements of a goldsmith's workshop are the typical forge and an anvil, pitched into the ground or into a portable wooden block. Before the artisan, there are a number of small tools. These may include bellows, blow pipes, brass-iron and wooden blocks, clay crucibles, chisels, dies, driller, files, impression pens, hammers, kerosene lamp, mallets, pincers, *reja*—a long narrow trough to mould the melted metal into a long bar, saws, scissors, steel drawing plates bearing holes of different sizes, and tongs. All these tools are within his easy reach and are used frequently. Sometimes there is a shelf or a hanger fixed on the wall, on which some of the tools are placed. In addition there may be a wooden or a tin box, used for keeping the tools. When the work is over at sunset, tools are kept in it. Rarely do goldsmiths work under the light of a wick-lamp. Where electricity has reached the villages, the artisans work under electric lights.



Blowing char coal

There may be an almirah. This is a show-case. One or two shelves are used to display articles of silver. Gold ornaments are kept in a separate case. In the remaining shelves a bottle or two of acids, chemicals, old jewellery, scales, skeletons of ornaments, tools and other articles like borax, meena glass and stones are kept. Some Sunars keep a cash box. Somewhere near the artisan are placed small pots, one filled with water and red sand used to clean or to brighten ornaments. Another pot contains a mixture of water and sulphuric acid in which ornaments are dipped. A visitor is attracted to many coloured pictures hung on the wall. These include some deities and some advertisements of film stars.

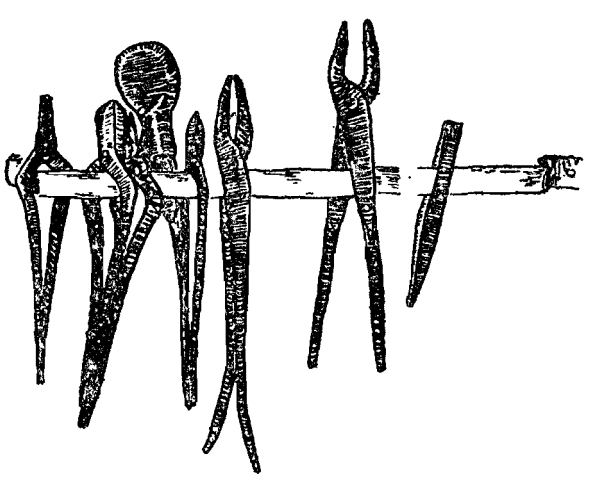
On an average, the space occupied by the gold smith's workshop is not much more than a square of five feet. This is sufficient for the artisan to carry on with technical operations. While working, the goldsmith sits on a asan. Coming from the workshop one hears a continuous sound of light and delicate strokes called *Sunar-ki-tak-tak*, or a hissing sound of the air, blown through the pipe in between the burning coals. While chatting with his customers, he continues to do his work deftly.

A brief description of all the tools and instruments with their specific use, materials out of which they are made, source from where they are procured and their approximate prices, is given below :—

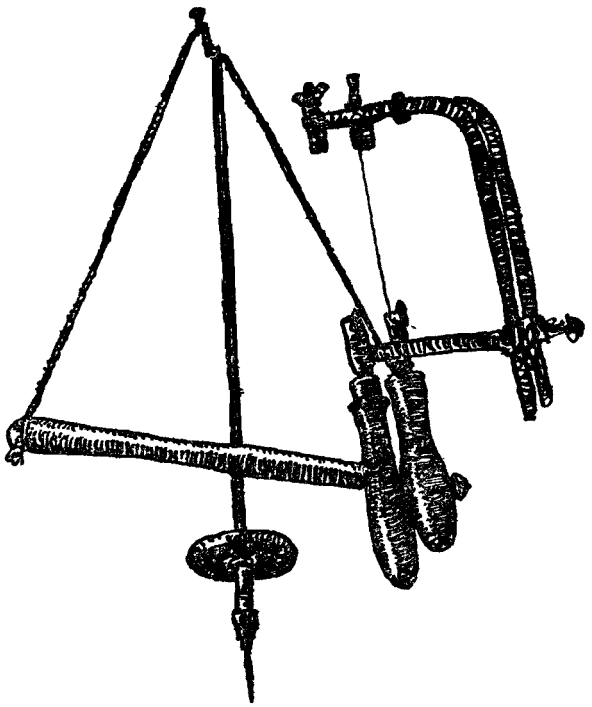
Tools

Anvil and stakes—Anvil is an iron block with a square flat surface used for hammering metals. It weighs about 3 to 5 kilograms and the surface is $3\frac{1}{2}\times3\frac{1}{2}''$. One end of this is pointed about 6", long. This is driven into a square or round piece of wood. This wooden block is then pitched into the floor. In Murang, Kinnaur District, a skilled old artisan was doing a job on the flat surface of a big hammer which is known as *bhartoal*, weighing about 4 kilograms. The anvil is an imported article brought from the nearby markets. A better quality of iron anvil costs more. Approximate cost is Rs. 10 to Rs. 25. In some local dialects it is simply called an iron, though with a slightly changed accent, as *ahero, ahroon, eran, haran* and so on.

Sunars have two or three different types of iron stakes. This is generally a 'T' shaped tool. It is driven into a wooden block by the side of anvil. Shaping and raising of artware is carried out on its two arms. This is about $6''\times8''$. One of its arms is round and tapering, on which an accurate round shape is given to oval hooks, rings and wires. Its common name is *kawai*. Procured from markets for Rs. 2 to Rs. 3.



Tools hung on a wall



Drill and the Saws

Blow pipe—This is a tapered brass pipe of about two feet in length. It is known as '*Nall*'. The shape is conical with a small nozzle at one end and a big vent at the other. Air is blown from this by mouth. One or two pipes are kept by the artisans. Some artisans are expert in blowing air through this pipe. The out-flow and velocity of air remain constant for minutes together. Even while inhaling, the air will blow from the pipe. This is known as *phuknal*. In Kinnaur, some artisans call it *phukni* or *phukrandi*. The cost ranges from Rs. 3 to Rs. 5. Some Kinnaur artisans have been using iron pipes manufactured by them. These are very rough.

Apart from this, the Sunar has one or two small and thin pipes about 9 inches long and curved at one end, called *baknal*. These are used to carry soldering. Air is blown through this pipe to the flame of the kerosene lamp and soldering is done. This costs round about Re. 1.

Bellows—Bellows are locally made of a goat skin. At one end a conical 6 inches long hollow piece of iron with a small vent is tied. This is fixed on the forge. The other side is open and the opening is fitted with two short sticks. With the help of these sticks a person opens the people hide and fills it with air. Simultaneously it is closed and the skin is squeezed. The skin is about two feet long and a foot wide. Air is propelled through the vent feading to the forge. Skin bellows are generally used by blacksmiths. A few Sunars have fitted these. In Kinnaur some aritsans have a pair of bellows. In local dialect these are known a *dhonkani* or *khalbang*. In Kinnaur these are known as *butpa* or *sapkul*. The approximate cost is Rs. 4 to Rs. 5. This is produced locally by carpenters.

Blow machine—Slowly and steadily artisans are replacing their bellows and blow pipes with blow machines commonly known as *pakha*. The machine is provided with a handle. When the handle is pushed round, blades fitted inside it rotate more swiftly and produce air. This air comes out from the nozzle. This reduces the burden of hard breathing. A handle has to be moved. This helps the artisans to concentrate on other important processes while the coal is kept ablaze by a helper. Artisans call it 'pakha'. The machine is procured from the markets and its price is between Rs. 18 and Rs. 20.

Charcoal block or asbestos paper—Asbestos paper commonly known as *jaind* or *jaint* paper is bought from the markets. Units of an ornament are soldered on it. Small bits of gold or silver may be fused on it. A piece of paper about $5'' \times 7''$ is enough to carry out these operations. The block is about one fifth of an inch thick and is useful as it does not catch fire. Generally, it is kept on a wooden board. Price for a piece is Rs. 1·50.

In place of an asbestos block Sunars may use a large piece of charcoal. The artisan places the work on a piece of charcoal and holds it in his left hand. In the right hand a mouth blower is held and the flame of the lamp is directed on the work. Sometimes a flat piece, made of clay is used for the same purpose.

Chasing tools or impression pens—These are similar in size and shape to chisels. In the local dialect these are called *chhinis* or *kandarni*. But the use for which they are put to is altogether different. Edges of these are not very sharp. Each one of these pens produce a different motif. According to the design of an ornament several pens are required. All chasing and relief work is done with them. Normally each one of these has a different name according to the motif it gives. For example *Chauras thalna, dudandi chhini, gulshuma* and so on.

Chisels and perforating tools—These are made of iron bars of different thicknesses. The usual one is as thick as a lead pencil. Sunars cut bars into small pieces of 3 to 4 inches each and shape their edges sharp. Superior quality steel bars are used for making them. The cost of these bars is about Rs. 3·50 per kilogram. When a piece of an ornament is to be cut or perforated at a place where scissors cannot be used these chisels may be used. These are commonly known *chhinian*. When the chisel become blunt they are sharpened.

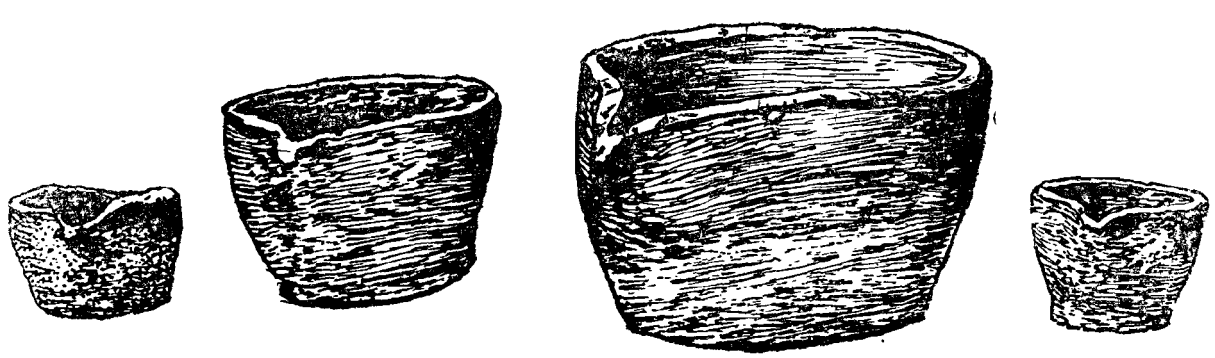
Crucibles—These are like small earthen *diyas* or lamps. Crucibles made of clay or *khariya mitti* are used for fusing metals. The crucible is locally called *gathali* in Sirmur, *kutharian* in Chamba, *khurich, khotu, lukpor* in Kinnaur, *khatiali* or *katori* in Mandi and in Rampur Teshil of Mahasu. Normally artisans prepare crucibles from the ordinary clay or *kharya mitti*. The cost is negligible. The crucibles are of varying sizes. Small as well as big, like earthen bowls. These are used according to the quantity of the metal to be fused.

Divider—Is used for inscribing accurate circles and circular designs on sheets of metals. These markings serve as guide lines during bending, cutting and shaping processes. A pair of iron divider, locally called *parkar*, is about 6 to 8 inches long. This is prepared by the artisan himself or by the local blacksmith. Two pointed pins are linked with a moving joint. Some artisans purchase it from the market at a cost of one rupee or so.

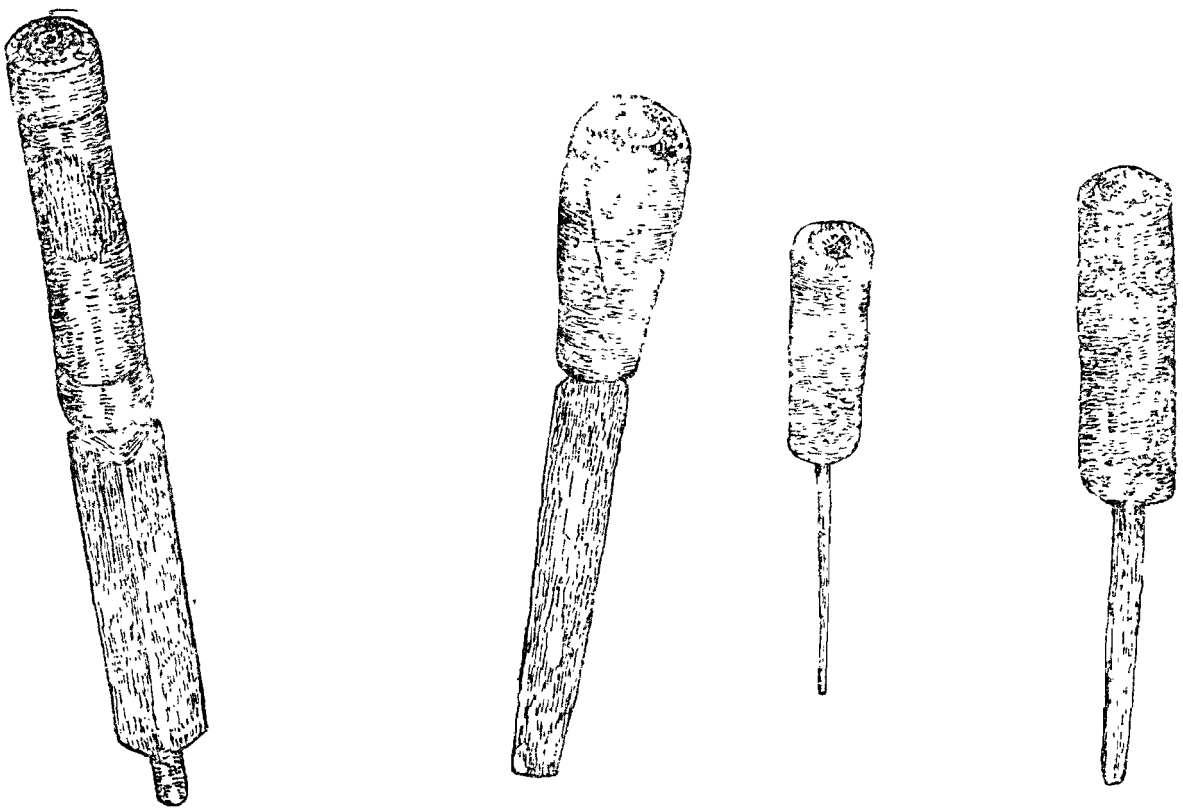
Files—At least eight to ten files of different kinds are kept by each Sunar. Their length may be 6 to 12 inches. These may be flat files, pointed round files, round and half round files, sharp edged files, spear shaped files and triangular files. Files are procured from big markets at a price ranging between Re. 1 to Rs. 5. However, in Kinnaur some artisans make their files. On a well prepared shaft of iron they chase out regular straight lines with chasing tools. The different types have been named after the shape and form they possess such as *Chakuni reti, gol reti* or *tikuni reti* and so on.

Forge—In local dialect this is called *arandi githa, bhathi,* or *hikra* in Mahasu and *kirkira* in Chamba. In other parts of the Pradesh the word does not vary much. In Kinnaur it is known as *dosa*. The size and shape is almost like an earthen pitcher, approximately one and a half feet in diameter. This is made of clay about half an inch thick. It looks like an earthen pitcher kept upside down. A portion is open on one side. This faces the artisan. It is slightly tapering at the top. Here a flat surface is provided. This is used to keep small bits of gold and silver ornaments. The lower portion inside is flat. In the centre charcoal is kept oblage with the blow pipe or sometimes with a bellows or a blowing machine. There may be slight variations in Solon and Nahan, where some artisans use open hearths made of stone.

The artisan keeps his forge clean. It is given a mud plaster once a fortnight or so. This type of forge has been used in the villages for a long time. In certain parts where Lohars prepare ornaments an open hearth is used.



Crucibles

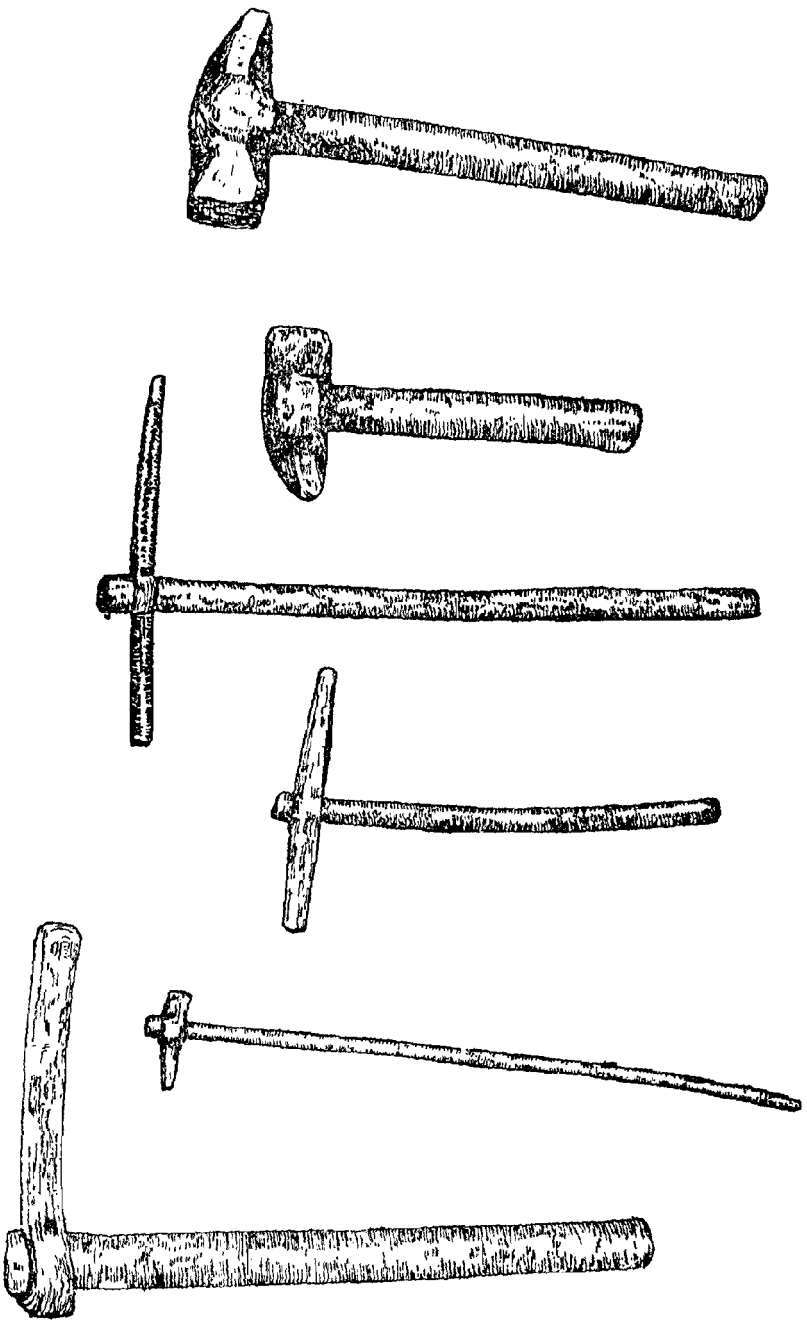


Files from Kinnaur

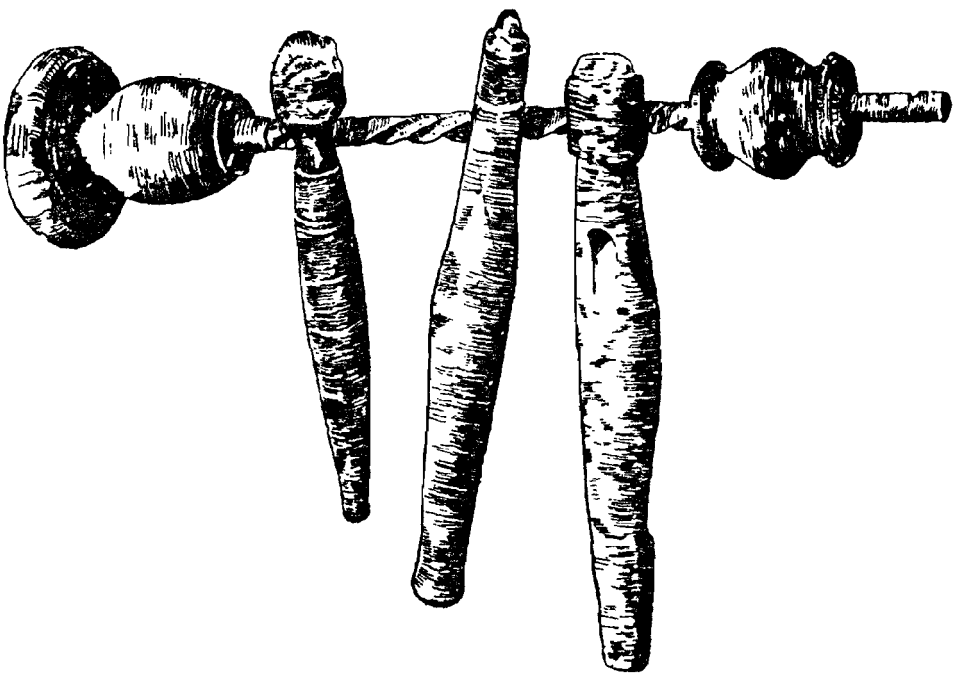
Even in towns Sunars have opted themselves to use open hearths. These are fitted with a blow pipe. According to craftsmen the age-old 'githa' is very useful. While blowing charcoal the ash does not scatter around in the room. The small particles of the metal which get disintegrated during the melting and soldering processes remain inside. The forge is considered useful for carrying out soldering operations of minute grains as required in *balu, bragar, long* and *murki*. While soldering the slightest blow of air may spoil the work. The walls of the forge protect the piece of work from such harm.

There is no technical point involved in the making of this typical forge. Artisans prepare it by breaking an earthen pitcher to shape. Then this is plastered with thick clay. The amount spent for purchasing a pitcher is Re. 1 at the most. Other forges may cost between Re. 1 to Rs. 5 each. In towns some sunars use forges made of stone, which are beautifully cut into shape with a groove in the centre.

Hammers—A number of hammers are needed to produce ornaments. These are of different types and sizes; called *hathora* or *hathauri*. In Kinnaur it is known as *Thooa* or *thauchung*. These are bought from the towns and wooden handles are fitted on them by the artisans. The length of these handles varies from 8 inches to 12 inches. The biggest hammer normally weighs about 2 kilograms. Others are gradually smaller and smaller in sizes and weight. The smallest hardly weighs 100 grams. All of these hammers are used for different types of work. The types of hammers are bossing hammer, chasing hammer, neck hammer, planishing hammer and a raising hammer. But artisans call these by the name of hammers only. All of these are bought from the market. The cost ranges from 50 paise to Rs. 5·50 paise. Some Sunars have at least a dozen hammers with them



Hammers from Kinnaur

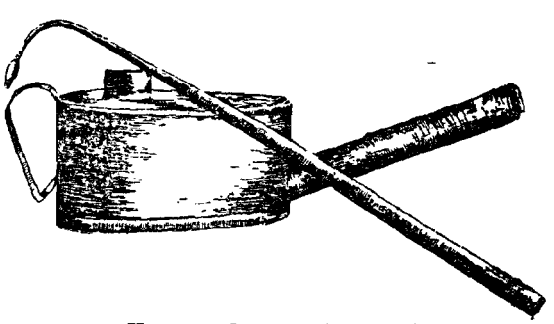


Hand drill

Hand drill and drill points—Sunars call it *Barma*. This has two handles and is used for making holes in metals and is available in towns. The cost is about Rs. 15 to 18. One handle is held firmly in the left hand and with the right hand another handle is moved round and round. A drill point of the required radius that is fitted in the place provided. The point revolves sharply and drills the metal. Drill points are purchased from the market. By regular use these become blunt so the artisan sharpens them himself. The needle is first heated and made soft. The point is flattened and heated red hot. The hot point is instantly dipped in the water. It now regains its hardness. After this the point is sharpened on a stone slab. The tool, called *barma*, which varies in shape is used rarely by the village silversmiths. However, in towns the artisan has a driller, costing about Rs. 7.

In Kinnaur some Domangs use *sor*, an implement which they manufacture for drilling. A drill point is fixed in a long wooden stick for making a hole. To make the stick heavy and balanced, an iron or stone whorl is fitted near the drill point. There is another stick having a hole in the centre which is passed through the first stick. In this way two sticks make a cross. The three ends of the sticks are tied with a thick woollen thread. Now, by pushing the second stick up and down the stick with a drilling point revolves and makes a hole on the required place. This is a crude type of hand drill. Finer drills are used by some village silversmiths.

Kerosene lamp—It is a simple small tin with a lid and a long nozzle provided with a wick. Kerosene oil is used in it. The flame of the lamp is required to carry out soldering and fusing operations on asbestos paper. A blast of air is given on the flame by a curved mouth blower. The lamp can be had for about 25 paise from the local blacksmiths. Some silversmiths have even converted small cigarette tins into kerosene lamps.



Kerosene lamp and Bakual

Maikh—This is made of iron or of a wooden block about 8″×4″×3″ containing depressions of various sizes. This is used to give hemispherical form to a plain sheet of metal, after hammering. It is used to prepare ornaments like *chak* and is made locally and costs little.

Mandrel—It is a foot long around tapered piece of wood known as *kalatha*. The diameter at one end is about 4 inches and at the other about half an inch. It is used to give round shapes to bracelets, bangles and rings and procured from the local carpenters for about one rupee. In Kinnaur artisans use *mukhanj* for this purpose. It is a locally prepared 1½ feet long shaft of iron. Both the ends are curved and slightly pointed.

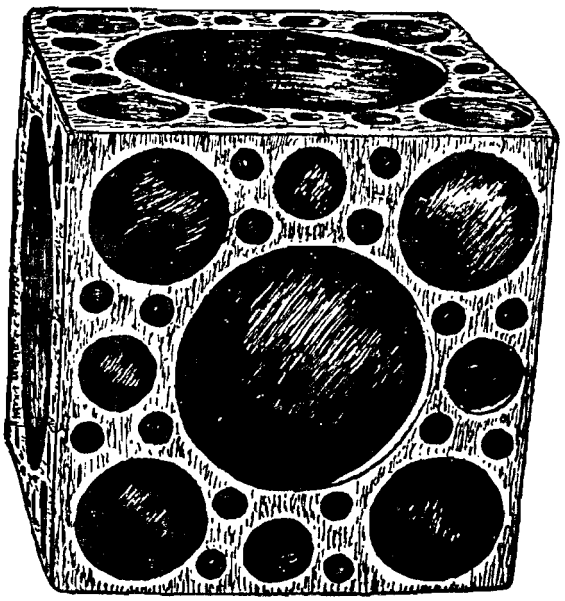
Mashkala—It is an eight inches long iron bar with a curved end. The back is slightly convex, but smooth. To bring brightness on the ornament, this is rubbed over the surface and serves the purpose of a fine sand paper and file. Procured from town for about Rs. 1·75.

Moulds, blocks and dies—For all sunars, blocks, dies, moulds and *thappas* are most indespensable. Everyone keeps them in dozens. Metal sheets and wires are hammered over them into designs. By using these sunars are able to fashion ornaments according to the designs in vogue among the rural folk. These are mostly made of bell metal. Iron blocks are also used. These blocks were procured from Amritsar in the past, but now jewellers use them rarely as the designs are changing. About a decade back these were available at the rate of 3 to 4 annas per tola. Rate for the iron blocks is Rs. 3 to 3½ per Kilograms. Its weight ranges between 50 grams to 300 grams each. These are called, *bahuguna, mosh, passa, titkara* and *thappas*. Brief description of each is given below:—

(*i*) *Bahuguna*—This is either a square, octagonal, hexagonal or a circular block of bell metal used as a die stamp. *A Bahuguna* made of iron is also used. Its diameter is about 3 inches and the thickness is about a quarter of an inch. It has as many as 20 different designs on its surface. Figures of birds, fish, stars and small flowers are carved on it. The impressions of these are received on a silver or gold disc of some ornament, when it is hammered on the block.

(*ii*) *Mosh*—It is a hollow die and is used in making units of necklace called *champakali*. This is named as *champukali-ki-mosh*.

(*iii*) *'Passa' or Dapping Die and Dapping Tool*—Dapping die is generally called *passa*. In Kinnaur it is named *markal*. It is normally a cube of 1¾″



Passa (Dapping Die)

having a number of half round cavities of different sizes on all its six surfaces. The die is made of bell metal. It is procured from markets for Rs. 5 approximately. The weight of the die is about 200 to 300 grams. Besides this there are few more blocks of iron having similar round cavities in them. These are used for the same purpose.

A number of dapping tools in different sizes are needed to shape the work into different halves. Every jeweller has a dozen or more of these. Each one is about 3″ to 4″ long iron shaft with a round head at one end. Circumferences of the shaft vary according to the size of the round head. To shape any circular disc into a half sphere, the disc is first placed on the required cavity of a block or cube. Then the dapping tool is put on it and hammered with light strokes. In local dialect it is called *padernoo* or *taparna*. These are made by Sunars from steel or iron bars.

(*iv*) *Titkara or kitkara*—The block is an oblong piece of bell metal about 5 inches long, one inch wide and quarter of an inch thick. It has a number of horizontal line designs on its upper surface. Breadth of the block gets slightly contracted towards the ends. This is used to get different impressions on the metal wires of various gauges. The plain round wire is placed on the requisite line design and hammered with medium strokes till the impression is received on the wire. In Kinnaur it is called *chhoktung thopa*.

(v) *Thappa or* die stamp—Each of these has a variety of design carved on them. Some are in cubical form, in square size, oblong and even in circular shapes. Some of these die stamp were carved by local silversmiths. For instance the late Phinoo, a jeweller of village Giana near Arki, manufactured a number of thappas himself and carved beautiful designs on them. The impression of one of his thappas has been given in the report. The required design is received on a piece of gold or silver by hammering it on the thappa. 'Thappas' are named after the designs of the ornaments they produce for example *bel-ka-thappa, chak-ka thappa, chauki-ka-thappa, chhap-ka-thappa* and so on. In Kinnaur *thappas* are called *par* or *thopa*.

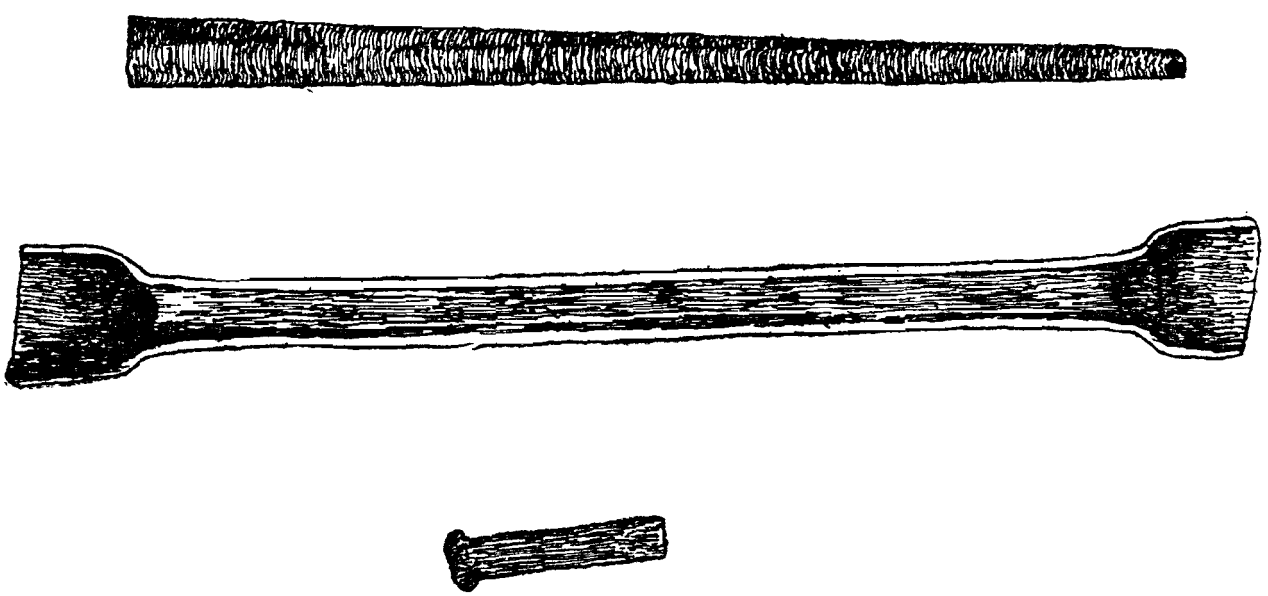
Pincers—A pair of iron pincers is needed every now and then by Sunars when they are at work. While an unit of some heavy ornament is put in between the red coal for annealing or soldering, it is handled with pincers. Half a dozen pincers are kept by jewellers. Commonly used pincers have curved flat jaws and are of varying sizes from 12″ to 18″, with 1½″ to 2″ of jaws, width about ½″ or a bit less. *Sani* is a common word used for it. It is locally prepared by a blacksmith. The price is about Rs. 2.

Pliers—Pliers are used for a similar purpose. But these are smaller in size and also differ in shapes. It is about 6″ × 10″ in length with 1″to 2″ long jaws. These are used to bend wires and sheets of metal. Plier is called *jamboor* or *plass* everywhere. A round nose plier having a round and pointed jaws is called *gaua* or *kao chunj*. These are procured from markets for Rs. 2 to Rs. 5 each.

Polishing lathe and brushes:—Some sunars who live in Bilaspur, Mandi and Nahan towns have lathes for polishing ornaments. Others do this job by using small and large brushes which are priced between Re. 1 to Rs. 3.

Reja—It is a long, narrow cast iron trough about one and a half feet long including the iron handle. After the metal is melted in a crucible, it is poured into mould the metal in a form of bar or a rod. When the molten metal becomes cold this can easily be cut, hammered or bent. Artisans keep one, two or three *rejas*. These are bought from the towns. In Kinnaur some artisans make their own *rejas*. They call it *paindi*. market price of a *reja* is about Rs. 1·50.

Saw blades and frames—Goldsmiths call this an *ari*. They purchase these from big markets. Its approximate cost price is Rs. 10. Blades are purchased by dozen lots. These are called bal



Phuknal, reja and chhini

and are about 6 to 8 inches long. The blade is placed in the saw frame with the teeth pointing towards the handle. The blade is kept tight so as to give fair tension. A well tightened blade cuts accurately. Loose or sloppy blade may break. This type of saw is used in very precise works.

Simple saw—It is used mainly for sawing silver. These are of varying sizes. Some are about a foot long excluding the handle and some are only 6 inches long. Separate blades are fitted in them. These are available in markets for Rs. 2·50 to 5.

Scale, weights and measures—One tool that is indispensable to a jeweller is his scale and measuring weights. He uses it for weighing old ornaments when customers come to him for casting new ones. While preparing a set of an ornament, he always weighs its various units to make sure that the material, provided by the customer will be sufficient to complete the set.

Till October 1959, when the metric system of weights was introduced in the country, the sunars used to weigh articles in old Indian weights, which constituted of *mashas, rattis and tolas* only. These units of weights were sufficient for a jeweller's purpose. Following units of weights were in use:—

Eight rattis	.. One masha.
Twelve mashas or ninety-six rattis	.. One tola.

Scales and set of weights were procured from towns and cities at a cost ranging between Rs. 3·50 to Rs. 10.

In place of the weights Sunars normally used to weigh with silver coins. A silver one-rupee coin weighed one tola, an eight-anna coin six mashas, and a four anna coin three mashas.

Now, with the introduction of the new metric system of weights, jewellers both of villages and towns had to change their old sets into new ones. It costs them between approximately Rs. 12 to 20. Besides the new sets of scales and measure weights, they have the copy of conversion tables. First, they weigh the ornament in grams and after looking through the conversion tables, they give their illiterate customers the weight in tolas and mashas.

The metric equivalents for ratti, masha and tol are given here:—

One ratti.	·12149	grams.
One masha.	·9716	grams.
One tola.	11·66	grams.
One gram.	·085	tolas.
Ten grams.	·85	tolas.
Hundred grams.	8·5	tolas.

The weights, measures and the scales used by the gold and silversmiths about two and a half millennium back also find mention in Kautilya's Arthsastra. Relevant lines have been produced below along with the English version as it appears in Dr. R. Shamasastry's translations.

"धान्यमाषा दश सुवर्णमाषकः, पंच वा गुञ्जाः। ते षोडश सुवर्णः कर्षो वा। चतुःकर्षं पलम्। अष्टाशीतिगौरसर्षपाः रूप्यमाषकः। ते षोडश धरणम्, शैम्ब्यानि वा विंशतिः। विंशतिर्गुलम् वज्रधरणम्। अर्धमाषकः, माषकः, द्वौ, चत्वारः, अष्टौ माषकाः; सुवर्णः, द्वौ, चत्वारः, अष्टौ सुवर्णाः; दश, विंशतिः, त्रिंशत्, चत्वारिंशत्, शतमिति। तेन धरणानि व्याख्यातानि।

प्रतिमानानि अयोमयानि मागधमेकलशैलमयानि, यानि वा तोदकप्रदेहाभ्यां वृद्धिं गच्छेयुरुष्णेन वा ह्रासम्"।

'10 seeds of masha (Phraseolus Radiatus) or 5 seeds of gunja (Abrus Precatorius)	..	1 suvarna-masha.
16 suvarna-mashas	..	1 suvarna or Karsha.
4 Karshas	..	1 pala.
88 white mustard seeds	..	1 silver masha.
16 silver-mashas or 20 saibya seeds	..	1 dharana.
20 grains of rice	..	1 dharana of diamond.

"Ardha-masha (half a masha), one masha, two mashas, four mashas, eight mashas, one suvarna, two suvarnas, four suvarnas, eight suvarnas, ten *suvarnas, twenty suvarnas, thirty suvarnas, forty* suvarnas and one hundred suvarnas are different units of weights.

Similiar series of weights shall also be made in dharanas.

Weights (pramanani) shall be made of iron or of stones available in the countries of Magadha and Mekala; or of such things as will neither contract when wetted, nor expand under the influence of heat."

"षडङ्गलावुर्ध्वमष्टांगुलोत्तराः दश तुलाः कारयेत्तोद्दण्डा-दूर्ध्वमेकपलोत्तराः। यन्त्रमुभयतः शिक्यं वा"।

"Beginning with a lever of six angulas in length and of one pala in the weight of its metallic mass, there shall be made ten (different balance with levers successively increasing by one pala in the weight of their metallic masses, and by eight angulas, in their length. A scale-pan shall be attached to each of them on one or both sides."

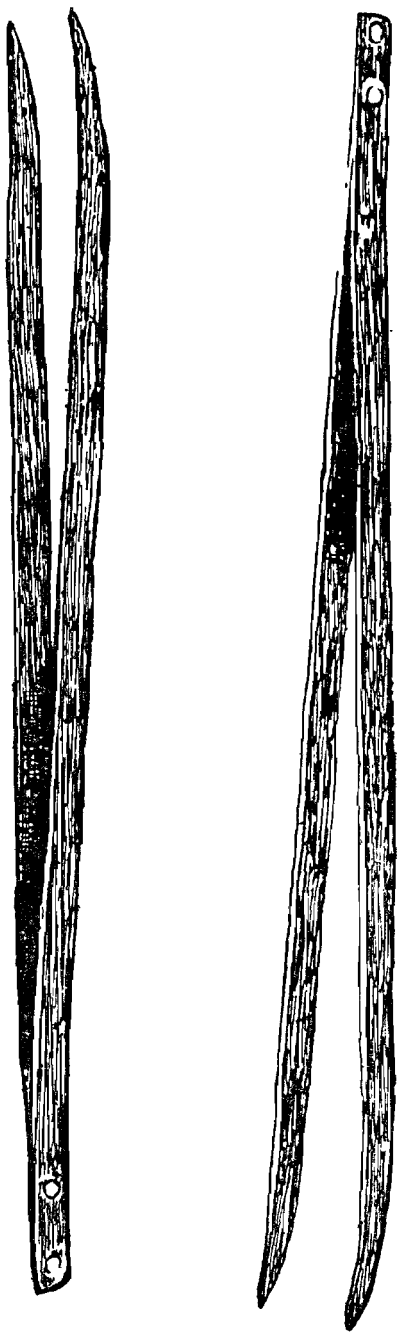
Shears or scissors—A pair of shears is used to cut sheets and metal wires according to designs and motifs of ornaments. Every sunar has about a dozen pairs of shears. Their varying sizes range from 6" to 12" with 1½" to 2" of snipping blades. These are made of superior quality steel and are procured from the bazar for Rs. 2 to 5. In Kinnaur, some of the artisans are using rough scissors they themselves have manufactured. *Kainchi*, *katira*, or *katoo* are the popular local names for this.

Sumba or gulsum—It is about 1½ to 3 inches long needle with a round wooden handle. The point of the needle is very sharp. It is used to make raised pointed portions for the stones fitted in the bezel boxes of an ornament. This helps to hold the stones firmly. Apart from this diamond cut work on metal is also done with this sharp tool. It is available in towns for about one Rupee.

Tongs—Every sunar has 4 to 8 tongs. These are in different sizes and types and are used for different actions. Some are used to set pieces of charcoal in the hearth. Some to pick up the hot metal or crucible; some to place small parts of ornaments close to each other to give it a shape of ornament and so on. A few tongs are one foot long and others are about 1½ feet long. All have pointed and accurate ends. Some tongs have curved and pointed ends. These are available from big towns for Rs. 2 or a bit less and are called *chimta* or *chimti* throughout the Pradesh.

Touch-stone—It is a black stone used for assaying gold and silver. Kept by all jewellers and is procured from markets for Rs. 2 to Rs. 3. Specially prepared rectangular blocks 2"×1½" are also used for the purpose. *kasauti* is the local name.

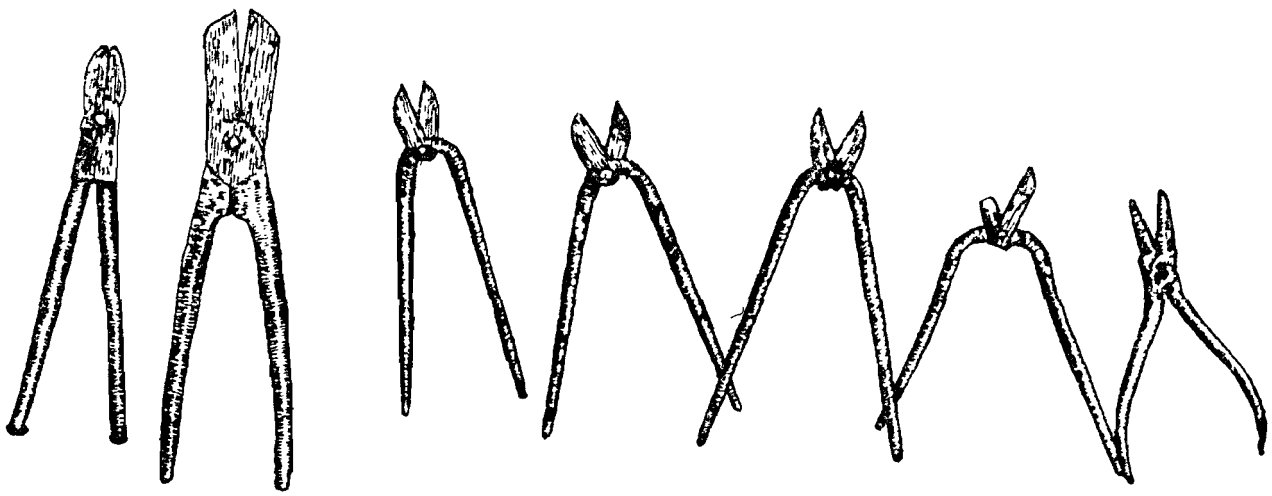
The following line on the merits and demerits of a touch-stone—'nikasha' as discussed in Kautilya's *Arthasastra* is quoted along with Dr. R. Shamasastry's Translation :



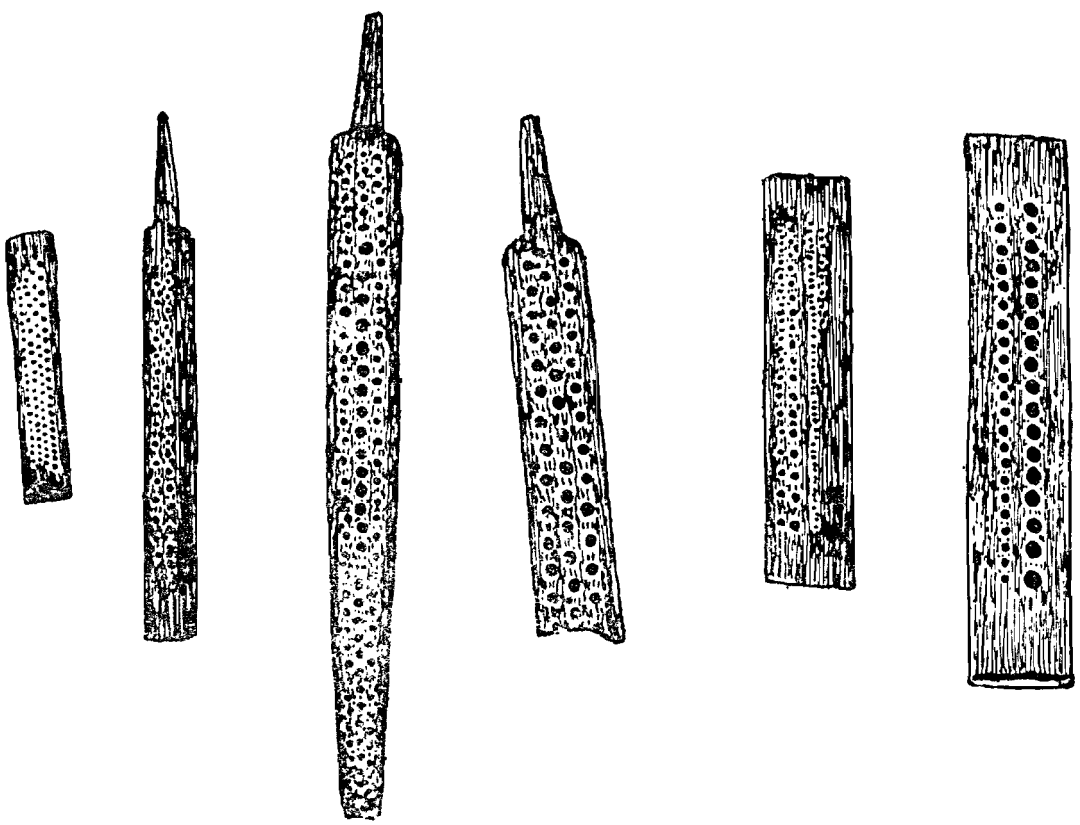
Tongs

"सकेसरः स्निग्धो मृदुः भ्राजिष्णुश्च निकषरागः श्रेष्ठः।।

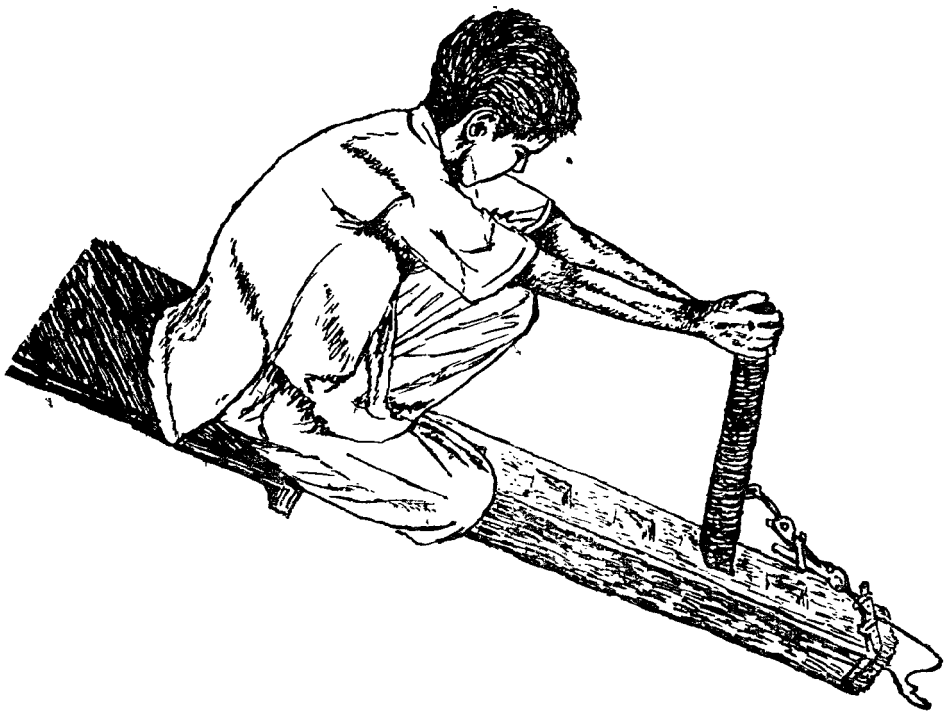
कालिंगकः तापीपाषाणो वा मुग्दवर्णो निकषः श्रेष्ठः। समरागी विक्रयक्रयहितः। हस्तिन्छविकः सहरितः प्रतिरागी विक्रयहितः। स्थिरः परुषो विषमवर्णश्चाप्रतिरागी क्रयहितः"।।



Pincers, scissors and round nose pliers.



Steel-draw plates



Wire drawing stand

"A touch-stone with soft and shining splendour is the best. The touchstone of the Kalinga country with the colour of green beans is also the best. A touch-stone of even or uniform colour is good in sale or purchase (of gold). That which possesses the colour of an elephant, tinged with green colour and capable of reflecting light (pratiragi) is good in selling gold. That which is hard, durable and of uneven colour and not reflecting light, is good for purchasers (*krayahitah*)".

Tweezers—The pair of tweezers is shaped like tongs but is smaller in size. It is hardly 4 to 6 inches long. It is known as *chimti*, *sansi*, and *suhani* among sunars. In Kinnaur it is called *kapche*. The market price is Re. 1 or Rs. 1·50. Every sunar has two or three of these.

Wire drawing apparatus—(*i*) *Steel draw plates*—These are thin perforated plates of steel normally in oblong sizes of about 9″×1″. Some may be larger. There are holes of different sizes in them. Gold and silver wires are drawn through these holes to make them thinner and thinner. These are available in large towns and are known as *jandri* or janti. A jeweller keeps at least half a dozen of steel draw plates. The price ranges between Rs. 3 and Rs. 6.

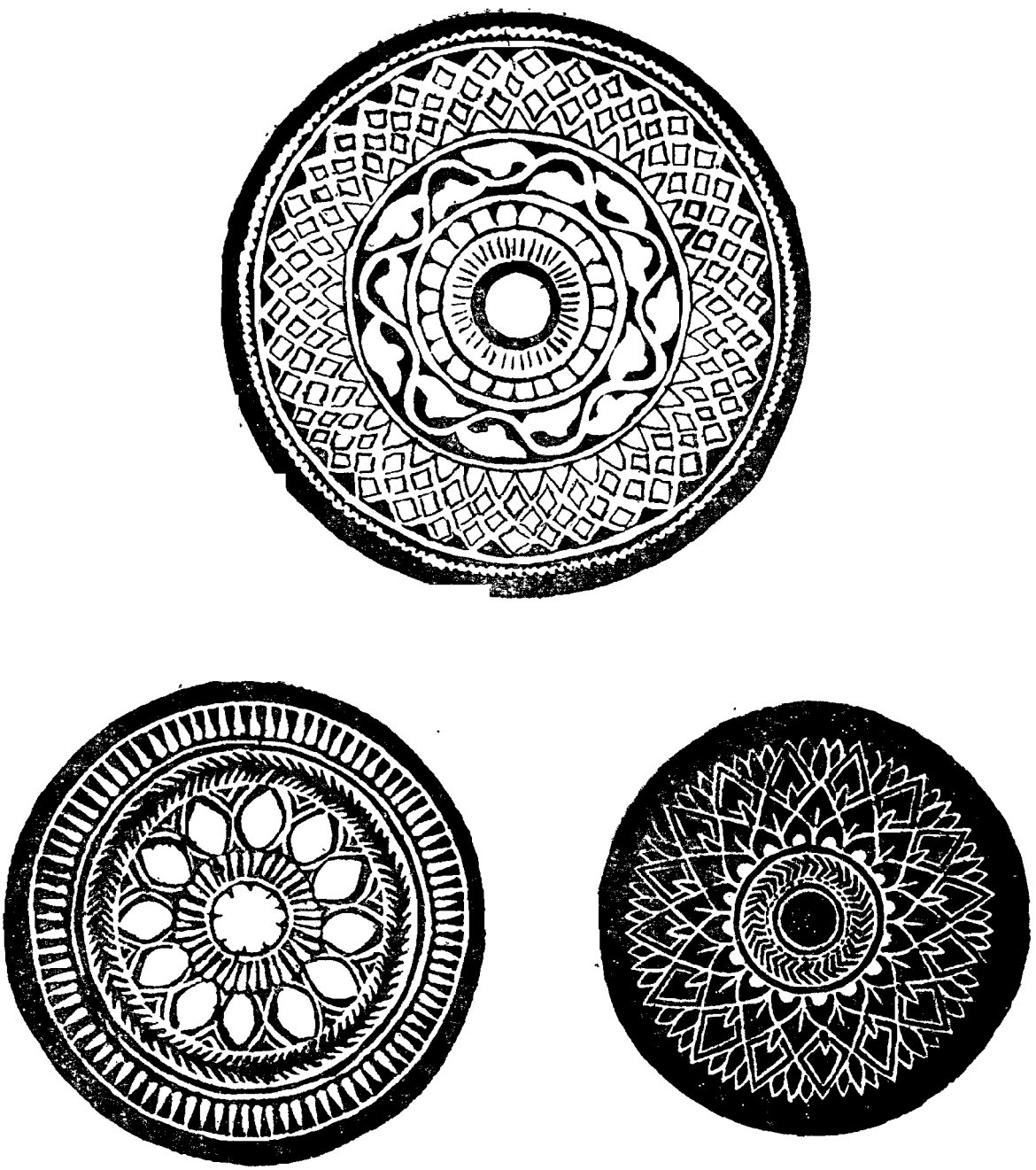
(*ii*) *Wire drawing stand*—This consists of a slab of wood about 4½ feet long with two iron nails fitted 3 inches apart, at one end. A number of grooves are made, one behind the other, on its upper surface. A steel draw plate is placed against the two nails and then the wire is drawn by pliers

through the holes. The pliers are placed within the grip of an oval hook which is fitted to a big wooden handle. With the help of the grooves the handle is pushed behind and the wire is drawn. The process is repeated till the artisan gets a wire of the required thinness. The whole structure called *jand* is prepared by the local carpenters. Its approximate cost is Rs. 3 to Rs. 5.

Most of the tools used by jewellers are brought from towns like Ambala, Amritsar, Delhi, Jullundur, Ludhiana, Pathankot, Saharanpur and Simla. They may buy these from *nyarie* carrying tools who visit them periodically. In exchange of tools the *nyarie* collect ash from them. The ash and dust collected by jewellers contain small particles of precious metal, which get disintegrated while melting, soldering and other processes of ornament making. Rate of exchange for the ash and the tools is not always fixed. It mainly depends upon the observation of *nyarie*, who estimate for the quantity of precious particles in the ash.

Impressions made on paper from carved bell-metal or iron die stamps which produce gold or silver plaques in embossed designs.

The Stamp



Traditional chak





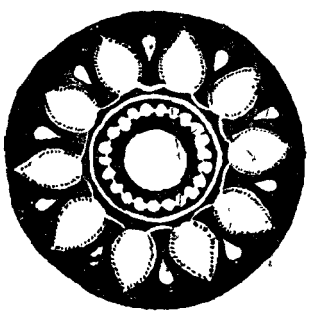
Traditional chak

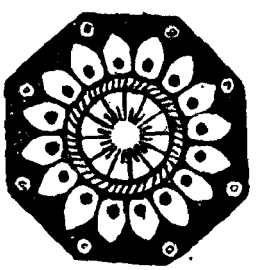


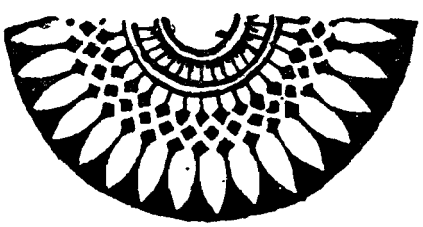


Impressions made on paper from the carved bell-metal or iron die stamps that produce gold or silver plaques in embossed designs.











Chak-phul

Impressions made on paper from carved bell-metal or iron die stamps that produce gold or silver plaques in embossed designs.



Mang-tika

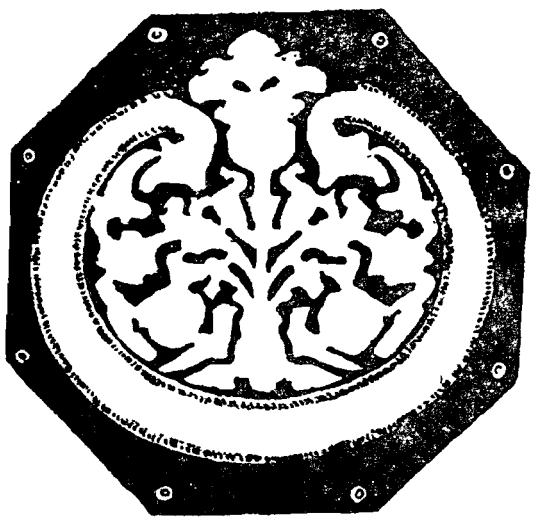


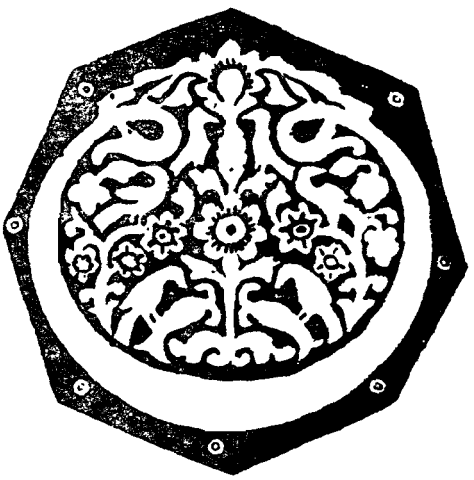
Triangle plaque, floral design for mang-tika



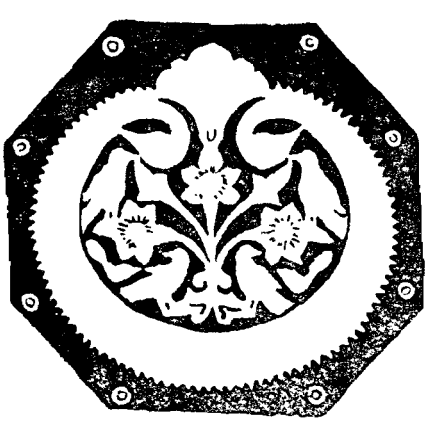
Crescent shaped mang-tika

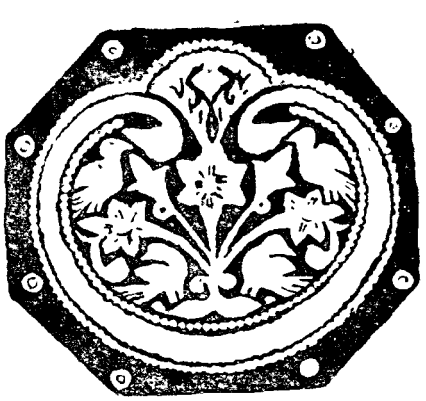
Impressions made on paper from carved bell-metal or iron die stamps that produce gold or silver plaques in embossed designs.





Mang tika





Impressions made on paper from the carved bell-metal or iron die stamps that produce gold or silver plaques in embossed designs.





Bulaks

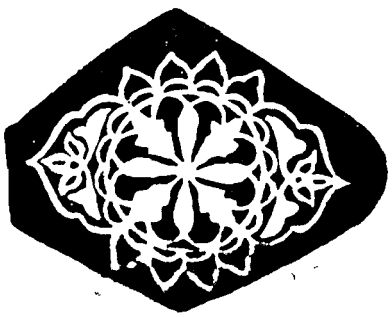


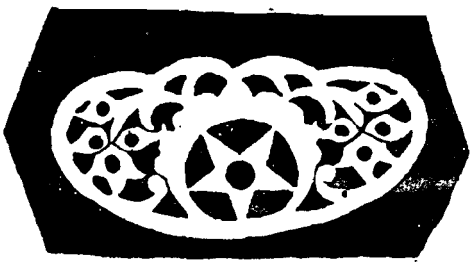








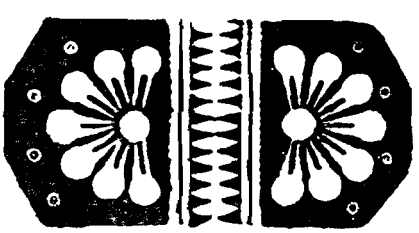




Hair clips





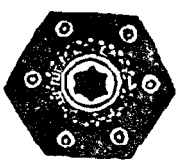


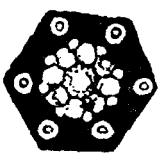
Impressions made on paper from the carved bell-metal or iron die stamps that produce gold or silver plaques in embossed designs.



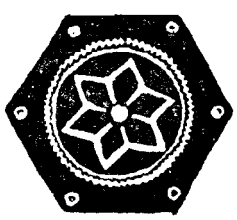
Machhli for nose ring



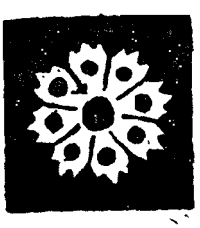




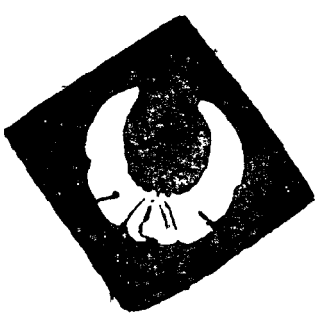
Tilli for nose

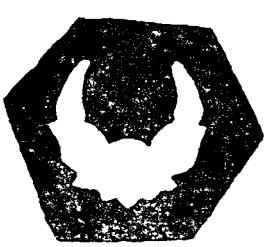






Ear tops

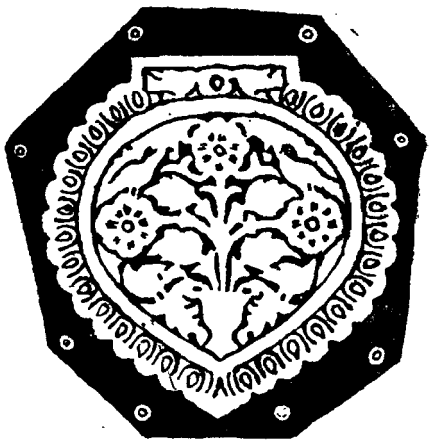






Ear rings

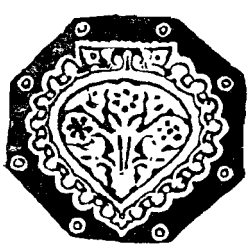
Impressions made on paper from the carved iron or bell-metal die stamps that produce gold or silver plaques for the adornment of various parts of the body.







Gold plaques used as pendants







Impressions made on paper from the carved bell-metal or iron die stamps that produce gold or silver plaques for the adornment of various parts of the body.

Impressions made on paper from the carved iron or bell-metal die stamps which produce gold or silver plaques.









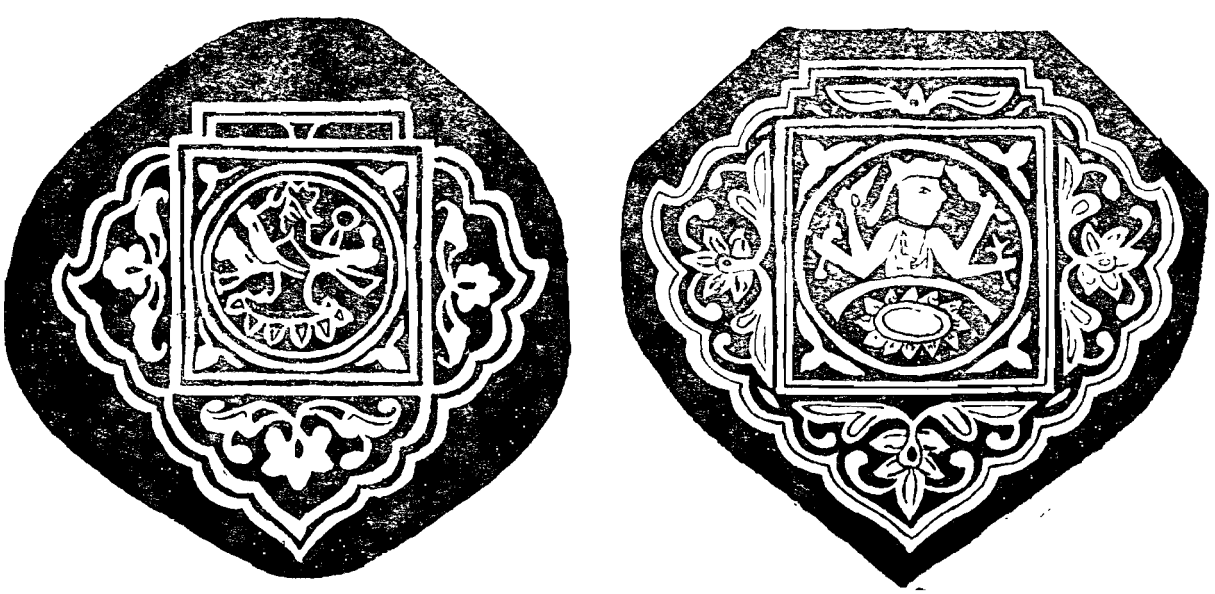


Chaukis



Impressions made on paper by the carved bell-metal or iron die stamps which produce gold or silver plaques.

Chaukis







Impressions on paper made from the carved bell-metal or iron die stamps that produce gold or silver plaques.

Pendants











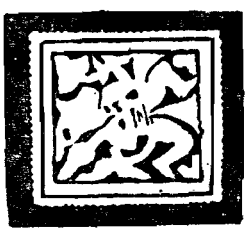


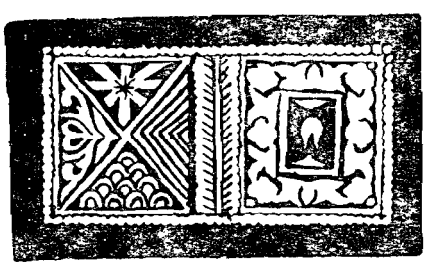


Amulets

Impressions made on paper from the carved bell-metal or iron die stamps that produce the silver or gold plaques which forms the face side of an amulet.







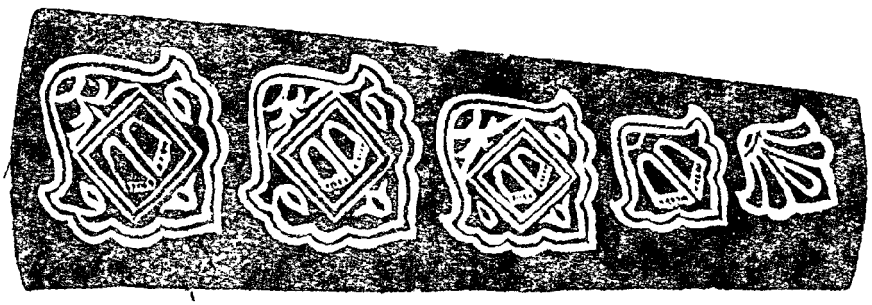
Charms







Impressions made on paper from the carved bell-metal or iron die stamps that produce embossed silver or gold plaques used as charms.







Plaques for necklaces

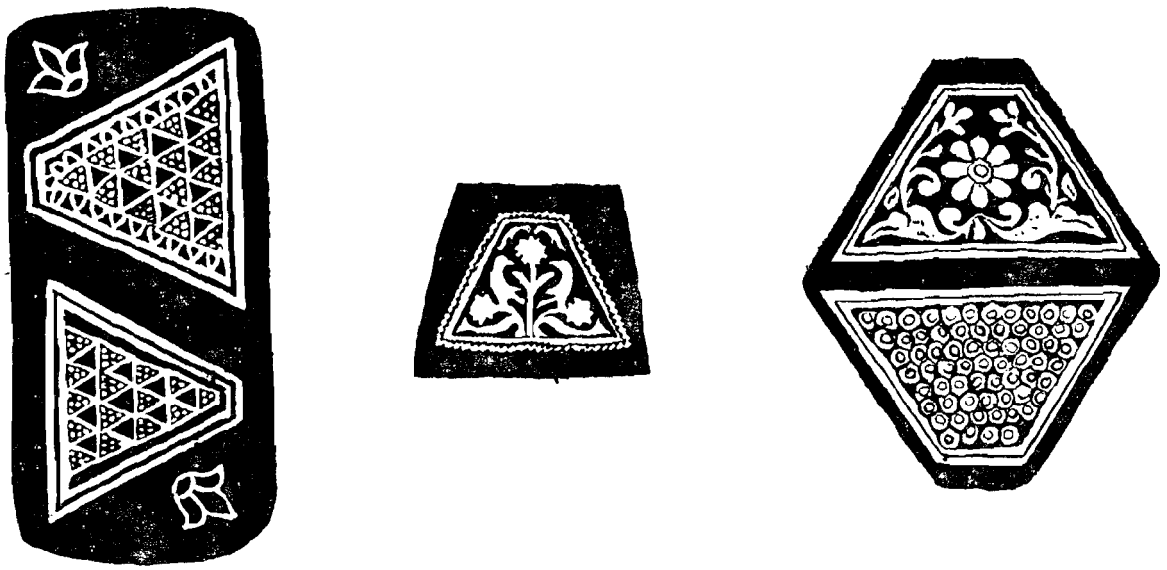






Units of champakali

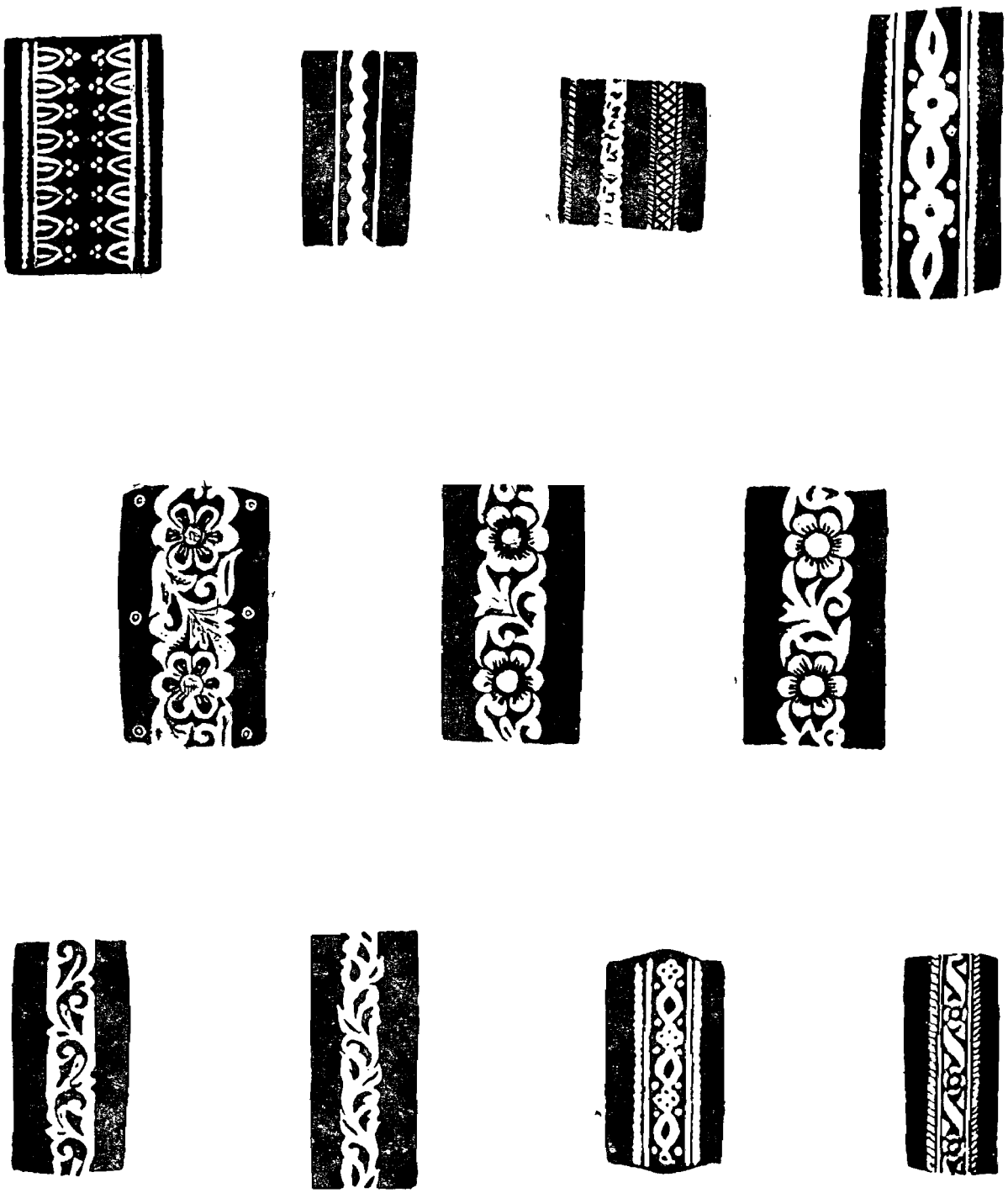
Impressions made on paper from the carved bell-metal or iron die stamps that produce embossed silver and/or gold plaques which, when assembled in quantity, will form the design units for producing necklaces.



Motifs for necklace

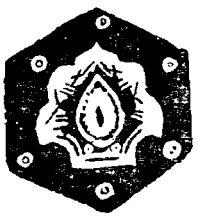


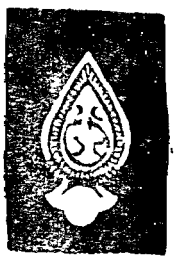
Impressions made on paper from the carved bell-metal or iron die stamps that produce embossed silver and/or gold plaques which, when assembled in quantity, will form the design units for producing necklaces.



Floral and geometrical designs for bracelets

Impressions made on paper of bracelet design units which are produced by pressing gold and silver sheets into the faces of bell-metal or iron die-stamps, the end result of which is an embossed strip of metal. Several of these strips will be soldered together to form the bracelet.





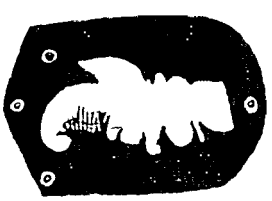


Motifs for silver buttons



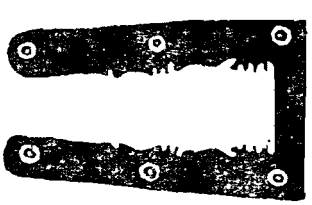






Motifs for kangu.

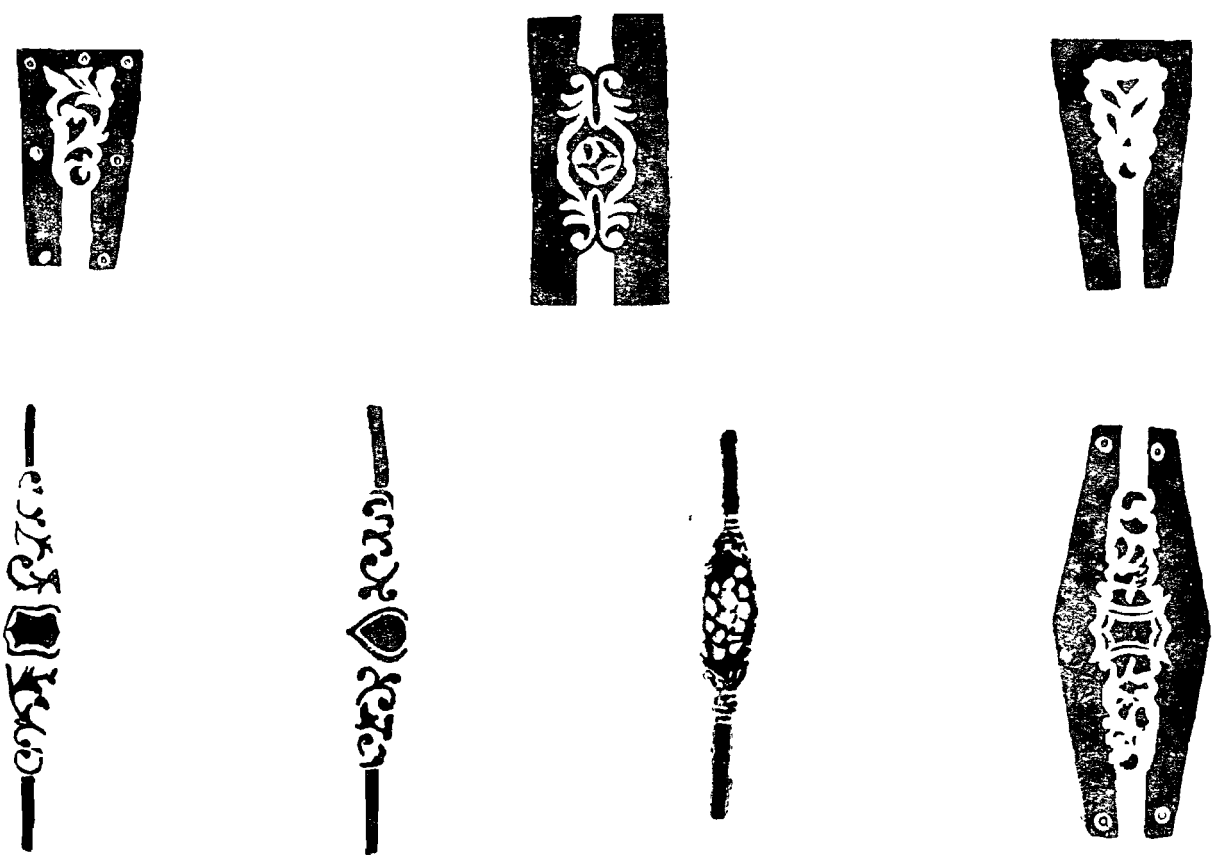




Patterns for die stamped gold and silver buttons and Kangus.

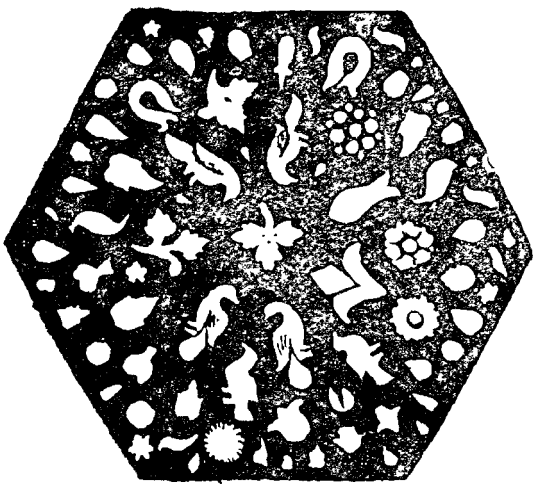


Arsi.



Motifs for ring

By Pressing small gold or silver sheets over the above design motifs carved in intaglio on the flat upper surfaces of pieces of bell-metal or iron, called die stamps, rings and arsis ore mass produced.

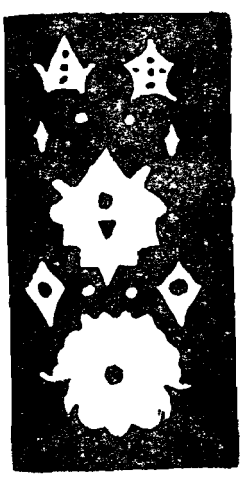




Bahuguna

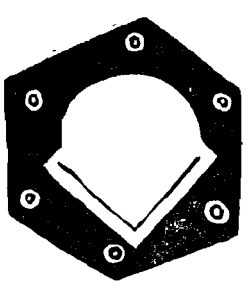
Patterns for ornaments



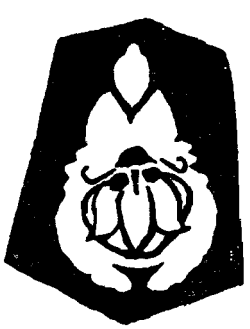




Chuna



Drop



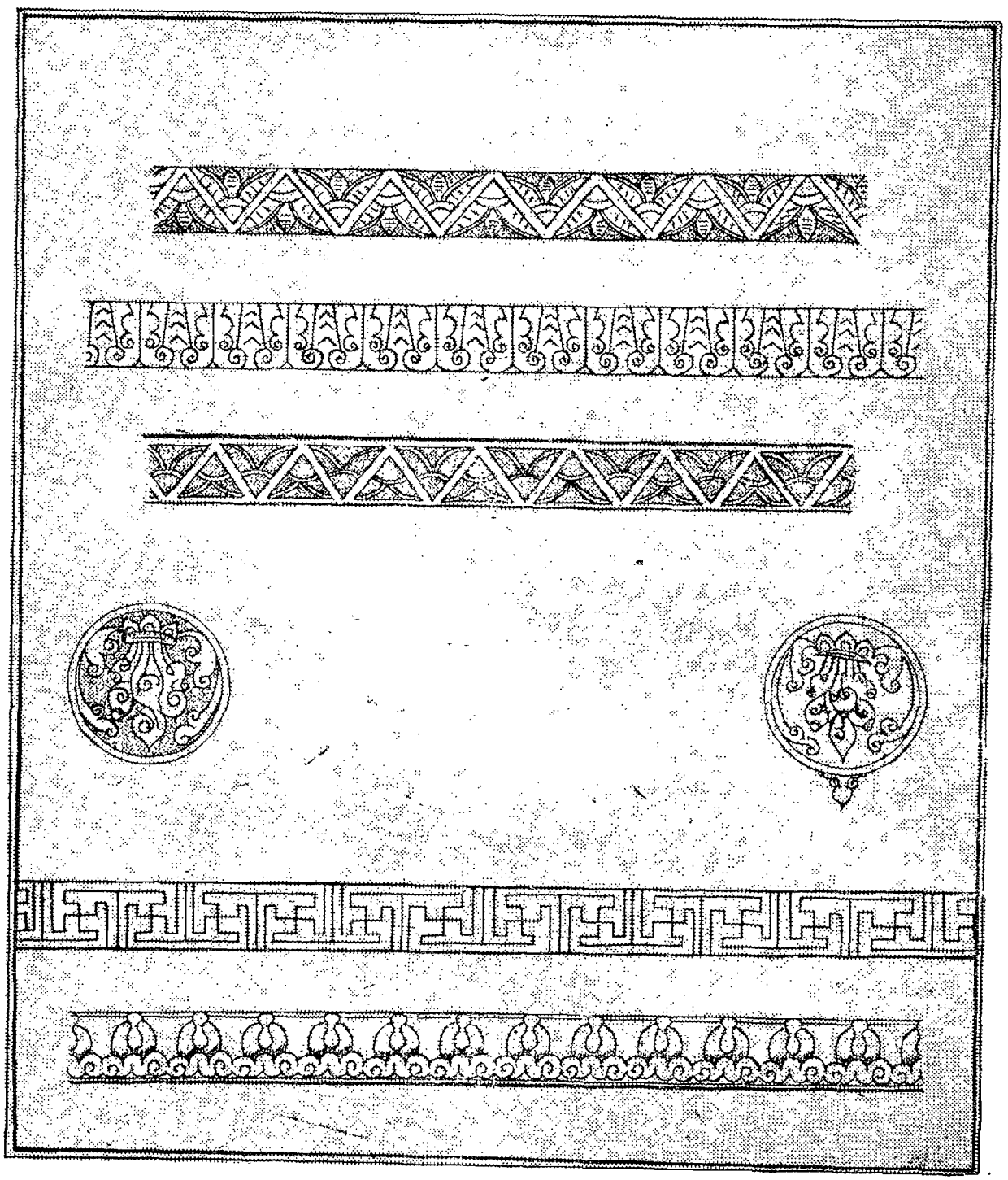
Ear-ring

By pressing small gold or silver sheets over the above design motifs stamps that produce the silver or gold plaques which forms the metal or iron, called die-stamps, the above ornaments are mass produced.

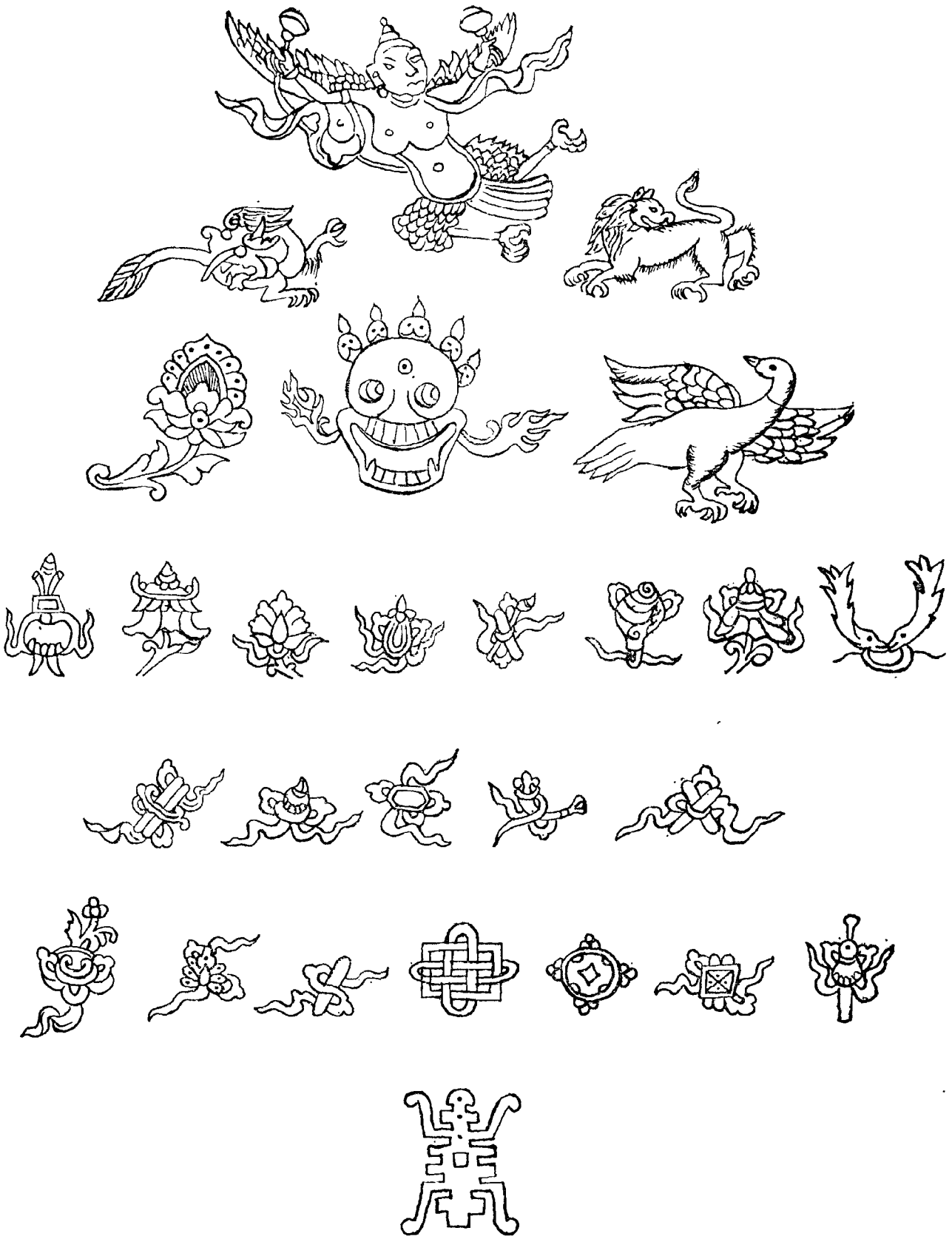


Charm

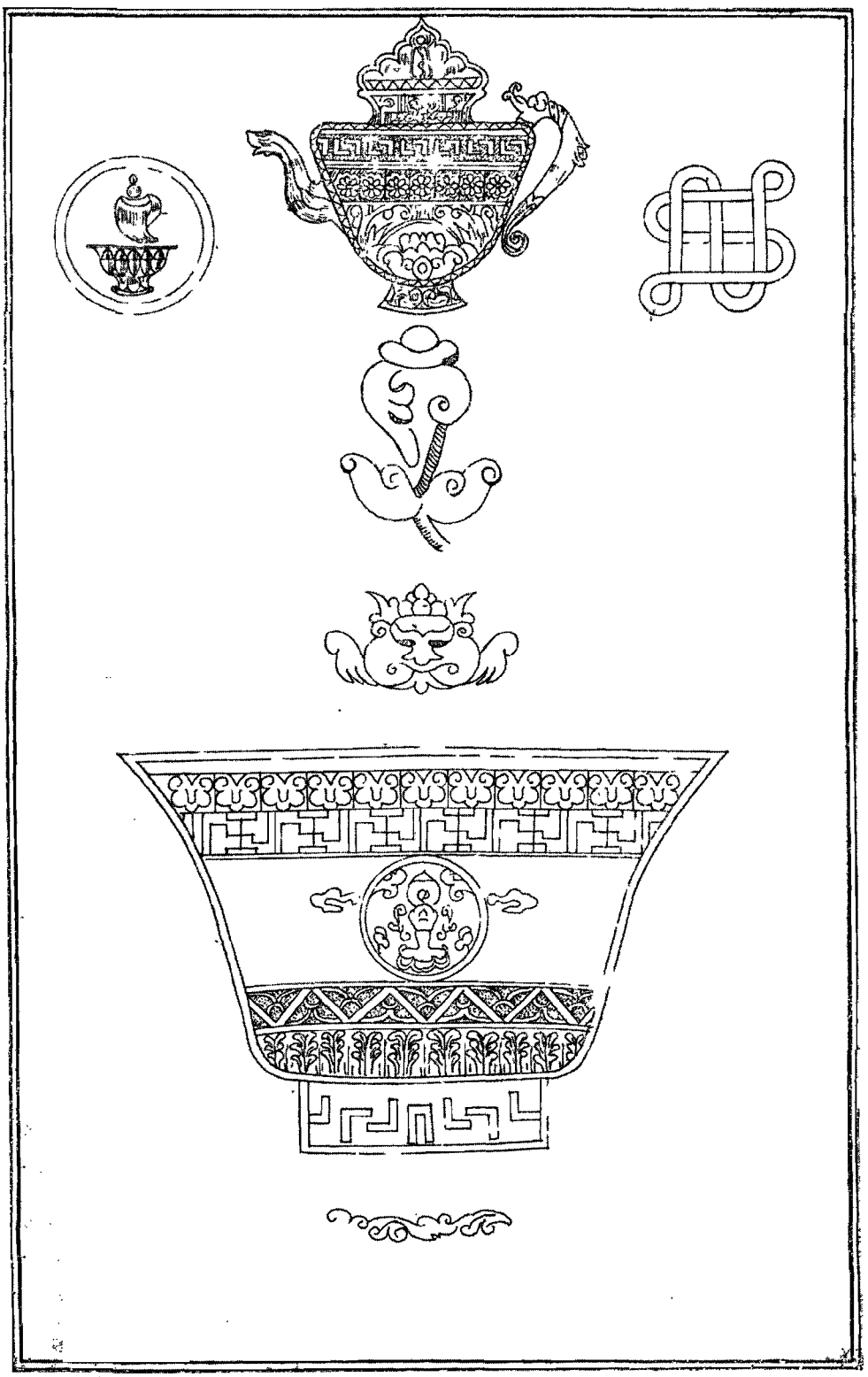
By pressing a small sheet of gold or silver over and into the above design carved in intaglio on the smooth flat top surface of a piece of bell-metal or iron, called a die stamp, the above charm can readily be mass produced.



Motifs of Kinnaur which are engraved on silver.



Kinnauri Motifs which are engraved on silver. It is to be remembered that Kinnaur District's northern border abuts Tibet



Silver cup and teapot showing typical Kinnaur District's design motifs engraved on silver objects for both temple and domestic use.

Raw Materials

Four

Main material

The basic or main raw materials used in making of ornaments are gold, silver, enamels, stones, pearls and diamonds.

Gold—It is known as '*sona*', '*suna*', '*seona*' or '*sooina*' in the Pradesh. In Kinnaur '*jang*' means gold. The yellow metal has a number of synonyms in Sanskrit. These are *hem, hiranya, kanak, kanchan, kundan, peet dhatoo* and *swarna.*

Varieties and merits of gold as given in Kautilya's Arthasastra are:—

"जाम्बूनदं शातकुम्भं हाटकं वैणवं शृंगिशुक्तिजं, जातरूपं रसविद्धं आकरोद्गतं च सुवर्णम्। किंजल्कवर्णं मृदु स्निग्धं अनुनादि आजिष्णु च श्रेष्ठम्। रक्तपीतकं मध्यम्। रक्तमवरम्

It is one of the fewest of the valuable metals. In its pure form gold is as soft as lead and is famous for its malleability and ductility. Encyclopaedia Britannica gives the following lines on gold—

"Gold is an extremely dense, valuable, bright yellow metal, with a resplendent lustre. Because of its brilliant appearance, unalterability and occurrence in the native condition, gold was one of the first metals to attract the attention of man. It was known and highly valued by the earliest civilizations, Egyptian, Minoan, Assyrian and Etruscan, and from all these periods ornaments of great variety and of beautiful and elaborate workmanship survived, many of them being as perfect as when they were first made several thousand years ago".

Gold is usually alloyed either with silver or copper. Alloy of gold and copper gives a reddish colour and when alloyed with silver the colour is somewhat yellow or green.

Prior to the enforcement of Gold Control Order, jewellers used to buy gold of diamond brand prepared in some refinery of Bombay. During the last decade market price for the yellow metal remained between Rs. 110 to Rs. 140 per tola. Now officially there is no selling or buying of gold for ornaments.

* "Jambunada, that which is the product of the river Jambu Satakumbha, that which is extracted from the mountain of Satakumbha; Hataka, that which is extracted from the mines known as Hatka; Vainava, that which is the product of the mountain Venu; and Sringasuktija, that which is extracted from Sringasukti (?) are the varieties of gold.

(Gold may be obtained) either pure or amalgamated with mercury or silver, or alloyed with other impurities as mine gold (akarodgata).

That which is of the colour of the petals of lotus, ductile, glossy, incapable of making any continuous sound (anadi) and glittering is the best; that which is reddish yellow (raktapita) is of middle quality; and that which is red and of low quality." (From Dr. Shamasastry's Translation of Arthasastra).

Silver—Chandi or *rupa* means silver. In Kinnaur it is called *mol* or *mal*. In Sanskrit it is named *rajat* or *rupyaka.*

Regarding merits and different varieties of silver Kautilya's *Arthasastra* says:—

"तुत्थोद्गतं गौडिकं काम्बुकं चाक्रवालिकम् च रूप्यम्। श्वेतं स्निग्धं मृदु च श्रेष्ठम्। विपर्यये स्फोटनं च दुष्टम्। उद्गत-चूलिकं अच्छं भ्राजिष्णु दधिवर्णं च शुद्धम्।"

Pure silver is as white as snow. When this is polished it gives a resplendent lustre. The metal is very soft in its pure form and is easy to work upon. In Encyclopædia Britannica the shining metal has been explained as:—

"Silver, a metal known from very early times, has long been used in the manufacture of articles of value such as coins, ornaments and jewellery because of its comparative scarcity, brilliant white colour and resistance to atmospheric oxidation. Silver minerals are found with the ores of certain base metals, especially those of zinc, lead, copper and nickle and considerable amounts are also derived from gold-silver ores".

Jewellers use silver known as *kuras chandi* or *dali-ka-chandi* or *tezabi chandi*. It is said of the highest purity. Though the rates are always fluctuating but generally it is available for Rs. 2·50 per ten grams. It is available in the form of small slabs known as *silian*. Silver serves as cleansing agent in purifying impure gold.

Enamels—Enamel is a type of soft glass known as *meena* or *meena glass*. This is a composition of sand or flint with soda or potash. The fusion of these ingredients produces a transparent colourless glass. This is enamel. It is available in green, blue, red and black colours. Enamels are procured from big cities such as Amritsar, Delhi and Ludhiana in a very wide range of prices. Inferior qualities of enamels are available between Rs. 2 to Rs. 5 per ten grams. Superior enamels may cost Rs. 100 per ten grams.

Well prepared powder of meena glass is fused on the metal according to carved designs. In this way ornaments receive shining colours and beauty.

Stones, pearls and diamonds—In Himachal Pradesh, we see a profusion of pearls and stones, real as well as imitation, in ornaments. Diamonds are rarely used. Particularly in Kinnaur, stones of various colours are put alongwith silver beads. These are worn in ears, wrists, round the neck and on the hair. Among these stones, red ones are called *shuli* and green ones are called *thing*. These are procured from markets of Calcutta and Darjeeling.

In other parts of the Pradesh, stones known as *lalari, manke, nag, neelak, sabze* and *thewa* are used. Pearls and corals called *moti* and *moonga* are used commonly in necklaces. *Thewas* are of red, blue, green and in other attractive colours. These sparkle very much because of their many facets. These are set on nose ornaments, ear ornaments, rings and pendants. Sizes vary and, may be as small as a seed of mustard plant or as big as a pea seed. The stones used in *bragar*—an ear ring is called *neelak* or *sabza*. Double convexed stone is called *lalari*. *Manka* is a cylinder-shaped bead. The best quality 'thewas' cost rupees two per ratti or say about sixteen rupees per gram. *Nag* used for rings costs nearly Rs. 35 to Rs. 40 per ten grams. Use of birth stones and diamonds called 'hira' on rings is in vogue among villagers.

Subsidiary materials

Many things are needed as subsidiary materials in producing ornaments. These may be abrasives such as alum, ammonium chloride, blue vitriol borax, burnt brick powder, charcoal, common salt, copper, crystalline nitre, kerosene oil, lead, mustard oil, nitric acid, red sand and soap nuts, resin, sulphuric acid, water and zinc. Apricot wood and resin producing fire-wood of pine trees are needed by the jewellers of Kinnaur District.

Alum, blue vitriol and common salt—The mixture made out of these is called 'bani' and is used to give lustre to ornaments. The cost incurred is negligible.

Ammonium chloride, borax and crystalline nitre—A special powder called flux is prepared by mixing up these ingredients which are used in the soldering processes. These are needed in very small quantities. Sunars spend Rs. one or two for these materials which may be sufficient for them to carry on with the work for months.

* "Tutthodgata, that which is extracted from the mountain Tuttha; gaudika, that which is the product of the country known as Gauda; kambuka, that which is extracted from the mountain Kambu; and chakravalika, that which is extracted from the mountain Chakravala are the varieties of silver. Silver which is white, glossy and ductile is the best; and that which is of the reverse quality is bad.

That which becomes full of globules, white, glowing and of the colour of curd is pure." (From Shamasastry's Translation of *Arthasastras*).

Apricots—A solution is prepared by boiling of apricots which serves as a pickle. This is used in places where pickling acids cannot be procured.

Burnt brick powder, mustard oil and resin—By mixing up these materials in quantities—explained in the next chapter, *lac* is prepared. *Lac* is used in carrying out repousse and relief work. Resin is about Rs. 2 per Kilogram and mustard oil costs Rs. 4 per Kilolitre. Brick powder costs nothing.

Charcoal and kerosene oil—Charcoal of pine trees is used. Village jewellers prepare it themselves. The cost is about Rs. 3 to Rs. 5 per bag of about 20 kilograms of charcoal. Kerosene oil is needed for soldering operations. It costs about 50 paise per bottle.

Copper, lead and zinc—These metals are required for various uses. Lead serves as cleansing agent for impure silver. Zinc and copper are the soldering agents used in silver and gold ornaments.

Nitric acid—Nitric acid is required for purifying impure gold and silver. It is procured from the bazar for Rs. 2 per bottle. The mixture of sulphuric acid and water makes what is known as the pickle. This is used frequently by sunars. Its cost is about Rs. 2 per bottle. It is available in markets.

Red sand and soap nuts—These are used for cleaning ornaments. Red sand is available for 75 paise per kilograms. In villages soap nuts are available free.

Resin producing fire wood—In Kinnaur sunars produce resin from a fire wood of pine or *chilgoza* trees. This contains resin. A local jeweller of Kalpa explained the following process of how they get resin from the wood.

First of all, the wood is brought from the jungle and cut into pieces. These pieces are put in an earthen pot in such a way that they may not fall down when the pot is kept upside down over another earthen pitcher. The other pitcher is placed below the level of the ground and is supported by the earth from all sides. Fire is put on all sides of the pitcher containing wood pieces. As the firing goes on for a long time, resin trickles down into the other pot. The process is continued twice and thrice till the required quantity of resin is received. When the resin gets cold and hard, a thin powder is made.

Afterwards, powder made out of a broken clay pitcher is added to it with oil. This is again heated and a lac is prepared for relief work.

Detailed descriptions have been added in the following chapter about all of these subsidiary materials as to how, where and in what quantity, these are used by silversmiths.

Processes

Five

Close observations have shown that goldsmiths have been converting old articles of jewellery into new. Hardly 5% of the jewellers had been preparing ornaments from gold and silver purchased from the towns. Now there is no buying of gold ornaments. Silver ornaments are brought, altered and melted in profusion.

Melting of old ornaments

Old ornaments are melted in a crucible. Crucibles are of different sizes, some are large enough to contain 1,000 grams or more of molten silver while others would contain only 5 grams. Gold is melted in them. Sometimes when the quantity of precious metal is about one gram or less, it is melted on an asbestos block. Before an old ornament is put in a crucible for fusing, some powder of borax or nitre is put with it. Sunars say this helps in melting the metal. It brings softness and ductility to the metal. Sometimes there are certain base properties such as bronze, brass or tin in silver and zinc in gold. Their presence may split up the metal. To prevent splitting up of metal borax powder is mixed. Live coals are placed all around the crucible containing old ornament and a blast of air is given with a skin blower or blowing machine. In the past, skin blowers were used. Blowing machines can fuse metals in less time and, therefore, have proved useful. It takes about 20 to 25 minutes to melt about 200 grams of silver whereas by using a skin blower for heating the same quantity of metal, it would take much longer. In villages heating is still done by using a skin blower. Charcoal of pine trees is considered the best flame producing material for heating metals. The metal should receive an even blast. Then a stage would reach when some vapours would appear floating on the melted surface. This would be an indication to remove the crucible from the hearth. Molten metal is poured into a mould *reja*. Before pouring in the metal it is smeared inside with some oily substance. It may be mustard oil or an oil produced from the kernels of apricots. This is done so that the hot lump of solid metal may come out from the *reja* with a slight blow. By doing this the hot metal does not stick to the mould. The molten metal takes a shape of a rod or become round and solid which is easy to work on.

A smaller quantity of gold or silver is melted on asbestos paper or on a charcoal block. A blast of air is given through a curved blow pipe on a kerosene lamp flame. This fuses the metal and soon turns it to a small ball.

Annealing

Gold and silver becomes hard by hammering or by drawing it often to make a wire out of it. In case the process is continued without re-heating the metal, it is likely to break. To prevent metals from becoming brittle re-heating is done. This process of softening metals is called annealing and is locally known as *tao dena*. By doing this, metals become ductile and easier to work on.

While annealing a metal sheet or wire of any gauge, sunars heat them to a dull red in between the soft flame of charcoal. While annealing a keen eye is needed so that the metal does not melt again. The air is supplied through the blow pipe and the metal is evenly heated. When long thin wires require annealing they are first coiled and then tied with an iron wire so that these do not stretch. This is placed in the charcoal flame. Since the wire is very thin there is every likelihood of its melting at any spot with an unbalanced flow of blast. But with deft training the sunar manages this easily. The next is judgement to know when to remove the metal from the forge after it has been evenly annealed. Heated metals are either left to cool or dipped in water, if the work is to be taken up soon. But artisans never dip the metal into water when it is red hot. If this is done the metal loses its softness to some extent. In case of large pieces metals are held with pincers on one side and the hammering is taken up. When the pieces are small the artisan holds one end of the mildly hot metal in one hand while he shapes and works on it with the other. It is not necessary that the metal should be hammered soon after it looses redness. The annealed metal can be worked any time. There are no chances of its breaking or cracking. After thirty to forty gentle strokes, re-annealing becomes necessary to avoid cracks, splits or stresses. In case of drawing wires, these can be drawn from draw plates for about ten to fifteen times at each annealing. At the same time it is the judgement and experience of a goldsmith, which in the end counts so much.

Designing

Annealed metals are shaped and designed step by step according to the ornament. It is clear from minute observations that the whole range of ornaments are mainly prepared either from a sheet or wire or pellets, or all together. While preparing ornaments several types of silver and gold sheets and wire of different gauges and dimensions are required. These are made by the goldsmith. Sometimes the sheets are cut into circles, hexagons

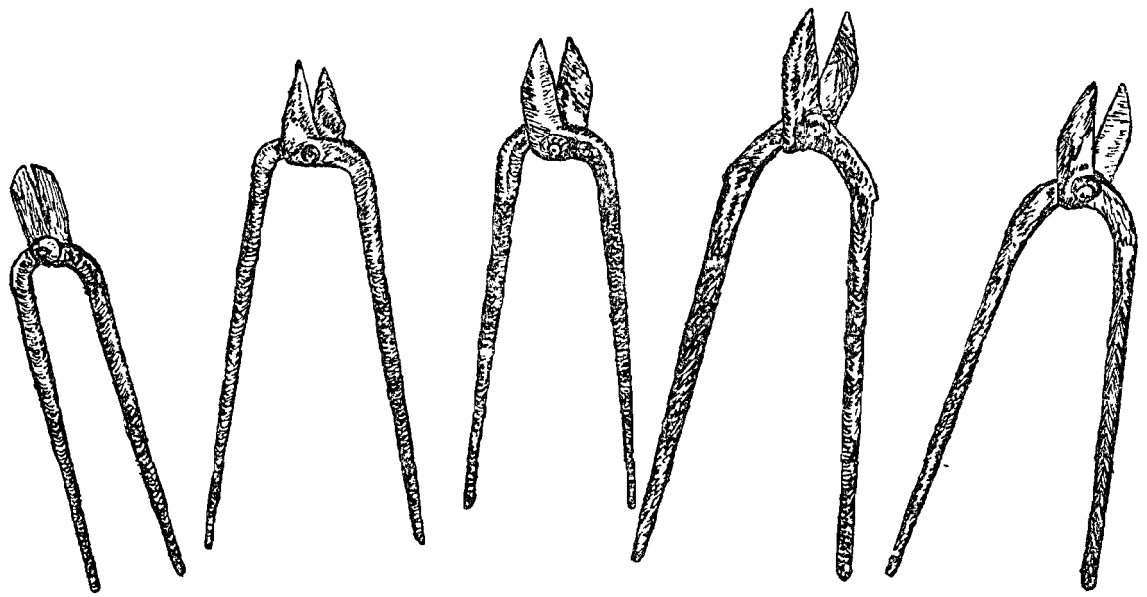


Delicate hammering

or octagons, rectangles, semicircles, squares, strips, triangles, or any other geometrical shape which may strike the artisan or as may be required for an ornament. These shapes are again worked to form various depressions, convex and concave impressions, ornamental and floral designs, twining creepers, zig-zag engravings, and a number of other geometric appliquings. Animal heads particularly of elephants and lions and bird and fish figures may be carved on them. Bezel boxes are also cut at various places of an ornament where stones have to be set. Sunars feel that it takes a long time for them to create rich engravings and the labour put in by them is not always rewarded with satisfactory wages. Cutting designs through the metal sheets are much more laborious and therefore, such work is avoided nowadays. Only in exceptional circumstances this is being done.

For designing these articles a number of implements are used. Metal and wooden moulds for carving of various depressions are required to give a round shape to the sheet. For large depressions bossing hammers and mallets are used. For making small depressions the dapping tool called 'padernoo' serves. Engravings are done with pointed chisels, scrapers and scribers. For the embossing of metals a number of iron and bronze dies are used. Sometimes simple dies of bronze are prepared by the goldsmiths.

Wires of different thicknesses in round or half round shapes are prepared and then plaited, knitted or twisted according to the design,



Snippers or scissors (katire)

Formation of these designs are considered easier. Thin wires are used for making chains, linear appliqued shapes and oval hook links. Thick wires are used to make strips by hammering and cutting them according to the design.

In certain ornaments like the *balu*, *bragar*, *long*, *murki* and *nath*, the setting of small pellets is done very artistically. Particularly the *murki* a nose ornament, is a fine example of trellis work designed with ornamental settings of these small grains.

These pellets are prepared from a thin wire which is cut into small bits of about 1/20th of an inch with special scissors called *roala-banane-ka-katira*. These small bits are placed in each groove of a specially prepared crucible, and become round pellets after melting.



Roala-banane-ka-katira

Soldering

Goldsmiths have to specialize in soldering work. After shaping different pieces of an ornament, these are deftly joined together. This is sometimes done at the initial or middle stages and sometimes when the skeleton of an ornament is ready. Joining is done piecemeal or at a stretch.

The process of joining pieces of metals is known as *tanke ka kam* in the local dialect. When soldering is done a specially prepared metal or *tanka* is placed in between the joints. The whole piece is evenly heated. This solder or *tanka* has a lower melting point as compared to the metal that has to be joined. When the solder fuses at a melting point it soon blends both the pieces and forms a firm joint.

Goldsmiths have no book knowledge about melting temperatures of pure gold and silver and their alloys. It is their subtle experience attained by regular and concentrated efforts. This is learned under the apprenticeship of an ingenious craftsman.

Pure form of gold and silver is rarely used for making of ornaments in western countries. These are too soft. To make them hard for making solders an alloy is prepared. An alloy is made by mixing two or more metals during their molten state. For instance when a little part of refined

copper is added to silver it becomes an alloy. It melts at 890° centigrade (1640° F). Gold and silver in their pure forms melt at 960° C and 1063° C. As the base metals are added to them in gradual progression, the alloys become hard and their melting point decreases.

Our goldsmiths do not need to make an alloy of silver or gold. They make ornaments of metals in whatever form these come to them from villagers. Goldsmiths have been preparing ornaments of the purest gold and silver. But at the same time they have the skill of preparing ornaments of metals containing impurity. They make silver ornaments which have one-fourth of base metal. Some can skillfully make ornaments out of silver even with half of the base metal.

Similarly gold can be used in various proportions of alloy. While making alloys lustre of the metals is maintained though slightly different to those which are wrought from the purest or slightly impure metals. Preparation of a solder for making the joinings and the technique involved in achieving its easy flow and adherence to the base metal is said to be known to a very few skilled craftsmen.

Goldsmiths know that joining of ornament pieces, with solders having smaller quantity of base metals in them, form a hard and strong join. As more base metals are added the joins become softer and break with a slight bend.

Solder for silver ornaments

Some alloys have nine parts or more of silver in one tola. These can be easily soldered. To carry out soldering on this common range of metal another alloy of silver would be required. This may have a lower melting point to the one being used for the ornament. Goldsmiths prepare these solders in different proportions of silver and zinc. For silver, the solder, commonly used is made by adding one part of zinc and four parts of silver. For making a solder metal is debased. The solder containing 3 mashas of zinc and 12 mashas of silver is the best. This solder is called "trimas ka tanka" as it contains 3 mashas of zinc. Other solders containing one part of zinc and 6 parts of silver are known as 'duimash ka tanka' and are used for superior silver. Solder prepared by adding 5 parts of zinc to 48 parts of silver is used for enamelling work.

Solder for gold ornaments

The solder commonly used for gold soldering is prepared by adding eight parts of gold and one part of either silver or copper or both.

Preparation of solders

Sunars melt the gold or silver in a crucible. A small amount of borax is added. When the metal attains the molten state, other metals are added in certain ratios. The metal is then mixed in the crucible with an iron rod. The molten alloy is poured back into a *reja*. The lump of alloy thus formed is flattened to form a thin sheet. Next the sheet is cut with snips, into very small oblong and square pieces. These are about one tenth of an inch or even smaller. These tiny fragments of solder are collected in a small container. This contains borax powder. A few drops of water are poured to form a thin paste of it. This is called flux. A small piece of cotton held with tweezers is used in mixing up the bits of solder with the flux. The ornament which is to be soldered, is also coated with flux. Then a scrap of solder is placed on or in between the joint with tweezers. The article is left to dry. If the ornament is a large one and needs soldering at more than one place, it is first given a close fit with an iron binding wire. The portion to be soldered is then smeared with flux. On the wet thin paste, pieces of solder are placed at the spacing of about 3/10th of an inch. The solder pieces will stick to the coated portion. Then the skeleton of an ornament is dried in the low heat or kept apart to dry.

Spacing generally depends upon the size of solder scraps and as well as on the thickness of the ornament. Sometimes joins are required to the depth of a quarter of an inch or more as we find in a typical bracelet called *gajroo*. In all such cases the Sunar uses his discretion. He decides the spacing according to the article and the size of tiny bits of solder available. More of solder would make the precious metals impure, and a little untidy. This may benefit the jeweller and bring him more profit. Particularly in gold work use of more solder could bring more profit to the Sunar. There are certain reputed families of artisans all over the Pradesh, who are famous craftsmen and reliable for preparing articles of purest metals. The purity of the ornaments made by them is taken for guaranteed. The ornaments manufactured by them may come to any jeweller even after a hundred years and nothing impure would be found in them. They are very careful about the solder they use.

Preparation of solder for joining grains of gold

A lump of gold alloy meant for solder is flattened into a very thin sheet. The sheet is

made two-fold. Again delicate hammering continues. After sometime another fold will be given to make the leaf four-fold. To avoid sticking of folded portions water is sprinkled between the folds every now and then. This leaf is cut into a number of tiny scraps with snips. With utmost patience these are placed and stuck to the piece of work and further processes are taken up.

These tiny thin bits of solder melt at a very low heat. In case more heat is given tiny pellets, which need soldering, may themselves melt, and thus the whole work may be spoiled. Therefore special attention and vigilance is required. Soldering in grain work is not done by directing the flame on the work. It is carried on by burning specially prepared thin dry sticks of wood. These sticks are called *bhalethi*. These are very inflammable. The flame is brought close to the ornament. With the heat tiny bits of solder melt and stick to the grains. At the time, when soldering is in progress, even the slightest blow of air may cause damage. It is for this reason that sunars think their old type of forge more useful. Its walls stop the flow of natural air and protect the delicate piece of work from any harm.

Sunars say, it is a matter of great skill to join articles with the minimum of solder. To make use of a hard solder indicates great craftsmanship. But it is difficult for a beginner. There are artisans who claim that they can solder gold ornaments with gold of the same purity, though it takes minute labour. They feel it is not worthwhile to put in such labour during a days hard as these.

Preparation of flux

Gold and silver in purest forms do not oxidize during heating. Because of the copper and other contents in them, there appears a thin layer of greyish and somewhat light reddish colour on the surface of metals, when they are heated. This layer is called an *oxide scale*. This oxide prevents solder from easily reaching the joints. To overcome this, pieces of the ornaments are dipped into a pickle. This is prepared by adding one part of sulphuric acid to 10 to 15 parts of water.

Soldering of pieces of an ornament cannot be taken up unless they are heated. But while heating an oxide scale will hinder the flow of solder. To prevent this, portion to be soldered is smeared with flux. On one hand it is done to avoid oxidizing of metals and on the other it promotes the flow of solder around the joints. This thin paint of borax is called flux or *suhage-ka-lep*. A general formula for preparing flux is given here. Ammonium-Chloride, borax and crystalline nitre are taken generally in ratios of 6:1:3. These are ground separately to make a thin powder. The powders are mixed properly in water to the consistency of a thin condensed paste. This paste can be used as flux. Some sunars take up further process to prepare flux and make sticks of it. This is done by boiling the paste in a tin bowl for about fifteen minutes. As soon as the mixture thickens and starts forming into bubbles, the bowl is taken aside and left to cool. The paste becomes hard within a few minutes. This hard white substance is removed from the bowl and again ground. The powder prepared this way is called borax by sunars and used as flux. Sunars sometimes knead the powder in water and make a stick of it. This stick can be rubbed on the clean slate by using drops of water and the thin paste produced this way is used in the same way as flux.

Soldering process

The units of an ornament are cleaned well. They are tightly tied with an iron binding wire. The whole piece is properly coated with flux, having solder fragments firmly stuck to it, and finally dried well. The combined piece is ready to be heated and soldered. If the piece is wet, drying and soldering is done subsequently. Care is taken that it is warmed under a low heat. If heated abruptly it is likely that bits of solder may fall. Artisans make sure that the piece has dried up and the bits of solder are sticking at their original places. Then only the piece is brought to a soldering temperature. For this blow-pipes are used. This helps in throwing the heat at the right place. Sunar is careful that heat is not directed at the solder, otherwise, tiny bits of solder would melt and fall. Even if one part of the joint receives heat enough for soldering and the other does not, the solder adheres only to the hotter part and the join is not a success under no circumstances is the piece made red hot, as it may melt the metal. The smallest flaw in soldering, particularly of minute and elaborate pieces, ruins the whole work. In that case, the work is taken up afresh. Great deftness is shown in carrying out the soldering job as there is a very minute difference in the melting temperatures of the metal and solder. Whatever be the processes involved, it is the correct judgement of an artisan, who knows what to do and when.

Simple articles can be soldered by putting them in charcoal without giving any support. A single soldering of simple articles like rings can be done on

a big piece of charcoal or on an asbestos block held on a wooden board. The flame is produced from a kerosene lamp. Sometimes, when a piece is a delicate one and needs elaborate soldering at serveral places the parts of the piece are placed quite close to each other on a tin plate having a thick coat of loam and then only the soldering process is taken up.

Methods adopted to prevent disturbing of earlier solderings

Often, a piece of an ornament needs a number of solderings. In such pieces, earlier solderings would be disturbed when these are heated for further soldering. To overcome this, two methods are adopted by artisans. The suitability of either of the methods adopted by them depends on the work. When the soldered piece is dipped for few minutes in the acid mixture, joints become firm. In this way, the risk is covered.

The other way is to thickly coat the soldered spot with a loam or sticky clay and then put the piece in burning coals for new soldering. This method is called *garan*. Apart from all these precautions, it is the skill of the artisan, who would blow the air through the pipe so accurately and deftly that the piece receives a successful joint without disturbing other joints.

To achieve the same result, a solder having a lower-melting point can be used. However this does not appear common among Sunars.

Typical solution

When grain soldering in *'murki'* is taken up, the tiny grains are set on a mud plastered tin piece in beautiful trellis settings. To make these grains stick to the muddy plate, some sticky solution prepared from black gram or *mask*, borax and *ratti* is used. To prepare this solution, black grams are boiled. Some powder of especially prepared borax and two or three broken pieces of a seed of *abrus recatorius* or *ratti* are put in it. After a thorough boiling, the water becomes concentrated and sticky. It is strained through a thin piece of cloth. The solution is called 'masala' and is used for sticking the grains of a delicate ornament before soldering. The solution also serves as flux.

Repousse decoration

Repousse work is the process of decorating a metal sheet of gold or silver by carving designs on the reverse side of it and then turning the metal over and sharpening these designs on the face of it. The method by which the relief is raised, is by hammering the sheet with scribers, punches and impression pens. The sheet is fixed in an especially prepared pitch, hard, medium or soft, as required. The pitch, which is called *lac* in jeweller's terms, is a type of compound prepared by mixing certain substances. The formula regarding quantities of materials, forming the compound, differs from sunar to sunar. The more common one is given below.

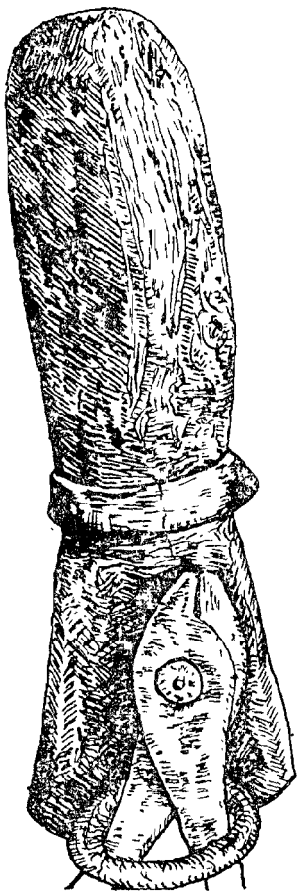
Preparation of the lac

About 250 grams of resin or *ral* powder, baked brick (*geru mitti*) or ash of cow-dung-cakes can be used as substitute. About one kilogram and 75 grams of mustard oil or as much as may be needed to form a coagulated paste of thsee powders, are required to make the *lac*. Formulas for mixing these materials differ from sunar to sunar. Some mix these up in the ratio of 2:2:1. Others refuse to disclose the formula.

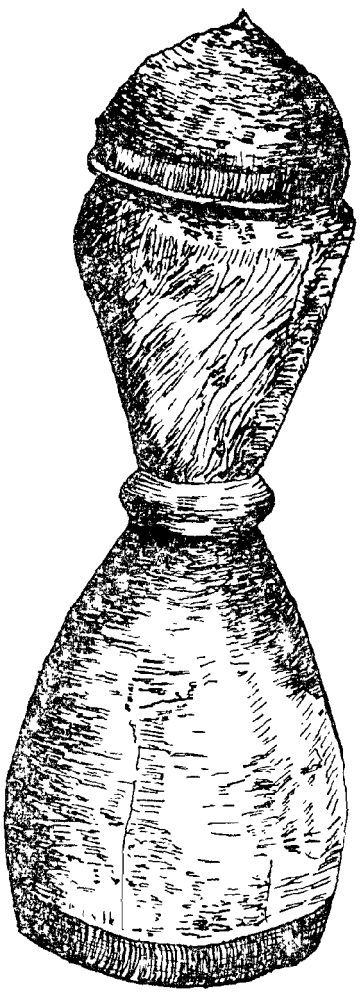
Either of the materials, brick powder, cow-dung-cake-ash or *geru mitti* is finely pulverised. Then this is sieved through a thin cloth. Sieving through the cloth is done to prevent tiny pebbles which may spoil the smooth surface of the hot pitch and thus harm the chasing work. A similar action is followed with the *ral* (resin). Both the powders are mixed up in the mustard oil and the compound is cooked in some earthen pot under low heat. If too much heat is given, it is likely that the mixture may burn and form into cinders. The baking process is contin ued for about forty-five minutes. If the amount of the oil appears relatively less in the compound, before the *lac* is ready, some more oil is poured during the baking process. It is always the sunar's good judgement in preparing *lac*.

As soon as the *lac* is ready, the pot is left to cool down to the temperature at which the compound is sufficiently pliant and yielding. Now the piece of ornament to be chased, is mildly heated and immediately fixed up on the *lac*. After that the *lac* alongwith the metal sheet is left to cool down or is cooled by throwing cold water on it.

Chasing work is taken up on both the sides of the ornament. A *chak* needs to be pressed face down into the pitch to carry on work inside.



Wooden shaft with an oval hook and pliar used for drawing wire



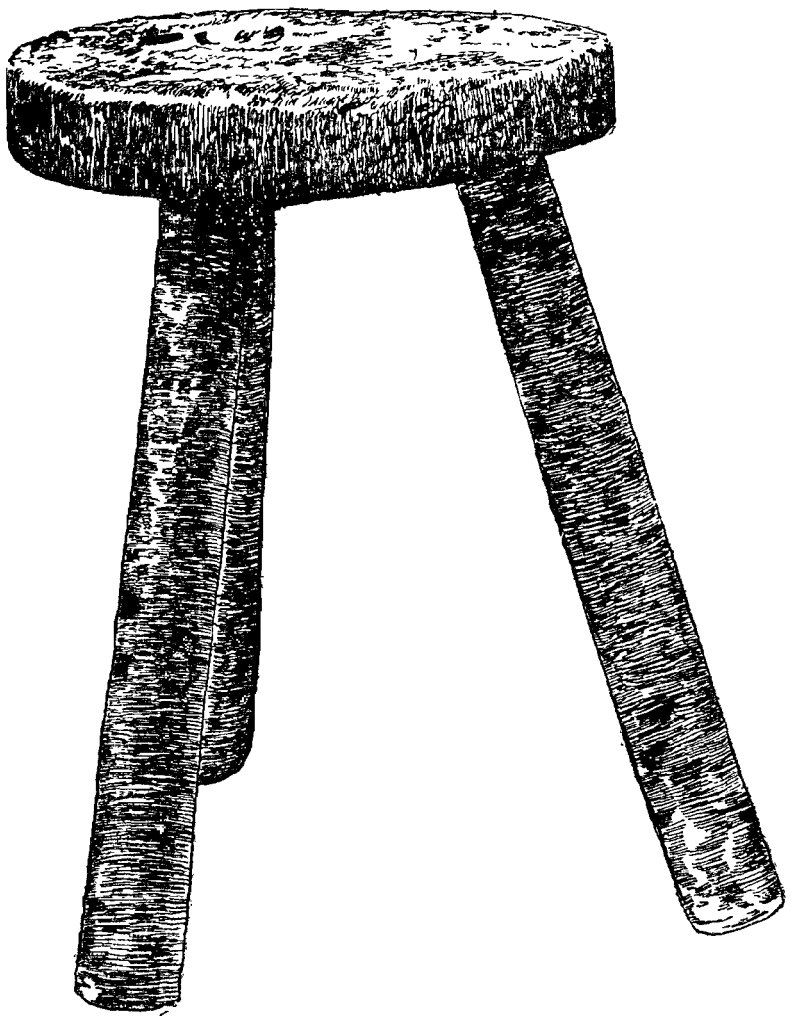
Chak fixed on the pitch for repousse process

When the chasing is to be done on the outside surface, it is pitched on a round formed *lac*.

After completing repousse work the ornament is removed from the pitch by giving slight knocks on the article or on the *lac* with a wooden mallet. Care is taken that the decoration is not spoiled. In case the article does not come out easily with light strokes, the surface of the sheet is warmed slightly.

Once the *lac* is prepared it is used by the sunars several times. When this is to be used afresh it is heated again. By doing this the flexibility is regained. Sometimes only the upper layer is heated to the depth of half an inch. When the lac is cool it becomes hard. To soften it some oil my be added while re-heating.

For repousse work, solidity of the *lac* is required in different tempers according to the work in hand. If the sheet is thick enough to bear hard blows of the hammer chisels, the pitch should be hard. Otherwise the depressions made on the back would not appear sharply enough raised on the face of the metal. If carving is taken up on a thin sheet, the *lac* is required of a slightly soft temper, otherwise the repousse tool may penetrate through the sheet. Besides all these cares hammering on the chasing tool is done carefully according to the relative dimension of the sheet and the solidity of *lac*.



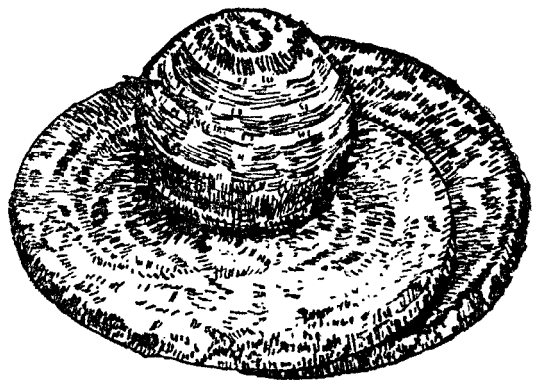
Stool used for filing and other processes

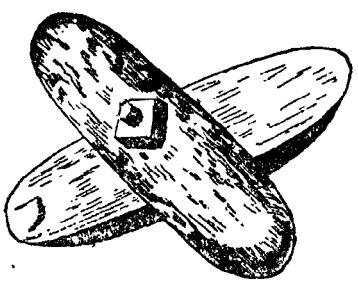
Repousse process

A design is drawn on a metal sheet with a pencil. These may be of flowers and meandering stems with leaves. Sometimes a lion or an elephant head may appear. There may be figures of fish and birds. These are encased in a number of circular lines drawn with a compass. Sometimes the lines are simply straight with some regular harmony. When the design is drawn engraving and embossing is taken up with scribers, having different cuts and with dapping tools of various sizes. This type of work is carried out mostly on ornaments like *chak* for head; *kangnu, dhagle, and chur* for wrist, *chanki* or *nam*—a pendant.

Stamped decoration

Much of the sunar's job is done by using steel and bell-metal dies. These have several patterns and shapes in them. Some of these are used for preparing a particular ornament. Two of the bell metal dies called *titkara* and *bahuguna* are frequently used. *Titkara* is an oblong piece of bell metal, which has width-wise deep cuts of different designs. Similarly, *bahuguna* is a circular piece of metal, which has geometrical design impressions. Now it is the ingenuity of the craftsmen in stamping out these designs on a precious metal and then combining them into the form of an ornament.





Tools for carrying out filing

The sheet of metal is first placed on the die and blows are given with the planishing hammer till the impression is received on the back of the metal. If the sheet is thin enough, a thick piece of lead is placed over the sheet and the hammering is done. Sometimes the sheet of gold, is as thin as a sheet of paper. To receive impression on so thin a sheet, cotton is used in place of lead. In this way, the thin sheet of silver or gold receives the design. This is a very ancient process in India, which is called 'embossing'. Before stamping out designs on the metal sheet annealing is done so that there will be no break through of the metal while the hammering.

Dies are generally purchased from big towns. Sometimes, these are manufactured by sunars. But these days, they do not make them. However, some of them possess dies prepared by their ancestors. For instance, late Phinoo sunar of village Giana in tehsil Arki, who died about fifteen years back had made some dies. The one prepared by him is still lying with Jeet Ram, silversmith of Arki.

When these dies become blunt because of their constant use the impressions received from them are not so sharp as they should be and therefore new dies are brought. But when a design revolving in the mind of a craftsman is not available, he prepares them by melting bell metal and moulding it into a shape he wants. The mould is prepared from clay.

To prepare a die with teeth impressions, bronze is melted. It is put in a clay mould to transform it into a solid cube. After this, the cube is struck in the centre on one side, with a sharp toothed chisel. The teeth are formed in the cube. After this, the cube is made red hot and immediately put into water. This gives hardness to the die. Now the teeth die is ready.

Enamel work

Enamelling is known as *Meena-kari*. Women like some of their ornaments to be enamelled because the shining colours add beauty to the ornaments. Some of the expert craftsmen of the Pradesh excelled in this art.

Enamel is a type of soft glass, known as *meena glass*. This is a composition of sand or flint with soda or potash. The fusion of these ingredients produces a transparent colourless glass. This becomes an enamel. It is procured from markets. From there, sunars purchase certain vitrifiable mineral colours, in the form of lumps, usually in green, blue and in red hues at the rate of Rs. 3 to Rs. 5 per ten grams. To produce enamelled ornaments, these are fused by heat on the metals. The process is given below:—

Preparation of Enamel—The lump of enamel is carefully beaten on a stone slab. This is pulverised to form a powder by a pestil and mortar. When the powder becomes fine, it is washed repeatedly in water till the water becomes free from the whitish substance. While doing this, it is always to be borne in mind that the particles or grains of powder are of regular sizes and of the same thickness. According to the sunars, coarse ground enamels give brighter results. The particles must be even, otherwise they will not melt at the same time nor be bright enough.

The sunars prepare enamel powders and keep them. Whenever, the powder is required for use, it is again washed to make sure that it is free from dust. Then the wet enamel is spread over in the grooves of an ornament. First the ornament is thoroughly cleaned in *tezab-ka-pani*. The surface, where enamelling is required, is made

rough by scrubbing and scratching. After that, a coat of flux is given. Then the thick layer of wet powder is placed. The layer is kept even and slightly above the level of outlines or edges within which, enamelling is needed. After the powder is spread, the piece of ornament is left to dry. When this is dried, the piece is carefully placed between the groove prepared out of live coals. In case, the piece is delicate or small, it is placed on a clay-plastered tin plate. Then the fusing process is taken up. The coals are heated up and the piece is made red hot. The heating process is done swiftly to bring better results. Even heating of the entire piece is required during the process. When it becomes red hot, it is time for enamel to the fuse. The time, taken in fusing varies according to the degrees of the enamel's hardness as well as of the thickness of the metal. The enamelling process needs careful attention of the worker. Even the slightest carelessness can ruin a craftsman's labour. As soon as the enamel fuses the piece is carefully taken out of the flame and left to cool. Enamelling, done by expert hands is final in the first firing. In case, the result is not upto the mark, another thin coating of enamel powder is given. This would be followed by another firing. When the enamelled ornament is cooled, it is filed at the rough places. Sometimes the enamel spreads over the edges or beyond the limits of the edges. This requires filing and repairs. While filing the pieces, drops of water are regularly thrown. This prevents the bright colours from fading.

If an enamelled piece of ornament is given another firing, it is liable to lose its lustre and brightness of colour. Only for this reason, the enamelling of an ornament is done when all other processes of soldering are complete. After enamelling a piece, filing, scrubbing, washing, brushing and polishing is done.

Observations reveal that the enamel work, done now-a-days by the sunars, is not lucent and beautiful as is seen in old jewellery enamelled by artisans of the past. The fashioning of ornaments with enamelling colours is gradually becoming out of date. In about ninety percent cases, people are converting their enamelled jewellery into simple ornaments. Even in the past, enamelling used to be done to four or five ornaments which were *chauki*—a pendant, *chandra semihar*—a necklace, *chak*—a head ornament, *tikka* used on the forehead and *kantas* for ears and sometimes in *anguthi* a ring for finger. Enamelling was done more on silver and comparatively less on gold.

Meena glass once used on an ornament becomes waste when re-casting of ornament is done.

Pickling

'Pickle' is a technical or goldsmith's term given to a solution of sulphuric acid and water. Sunars call it *tezab-ka-pani* or *tezab* and keep it in a glazed jar. This is prepared by adding one part of acid to ten to fifteen parts of water. Four or five pints of solution prepared once serves for about a fortnight. After that few more drops of acid are added. This is done as the chemical activity of the solution subsides because of its constant use.

As many times a piece of ornament receives heat it gets oxidised. If the oxidised metal is kept in the solution for about ten to fifteen minutes, the layer of oxide dissolves and the metal regains its lustre. When the piece is taken out of the solution, it is dipped in clean water. Particularly a touch of iron leaves a black stain on the metal having wetness of the pickle. Sunars always keep this point in view and never hold out ornaments from the pickle with iron tongs.

In the past when sulphuric acid was not used, artisans prepared a special home made pickle. In far corners of the Pradesh, this is still in use. It is prepared from wild apricot. These are boiled in an earthen pot. The water is strained. The solution is effective in removing the 'oxide scale' and in making the solder joints hard.

Filing and polishing of ornaments

Now the ornament is in the final stage and requires finishing and polishing. Before this is taken in hand the ornament is properly filed and scrapped. This process removes edges, scratches, ball-up spots of solder and perfects the surfaces and curves according to the shape. Sunars have a number of different needle files, some flat, round, half round, triangular, spear shaped, convex shaped and others with varying edges. Emery papers of different grades are used. Sunars do this work with care, otherwise over filing may spoil the whole piece. To achieve the best result they handle the file so that the first fore-finger rests on the top of it to control the pressure. While rubbing, pressure is applied mostly on forward strokes, except when the surface is smoothened, where file cuts are given both ways. The piece that is being filed is held in the left hand. Sometimes wrong filing produces traces on the articles. To prevent such traces and scratches, sunars use abrasives of various grades, right from the coarse to the medium and fine ones. Finally emery paper of a fine quality is used. In this way scratches produced by the use of rough abrasives are removed.

Some Sunars have a tool known as *mashkla.* When ornaments are rubbed with it they become bright.

The parts of an ornament do not always need to be filed. If sunars take care in the earlier stages of making an ornament there is very little left for filing. The ornament pieces with wire construction do not need much of abrasion.

The filing process, makes the ornament ready for polishing and giving final touches. An especially prepared solution, red sand and soap nuts are used for washing and polishing ornaments.

Preparation of banni solution—To make the solution 8 grams of alum, 1 gram of blue vitriol and 4 grams of salt are powdered. These powders are mixed in water and boiled for sometime. When the liquid is concentrated it is left to cool. Now the *banni* is ready. Another formula of preparing this solution is by mixing up 8 grams, of alum blue vitriol 1 gram, nitre 4 grams and common salt 4 grams. This solution is effective.

Use of solution—Owing to heatings, the ornament loses its lucency. Hollowed encrustations and cavities become dark. To make them bright the ornament is coated with the solution and gently heated. After that it is kept in *tezab-kapani* for 15—20 minutes. When this is taken out of the pickle the ornament is washed in clean water.

Use of soap nuts and red sand—Beaten soap nuts and red sand are kept in a big vat. The ornament is thoroughly washed in it, with hard brushes. By and large it takes about half an hour to give it a thorough wash. Then the ornament is wiped and rubbed with a piece of cloth. Now the ornament is ready to be sold.

Methods of assaying gold and silver

Villagers may often be all too ignorant to make out the fineness or impurities of gold and silver. They are simply satisfied, when they are told that the ornament, which they have brought to the jeweller's shop or the one, they are taking with them, is of the purest metal. They believe sunars and take away ornaments on their words. They are only attracted to the sharp brightness of ornaments. To bring about the lost lustre of an old ornament they go off and on to Sunars for polishing.

But the Sunars have a sharp eye to identify the values of metals. They can tell, how much of base metal should be found in an ornament of gold or silver.

Inspite of this virtue of judgement, Sunars still have to use certain methods to assure themselves as well as to assure their customers with regard to the grading or purity of ornaments. Kautilya's Arthasastra gives an account of the methods adopted for assaying gold in olden times.

"शुद्धस्यैको हारिद्रस्य सुवर्णो वर्णकः। ततश्शुल्बकाकण्युत्तरापसारिता आचतुस्त्रीमान्तादिति षोडशवर्णकाः।

सुवर्णं पूर्वं निकष्य पश्चाद्वर्णिकांनिकषयेत्। समरागलेखमनिम्नोन्नते देशे निकषितम्। परिमृदितं परिलीढं नखान्तराद्वा गैरिकेणावचूर्णितं उपधिं विद्यात्। जातिहिंगुलकेन पुष्पकासीसेन वा गोमूत्रभावितेन दिग्धेनाग्रहस्तेन संस्पृष्टं सुवर्णं श्वेतीभवति।"

According to Shamasastry's Translation these Sanskrit lines indicate—

"When the streak of pure gold (made on touchstone) is of the colour of turmeric, it is termed suvarna. When from one to sixteen kakanis of gold in a suvarna (of sixteen mashakas) are replaced by from one to sixteen kakanis of copper, so that the copper is inseparably alloyed with the whole mass of the remaining quantity of the gold, the sixteen varieties (carats) of the standard of the purity of gold (shodasavarnakah) will be obtained.

Having first made a streak with suvarna on a touchstone, then (by the side of the streak) a streak with a piece of the gold (to be compared with it) shall be made.

Whenever a uniform streak made on the even surface of a touchstone can be wiped off or swept away, or when the streak is due to the sprinkling of any glittering powder (gairika) by the nail on touchstone, then an attempt for deception can be inferred.

If, with the edge of the palm dipped in a solution of vermilion (jatihinguluka) or of sulphate of iron (pushpakasisa) in cow's urine, gold (suvarna) is touched, it becomes white."

Methods being followed today in assaying the metals are—

1. *Use of touchstone*—The Sunars have a touchstone, known as 'kasauti' on which, the metal is rubbed. Some bright or dim streaks are formed on it. Here again, it is the Sunar, who judges the colours of the streaks. From the colours obtained, he assesses the base metal, that the ornament may contain. According to Sunars, the bright yellowish red streak shows the absolute purity of gold. The gradual deterioration in the brightness of marks shows that there is impurity. Gold with silver contents in it would also give less yellowish colour. Pure silver brings sun bright streaks on the touch stone.

Impure silver would go on giving relatively dull impressions. This depends on the percentage of impurity.

2. *Use of sulphuric acid*—To test the purity of gold it is first rubbed on a touchstone to make a streak on it. Then a drop of sulphuric acid is spread on the mark. In case of gold having more copper contents, the mark dissolves in the acid to the extent of impurities present. The mark becomes slightly dull. The acid does not remove the impression of pure gold. There is same action in silver. If a silver ornament is slightly filed at a place and touched with the acid no reaction would appear on the surface if the silver is pure. But on silver, with copper in it, the acid would show some brisk action. The spot changes into light or deep bluish colour in a relative proportion.

3. *By heating the metal*—When pure gold and silver are heated, they do not change colour. Because of other properties in the metals, these become oxide and the changed greyish colour would indicate the impurities present. Similar version appears in Sanskrit lines about gold—

"छेदः चिक्कणः समवर्णः श्लक्ष्णो मृदुर्भ्राजिष्णुश्च श्रेष्ठः। तापे बहिरन्तश्च समः किंजल्कवर्णः कारण्डकपुष्पवर्णो वा श्रेष्ठः। श्यामो नीलश्चाप्राप्तकः" ॥

This tells that "the gold which is greasy, of uniform colours, soft, and glossy is the best. That (gold) when heated, keeps the same colour (tapo bahirantascha samah), is as glittering as tender sprouts or of the colour of the flower of karandaka (?) is the best.

That which is black or blue (in gold) is the impurity (apraptaka)."*

4. *Shrill tone of impure metals*—If an ornament of impure gold or silver is thrown on a stone or on iron anvil a shrill and a vibrating sound comes. But in case of pure metals, the fall produces a hoarse sound. The vibrations will stop coming with the fall.

Refining of impure metals

Gold or silver becomes impure for the solders get mixed during conversions given to them from time to time. Sometimes, the villagers order sunars to add silver in gold or copper in silver to the limit, as may be desired. This has to be done as the person may not have enough of gold or silver for an ornament. For these reasons, alloying becomes necessary. When fortune takes a turn, one may long for jewellery of the finest metal. In such circumstances, sunar refines the impure metals. The methods adopted by them are given below :—

Refining of Silver—Lead is used as an agent to purify silver. Firstly, the impurities are ascertained. If the contents of the base metal are about one third or one-fourth of the fine metal, double the quantity of lead is required. If the impurities are less, an equal quantity of lead is sufficient for cleaning. According to Kautilya's Arthasastra "तत् सीसचतुर्भागेन शोधयेत । *i.e.*, "impure silver shall be heated with lead of one fourth the quantity of the impurity."

A groove is made on the floor. A thick paste of wet clay or wet charcoal ash is given to it. To refine five hundred grams of silver, an equal or double the quantity of lead will be required. First the silver is put in the groove and burning charcoal is placed around it. The charcoal is given a blast of air from the blowing machine or from a skin blower. In a short time, when the silver melts, an equal quantity, or double the quantity of lead is added. The heating process continues for hours together till the lead is burnt to ashes. A yellowish smoke comes out from the burning of alloy. This way, the base metals in the silver burn. As soon as yellowish smoke stops coming, it shows that every part of the lead has been burnt. The silver would look like red bright thin liquid. After giving some more heat to it, cloud like shapes would appear floating on the molten metal. Then the live coals are removed. The groove is cooled down and the solid metal is taken out. This lump of metal is very rough and has a number of holes and dark spots. Some ash or clay particles get stuck to it. These are removed by striking it against the anvil. This silver is again melted in a crucible. Borax powder is added. Now the molten silver is poured in a *reza*. In this way, the solid metal can be used for making ornament of pure silver.

But the quality of silver obtained this way is not of the standard purity. Five to ten per cent of impurity may still be present. Normally, this is not taken account of when ornaments are made. To bring the silver to the mark of flawless purity, a further process is carried on. The rod of silver obtained has to be beaten into a sheet. The sheet is cut into small pieces. Some sunars may use another method. If the molten silver is poured in a bucket full of water, small pellets are formed. This saves sunars from the labour, required to make small pieces of the silver rod. The pellets formed in a bucket are not of the same sizes. These do not dissolve easily in acids, when they

*From Shamasastry's translations of the Arthasastra.

are boiled in them during further processes. For this reason, sunars feel it better to put in more labour and prepare small pieces from the sheet.

These silver pieces are placed in a crucible containing nitric acid. The crucible is heated till the pieces are dissolved in the acid. This silver solution is poured in an earthen vessel containing two pints of water. A piece of copper weighing about one and a half times the silver is put into this. The copper dissolves in water and turns the water blue. During this process, the silver gets separated and forms small dust like particles. A layer of these is formed at the bottom. Then the water is drained out steadily and the particles are removed. These particles are again melted in a crucible. In this way, silver is obtained in a mass form of the purest standard. Half a bottle of nitric acid is sufficient for cleaning 500 grams of silver.

Refining of gold—The ancient process of refining gold has been discussed in the following lines in Kautilya's Arthasastra—

"श्रेष्टानां पाण्डु श्वेतं च अप्राप्तकं। तत् येनाप्राप्तकं तच्चतुर्गुणेन सीसेन शोधयेत्। सीसान्वयेन भिद्यमानं शुष्क-पटलैर्म्मापयेत्। रूक्षत्वाद्विद्यमानं तैलगोमये निषेचयेत्। आकरोद्गतं सीसान्वयेन भिद्यमानं पाकपत्राणि कृत्वा गण्डिकासु कुट्टयेत् कन्दलीवज्रकन्दकल्के वा निषेचयेत्।"

R. Shamasastry's Translation -

"Impure gold is of whitish colour. It shall be fused with lead of four times the quantity of the impurity. When gold is rendered brittle owing to its contamination with lead, it shall be heated with dry cow-dung (sushkapatala). When it splits into pieces owing to hardness, it shall be drenched (after heating) into oil mixed with cow-dung (taila-gomaye).

Mine gold which is brittle owing to its contamination with lead shall be heated wound round with cloth (pakapatranikrtva); and hammered on a wooden anvil. Or it may be drenched in the mixture made of mushroom and vajrakhanda (Antiquorum)".

According to sunars of today silver serves as a cleansing agent for purifying gold. The quantity of silver to be added in gold is equal or near about double of the gold to be refined. This is determined after ascertaining the impure contents of the metal. 200 grams of gold having about one fourth of impurities in it would need equal quantity of silver. The process is given here—

Both the metals are melted together in a crucible and thoroughly mixed during their molten state. The alloy is then poured in a 'reza'. The solid lump is beaten into a thin sheet from which small bits are cut with snips. Pellets can also be formed by pouring the molten metal into a bucket full of water. But the method is said to be unsafe. Small bits in piecemeal are put in a clay crucible containing nitric acid. These bits may be divided into 3 or 4 parts. Each part is to be heated separately. Fusing process is continued for at least one and a half hour for every part of the metal bits. While heating dark brown smoke and fumes come. After about half an hour this stops. Chemical activity of acid finishes when it is burnt for so long then the crucible is taken out of the hearth and the acid is drained out steadily in some earthen jar. Care is always taken that particles of the powder which settle in the crucible may not come out while pouring the acid. Again some fresh acid is put in the crucible and heat is given for half an hour. After that the acid is again drained out carefully. Action is repeated for at least two or three times. After pouring out the acid, a sort of powder formed in the crucible is kept to dry separately. Other parts of the metal-bits are repeatedly passed through the same process.

Now the dry powder is again put in a crucible. Borax powder is also mixed with it. The crucible is put in between the coals. Blast of air is given. Within a few minutes, the powder melts. It is poured in a 'reza', where the liquid metal takes solid form. The lump, received this way is of pure gold.

The silver, which was put into gold as a cleansing agent, can be extracted to some extent. A piece of copper may be thrown into the acid, which was collected after fusing the metal-bits. Before doing this, two pints of water are added in the acid. Copper changes the mixture into a bluish colour. The water is drained out carefully. A layer of brown dust settles at the bottom. This is carefully taken out and dried. It is then heated in a crucible and this way silver is separated. Some amount of silver burns in the process and the quantity of silver received is half or less from the original amount. About one bottle of nitric acid is enough for the purpose.

Cost of Production

Six

Inflationery trend in prices since the last three decades had its direct and continuous impact on this craft. The gold and silver are the main metals. The prices of these metals and other subsidiary meterials and cost of production of ornaments has flared up considerably.

There were times when silver was sold at the rate of 12 to 14 annas a tola and gold at Rs. 14 to 16 a tola. Now the continuous rise in the prices brought these precious metals to be sold at the rate of Rs. 3 per tola and Rs. 135 to Rs. 150 per tola. But villagers generally do not afford to buy gold. Whatever ornaments they own, are simply recast or converted into ornaments of their choice. If at all they need gold or silver they would manage it from their relatives or acquaintances. Almost in 95 per cent cases this process goes on among villagers. Thus often the villagers pay for the labour put in by sunars in producing ornaments.

The wages earned by each artisan for his day's labour varies. This variation is based on their skill and the delicacy and elaborateness of the work. The quantity of the work they receive from their customers is one of the considerations which tends to variation in their income.

Working hours

There are about 180 silversmiths living in towns. On the basis of the field study it is evident that on an average they work for about 6 to 8 hours, a day. In villages about 5 per cent silversmiths spend 4 to 6 hours a day more or less. The remaining 95 per cent of the Sunars are seasonal workers and carry on with the job only when it is a season for marriages. During other months these village Sunars do not have much work. If at all they work, they would sit only for three or four hours a day in their workshop.

It is true that during working months they earn Rs. 120 to Rs. 150 per month as net wages for their work whereas during other months their income is hardly upto Rs. 50 p.m. They have some landed property. They supplement their income by doing agriculture and horticulture. In towns about 20 per cent of the sunars have landed property. The other 80 per cent are dependent making ornaments and earn between Rs. 90 to Rs. 130 per month.

Rates of wages

It is a common grouse of the silversmith that he gets little in the form of wages for his excellent craftsmanship. In the past

he used to charge four or at the most 6 pice per tola for preparing silver ornaments and the charges for gold work used to be between 8 and 12 annas per tola. But keeping in view the cost of living of that time the wages they earned used to be more than sufficient. They lived happily and saved something for future. But the condition today is altogether different. Today, at an average the charges may be from 25 paise to 75 paise per ten grams for silver work and Rs. 3 to Rs. 10 per ten grams for gold work. Sometimes the charges may be even more according to the delicacy and minuteness of the work. For example wages for a profusely bejewelled gold 'balu' weighing 50 grams may be hundred or even Rs. 150. The time taken for finishing such a *balu* is never less than three weeks. *Bragars* finger rings, *jhumake, long; tili* are some of the ornaments which may require comparatively more time and skilful and deft labour. And therefore the charges may obviously be more. Rates of labour charged for intricate silver work may be a rupee or more per ten grams. But inspite of the higher wages silversmiths say they are not pulling on well today. The reasons for their unhappiness may be many.

(*i*) *Cost of living*—Firstly the cost of living has increased comparatively fast and the rate of wages charged by them is lagging behind.

(*ii*) *Charges*—Secondly they are not in a position to increase the rate of their work charges as they very well know that nobody would be prepared to pay higher wages for their work. Even whatever they are charging now appears to be too much for their customers.

(*iii*) *Competition in the market*—Thirdly there is a competition from outside and around which has given a blow. For instance some *sarafs* have settled in towns of the Pradesh, who do not prepare ornaments themselves but bring ready made ornaments from big cities and sell them to the villagers at comparatively cheaper rates. Some of the local well-off sunars of the towns have started doing this as well. It needs capital investment and not all village sunars are able to invest much.

Today these sarafs are selling silver ornaments at the rate of Rs. 2·75 paise per tola or even at lesser rates, just the rate at which silver is being sold. The cheaper rates are because of the large scale production with the help of machines and as well as by mixing up of more base metals. Villagers are attracted to the shine and are allured. Certainly, the local sunars are feeling the pinch. They say that half a yard of silver chain would involve a craftsman to a full day's labour whereas the actual wages which he would get for the work will hardly be just 35 paise or at the most 50 paise. Similarly, they can hardly produce a handful of globular beads during the day and the wages for them are small. For this reason some of these Sunars have started purchasing chains and globular beads and such other parts of ornaments from the towns.

Another impact of this machine age is clearly perceived on the fineness of art. Even the globular beads or various other parts of an ornament prepared by the Sunars are sometime rougher and do not look as beautiful as the one which one finds in the old ornaments.

(*iv*) *Selling ornaments in fairs*—Throughout the Pradesh fairs are held. Some of them attract traders dealing in ornaments from towns. They take gold and silver ornaments valuing Rs. 2,000 to 10,000 to these fairs. Villagers of remote areas, get a chance to buy jewellery. More than 75 per cent of the business is exchange of old ornaments for the new ones. For instance sale of ornaments in Shivratri fair of Mandi town, Kuthah fair held in Chichot Tehsil of Mandi district, Lavi fair of Rampur Town, Rainka fair in Sirmur district, Brahmaur yatra of Chamba district goes in hundreds of thousands. This shows that the requirement of the local people is sufficiently met in these fairs. For this reason also the local sunars have started getting less work.

(*v*) *Use of imitation jewellery*—Imitation jewellery has greatly invaded these areas. Particularly *koka, tili, kanta, tops, anguthis, churies* and different kinds of beaded *malas* and pendants are abundantly available in several charming designs. These cost many times less. These items of jewellery can be bought from any fair. Then these can be purchased from towns. There are people who have established new shops in villages. They sell similar articles. Not only this there are a number of hawkers who go from village to village and sell such articles. Whenever there is a fair in the village they put up their shops. All other big and small fairs meet the demand of the villagers for imitation jewellery.

(*vi*) *Change*—The declining tastes of the villagers for the heavy and age old jewellery is rendering local sunars less work.

(*vii*) *Effect of gold control order*—With the coming of the Gold Control Order, this class appears to have been effected. Previously they used to have enough of gold work which brought them better wages. But with the Gold Control Order, the silver work is only left for them which brings too meagre an income. Even upon the villagers this

order has thrown a mysterious spell. They do not wear so much of gold ornaments as in the past they were used to. This is perhaps for the fear that they might lose it one day by a Government Ordinance. A few others who know the ins and outs of the order are converting their old ornaments of gold such as *balu, bulak, chak,* into the new-designed ornaments through the well established Sunars, who have secured licenses.

Payment of wages

Our observations show that wages are paid to sunars in cash and seldom in kind. Generally each silversmith has ten to twenty households for whom ornaments are prepared by him. Besides this they get work from others.

But the system of payment of wages to the sunars of the royal families of the pre-Himachal small Hill States was different. The sunars who were attached to these families say that they had received free landed property from the Darbar. In return they prepared ornaments for them. On occasions like marriages in the ruling family, their services were requisitioned. For all that period during which they served the State they used to get food enough for themselves and their family, a month or two during the year. For rest of the period they used to work for villagers. There used to be no other payment of wages from the royal families. Materials like gold, silver, acids, borax, charcoal were provided by the Darbar. The tools used to be their own. This type of privilege is not enjoyed by any of the jewellers now.

Cost of ornaments

A list of ornaments has been added in Annexure V showing approximate cost of material used, cost of labour put in and the price of each finished article in respect of each district. The prices shown prevailed during years 1961 to 1964.

Ornaments and Designs

Seven

Himachal jewellery reveals an amazing variety of designs. These designs, which carry an unceasing continuity of evolution in them, provide a good scope for study. It is only natural that the first inhabitants of the land must have arrayed themselves with leaves and flowers. Even now men and women of certain parts take immeasurable pleasure in pinning flowers on their caps or on the hair. Use of an especially prepared chambaka flower among Kinnauras is a fine example of it. But with the advent of precious metals the primitive men must have tried those leafy and floral designs on them. This obviously was a crude copy of nature. Gradually the sphere of life became more various and vast and this eventually gave new incentives to primitive man to devise original designs for the embellishment of ornaments.

A keen and comprehensive survey clearly shows that many of the designs have remained unaltered down through the ages. People have deep love for them. Particularly fashioning of ornaments in far off places still continues to follow the old patterns. Areas which are closer to the plains have shown a noticeable deviation from the old. This is perhaps the impact of the fast changing fashions of the towns and cities which fascinate villagers. For instance a large *chak* for the head has been replaced by a small *chak*. *Balu*, *murki*, *nath*, etc. have become almost obsolete save for certain auspicious occasions and simple *koka*, *lona* and *tili* have taken their place. *Chars* the armlets are no longer prepared. Love for *arsi* is gradually vanishing. *Mahet* and *tandeera* necklaces are now ornaments of the past. The same has happened with old designs of anklets. A pair of ear-rings *kantas* or *tops* are enough where sometimes one and a half dozen of *dandies* used to adorn women. Today we only see their ears with several pierced blank holes. Because of this change in fashion, children are not put through this ordeal of piercing ears with several holes. In Brahmaur and Pangi tehsils of Chamba; Chaupal, Jubbal Rampur and Rohru tehsils of Mahasu; Chichot and, Karsog tehsils of Mandi and throughout the Kinnaur district, decking ears with a dozen of earrings is still there, more with the old women.

Ornaments for the head

Chak—Is an ornament for the head. This is used all over the Pradesh by the old and young women. It is produced in many designs and is called by the same name more or less with slightly changed accent. In Chamba it is called *Chaunk*. The following types of *chaks* are found here though their use is on the decrease. Some *chaks* are made of gold.

Chak-sada—Is worn on the top of the head. It is just a hemispherical boss, with raised work all over. The floral work is generally carved out in one or two horizontal circles encased with lines of dots and dashes given in some symmetrical manner. Then there is a variety of relief work which is done with a number of tracers. The entire work has a harmony. The centre top of about 1 inch diameter is made more convex and forms a star shape. This dome shaped ornament has two small oval hooks affixed at about 1½ inch apart at the centre inside. Through these oval links a multi-coloured thread is passed and the ornament is tied to the locks of a woman. This weighs from sixty grams to 150 grams. The diameter is about 3 to 6 inches and the height is between 1¾ to 3". Thickness of the sheet used for it varies from 1/20th of an inch to 1/10th of an inch. This is generally in silver.

Chak-uchha—The shape and size of this *chak* is similar to *sada chak*. The only difference is of the big bezel box three quarters of an inch high, which is fixed at the top centre of the sada chak. In the bezel box red or blue stone known as *thewa* is set.

Chak-boron-wala—Here, in this *chak* several round beads are hung at the edge of the *sada chak* or *uchha chak* with silver chains. The chain is composed of a number of units of wire. These units are prepared by giving regular folds and twists to the silver wire. Sometimes soldering is also done at the joints. Generally five, seven, nine, eleven or thirteen oval hooks are soldered on the one-third or half edge of the *chak* to which the chains with a small oval link at its one end are fastened to them. Normally three chains are tied to each oval hook. At the other end of every chain, there is a bunch of three globular beads. Sometimes the beads are half open. Beads are prepared by embossing small discs into half domes. The two halves are soldered into a ball alongwith a tiny oval hook at any place on the joint. These are produced in a number of other designs Sometimes beads are tied to the chak without linking it with chains. This *boron-wala-chak* is also called as *laridar chak*. *Laridar* in local dialec mean having a chain.

Chak phul—An addition of two small *chaks* to any *chak* is called *chak-phul*. It is about one third the size of a *chak*. These are known as *phul*. Both the *phuls* are linked to the outer sides of the *chak* with a chain of wire. Oval hooks may be provided inside or just on the outer edge of the *chak-phul* to which wire chains are tied to make a link. No beads are provided in the *chak phul*. If at all these are to be provided they find a place near its top.

Chak chhota or gutira—It is an ornament used on the big hair plait on the back of the head as substitute for the large heavy *chak*. Relief work done on it is almost the same though the general construction is different from the *chak*. Its convex shape is about ½" to 1" high with a diameter of about 2" to 2½". One or two oval hooks are soldered on the inner side which help it to be tied to the hair plait. It is also known as *chandiara chak*.

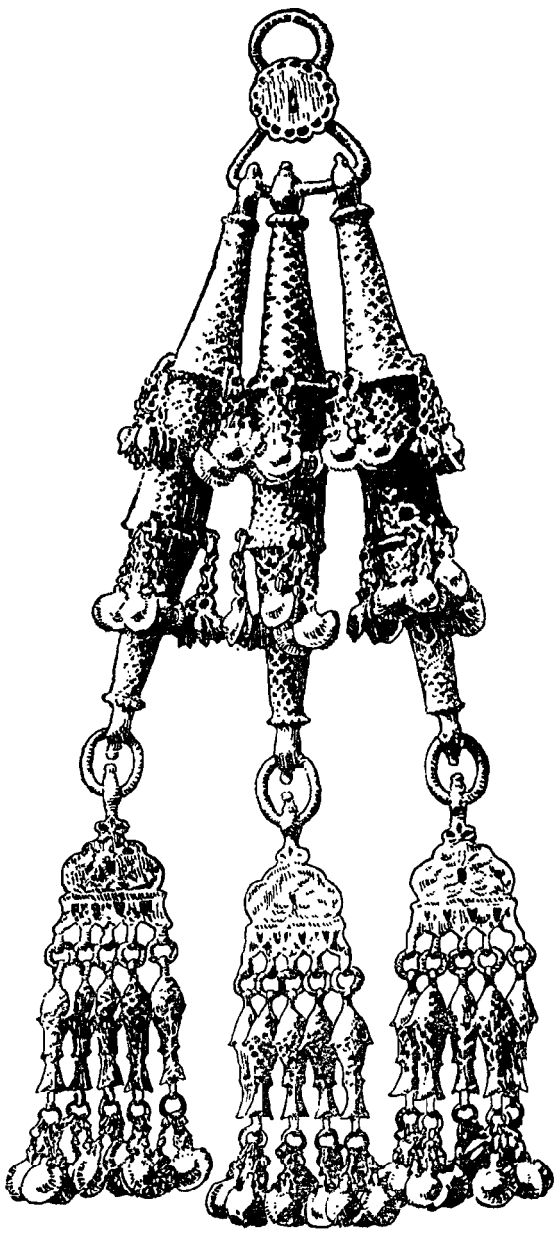
Chak 'meene wala'—Size and shape of this *chak* is the same as *gutira chak*. The design is slightly different. Green or blue enamelling may be done.

All these types of *chaks* are prepared in both gold and silver. Large *chaks* especially with globular beads are getting out of date.

In areas where Bushahri cap or scarf called *dhatto* are used as head-dress by women, large *chaks* are not used. Small *chaks* worn on the hair plait appear to be in fashion there.

Clip—Used as hair clip by women just above the ears. Prepared in many geometrical shapes and depicts modern design. Clips are made in silver and gold. It is about 3" long and 1½" wide. On its back a pin and a hook is provided by which it is tied to the hair. Weight of a pair of clip is 15 to 25 grams.

Jutti or junti:—Is a silver hair pendant hung on the back of the head by a plait of hair. Most popular in Kinnaur and in certain areas of Mahasu district. Normally six inches long hollow pipe thicker in the middle and conical towards the ends is prepared. Some floral designs are carved on it. In its middle and on the two ends oval hooks are soldered from which cluster of drops are hung. Sometimes in place of a single hollow pipe three pipes are put together. The *jutti* with three pipes may weigh about 80 grams.



Jutti

Phul or sisphul or saggi phul—When a pair of chrysanthemum shaped small domes are separated from the *chak*, it is called *phul* or *sisphul*. Size and shape is similar to that of the *chak phul*. A pair weighs between 20 to 50 grams. Relief work done on them is the same as on *chak*. Inside single oval hook is provided which helps in tying it to the hair plait.

Shangli—Is a 10 inches long chain with small silver pins at either end. Worn around the head by women in Pangi area of Chamba district. One end of it is tied to the *joji*. Average weight 20 grams.

Ornaments for the forehead

Chiri, dora or shringarpatti—This is like a fringe worn over the forehead on either side of the face and forms a part of the ornament *teek*. It consists of two knitted strips of wire links in between which a number of star shaped or some other geometrical shaped pieces of metal called *chandaka* are fitted linking each other. Normally along the lower edge of the wire innumerable small *pipal* leaves or drops are hung, which give out a sweet jingling sound. One end of each fringe is connected by a small plaque from which hangs a bit larger crescent shaped ornament, on the forehead like a *teek*. Smaller plaque is linked with a strip to chain having a hook at the other end. Hook is tied to the hair on the head. Other two ends of the fringe are provided with small hooks which are attached to hair on the occipital region. Sometimes in place of small hooks *karan phool* or *jhumkas* are linked, which are worn on the lobes of the ear. In this way it forms a complete set of forehead ornament, and may weigh between 70 grams to 100 grams.

Man or mang tikka or teek—Is a moon or crescent shaped plaque, sometimes enamelled at suspended on to the middle forehead. It is linked with a strip of wire chain having a small hook at the one end. This hook is fast ened to the hair plait at the top. The diameter of the plaque varies from one inch to three inches. It weighs about 15 grams to 50 grams. This is prepared both in gold and silver and displays a number of designs. To the lower edge of the plaque sometimes bunch of silver leaves or round beads are attached. These plaques are sometimes pierced through in beautiful designs. Cretain Sunars living in towns are preparing these items of jewellery in a modern way and produce a diamond-cut-work on them. In this way facets are cut on the metal like those on the diamond by using sharp and different pointed chisels. This makes the ornaments glitter more from all angles. There is also a fashion of more studding it with imitation stones which also gives an attractive look. This is also called *chandroo, chandra or chiri.*

Ornaments for the ears

Bale or phair—Is an ear-ring with beautiful decoration work. A crescent shaped piece of embossed metal is fitted to the wire by a hinge at one end and a hook on the other. The lower edge is extended with wire work carrying flat or round pieces of metal at a certain regular gap. From this small



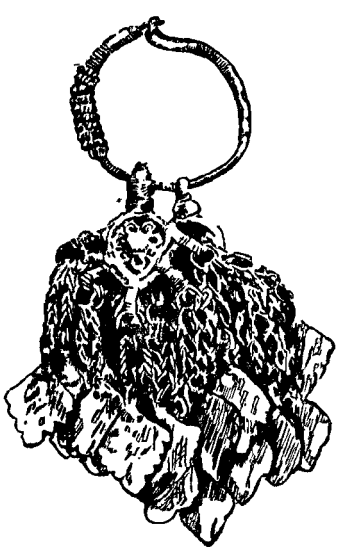
Shringarpatti—a forehead ornament—
Courtesy: Journal of Art and Industry.

round balls or bunches of pipal leaves are suspended. Its pair normally weighs about 15 to 30 grams. It is normally worn on the lobe of the ear.

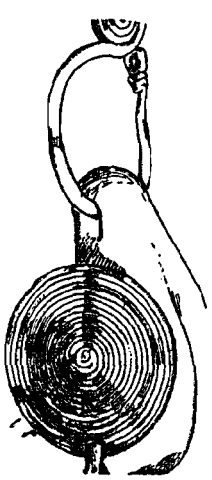
Bragar—Is a large gold ear-ring with two round pearls and a conical turquoise suspended in the centre. The conical turquoise is called *neelak* or *sabza*. Generally these are of green and blue colour. Some portion of the pearls and turquoise is encrusted with fine trellis work prepared from the grains of gold. From the central turquoise occasionally three or five small drops are hung. Just close to the pearls about half an inch portion of the ring on both sides is covered with a coiled thin wire. Half the portion of the ear-ring is a thick wire without any decoration. At one end a hook is fitted in an oval link provided at the other end of the ornament. A pair of 'bragar' used to be worn even by a bridegroom during his marriage. *Bragers* are made in many sizes. These are prepared of one inch diameter to two inches diameter and weigh between 15 grams to 40 grams a pair. The ornament is worn on the lobe of the ear.

Bunde—Small drops are united in many design. and a piece is joined with a large hooked pin which is passed through the ear lobe of the ear. Normally this is made of silver and weighs a few grams.

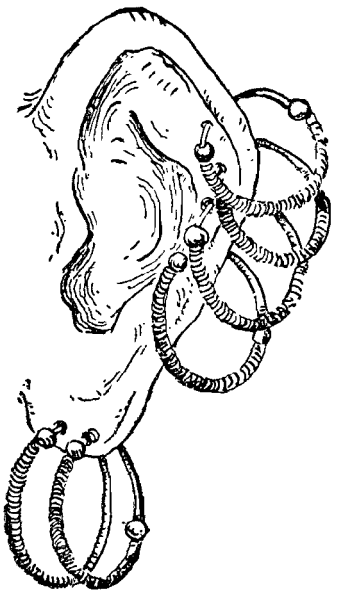
Dandi—Is an ear-ring. The only decoration in it is the coiled thin wire which encircles about half the portion of the ring. This is prepared in gold and silver and worn on the lobe of the ear. These weigh from 5 grams to 10 grams each. Sometimes



Ear-ring



Darotu and Mungr



Dandian

altogether plain *'dandies'* are prepared. In Kinnaur and in some areas of Mahasu district plain ear-rings called *kantaie* or *'kantali'* are used. In the rest of the Pradesh these are called *balian*.

Dandi boronwali—The only difference is of the drops or globular beads, which are hung to is in place of a coiled wire. These drops called *bor* are suspended with oval links and hooks. Sometimes in the place of heads small thin silver plaques are hung.

Darotu—A peculiar shaped ear-ring prepared in gold or silver is worn on the lobe of the ear. It is popular in upper Mahasu. It is made of single long wire. The half part of this long wire is bent round to form a ring with a small closed hook at one end. The remaining part is turned outward to form a semi-circle. Here another inward bend is given. Now the wire is turned round and round to form three or five circles each shorter than the previous one. A pair weighs about 15 grams.

Gol—Is an ornament particularly worn by Gujjar women. A large ear-ring having a number of hollow beads at its lower edge is connected to two round tinsels with a wire-knit chain. All round the edge of the tinsels hollow beads are linked. A ring is put in the lobe of the ear and the tinsel is hung in the hair just above the ear by a hook. Average weight of the pair is 35 grams.

L/P(D)1SCO(H.P.)—8a



Karan phul—Courtesy Journal of Art & Industry

Jhumka or karanphul, pharaloc—Is an ear ring consisting of two parts. The upper part covers the lobe of the ear. It is either enamelled or chased cone plaque, sometimes fitted with turquoise in the centre. Its outer edge resembles like a star or is sometimes appliqued with a wire-ring having impressions of jound knobs. A small bell shaped ornament, having a number of small balls hung to its outer edge is suspended from it. The ornament is sometimes prepared without the bell shaped pendant. Then it looks like a knob put in the ear and is called *dhodhu or dedi jhumka*. A pair of these weigh about 15 to 30 grams and is about two inches long. It is very popular in Chamba District. Some of the villagers call it *gokharu*.

Kanta, kanti or sabza—This ear-ring is made in several geometrical designs and is about $1\frac{1}{2}$ to 3 inches long. The one having a large imitation stone or jewel may be called *sabza*. The long *kanta* is provided with a thin long chain with a tiny oval link at one end. This is drawn over the ear and passed through a large curved pin of the ornament. The ornament is prepared in gold and silver and each weighs between 5 grams and 15 grams.

Mungri—Is a round disc of $1\frac{1}{2}''$ to $1\frac{3}{4}''$ diameter. The disc is prepared from a long thin wire by coiling it round and round. Each successive circle is closely fit to the first one and gets each time bigger. When the disc is complete a hook is soldered at one edge by which the ornament is suspended to the upper ear. The ornament is prepared in gold or silver and weighs nearly 10 grams. To avoid the up setting of wire, soldering is done on the back.

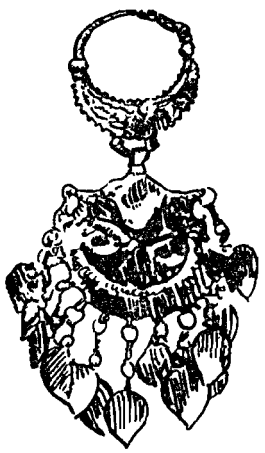
Murki, murku or nanti—Small ear-rings, particularly worn by men in the lobe or the upper part of the ear. Prepared both in gold or silver. Weighs a few grams.

Tilli—Is a small gold or silver knob worn in ears in Pangi area of Chamba district. The shape and design resembles to that of a plain *tili* worn in the nose. Weighs a few grams.

Ornaments for the nose

Balu or besar—Is a large gold ring worn on the nose. Particularly in Kinnaur women have great liking for the ornament. On fairs and festive occasions old and young women wear it alike. In other parts of the Pradesh the ornament is getting obsolete. This is ornamented with a belt of jewels or pearls. Some of the jewels are encased in two grain-worked semi-circular balls, through which the ring wire passes. Another design is prepared by fitting flat round plaques to the half portion of the wire-ring with one or two pearls in the centre. This design is common in Chamba District. A small chain is provided in the ring. This is tied somewhere in the hair. The chain helps this heavy ornament to be suspended on the cheek. The ornament is quite heavy and weighs about 20 to 40 grams. The diameter of the ring is three to four inches.

Bulak—This is another beautiful ornament which is suspended from the nose. Used to be one of the most popular nose ornaments. Among the women of Kinnaur it is still very popular even today. Usually it was made of



Bulak

gold and weighs about 10 to 30 grams. This is composed of many hollowed out pointed pipal leaves and big convexed leaf of varying designs. Smaller leaves are hung to a big leaf on three sides by oval links. On the fourth side a curved wire is fixed with a hinge.

Karolu, khundi, murki or nathli—Forms one of the nose ornaments. It is suspended from the nose and looks like a decorated disc of small grains of gold. Silver *murkis* are also used. Sizes, shapes and weights of this ornament are varying. Some of the *murkis* are prepared only of 8 or 9 grams of metal whereas some weighs about 20 grams of gold or a bit more. A big *murki* may have a diameter of about two inches. Some *murkis* are designed to form a pointed corner at its lower edge. But these are smaller in size as compared to the round *murki*. Betel leaf shaped *murkis* are also prepared. At its upper portion hinge and hook is provided, wherein a curved wire is fixed by which it is hung to the septum.

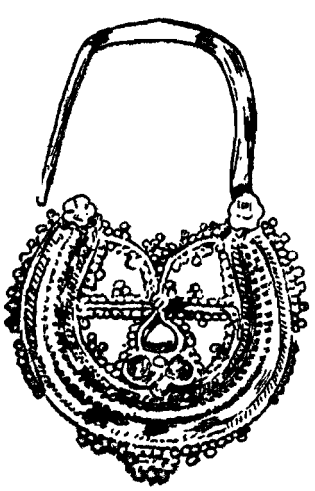
Koka—Is a substitute for *tili*, weighing less than a gram. This is a gold knob with a hollow pin to which another pin is fitted from inside the nose. Generally a small red stone known as *thewa* is fixed on the knob.

Long—Is shaped just like *tili* but is a bit larger. It is prepared from gold and wieghs about 5 grams to 10 grams. On a small thin plaque equal to a fifty naya paisa coin or a rupee coin, a slightly convexed round disc is soldered. On this grain work is done Sometimes a small flat red jewel known as *nag* is fitted in the bezel box provided in the centre. On the other side a hollow pin is fixed which is inserted into the nose. This ornament is in fashion throughout the Pradesh but it is common particularly in Bilaspur and Mandi Districts.

Nath—Is an ornament like *balu* or *besar* prepared from gold. This carries a simple design on a smaller ring. In villages it used to be a custom that a newly married woman must keep *besar* or *balu* in her nose for one year after her wedding. But it used to be heavy. The ornament was therefore replaced by a small *nath* which is easier to use regularly. Many call it *balu*. Sometimes it is a thin wire with only a hook. No decoration is done in it. This weighs nearly 10 grams or less. In some cases this may be tied to the hair with a thread.

Phuli—Is worn in the nose like *tili* or *koka*. It is slightly different in design. Normally it is a star shaped small stud with five corners and small jewels or *nag* fitted in the centre and sometimes all around as well. A small pin to be fitted to the silver pin.

Tili—Is a common ornament throughout the Pradesh. Weighs hardly a gram. Generally it is of gold. Some poor people have this in silver. It is produced in varying desings. Some have plain surfaces and a decorated edge. Some are appliqued with three, five or seven small diamonds or imitation stones. The design is called *jaraoo tili*. Some are decorated with 'rowala' or grain work. Others are fitted with simple turquoise or red stone in the centre having grain work all round. It is round and slightly conical, with a long hollow pin provided at the back. The hollow pin is put inside the nose.



Khundi or Murki

Another silver pin with a small disc at one end is inserted in the nostril so as to fit in the hollow pin tightly.

Decorations for the teeth

Phulli—Is a gold knob cut from a thin gold wire. It is fitted in the centre of the teeth. A tiny hole is made in the centre of the teeth by using a small drilling tool and then a wire knob is placed into it and hammered to make it fit tightly. Normally the migrating dentists, who are used to visit hill fairs and carry on with business like tattooing, fit these gold knobs to the interested villagers. Now-a-days it costs Rs. 1·25 to fit a gold knob. However, a fashion is gradually decreasing. Some call it *tili* or *tilla* or *phuli*.

Suine-ra-dand—Some villagers are very fond of covering their one or two teeth with a thin sheet of gold. The enveloped teeth is called *suine-ra-dand*. This job is done by the same dentists in the fairs who fit *phullis*.

Ornaments for the neck

Chamkali or champakali—It is a necklace of several units made of silver. These units are prepared by stamping a silver sheet on a die cast. Each unit is about an inch long and two fifth of an inch wide at the centre. Both the ends are pointing. If a thin sheet of metal is used the back of the unit becomes hollow. At the upper end of the unit an oval link is soldered through which a long thread is passed so as to give it a form of a necklace. The lower end is either left simple or provided with another small oval link from which are suspended three or five globular beads. A necklace weighs near about 50 grams. Sometimes it is made in gold.

Chauki—It is either a silver or a gold pendant. Normally prepared in a rectangular or a square shape. Some villagers and particularly Gujjars call it *tabeez*. 10 to 25 grams of metal is enough to make the plaque which is roughly of 3″ × 4″ size. On the lower edge 5, 7 or 9 oval hooks are provided from which are suspended bunches of globular beads. At the opposite edge two oval hooks are soldered. Through these hooks a multi-coloured thread is passed and tied at the back of the neck. It is said that at child birth mother takes out one or two globular beads of her *chauki* and puts them round the ankle of the child with the belief that the child may not be a victim of an evil eye. There are superstitions used to these.

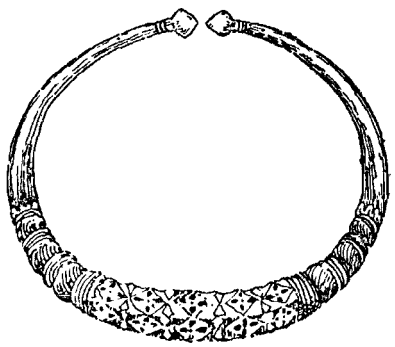


Dodmala

Dodmala—It is a necklace of *dodas* made of silver. *Doda* means a big hollowed round bead. These round beads are about one inch long carrying vertical convex rows. Two half portions of a bead are prepared by stamping a silver sheet on a mould called *dodmala-ki-mosh*. Then both the units are soldered at the edges, leaving a hole at two ends. The beads are then threaded either in a silver wire or a cotton thread. Normally each necklace carries 20 to 30 beads. Two plaques in a betel leaf shape with surface decoration are also linked at each end. The ornament weighs 40 to 60 grams. This type of necklace is very popular in Chamba. Even the men of that area wear it once a while.

Hansairi—Is a large silver case with flexible lid prepared almost in square size. Small beads are hung at the lower edge which produce jingling sound. Sometimes a small piece of a looking glass or photograph of some deity is fitted on the facing surface. Average weight is 100 grams.

Hansli, hanseeri or tandeera—It is a large silver collar made of solid metal. Worn round the neck. The collar or ring is prepared from half an inch square or a round bar. Its circumference may be about 15″ to 20″. Its central half is comparatively thick. Its two ends are shaped to the form of a



Hansli

round knob, which are sometimes given a outward turn. A number of horizontal line desings are made in the central half portion of the ornament. Weighs about 150 to 250 grams.

Hamel, mahel, paoli or chandramalang—It is a necklace of coins. Old silver coins of 4 and 8 annas and of a rupee denomination are used to make the ornament. In certain areas of Mandi district the coin necklace is known *Chhatta har* or *kandu*. The coin is provided with an oval link at the edge just over the effigy's head. The link is soldered here. Through the oval link thread is passed which gives it a form of necklace. The effigy's head forms the upper side of the ornament. Normally coins of uniform denominations are used. Rarely these may be used combined but symmetrically. Sometimes in the middle a big betel leaf shaped plaque of silver with stamp decoration is suspended. Particularly the type of necklace called *bitri, daroli* or *Chandramalang* prevalent in Kinnaur contains, in addition colourful beads of *moonga* and *pheroza*. The ornament weighs about 100 to 150 grams.

Kach, kachong or patkachong—This ornament is worn quite close round the woman's neck. It is about 6″ to 8″ long and about 1½″ wide. This is composed of a number of silver beads and two triangle shaped silver plaques. The silver beads with many sides have a hole in the centre. These are threaded in 5 or 7 silver strings and are linked to a triangle plaque at each end. The ornament weighs 100 to 150 grams. In Kinnaur the ornament is known as *patkachong*.

Kantha or kanthi or manke—Is a necklace of silver beads worn close round the neck. Popular in areas nearer to plains. Also known as *mala* or *kandhri* or *rupalka*. Beads are threaded in a cotton string so as to tie it round the neck. About 50 grams of silver is required to make the ornament.

Nalia or dhol—Is a cylinder shaped silver ornament. The hollowed round piece is about 2 inches long and half an inch thick. Both of its ends are shaped round and soldered with oval hooks. Through these hooks a thread is passed to tie it round the neck. It looks like a charm. Average weight is 25 grams.

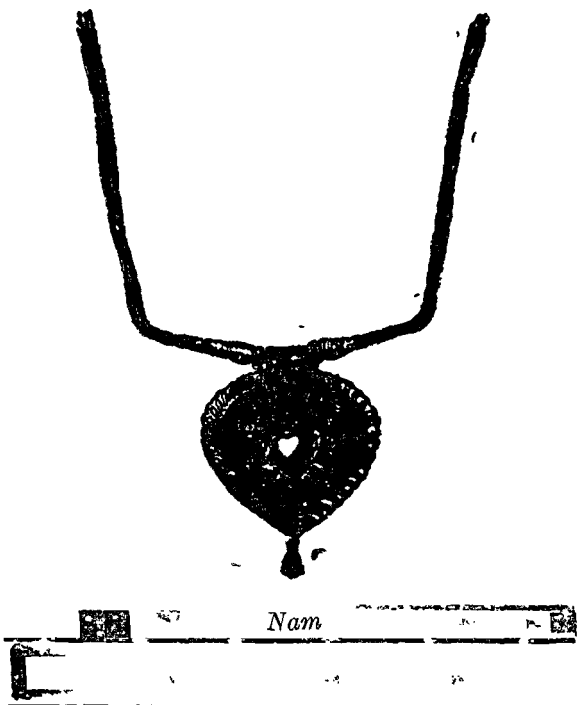
Nam—This is a betel leaf shaped pendant. Mostly prepared in gold and is so very popular in Bilaspur and Mandi Districts. The plaque is suspended on the breast by means of a multicoloured thread. About 10 to 20 grams of metal is enough.

Rani har or locket—Is a necklace of a modern design and sold in towns by jewellers. Local Sunars do not prepare it costs about Rs. 15.

Satlari har or chandar har—It is a necklace of seven chains, some-times more or less are added. These may be five, seven, nine or eleven. Chains are prepared from several star shaped units with a flat round surface in the centre. These units are linked each other with an oval link. The ends of these chains are linked to a triangle plaque with a fine trellis work. Each side of the plaque is about 2½″ to 3½″. One side of both the plaques are provided with as many oval hooks as may be required according to the numbers of chains. At the opposite corner facing oval hook side of the plaque another oval link is soldered. These two oval links are connected with an 8″ long similar chain which helps



Mahel



to suspend the necklace from the neck. The fall of seven chains comes one above the other on the breast and the plaques. The ornament is made of about 200 to 300 grams of silver.

This type of necklace is produced in a number of other designs too. Sometimes one, three or five plaques with fine enamel work are in set in between the chains.

Singi—Is a pendant worn round the neck sometimes for magico-religious reasons. It is made of silver or gold. Resembles somewhat like a hollow pipe with a slight bend in the centre. Length is about 1" to 3" with varying thickness. Sometimes bunches of drops are also hung to it. Known as *'ralu'* in Chhitrari of Chamba district 10 to 30 grams of metal is required to make it. The ornament is in fashion in certain areas of Mandi and Bilaspur districts.

Shangli or buttons and cuff links—Silver chain with four buttons are used by men and women alike for the button holes of their shirts. It is produced in many designs. The chain is prepared by joining a number of units prepared from a silver wire. Normally there are three strings of chains linked with buttons. At the end of the chain a triangular plaque with decoration or enamel work is joined. Upper surface of the button is designed by stamping out a sheet on a mould. After that it is soldered to another round disc with a pin in the centre. Complete set of buttons roughly weighs 30 grams.

Cuff links are similar in design and shape as are the buttons of the chain. A small cluster of hollow globular beads is also linked to it. These are called *'Mogla'* in Chamba and stud in other areas. About 15 grams of silver is sufficient for a pair of cuff *links*.

Ornaments for the upper arm

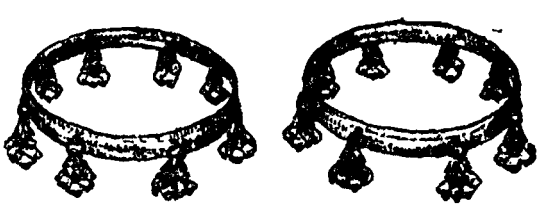
Anant—Is a similar ornament like Saptami. It has, however got fourteen marks on it. Men of the upper caste wear it on the upper arm. Thirty or thirty five grams of metal is enough.

Jantar—Is a small case of silver in which some tilisman is kept to keep off the effects of witches. About 5 grams of silver or gold is sufficient to make this case. An oval hook is soldered on the edge. It is tied with a thread on the upper arm by men and women alike.

Saptami—It is a religious ring made with seven spiral marks and worn on the upper arm. It is slightly thick in the middle and narrowing towards its two ends. This is worn on the upper arm by women of upper caste. About 30 grams of silver or gold is enough for the ornament.

Ornaments for the wrists

Band, pariband or chhankangni or ghungrooal—Bracelets known as *band, pariband or chhankangni ghungrooal* are prepared either by stamping out a silver sheet on a mould or by joining wire strips into some ornamental interlaced work. Normally the bracelet has a flexible joint. On the middle line or near the edges of the bracelet cluster of drops are hung at three or five places with the oval links. This type of bracelet is also called *bang* or *churi* in certain areas. It is about one inch wide and roughly two fifth of an inch thick. A pair of the ornament weighs nearly 60 to 80 grams.



Chhankanghri

Bang or churi—Is a simple ring of wire with a circular joint. Some impression of designs are received on the upper surface of the ring from the moulds. These are prepared in silver and gold. About 20 to 25 grams of metal is sufficient to make a pair. Normally two to ten *churis* are worn on a wrist.

Chur or chura—This cylinder shaped ornament is the largest in size among the bracelets worn in the Pradesh. It covers almost three fourth of the lower arm. It is about 5″ to 6½″ long and is slightly tapering towards the lower end. One tenth of an inch thick sheet is generally required to make the ornament. Stamp decoration and relief work is done on all over the surface in horizontal lines. Main attraction among the decoration done on it is the shape of cucumber seeds stamped out with plain surface. The ornament which appears to be a single piece is prepared from four or five one inch wide circular strips. These decorated pieces are afterwards soldered to make a complete *chura*.

For a pair of *chura* about 300 to 350 grams of silver is used.

Gajroo—Is a hollowed bracelet with teeth decoration on its upper surface. Pointed teeth are set in two or four lines. Inner two lines are slightly longer than the two on sides. It has a flexible joint and has a close fit over the wrist. Its width and height is about half an inch. A pair of *gajroo* weighs about 25 to 35 grams.

Ghari churi—A bracelet made from a thin silver or gold sheet. It is about an inch wide at the centre and gets narrower towards the two ends. Beautiful fret work and inlay decorations are done on its upper surface. A pair of *ghari churi* weighs about 30 or 35 grams.

Kangnu or dhagle—Is a heavy round bracelet normally prepared from a solid silver. Rarely made in gold and is called *sulangan*. It is thin and plain in the middle and is widened towards the two ends. The ends are engraved to give the shape of the heads of alligators and tigers. In Chamba district some people call it *gokhru*. Sometimes the middle part of it is made from silver wire. About 10 to 12 inches wire of a thick gauge is taken and is cut into three equal pieces. All the three pieces are twisted together to make a creeper's design. There may be four pieces of wire which are knit into some other attractive design. This is then soldered to the two engraved ends.

Throughout the Pradesh the ornament is in fashion. In Kinnaur, however, apart from the common design, women wear a pair of 'dhagloos' on each wrist. While making, these the Sunar solders them together to make one piece. This becomes very heavy and a pair may weigh roughly 800 grams. Children are also arrayed with small *kangnoo*. The normal weight of a pair of *kangnoo* is nearabout 400 grams.

Maridari or maridoo—Is a hollowed bracelet with serrated surface. It is about three quarter of an inch



Chura

wide and half an inch high. Popular in Mandi and Chamba districts. About 50 grams of silver is sufficient for a pair of *maridari*.

Toke—Is a flat silver bracelet. Width is about one and a half inch. There appear two or three lines of conical studs on the surface. In between these lines relief decoration is done. Thickness of the silver sheet is about 1/10th of an inch. A pair of *toke* weighs about 100 grams of silver. These are popular in Chamba district.

Ornaments for the fingers

Arsi—Is worn on the thumb by brides on ceremonial occasions but is out of fashion now. A beautiful ornamental circular plaque set with mirror in the centre is soldered with a ring at the back. The diameter of the plaque is normally one and a half inch. It is made both in silver and gold and weighs about 20 grams. There can be other attractive designs.

Patha mundi—Is a plain strip of silver without a circular joint. Normally it is not worn in finger. It is given as present to the bride and is always kept intact in the jewellery box.

Ring—Finger ring is called *anguthi, chhap, mundi* or *mundari*. Kinnauras call it *laksap*. About 5 to 10 grams of silver or gold is used to make a ring. It is worn by men and women. However, certain rings worn by women have different designs. Such as a loop shaped ornamental plaque soldered to it. The loop is sometimes set with seven or nine stones.

Ornaments for the ankles

Jhanjar—Is a large hollow ring with beautiful fret work on all over. It is thick in the middle and gets narrower towards the two ends. On the two ends star shaped large hollow knobs are soldered. A few small pebbles are put inside the ornament which produce sweet sound when the wearer walks. The pair of jhanjar weighs 200 to 250 grams.

Panjeb—Is a common name for various types of anklets—*gopi chain, gulshanpatti, phulu* and *shakuntla chain* are the popular names of the types of anklets. Most common and popular among these designs is the one made by knitting a wire into an ornamental way. A belt of small and large drops, is linked on the lower edge of the knitted piece. The width of the complete piece is about one and half inch or a bit more. A clasp is also provided at the two ends which makes it fit on the ankle. It produces a jingling sound when the wearer walks. A pair may weigh about 250 grams.

Tora—Is a simple set of chains knitted in an attractive manner. This anklet has no drops. It is tied on the ankle with a clasp provided therein. The width is about $1\frac{1}{4}''$ or a bit more. 150 to 200 grams of silver is sufficient to make it.

Ornaments for the toes

Bichhu or chhala or phullu—These silver rings are worn on toes. Known as *polaree* or *bang pole* in Kinnaur and certain areas of Mahasu district. Weighs about 5 grams.

Guthara—Is a silver ring for the big toe and weighs about 10 grams.

Chhala—Normally prepared from a thin strip of silver or by coiling a wire into four or five circles. The surface of the wire is stamped on a mould to give it ornamental look. This type of a ring is worn on the toes.

Kinnauri Designs

Eight

It would be worthwhile to mention something about the ornaments used by Kinnauras. These are quaint and quite unusual in form as compared to the rest of the Pradesh. The villagers intense love for ornaments is evident from the following few lines of the popular song *Muti Sya Gyani Geetha* sung in praise of a beautiful maiden overlaid with *likcho* i.e. ornaments.

मुतीसया काला पीना मुती सया ज्ञानी
काकचो कोंठी माई लोनिना मुती सया ज्ञानी
नाकुचो बालू माई लोनिना मुती सया ज्ञानी
कानातो कोनताई माई लोनिना मुती सया ज्ञानी
गुदो टौरो माई लोनिना मुती सया ज्ञानी
प्राचो मुन्दी माई लोनिना मुती सया ज्ञानी

English transliteration

Muti Saya kala peena muti saya Gyani
Kakcho konthi mai lonina muti saya Gyani
Nakucho balu mai lonina muti saya Gyani
Kana to kontaie mai lonina muti saya Gyani
Gudo tauro mai lonina muti saya Gyani
Pracho mundi mai lonina muti saya Gyani

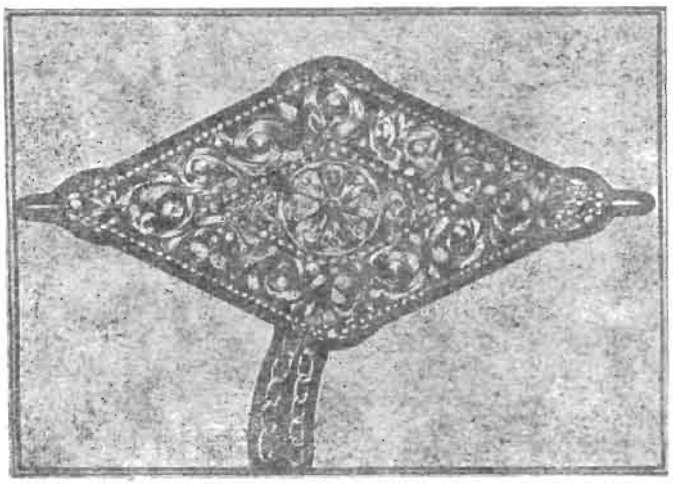
The song relates the details of the bejewelled ornaments which adorn the different limbs of a lady.

Women wear massive necklaces, amulets and charms of gold and silver appliqued with filigree work of a very high order and set with turquoises and coral shells. Some of the popular necklaces are *chandramalang, doroli, kashmal, kanthi, mulgawoo, patkachang, poshal, shokpotok* and *shulikcha.* The necklace called *shatungma* is so long that it reaches down to the waists and thighs. Women using bracelets of solid silver in one, two or three pairs on each wrist. They overlaid themselves with enormous earrings called *khul-kantaic.* It is a set of two dozens of large rings which are mounted on a strap of cloth. Each set is hung from the hair down to the neck over the ears. Then there is a pair of ornament known as *mul-u* which is suspended from the hair down to the breasts. This is a bunch of small silver leaves linked with many triangular plaques. Large nose rings made of gold are very much popular with these people. They have great love for turquoises and corals and have them set profusely in many of their ornaments.

Some of the quaint and unusual ornaments are described below :—

Ornaments

Dhagloo—Is a heavy bracelet commonly prepared in pairs. Two bracelets are soldered together to make one. Rich women wear a pair of these double



Digra

dhagloos on their wrists. It is said that unmarried girls invariably wear single *dhagloo* whereas married women use double or soldered pair of *dhagloos*. A pair of a soldered *dhagloo* weighs roughly a kilogram.

Digra—Is a decorated cloth pin mostly used in Mahasu and Kinnaur. This parallelogram silver plaque has a fine relief work carved out on it. Each side measures about 3″. About 40 grams of silver are used.

Digrao chheo or shanglang—It is about 15 inches long chain knitted up from silver wire. Normally the chain is three fold and linked with three inch long pins on each end. It is connected to the two opposite corners of *digra*. It serves as a pin to hold the *dohru*. Average weight is 35 grams.

Jutti—Is a silver hair pendant. Several thin silver beads, leaves, stones and corals are linked together to make the pendant.

Kantaie and khul kantaie—Are worn in ears. *Kantaie* is a plain ring put on the lobe of the ears and also on the upper outer edge of the ears. Average weight is 5 to 10 grams each.

Khul kantaie is a set of several ear-rings not to be worn in ears but are hung from the hair down to the neck over the ears. About two dozen rings are mounted on an eight inch long strap of cloth in a symmetrical arrangement. A pair of these rings roughly weighs 450 grams.

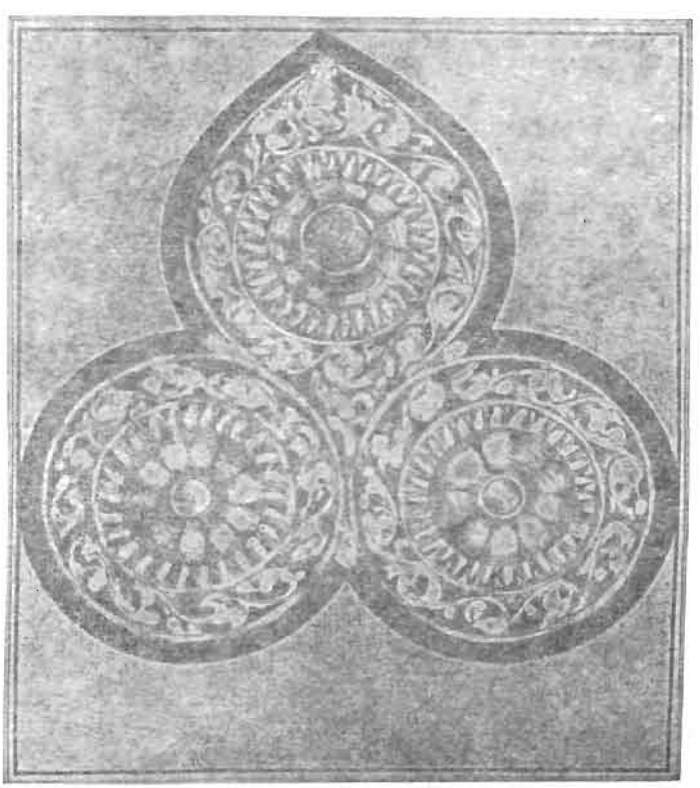
Mul-u or mulmentho—Is a pair of ornaments hung from the hair down to the neck on either side of the face. It consists of several clusters of silver leaves linked down to a large triangular plaque Average weight of silver used is 200 grams.

Pichuk, pachu or tomukch or bamnu—Is used as a cloth pin just below the neck. It is a bean leaf shaped plaque of silver with beautiful tracings. The silver plaque measuring about 6″ on all sides weighs about 50 grams.

Sedu shankli—Is an ear-ornament with a top and a long chain. One end of the chain is tied to the head gear and the top is worn in the lobe of the ear. Weighs about 100 grams.

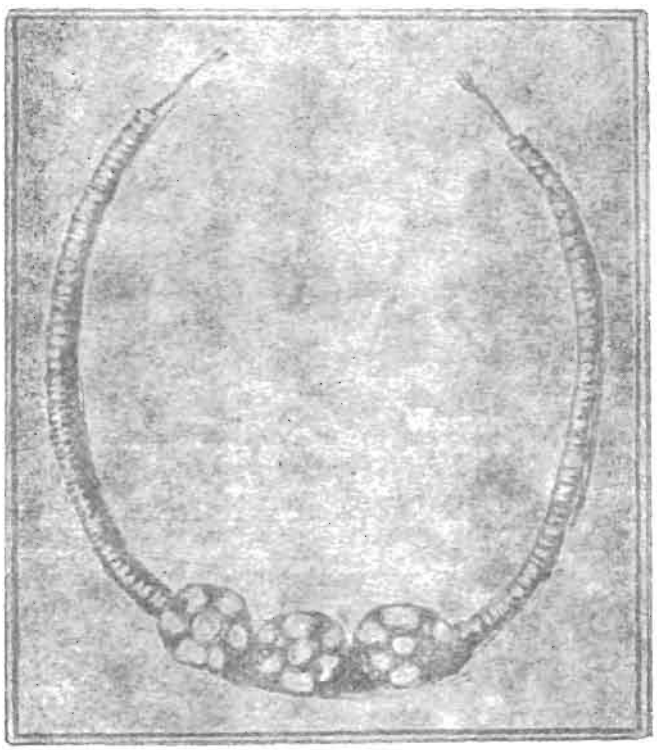
Shtungma or gawoo or mulgawoo—Is an amulet case produced in many ornamental designs in Kinnaur. Produced in square, hexagonal or pantagonal shape. It is worn round the neck by men and women of that area alike. Sometimes silver cases are made with gold strips in between. Weighs between 30 grams to 100 grams.

Takpan sanglang or chak—Is a hemispherical ornament tied to the hair behind the head. Beautiful relief work is done on its surface. Approximately 50 grams of silver is required to design it.



Tomukch

Trimani or shokpotok—Is a small necklace composed of several silver beads, silver plaques and three hollow gold beads in the centre. Silver beads are solid and smaller in size, and gold beads are larger and hollow. Outside surface of the gold beads is appliqued with grain work, in some regular design. These beads are threaded in the centre. On each end 4 inches long 5 strings, prepared from the silver beads are added. Two triangular plaques are set to merge 5 strings of silver beads into one. Three beads weigh about 10 grams and the rest portion about 50 grams. Sometimes the necklace contains only three beads and a number of corals on each side all tied in a single thread.



Trimani

Silver Sacramental Artifacts Used in Temples

Nine

Himachal is a land of. gods, goddesses and temples. In our mythological books this Northern strip of sacred land has been excelled greatly and is said to be the *Deva Bhumi* or an abode of gods. Practically in every house there are godlings, idols and images and pictures of deities kept nicely. Almost every village has its own god or goddess housed in some temple. Then for a large area there may be a huge construction of some shrine, or a monastery or a *gurudwara* with a number of gods and deities and *Guru Grantha Sahib* placed therein. Towns like Mandi and Chamba have famous old temples.

In all these places of worship one or more articles of valuable silver are used. Particularly big temples have a number of articles made of silver. Besides other metals like brass, bronze and copper, we find many idols made up from gold and solid silver. Facets of deities are commonly made of silver. These gods are profusely decked with *chhatras* and ornaments which are similar in design as those worn by the villagers. Idols are kept in small or large sized receptacles made of silver and sometimes of gold. Besides these there are innumerable small and big utensils made of silver which are used to carry out ceremonial rituals and morning and evening prayers. These may be *achmani, argha, chambhu, chaunr, chhari, dhuras, ganjali, kalsha, mor-mutha.* These are interesting sacramental artifacts of the temple, other things include silver musical instruments such as *ban, dhol, karnal, nagara, narsingha* and *shahnai.* Some of the temple doors have a covering of silver sheet with profusion of most attractive motifs. But it may be made clear that now-a-days we hardly see any Sunar preparing any of these things. Only the old articles are being used in the temples. If any of these things needs repairs it is taken to the Sunar, or Lohar-cum-Sunar and the needful is done. However, all the skilled Sunars claim to have the skill of preparing all such articles. Piari lohar, a skilled old worker of village Deothi in Rampur tehsil was however, found making a *mohra* of Durga Bhawani, when he was visited about two years back. Brief details of these articles are given here:-

Mohras, devtas, devis and temple doors- Mohra is a facet of human figure. Silver and gold facets are prepared normally on a metal sheet of about 7″×9″. Its thickness is about one-tenth of an inch. An average weight may be 500 grams. A sketch of a deity is first made on it with a pencil. Then the sheet is fixed up on a 'lac' pitch and the repousse work is taken up. Process is continued till each part of the human face comes up properly. These facets are then given a finish. The villagers

pin up these facets on some wooden structure and call it a *devta*. Similar '*mohras*' containing figures of mythological personalities and mythical tales are found stuck up on temple doors. In Bhima Kali temple at Sarahan of Mahasu district all the giant doors are fully enveloped with such *mohras*, so do many other temple doors have this decorations.

Idols and images—Are solid figures of deities. These are prepared by casting metal into moulds. Moulds are prepared by craftsmen. Idols are normally small in size just about six inches or less in length. Alloyed silver is used in making them.

Decorations in temples

(*i*) *Chauki or singhasana*—Is a receptacle in which idols and images of gods are seated. It is like a rectangular cot with four legs and a raised decorative screen. A fine tracing work is done all over. Prepared in various sizes and therefore the cost may differ according to size and design.

(*ii*) *Chhatra and kalasha*—Chhatra is a sort of covering which is hung over the head of a deity with a string. The string is either tied in the ceiling or suspended from a bent rod fixed up at the back of a *chauki*. A round flattened plate of metal is hollowed out a bit. Round the edge several beads are linked with oval hooks. Floral designs are carved on the surface. An oval link is provided in the centre of the upper surface by which it is suspended with a cotton thread or a chain of wire. Prepared in smaller and larger sizes. Some weigh few grams whereas others are as heavy as one kilogram. Many devotees offer *chhatra* to *devtas* when their wishes are fulfilled.

Kalasha is made up into a hollow cone and each one is placed on the four corners of 'chauki'. Similar 'Kalashas' are also fixed up on a planquin of a bride on her marriage. It is about six inches long and weighs 30 to 50 grams.

Large *kalashas* of gold are made. These may be about a foot or more in length. These are placed on the top of temples.

(*iii*) *Ear-rings, nose rings, necklaces and wrist ornaments*—These are similar in design and shape as those worn by the villagers. More often these are offered to 'devtas' by persons whose prayers have come true.

(*iv*) *Eyes*—Villagers offer eyes made of silver or gold to gods and goddesses. It is said that persons having chronic eye sores vow to the deity and wish for its cure. As soon as they are relieved they come to the deity with the offering. It is a small piece of hollowed out metal cut into the shape of an eye. Similar eyes are fitted on the faces of some stone statues in temples. An average weight is about one gram.

(*v*) *Kharaon*—Is a sort of foot wear normally made of wood with a covering sheet of silver. It may be kept in some temple before the deity.

(*vi*) *Mukat or mathapan*—Is made of silver and is kept on the head of deity like a crown. A fine trellis work is produced on it. Sizes and weights are different.

Puja patra

(*i*) *Achmani*—Is a six inches long piece of silver with a small half round depression at one end. It is used to serve *charnamrit* or holy water. Prepared in many designs and weighs between 25 and 70 grams.



(*Achmani*)

(*ii*) *Argha*—Is like a trough about 6 inches or more in length. Water is offered to gods with it. It is about $1\frac{1}{2}$" wide at one end and gets narrow or towards the opening. Average weight is about 50 grams.



Argha and chambhu

(*iii*) *Chambhu*—Is a small water container. *Charnamrit* is kept in it. Weighs about 50 grams or more.

(*iv*) *Chaunr*—Is made from the hair of 'yak' or 'horses' tail with a wooden handle inlaid in silver. Weighs about 400 grams.

(*v*) *Chhari*—Is normally 6 feet long stick of wood wrapped in silver. Relief work is done on the metal. One end has a large round handle. The silver used may be round about a kilogram.

(*vi*) *Dhuras*—Is a large censer in which 'dhoop roots and ghee is burnt before the deity. It consists of a big handle and a big bowl. About 500 grams of silver may be consumed in it.



Dhuras

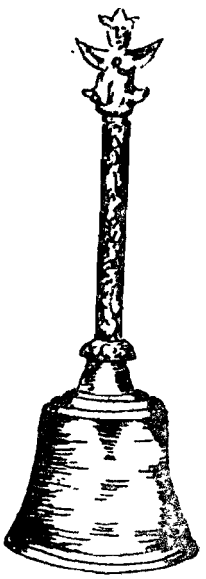
(*vii*) *Gangajali*—Is a large pan with a lid in which holy water is kept. May be produced in different shapes and sizes.

(*viii*) *Kalasha*—Is a big silver vessel to keep fresh waters for deities. It may have ornamental surface. Average weight is 600 grams.



Kalasha

(*ix*) *Mor-mutha*—Is composed of peacock feathers and a handle of silver. It is waved before the deity at the time of prayers.



Bell

Musical instruments

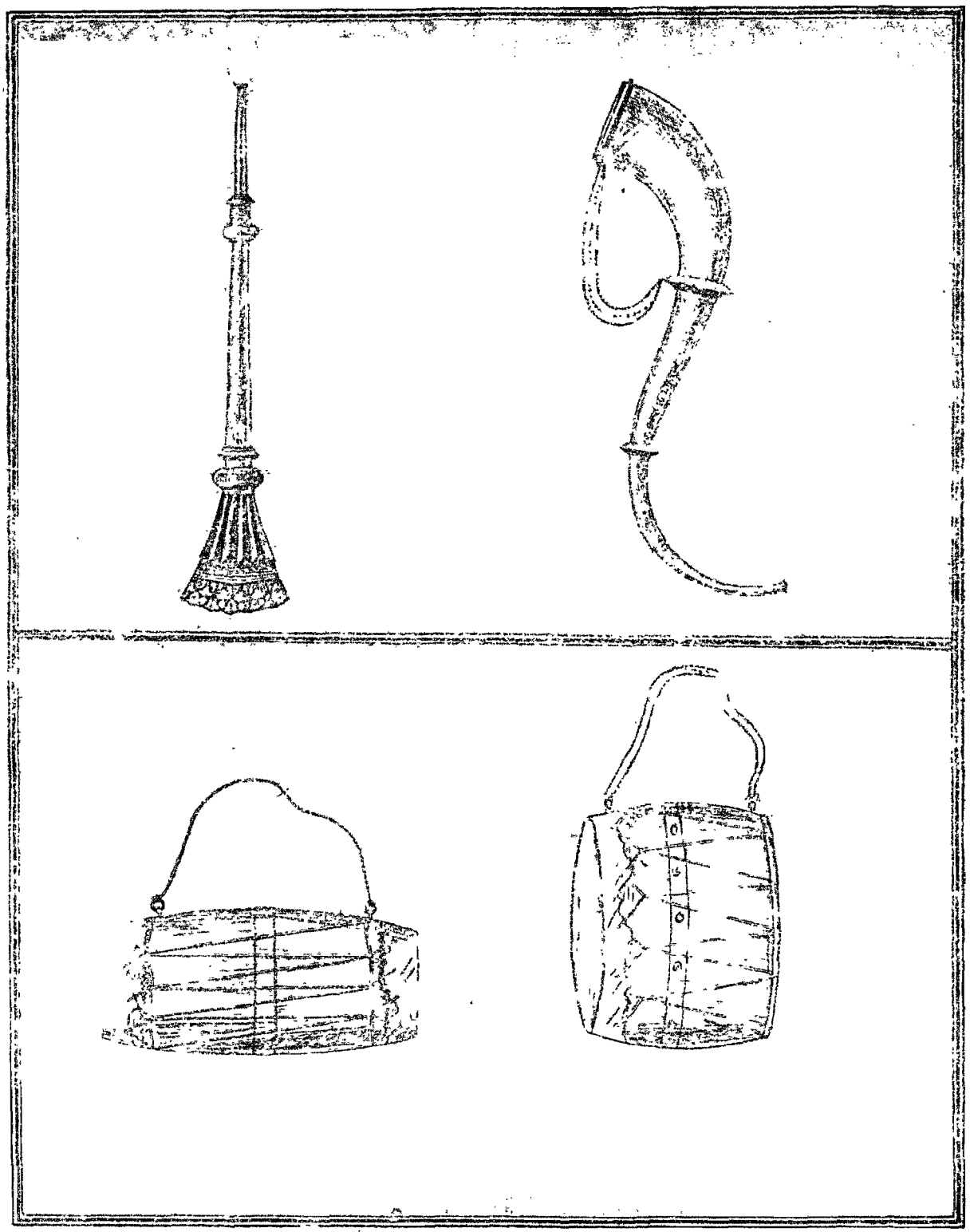
(*i*) *Bam or damama and nagara*—Is a large half round vat covered with ox skin. Diameter may be 2½ feet. The skin is beaten with a stick to produce sound. The vat is rarely made of silver. About 15 kilograms of silver may be used in making it. Nagara is half the size of 'bam'.

(*ii*) *Dhol*—Is a cylinder shaped hollow piece of thick silver measuring roughly 1½ feet in length. The diameter of the circle is about 1¼ feet, on which goats skin is tightened on both surfaces with strong chords. The silver used weighs 10 or 12 kilograms.

(*iii*) *Karnal*—Is a four feet long tapering pipe with a small nozzle at one end and broadened at the other. The broad end is stretched like a big saucer with a wide vent in the centre. Beautiful relief work is done on all over the surface. The instrument is blown from the mouth. The silver used in making it may be about 6 kilograms.

(*iv*) *Ransinga*—Is also a blowing instrument shaped into the form of letter "S". The length may be 5 feet. The lower end is thin and has a small vent. It gets wider and wider towards the other end. It weighs about 6 kilograms.

(*v*) *Shahnai*—Is one of the blowing instruments. It is made of wood and is profusely inlaid with silver. This 1¼ feet long pipe is shaped like Karnal.



Musical Instruments—Karnal—Ransinga—Dholak—Dhol

Annexures

ANNEXURE I

ORNAMENTS AND JEWELLERY—AN EXTRACT FROM ENCYCLOPAEDIA BRITANNICA

Ornaments primitive.

"The term 'ornament' is strictly applied to objects worn from a sense of aesthetic value and intrinsic beauty either in gratification of the personnal taste of the wearer, or in accord with fashion. But it can be applied to objects which are worn for other reasons, such as the various objects worn social distinction and status, for purpose of protection, as amulets and charms or even as curatives. As professor Radcliffe Brown pointed out, the desire for protection and the desire for display "are very intimately related and are really both involved in every kind of ornament. All ornaments in some way marks the relation of the individual to the society". (Andaman Islanders, P. 319). Classes of ornaments in primitive society mark distinctions of sex and social status, the unmarried having ornaments peculiar to their status which differ conspicuously from those allowed to or required of married people. Articles worn as dress, that is either for protection against climatic conditions, or from modesty may become ornaments if an element of aesthetic appreciation helps to determine individual choice or fashionable vogue. Decorations may be worked on or fashioned to plain materials to make the whole ornamental. In communities of a more permanent order, ornaments and embellishments, external and internal are applied to architecture in personal rivalry or in token of socia-status. To religious zeal is due to the wealth of ornament, often found in the Men's House—the centre of the communal life, the repository of the cult objects of the community, the origin of the temple.

The objects worn as ornaments are sometimes of a considerable degree of elaborations. Wings of butterflies, gorgeous tropical beetles, seeds, berries, flowers, variegated leaves, bright stones and all sorts of natural products are employed. The manufacture of ornaments as prescribed by the social order is an occupation of importance. Thus, "The Akamba wear a great number of ornaments (mapa) of various kinds especially metal ones, but they never overload their bodies with them on ordinary occasions. On account of the composition and choice of colours these ornaments

are attractive even to European ideas of beauty, and the fine execution of the work must arouse admiration." (G. Lindblom, Akamba, P. 375—1920) Nature provides the materials and the models. The sense of colour is expressed by using different coloured earths, the quest for which is a stimulus towards economic development. Conventionalization, vulgarization, degradation and imperfect, unintelligent imitations are notable in primitive art but at one and the same time in one community there may be artists of very different capacities.

Jewellery—"Jewellery, is a collective term for jewels, and so for the art of making them. Jewels are personal ornaments made of precious metals and precious stones, alone or combined. One type of jewel, including clasp and brooches of all kinds, arises from the decorative elaboration of a practical object; another type, of which pendants are an example, is derived from the primitive practice of wearing objects hung round the neck with magical intent. Other jewels, such as earings and bracelets, appear to be purely decorative in origin.

The origin of jewellery are lost in the mists of antiquity. In primitive times a strange stone, tooth or other object was often worn round the neck, doubtless with the intention of protecting the wearer by its magical qualities. Precious stones were still believed to have these qualities as late as the 17th century, and the belief is hardly yet extinct among the credulous. The belief that opals are unlucky seems to come only from Sir Walter Scott's Anne of Geierstein; in the middle ages they were supposed to be extremely fortunate. The practice of wearing objects round the neck dates from the stone age, and gold was worked to make jewels before the use of bronze was known. For information about the Jewels of Ur, see BABYLONIA AND ASSYRIA: Early Sumerian Period; for an account of Egyptian Jewellery, see EGYPT : Archaeology; Meta-work, Plate and Jewellery: or Greek and Roman jewels, see SILVERSMITH'S AND GOLDSMITH'S WORK."

ANNEXURE II

TABLE SHOWING CASTE OF SOME SUNAR FAMILIES AND THEIR SET UP IN THE VILLAGE

Village/Town	Name of Tehsil	Since when settled in the village	Caste	Number of families
1	2	3	4	5
	Bilaspur District			
Ghamarwin	Ghamarwin	5 years from a nearby village.	Sunar	3
	Chamba District			
1. (1) Bathree		60	Khatri	10
(2) Chowari		Not known	Sunar	1
(3) Kakira	Bhattiyat			3
(4) Tundi				1
2. Brahmaur	Brahmaur	20	Rehare	1
3. Chamba	Chamba	..	Sunar	15
4. Kufa, Parmas and Thamoh	Pangi	3	Sunar	1
5. (1) Bhandal				
(2) Diur				
(3) Jawans	Chaurah	225	Muslims	13
(4) Kihar				
(5) Sarog				
	Kinnaur District			
1. (1) Barang		Time immemorial		3
(2) Kalpa	Kalpa			7
(3) Kothi				2
2. Bhaba	Nachar			3
3. (1) Jangi	Morang			2
(2) Morang				4
4. (1) Dashing				2
(2) Giabong				4
(3) Jangi				2
(4) Kanam				4
(5) Labhrang			Lohar	4
(6) Morang				6
(7) Namgia	Poo			2
(8) Poo				7
(9) Ribba				6
(10) Ropa				6
(11) Rushkling				7
(12) Sangla				1
(13) Sunam				8
(14) Thangi				3
	Mahasu District			
(1) Arki	Arki	120	Sunar	1
(2) Majhiyat	Arki	90	Sunar	4
Chaupal	Chaupal	Time immemorial	Sunar	2
Chergaon	Rohru	50	Lohar	1
(1) Rampur	Rampur	60 & above	Sunar	4
(2) Deothi		Time immemorial	Lohar	1
Solon	Solon	50	Sunar	8
Theog	Theog	18	Rajput	2
	Mandi District			
Jogindarnagar	Jogindarnagar	33	Sunar	3
Mandi	Mandi	Time immemorial	Sunar	15
Pipli	Sarkaghat	150	Rajput	5
Sundarnagar	Sundarnagar	..	Sunar	14
	Sirmur District			
Andheri	Rainka	Time immemorial	Lohar	1
Dadahu	Rainka	12	Sunar	3
Kamrao	Paonta		Sunar	2
Nahan	Nahan	Time immemorial	Khatri	15
Paonta	Paónta		Sunar	5
Sarahan	Pachhad	30	Sunar	4

ANNEXURE III

TEHSILWISE DISTRIBUTION OF NUMBER OF UNITS OF SILVER AND GOLDSMITHS IN HIMACHAL PRADESH

Name of District	Urban Areas	Rural Areas	Total
1	2	3	4
Bilaspur District			
1. Bilaspur Sadar	31	30	61
2. Ghamarwin	..	12	12
Chamba District			
1. Bhattiyat	..	28	28
2. Brahmaur Sub-Tehsil	..	13	13
3. Chamba	13	22	35
4. Chaurah	..	40	40
5. Pangi Sub-Tehsil	..	2	2
**Kinnaur District*			
1. Kalpa	..	3	3
2. Nachar	..	6	6
3. Poo	..	7	7
Mahasu District			
1. Arki	7	25	32
2. Chaupal	..	25	25
3. Jubbal	..	9	9
4. Kasumpti	..	8	8
5. Kotkhai Sub-Tehsil	..	17	17
6. Kumharsain	1	6	7
7. Rampur	4	17	21
8. Rohru	..	34	34
9. Seoni Sub-Tehsil	..	11	11
10. Solon	9	6	15
11. Theog	4	29	33
Mandi District			
1. Chichot	..	20	20
2. Jogindarnagar	3	24	27
3. Karsog	..	31	31
4. Mandi-Sadar	18	24	42
5. Sarkaghat	..	22	22
6. Sundarnagar	14	15	29
Sirmur District			
1. Nahan	20	3	23
2. Pachhad	..	17	17
3. Paonta	2	22	24
4. Rainka	..	24	24
Total	126	552	678

*According to the industry-wise list prepared from the houselist during the year 1960 the total number of houses used as workshops/worksheds by gold and silversmiths is only 16, But actually a good number of the blacksmiths living in the district also work as silversmiths. According to the industry-wise list prepared in 1960 there were 112 blacksmiths and one half of them may safely be assumed as blacksmiths-cum-silversmiths.

ANNEXURE IV

SKILLED CRAFTSMEN

Bilaspur District

Bilaspur Sadar Tehsil

1. *Bilaspur*

1. Des Raj.
2. Gurdiali Ram.
3. Hari Chand.
4. Joginder Pal.
5. Munshi Ram.
6. Rameshwar.
7. Ram Lal.
8. Ram Nath.
9. Sada Ram.

Ghamarwin Tehsil

1. Auhar.	1. Dhani Ram. 2. Ganga Ram. 3. Sidhoo Ram.
2. Barthin.	1. Lekh Ram.
3. Duslehra Talai.	1. Bal Krishan. 2. Ram Chand.
4. Doog.	1. Sher Singh.

Chamba District

Bhattiyat Tehsil

1. Bathree.	1. Anand Ram. 2. Diva Nath. 3. Gian Chand I. 4. Gian Chand II. 5. Hari Chand. 6. Jija. 7. Madan Lal. 8. Mathra Dass. 9. Nathu Ram. 10. Paras Ram.
2. Chowari.	1. Kirpa Ram.
3. Hobar.	1. Churu. 2. Som Raj Pathaina.
4. Kakira.	1. Amar Nath. 2. Jagan Nath. 3. Kishan Chand.
5. Naini Khad.	1. Sita Ram.
6. Parchor.	1. Ram Prakash.
7. Tarwar.	1. Ram Krishan.
8. Triban.	1. Shiv Charan.

Chaurah Tehsil

1. Andwas.	1. Shyama.
2. Baroni.	1. Rupsen.
3. Bhandal.	1. Gulam Nabi.
4. Bharpanyar.	1. Ali Mohammad.
5. Chambla.	1. Massadi.
6. Chatoga.	1. Waziroo.
7. Damwas.	1. Mahesh.
8. Dehrog.	1. Jhanfar.

Chamba District—contd.

9. Duriyadu.	1. Ali Mohammad.
10. Jawans.	1. Gul Mohammad. 2. Kuman Din. 3. Raj Din.
11. Kailha.	1. Gulam.
12. Kandla.	1. Alia.
13. Kathroth.	1. Dina.
14. Kihar.	1. Gulama. 2. Kamar Din. 3. Mohammad Ramjan. 4. Raj Din. 5. Sadar Din. 6. Shaikh Mohammad.
15. Kubbar.	1. Shakoru.
16. Kumaharwin.	1. Rigazin.
17. Manduwal.	1. Parja. 2. Tapia.
18. Mangalwas.	1. Paddar. 2. Sundar.
19. Manpinhiar.	1. Gulam Rasul.
20. Manjir.	1. Mosani Din.
21. Sudla.	1. Chhaju Ram. 2. Sarban.

Chamba Tehsil

1. Chamba.	1. Achhroo Ram. 2. Amar Chand. 3. Amar Nath. 4. Kishan Singh. 5. Nathi Ram. 6. Poonu Ram. 7. Prithi Chand. 8. Sohan Singh. 9. Walait Singh.
2. Chhatrari.	1. Sita Ram.
3. Kiani.	1. Ram Krishan.

Kinnaur District

Kalpa Sub-Division

1. Barang.	1. Pasam. 2. Uttam Bir.
2. Kalpa.	1. Bhagat Ram. 2. Bhagpur. 3. Chhayang Darje. 4. Giab Chhan. 5. Mani Ram. 6. Raghu Dass. 7. Samku.

Skilled craftsmen—contd.

Kinnaur District—contd.	
3. Kilba.	1. Akhalvir.
4. Kothi.	1. Ganga Ram. 2. Puranjeet.
Nachar Sub-Division	
1. Bhabha.	1. Gulaba. 2. Gulab Ram. 3. Wangyal.
Poo Sub-Division	
1. Dabling.	1. Chhering Chhopel. 2. Dewa Gyalchan.
2. Giabong.	1. Devi Singh. 2. Khuzang. 3. Ramjeet. 4. Thachung.
3. Jangi.	1. Daulat Ram. 2. Panna Dandu.
4. Kanum.	1. Bhagat Ram. 2. Bhagwanjeet. 3. Chhering Dandup. 4. Sunamgiachoo.
5. Labrang	1. Darjechhering. 2. Dewa. 3. Gulbas. 4. Narchham.
6. Morang.	1. Bhagchand. 2. Chhopel. 3. Dayanand. 4. Hira Lal. 5. Nandup Chhering. 6. Taji Ram.
7. Namgia.	1. Angdan. 2. Gyachóo.
8. Poo.	1. Chhaya Darje. 2. Chheringa. 3. Chheringbhag. 4. Deshin Tharchin. 5. Khibu Darje. 6. Phurbu Ram. 7. Sonamjeet.
9. Ribba.	1. Bhagat Ram. 2. Bishan Bhagat. 3. Darje. 4. Gangu. 5. Nimamedup. 6. Shamsukh.
10. Ropa.	1. Bidi. 2. Dewa Chhering. 3. Ram Singh Dass. 4. Sanam. 5. Soda Ram. 6. Urgian.

Kinnaur District—concld.	
11. Rushkling.	1. Akal Chand. 2. Akaljeet. 3. Chhavid Darje. 4. Narjeet. 5. Nurchand. 6. Ramjeet. 7. Sundup.
12. Sangla.	1. Samtam Chhedup.
13. Sapni.	1. Lal Chand.
14. Shi-Asu.	1. Raghu Dass.
15. Sunam.	1. Chhawanglal. 2. Chhemang Dorje. 3. Hirpur. 4. Lachham. 5. Moti Ram. 6. Namgyal. 7. Ram Chand. 8. Urgyan.
16. Thangi.	1. Hirabir. 2. Hirbhag. 3. Narzin.
Mahasu District	
Arki Tehsil	
1. Arki.	1. Basant Ram. 2. Chet Ram. 3. Hari Ram. 4. Nathu Ram. 5. Paras Ram. 6. Shiv Datt.
2. Batal.	1. Chet Ram. 2. Jagan Nath. 3. Mast Ram. 4. Paras Ram.
3. Bugan.	1. Ram Lal.
4. Darla.	1. Jagar Nath.
5. Dhondan.	1. Devi Ram. 2. Mast Ram.
6. Hat Kot.	1. Prem Lal.
7. Jablu.	1. Jagat Ram. 2. Sant Ram.
8. Jawaee.	1. Nantia.
9. Kalyanpur.	1. Kishnoo. 2. Ram Lal.
10. Lahelana.	1. Jagdish.
11. Nagaon.	1. Achhru Ram. 2. Durga Dass. 3. Naratu Ram.
12. Sehawan.	1. Ram Chand.
13. Semmu.	1. Govind Ram. 2. Mansha Ram.

Skilled craftsmen—contd.

Mahasu District—contd.

Chaupal Tehsil	
1. Charoli and Majohli.	1. Padu.
2. Chaupal.	1. Balida.
	2. Budhi Singh.
	3. Dhani Ram.
	4. Phool Chand.
3. Dabhas.	1. Chhajoo Ram.
	2. Kirpa Ram.
	3. Kumbhia.
	4. Sita Ram.
4. Dadona.	1. Hira.
5. Darathi.	1. Gauri Nand.
6. Hioah.	1. Nand Ram.
7. Malat.	1. Durga.
8. Pujarli.	1. Hira.
9. Sayal.	1. Bir Singh.
	2. Hira Singh.
10. Thana Jalona.	1. Kania.
Jubbal Tehsil	
Sainj-Jubbal Old Jubbal	1. Devi Saran
	2. Kali Ram.
Kasumpti Tehsil	
1. Dobru.	1. Hari Singh.
	2. Jeet Ram.
2. Ghanahatti.	1. Kanshi Ram.
3. Junga.	1. Sadhu Ram.
4. Mashobra.	1. Roop Lal.
5. Thal.	1. Kaka Ram.
Rampur Tehsil	
1. Deothi.	1. Pyare Lal.
2. Rampur.	1. Brij Lal.
	2. Charan Dass.
	3. Har Ballak.
	4. Nand Lal.
	5. Ram Lal.
	6. Sham Lal.
3. Sarahan.	1. Muni Lal.
4. Sholi.	1. Jhilu Lal.
Rohru Tehsil	
1. Jangla.	1. Kanwal Ram.
2. Saribasa.	1. Rattani.
3. Shelawat.	1. Ram Saran.
4. Tikri.	1. Darshan Dass.
	2. Duni Chand.
	3. Goverdhan Dass.
	4. Hari Saran.
Seoni Sub-Tehsil	
1. Nin.	1. Dhani Ram.
2. Seoni.	1. Komal Chand.

Mandi District

Jogindarnagar Tehsil	
1. Jogindernagar.	1. Girdhari Lal.
Mandi Sadar Tehsil	
1. Bagla	1. Dhani Ram
	2. Kanshi Ram
2. Chauk	1. Mian Ram
3. Dugrain	1. Bhup Singh.
	2. Chander Mani.
	3. Dalip Singh.
	4. Jodhu.
	5. Sunder.
4. Leda	1. Banshi Lal.
	2. Krishnu Ram.
5. Mandi.	1. Arjan Dass.
	2. Bhagat Ram.
	3. Bhuvneshwar Ram.
	4. Devki Nand.
	5. Durga Datt.
	6. Darogu Ram.
	7. Gita Ram.
	8. Gurbachan Singh.
	9. Hari Shankar.
	10. Jai Singh.
	11. Kahan Singh.
	12. Kartar Singh.
	13. Kedareshuar.
	14. Kanhia Lal.
	15. Mian Ram.
	16. Nand Lal.
	17. Narpat Ram.
	18. Om Prakash.
	19. Pritam Singh.
	20. Ram Gopal.
	21. Ravat Singh.
	22. Sat Pal.
	23. Shiv Ram.
	24. Swarn Singh.
6. Pairi	1. Sohan Lal.
7. Rajgarh	1. Jaggar Nath.
	2. Jai Karan.
8. Ratti (Malther)	1. Gurdayal.
9. Sakroha	1. Devakar.
	2. Jiva Nand.
	3. Keshar Ram.
	4. Nand Lal.
	5. Narotam Ram.
	6. Param Dev.
	7. Sunder.
Chichot Tehsil	
1. Bag	1. Jai Dev Ram.
2. Chail Chauk	1. Ram Singh.
3. Fani Pura	1. Maie Ram
	2. Puran.
4. Ghiben	1. Damodar Dass.

Skilled crastsmen—concld.

Mandi District—concld.	
5. Mauhri.	1. Brij Lal.
	2. Changu Ram.
	3. Dhana Ram.
	4. Hem Chand.
	5. Jai Singh.
	6. Nagnu Ram.
	7. Parma Nand.
6. Muratan.	1. Durga.
7. Seri.	1. Bhim Singh.
8. Sianj.	1. Tek Singh.
Karsog Tehsil	
Drahal	1. Paras.
Sarkaghat Tehsil	
1. Brang.	1. Sukh Ram.
2. Baeli Banwar.	1. Dila Ram.
3. Barchhawar.	1. Chanan Ram.
	2. Braham Dass.
4. Biddi.	1. Achhru Ram.
5. Chhatar.	1. Hari Sukh.
6. Haldwara.	1. Nanak Chand.
7. Khanaur.	1. Bhagar Ram.
8. Kufa Balh.	1. Thakur Dass.
9. Lasnana.	1. Sant Ram.
10. Longni.	1. Ramji Dass.
11. Patti.	1. Raghu Ram.
12. Pipli.	1. Bakshi Ram.
	2. Bhagirath.
	3. Bhagat Ram.
	4. Gurdyal.
	5. Nand Lal.
	6. Prithi Chand.
	7. Sohnu Ram.
13. Merhi.	1. Thakur Dass.
14. Sajod Piplu.	1. Jai Ram.
15. Sandhole.	1. Nanak Chand.
16. Thangi.	1. Shiv Dass.
17. Tira.	1. Ram Saran.
Sundarnagar Tehsil	
1. Chambi.	1. Chandu Lal.
2. Dehar	1. Hari Dass.
	2. Krishnu.
3. Jarol.	1. Shiv Ram.
4. Sundarnagar.	1. Baliati Ram.
	2. Chaman Lal.
	3. Chandu Lal.
	4. Dhani Ram.
	5. Dhanvant Singh.
	6. Dhungal Alias Kirpa Ram.
	7. Govind Ram.
	8. Krishan Chand.
	9. Lacnu Ram.
	10. Nar Singh Dass.
	11. Roshan Lal.

Sirmur District	
Nahan Tehsil	
1. Nahan.	1. Het Ram.
	2. Keshar Ram.
	3. Mast Ram.
	4. Om Prakash.
	5. Om Prakash II.
	6. Piyare Lal.
	7. Ram Chandra.
	8. Ram Sarup.
	9. Sohan Lal.
	10. Tara Chand.
Pachhad Tehsil	
1. Sarahan.	1. Amar Nath.
	2. Banarsi Dass.
	3. Hari Mohan.
	4. Ram Saroop.
2. Sarol.	1. Amar Singh.
	2. Hot Ram.
	3. Hira Lal.
	4. Masadi Lal.
	5. Rup Chand.
	6. Rup Lal.
Paonta Tehsil	
1. Amar Kot.	1. Raja Ram.
2. Bhangani.	1. Nasib Chand.
3. Kanshipur.	1. Hans Raj.
	2. Tarsem Lal.
4. Kandon Dugana.	1. Radha Kishan.
5. Majra.	1. Bhagat Ram.
	2. Krishan Chand.
	3. Lohari Ram.
	4. Mohan Lal.
6. Paonta.	1. Jiva Nand.
	2. Kartar Singh.
	3. Surjit Lal.
7. Sainwala.	1. Kishori Lal.
Rainka Tehsil	
1. Andheri.	1. Bhelu.
	2. Mohan Lal.
2. Bandal.	1. Ram Bhuj.
3. Chokar.	1. Tinsoo.
	2. Tunglu.
4. Dadahu.	1. Guru Prasad.
	2. Jyoti Prasad.
	3. Narata.
5. Dana.	1. Besu.
6. Dewana.	1. Moti Ram.
7. Pipli.	1. Lekh Ram.
	2. Sukhi Nand.
8. Tuhari.	1. Chananoo.

ANNEXURE V

DISTRICT-WISE LIST SHOWING COST OF ORNAMENTS FROM 1961 TO 1964.

Name of Article	Silver/Gold	Weight in tolas	Cost of material per tola	Wages for labour per tola	Cost of finished article
1	2	3	4	5	6
BILASPUR DISTRICT					
			Rs. P.	Rs. P.	Rs. P.
Anguthi	Gold	1	140·00	3·00	143·00
Chuk Phul	Gold	3			429·00
Kare, Gajre	Silver	17	2·00	00·25	38·25
Long	Gold	1			143·00
Nath	Gold	1			143·00
Murki	Gold	1	140·00	3·00	143·00
Nam	Gold	1½			214·50
Pajeb	Silver	30	2·00	00·25	67·50
CHAMBA DISTRICT					
Anguthi	Silver	6 Mashas	2·50	0·25	1·37
Bali	Gold	1	146·00	3·00	149·00
Bangles	Silver	16	2·50	0·25	44·00
Bragar		4			11·00
Bugdi	Gold	1	146·00	3·00	149·00
Buttons		2			5·50
Chandi Doru	Silver	10			27·50
Chonk phul	Silver	6			16·50
Champkali	Silver	20	2·50	0·25	55·00
Dodmala	Silver	25			68·75
Ghogharli bangani	Silver	10			27·50
Golan	Silver	20			55·00
Hanseri		60			165·00
Jantar	Gold	4	146·00	3·00	596·00
Jhanjar	Silver	20	2·50	0·25	55·00
Kanganu	Silver	50			137·50
Kantha	Gold	1½	146·00	3·00	223·50
Long or murki	Gold	9 Mashas	146·00	3·00	111·75
Mahel	Gold	30			82·50
Mang Tikka	Gold	1½			223·50
Maridari	Silver	15	2·50	0·25	41·25
Manjeeri	Silver	12			33·00
Nam	Gold	9 Mashas			111·75
Nath	Gold	2	146·00	3·00	298·00
Nanties	Gold	6 Mashas			74·50
Pajeb (Anklet)	Silver	40	2·50	0·25	110·00
Phuli	Gold	3 Mashas	146·00	3·00	37·25
Tokas	Silver	15			41·25
Sabihi	Silver	45	2·50	0·25	123·75
KINNAUR DISTRICT					
Bala or Long	Gold	½	130·00	3·00	66·50
Balu	Gold	5			665·00
Bang Pole	Gold	2			266·00
Bitri	Gold	20			2660·00
Chak	Gold	4			532·00
Chander-sen-Har	Silver	200	2·00	00·25	450·00
Daglo	Silver	200			450·00
Digra	Silver	7			15·75
Jumku	Silver	3			6·75
Tungma	Silver	5			11·25
Kantali	Silver	13			29·25
Kunthi	Silver	15			33·75
Khundoch	Gold	½	130·00	3·00	66·50
Kontaie	Silver	5	2·00	00·25	11·25
Moolu	Silver	4		00·50	10·00

District-wise list showing cost of ornaments from 1961 to 1964—contd.

1	2	3	4	5	6
		KINNAUR DISTRICT—*contd.*			
			Rs. P.	Rs. P.	Rs. P.
Mundi	Silver	9 Mashas	2·00	00·50	1·87
Murki	Gold	1½	130·00	3·00	199·50
Shangling	Silver	50			112·50
Tanol	Silver	16			36·00
Tokhose, Taro	Silver	10	2·00	00·25	22·50
Tomukch	Silver	12			27·00
Tramole	Gold	2	130·00	3·00	266·00
Jutti	Silver	24	2·00	00·50	60·00
		MAHASU DISTRICT			
Ambli	Gold	3		2·00	441·00
Balu	Gold	3	145·00	3·00	444·00
Balak	Gold	1		8·00	153·00
Bragar	Gold	2		5·00	300·00
Bangles		5			15·00
Band	Silver	12			36·00
Shangli	Silver	3	2·50	00·50	9·00
Chak	Silver	3			9·00
Chandersain Har	Silver	60			180·00
Darotu	Gold	1	145·00	4·00	149·00
Dora	Silver	20			60·00
Dhagla	Silver	30			90·00
Jutti or Pranda	Silver	40	2·50	00·50	120·00
Jugnu	Silver	3			9·00
Kantalli or Bali	Gold	2	145·00	3·00	296·00
Khundi	Gold	6 Mashas			74·00
Kanbichai	Gold	1	145·00	3·00	148·00
Kanthi	Silver	25			75·00
Kach	Silver	20	2·50	00·50	60·00
Khagli	Silver	20			60·00
Long/Phulli	Gold	9 Mashas	145·00	3·00	111·00
Lion nails	Silver	10	2·50	00·50	30·00
Murki	Gold	3	145·00	3·00	444·00
Mungri	Gold	1			148·00
Maridu	Silver	15	2·50	00·50	45·00
Nath	Gold	1	145·00	6·00	151·00
Panjebs	Silver	50			150·00
Pollari	Silver	1	2·50	00·50	3·00
Anguthi	Silver	6 Mashas			1·50
Anguthi	Gold	6 Mashas	145·00	3·00	74·00
Tabit	Silver	15	2·50	00·50	45·00
Tili	Gold	1 Masha	145·00	3·00	12·33
		MANDI DISTRICT			
Angoothi	Gold	½	140·00	3·00	71·50
Arsi	Gold	1			143·00
Baloo	Gold	3			429·00
Blak	Gold	3	140·00	3·00	429·00
Besar	Gold	4			572·00
Chak	Gold	4			572·00
Chuda	Silver	10	2·00		35·00
Churian	Silver	2	2·00	1·50	7·00
Chandersain Har	Silver	60	2·00		210·00
Phul	Gold	1	140·00	3·00	143·00
Gajru	Silver	20			2860·00
Hamel	Silver	40	2·00	1·50	140·00
Jhanjhar	Silver	10			35·00
Kanty	Gold	3	140·00	3·00	429·00

District-wise list showing cost of ornaments from 1961 to 1964—concld.

1	2	3	4	5	6
		MANDI DISTRICT—*contd.*			
			Rs. P.	Rs. P.	Rs. P.
Kanthi	Gold	2	140·00	3·00	286·00
Kangnu	Silver	20	2·00	00·25	50·00
Long	Gold	1			143·00
Moorki	Gold	2			286·00
Nanti	Gold	½	140·00	3·00	71·50
Nam	Gold	1½			214·50
Panjeb	Silver	20	2·00	0·50	50·00
Pair ful	Silver	1			2·50
Salagan	Gold	4	140·00	3·00	429·00
Sanyali	Silver	3	2·00	0·50	7·50
Shakuntala Chain	Silver	10	2·00	0·50	25·00
		SIRMUR DISTRICT			
Anguthi	Silver	1	2·00	00·25	2·25
Baju Band	Silver	15	2·00	00·25	33·75
Balak	Gold	1	140·00	3·00	143·00
Chak	Silver	4	2·00	00·25	9·00
Darotu	Gold	1	140·00	2·00	142·00
Kach	Silver	8	2·00	00·25	18·00
Kangan	Silver	20			45·00
Long	Gold	½	140·00	3·00	71·50
Lurka	Gold	1 Masha			12·00 approx.
Ranshli	Silver	18	2·00	00·25	40·50
Tilli	Gold	3 Mashas	140·00	3·00	36·00

ANNEXURE VI

VILLAGE SCHEDULE OF INDUSTRIES AND CRAFTS

District ——— Sub-Division/Tehsil/Sub-Tehsil ———
P.S. ——— N.E.S. Block (if any) ———
Village ———

GENERAL DESCRIPTION OF VILLAGE

Part A

Describe briefly:

(*i*) Area of the village in acres . . . . . (*i*) ———

(*ii*) Population of the village . . . . . (*ii*) ———

(*iii*) Approximate number of families in the village . (*iii*) ———

(*iv*) Various sections in the village corresponding to communities and their names . . . . . (*iv*)

	Name of community	*Name of community*
(*a*)	———	(*e*) ———
(*b*)	———	(*f*) ———
(*c*)	———	(*g*) ———
(*d*)	———	(*h*) ———

(*v*) Distance of the village from nearest Railway Station (miles) . . . . . (*v*) ———

(*vi*) Distance of the village from nearest Motor road (miles). (*vi*) ———

(*vii*) Distance of the Village from P.S./Tehsil/Sub-Tehsil/Sub-Division headquarters (miles) . . . . (*vii*) ———

(*viii*) Is there an Industrial/Crafts, Cooperative Society in the village? Write the name of the Co-operative Society and Specify names of communities and Castes who are its members . . . . . (*viii*) (*a*) Name of Society: ———

(*b*) Members . 1. ———
2. ———
3. ———
4. ———
5. ———

Part B-I

Artisan communities in the village (Tribal and Non-Tribal)

Name of Caste or Community	Approximate number of families in each Community	Total number of Adult Workers in each Community		Number of families of each community working under cooperation	Number of families of each Community working in own houses or in workshops set up by their employees	Are there any villages in the neighbourhood where branches of these communities live? If so, give name of Village (s)
		Males	Females			
1	2	3	4	5	6	7

Part B-II

Industry or Craft Practised by each community

*1. (*a*) Name of Artisan Community ———
(*b*) When did the community come to this village? ———

2. (*a*) Name of Industry/Craft ———
(*b*) How old is this Industry/Craft in this village? ———
Who were the patrons? ———

	Name of articles produced in the Industry/Craft. Describe the articles and mention approximate sizes and heights	Is the article produced for community's own use entirely? Describe whether for domestic or ceremonial purposes	Is the article produced entirely for other communities in exchange for money or Kind? If so, who are the customers and to which communities do they belong? (i) Are they for domestic use? (ii) Are they for ceremonial or ritualisti purposes? . so, for wh L ceremony [er ritual?	Is the article produced for sale in open markets—Hats and Melas? Mention the markets, Hats or Melas and the occasions	Is the article made to the order of middle men who advance money and undertake marketing facilities	Main material used for each article and its cost.
	1	2	3	4	5	6
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

*Describe legends or myths current on the origin of the community.

	Subsidiary material used for each article and its cost	Whether material used is imported and if so, from where? Specify names of materials imported	Quantity of main materials used in manufactures of each article and percentage value of subsidiary material	Who gives the designs? (Specify for each article)	Give the names of the designs and myths or stories behind the names, i.e., explanation of what the design stands for and the shape or decoration of objects	Describe colours used. How are the colours obtained?	Out-put per head per week/month by skilled craftsman
	7	8	9	10	11	12	13
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							

REMARKS: 1. Nature of Industry/Craft. (a) Seasonal/Perennial ——
(b) If Seasonal what other subsidiary profession the community is engaged on. (Specify name of profession) ——

2. Nature of Employment Industry/Craft. (a) No. engaged part-time (during work season) ——
(b) No. engaged full time (during work season) ——

3. Difficulties in Development of Industry ——

4. Prospects of Industry ——

Part B-III

General Description of workshop and Tools used in the Industry Craft.

1. Name of Artisan Community ——————

2. Name of Industry/Craft ——————

Tools used (Describe tools. Give pencil sketches and photographs separately.	Who make these tools and from where are they imported?	General description of workshop (use separate sheet of paper if necessary).
1	2	3
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Part B-IV

Production progress of each Article

1. Name of Artisan Community ——————

2. Name of Industry/Craft ——————

3. Name of Article Produced ——————

1. Describe production . . . . . .

(Please describe stage by stage and take photographs wherever possible. Photographs should be supplemented by pencil sketches of surface forms, designs, shapes, colours and processes of paper if necessary for sketches of stages)—

(*i*) First Stage . . . . . .

(*ii*) Second Stage . . . . . .

(*iii*) Third Stage . . . . . .

(*iv*) Final and finishing Stage . . . . . .

2. (*i*) Total price of material used for the article . . . .

(*ii*) Cost of conversion into finished products (wages etc.) . .

(*iii*) Usual sale price of finished products . . . . .

Part B-V

List of skilled craftsmen

1. Name of Artisan Community———————————————————————

2. Name of Industry ———————————————————————

Give a list of very skilled craftsmen of each community	Period for which craftsman is occupied in his trade in a year and number of hours per day	Wages earned (Average per month for each craftsman)
1	2	3

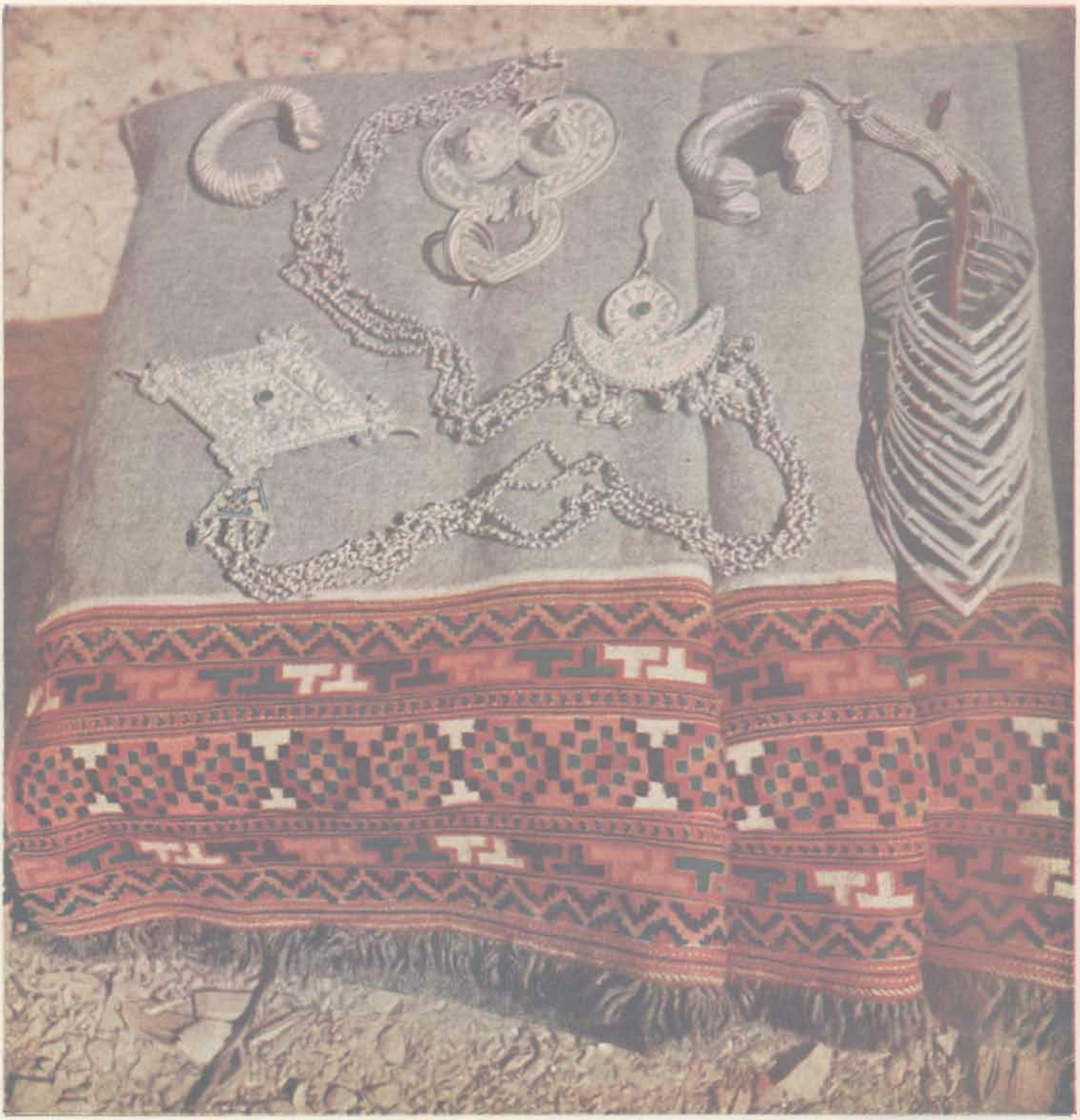
M/P(D)18CO(HP)—1,000—4-7-67—GIPS



Silver tea pot, cups and a shawl



Ornaments and exquisite shawl



Kinnauri silver ornaments, and a woollen dhoru showing Chamang teko a popular design

Lovely Princesses of Bushahr



With typical ornaments

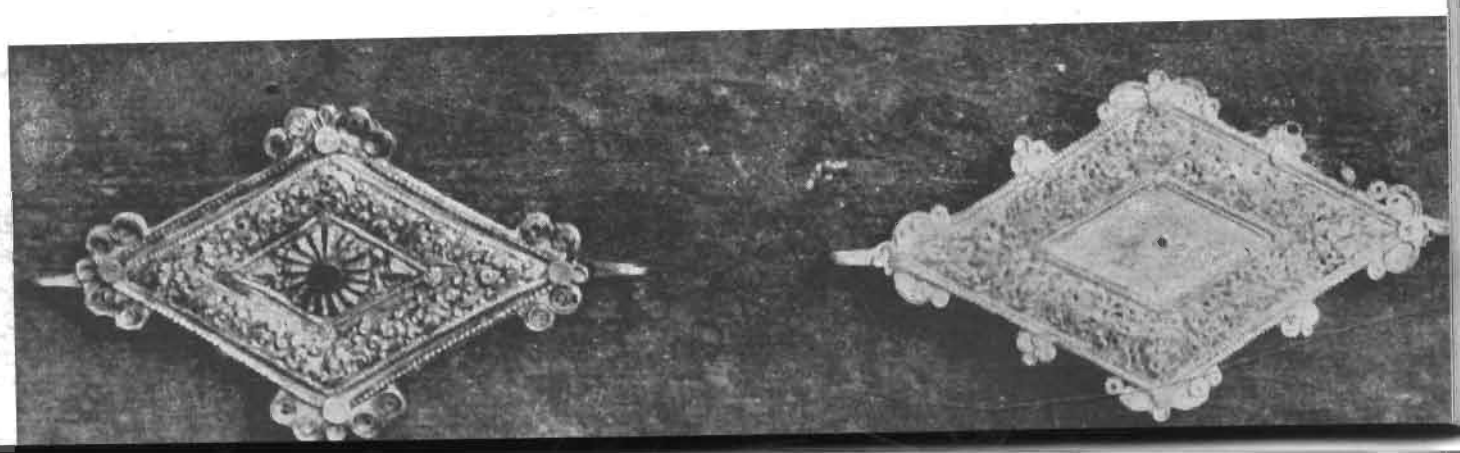


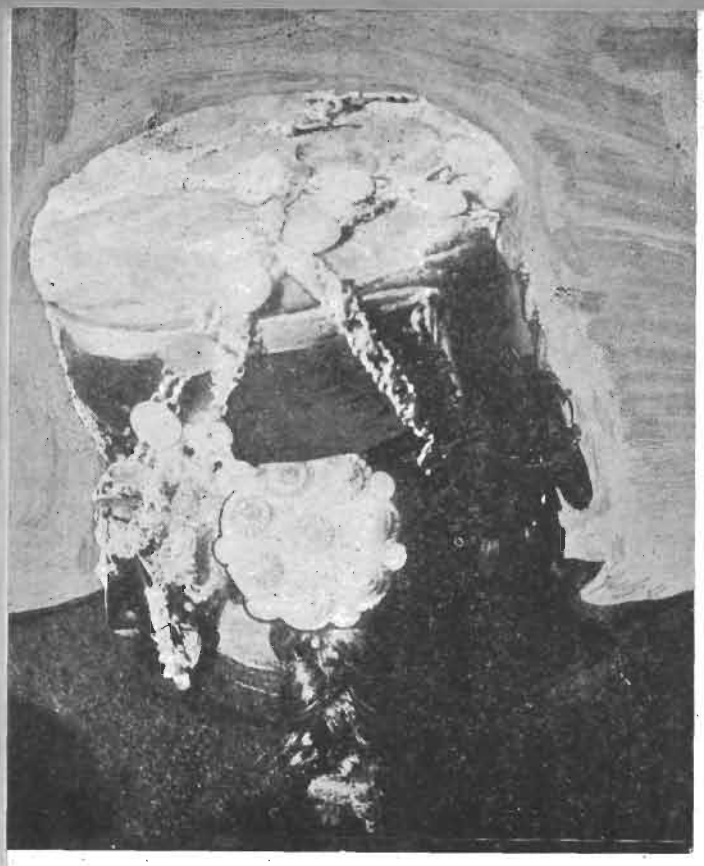
Ornaments worn during Phulaich—Kinnaur



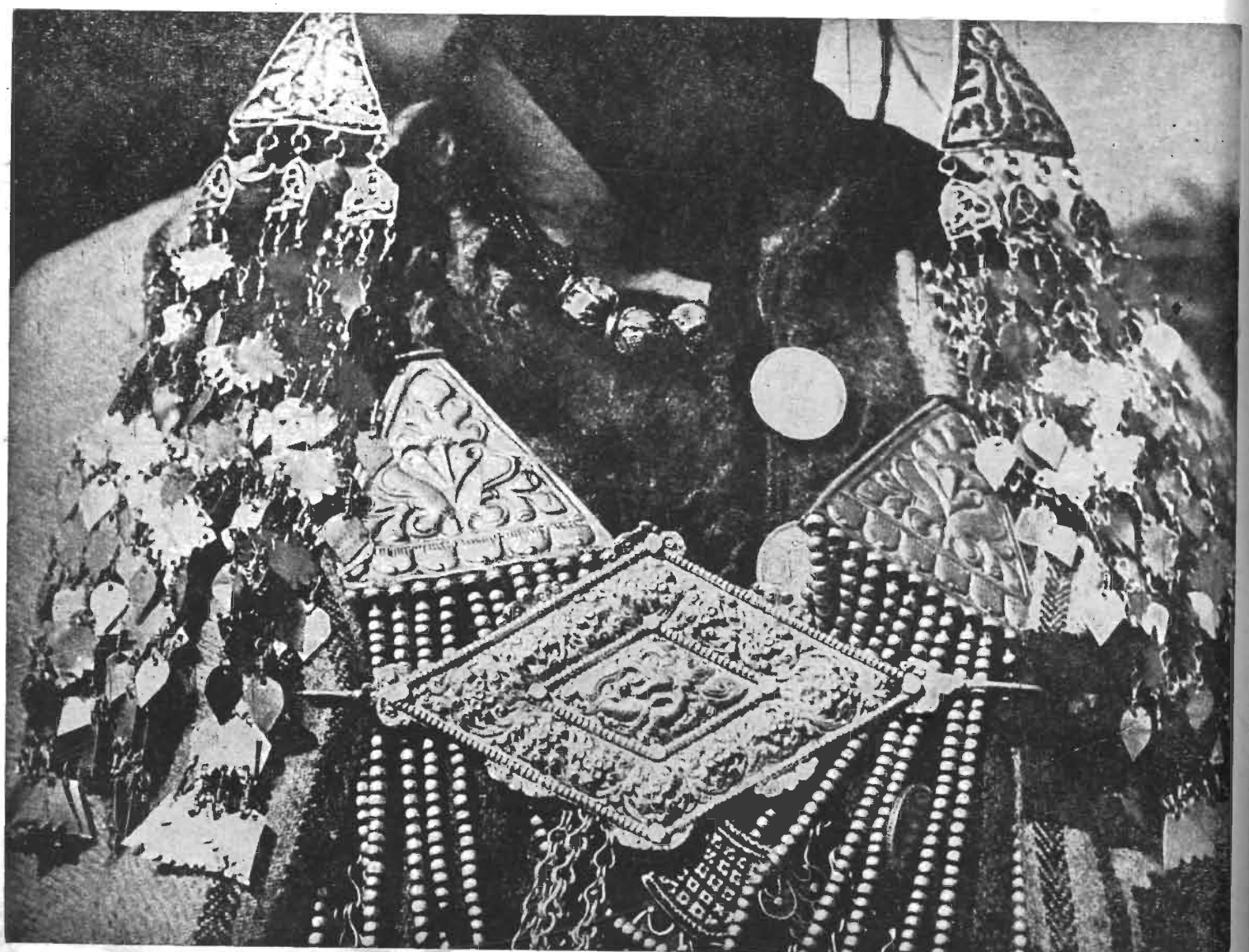
A beautiful lot of Kinnauri ornaments

Digra





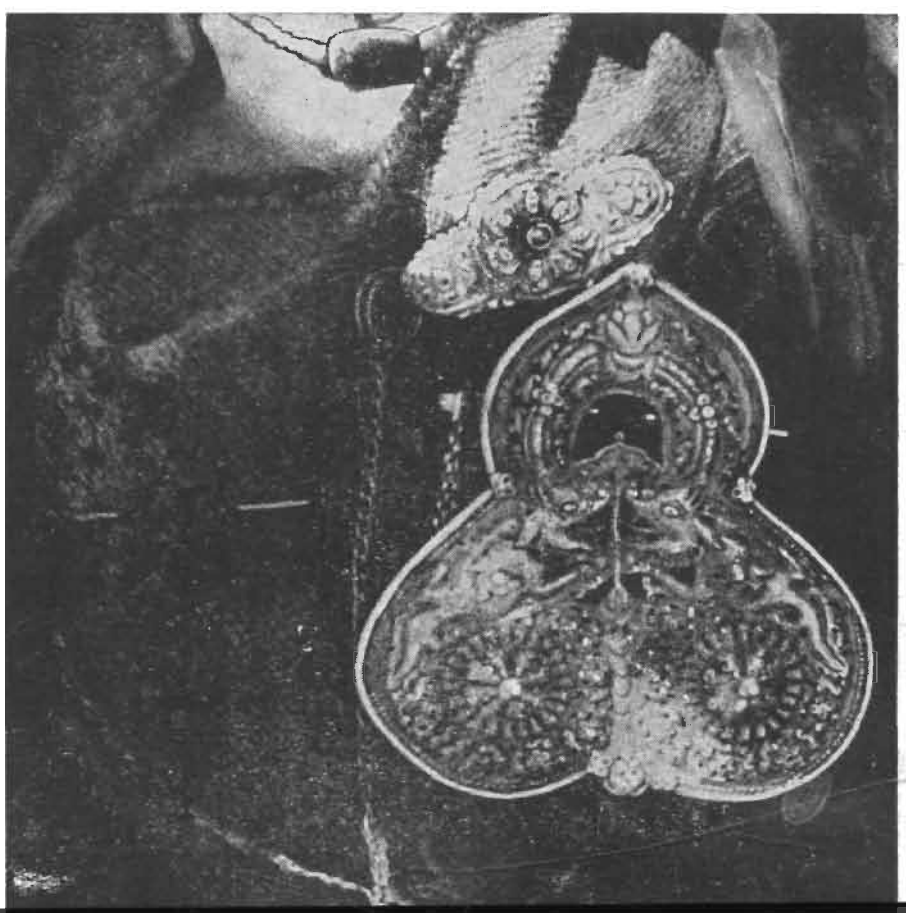
Kinnauri Chak



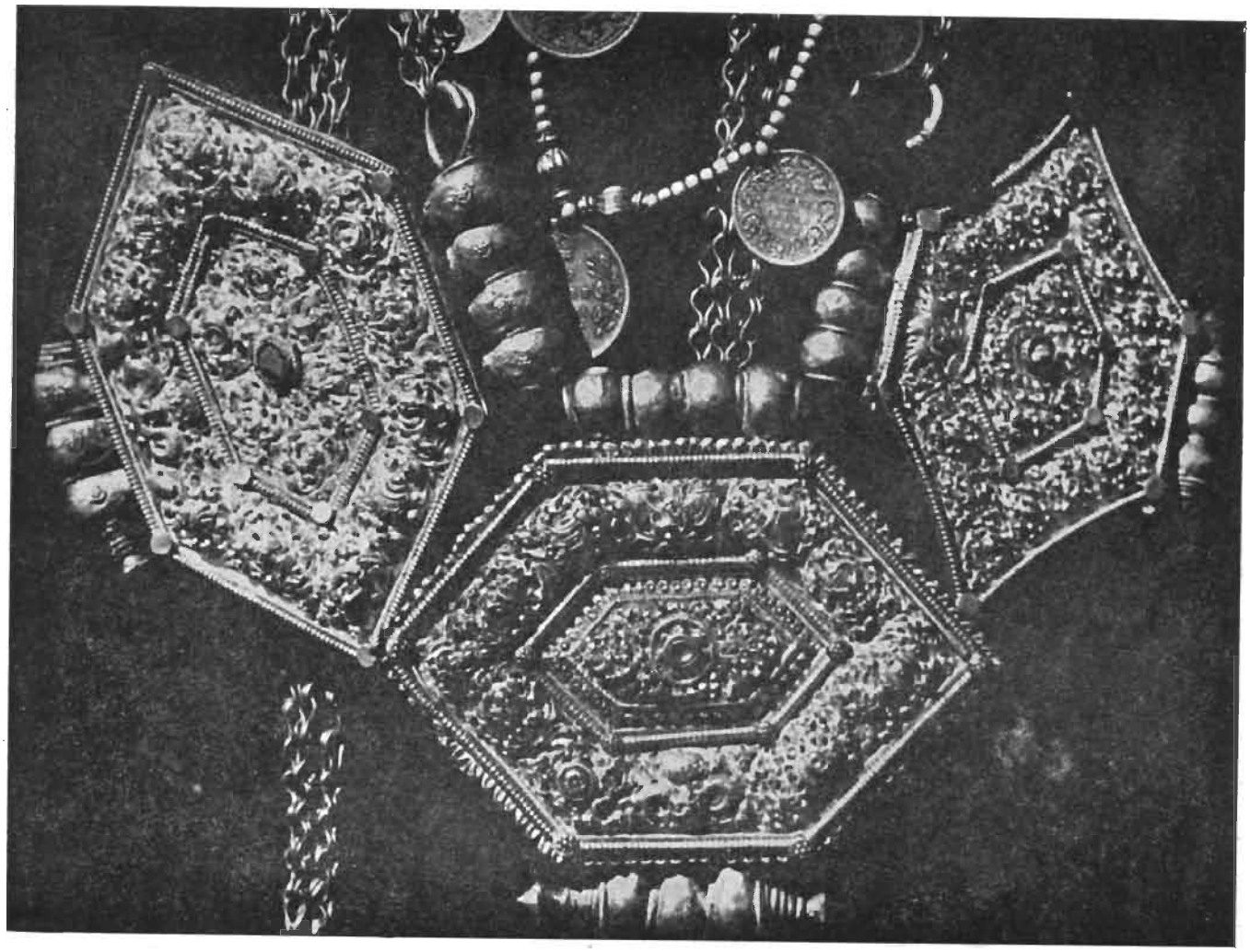
Digra and other Kinnauri ornaments



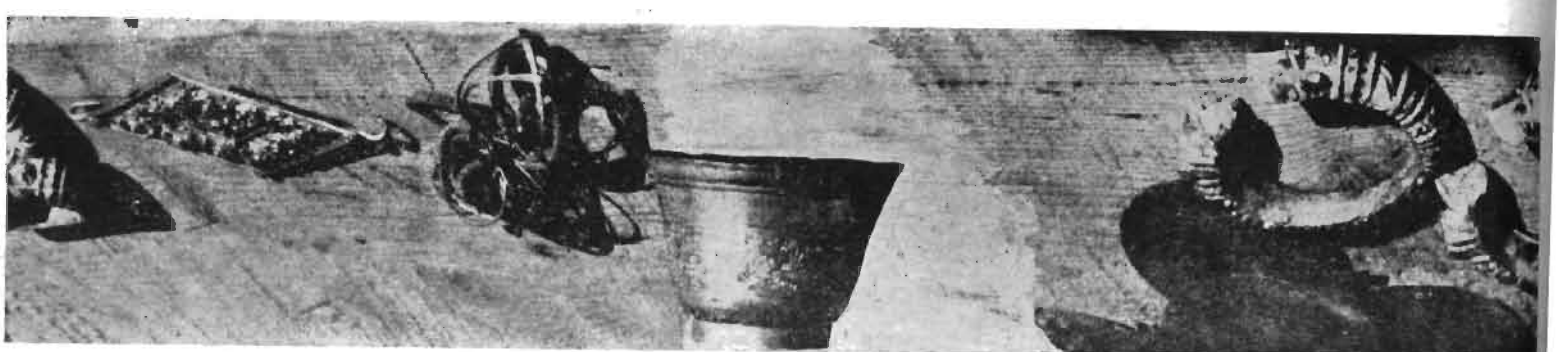
Tomukch



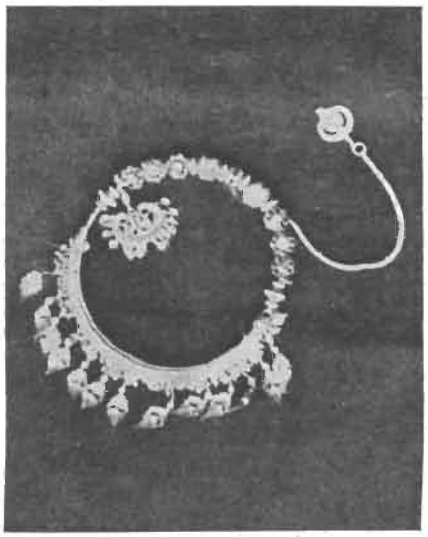
Tomukch or Bamnu



Shatingma or Mulgawoo

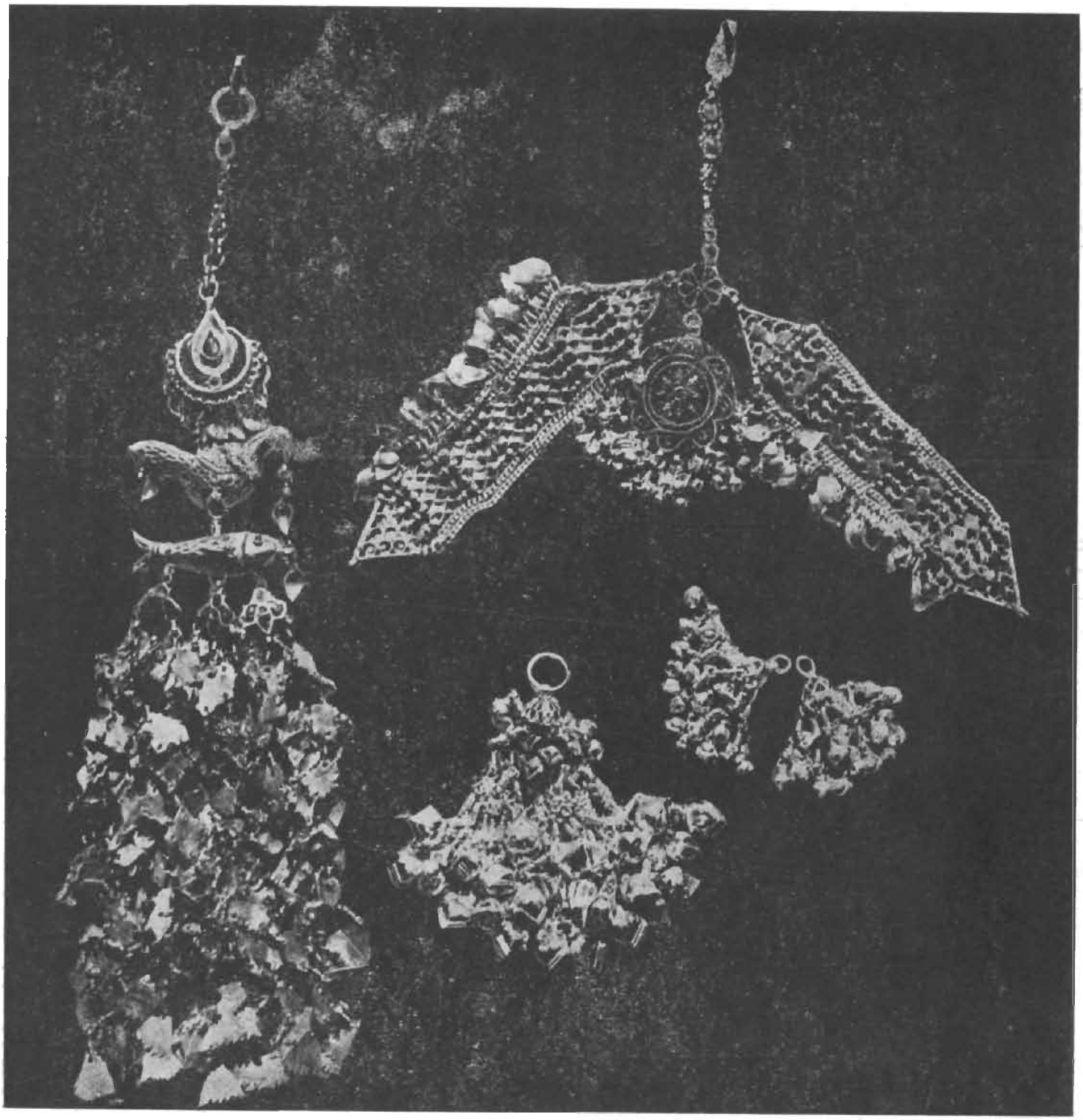


Digra *Kantai* *Silver cup* *Dhagla*

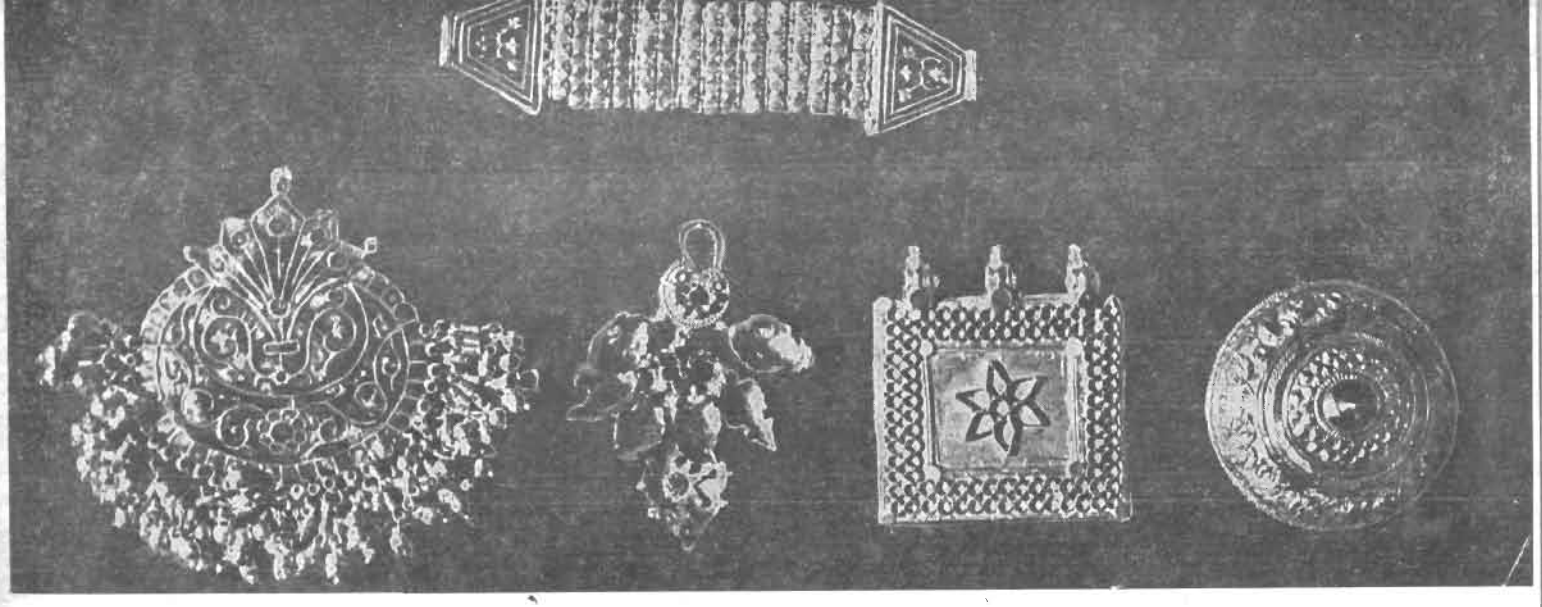


Balu

Festive dress and Ornaments from Arki

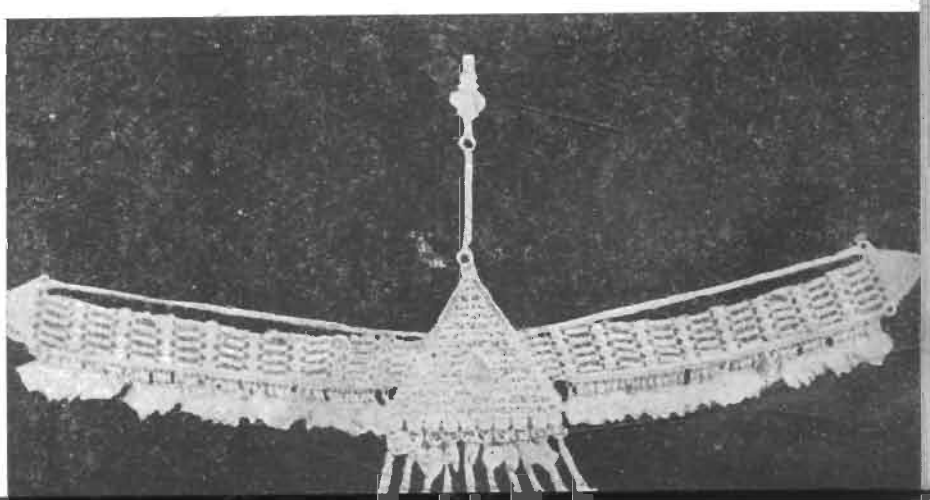


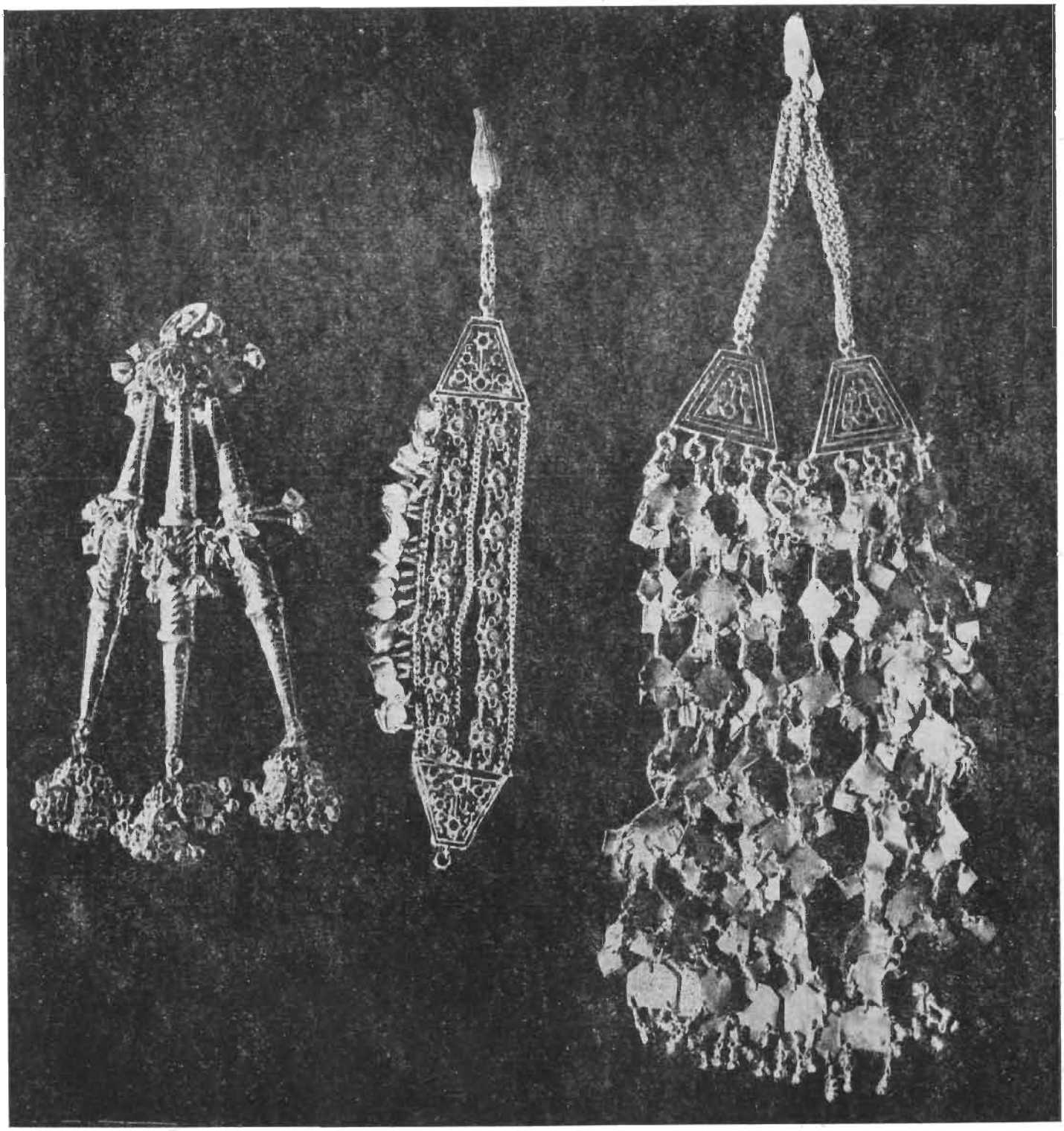
Dora or Chiri



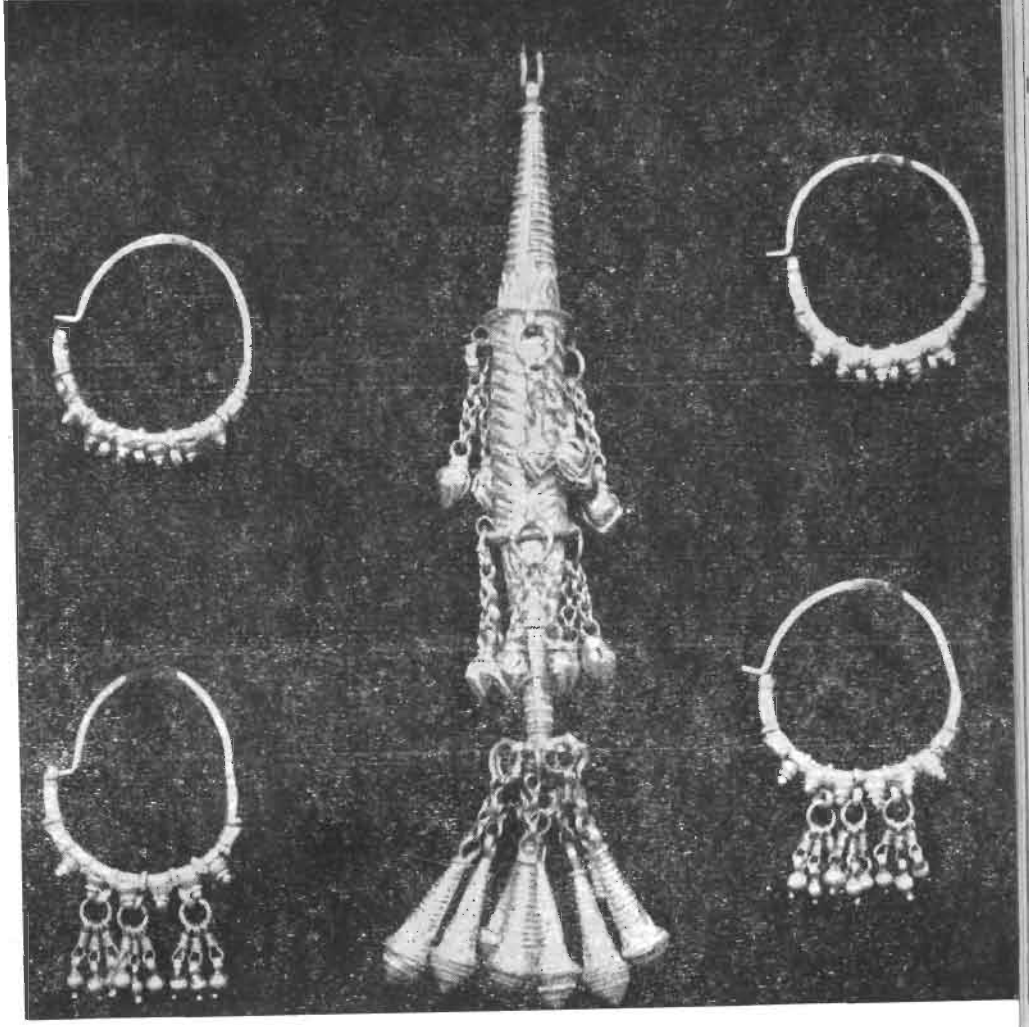
Kach, teek, bulak, chauki and chak

Dora or Chiri





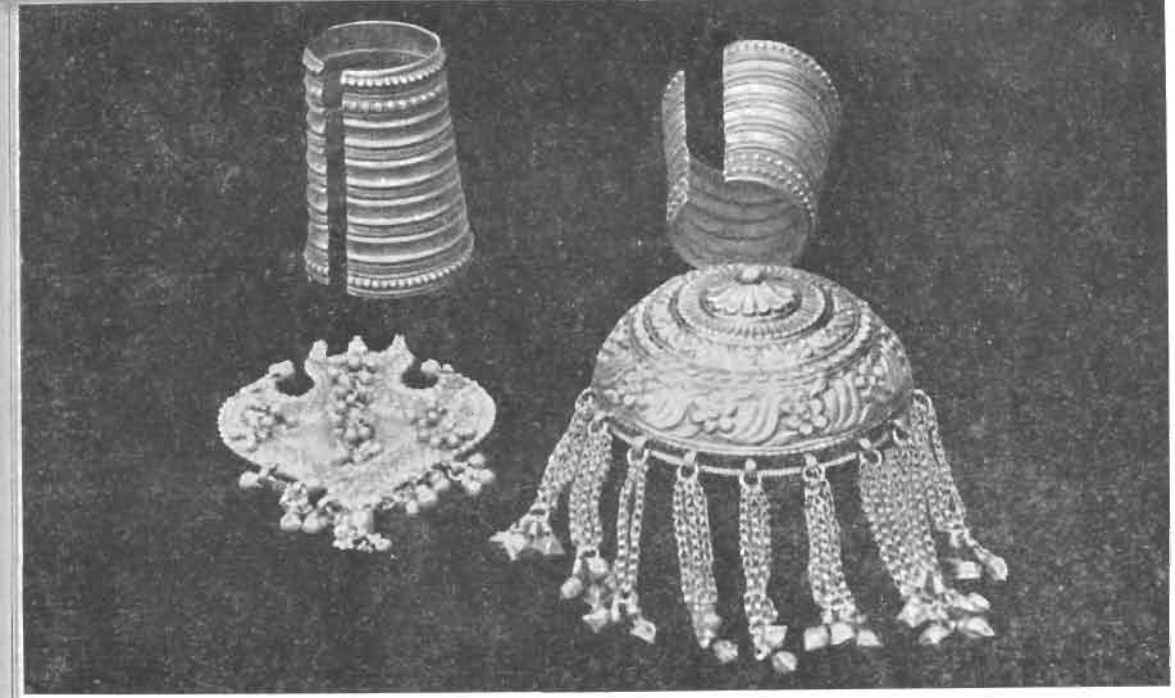
Jutti Dora, and Mul-u 14



Dandi and Jutti



Jhak and Chakphul



Chura Chauki and Chak

Jutti and Gatra-a waist ornament



Karolu for the nose

and

Mungri for the ears



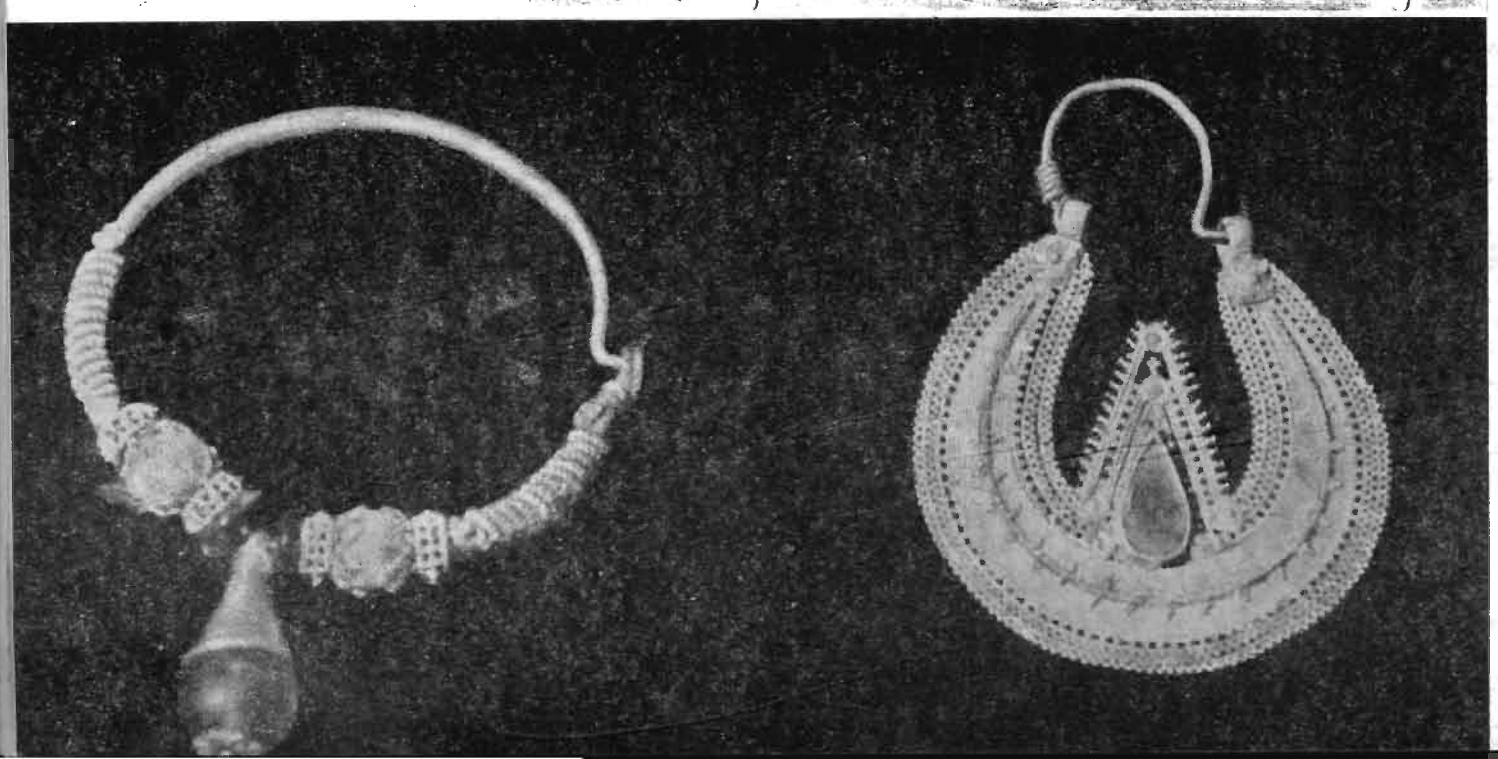


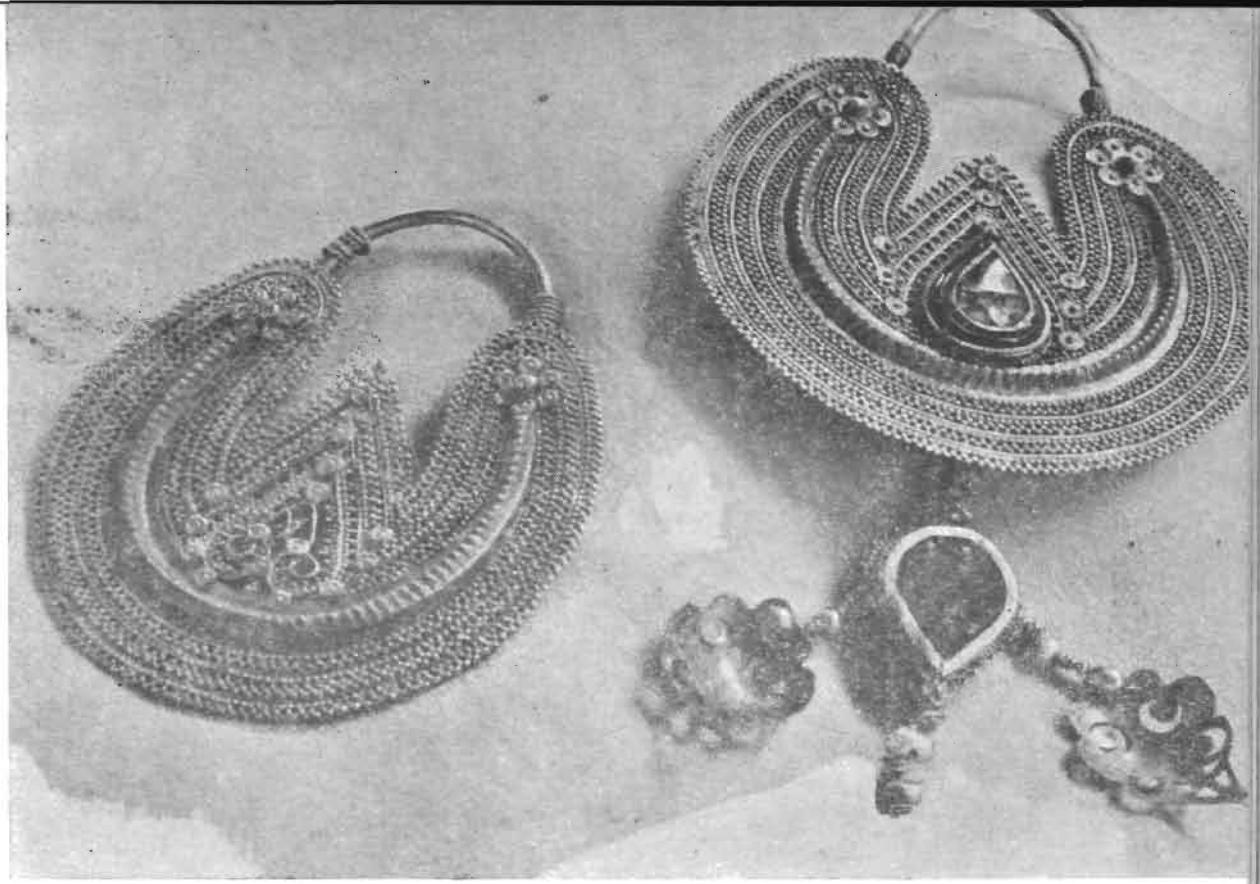
Jutti



Designs prevalent in Rohru

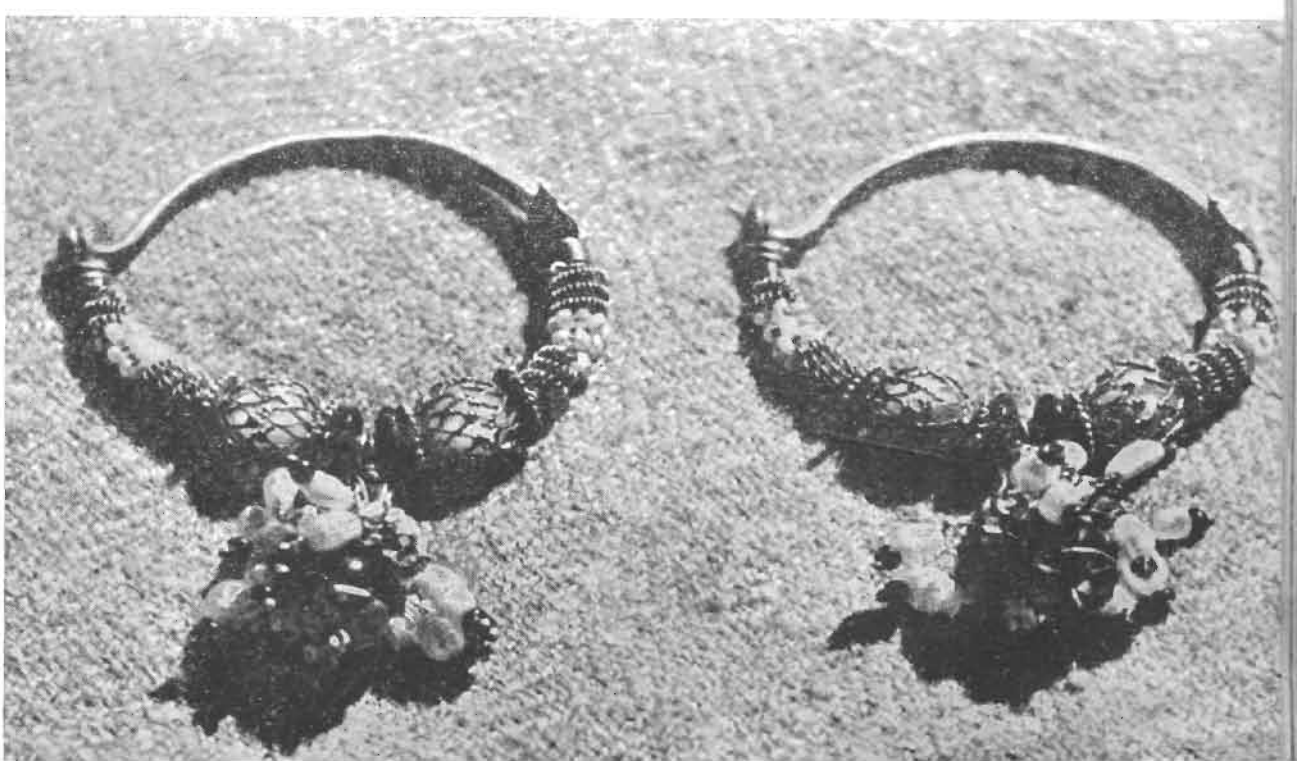
Bragar and Murki





Murki and Bulak

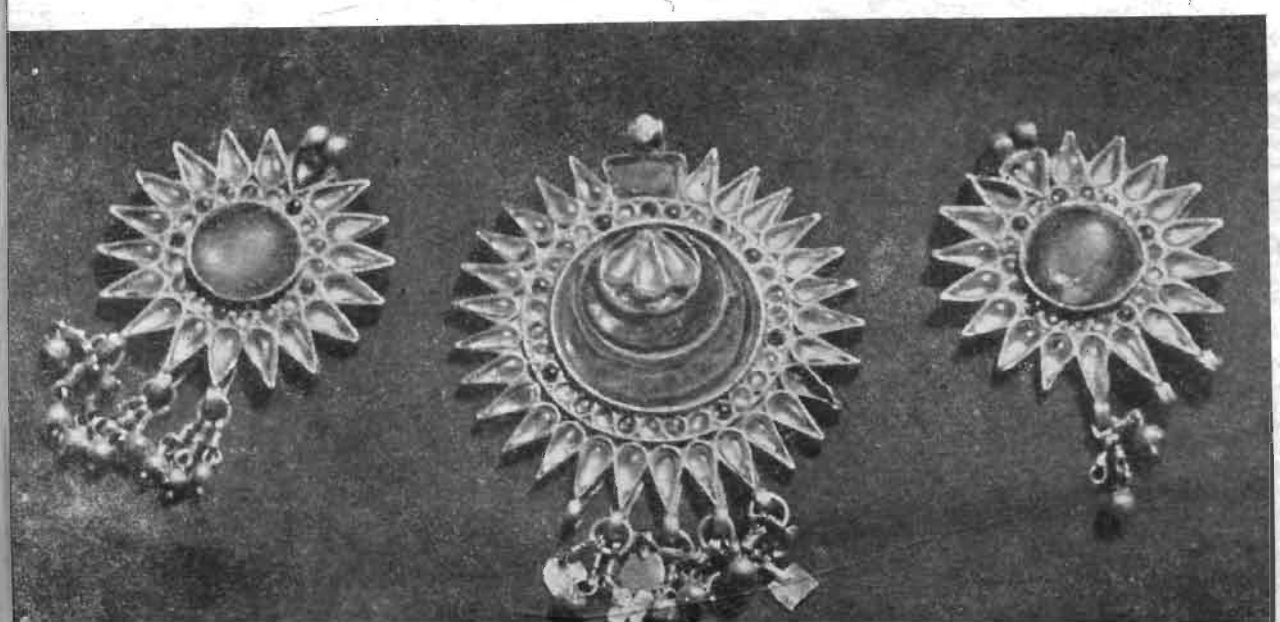
Bragar





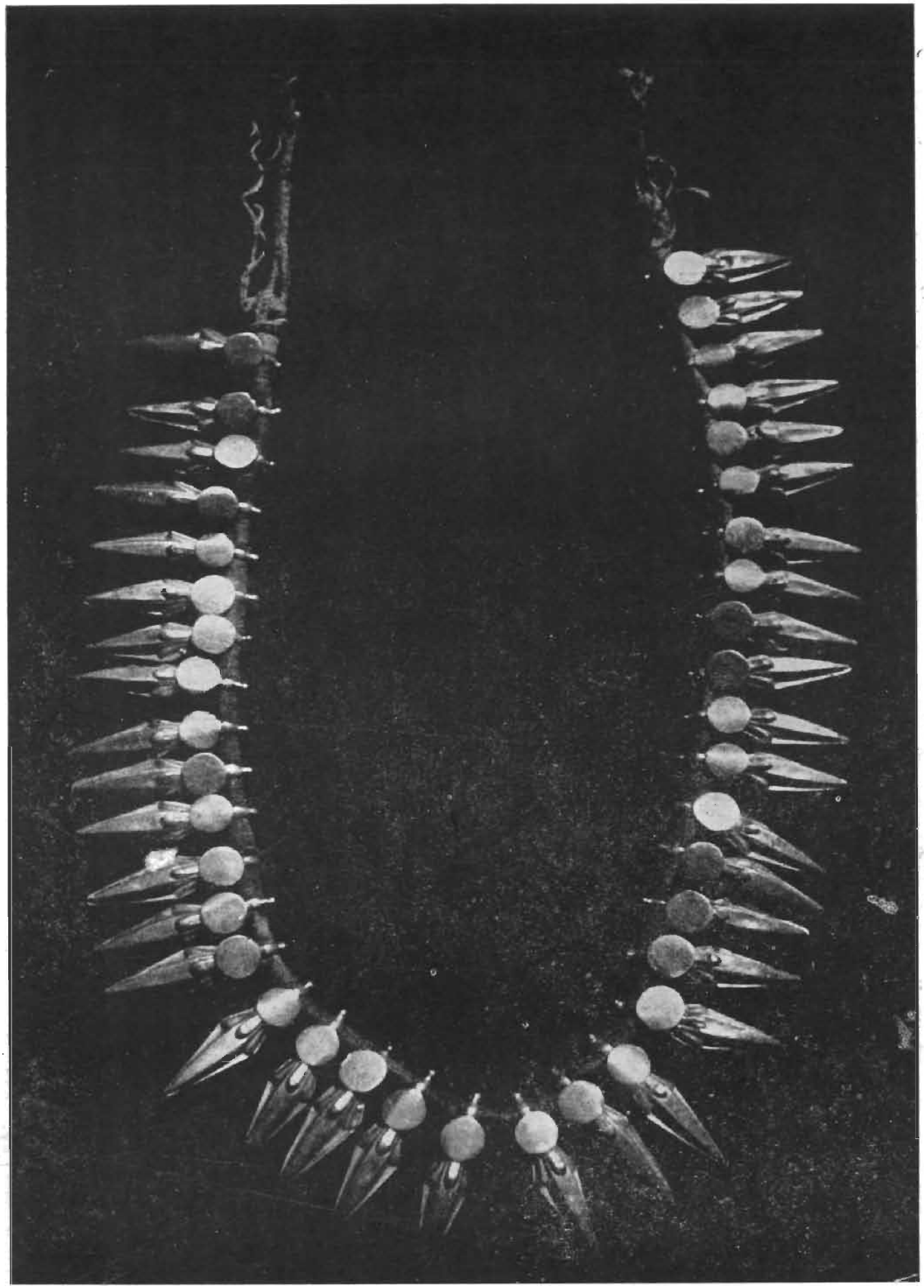
Murki, Bragar and Kanbichai

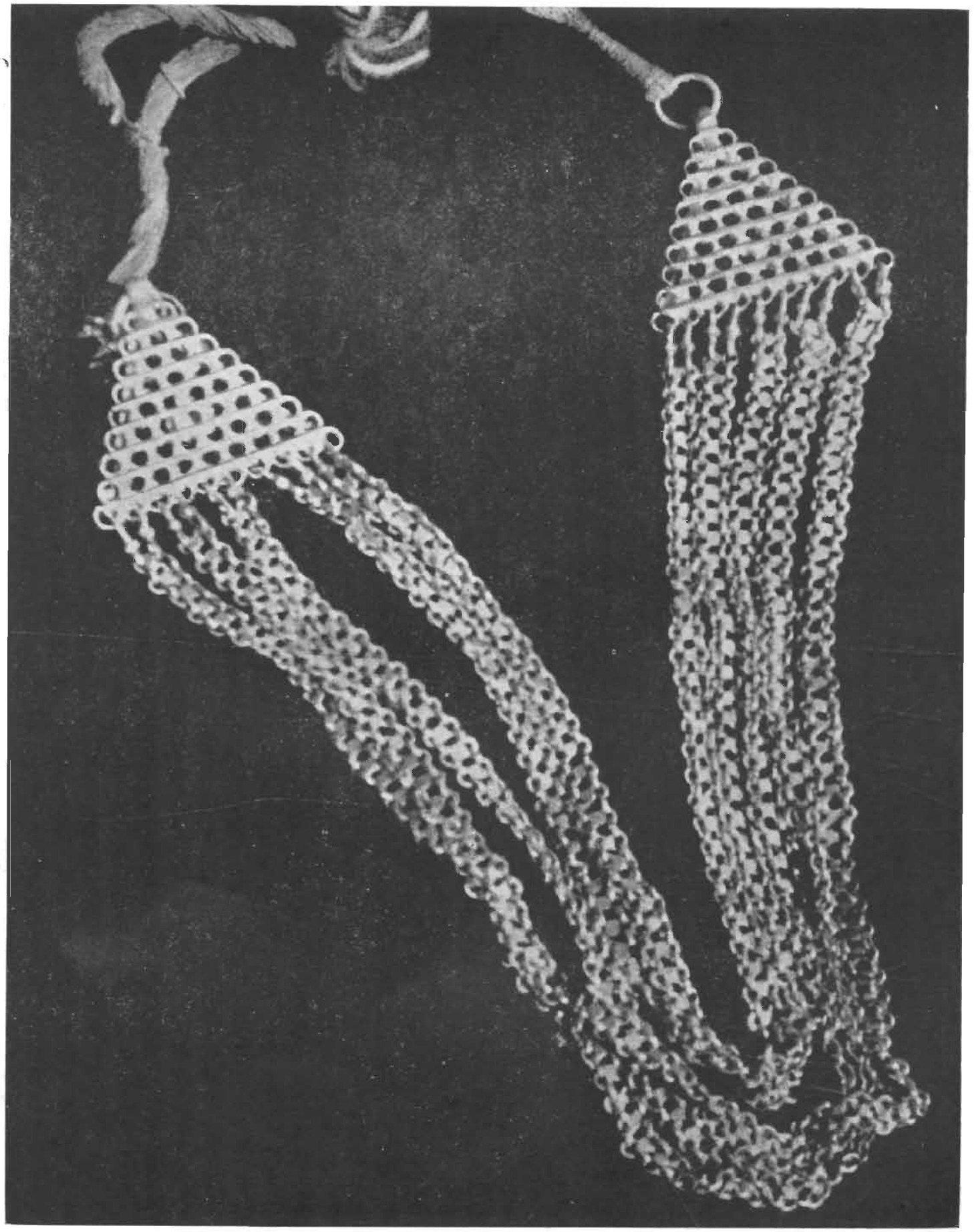
Tops

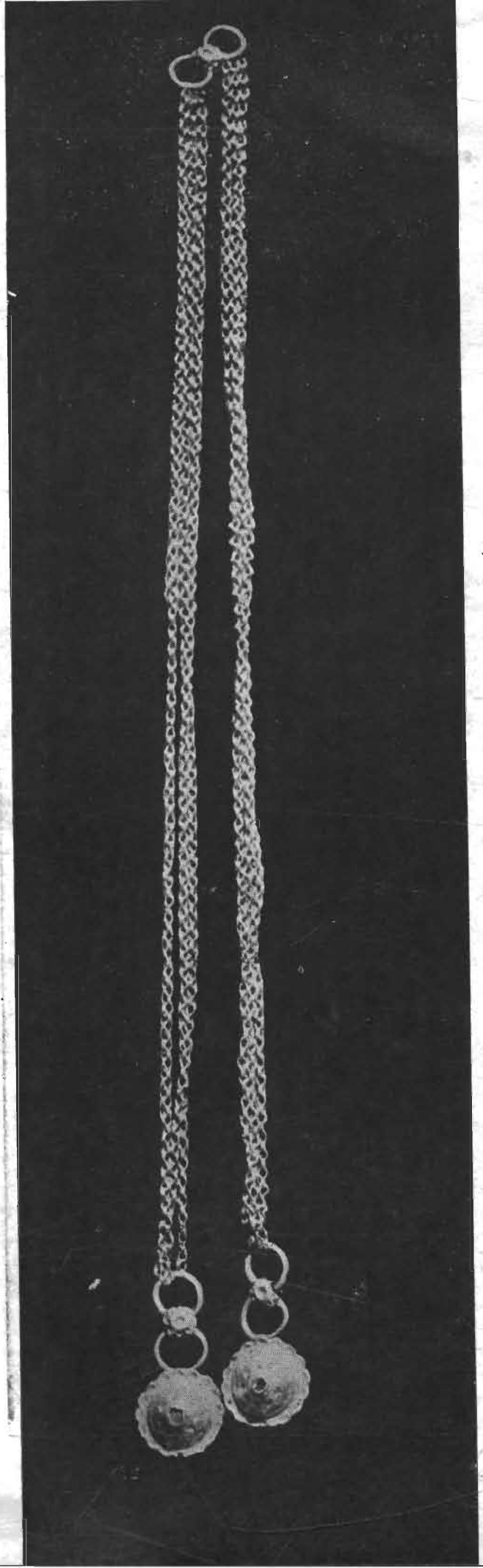


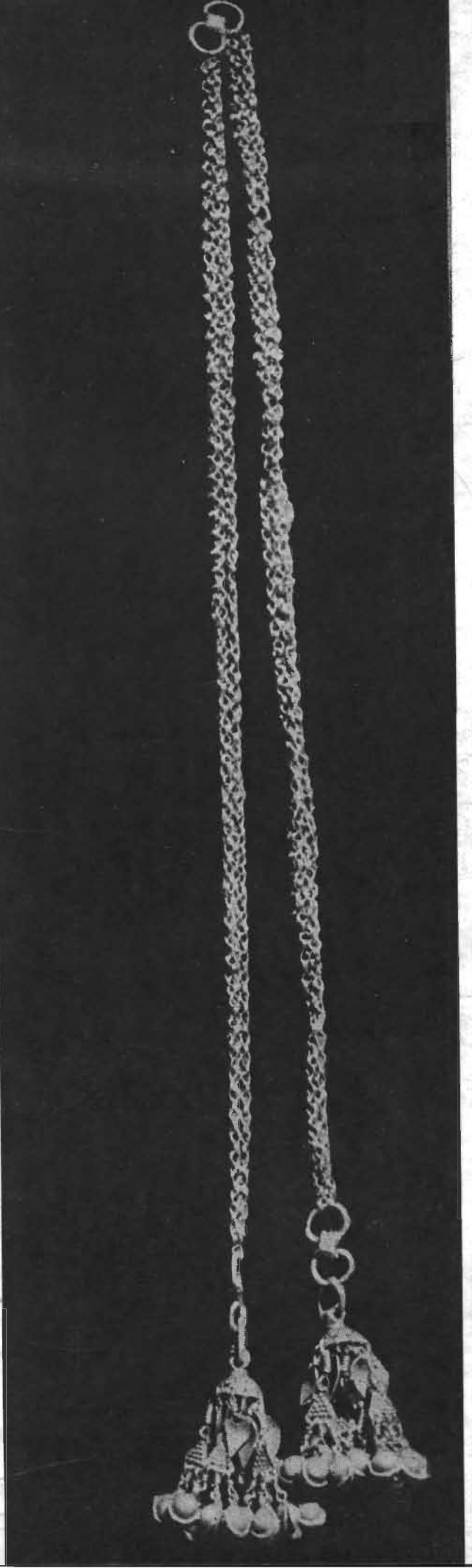


Fair from Dodra Kawar with typical ornaments

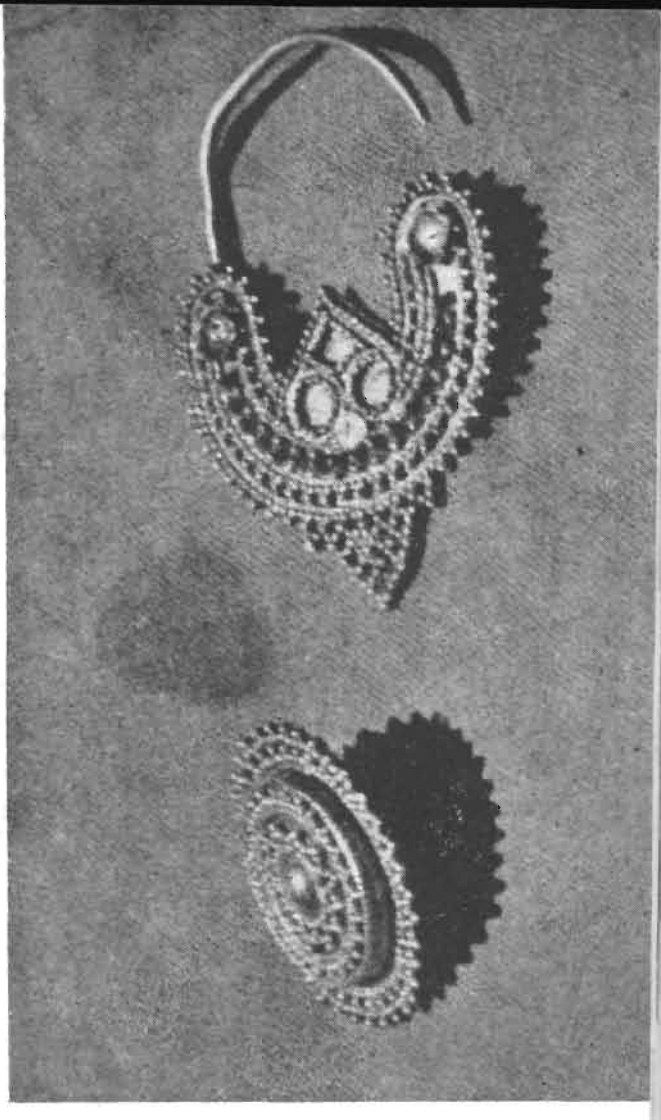








Silver Chains



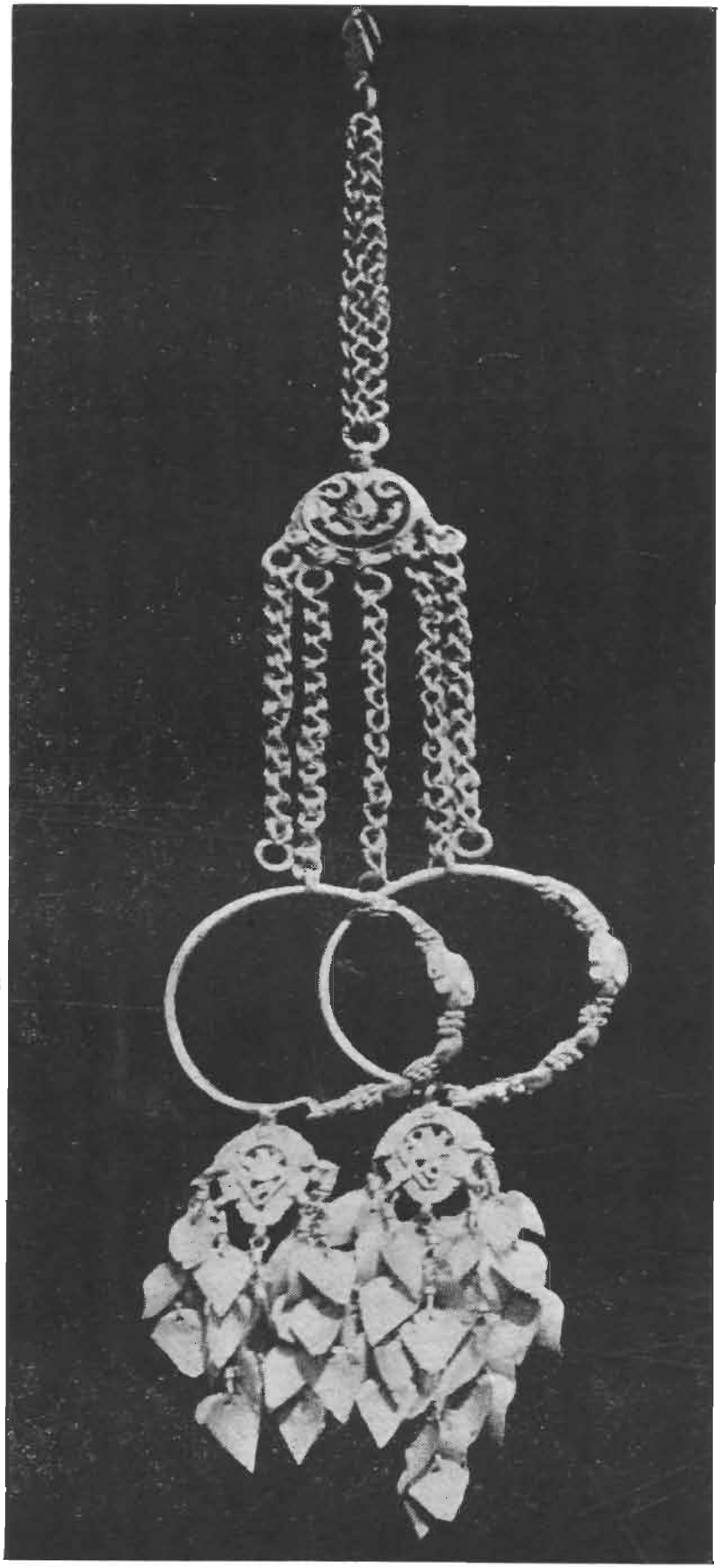
Karolu and laung



Wearing ornaments from Rampur



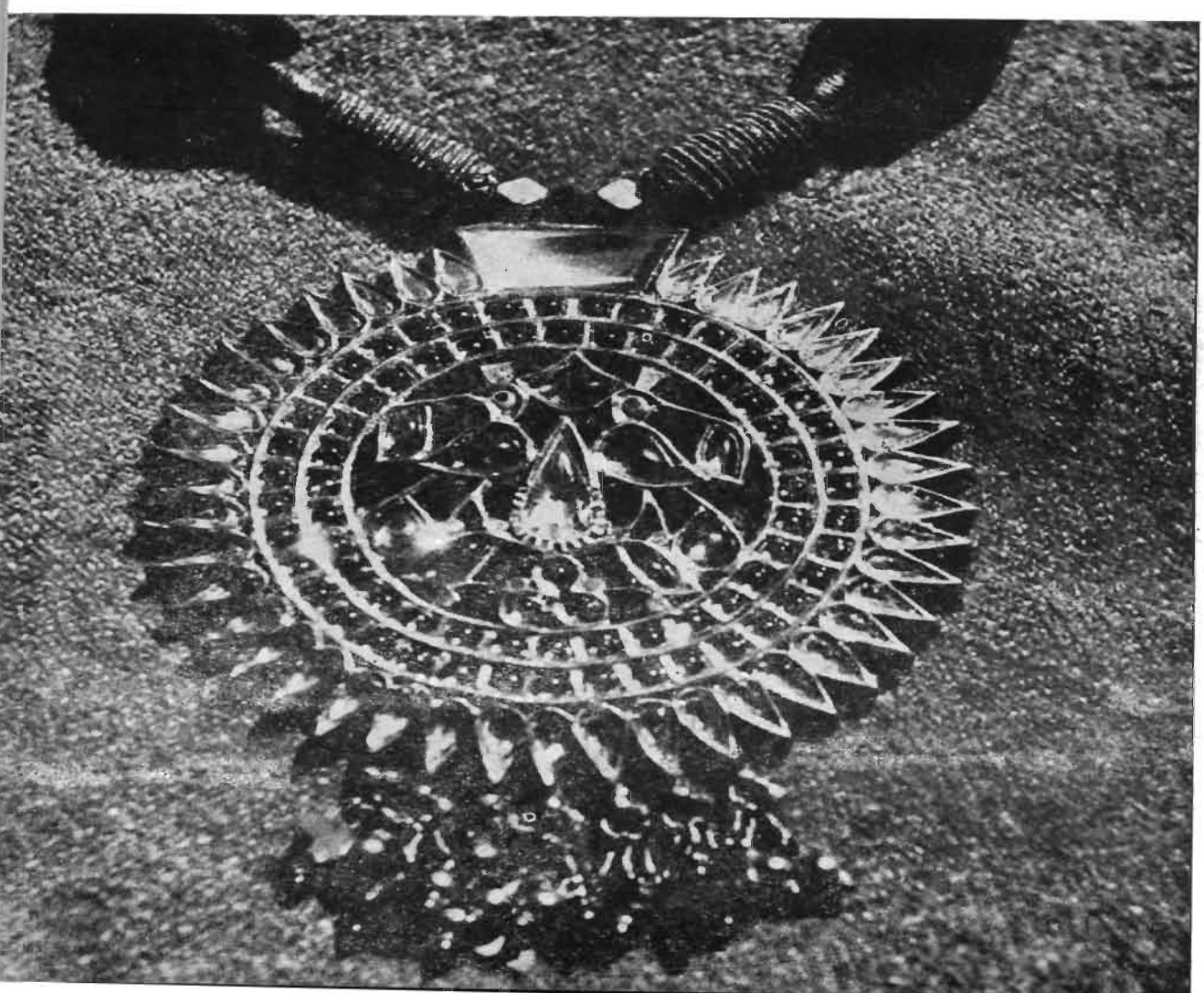
Inmeats ornaments from Dodra Kawar



Earrings



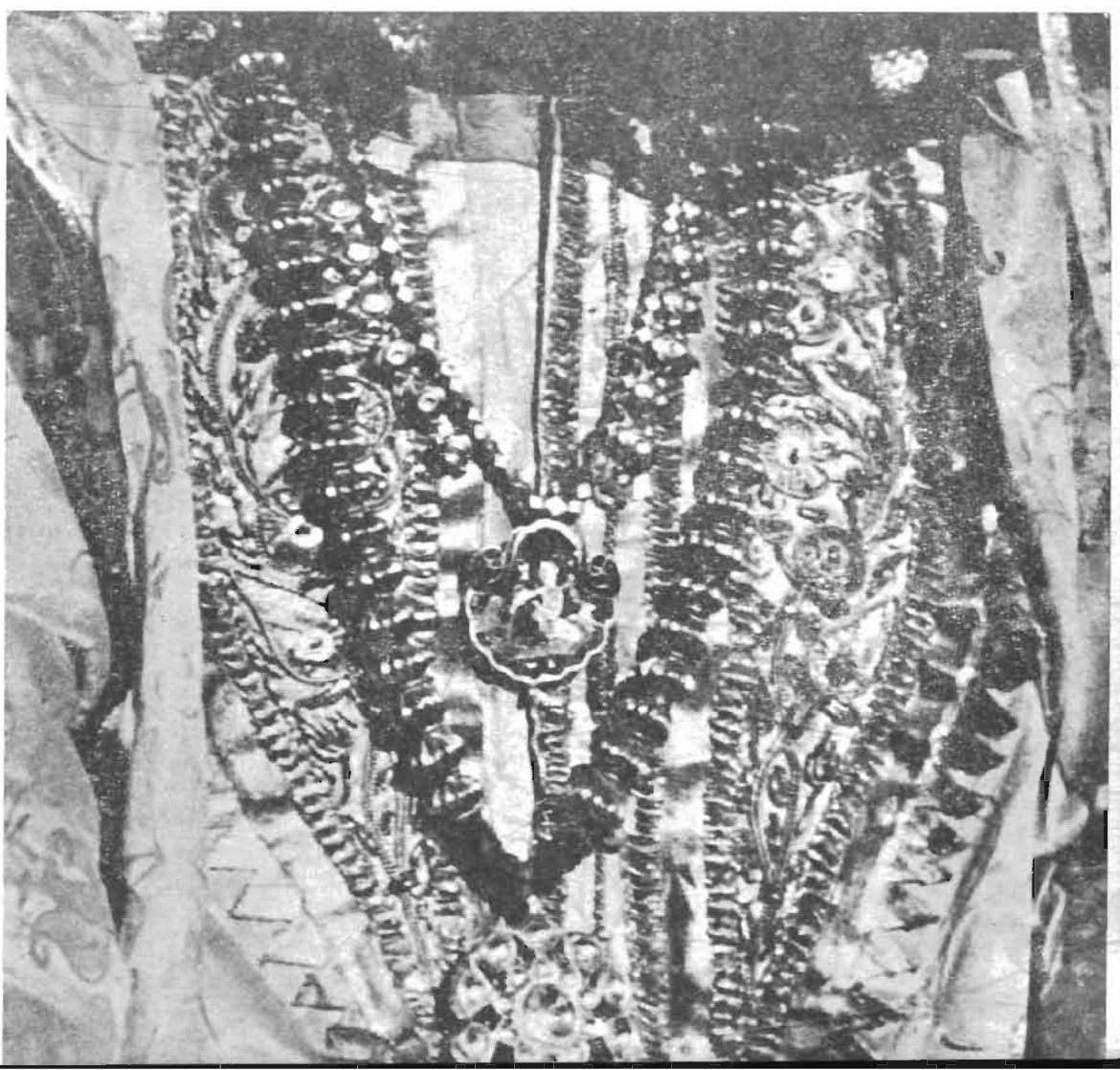
Jugani-a pendant



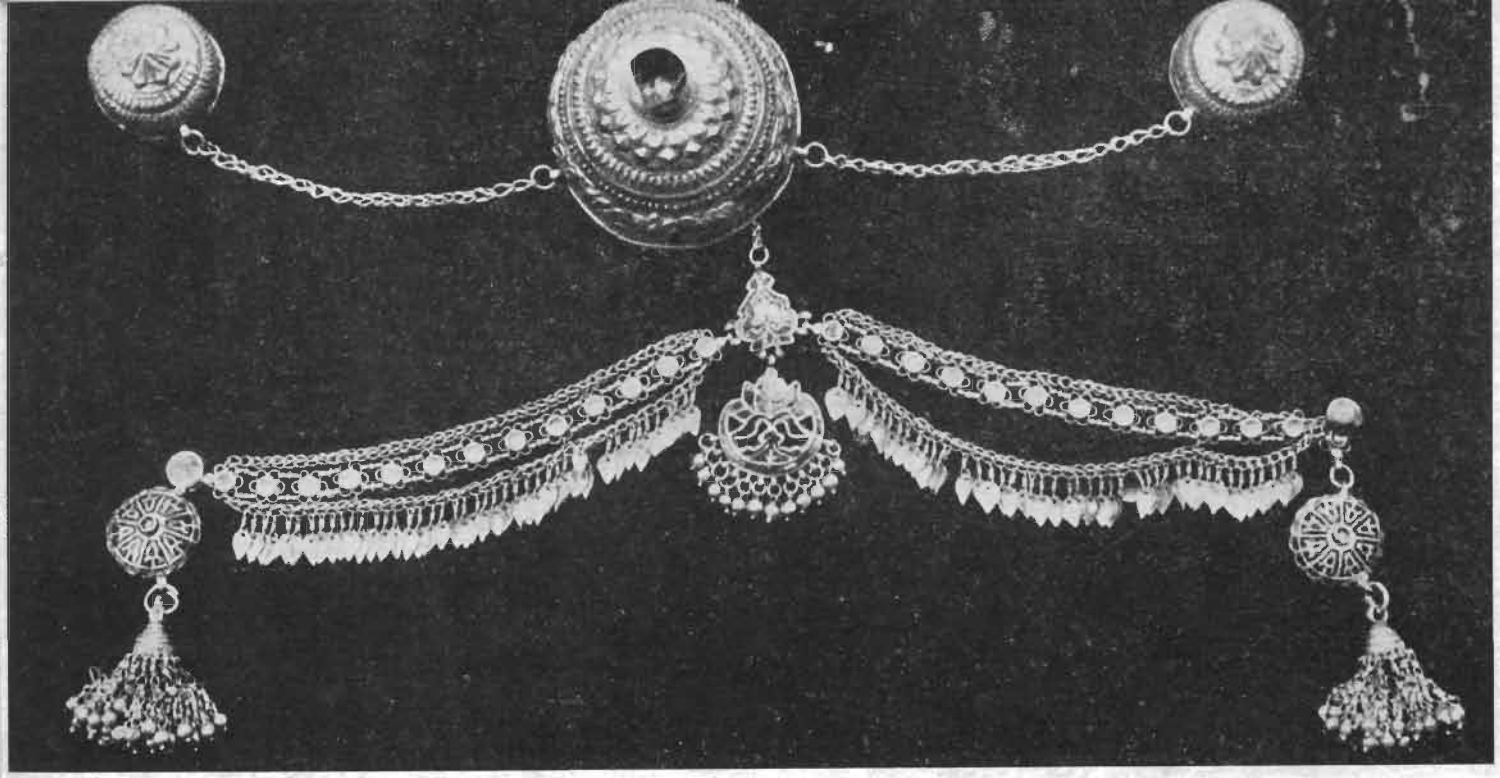
Tabeet



Kach, Tabeet and Boronwali Chauki



Profusion of necklaces



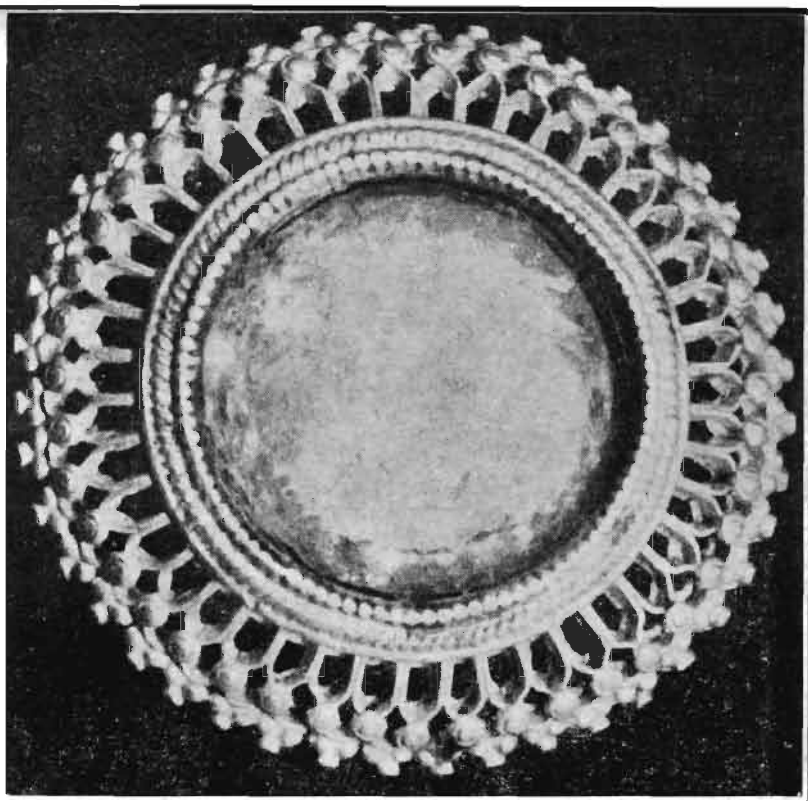
Chakphul and Sringarpatti

Ucha-Chak

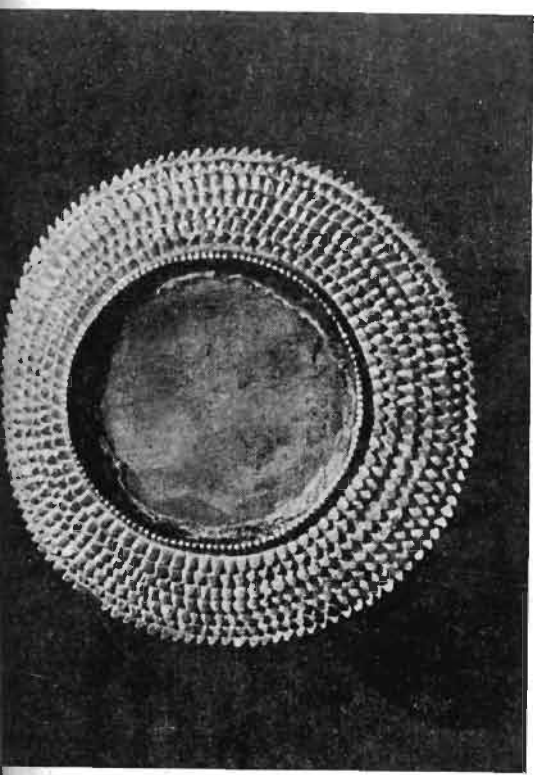


Lari-dar Chak,





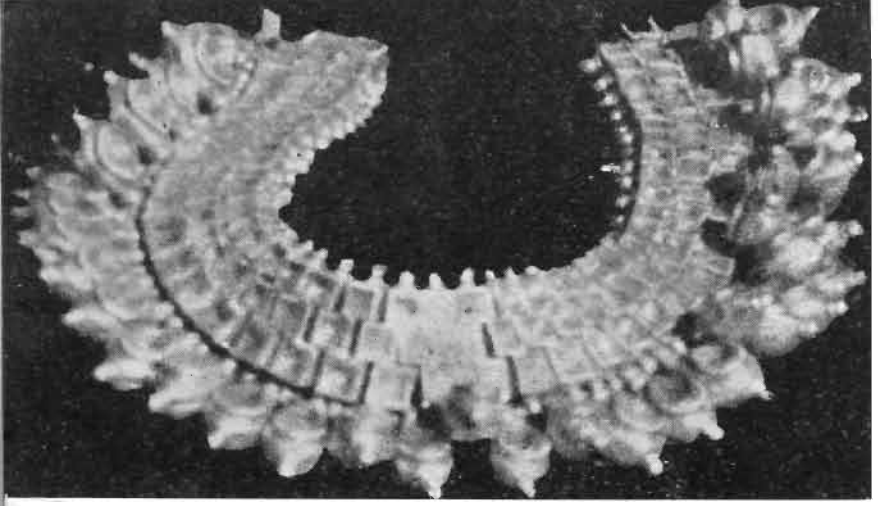
Arsi



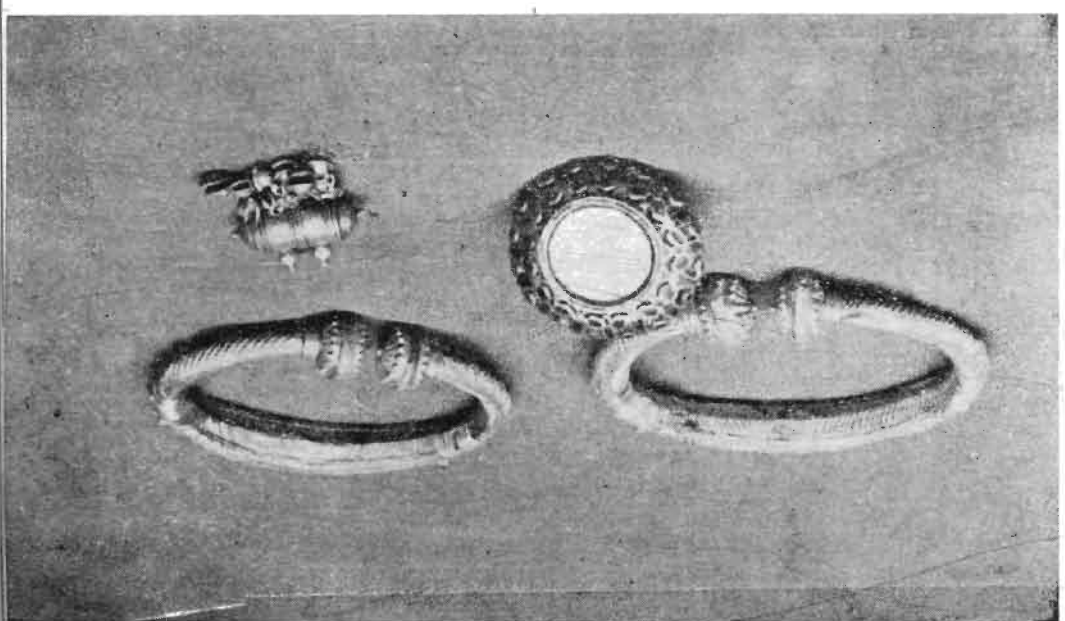
Arsi



Kanta and Phair

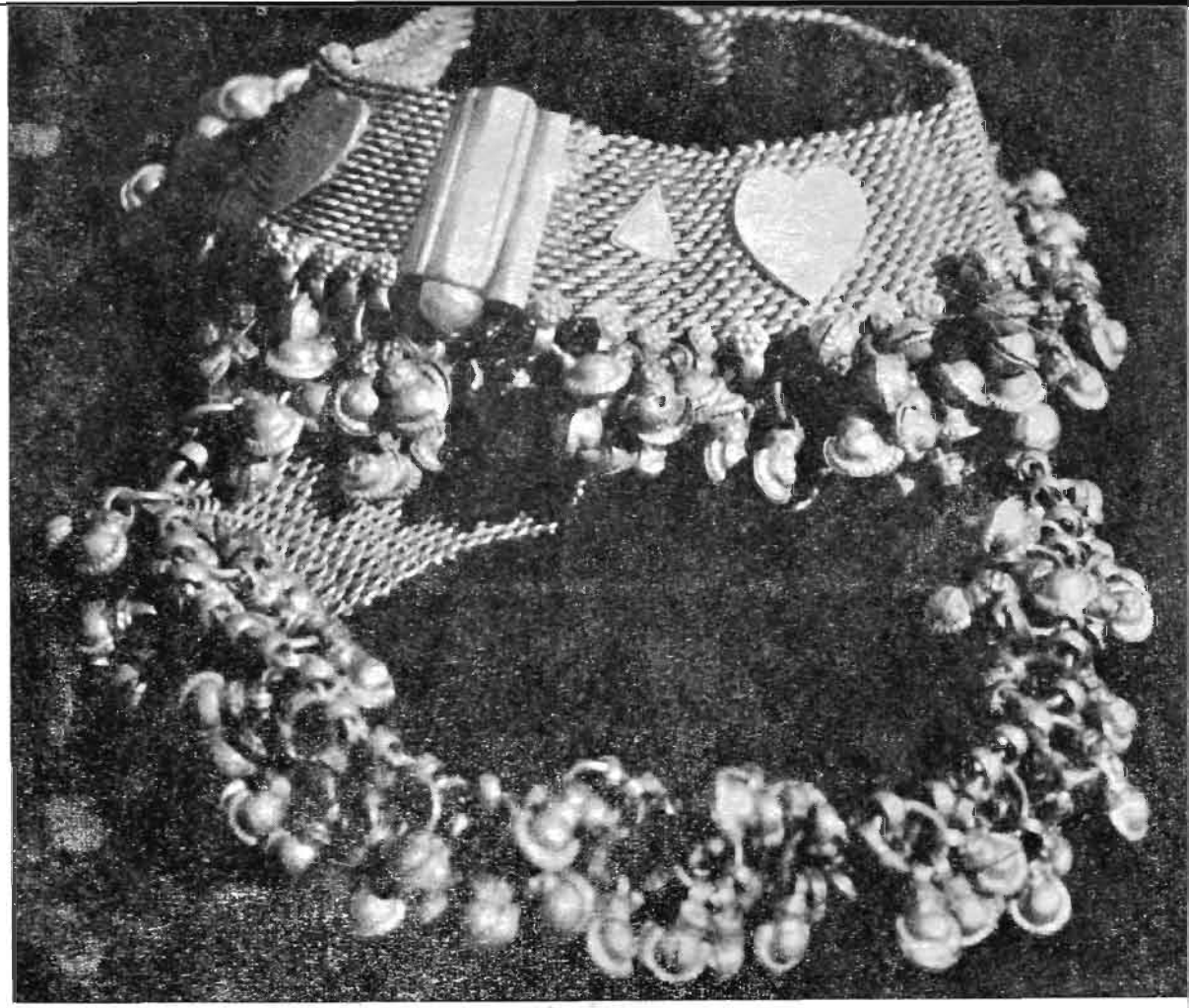


Tora



Singi, arsi and Jhanjhar

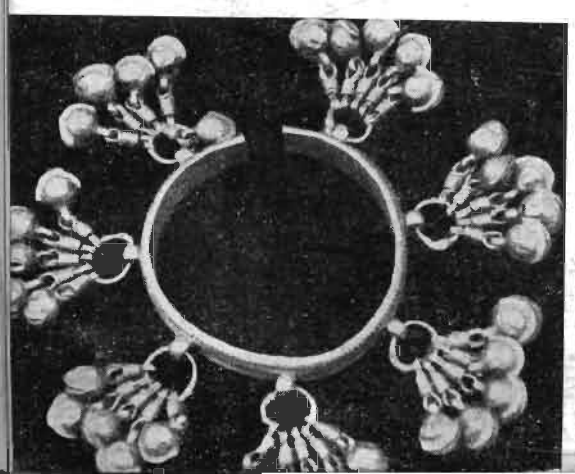
Shakuntla Chain



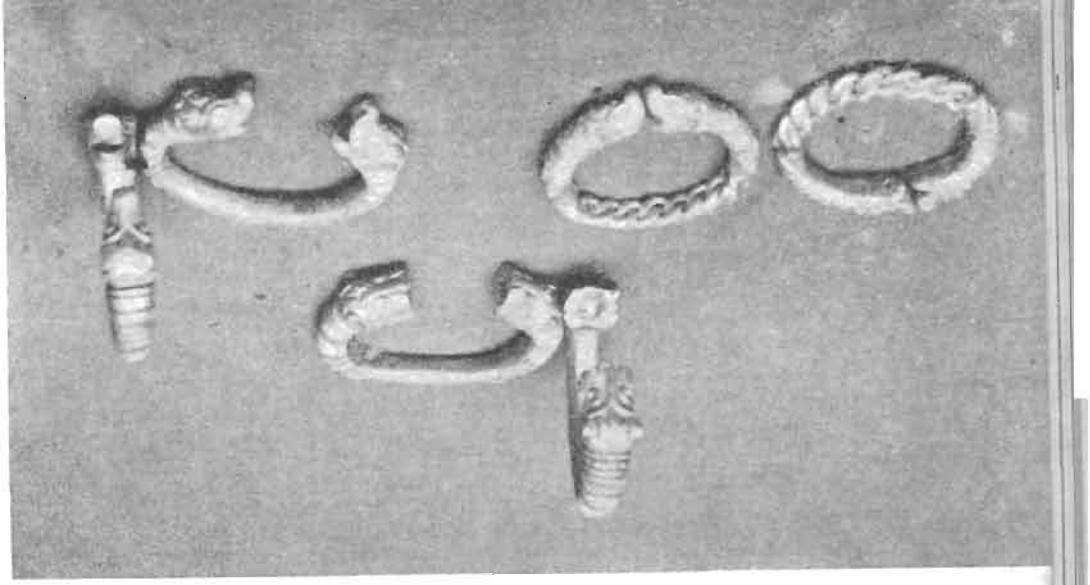
Panjeb or Paejeb



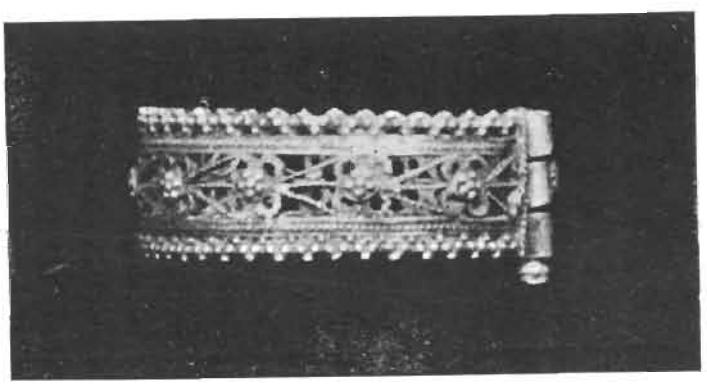
Pariband



Kangnu



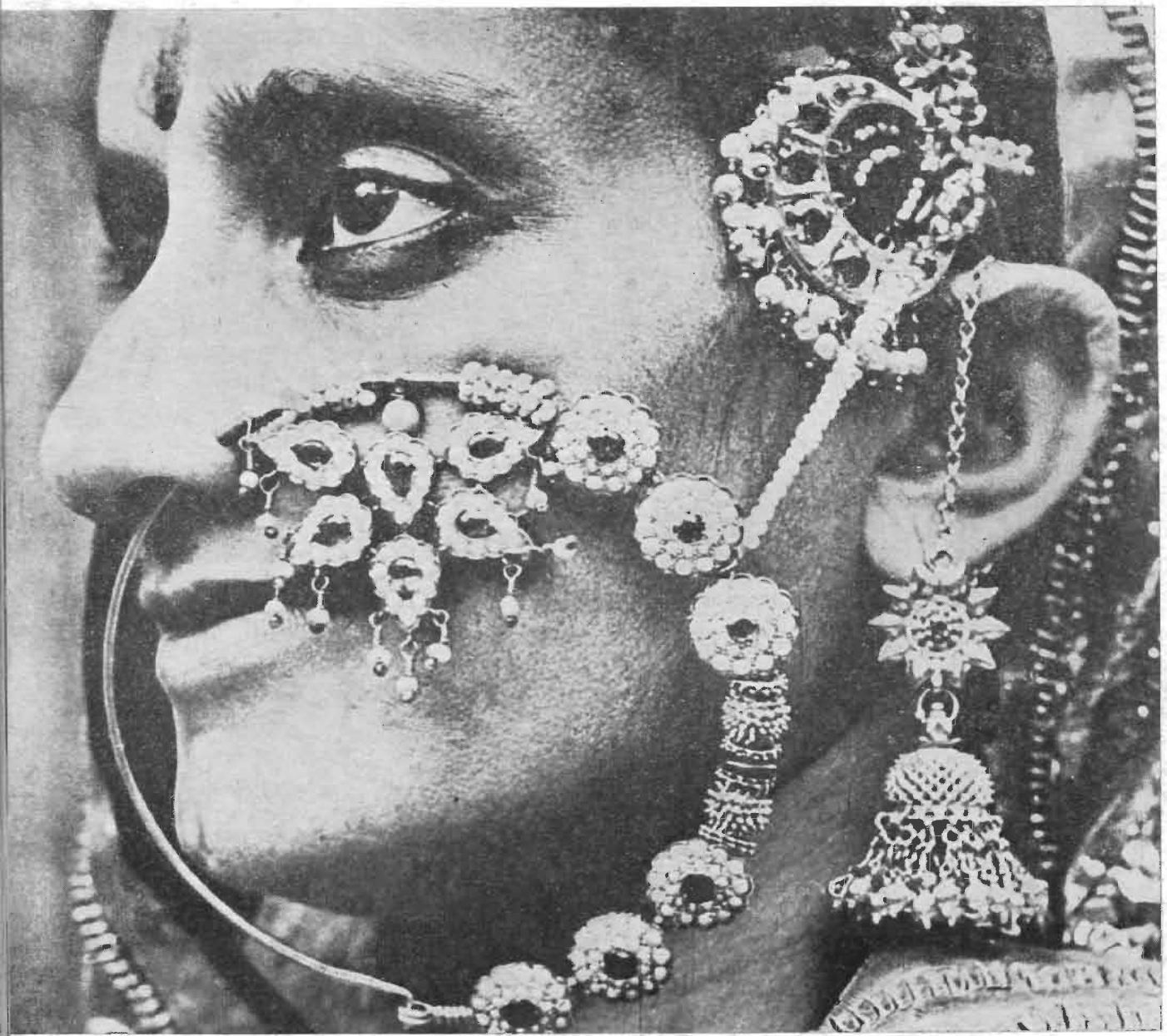
Kangnu in three designs



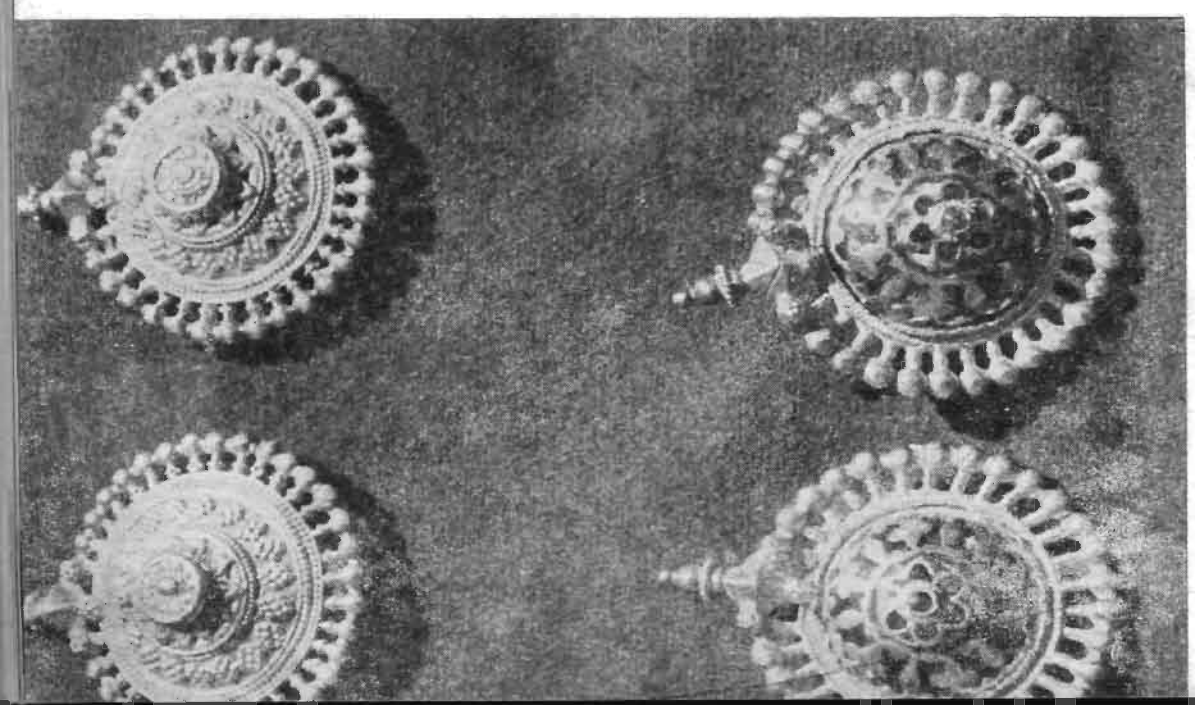
Churi



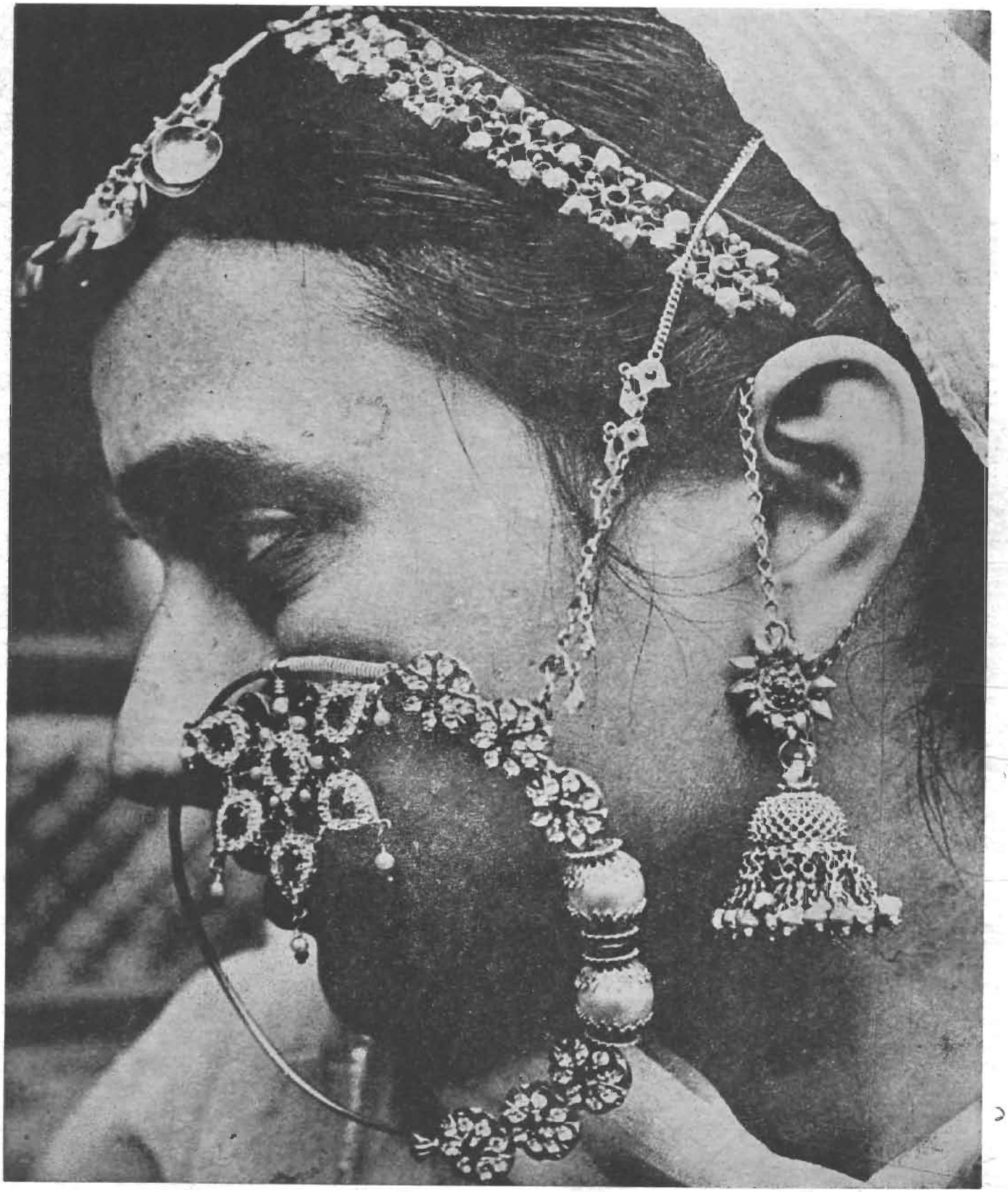
Chhankangni



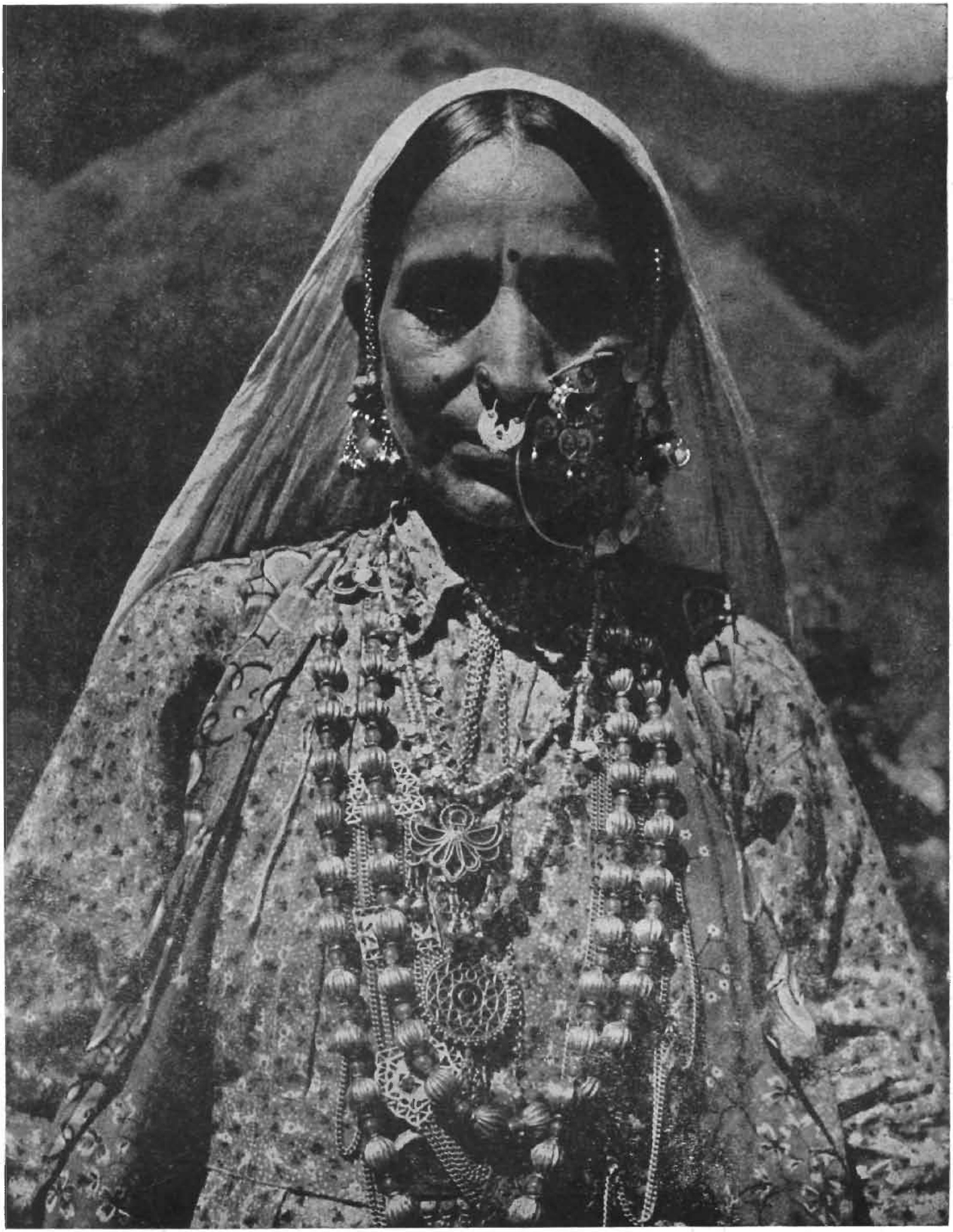
Balu



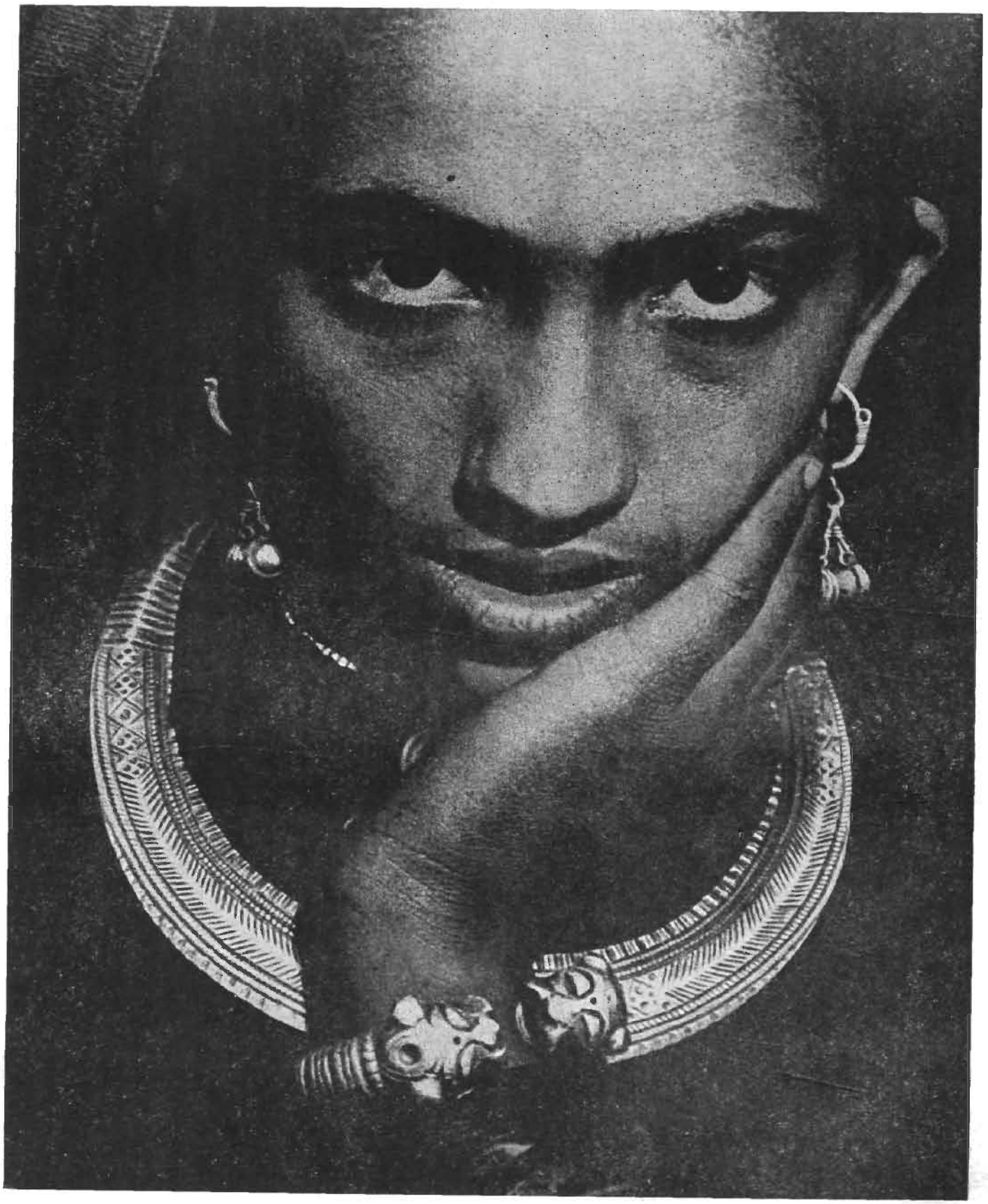
Pharalu



Balu, Kanta and Srinagarpatti



Bulak nathli dodmala and other necklaces—Gaddan



Gujjari wearing hanseeri



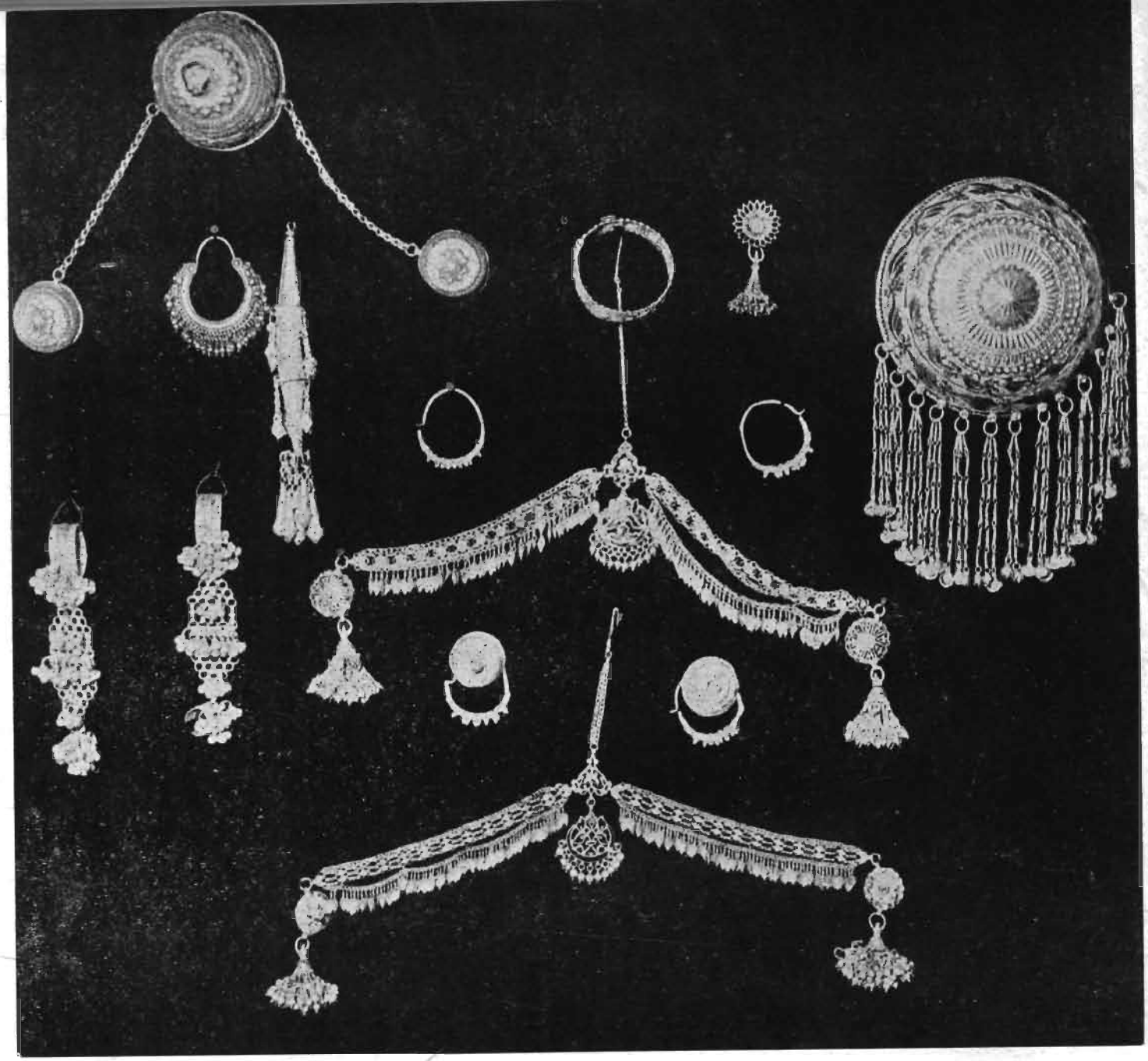
Nalia or dhol



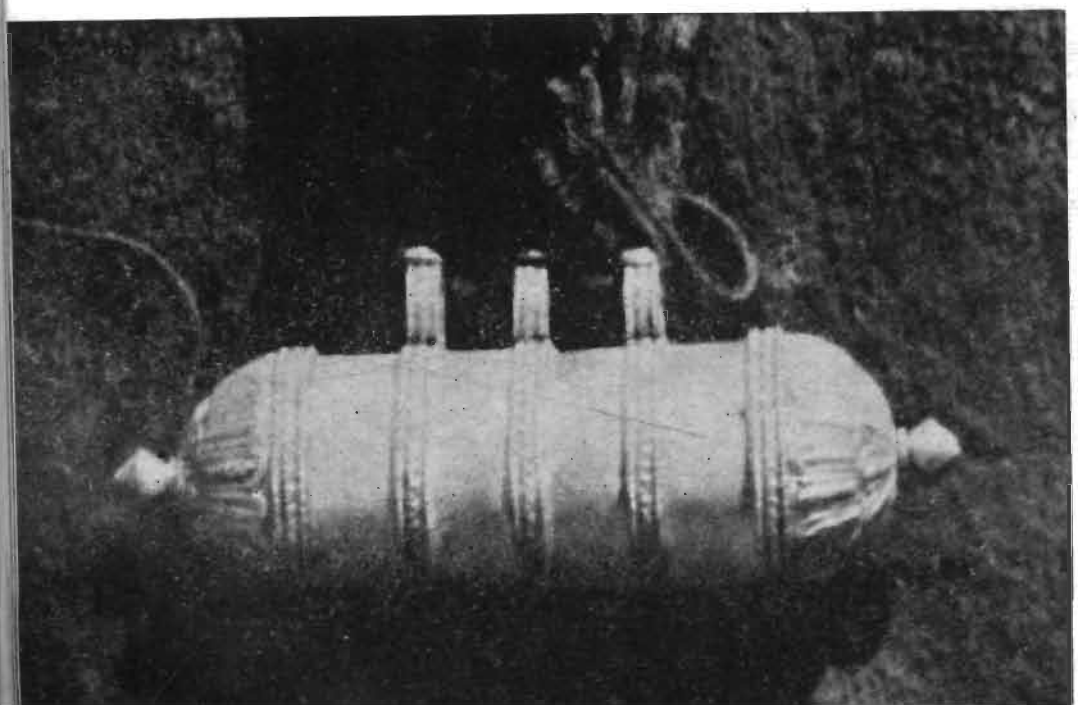
Pangwalan in Ornaments



Profusions of neckless from Pangi



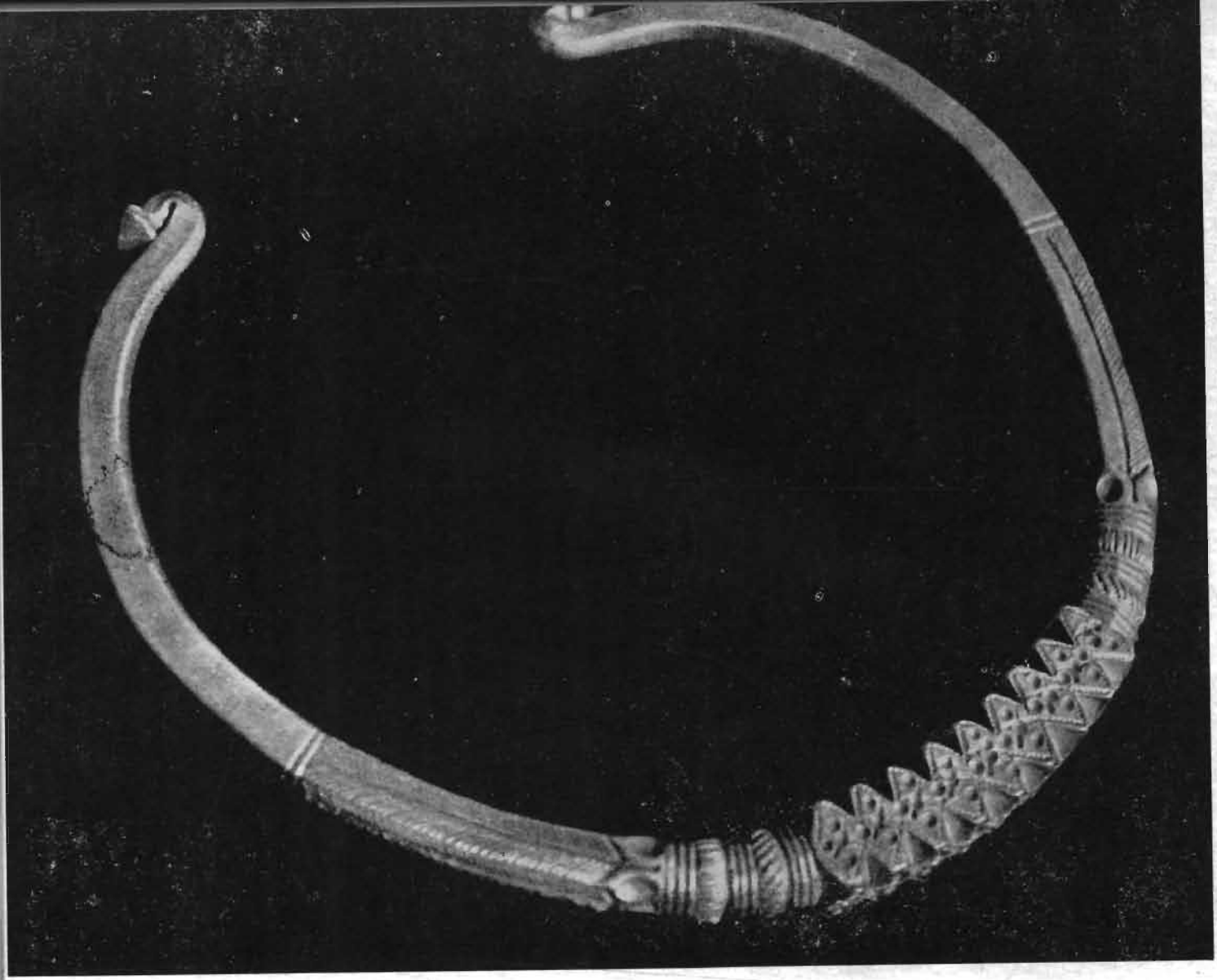
Chak-phul, phair, Jutti, Bang, Pharalu, lari-dar chak, Dandi, Jhumke Dora, Kanbale



Nalia or dhol



Gaddan in Ornaments



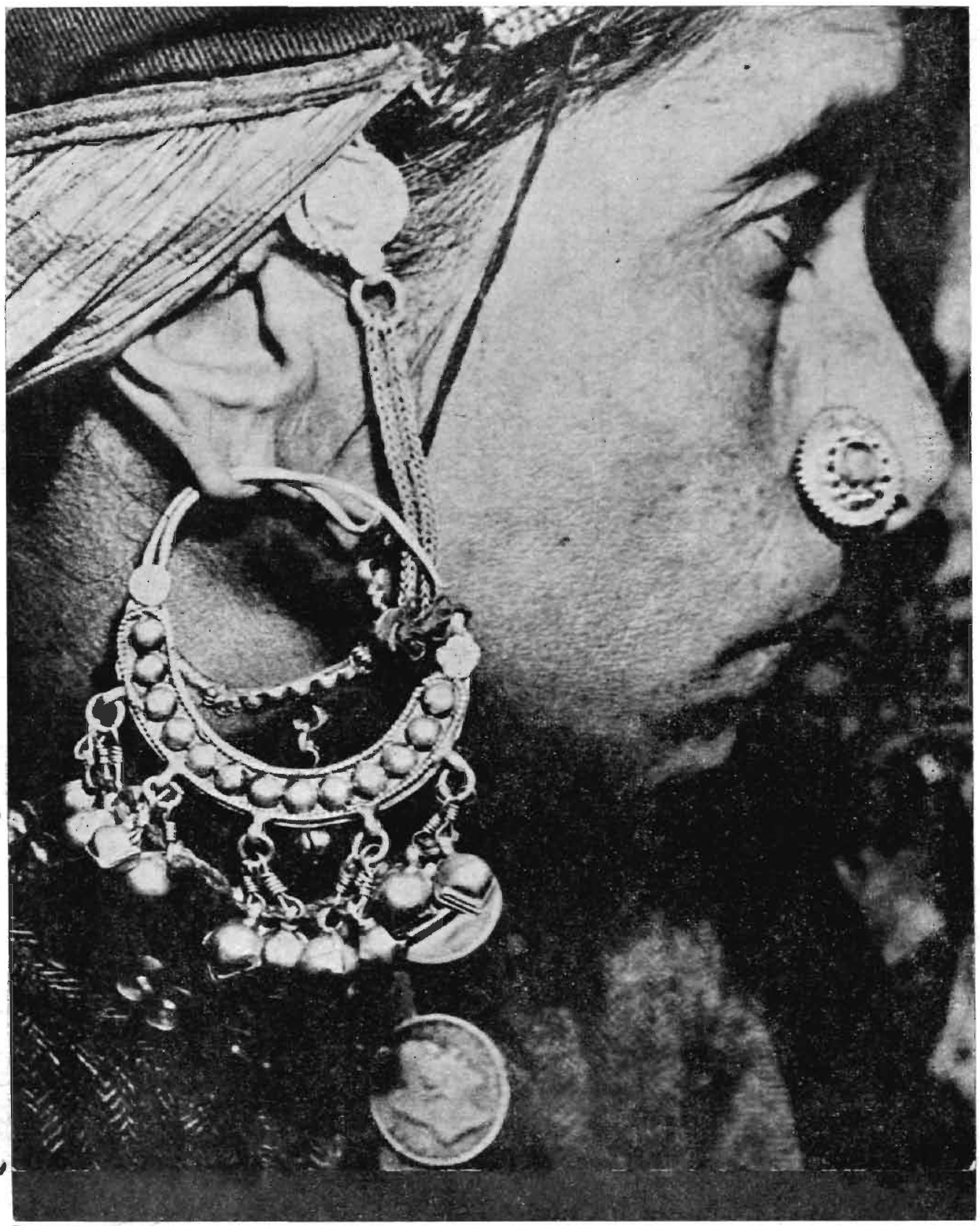
Hansli

Boron-wali hansli





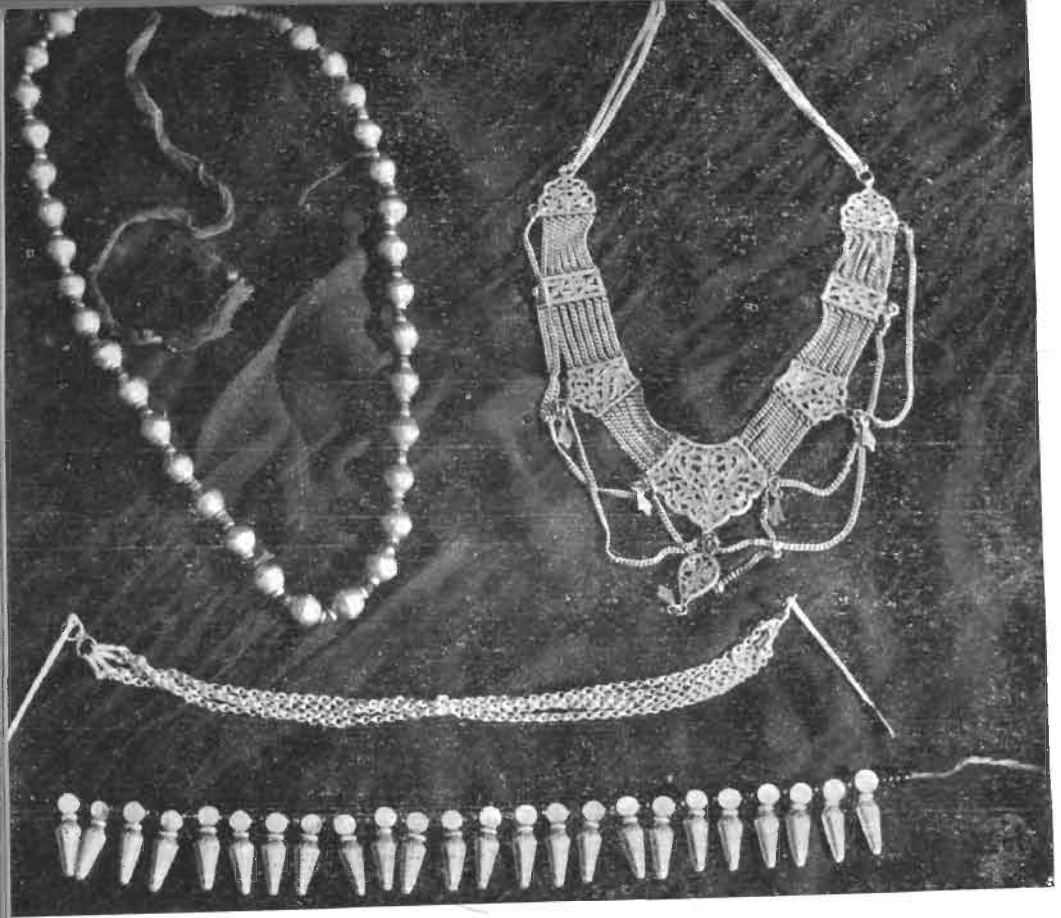
Gujjari in typical ornaments



Another Gujjari with typical ear ornament



Gujjar woman with more ornaments

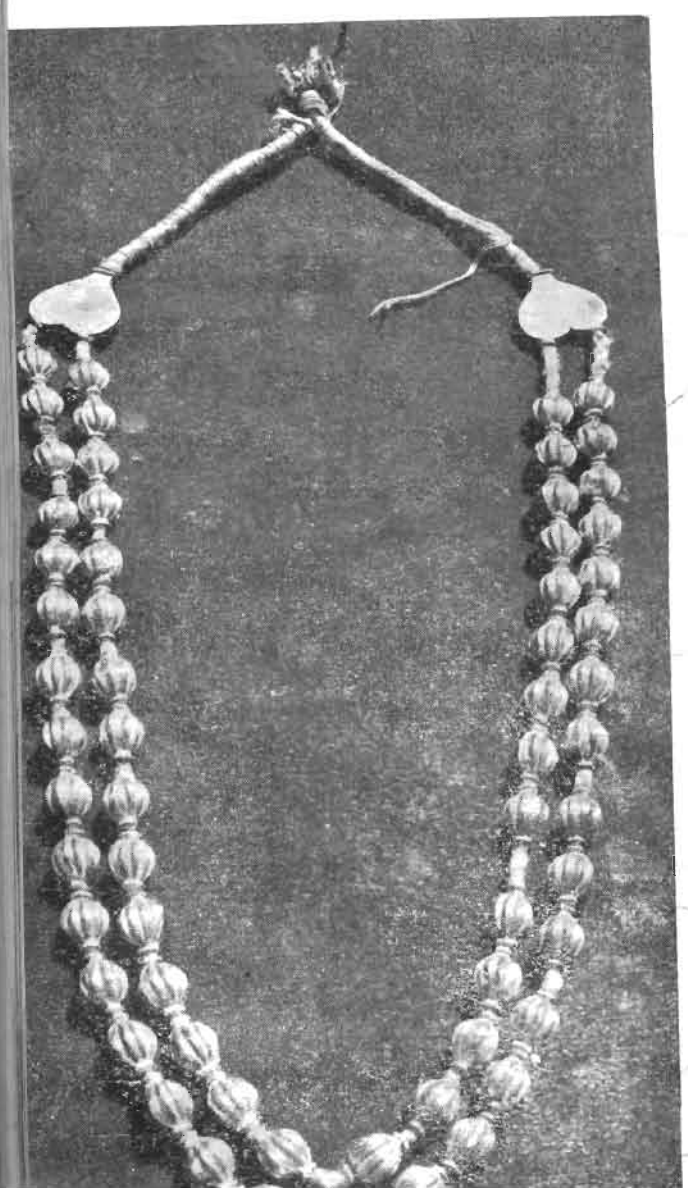


Dodmala

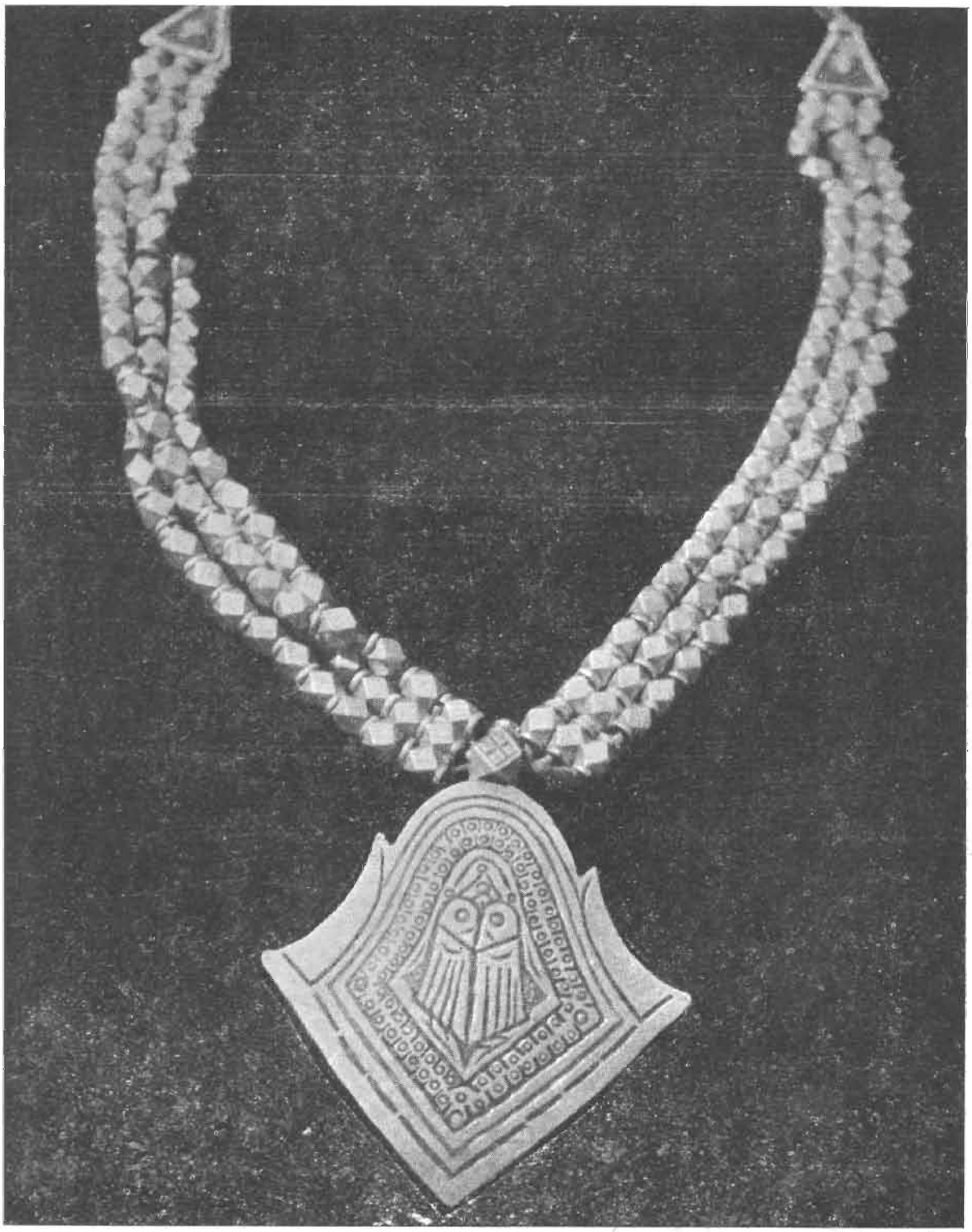
Ranihar

Janjeer or Shangli

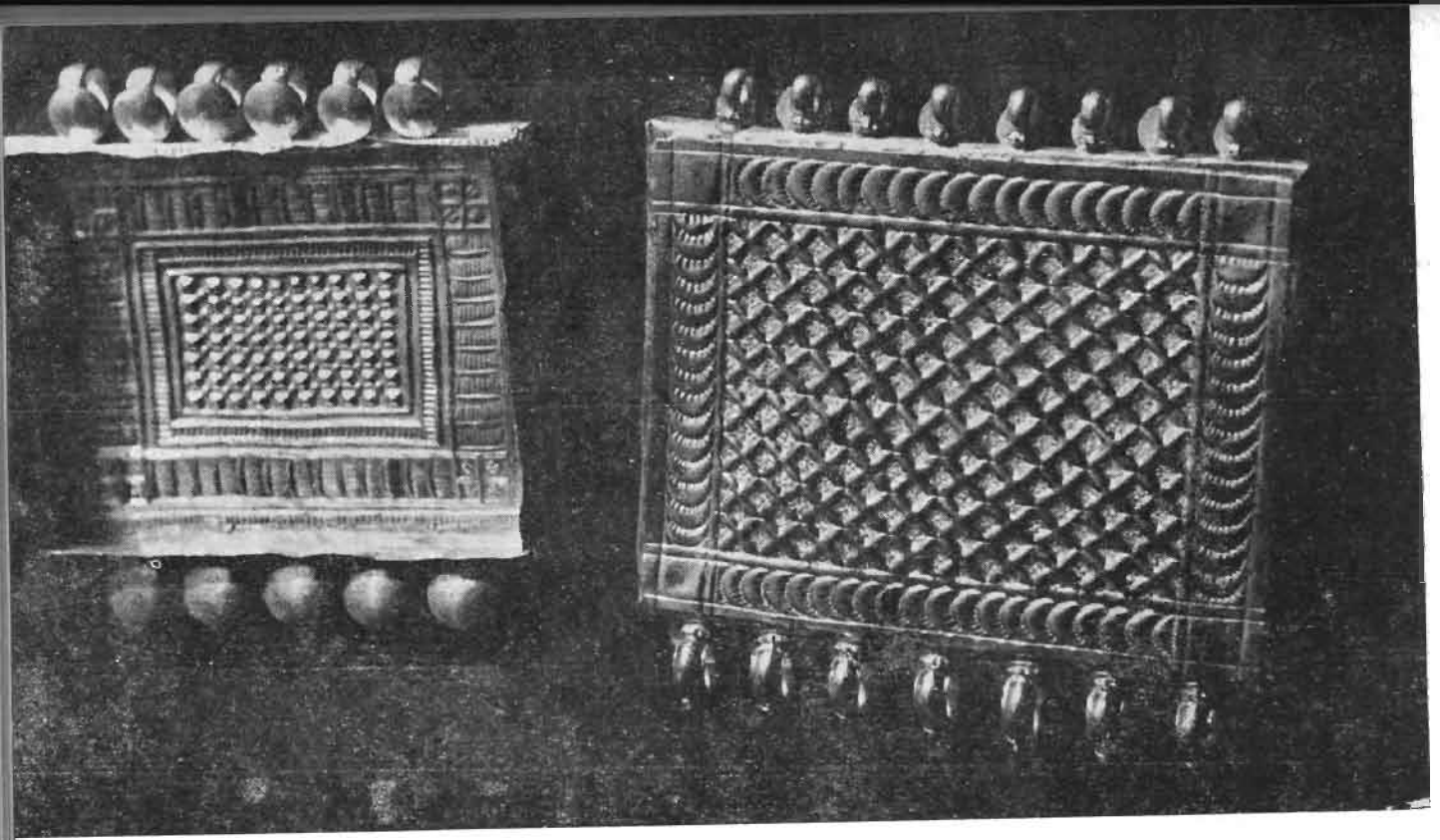
Chamkali



Dodmala



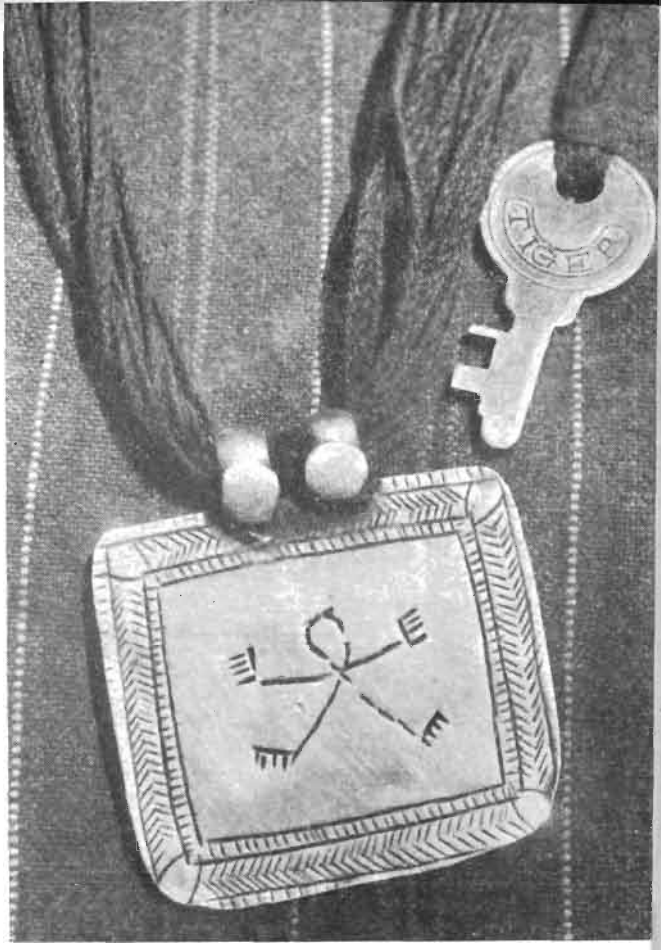
Charan Kanthi



Tabeet

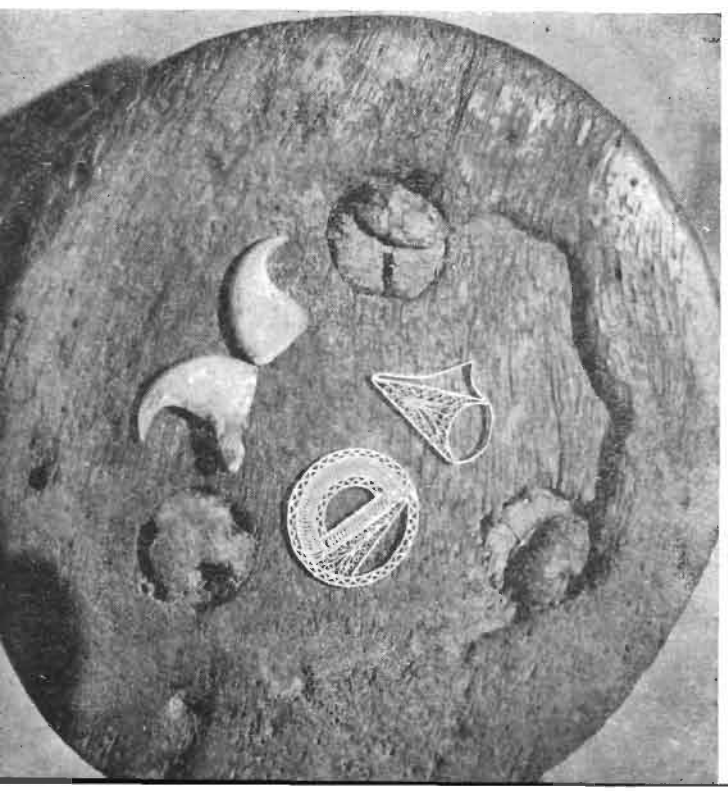


Chauki

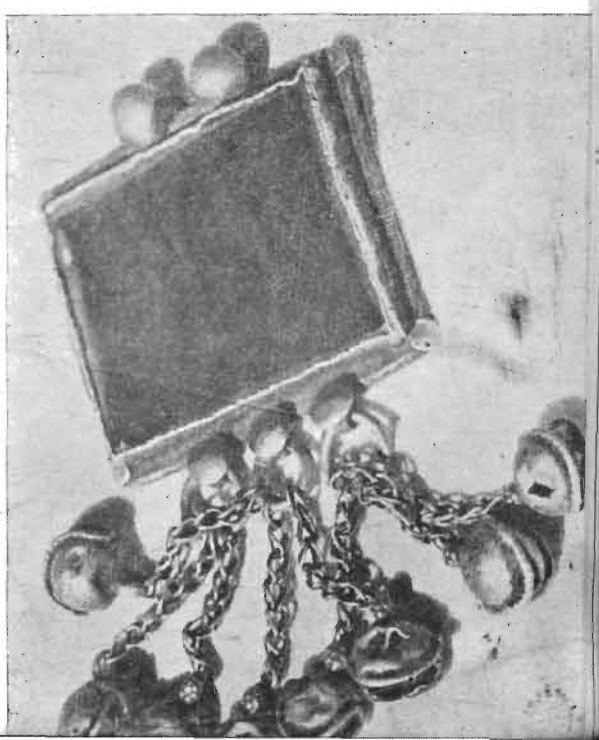


Chauki

Bagh-nakh

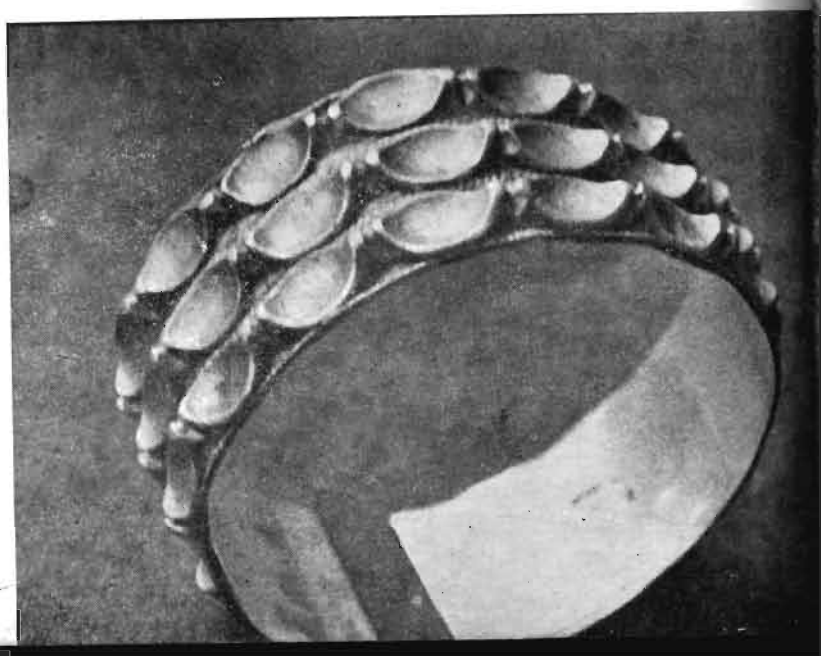


Chauki or Tabeet

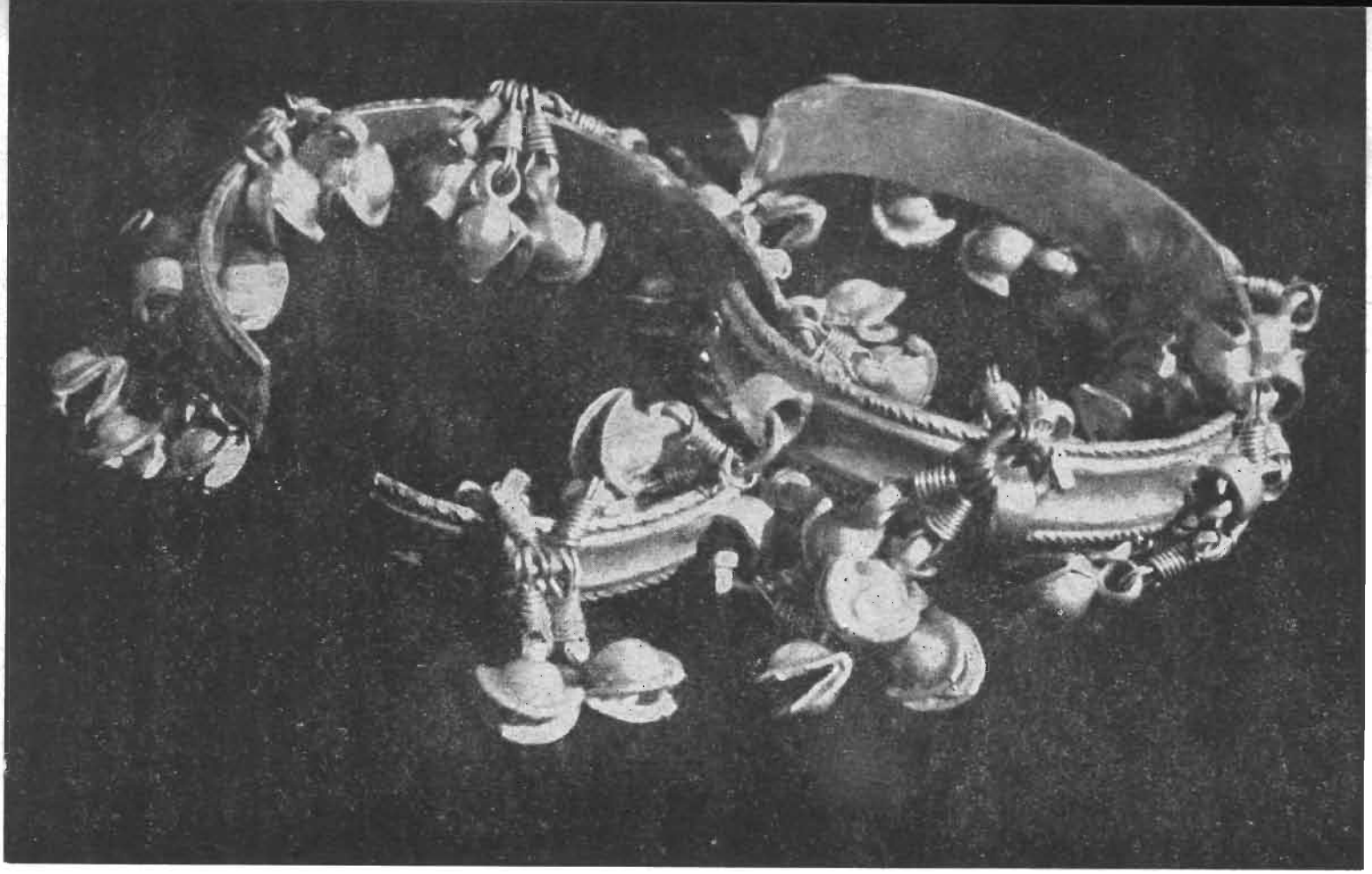




Bracelets

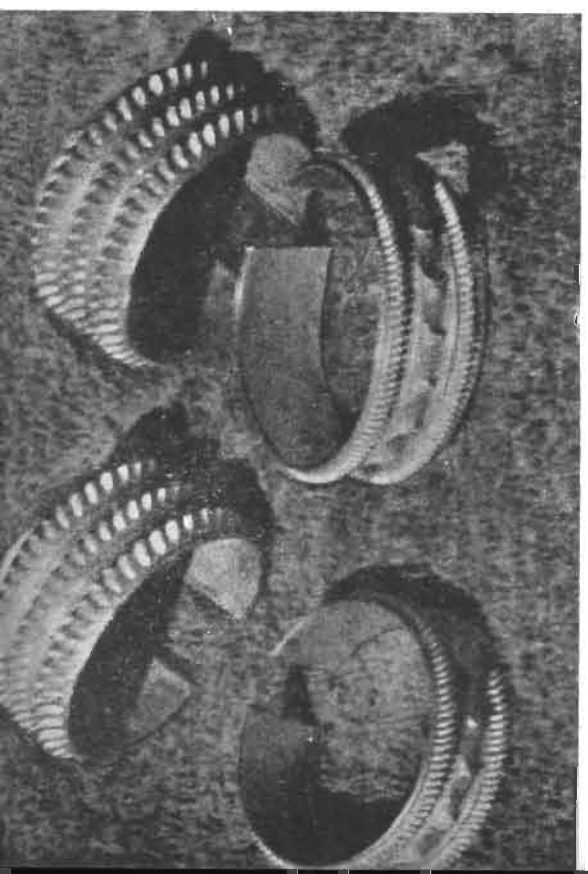


Toke

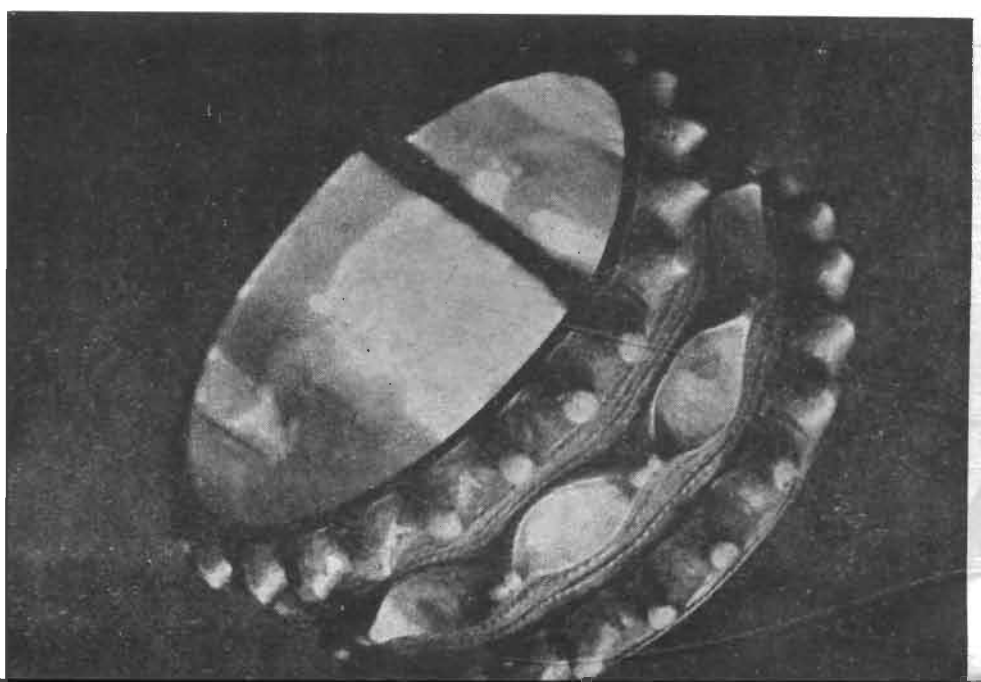


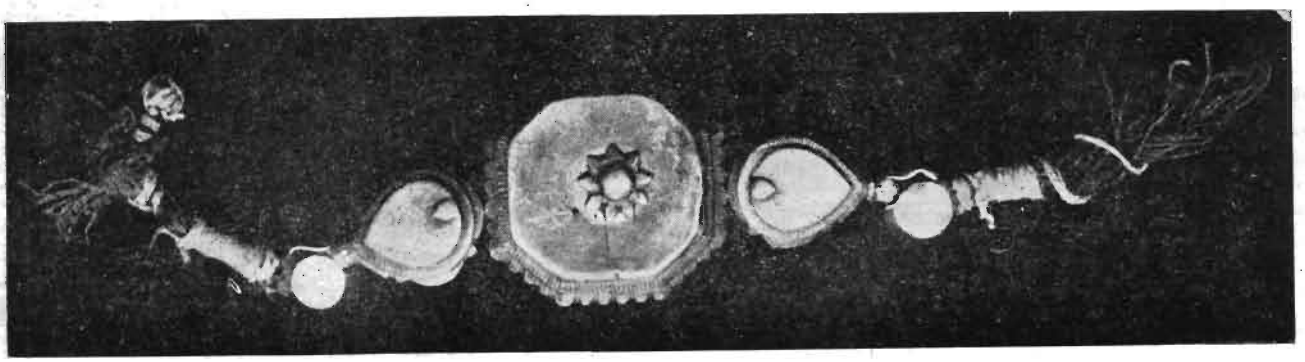
Ghungruwal

Band



Toke



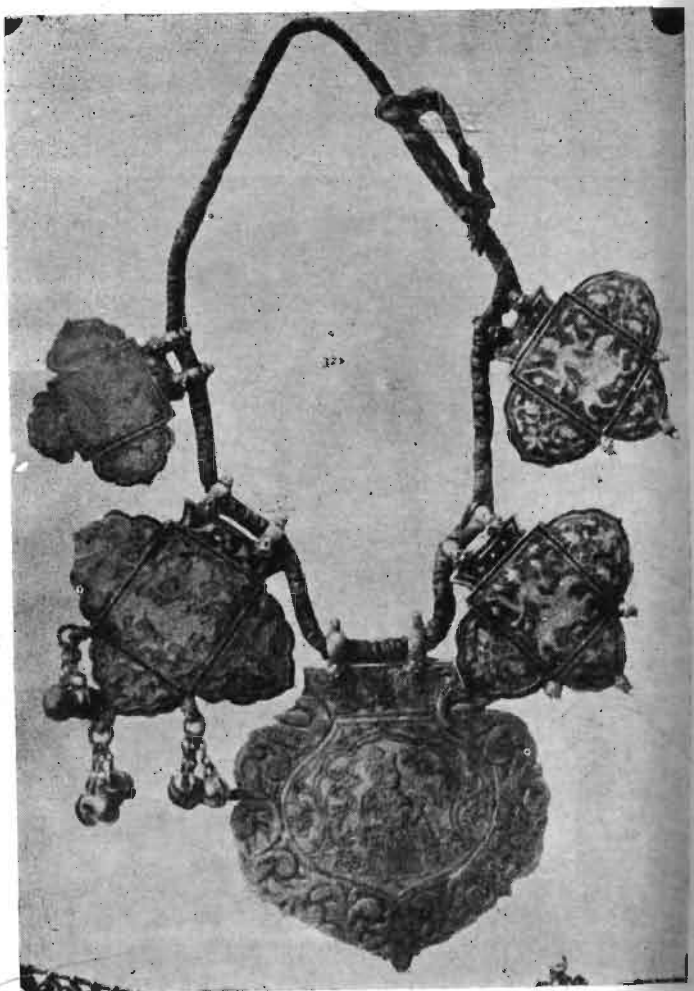


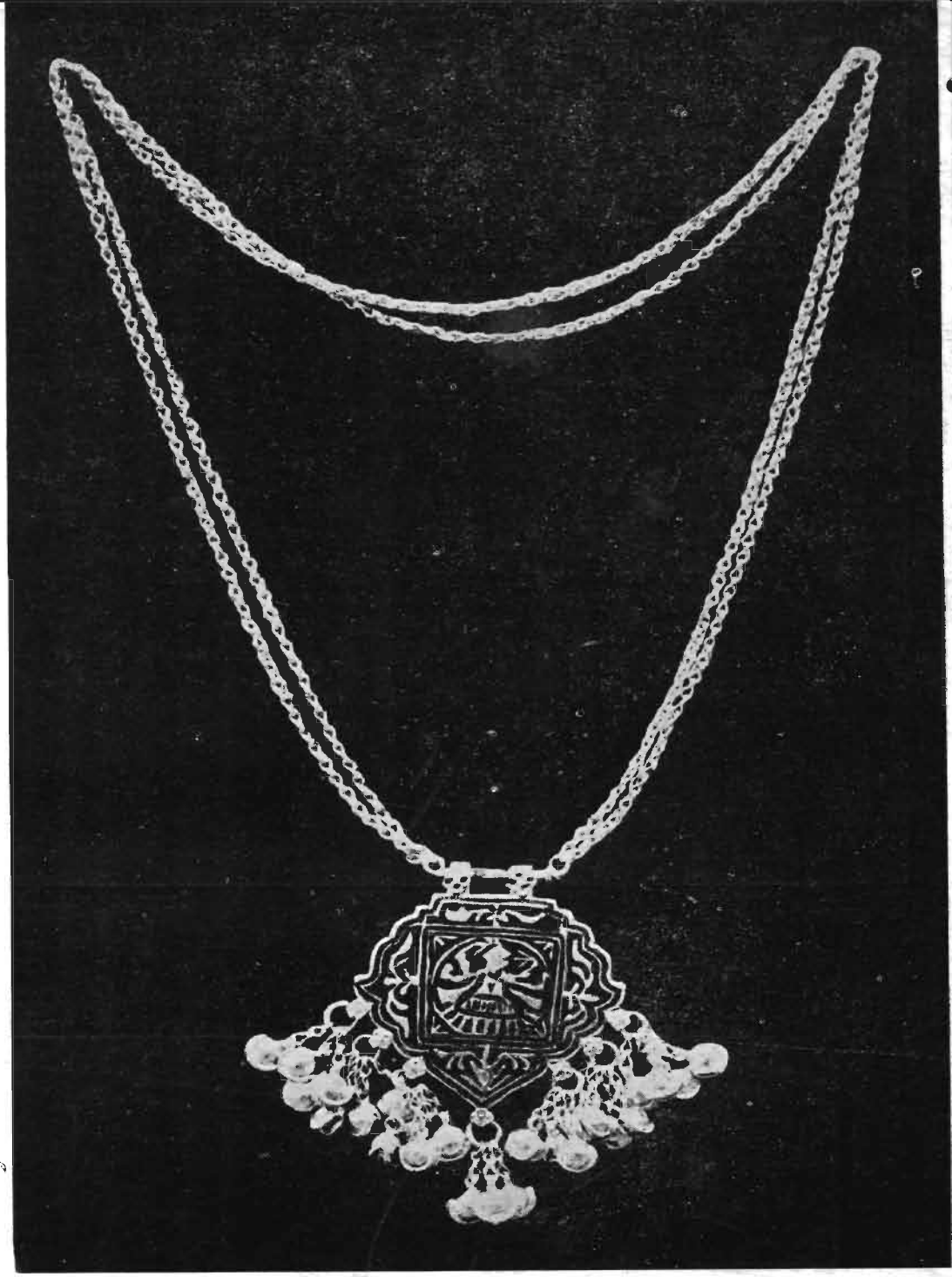
Necklace

Pendant (Haar)

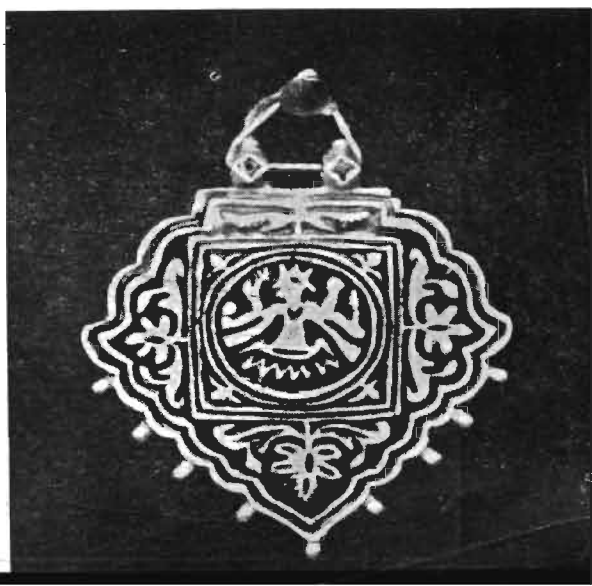


Chauki

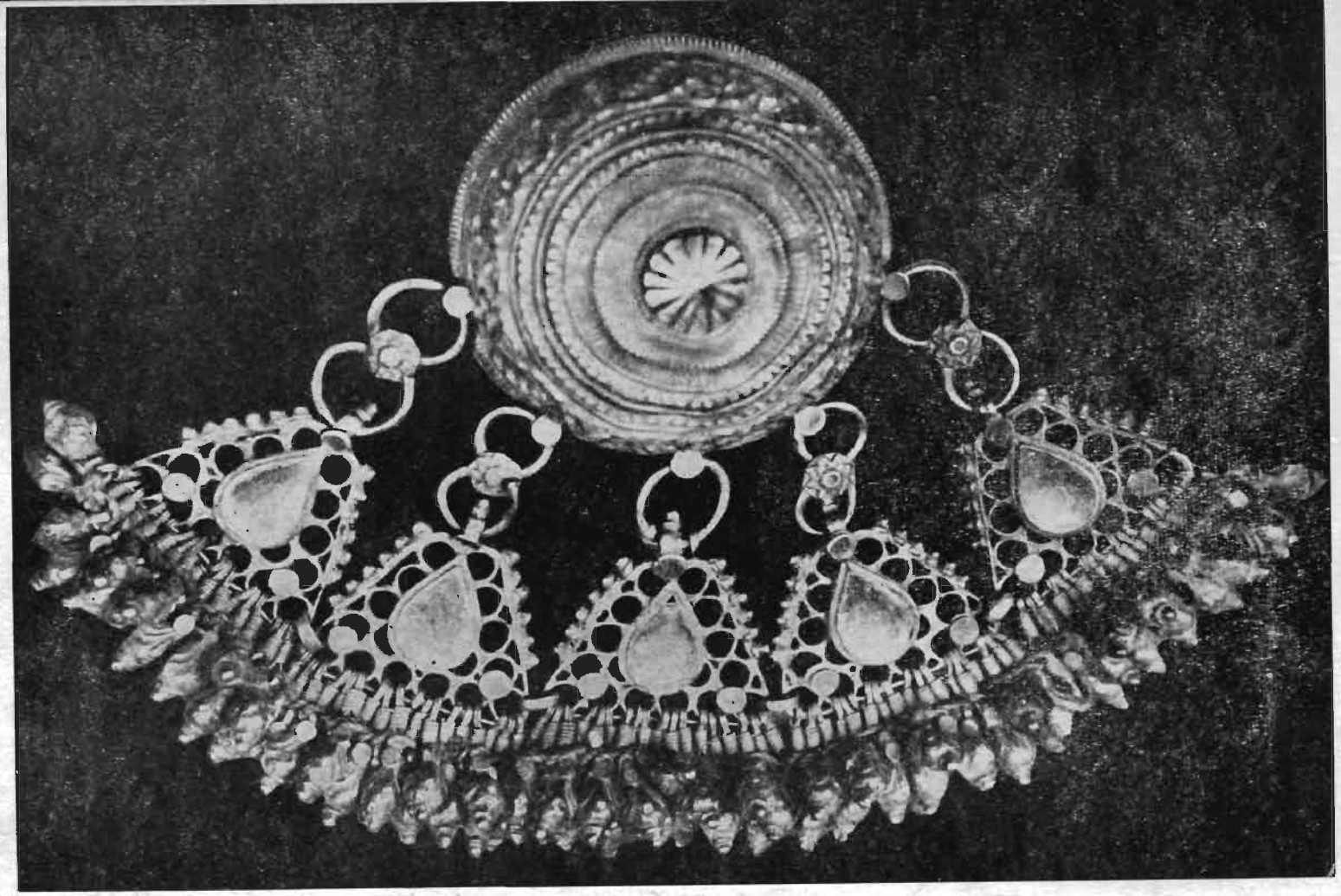




Chauki



Chauki



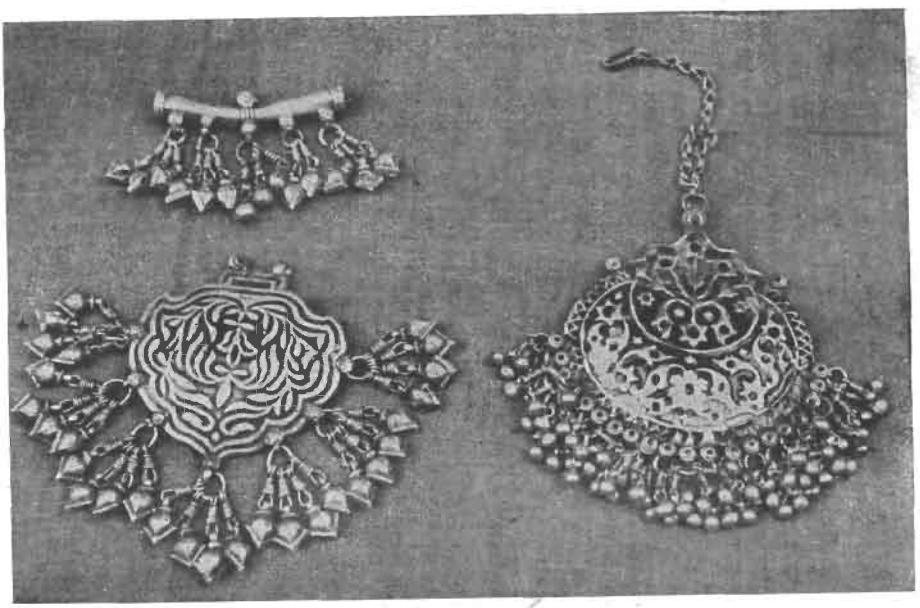
Jhalardar Chak

Charke or Kante

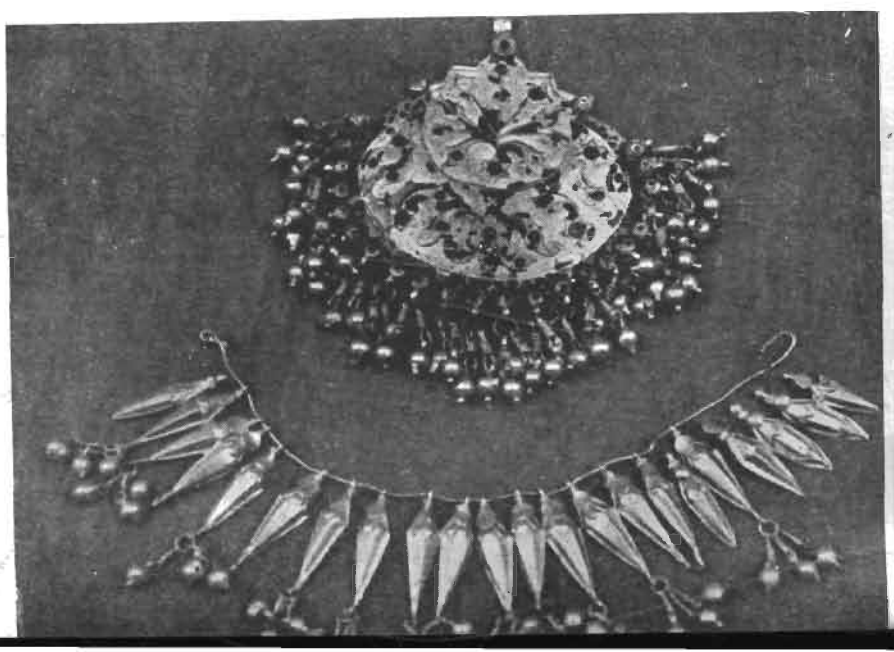




Balu and anguthi



Singi, Chiri and Chandra

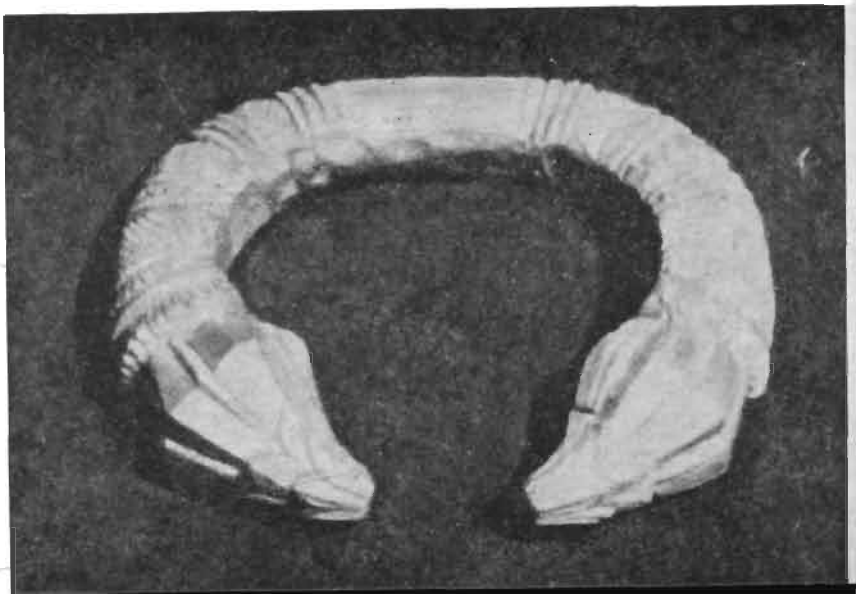


Chandra and Champakali



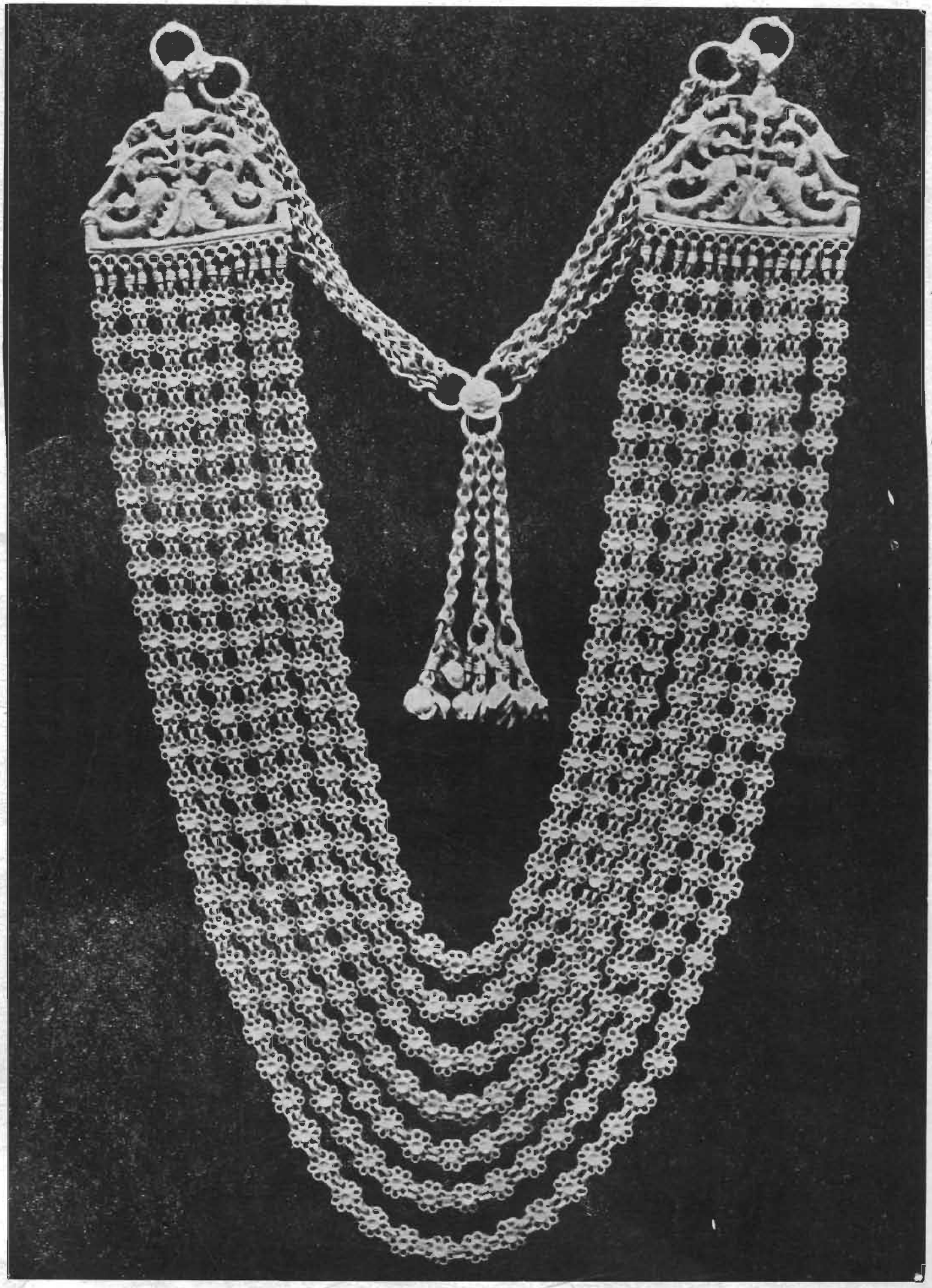
Bracelet and ring

Kangnu or Gokharu

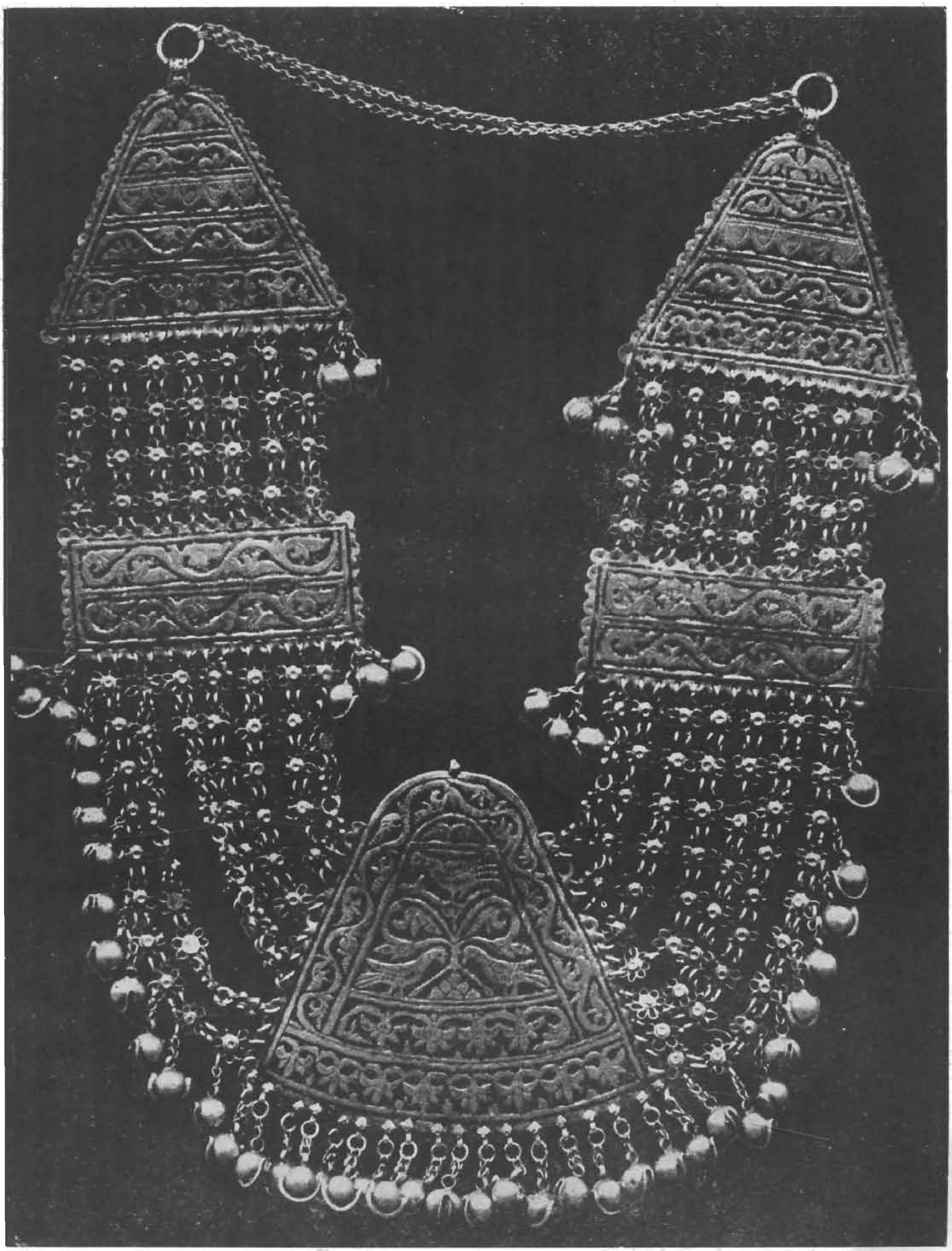




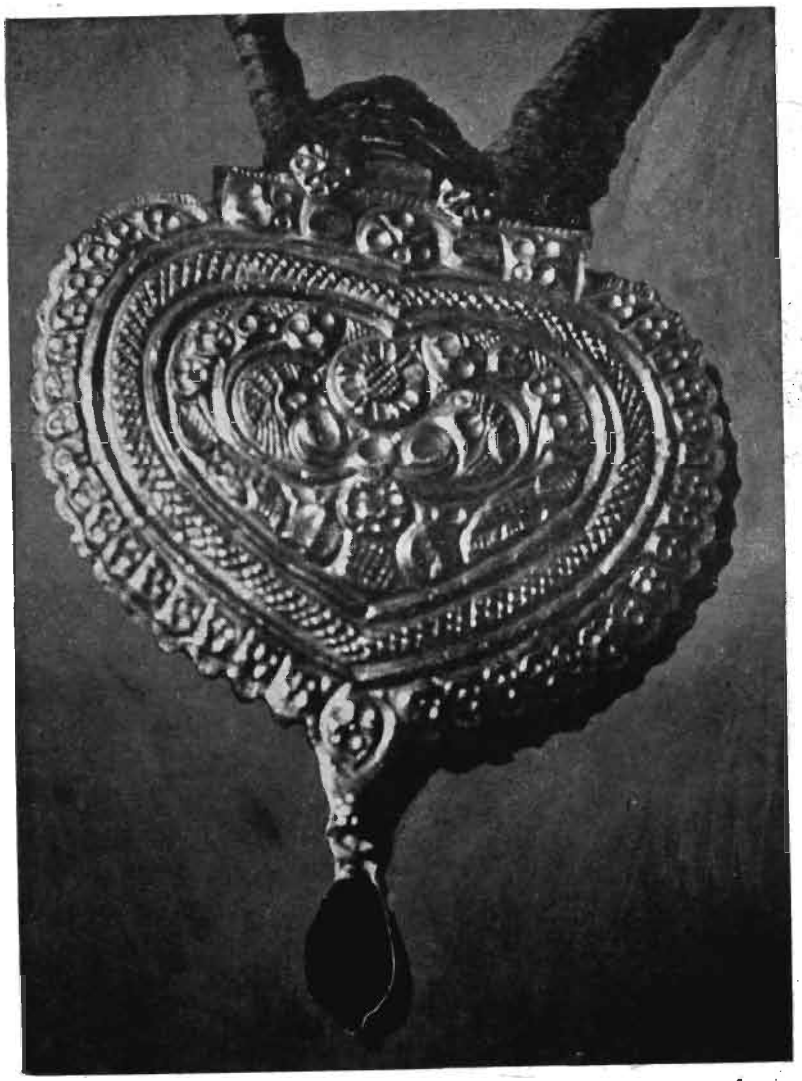
Bracelets and rings



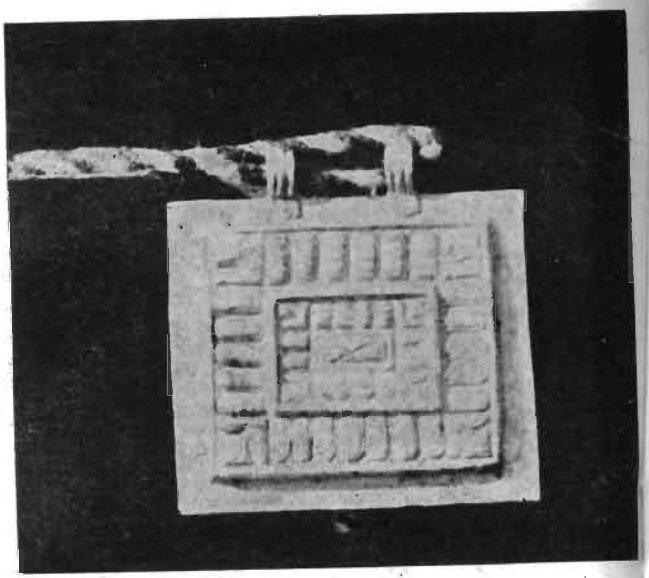
Satlari Haar



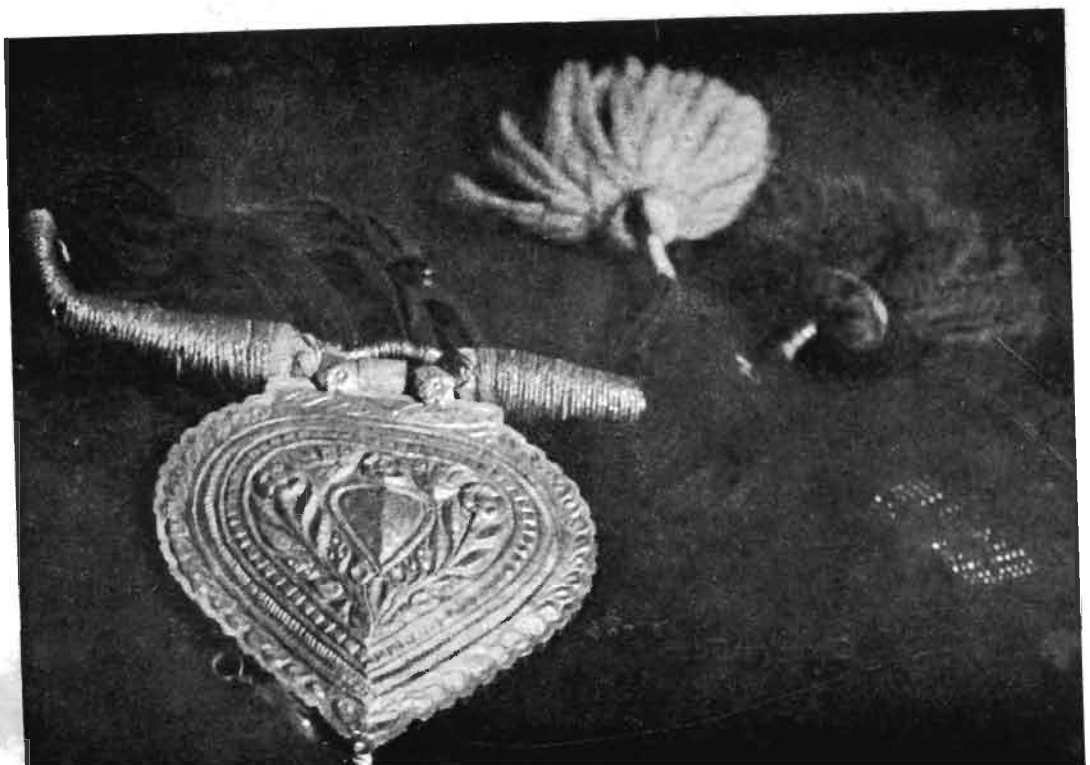
Chandra Haar



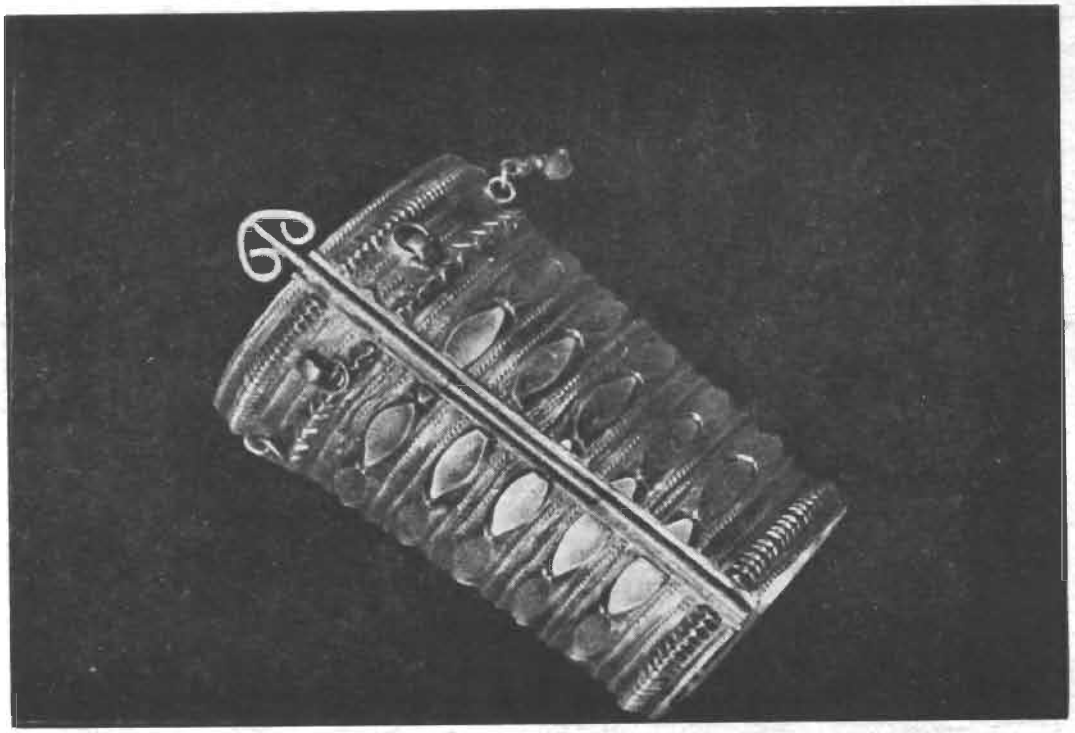
Nam



Chauki



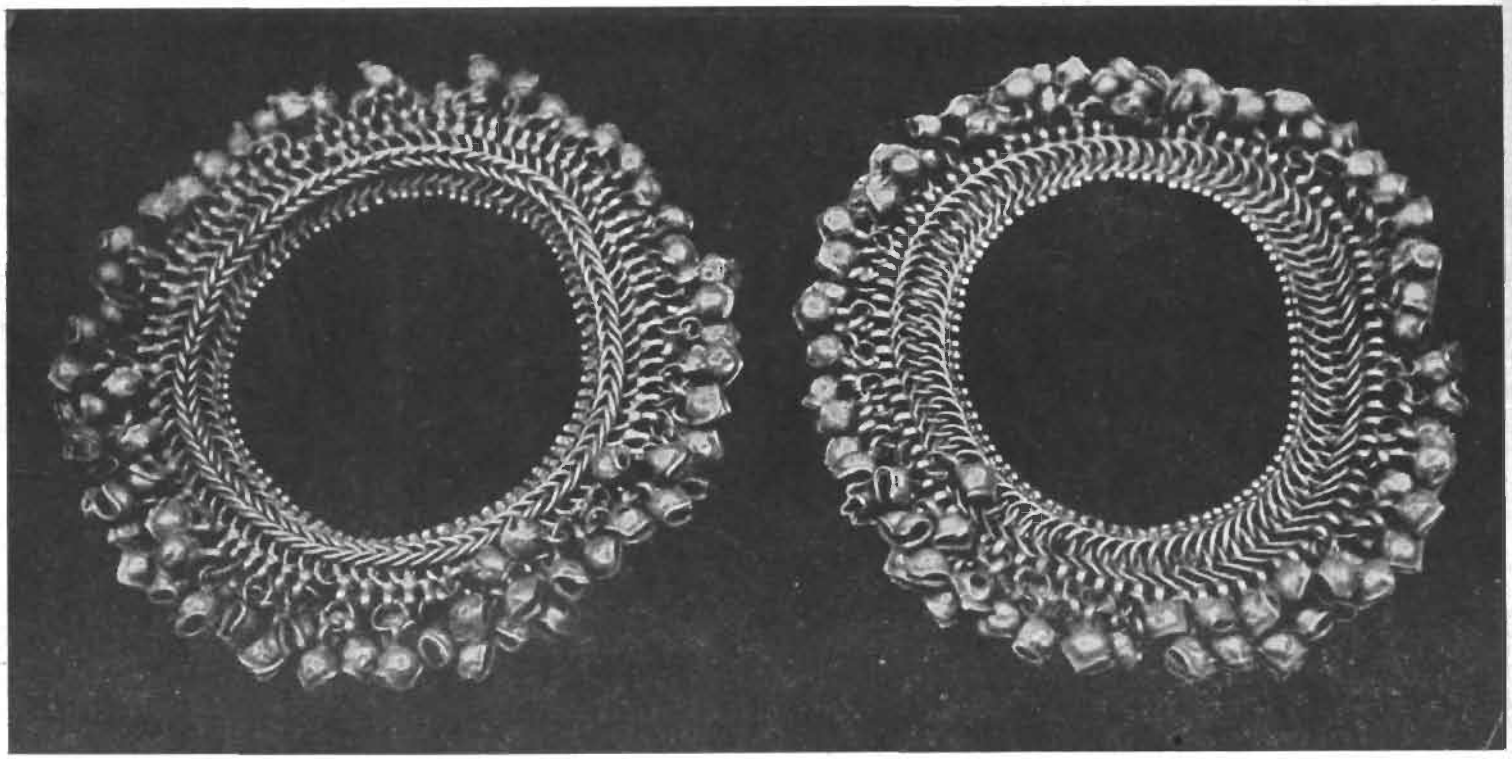
Nam



Chura

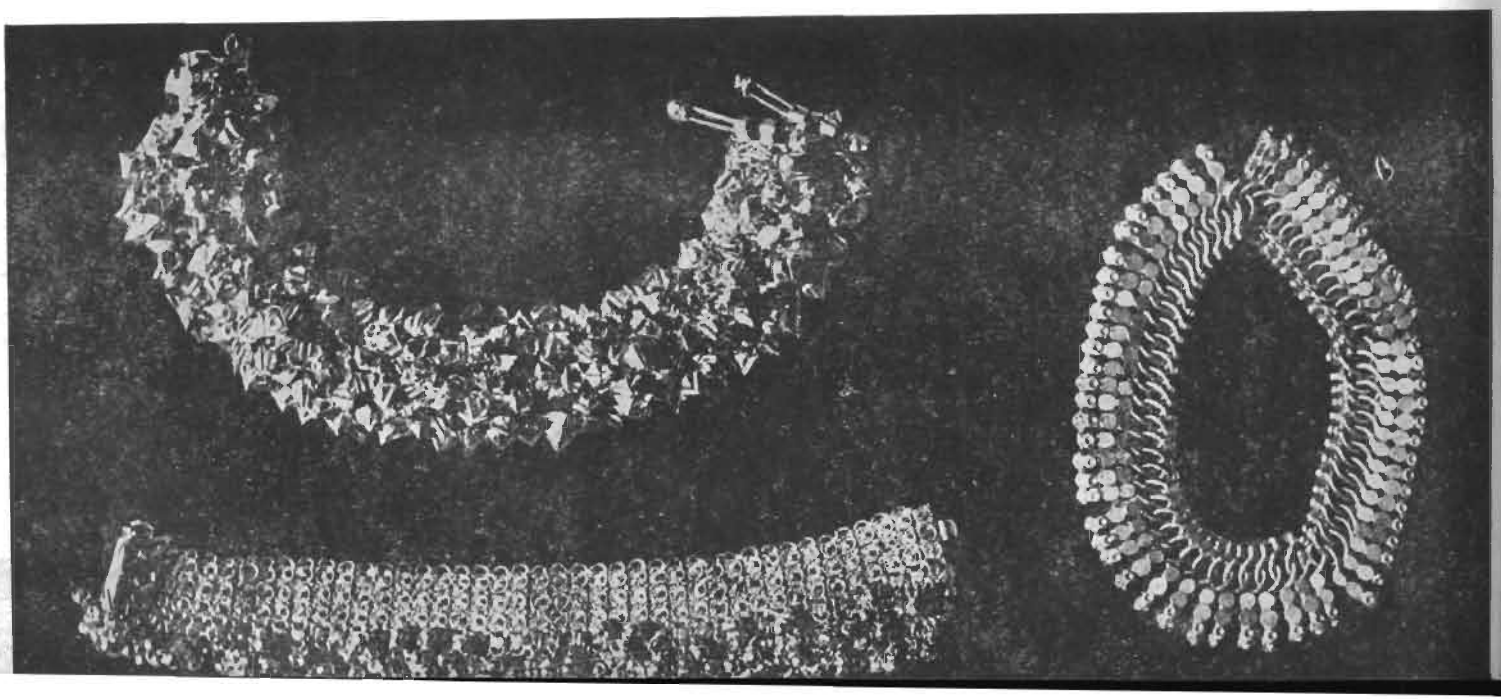


Panjeb

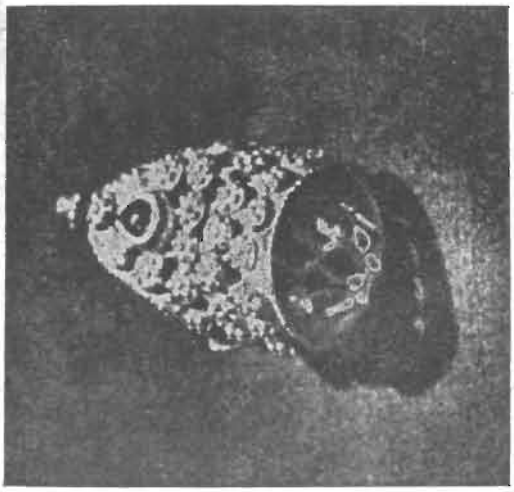


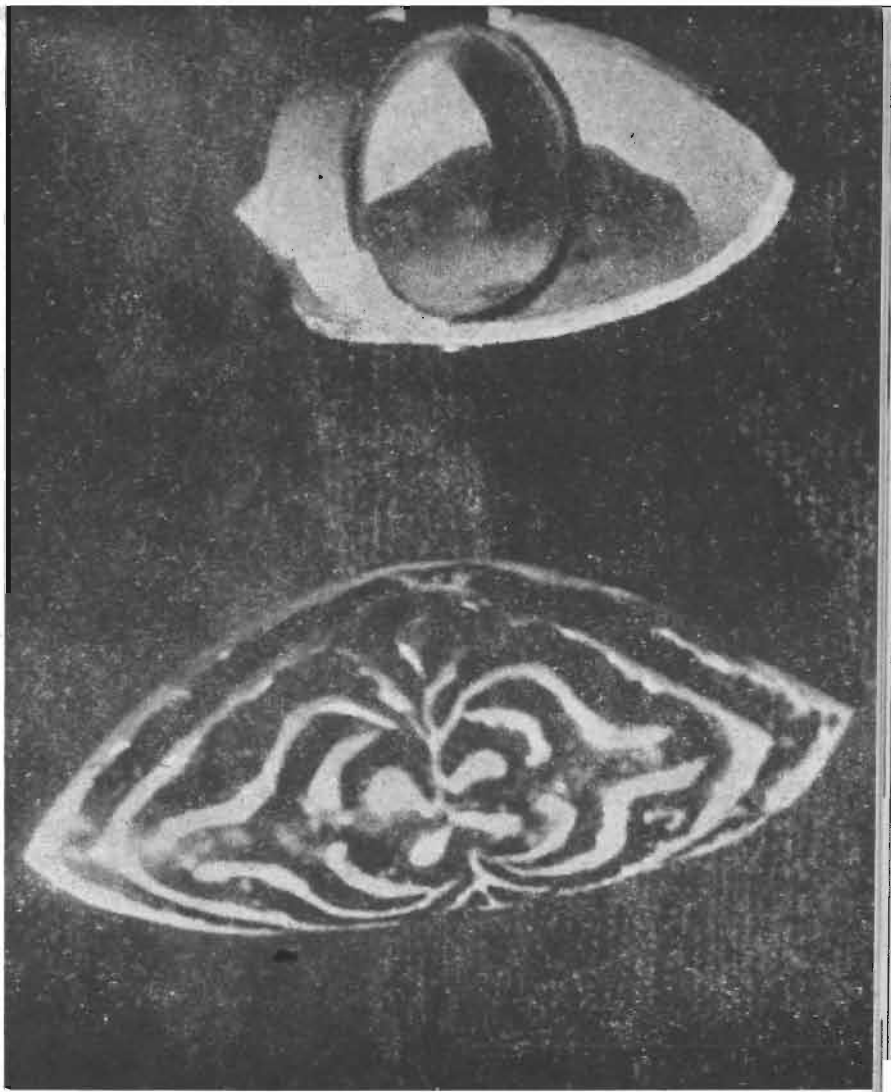
Panjeb

Panjeb, Gulshanpatti and Tora



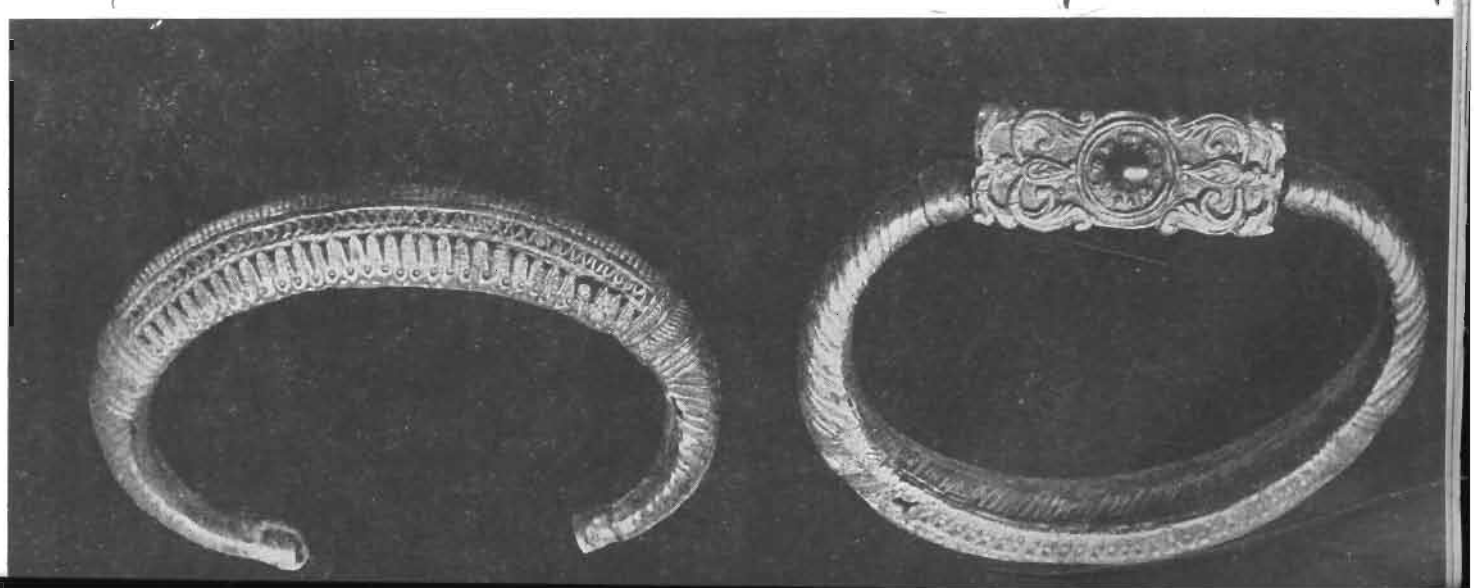
Polari

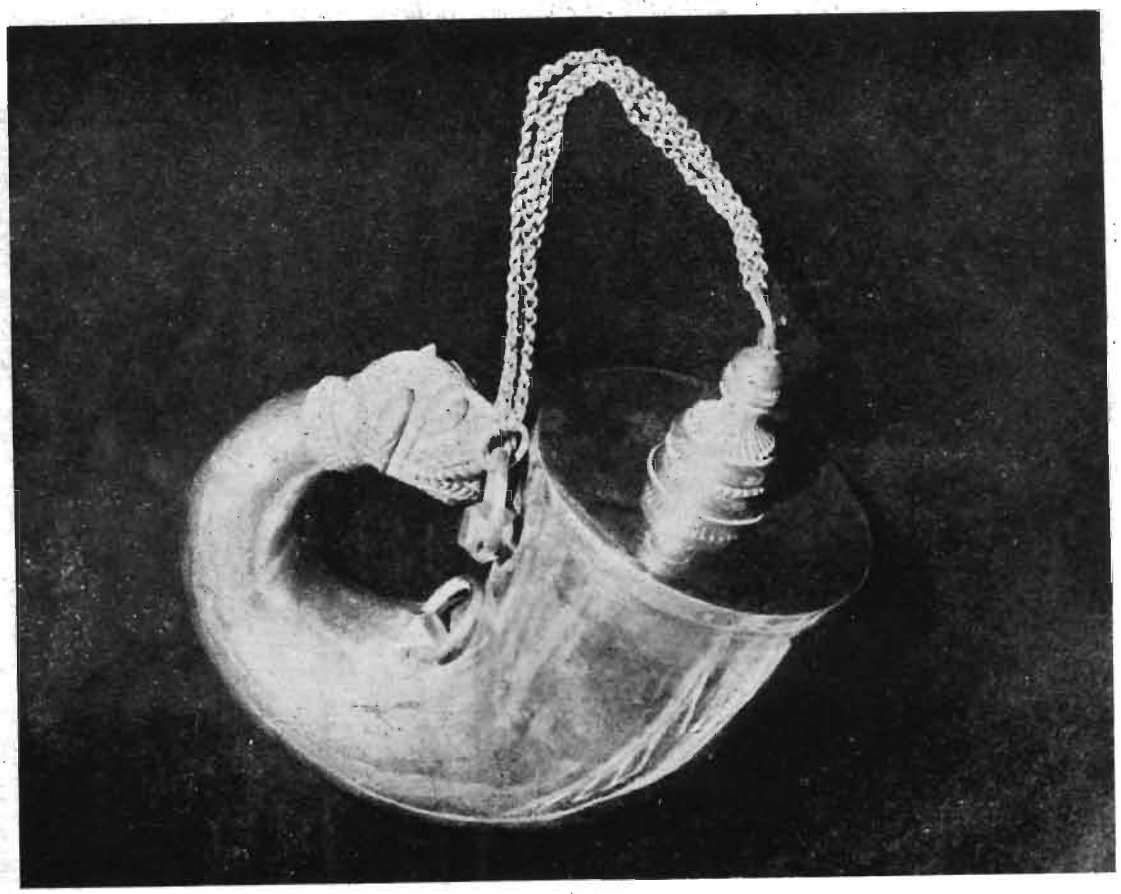




Guthara or Polari

Jhanjhar



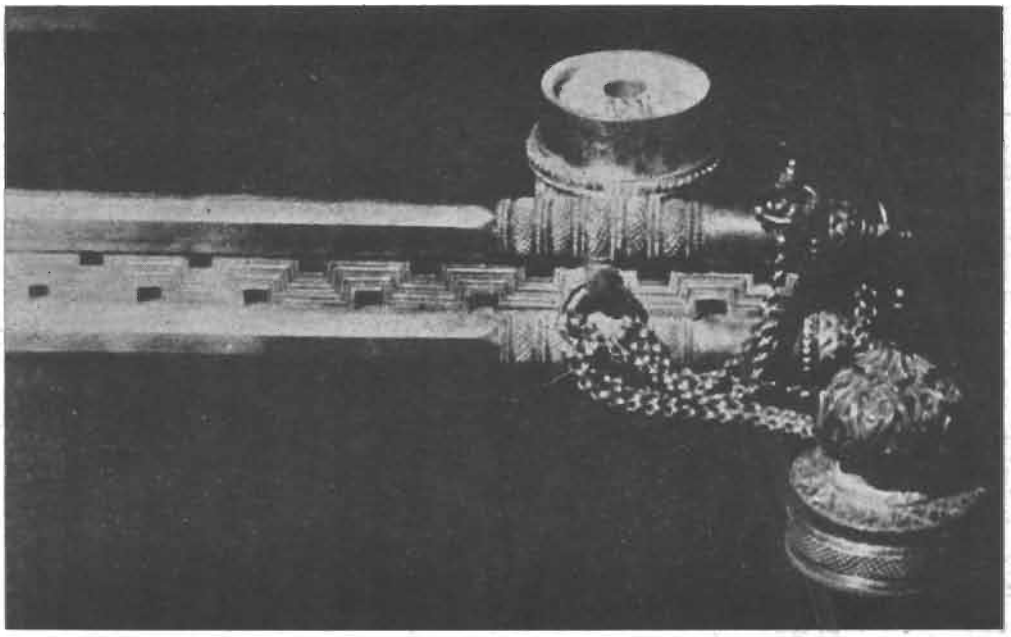


Silver Horn for Gun powder

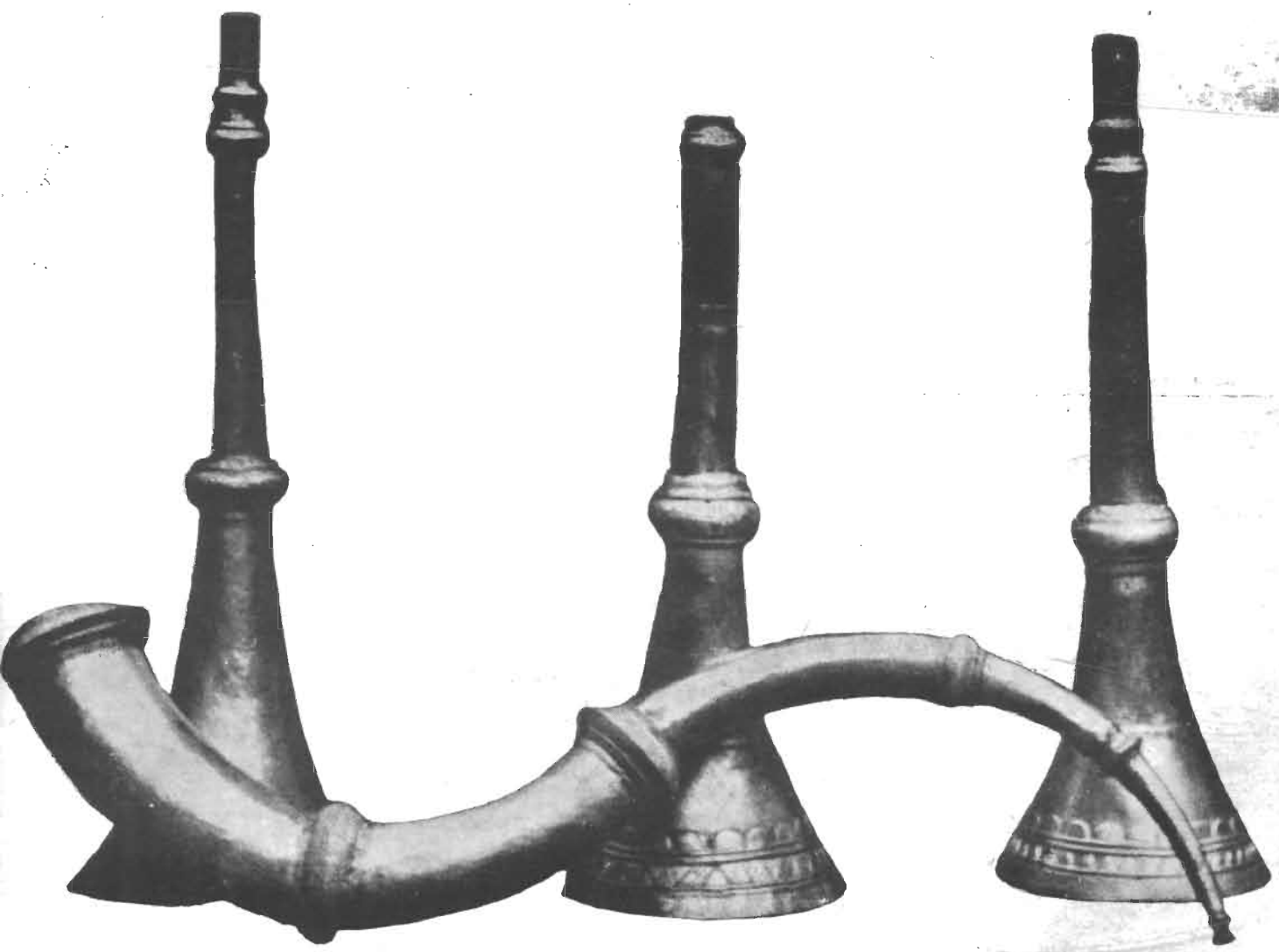


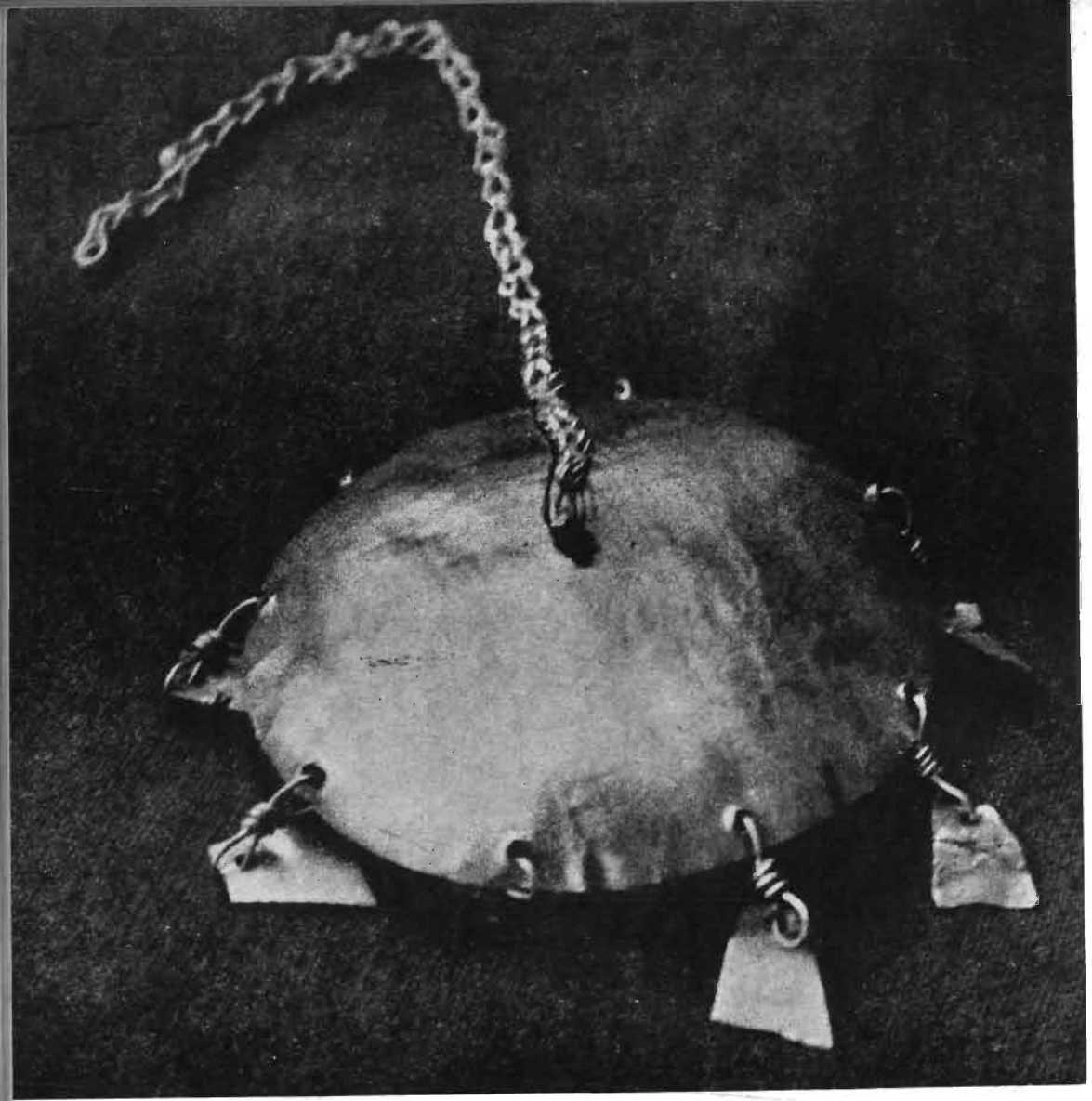
Itardani

Kalamdawat



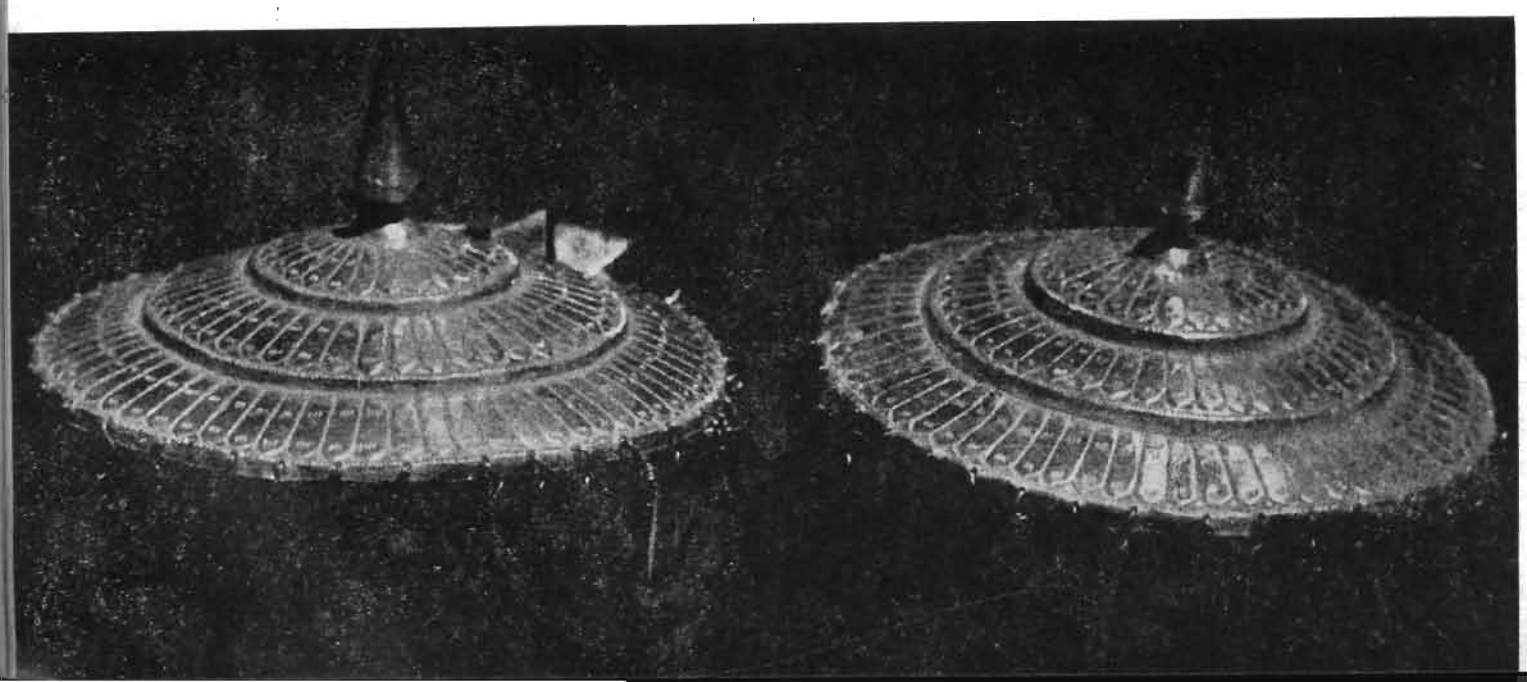
Karnal and Ransinga

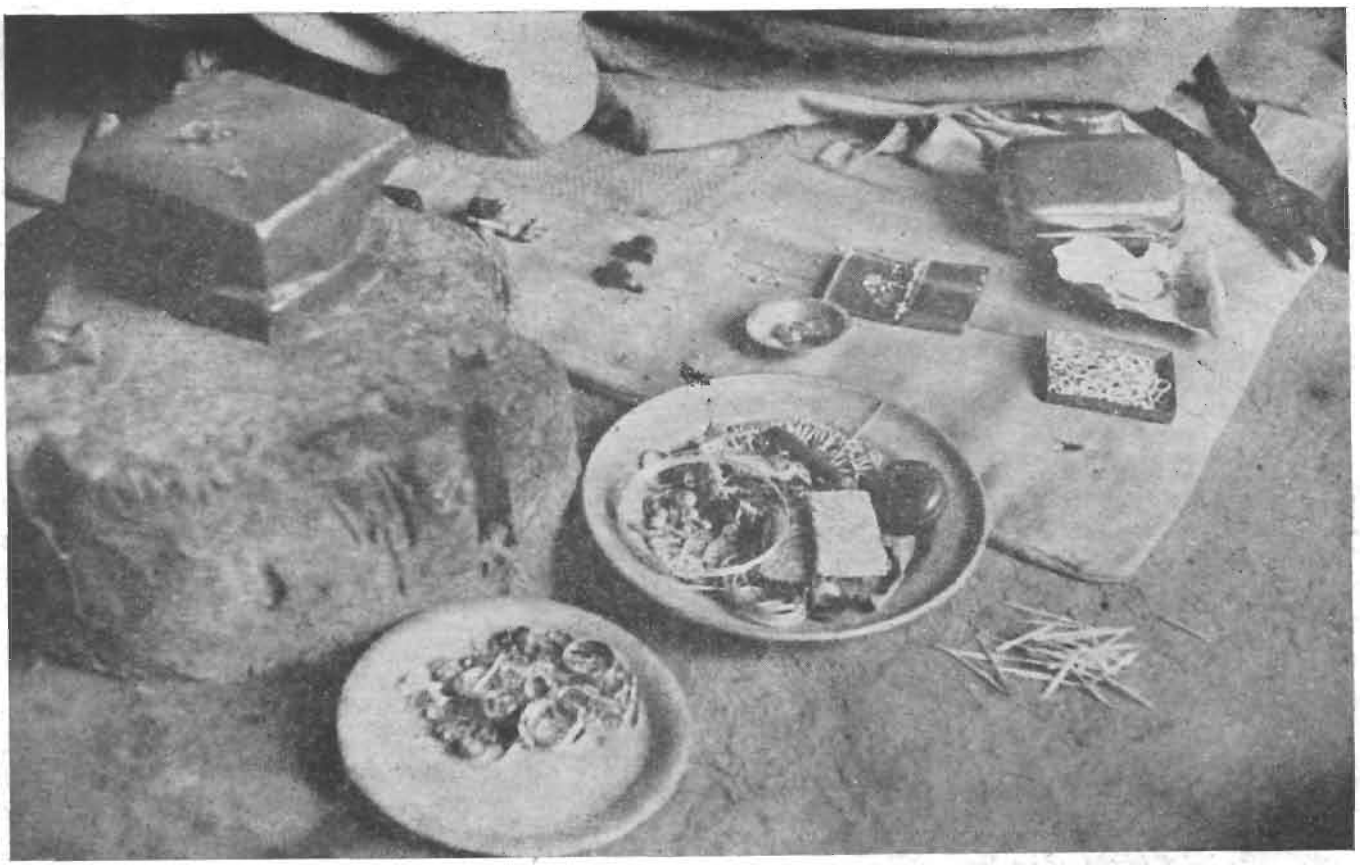




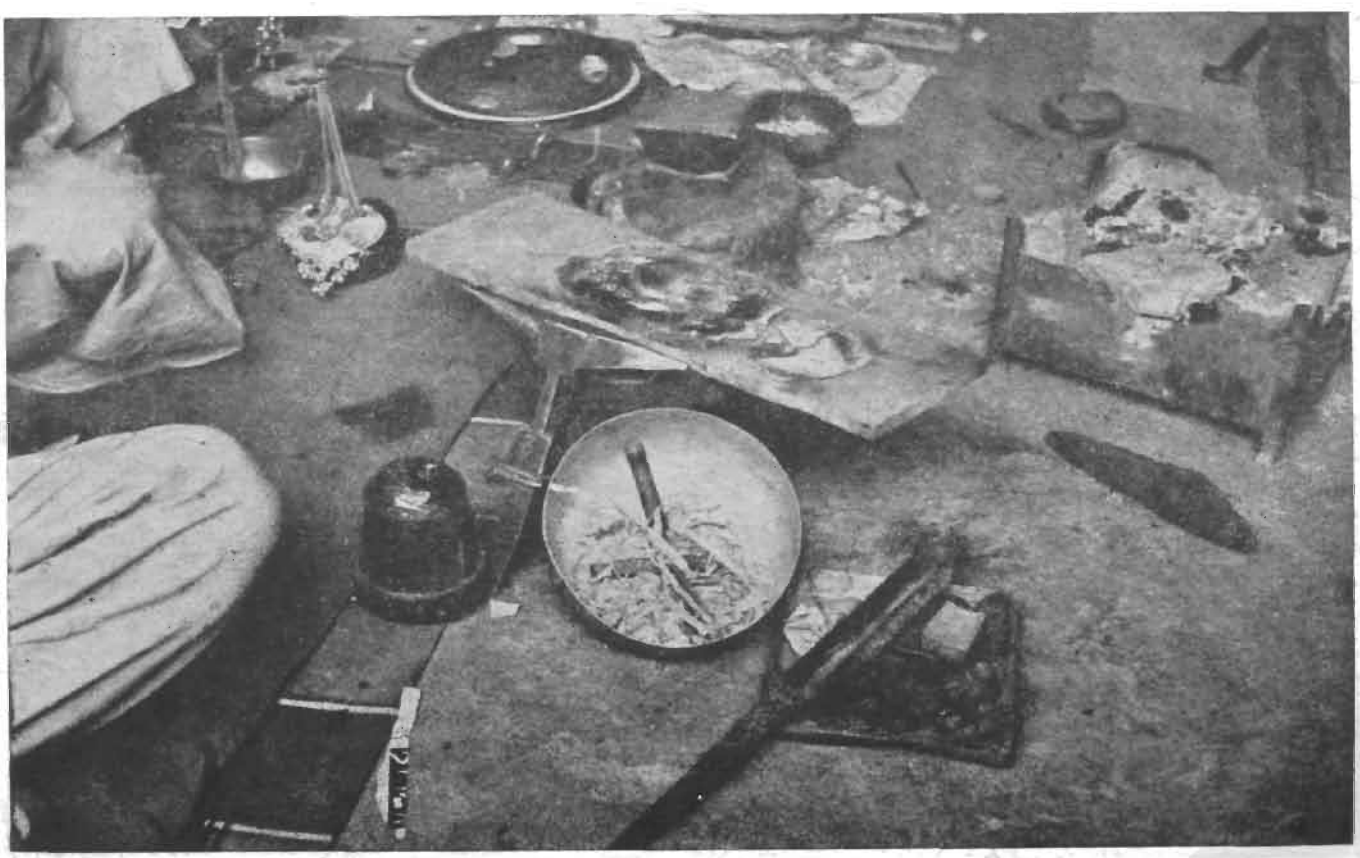
Chhatra

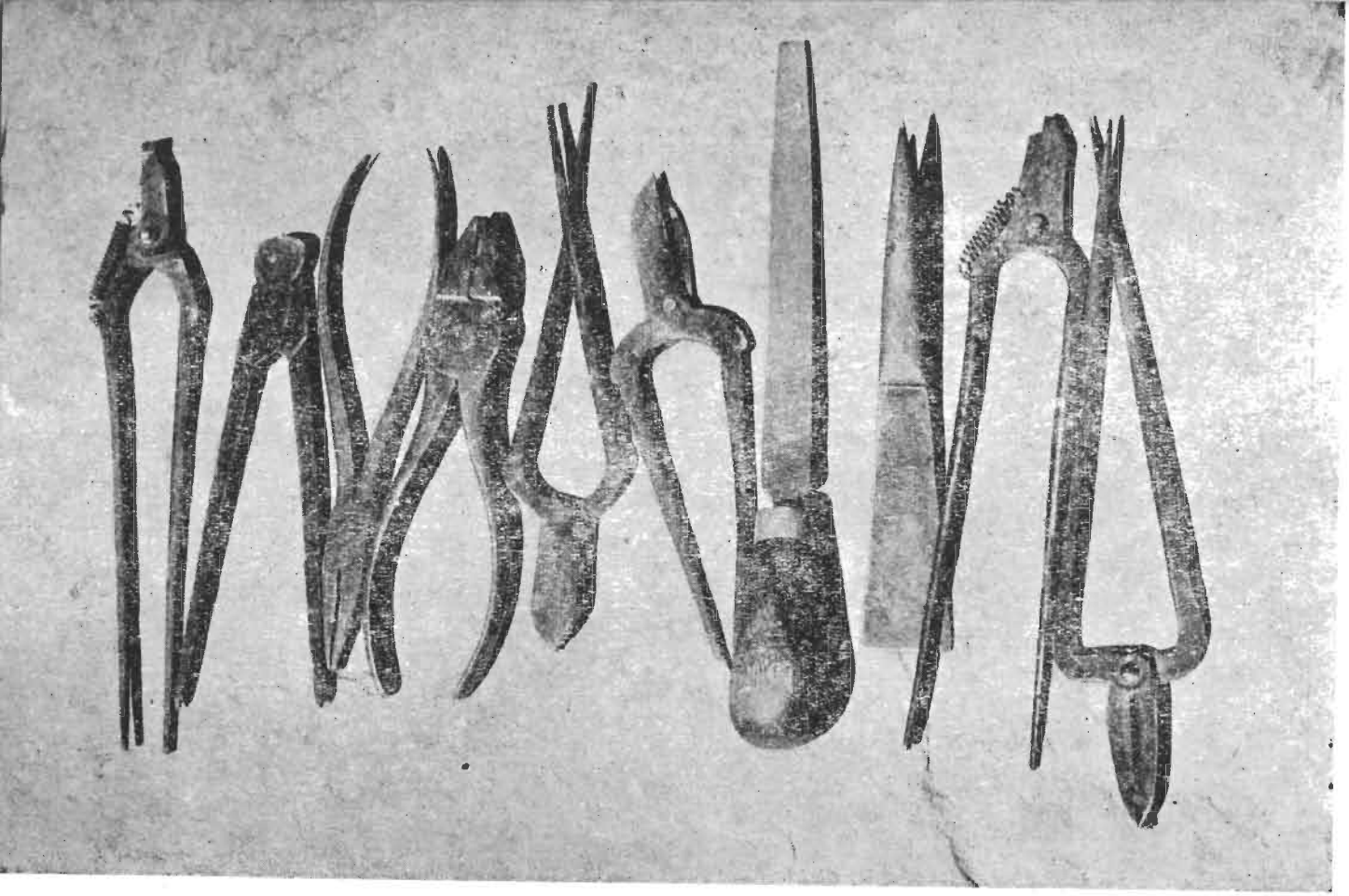
Beautiful Relief Work on Chhatra





Workshop



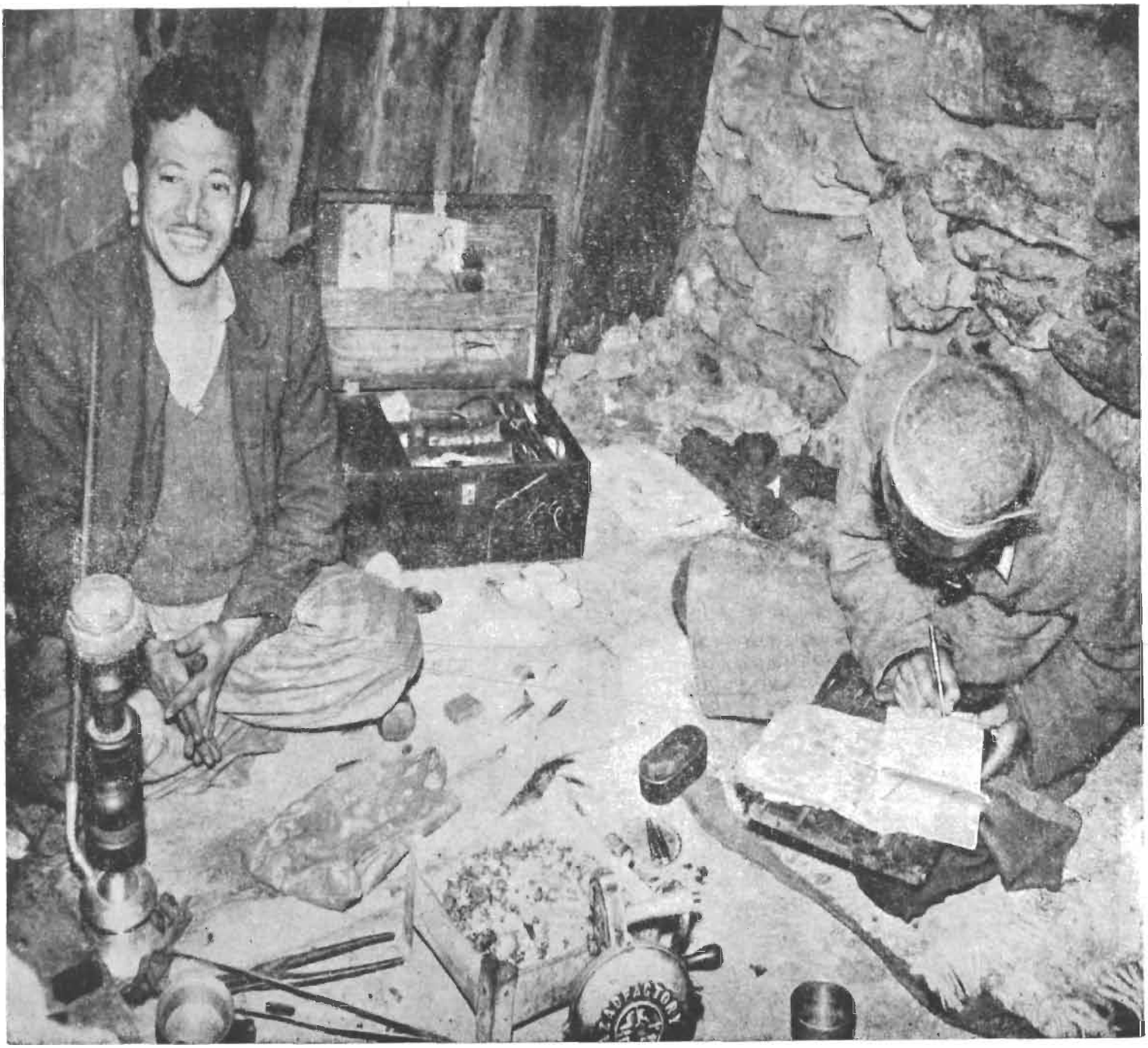


1 2 3 4 5 6 7 8 9 10

1 and 9—Rawala-Kante-ka-Katira, 2—Pincers, 3—Kao *chunj*, 4—*Pilar*, —5, 6 and 10—*Scissors*, 7—*File*, 8—*Tweezers*

Hammers

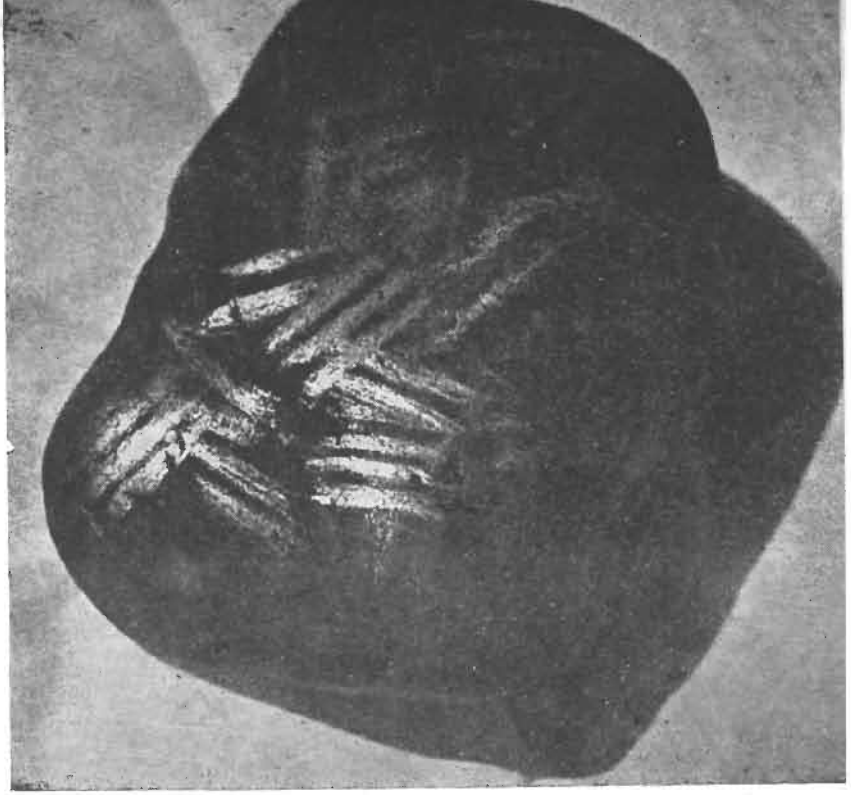




Drawing Designs—Kothi near Kalpa



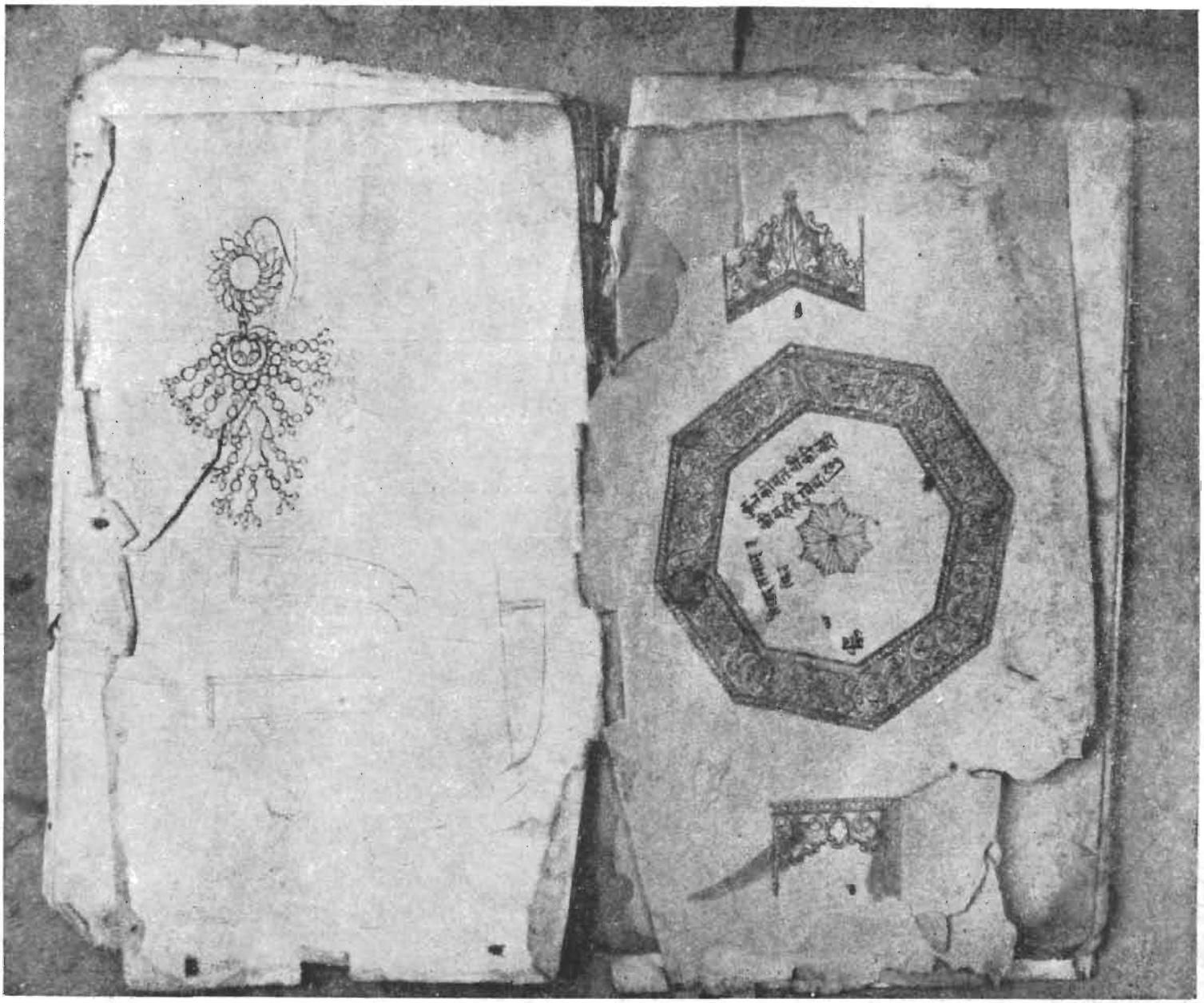
Shaping—Solon



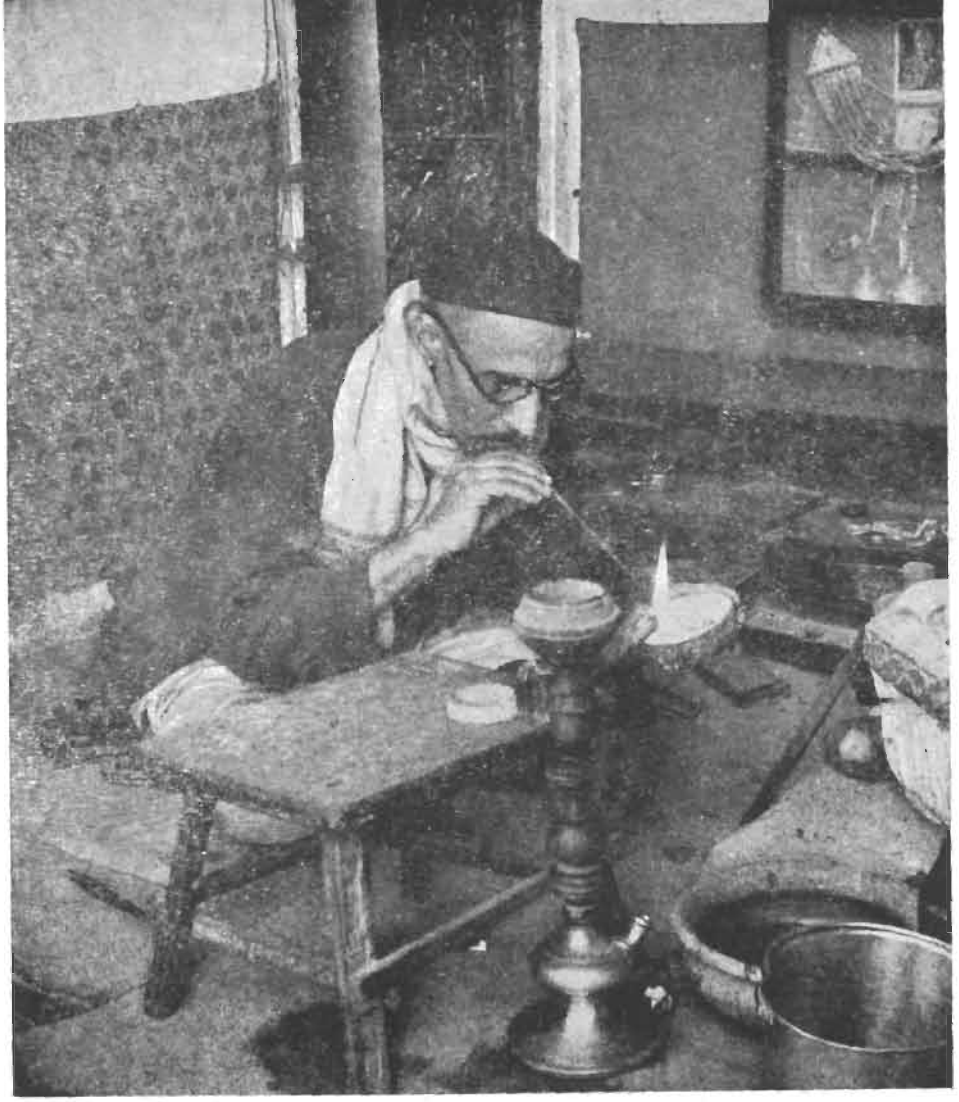
Kasauti

Drawings from an Old Sunar's Note Book—Nahan





Painting from an Old Sunar's Book—Nahan



Soldering



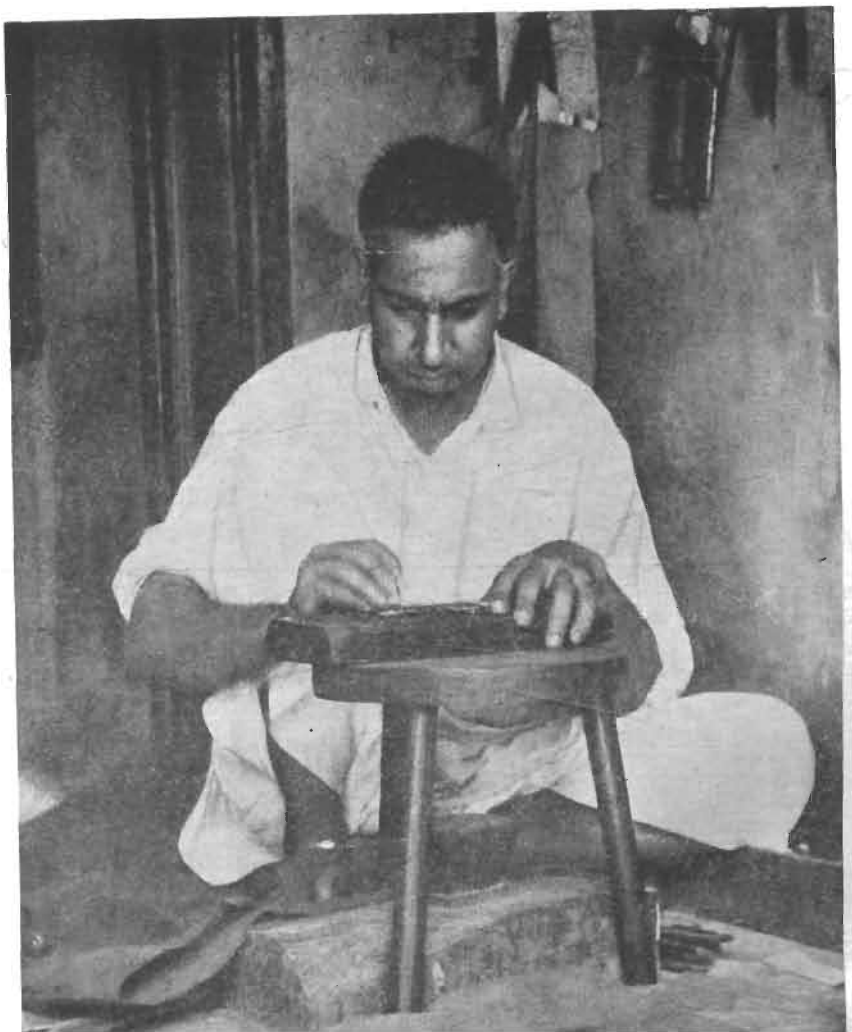
Filing



Drawing **Wire**



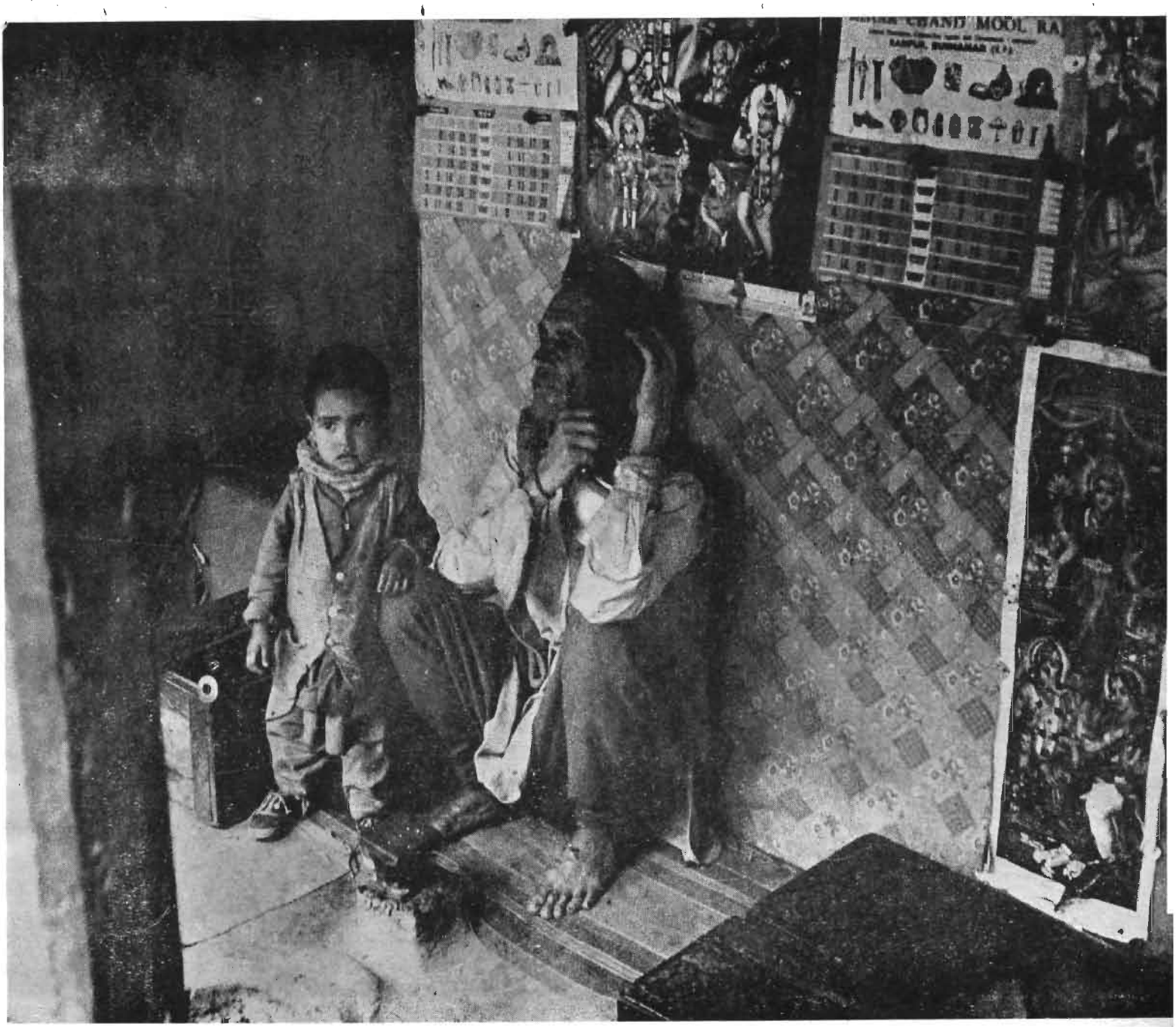
Delicate Hammering of Wire



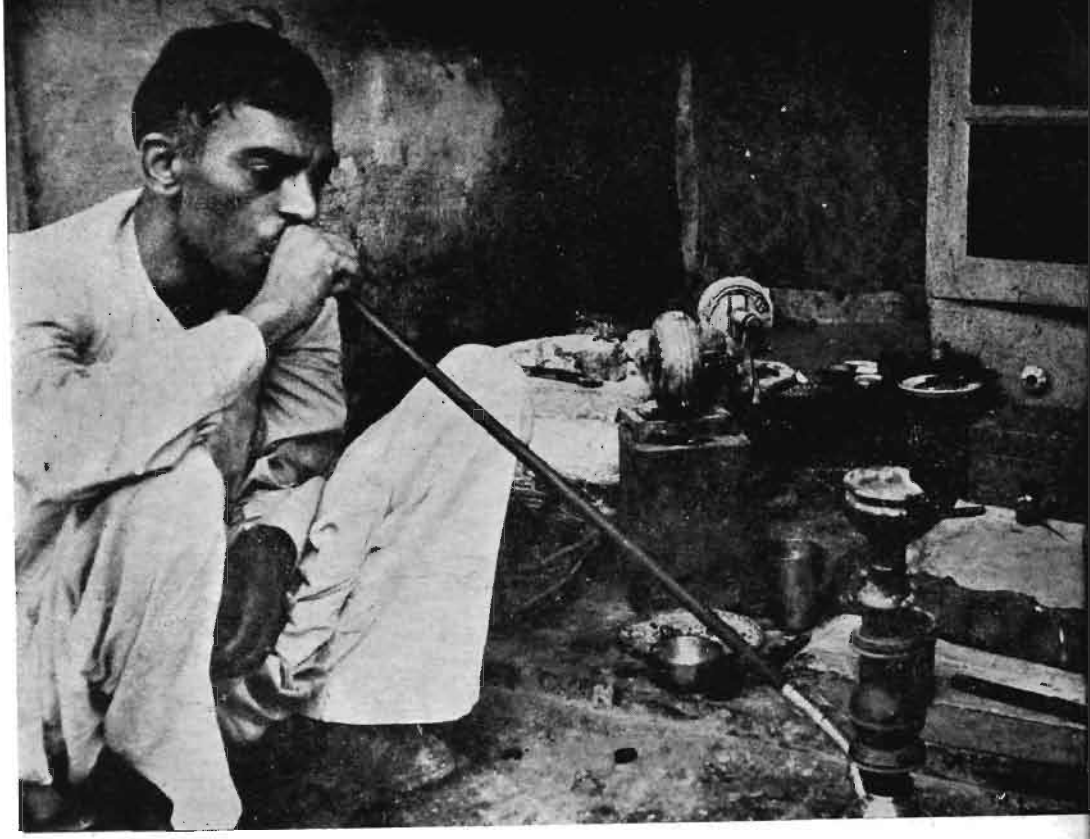
Designing



Finished Product



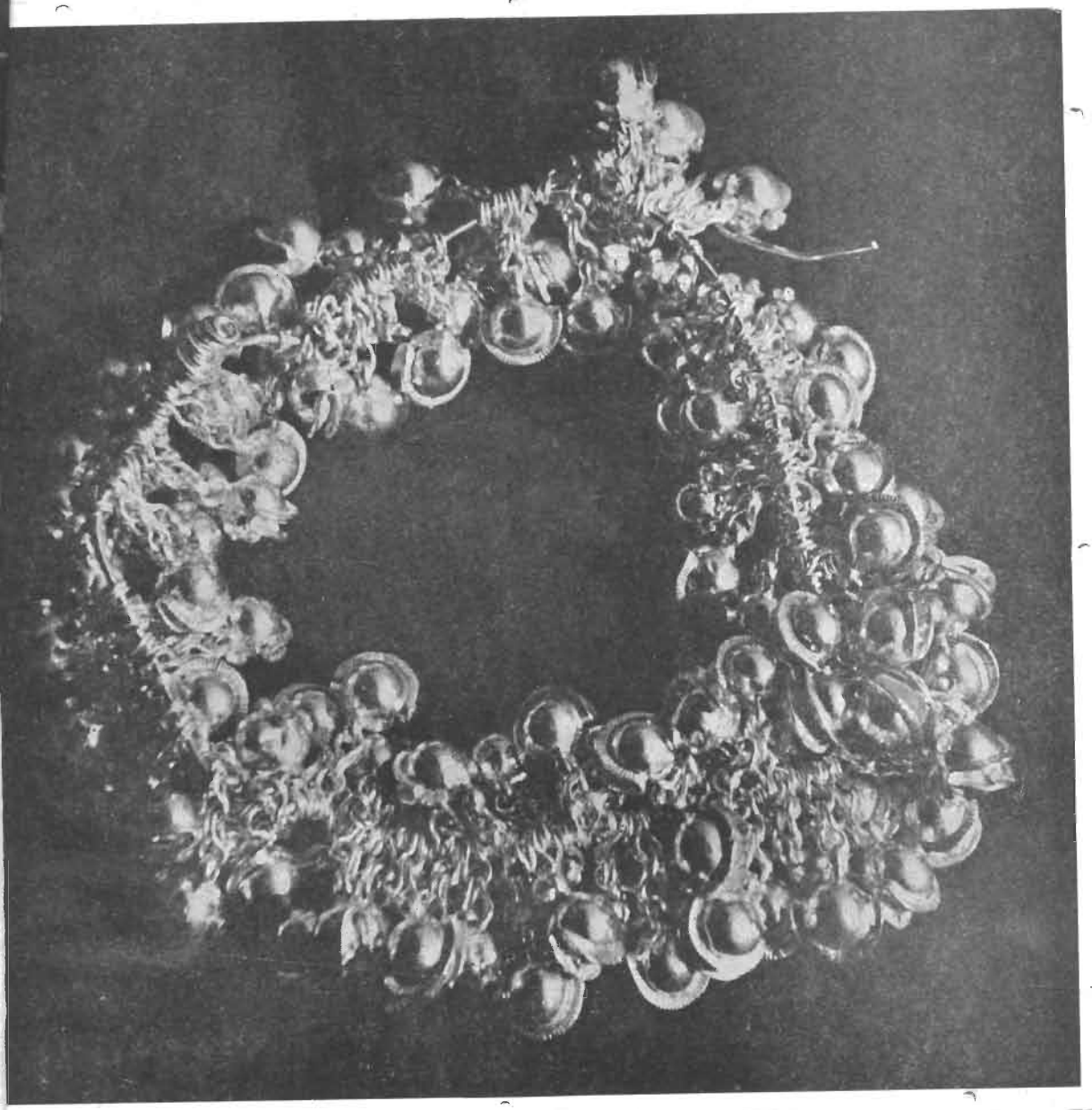
Relaxing



Relaxing Sunar



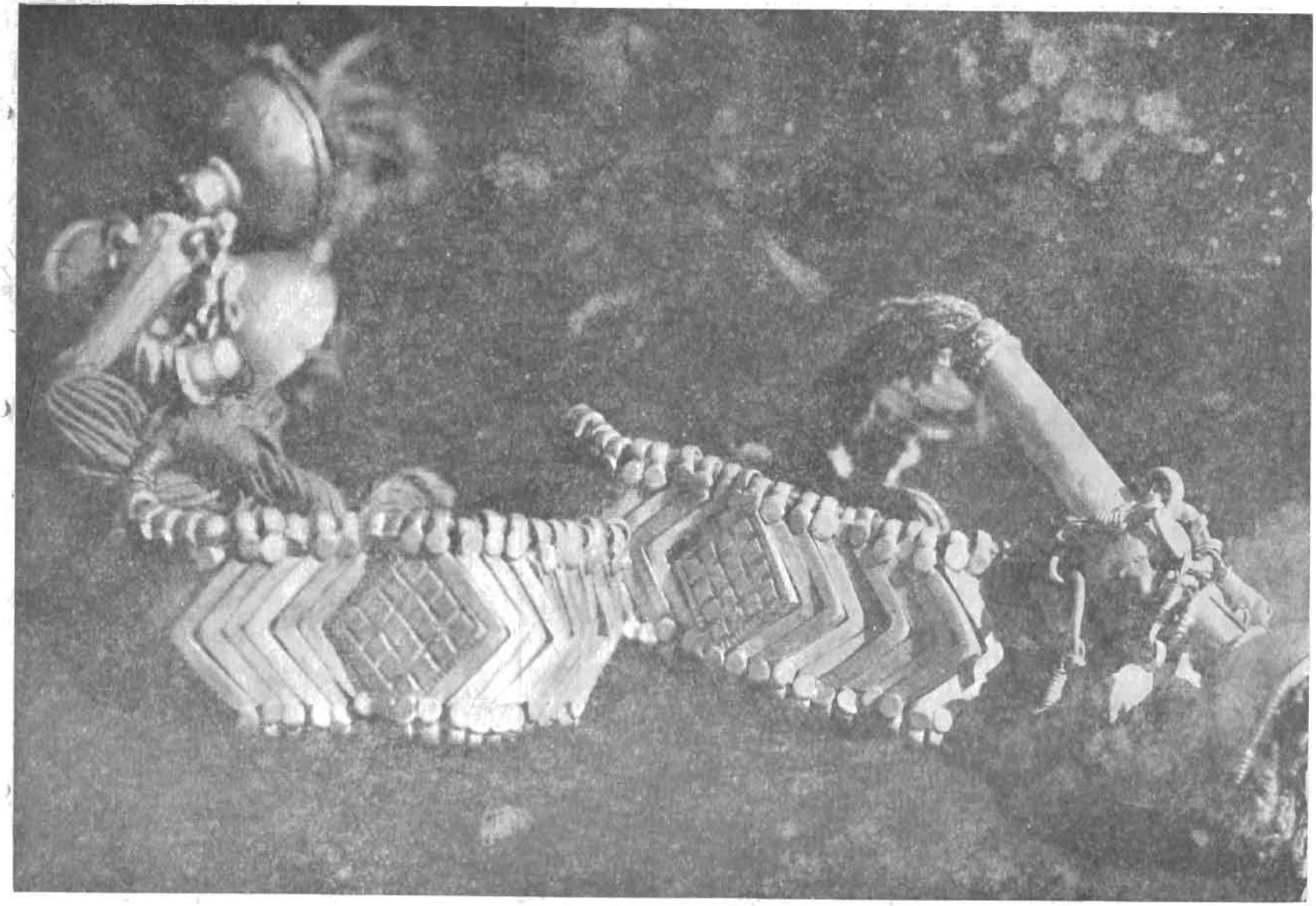
Collecting Siver Particles from Ash



Beads



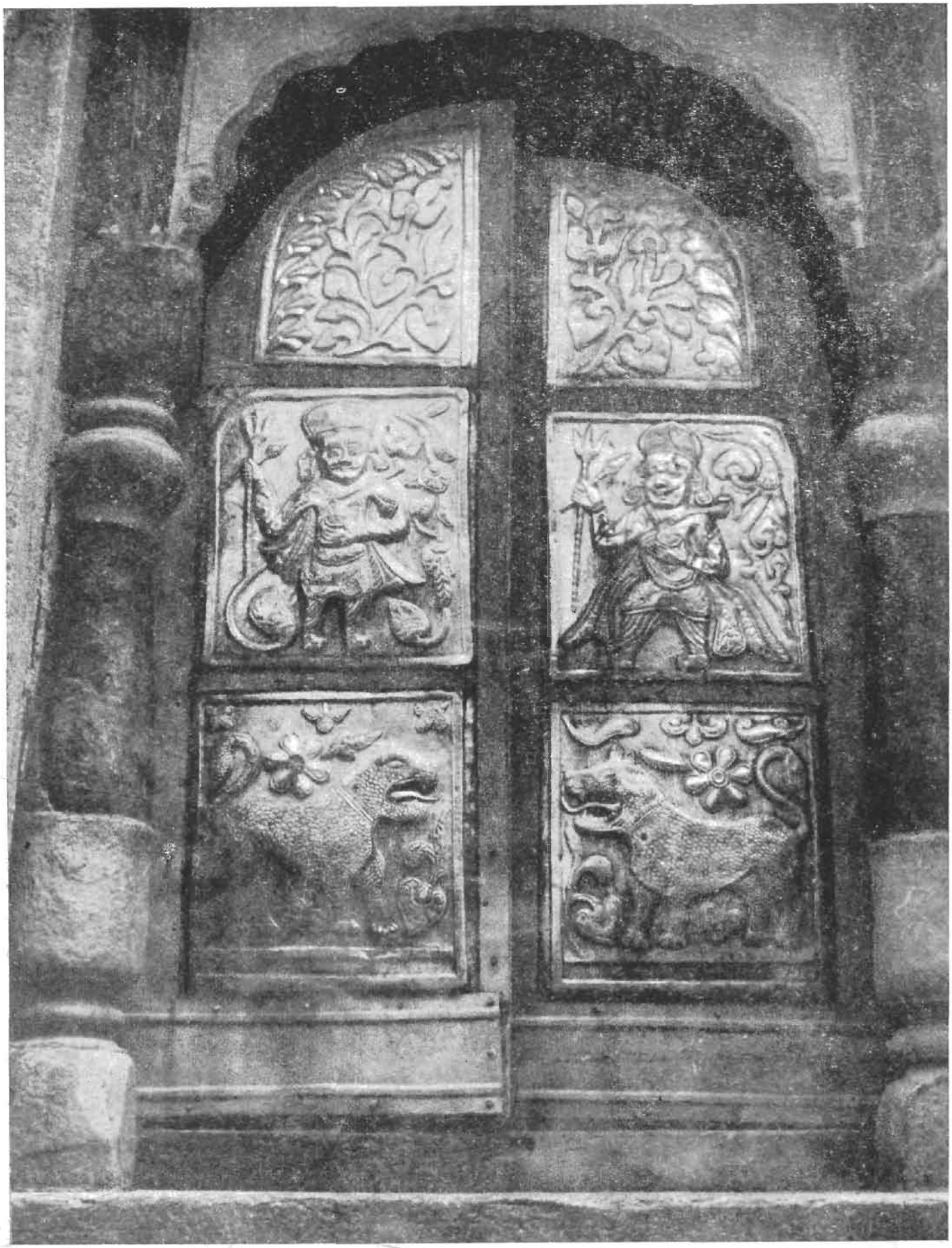
Silver Plate



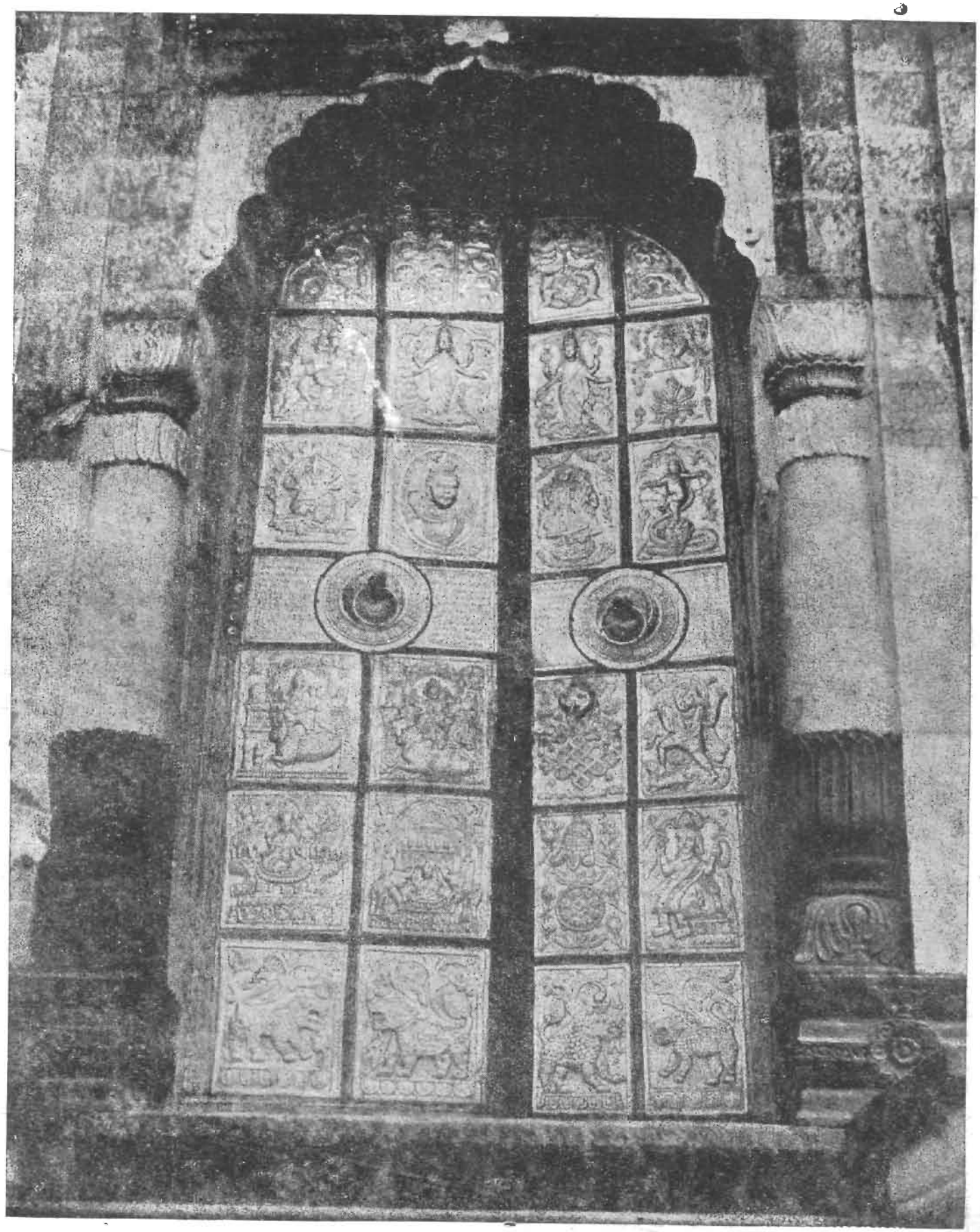
Ornament for the neck.



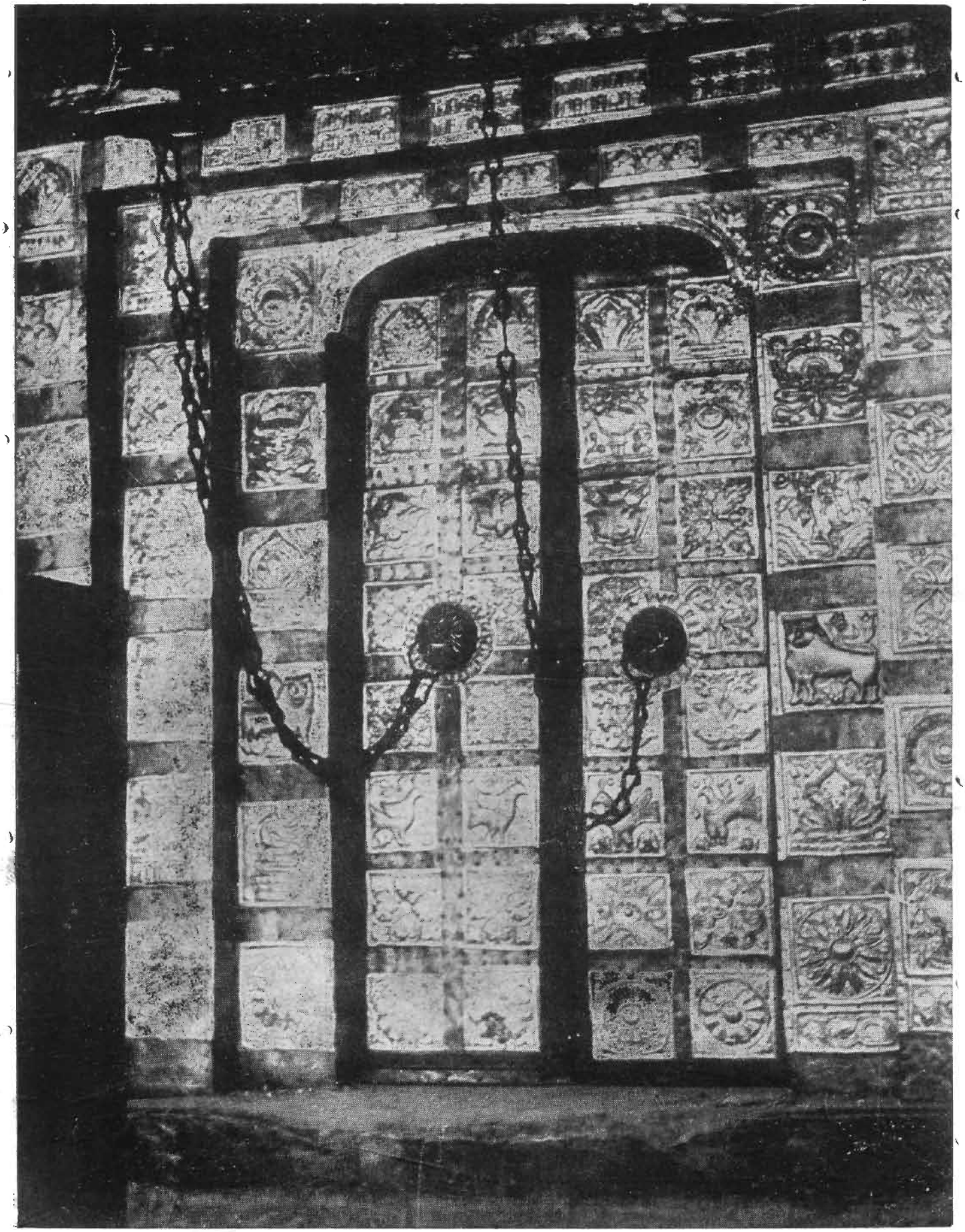
Silver Ornamental Temple Door, Bhimakali



Painting on Silver Ornamental door, Bhimakali



Silver temple door profusely ornamentad



The Exquisite Silver Door of Chandi Temple at Kothi



Relief Work on Silver Doors

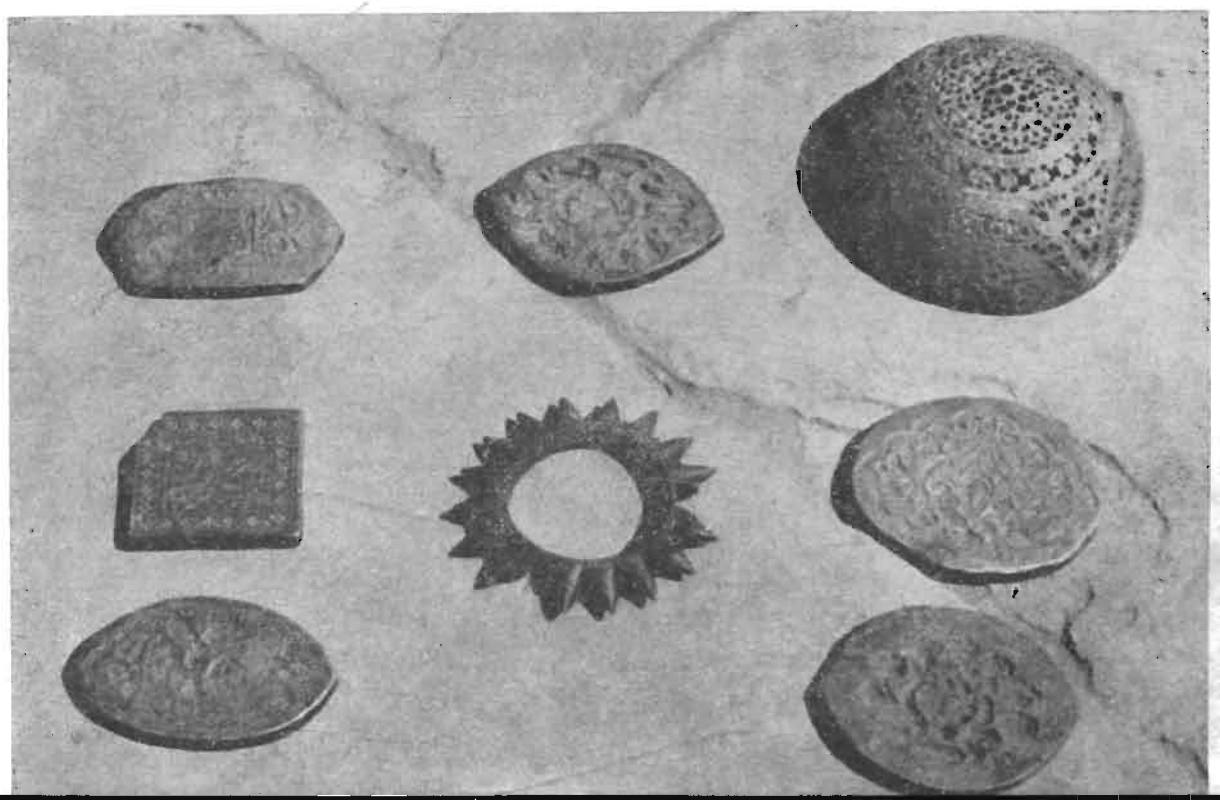


Relief work on Silver doors, Bhimakali





Wooden Stands, driller and Janti



Moulds



Moulds

