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A Study of Peruvian Textiles

Illustrated by Representative Examples

in

The Museum of Fine Arts

Boston

by

PHILIP AINSWORTH MEANS

MUSEUM OF FINE ARTS
BOSTON, MASSACHUSETTS

1932

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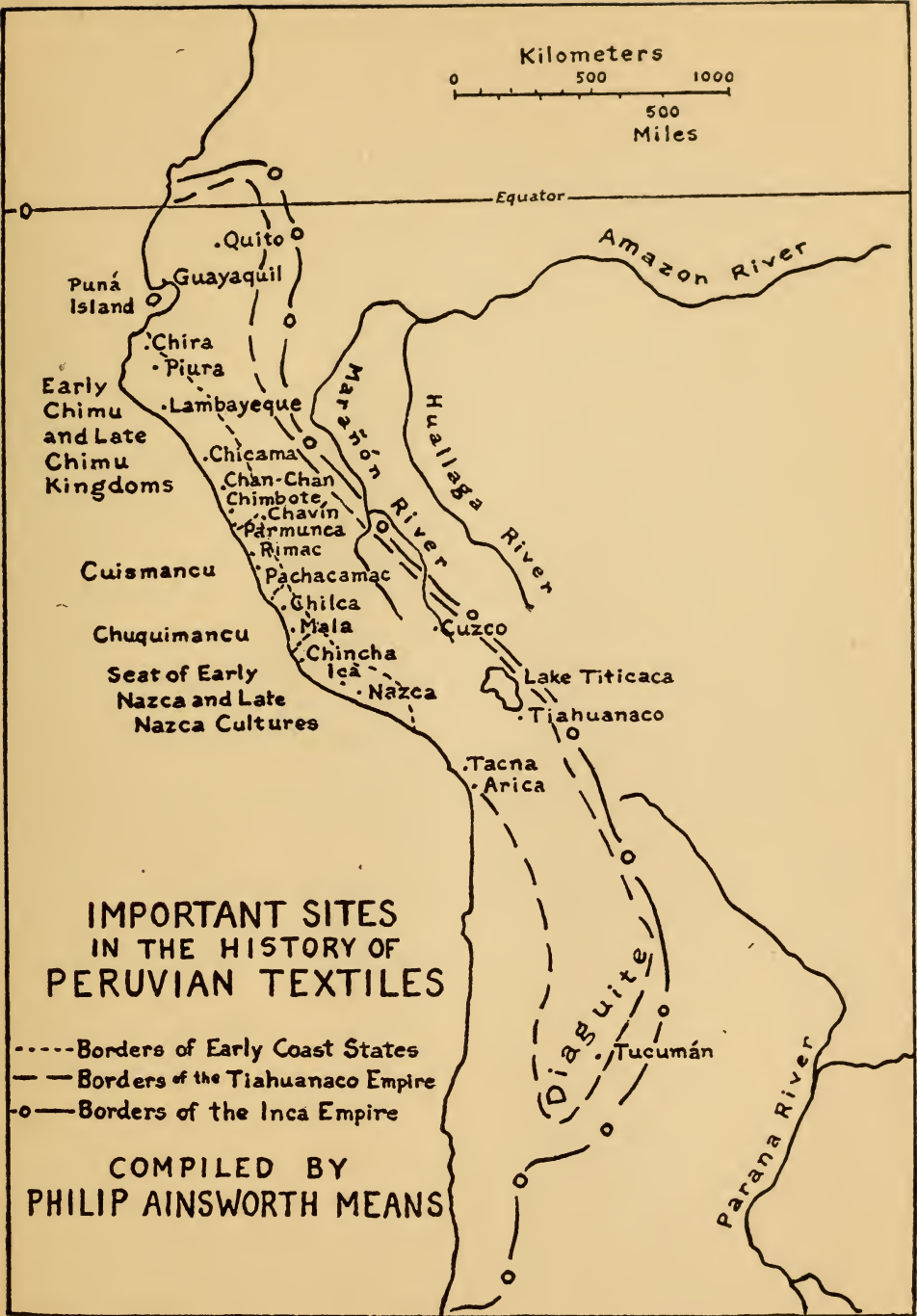
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PREFATORY NOTE

While this study deals with the different types of Peruvian textiles in the collection of the Museum of Fine Arts, Boston, only sixty-seven of the more important examples have been described and illustrated. There are now 225 pieces in the collection.

TO
H. A. ELSBERG, ESQ.
IN GRATITUDE FOR ALL
HIS AID AND ENCOURAGEMENT
TO ME IN MY STUDIES OF
ANCIENT PERUVIAN TEXTILES



Kilometers
0 500 1000
500 Miles

Equator

.Quito
Puná Island
Guayaquil
Chira
Piura
Early Chimu and Late Chimu Kingdoms
Lambayeque
Chicama
Chan-Chan
Chimbote
Chavin
Parmunca
Rimac
Cuismanco
Pachacamac
Chilca
Mala
Chuquimancu
Seat of Early Nazca and Late Nazca Cultures
Chincha
Ica
Nazca
Marañón River
Huallaga River
Amazon River
Cuzco
Lake Titicaca
Tiahuanaco
Tacna
Arica
Parana River
Diabuyoite
Tucumán

**IMPORTANT SITES
IN THE HISTORY OF
PERUVIAN TEXTILES**

- Borders of Early Coast States
- Borders of the Tiahuanaco Empire
- Borders of the Inca Empire

COMPILED BY
PHILIP AINSWORTH MEANS

PART ONE

INTRODUCTION

The collection of Peruvian textiles in the Museum of Fine Arts, Boston, is one of the oldest, if not the oldest, of this kind in the country. In 1878 the late Edward W. Hooper gave to the Museum a large number of interesting and beautiful specimens of the productions of ancient Peruvian looms, and to those specimens others have been added from time to time, largely through the generosity of Dr. Denman W. Ross and of Mr. Edward J. Holmes, Director of the Museum. It can be truthfully said, at the present time (May, 1932), that the collection, which has been developed under the able curatorship of Miss Gertrude Townsend, is one of the largest and most representative collections of Peruvian fabrics in the United States; indeed, its only serious rivals are the collections of the Metropolitan Museum of Art, and the private collection of Mr. H. A. Elsberg, of New York City. In making this perhaps rash-sounding statement, I have in mind not only the number and the variety of the specimens in the several collections mentioned, but also the manner of their presentation to students and to the public as well as the care that has been taken to have each specimen examined with a view to showing clearly its peculiar significance in the field of textile art as a whole. No doubt, in the various archaeological and ethnological museums throughout the land, there are numerically greater accumulations of Peruvian fabrics; but little or nothing has been done, thus far, to study and describe them consecutively and constructively.

While the Museum of Fine Arts Collection is richer in a number of categories of textiles from Peru than any other, it shares with the two collections mentioned above the drawback of including no examples of the historically important Incaic period. It is to be hoped that this gap, and that due to the absence of some of the other characteristic techniques, may be filled by future generosity.

THE ANCIENT ANDEAN CULTURAL PERIODS.

In order to reveal as fully as possible the historical as well as the technological significance of the Museum's present collection, special attention must be given to the sequence of cultural periods, with their approximate dates, which ran its course in what, for want of a better term, must be called "the Andean area." This arbitrary and far from satisfactory name designates the vast and varied territory now occupied

by the republics of Ecuador, Peru, and Bolivia, together with adjacent portions of the republics of Colombia, Brazil, Argentina, and Chile. Although the emphasis falls, so far as this Museum's textile collection is concerned, on Peru, we must not lose sight of the fact that the modern republic of that name represents only a part of a much larger area which was, in ancient and also in colonial times, an historical as well as a geographical continuity.¹

Having made it clear that the term "Peru" should always be understood merely as a part of the larger term "the Andean area"—save, of course, when the modern republic of Peru is specifically indicated—I will now proceed to present a brief outline of the historical and cultural periods therein so that the reader may be enabled to grasp the significance of the Museum's collection of ancient and colonial Peruvian textiles. In so doing I wish to emphasize the fact that Andean archaeology is a science which is still in its infancy, notwithstanding the existence of an immense body of literature dealing with it. Information regarding the pre-Hispanic periods is derived from two principal sorts of evidence: the first is folk-memory or folklore which was current at the time of the Spanish conquest (1530) among the upper class natives throughout the Inca Empire; the second is derived from modern archaeological investigations.

It is necessary to dwell briefly upon each of these two kinds of historical evidence.

Folk-memory or folklore is important for all who wish to reconstruct the ancient history of the Andean peoples because it gives us the sole possible insight into those peoples' own knowledge of their past. Unfortunately they, notwithstanding spurious modern claims to the contrary, totally lacked any sort of true writing. In this respect they stand in marked contrast to their distant kinsmen, the civilized folk of Central America and Mexico, of whom the former had hieroglyphic writing as early as 100 B.C., and probably much earlier.² Yet the ancient Andeans, whose general cultural level was fully as high, and in some respects higher, never attained to even a beginning of the hieroglyphic and calendric systems which were the pride of their distant kinsmen in the north.

¹ This subject is fully discussed in Means, 1931, Ch. i.

Works cited are expressed in this short form in the footnotes, but each work is cited in full in the bibliography at the end of the volume.

² Dr. Herbert J. Spinden, the foremost authority on Maya art, science, and history, dates the perfecting of the Mayas' calendric system at 580 B. C. See Spinden, 1924, p. 4. The importance of this subject for the student of ancient Andean history is discussed fully in Means, 1931, Ch. ii.

All this being true, it follows that the sole means by which the Andeans could preserve the memory of events in their own history was the human memory aided—when aided at all—only by the *quipu* or knotted string record of the Incaic period. The function of the *quipu*, moreover, was at best only mnemonic, and it is possible that it was altogether numerical, without any narrative function whatever.³ As has happened elsewhere, however, the absence of writing had the effect of strengthening the collective memory, particularly of the ruling classes, with the result that, when the Spaniards entered the country, those among them who were of an investigatory turn of mind found a definite body of folk-memory in readiness to be set down in writing. Unhappily for us, however, the body of folk-memory was far from being as firm of texture as we could wish, and the historical or pseudo-historical narratives received by the earlier Spanish historians from the lips of the natives whom they questioned very often fail to corroborate one another. Nevertheless, taken as a whole, the writings of the Chroniclers of Peru—by which term is indicated the large group of Spanish authors who, before 1700, dealt with pre-Hispanic Andean history—do constitute an invaluable mass of historical data upon which all modern investigators must draw if they would support their studies with the best available evidence.

Archaeological science, whence is derived the second kind of historical evidence referred to above, had its beginnings in Peru in the eighteenth century. One of the earliest, if not the earliest, archaeological collections to be formed in Peru and still extant for the information of students and the delight of the curious is that built up, about 1780, by Don Jaime Martínez Compañón, Bishop of Trujillo. He wrote a book about the antiquities of his diocese, intending to illustrate it with pictures made from the superb objects which he gathered so eagerly. Although the book of Bishop Martínez is, apparently, no longer in existence (never having been printed), his collection is fittingly installed in the National Museum of Archaeology, Madrid, the good Bishop having sent it as a present to his sovereign, Charles III of Spain.

From such beginnings Andean archaeology has grown and intensified until, today, it is embodied in a large mass of published works, some of the most important of which—notably those which bear more or less directly on the textile arts—are listed in the bibliographical references on pages 74–82 of the present work. To a large extent the discoveries of field workers and the analyses of writers using data provided by archaeology have corroborated and interpreted data provided by folk-

³ Means, 1931, pp. 305-306 and 325-329, where the leading authorities are cited.

memory as preserved for us by the Chroniclers. It is upon a combination of these two kinds of data that the following account of the cultural periods of Peru is based. The dates here used are, admittedly, only approximate. Moreover, they are my own personal interpretation of the evidence provided by archaeology as regards the intricate and difficult subject of Andean chronology. While it is true that all acceptable chronologies are based upon that of Dr. Max Uhle (many of whose works are cited in the bibliographical references), they differ among themselves in details.⁴ In spite of these small divergences, in spite, too, of various differences of opinion with respect to nomenclature, all the chronologies cited agree in the main with Dr. Uhle's original chronological scheme. Therefore, although I am well aware that several other workers in this field do not wholly agree with me in every respect, I shall continue to adhere in these pages to the chronology which I drew up in 1930 for the Metropolitan Museum of Art.⁵ In the present connection, however, I shall go into greater descriptive and interpretative detail than I was able to do on that former occasion, doing so with special reference to the chronological groupings of Peruvian textiles.

THE EARLY CHIMU AND EARLY NAZCA CULTURES. FIRST SIX CENTURIES OF THE CHRISTIAN ERA.

Many writers, among them Dr. A. L. Kroeber in a recent work,⁶ have held that the culture now generally designated as Early Chimu is without roots in Peruvian soil; that it is known only as a fully developed cultural type. With this opinion I am unable to agree. Although our archaeologically derived information on this point is still lamentably incomplete, it is already clear enough that a culture of archaic character in which were already present the rudiments of the arts, of agriculture, of pottery, of weaving, and of metallurgy existed along the Peruvian coast and also in the Peruvian highlands at an indefinitely remote period. Almost certainly that archaic culture was of Central American origin, having left the north prior to the invention there of hieroglyphs and calendric lore, and having during many, many generations of slow and haphazard migration spread along the western seaboard of South America. All this

⁴ Attention is called particularly to the chronologies of Dr. Uhle, as set forth in his various writings, especially in Uhle, 1901, 1902, 1903, 1910, and 1913b, and to that of Drs. Lehmann and Doering, 1924, and to that of Dr. Olson, 1931.

⁵ Means, 1930, pp. 9-17.

⁶ Kroeber, 1930, p. 108.

has been made clear elsewhere.⁷ The central fact about archaic culture in Peru, as, indeed, about archaic culture wherever it occurs, is that it contains the rudimentary forms of many cultural activities, but the fully grown forms of none of them.

It is likely that the transition from the groping and experimental archaic stage of technology to the stage wherein the processes of technology, both in manufactures and in such matters as agriculture are mastered so that the objectives to be gained are merely greater efficiency in form and method than was possible while the raw materials for the technique were still unconquered, took place rather suddenly in coastal Peru. Folklore, as preserved for us by Father Calancha,⁸ tells us that a ruling dynasty named Chimu had its seat in the Moche Valley where the mighty ruins of the great city of Chan Chan may still be seen,⁹ and that its power spread thence into the next valley to the north, that of Chicama; spreading still later into the Pacasmayo or Jequetepeque Valley to the north of Chicama.

These three valleys were certainly the seat of a high culture during the first six centuries of our era which, for want of a better name, we call Early Chimu. How far this culture spread to north and south in this period is not yet settled; nor is it important for us in the present connection. We know, at any rate, that the ceramic art, the architecture, and the agriculture of the Early Chimu folk were highly developed, far removed from their archaic beginnings. Of Early Chimu textiles we know only what the pottery of the period tells us; for no specimens of cloth quite certainly representative of this period have yet been acquired by archaeologists.¹⁰ Nevertheless we have irrefutable evidence that the textile art was highly developed among the Early Chimu people. Their pottery, embellished both by modelled and by painted designs, shows us richly clad men with tunics both sleeved and sleeveless, with fantastically elaborate headgear, and with long mantles.¹¹ Moreover, in the British Museum there is a very important Early Chimu vase upon whose flaring rim is painted a series of scenes in which an Early Chimu weave-shop is shown.¹² Concerning the nature of the cloth being made in that weave-shop we are in some doubt, but to this point I shall return presently.

⁷ Consult Uhle, 1906, and pp. 390-392 of Means, 1917, where Dr. Herbert J. Spinden discusses the archaic culture in Peru. See also, for a full exposition of the matter, Means, 1931, Ch. ii. Particularly important is Jijón y Caamaño, 1930.

⁸ Calancha, Bk. III, Chs. i and ii.

⁹ Holstein, 1927.

¹⁰ Kroeber, 1930, p. 107.

¹¹ Montell, 1929, pp. 24-132.

¹² Joyce, 1921; Means, 1931, pp. 465-466.

The general character of Early Chimu art was realistic. In the pottery we see lifelike representations of landscapes, hunting-scenes, fishing-scenes, battle-scenes, buildings, genre-scenes, and portraits (many of them of the highest artistic worth). The designs of Early Chimu pottery, both the painted and the modelled designs, have a great documentary value for the reason that they tell us nearly all that we know concerning the material aspects of the civilization flourishing in that period. It is to be hoped that in the future scientific archaeology will succeed in recovering actual specimens of Early Chimu textiles.

Although we are still without true stratigraphic evidence concerning the history of Early Chimu civilization, we can already perceive that the art of that people and period gradually matured during the centuries of its prosperity. Little by little the scenes upon the pots lost something of their spirited naturalness and a tendency towards formalism gained ground correspondingly. Scenes in which monsters occur, such as certain centipede-like demons with or without human attributes, came to be made in increasing numbers; gradually a subtle but unmistakable growth of superstitious fear came to be reflected in the Early Chimu art. These tendencies were the outcome, I take it, of an augmenting power on the part of a priestly class, or of a class which may have combined in itself the functions of priesthood and of rulership.

In the meantime, the Ica and Nazca Valleys, located some six hundred miles down the coast, to the south from the seat of the Early Chimu culture, were the home of another high culture which is now known as the Early Nazca culture. The fact that it, also, is characterized by portrait-pots and by vessels embellished with genre paintings akin to those of Early Chimu art makes it evident that it is related, and rather closely, to the other. There is, nevertheless, a strong contrast between Early Chimu and Early Nazca art. The former began as predominantly realistic, its designs being wrought in simple color schemes, chiefly cream and dark brown with lighter tints now and then; it gradually became more and more formal in its subjects and in the mode in which they were depicted. Early Nazca art, on the other hand, is richly varied and usually dark in its coloration; in it the realistic tradition is preserved by skilfully modelled and painted portraits and by more or less lifelike genre paintings on pots. But, for the most part, Early Nazca art is concerned with a many-colored world of mythological monsters, part human, part animal, which are highly esoteric to us, so much so that we can admire only their coloring and the skill with which they are drawn, both on the pottery and in the different kinds of textiles which the Early Nazca folk made.

The inner meaning of the innumerable decorative motives which they created is, of course, lost to us.

This being so, all that we can say with sureness is that Early Nazca art, in its formalized and conventionalized phases (as contrasted with its naturalistic phase—presumably earlier), is chiefly concerned with the presentation of a number of strange personages of which the most frequently seen are the following:

1. **THE SPOTTED CAT.** This creature is purely animal in character and is evidently derived from the puma. Sometimes the Spotted Cat motive is shown in such a way as to be almost naturalistic in part; but more often it is conventionalized, one symptom of conventionalization being the habit of showing its paws with only four toes and those far from natural in appearance. Almost always, however, the Spotted Cat bears with it in its front paws leaves or pods, which fact has led Dr. Seler aptly to term the Spotted Cat "Bringer of the Means of Life." On the whole the Spotted Cat seems a benevolent creature.

2. **THE CAT DEMON.** This creature is far less kindly in its aspect than the Spotted Cat. Indeed, it is decidedly ferocious for, whether it be shown as partially humanized or whether it be shown with bird attributes (such as wings and bird-tails), it almost always has with it the heads of slain people and sometimes their entire bodies. In Cat Demon designs the painting of hands and feet varies considerably in point of realism. Sometimes they are shown quite naturalistically with five digits; but more often they are mere formulae and have four or three digits only.

3. **THE BIRD DEMON.** As a rule this figure is even less realistic than the two already mentioned. It is usually associated with decapitated heads which are attached in various ways to its sinister person. The Bird Demon itself, however, has no human attributes; rather, it appears usually in the rôle of a creature which preys upon humankind. Moreover, its aspect is usually of considerable conventionalization and one has to study it with much care in order to comprehend the design.

4. **THE MULTIPLE-HEADED GOD.** This personage is still further removed from realism than the foregoing creatures. Its feet, legs, hands, and arms (not always all of them present) are the sole vestiges of realism in its make-up. They usually have four or less digits. The remainder of the Multiple-headed God's person consists of a series of two or more utterly unlikelike faces joined together in lines, each face having strange curling protuberances that stick out all around it.

5. **THE CENTIPEDE GOD.** Sometimes this creature has a human face and human hands and feet (or formulae representing such); sometimes it is wholly animal in its aspect. As a rule it is associated with death and destruction because of the decapitated human heads which it grasps.

Such are a few of the leading members of what was, supposedly, the Early Nazca pantheon. In addition to these figures, Early Nazca art

shows us many others, ranging from fairly realistic representations of human or pseudo-human figures to depictions of reptiles, insects, fish, birds, crustacea, and other life-forms all of which, however, are portrayed in the gorgeous coloring and in the highly individual style of Early Nazca art, a style which cannot be adequately described in words and which can be understood only after a prolonged study of designs representing it. That style involves the infinite reiteration of many tricks and formulae of representation. Thus, all the personages of the Early Nazca pantheon are shown with one or more of certain minor attributes which I will now describe.

A. THE PROTRUDING TONGUE. This curious feature may be more or less realistic in some designs, such as the Spotted Cat, or it may be altogether a stylistic formula, as in the Multiple-headed God.

B. THE MOUTH MASK. This decoration is usually shown as depending from the septum of the personage's nose. It consists of a semilunar plate that hangs down upon the chin, leaving the mouth exposed, and of lateral projections that resemble a cat's whiskers. Ornaments of this kind, made of gold, silver, or copper, have been found adorning Early Nazca mummies.

C. THE HEADDRESS. Most of the headdresses found in Early Nazca designs consist of a broad, flat cap of two or more layers. In the centre, over the eyes of the wearer, there is usually a small, conventionalized face. The remaining details of this sort of headdress vary from one example to another. A second and somewhat less frequently seen headdress consists of a small headpiece out of which comes, at the top, a loose end which falls down upon the wearer's shoulder. Sometimes this end has a serpent-like appearance; sometimes it seems merely to be a long fold of cloth.

D. THE FACE-PAINTING. Nearly all the human or pseudo-human faces in Early Nazca art show signs of face-painting, the designs used being many, some of stripes, some of large patches of colors.

E. THE EAR ORNAMENTS. Many of the more realistic designs of Early Nazca art, and some of the less realistic, also, show ear ornaments consisting of one or more circular objects decorating each side of the chief personage's head at the place where the ears would naturally be. Sometimes these embellishments take the form of thick rings apparently strung on cords. In other cases they look as though they were attached directly to the ear in some way.

F. THE WEAPONS. Very common in Early Nazca designs are weapons. The spear-thrower and the spear, the war-club (sometimes replaced by an elaborate ceremonial staff or by a pair of staffs), and the chopper-shaped knife all occur frequently.

Thus far I have been speaking of Early Nazca art as a whole without differentiating between art-on-pottery and art-on-fabrics. It now remains

for me, before taking up the special subject of Early Nazca textiles, to point out the chief links between Early Chimu and Early Nazca art. In the first place, as I have said above, realistic portraiture in pottery exists in both, but with less frequency in Early Nazca art. Furthermore, certain of the chief symbolical figures of Early Nazca art, notably the Spotted Cat and the Centipede God, are found also in Early Chimu art, albeit in forms more realistic than those in which Early Nazca art displays them. Finally, the dress, the ornaments, the habit of face-painting, and the weapons are all closely similar. These points make it clear that the cultures in question were two manifestations of one general civilization, that of the Peruvian coast in the first six centuries of our era. But it is probable that the Early Chimu culture is somewhat older. In other words, we may reasonably believe that the two were fundamentally one, but that the northern phase of the culture rose directly from the archaic plane, passed through the stage of realistic art, and advanced well into the formalistic stage; that the southern phase, on the contrary, was produced—perhaps by colonization—after the older culture had made a good beginning and that it advanced with greater rapidity and for a greater distance along the path that leads through formalism into symbolical conventionalization.¹³

To the subject of Early Nazca textiles I shall revert presently, when discussing the probable relative ages of the different kinds of cloth made in ancient Peru.

THE HIGHLAND CULTURES:

TIAHUANACO I (DOWN TO A.D. 600) AND TIAHUANACO II (A.D. 600-900).

During the centuries in which the Early Chimu and Early Nazca cultures were running their course on the coast, the highland folk were still in the archaic stage of culture and were slowly working out the technological processes of pottery making, agriculture, stone cutting (both for the sake of having implements and utensils and for the sake of acquiring building materials) and, probably, of weaving. Only the latter part of the putative archaic period of highland culture is at all known to us at present, and that latter part, usually designated as Tiahuanaco I, is still somewhat vaguely defined because almost no scientific archaeological work has been done with regard to it. Nevertheless, we can safely

¹³ Those who wish to study these intricate matters with greater care are recommended to turn to the following materials: Harcourt, 1924; Lehmann and Doering, 1924, especially, pls. 20-39 and 114-116; Means, 1931, Ch. iii; Schmidt, 1929, pp. 331-348; Basler and Brummer, 1928, pp. 179-188; Selser, 1923, entire.

say that there is both folkloric and archaeological evidence indicating that, in the centuries just prior to about A.D. 600, a culture was growing in the highlands generally, and in the region around the southern end of Lake Titicaca particularly, wherein were contained fairly well developed germs of such cultural activities as those already mentioned. In all of them the archaic character—marked by a struggle to obtain mastery over tools and over materials—is noticeable. Thus, the pottery is fairly good and has reached the stage of embellishment with incised lines and even with crude painted designs; the architecture is largely of the menhir sort, using big monoliths of soft reddish brown sandstone whose finish was probably somewhat rough, using also smaller stones of the same kind for filling in between the large stones, these smaller stones being laid in mud; the agriculture, mostly concerned with potatoes and other tubers, was in all probability of a simple description without such elaborate aids as terracing and irrigation. In short, the Tiahuanaco I culture was a high archaic culture which needed only a stimulating touch from outside to make it develop into a civilization in which mastery over tools and materials would prevail.¹⁴

It was exactly this sort of stimulus that was brought into play at last. Montesinos, in the chapters just cited, shows that the highlanders were in bellicose contact with the folk of the coast at an early period. Moreover, archaeology presents us with many evidences that the coast folk were in touch with the highland folk and even with the forest-dwellers to the east during the last century or so of the Early Chimu-Early Nazca period. This contact probably began with trade between coast and highlands in which wool was imported by the coast people and cotton by the highland folk, each region thus presenting the other with an important textile material. In other respects, too, there was a fructifying interchange of ideas between the two regions, an interchange involving matters as diverse as agriculture and decorative art. In the latter field the results were peculiarly interesting for us. The fully formed and well matured art of the Early Nazca people, on being brought to the knowledge of the high archaic Tiahuanaco people—probably about A.D. 500 or soon after—gave them just that impulse toward aesthetic maturity which they needed and, by teaching them better methods of work than

¹⁴ Archaeological data concerning Tiahuanaco I culture are to be found in: Posnansky, 1914, Ch. vii; Means, 1917, pp. 324-326; 1931, pp. 108-112. On the folkloric side we have the folk memory, preserved by Father Montesinos, of a series of highland kings or chiefs who, presumably, ruled over peoples of rudimentary culture and had wars with the peoples on all sides of them. See Montesinos, 1920, pp. xlvi, Chs. viii-xi, inclusive. The accounts of early highland history preserved by Montesinos are vague, contradictory, and largely mythical, but they do serve to indicate that there were organized states of some sort in the highlands at the period in question.

they had had before, as well as giving them an immense store of aesthetic concepts which they could readily combine with their own ideas, set them firmly on the path that quickly led to the formation of the culture which is now known as Tiahuanaco II.

This culture was emphatically an advanced one, fully equal on artistic grounds to any native American civilization. Its peculiar aesthetic style, which is conveniently summed up in the frieze carved in relief upon the celebrated Monolithic Gateway at Tiahuanaco (Fig. 17,) is so distinctive that it is easily recognized wherever it occurs and in whatever medium it is presented.

This is a matter which must now be taken up in some detail. The central element in Tiahuanaco II art, whose period was approximately A.D. 600-900, was the worship of the Creator God, known to the Incas as Viracocha. He it is who appears as the central figure in the frieze referred to above. He is shown there as a short, stocky personage with a large square face in which are set round eyes, a thick flat nose, and an oblong mouth. All around this countenance is a frame from which stand out a number of ray-like tabs ending in puma faces or in geometrical designs. The short, thick body of the god is clad in a sleeved shirt around which is a girdle from which hangs a short kilt with a fringe of tabs adorned with conventionalized faces (human or animal). Viracocha's hands have only four digits, but these, oddly enough, are shown with considerable naturalness. He grasps with his right hand an object that is clearly a spear-thrower, albeit much conventionalized, and with his left hand what is, apparently, a quiver full of spears, this also being much conventionalized.

To right and left of Viracocha as he stands—or perhaps kneels—upon an elaborately adorned pedestal wrought in relief, are rows of attendant figures. On each side there are three rows of eight figures each, the top and the bottom rows being of men with crown-like hats and with mantles which float out behind them in such a way as to suggest wings, the central row being made up of creatures which are either anthropomorphized birds or else men masked as birds and wearing flowing wing-like capes. All these attendant figures have certain points in common: in spite of the considerable degree of conventionalization which distinguishes them, they are exceedingly vigorous in aspect, all of them running rapidly towards Viracocha, each one bearing a ceremonial staff; below their round eyes are strange ornaments suggestive of tears, this ornamentation being also a conspicuous feature of Viracocha's countenance; they, like Viracocha, have four-digit hands shown with considerable naturalness as

to position and line; finally, they have legs and feet which are shown in a manner that is angular and conventional, yet which manages also to be vigorous.

Below Viracocha and his attendants—or worshippers—is a horizontal band of decoration made up of intricate geometrical lines embellished with conventionalized condor heads and of faces which resemble that of Viracocha both in having the “tears” and in having the surrounding ornament of tabs. These two elements of the band, the geometric lines and the faces, are arranged with the most exquisite symmetry and balance.

Regarded as a whole this frieze, painstakingly executed in a rectangular mode of edge- and line-cutting in a hard stone, is a masterpiece of decorative art. The first thing that impresses us is the extraordinary symmetry of the whole design; the second is the amazing combination of conventionalization with a high degree of vitality. Still another point regarding this composition has been mentioned already but must now be enlarged upon: the frieze is a compendium of a whole style and period of art. Every part of its surface is covered with primary and secondary patterns in which are motives both geometrical and derived from life forms. The primary patterns are carried by relatively large masses whose edges are at right angles to the plane of the background, and the secondary patterns are carried by thin lines finely and accurately engraved upon the surface of the aforementioned masses.

No description will convey any adequate impression of the frieze; one must study it and familiarize himself with the infinite number of aesthetic motives which go to make the whole. Having done so, the student will never find it difficult thereafter to recognize the influence of Tiahuanaco II art, whether it be in the form of sculpture or in such media as pottery, metals, and textiles.

The influence of Tiahuanaco II art spread far from the home site of the culture and, in spreading, quite naturally underwent various modifications, of both chronological and geographical significance. As regards the former it may be said that the trend of evolution in Tiahuanaco II art, wherever it occurs, runs parallel with the trends of Early Chimu and Early Nazca art; that is, in the beginning of its period of florescence, it had the strong vestiges of realism which we find on the frieze, but afterwards it rapidly gained in conventionalization at the expense of realism, finally reaching a point where realism ceased to be present and designs were merely rigid compositions made up of symbolic motives combined into patterns devoid of representational intent and function. Thereafter,

Tiahuanaco II art rapidly fell into aesthetic chaos with the result that its final phase is represented by designs made up of arbitrarily combined motives—such as eye-motives, nose-motives, and hand- or foot-motives—each of which is separated from its natural context and put into a pattern that does not cohere in any rational sense, albeit the pattern may be—and, in the case of many textiles, often is—a magnificently beautiful composition of hues and lines.¹⁵ The degree, then, of realism discoverable in a given Tiahuanaco II design is an index to the relative age of that design within the limits of the whole Tiahuanaco II period, i.e., about A.D. 600 to about A.D. 900.

Geographically considered Tiahuanaco II art is widely distributed. In the mountains it is traceable in Ecuador, throughout the Peruvian mountain zone, and well down into northwestern Argentina. Logically enough it is most intensively established in the Titicaca basin, its remoter penetrations being exemplified by objects in which little or no realism is present and in many of which the aesthetic chaos already mentioned is obviously in full swing. On the coast from at least as far north as the Chicama Valley to at least as far south as Arica—and possibly much further in each direction—Tiahuanaco II art made itself powerfully influential, particularly so from Ancón to Ica. As Dr. Kroeber has aptly said, its influence was in the nature of an irruption rather than of a filtering in for, throughout the period of its dominance on the coast, Tiahuanaco II art completely overshadowed the local arts, imbedding itself so thoroughly in the collective mind of the coastal designers that, after its impelling control was ended, it took a long time for the aesthetic tenets of coastal art to reassert themselves and, indeed, they were never again exactly what they had been.¹⁶ To what extent Tiahuanaco II's aesthetic control was paralleled by a political control we do not know.

THE LATE CHIMU AND LATE NAZCA CULTURES AND THEIR PERIOD, ABOUT A.D. 900 TO ABOUT 1400.

Whether the Tiahuanaco II civilization broke down because of internal weaknesses involving psychological and political factors or whether it was toppled over by the impact of onslaughts delivered by savage invaders from the jungles to the east and to the south we do not know. At any rate, it is clear enough that its end was sudden, particularly so in the highlands where, during about two hundred years, a neo-archaic state of culture prevailed, in which practically all the progress that had been

¹⁵ These points are treated at some length in Means, 1930b.

¹⁶ Compare Kroeber, 1930, pp. 102-103, on these points.

made in Tiahuanaco II times was lost and in which many small chieftaincies came into being, few of which had a degree of civilization as high as that which we call Tiahuanaco I.

On the coast, however, no such sweeping cultural decline was produced. Rather, once the putative political control from Tiahuanaco had died away at its source, there was a general re-establishment of the political arrangements which had existed in Early Chimu and Early Nazca times, a re-establishment, nevertheless, which brought with it modifications of great importance. In the north the kingdom of the Great Chimu, with its capital at Chan-Chan, as before, was set up again, probably with a new ruling dynasty and certainly with a great enlargement of territory; for, by combining folkloric with archaeological evidence, we arrive at the conclusion that the Late Chimu kingdom stretched along the shore-country from at least as far north as the Chira Valley in the department of Piura to the Pativilca Valley in the northernmost part of the department of Lima. In the latter valley, or rather in a smaller one immediately to the north of it, stands the huge and stately fortress of Paramonga, anciently called Parmunca, an imposing military construction with three massive terraces of adobe having bastions at the four corners of the lowest terrace. This great military work defended the southern limit of the Chimu kingdom at the time when the Incas conquered it and, we may suppose, the fortress had been in existence, though added to from time to time, during many centuries.¹⁷

To the south of the Chimu kingdom was a series of other states of the same general political structure, that is, states which had been built up by forcibly feudalizing chieftaincies of varying size and power under the overlordship of a chief or king who was strong enough to dominate and to rule the rest. The first of this series of states was that of the king whose name or title was Cuismancu. On its northerly side his realm abutted on that of the Great Chimu, immediately south of the Pativilca Valley; on the southerly side was the Pachacamac (now called Lurín) Valley. Cuismancu's realm, therefore, was far smaller than that of the Great Chimu, but it contained such important sites as Ancón, with its famous necropolis from which vast stores of archaeological data have been extracted,¹⁸ as the Rimac (Lima) Valley, crowded with architectural and other evidences of intensive occupation; as Pachacamac, a great city begun in

¹⁷ Two magnificent air-photographs of this fortress are easily accessible; one, by Lieutenant George R. Johnson, in Johnson and Platt, 1930, p. 73; the other, by Major Otto Holstein, in Means, 1931, Fig. 32.

¹⁸ See especially Reiss and Stübel, 1880-1887.

Tiahuanaco II times and thenceforward of the highest importance as a cultural centre and as a place of pilgrimage.¹⁹

The state next to Cuismanco's on the south was the still smaller one ruled by Chuquimancu. It included the Valleys of Chilca, Mala, and Huarco (Cañete), the upper part of which was known as Runahuanac (Lunahuaná). In the Huarco Valley was the great fortress of Chuquimancu, one of the most amazing military constructions of ancient Peru. Like that other great coastland fortress, Parmunca, it was a defensive work primarily and, incidentally, it was also a residence.

South of Chuquimancu's kingdom came a large territory whose political arrangements were perhaps more in the nature of a confederation of chieftaincies than in that of a feudalistic kingdom. This seems to be indicated quite clearly by the fact that both Cieza de León and the Inca Garcilaso, in speaking of the wars between the Incas and the folk of this part of the coast, emphasize the collective will and the popular action of the Chinchas rather than the will and the action of any special chieftain or king. Moreover, they make it plain that the people of the Pisco, Ica, and Nazca (or Rio Grande) Valleys, although at one time in some manner confederated with or allied with those of Chinchá, preserved a goodly degree of autonomy. Of these three valleys that of Nazca was the first to be conquered by the Incas, who used it as a base for their campaigns against the people of Ica, Pisco, and Chinchá.²⁰

Of the coastal valleys south of that of Nazca it is not necessary to speak in the present connection. Therefore, I shall now turn to the archaeological evidence relative to the civilization of the coast as a whole, and shall offer my own interpretation of the materials gathered in the field by Dr. Uhle and by his continuators, Drs. Kroeber and Strong.²¹ Here, then, is the gist of the archaeological evidence as I understand it:

From the Chira and Piura Valleys on the north down to Pachacamac on the south there was, in post-Tiahuanaco times, a series of kingdoms which sprang up after the political and intellectual control of Tiahuanaco were removed. Their art, although differing in detail from one part to another of the region named, had a fundamental uniformity in that it combined a partial renaissance of an ancient realistic tradition with a

¹⁹ See Uhle, 1903, and 1908.

²⁰ See Cieza de León, Pt. II, Ch. lix—1883, pp. 189-191; and Garcilaso de la Vega, Pt. I, Bk. VI, Chs. xvii-xix, inclusive,—1871, pp. 146-155.

²¹ Useful bibliographical references in this connection are: Baessler, 1902-1903; Berthon, 1911; Holstein, 1927; Kroeber, 1926 and 1930; Kroeber and Strong, 1924 and 1924b, together with the very important writings of Dr. Uhle included in these two publications; Reiss and Stübel, 1880-1887; Uhle, 1901, 1902, 1903, 1908, 1910, 1913, 1913b, and 1920.

surviving multitude of motives and of tricks of execution inherited from Tiahuanaco II art. Quite naturally, these visible evidences of the aesthetic influence from Tiahuanaco II art are strongest at the beginning of the period now under discussion, and quite as naturally, they slowly fade away to the vanishing point as the period progresses. The aesthetic modifications which took their place, little by little, seem to have followed two divergent paths, the one a tendency towards a re-establishment of the naturalistic tradition, the other a tendency to maintain formalism and conventionalization. As regards the first of these tendencies, more noticeable in pottery than in other media, it may be said that it never succeeded in reaching the high level of naturalistic representational art which had so distinguished the Early Chimu civilization; as regards the other, observable in pottery designs, but still more in textile designs and in the arabesque patterns applied to the walls of buildings, it may be said that the habit of making finely detailed, highly conventionalized, interlocking patterns built up of a variety of motives chosen for their intrinsic attractiveness, rather than for any significance which their component parts may have had, was characteristic. Both of these tendencies, then, were typical of Late Chimu art, a term which may be used in a broad sense to designate all post-Tiahuanaco and pre-Incaic art from the Chira Valley down to Pachacamac.²² The two tendencies are present, in one form or another, throughout Late Chimu art (in the broadest sense of the term), and they are so closely allied that one often finds them both represented in one specimen.

The small kingdom of Chuquimancu is, almost wholly, *terra incognita* so far as scientific archaeological work is concerned. It is clear enough, however, that it separated, or at any rate served as a buffer between, the Late Chimu culture and the contemporary culture which prevailed in the territory occupied by the Chinchas and their neighbors, the folk of the Pisco, Ica, and Nazca Valleys. My interpretation of the archaeological data thus far given to the world by field workers is this: Following upon a Tiahuanaco II period came one in which, as in the north at the same time, Tiahuanaco influences gradually faded away, yielding before the growth of a new aesthetic tradition. This tradition, which may be studied both in the pottery and in the textiles of the time, was characterized, as was that to the north, by both a realistic tendency and by a formalistic

²² The use of the term "Late Chimu" does not, of course, take account of the very numerous local variations which flourished at this period; but, because of the fundamental uniformity here referred to, its use, with proper reservations in favor of those local sub-types, is both permissible and convenient.

or conventionalistic tendency. Their manifestations are very different in style in the two regions, however, but the difference is one that no amount of verbal comment will make clear; that can only be done little by little when specimens of the various periods and styles of textiles are examined.

THE ART OF THE INCAIC PERIOD, ABOUT A.D. 1100 TO 1530.

From the neo-archaic condition already mentioned, characterized by the existence of many small tribal communities, each one often at war with its neighbors, arose one specially gifted tribe, that of the Incas, who, from being llama-herders upon the high plains above Cuzco, about A.D. 1100, began a spectacular career which eventually led them to imperial power.

The Incaic period falls naturally into two parts whose line of demarcation is by no means easy to fix and whose artistic features roughly reflect the political character of the times. To be more explicit, the reigns of the first four historic Inca rulers²³ were filled with alternating periods of war and peace, of conquest and of organization. At the same time, material culture in general and artistic matters in particular were being gradually improved and lifted by logical steps from the neo-archaic level to which the culture of the mountain folk had suddenly dropped after the collapse of the Tiahuanaco II civilization. This progress was confined, in the early Incaic period already dated, to the mountain folk who alone suffered a marked cultural subsidence; for, as already shown, the contemporary coast-dwellers were passing through quite a different phase of civilization at this time.

In the early reigns of the Inca dynasty the peculiarities of Incaic art were being determined. Of the textiles then made we know next to nothing for the simple reason that few if any specimens have come down to us from that time; but of art in ceramics we know at least something. Briefly, the growth of Incaic art may be described as a steady progression from the crudest kind of unpainted pottery up to a class of pottery in which the aryballus (a jar with a graceful, flaring neck, an oval or nearly globular body, a pointed or cone-shaped bottom, two handles fixed opposite to one another at the widest part of the body, and a small nubbin at the base of the neck equidistant from the two handles) is the most distinctive form, but a class containing many other forms of ceramic

²³ Their names, and the approximate dates of their reigns, were: Sinchi Roca, 1105-1140; Lloque Yupanqui, 1140-1195; Mayta Capac, 1195-1230; and Capac Yupanqui, 1230-1250. For an account of these reigns see Means, 1931, pp. 222-236.

ware as well.²⁴ In its pure form Incaic pottery, whatever its shape, is adorned with innumerable combinations of a relatively small number of painted motives all of which are geometric and devoid of any tie with life-forms. The decoration is almost always arranged in panels or in bands of ornamentation, and the colors are mostly browns, creamy tones, several shades of red, black, and white. There is no suggestion of animal motives save in the nubbin at the base of the neck which very often has a cat-face roughly indicated upon its upper end by means of crude incisions.

The closeness of correspondence between Incaic ceramic art and Incaic textile art—both being taken in their purest states—is as noticeable as that between the pottery and the textiles of the Early Nazca and of the Tiahuanaco II periods. Incaic art was at its best and most characteristic in the middle reigns of the dynasty;²⁵ for, in the reign of Pachacutec (1440-1448), in that of Tupac Yupanqui (1448-1482), and in that of Huayna Capac (1482-1525 or 1526), the Inca empire was spreading far and wide, both on the coast and in the highlands, so that at last it stretched from northern Ecuador to central Chile and northwestern Argentina and from the Pacific to well down the eastern slopes of the Andes. A natural consequence of this great expansion was that Incaic art was brought into modifying contact with numerous local arts all of which had firmly rooted characteristics of their own which promptly reacted upon Incaic art. As a result, the pottery and the textiles of the latest part of the Incaic period vary greatly from region to region, always presenting, however, a blend of local aesthetic ideas with Incaic aesthetic ideas. As a general rule it may be said that, in such blends, Incaic forms of pottery were dominant because of their intrinsic excellence and charm whilst local decorative motives applied thereto were more usual than Incaic motives. Thus, on the coast, we find pottery of pure Incaic shapes adorned with painted decorations, and even with plastic decorations, derived from Late Nazca and Late Chimú art.

Paradoxically enough, although Incaic textiles are the most recent in point of time, they are also the rarest in collections of pre-Spanish Andean textiles. The Museum of Fine Arts, for instance, at present has none of this period. Nor do either the Metropolitan Museum of Art or the Elsberg

²⁴ The student who desires to inform himself more fully as to Incaic pottery is referred to Bingham, 1930, Ch. vi, where a great array of magnificent illustrations and valuable descriptions will be found. See also Eaton, 1916, Pls. V-XIV, inclusive, with their descriptions, and Means, 1917, pp. 336-338, 377-382; 1931, pp. 221-222, 277-278. The best study of the earlier phases of Incaic art in pottery is to be seen in Uhle, 1912.

²⁵ Inca Roca, 1250-1315; Yahuar Huaccac, 1315-1347; and Inca Viracocha, 1347-1400. See Means 1931, pp. 237-247.

Collection contain representatives of the textile art of the Incaic period. On the other hand, valuable webs of this period exist in the American Museum of Natural History and in several European collections.²⁶

THE HAPSBURG PERIOD, 1530-1700.

Contrary to the generally received opinion, the Spanish conquest of western South America did not demolish the native civilization and replace it with an imported civilization wholly Spanish in character. Much that was of native origin survived the conquest itself and the three centuries of the colonial culture that followed it, many elements in modern Peru, even after more than a century of republican government, being directly derived from the ancient civilization of the land. Survivals of this kind are frequently met with not only in the institutional aspects of colonial and of modern Peru, but also in the arts, notably in textiles, pottery, wood-work, and architecture. Colonial civilization in Peru and, to a slighter extent, modern civilization, were the result of a blending of native with Spanish elements, a blending so widespread and so various in its manifestations that the result was both logical and harmonious in very many instances.

This is specially true of the art of the loom in colonial times. Once the rude and tumultuous conquest-period proper was overpast, the Spaniards sought to import their peculiar aesthetic tradition, compounded of a mixture of European with Moorish elements, into their new possessions overseas, particularly into the richest and most promising of the new viceroyalties, those of Mexico and Peru. In textile art—to mention but one kind of art—they found already existing an old and highly respectable tradition which could display with justifiable pride not only a wide range of techniques but also a large body of decorative concepts. Almost automatically the invaders made use of the abilities which they found, adding to them various technological and aesthetic contributions of their own. It is to this process that we owe the magnificent colonial tapestries of which this Museum owns notable examples that will be studied further on in this monograph.

A fact of capital importance concerning those textiles that were made during the rule (1530-1700) of the Hapsburg Kings of the Spains for

²⁶ See Means, 1917, Pl. XVI, and Pl. XVII, Fig. 1. A tunic of the purest Incaic type existing in the National Museum of Archaeology, Lima, is shown in Means, 1931, Fig. 180. A splendid tunic which is so late as to show Spanish influence in combination with a great variety of Incaic motives also exists in the American Museum of Natural History and is figured by Lehmann and Doering, 1924, in their Plate 128.

use in Spanish America, and even for use in Spain itself, is this: Practically always they bear, somewhere in their designs, the double-headed eagle of the Hapsburgs. Usually only fabrics made by the Indians under Spanish rule for their own use are without it, and they almost always contain decorative motives derived from some non-native object or concept—a stringed musical instrument, a brass musical instrument, a horse or a mule, an angel with wings, or some other such intrusive element—which betrays the fact that they are of colonial rather than pre-Conquest date.

THE BOURBON PERIOD, 1700-1825.

The textile art of colonial Peru, chiefly represented by tapestries, continue to flourish after the change of dynasties in Spain. Gradually French ideas and French taste penetrate into the aesthetic repertory of designers, but always with a continuation of native influences. The fleur-de-lys of the Bourbons appears in many of the tapestries made at this time for the use of Spaniards, but it does so less often than does the double-headed eagle in the tapestries of the Hapsburg period. Decorative elements such as baskets of flowers, garlands, and pseudo-classical motives appear as a result of French influence in matters of taste.

THE MODERN PERIOD, 1825 TO THE PRESENT.

In republican days, quite naturally, the native textile arts ceased to have royal and noble patronage and became once more the peculiar property of the native element among the population of the Andean countries. To a very large extent the Indians of the Andes, upwards of 55% of the total population, still make all the cloth that goes into their garments, doing so on looms and with processes almost identical with those of pre-Spanish days. This Museum possesses, largely through the generosity of Dr. Denman W. Ross, an unusual number of native Peruvian fabrics dating from the modern period.

TECHNOLOGICAL CLASSIFICATION OF PERUVIAN FABRICS.

If we are to understand fully the worth and significance of the Museum's collection of Peruvian textiles, it is necessary to classify them technologically before proceeding to examine individual specimens from the chronological and from the aesthetic angles. Therefore, I offer here a brief version of the technological classification which I have presented in more extended form elsewhere.²⁷ In so doing I shall hope to meet the requirements as succinctly as possible. It should be noted that the various

²⁷ Means, 1931, pp. 483-491.

categories of weaves are here arranged in accordance with their numerical importance, not in accordance with their aesthetic importance. This plan seems to me to be desirable from the standpoint of students for the reason that, of all the Peruvian textiles in this Museum and in other museums, more than half fall within the first two classes of this present scheme. The remaining five classes, although of the highest technological and aesthetic interest, consist of rarer weaves to which the student must of necessity give particular attention.

I. Tapestry.

A. ORDINARY TAPESTRIES.

The salient characteristic of ancient Peruvian and of colonial Peruvian tapestry is the fact that the warp is hidden from sight by the weft as a

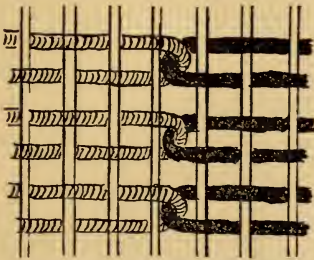


Figure 1—A method of joining two color areas in the warp of a tapestry by means of interlocking weft.

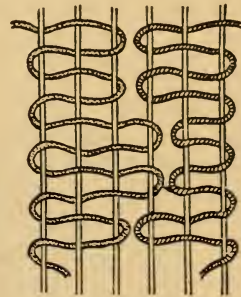


Figure 2—A form of interlocking weft. (After Crawford.)

result of a careful "beating up" by means of a weave sword after the insertion of each pick of weft. In most tapestries the warp is of cotton and the weft of wool, albeit exceptions do occur, as will be duly noted.

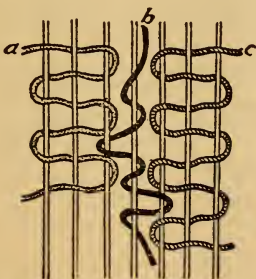


Figure 3—A method of inserting a liming weft between two color areas. (After Crawford.)

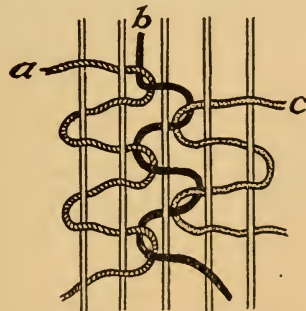


Figure 4—Interlocking weft with liming. (After Crawford.)

In weaving tapestries the innumerable color areas are carried wholly by the weft. The weft is seldom carried from selvage to selvage, each color going only as far as the pattern requires. Methods of causing abutting

color areas to meet horizontally vary considerably. In cases where only two hues are in question the horizontal joining was effected by methods such as those seen in Figs. 1 and 2, supplemented, of course, by careful beating up. But very early in the history of Peruvian tapestry designers became aware of the desirability of separating color areas which might not

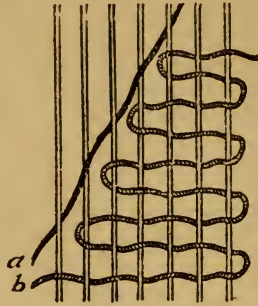


Figure 5—A very simple form of eccentric wefting. (After Crawford.)

be harmonious or distinct in absolute juxtaposition by a third color—usually black, but sometimes of some neutral shade—which was used for limning the major color areas. Methods of manipulating the insertion of the limning color are seen in Figures 3, 4, 5, and 6. A form of limning known as eccentric wefting which does not run at right angles to the warp and was, therefore, much used for curvilinear effects in designs, was achieved by the methods shown in Figs. 5 and 7.

Finally, many tapestries are of the sort sometimes called slit, or *à jours*. The distinctive feature of these is that they have slits or jours between

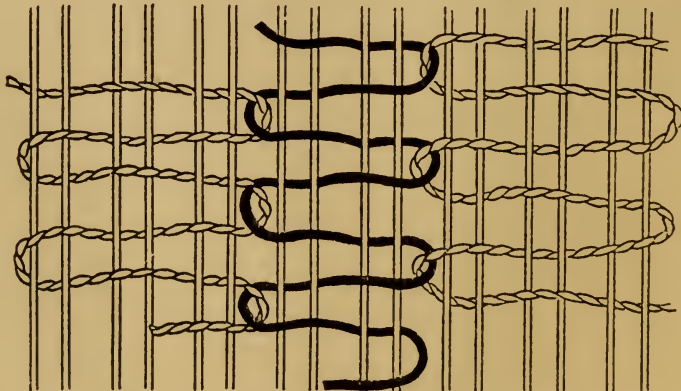


Figure 6—Weft interlocking with limning from both sides. (After Crawford.)

horizontally adjacent color areas, slits made by means of a technique such as that shown in Fig. 8. It is possible (but not yet certain) that the slits or jours were a relatively late development, originated in order to give

special sharpness of definition to abutting color areas. It will be seen, when specimens come to be examined individually, that simple interlocking of wefts, limning, eccentric wefting, and jouring were all practiced contem-

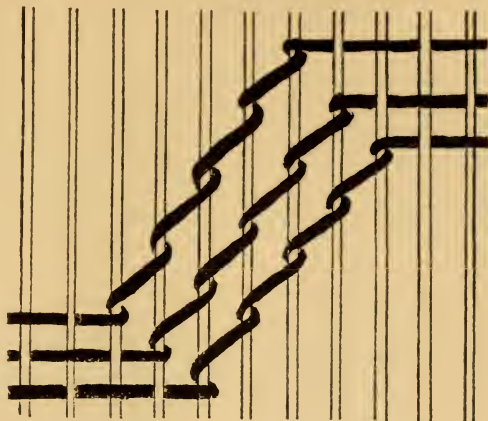


Figure 7—A more elaborate type of eccentric wefting.

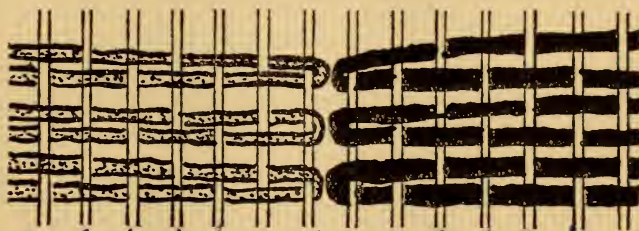


Figure 8—Non-interlocking wefts which form a slit or jour.

poraneously, two or more of them often occurring in one specimen, and that, moreover, jouring eventually came to be used as a decorative element in itself without reference to color areas.

B. BROCADED TAPESTRY.

In tapestry of this kind—which may or may not have limning, eccentric wefting, and slits—there is a secondary pattern wrought by means of an auxiliary or secondary weft inserted into the web *while it is still in the loom*, the tapestry proper serving as a base fabric.

C. EMBROIDERED TAPESTRY.

In contrast with brocaded tapestry, embroidered tapestry has a secondary pattern wrought with a needle *after the web has been taken from the loom*. The two techniques are inconveniently similar, but there are two tests—of which neither is altogether satisfactory—which aid in determining which is which: the first is that brocades usually have floats at the back of the cloth, whereas embroideries usually have knots or loose ends; the second

is that the auxiliary weft of brocades usually lies more closely and firmly upon the base fabric than do the threads of embroidered stuffs.

II. *Plain Webs, or Ordinary Basket Weaves.*

A. UNDECORATED.

In undecorated basket weaves whose warp and weft are of the same sort of thread a piece of plain cloth results. Sometimes, however, a crêpe-like quality was obtained by using, either in warp or in weft—rarely in both—threads of different diameters and of different degrees of firmness in spinning. Sometimes, also, either warp threads or weft threads—again rarely both—were grouped in pairs or in larger groups and woven as units.

B. STRIPED IN THE WARP.

C. STRIPED IN THE WEFT.

By introducing one or more contrastingly hued threads either in the warp or in the weft simple rectilinear patterns were made, usually in cotton cloths.

D. CHECK-PATTERNS AND GINGHAMS.

These were really a combination of B and C, just described.

E. EMBROIDERED PLAIN WEBS OR BASKET WEAVES.

The function of these webs was to serve as a base fabric for post-weaving decoration by means of embroidery with a needle, crewel and other stitches being used to form elaborate designs, usually in wool (the base fabric being usually cotton).

F. BROCADED PLAIN WEBS OR BASKET WEAVES.

These cloths, like their tapestry analogs, were wrought in the loom by introducing an auxiliary weft, usually of wool, which was made to carry the pattern.

G. PLAIN WEBS PAINTED OR PERHAPS PRINTED.

In fabrics of this kind the decoration belongs to the graphic rather than to the textile arts in many cases. Sometimes, however, simple designs, either painted free-hand on a finished web or else applied thereto with stamps or rollers bearing patterns, are found.

III. *Double Cloths.*

These are relatively rare in most collections, but this Museum is fortunately rich in them. Double cloth technique consists in causing two webs to interchange their warp and their weft threads with systematic reciprocity, thus giving rise to designs which are similar in line on both sides of the fabric but which are opposite in color. Thus, one side will have brown figures on a white ground while the other has white figures on a brown ground. Double cloths are almost always either all-cotton or else all-wool.

IV. Feather-Work.

This class of fabrics is not represented in the Museum's collection. It consists of ordinary cloth to which feathers of many colors have been attached in such a way as to cover the entire surface and to form a many-hued pattern.

V. Chaquira.

Nor has the Museum examples of this sort of fabric. It consists of ordinary cloth to which have been sewn small discs, bangles, or bells made of copper, silver, gold, bone, or shells.

VI. Gauze and Voile.

A. UNDECORATED.

In gauze the warp threads are paired and loosely twisted around each other in such a way that the weft threads could be passed through the loose bends thus formed. Voile is merely a loosely woven web without the element of twisting even when either or both the warp threads and the weft threads are paired. Very often undecorated gauzes and voiles, almost always of cotton, have tapestry borders which are technologically independent entities sewn to the edges of the tissues which they embellish.

B. BROCADED.

By the introduction of an auxiliary weft, usually of wool, a gauze or a voile was sometimes converted into the base-fabric for a brocaded design, this being done in the loom.

C. EMBROIDERED.

In like manner, but after weaving, a design could be worked with a needle on a gauze or on a voile.

VII. Network, or Reticulated Meshes.

A. PLAIN.

B. FIGURED.

Both of these partake of the nature of lace-work rather than of weaving. They are not represented in the Museum's collection.

VIII. Miscellaneous, Rare, and Combined Techniques.

A. NEEDLE-COILING AND BRAIDED FABRICS.

B. TASSELS, ROPES, AND FRINGES.

C. RARE OR INDETERMINATE WEAVES.

D. SUNDRY COMBINATIONS OF TECHNIQUES.

These are all so highly individual and so specialized that they can be studied satisfactorily only with reference to specific examples.

CONSIDERATION OF THE CHRONOLOGICAL ASPECTS OF THE TECHNOLOGICAL CLASSIFICATION.

The question now rises: What are the relative ages of the different classes of early Peruvian textiles? This is an intricate problem which cannot, probably, be solved by anyone in the present state of our knowledge. Nevertheless, I venture to examine it here as best I can.

As has been indicated above, on page 13, we have at our disposal for study no actual specimens of cloth which can surely be dated as of the Early Chimu period. We do possess, however, incontrovertible evidence that the people of this culture had a highly developed art of the loom; for, to mention but one point, the modelled and painted decorations upon their pottery display before us a great array of richly clad personages whose clothing is eloquent of the fact that the Early Chimu folk were masters of the art of weaving. This is satisfactory and instructive as far as it goes, but we are left in the dark concerning the kinds of cloth which were then manufactured. A careful study of the available data leads one to suspect that Early Chimu cloth was chiefly of cotton basket weave with ornamentation in one color in either brocaded technique or in double cloth technique. True, certain designs—particularly those seen in headdresses—have elaborate curvilinear patterns which suggest painting upon cloth. But we must bear in mind the fact that an attempt to judge of a textile from a representation of it painted upon pottery is quite likely to lead us into error, both as to the nature of the cloth and as to the color and method of the decoration.

More to the point is an able study, by Mr. Joyce of the British Museum, of a unique vase-painting which shows what is beyond doubt an Early Chimu weave shop.²⁸ In the painting mentioned we see a number of looms of the vertical type which are tied at their upper ends to the rustic supports of the weave shop's roof and at their lower ends to the persons who manipulate them. Mr. Joyce is of the opinion that the kind of cloth being manufactured on those looms was tapestry, his chief argument being the absence of heddles. Although formerly I accepted (in the place just cited by me) the opinion of Mr. Joyce, I have subsequently had a few doubts on the subject. In the first place, the drawing is much more crude than is that of the best Early Chimu vase paintings, with the result that the exact nature of the looms shown is left somewhat obscure. In the second place, the weavers are copying from models, both vase-designs and textiles already completed, and the designs involved

²⁸ See Joyce, 1921. This same painting is also described in Means, 1931, pp. 73 and 465-466, and Fig. 2.

are far from resembling those which we find on actual specimens of Peruvian tapestry, these last being much more intricate and, very often, more pictorial than the relatively simple geometric designs which the weavers on the vase are making. In the third and last place, the pictured weavers are not supplied with weave swords for beating up, and the weave sword is generally admitted to have been an indispensable tool for the maker of Peruvian tapestry both in ancient and in later times. This last point touches, however, upon the already mentioned crudeness of the painting and so loses some of the importance that it might otherwise have.

We are left, therefore, in some doubt as to whether or not the Early Chimu folk did make tapestry. Let us hope that we shall sometime acquire evidence that will decide the question. In the meantime my study of three specimens preserved in the Metropolitan Museum of Art has convinced me that the direct ancestor of tapestry in Peru was embroidery upon network, that the decisive step in the evolution of the tapestry technique was the purposeful omission of the weft of the network, and that this step was taken early in the Tiahuanaco II period, at the time when the Early Nazca and the Tiahuanaco folk were carrying on that fructifying interchange of ideas to which reference has already been made.²⁹

Plain webs, undecorated, (Class II, A); plain webs, embroidered, (Class II, E); and plain webs, painted or perhaps printed, (Class II, G) are probably all very old techniques in Peru. As techniques they may well date from the Early Chimu and Early Nazca periods. Perhaps the first and the third of these sub-classes were known in the archaic period which, as shown above, preceded them, it being understood that Tiahuanaco I is here regarded as a part of the archaic cultural plane. Certainly we have incontrovertible evidence that plain webs, embroidered, (Class II, E) were characteristic fabrics in the Early Nazca period; and the same may be said of plain webs, brocaded, (Class II, F). All of these could easily have been made upon looms such as the Early Chimu looms shown on the above mentioned picture vase, it being understood, of course, that in the case of painted cloth the decoration was applied after the fabric was removed from the loom. Likewise, plain webs striped in the warp, striped in the weft, and check-patterns and ginghamms (Class II, B, C, and D) could also have been made without

²⁹ Means, 1930b. Readers desirous of knowing more about the mechanism and operation of cultural exchanges such as that here indicated are urged to read two highly important recent books, viz., Dixon, 1928, especially Chs. ii-iv, vi, and vii; and Wallis, 1930, especially Chs. iii to vii.

recourse to a true heddle, but probably with the aid of some simple device taking the place of a heddle. As no loom having such a feature is known of in association with times earlier than Tiahuanaco II (if, indeed, with that early a time), we may assume that these three subclasses of fabrics are chiefly of the Late Chimu and Late Nazca period.

Double cloths (Class III) may have been used in Early Chimu times and could have been made on looms without any sort of heddle. Moreover, the designs being made in the Early Chimu painting of a weave shop closely resemble those of double cloths of the Late Chimu period. The Tiahuanaco II period does not, so far as I know, afford us examples of true double cloth technique. Finally, although common enough in the Late Chimu period, double cloth is rare or non-existent in the Incaic period, and it does not reappear until after the Spanish Conquest.

Concerning Feather-Work (Class IV) and Chaquira (Class V) I shall not speak here because the Museum possesses—as yet—no specimens of either of them.

Gauze and voile (Class VI) were certainly used in Early Nazca times. Drs. O'Neale and Kroeber illustrate an Early Nazca gauze and the American Museum of Natural History, New York, possesses at least one piece of fine cotton voile with typical Early Nazca embroidery (Class VI, C) upon it.³⁰

Network or reticulated meshes (Class VII) constitutes what is undoubtedly the oldest technique of all those enumerated here. Dr. Max Uhle shows us two examples of network from the Arica and Tacna region which date from the first cultural period of that locality, *i.e.*, from the primordial (archaic) period, a century or more B.C.³¹ The specimens shown by him are of the most simple description; they may well have been made with the fingers unaided or with a very simple crochet-hook. Nevertheless, they represent a technique from which were developed all subsequent variations from and elaborations of the network technique.

So far as the age of the techniques of braided and knitted fabrics (Class VIII, A) is concerned one can only say that they were certainly much used in Early Nazca times.³² On the other hand, such decorative elements as tassels, ropes, and fringes (Class VIII, B) require somewhat lengthier treatment. Tassels and ropes, so far as I know, do not appear in connection with fabrics earlier than Tiahuanaco II; but their respective techniques may well go back to the archaic period being then of a utili-

³⁰ O'Neale and Kroeber, 1930, Fig. 1.

³¹ Uhle, 1919, Figs. 2 and 5.

³² O'Neale and Kroeber, 1930, Table 2, last column.

tarian rather than of a decorative value. Fringes, which are of three chief types—braided or cord, loop (cut and uncut), and tab (tapestry)—require a monograph to themselves. One can only say here that the braided or cord type of fringe is the oldest and is often seen on Early Nazca fabrics; and that the other two types are characteristic, respectively, of Tiahuanaco II and of Late Chimu fabrics.

These data are unavoidably incomplete and imperfect. They remind us that our knowledge of ancient Andean weaving is still in its infancy. Nevertheless, in order to make the relative ages of the principal technological classes of fabrics as clear as circumstances permit, I offer the following Table of periods and techniques.

<i>Periods.</i>	<i>Techniques.</i>
Archaic (including Tiahuanaco I)	<p>Network and reticulated meshes. (VII.)</p> <p>Plain webs, undecorated. (II, A.)</p> <p>Possibly the beginnings of ropes or cords and tassels. (VIII, B.)</p>
Early Chimu and Early Nazca	<p>Tapestry, ordinary. (I, A.) (Very doubtful.)</p> <p>Plain webs, undecorated, embroidered, brocaded, and painted or printed. (II, A, E, F, and G.)</p> <p>Double cloth. (III.) (Not certain.)</p> <p>Gauze and voile. (VI.)</p> <p>Network and reticulated meshes. (VII.)</p> <p>Cord-type of fringes. (VIII, B.)</p> <p>Braided and knitted fabrics. (VIII, A.)</p>
Tiahuanaco II	<p>Tapestry, almost wholly ordinary tapestry. (I, A.)</p> <p>Plain webs. (Perhaps of all classes, but this point is not yet clear.)</p> <p>Double cloth; gauze and voile; network and reticulated meshes; braided and knitted fabrics. (Classes III, VI, VII, and VIII, A, may all have been used in this period but they are all far from typical.)</p> <p>Fringes (Class VIII, B) were either of the loop type (cut and uncut) or of the tab variety.</p>
Late Chimu and Late Nazca	<p>Tapestry of all kinds. (I, A, B, and C.)</p> <p>Plain webs of all kinds. (II, A-G, inclusive.)</p> <p>Double cloth. (III.)</p> <p>Feather-work. (IV.) } Not represented in the Chaquira. (V.) } Museum's collection.</p> <p>Gauze and voile of all kinds. (VI, A, B, and C.)</p> <p>Network or reticulated meshes. (VII, A and B.)</p> <p>All known miscellaneous, rare, and combined techniques. (VIII, A, B, C, and D.)</p>

Incaic

The Incaic period in Andean weaving is wholly unrepresented in the Museum's collection. It may be said, however, that in this period most of the fabrics were either tapestries, plain webs, or gauzes and voiles. (I, II, and VI.)³³

BRIEF NOTES ON RAW MATERIALS, SPINNING, WEAVING, AND DYEING.

In pre-Spanish times the two chief materials for textiles were cotton—peculiar to the coast country—and wool—originating in the highlands. During the middle and final phases of the colonial period silk, brought from China and the Philippines by legitimate commerce as well as by clandestine trade with smugglers, came into use in Peru and was effectively employed, as we shall see, in combination with the two older materials.

Most of the cotton—perhaps nearly all of it—used by the pre-Spanish weavers was *Gossypium peruvianum*, Cavanilles, known to modern commerce as Peruvian Full Rough or as Peruvian Moderate Rough.³⁴ Other sorts of cotton may have been used also, among them *Gossypium religiosum*, Linnaeus, a wild, perennial tree cotton which Jean Lérius, a Frenchman who was in Brazil in 1557 and 1558, found in general use in that country,³⁵ and *Gossypium vitifolium*, Lamarck, which was—and is—abundant in the Department of Piura, northernmost Peru, and which may have been an ancestral form of other cottons, being itself a semi-wild variety.³⁶

It is safe to say, however, that *Gossypium peruvianum*, Cav., provided a very high proportion of the cotton anciently used by Peruvian weavers. The plant grows to a height of fifteen feet or more and, nowadays, it is peculiar to the Department of Piura and to that of Ica. Although it can bear for as much as twenty years, modern planters usually cut it down at the end of the eighth year of bearing. Figs. 9 and 10 give an idea of the appearance of the plant. The chief characteristic of its fibres is a long staple, ranging from about two and one-half to about four and eight-tenths centimeters, coupled with the presence of innumerable hook-like microscopic projections along each filament, these projections giving to

³³ The attention of readers is specially called to the recent work of O'Neale and Kroeber, 1930, which will be found to contain data of great interest, some of them supporting what I have said here, some of them running counter thereto. Discrepancies such as this merely serve to indicate, once more, how very inchoate our knowledge of this subject is as yet.

³⁴ Useful references in this connection are: Linnaeus, 1753, II, p. 693; 1766-1768, III, p. 462. Lamarck, 1783-1808, II, p. 135. Cavanilles, 1785-1790, II, p. 313. Parlatore, 1866, pp. 54-56. Todaro, 1877-1878, many references. Watt, 1907, pp. 68-69 and 166-167; 1908, pp. 575-576.

³⁵ Lérius's account appears in Purchas, 1905-1907, XVI, pp. 539-540.

³⁶ Lamarck, 1783-1808, II, p. 135. Spruce, 1864, pp. 67-73.

this cotton that "rough" quality which so greatly enhances its value for spinning and weaving.

The wool-bearing animals of ancient Peru were all members of the family of the *Camelidae*; they are four in number: the guanaco or huanaco, which is the oldest form and which is of but slight importance as a wool-bearer; the llama, chiefly important—both in ancient and in modern times—as a burden-bearer, but important also as a source of coarse, strong wool; the alpaca, whose wool is finer and variously colored, ranging from white through bluish gray, tawny, orange, light brown, and dark brown to black; and the vicuña, whose wool, mostly of brown hues, is the finest of all. Of these four animals only the llama and the alpaca are truly domesticated.³⁷ A picture of a herd of llamas appears in Fig. 11.

It is easy enough, with practice, to distinguish between cotton and wool in Peruvian textiles, particularly if one but use a good magnifying glass. The fibres of wool lie straight, tight, and smooth, even at the broken end of a thread; those of vicuña wool have a pronounced sheen as a rule, alpaca wool being less lustrous and llama wool coarse and without lustre. Cotton, on the other hand, has a fuzzy, rough-looking surface and no sort of lustre.

Besides cotton and wool certain other fibres were sometimes used, fibres usually designated by the convenient generic term, "bast," which includes the textile material derived from the *chuchau* (maguey) as well as that from various reeds and grasses of varying degrees of fineness or coarseness. These materials were, however, used but rarely in weaving. One runs across occasional references to other substances used for textile purposes, such as human hair (used in conjunction with alpaca or vicuña wool for the purpose of making highly lustrous blue-black weft stripes in fine tapestry and used also in the making of footgear), the subtle, pale grayish yellow hair of the viscacha, a large rodent (used in fine webs because of its delicacy of color and of texture), and the hair of the chinchilla and even of the bat.³⁸ All of these materials, however, are so rare—actual specimens of some of them not existing in museum collections—that they do not seriously contradict the general statement that cotton and wool were the chief textile materials in ancient Peru.

The Spaniards, when making themselves masters of Peru, introduced there various European animals and plants, including the sheep and the

³⁷ Hollister, 1918. Scott, 1913, pp. 138-139 and 386-390.

³⁸ Acosta, Bk. IV, Ch. xxxviii. Cobo, Bk. IX, Ch. xlvi. Garcilaso, Pt. I, Bk. VIII, Ch. xiii. Beuchat, 1912, pp. 666-667. Montell, 1929, pp. 129-132.

flax plant. It is not clear to what extent, if any, the wool of sheep replaced that of llamas, alpacas, and vicuñas. A study of the colonial and modern fabrics in the Museum's collection seems to indicate that sheep wool did not invade the field of fine and artistic weaving at all. On the other hand, Father Cobo tells us that, because of its extraordinary cheapness, sheep wool was much worked in the *obrajes*, weave shops, of colonial Peru and that it was used for a wide range of fabrics which were consumed by all classes of people. Flax, although planted in some regions, seems to have been used for flaxseed oil rather than for the making of linen thread and linen cloth.³⁹

The methods of spinning and weaving anciently employed in Peru were very simple. A rod surmounted by a crescent-shaped or a V-shaped finial was held under the left arm of the spinner and into the upper end was fixed the wool or cotton to be spun. In conjunction with this simple distaff a spindle was used, consisting of a slender shaft of wood provided with a whorl—usually of stone or of pottery, but sometimes of wood—and to the spindle thus weighted a steady whirl was imparted by deft movements of the fingers. Into the process of spinning a good deal of moistening of the fingers in the mouth entered, giving to the thread thus wetted with the rather glutinous saliva of the Indian, a peculiar tightness and permanence of twist. Spinning continues to be performed by the Peruvian highlanders with much the same methods that were used in pre-Spanish days. To-day, just as long ago, the Indian woman spins almost continuously during her eighteen-hour day, save that in certain sections of the country the ancient distaff is no longer used, the hank of wool or cotton being made into a loose ring which is passed over the left wrist, as shown in Figures 12 and 13. When the spinner—either a woman or a man may spin—wishes to sit down, the lower end of the spindle is either placed in a small bowl which serves to keep it turning smoothly, or else, as in Figure 14, it is placed upon a small indented stone and then held between the feet with which the spinner twirls it. These details of modern spinning among the Peruvian Indians are mentioned here because there is every reason to suppose that they were all practised in ancient times as well as in modern.

The looms were as simple as the spinning-implements, being, for the most part, of the vertical type. Only the hands were used in working them, the feet playing no part at all. Tapestry looms were the simplest, having no sort of heddle, the sheds being formed either by the fingers or by the weave sword which was used to beat up the weft after insertion.

³⁹ Cobo, Bk. X, Ch. vi and Ch. xxxvi.

The bobbins were, in most cases, merely spindles that had been well filled with thread; but some ancient work-baskets which I have studied contained true bobbins also. They were rods about eight inches long and somewhat blunt at one end. The pointed end was passed through the shed made for it and the weft was paid off from the blunt end as the operation was carried out. The warps were maintained at the proper tension either by lateral bars fixed between the upper and the lower loom-bar or else by having the lower loom-bar strapped to the waist of the weaver who could increase the tension merely by leaning back a little. Looms intended for the manufacture of basket-weave cloth or of brocade did have a rudimentary heddle consisting of a rod to which a series of dependent loops was affixed by means of which alternating warps could be pulled upwards in order to form a shed. A heavier bar was always present in the warp above the heddle in order to cause the alternate warps to drop again after having been lifted. These arrangements are clearly shown in Figure 15, which shows a modern loom exactly like the ancient ones mentioned. It is, indeed, quite unlikely that the advent of the Spaniards altered the ancient methods of manufacture in any important respect. They did, however, introduce the element of a thick roller with ratchet and pinion upon which either the warp threads or the fell of cloth were tightly wound. Sometimes there were two such rollers, at top and bottom of the loom; for, although the actual plane of the work-surface was nearly horizontal, the loom remained in technique vertical.

Characteristically the pre-Spanish weavers took great advantage of the natural hues of both cotton and wool. The former occurs in several natural shades: white, brown, and blue or grayish blue, the last two being due to the action of a pest which attacks the cotton boll. The natural hues of wool include: white, light brown, medium brown, dark brown, tawny, orange, bluish gray, and black. To these natural colors were added others, mostly derived from vegetable substances and rendered permanent by the use of mineral mordants. Animal substances, notably cochineal which provided many of the red dyes, were also used.⁴⁰

THE METHOD TO BE USED IN DESCRIBING THE MUSEUM'S COLLECTION OF PERUVIAN TEXTILES.

In the ensuing descriptions of specimens in the Museum's collection of Peruvian textiles two series of factors will be borne in mind, namely,

⁴⁰ See Valette, 1913.

the sequence of cultural periods and the classification of types of fabrics. Each sort of fabric will be taken up in turn, and the divers representatives of it will be arranged in as nearly accurate chronological order as possible. This treatment will be confined, however, to the pre-Spanish specimens; as regards the specimens of the Hapsburg period, Bourbon period, and modern period the treatment will be chiefly from the technological angle.

It will be found that various dates have been ascribed to the specimens. These are intended to be in accordance with the chronological material provided above. One point, however, may lead to the reader's confusion unless it is set straight now. It is this: The Late Chimu and the Late Nazca cultures lasted from the time when Tiahuanaco influence ceased to dominate the art of the coastal folk until the time when the Incas of Cuzco conquered the shore-country—in other words, from about A.D. 900 to about 1400. In the first two of these five centuries, approximately, the lingering influence of the Tiahuanaco II aesthetic tradition was still strong, albeit decreasingly so; in the last three centuries it gradually became scarcely perceptible. Therefore, if a fabric is found to be of Late Chimu or Late Nazca period, but with manifest influence from the art of the Tiahuanaco II period, it is here dated A.D. 900-1100; if it is Late Chimu or Late Nazca, but not conspicuously influenced by Tiahuanaco II art, it is dated A.D. 1100-1400; if, finally, a fabric of Late Chimu or Late Nazca type is found which is not clearly a representative of either one of these two divisions of the Late Chimu and Late Nazca period, it is merely dated A.D. 900-1400. This arrangement, it is hoped, will provide for the noticeable stylistic variations within the limits of the Late Chimu and Late Nazca periods, these two cultures—like the Early Chimu and the Early Nazca cultures before them—being closely related both in general character and in point of artistic style.

PART TWO

DESCRIPTIONS OF DIVERS CLASSES OF TEXTILE SPECIMENS.

SPECIMENS OF TAPESTRY.

Ordinary Tapestries, Class I, A.

SPECIMEN NO. 1. FIGURE 16. (Acquisition No. 24,300, a and b).

Fragments of tapestry combined to form a pouch.

Size, .18 x .175.

Cotton warp, woollen weft.

The weave in this specimen is coarse and heavily ribbed in appearance because of the fact that the cotton warp threads are tripled throughout the fabric in such a way that a triangle of grouped warps is formed with two threads on top and one below. In this grouping of warps, which occurs in other specimens of tapestry also, we find perhaps an evidence of the ancestry of the tapestry technique in Peru. As I have pointed out elsewhere,⁴¹ embroidery on a cotton base fabric whose warps were doubled was the immediate forerunner of the tapestry technique. The step which led to the making of true tapestry was the purposeful omission of the weft threads of the base fabric, with the result that only the doubled warp threads remained; they, in turn, became the warp threads upon which the tapestry weft, substituting the old base fabric weft, were woven. In this specimen there is a great deal of eccentric wefting, also, executed in the manner shown in Figure 7 on page 31.

The design of this specimen is distinguished by very careful and consistent limning in black, carried out partly in eccentric wefting and partly in what Drs. O'Neale and Kroeber aptly term "Figure 8 weave," which consists of paired warps (or of paired groups of warps) around which the weft is woven in the form of a figure 8.⁴² This technical method was frequently employed for vertical limning, as in the present instance. Some vertical lines of limning have, however, but one pair of warps in them, that pair being wound spirally with weft. Resulting from these peculiarities of weaving is a waviness in the warps and in the weft, coupled with the accidental occurrence of slits or jords which add nothing to the clarity of the design and which were, originally, sewn up rather clumsily after the fabric was taken from the loom.

Nevertheless, the specimen is slightly enough because of its rich coloring. The colors are: reddish violet, as a ground, dark yellow, greenish blue, brownish violet, and black. The design is in the purest Tiahuanaco II style, the chief figure in it bearing an obviously close resemblance to the chief figure on the Monolithic Gateway at Tiahuanaco which is here shown, for purposes of comparison, in Figure 17. Likewise, the minor motives in the design of this specimen, particularly those along the top and along the left-hand side, are typical of Tiahuanaco II art at its peak.

Therefore, this specimen may be dated as of the earlier half of the Tiahuanaco II period, approximately between A.D. 600 and 750.

⁴¹ Means, 1930b, pp. 23-26. The metric system is used in measurements.

⁴² O'Neale and Kroeber, 1930, p. 52.

SPECIMEN NO. 2. FIGURE 18. (Acquisition No. 21.2566).

A fragment of tapestry.

Size, .53 x .21.

Cotton warp, woollen and cotton weft.

In this fabric the weave is rather fine, varying between about 29 and about 36 weft threads per cm. There are no jours and there is no limning, save of a purely accidental sort, but there is considerable eccentric wefting.

Upon a ground of very pale brown are wrought a number of highly conventionalized motives—puma-heads and human hands and sundry geometric motives predominating—in which the colors are rich and various, being: crimson, dark purple, lavender, three shades of brown, light green, black, and white (this last of cotton).⁴³

The style of the various motives is pure Tiahuanaco II, yet they quite fail to combine themselves into a coherent composition. A situation similar to this is found in several specimens in The Metropolitan Museum of Art, which I have discussed elsewhere.⁴⁴

On the whole, therefore, this fabric may be safely dated as of the latter part of the Tiahuanaco II period, say between A.D. 750 and 900.

SPECIMEN NO. 3. FIGURE 19. (Acquisition No. 10.265).

A fragment of tapestry.

Size, .295 x .245.

Cotton warp, woollen weft.

The weave here makes a somewhat coarse effect because of the relative thickness of the warp threads and because of the great fluctuation in the weave count, which ranges from about 18 to about 40 picks per cm. If the design be placed right side up, the warps run horizontally. There is a considerable amount of limning, with use both of spirally wound warps and of eccentric wefting. Most of the resultant jours have been closed up by stitching, perhaps for the purpose of strengthening the fabric. At any rate, they do not play a part in the forming of the design.

The ground color is deep red, and on it are worked highly conventionalized pumas and men, their colors being: grayish brown, bluish green, deep red, grayish yellow, creamy white, and brownish black. The larger motives in the design—the pumas and the men—display strong influence from Tiahuanaco II art. The smaller animals (dogs or rabbits) near the right-hand side of the panel and the fish motives along the left-hand side resemble analogous motives in Late Chimu art. The minor conventional motives—especially the crosses and the rectangular areas—are similar to those in Late Nazca pottery designs.

Altogether, therefore, this specimen seems to represent the period immediately following upon the decay of Tiahuanaco II influence on the coast. It may be dated as of the opening part of the Late Nazca period, between about A.D. 900 and about 1100.

⁴³ The reader is informed that hereafter I shall write "(cotton)" directly after each weft color that is made of this material, it being understood that all other weft colors are of wool.

⁴⁴ Means, 1930b, pp. 28-30, and Figs. 14-16.

SPECIMEN No. 4. FIGURE 20. (Acquisition No. 78.75).

A fragment of a tapestry garment, probably a sleeve.

Size, .337 x .28.

Cotton warp, woollen weft.

In this specimen the weave is even and strong. The ground color is a deep purplish brown shading to a lighter tone of the same color, and the other colors are: several shades of grayish yellow, several shades of pale blue, medium green, cream, and black. The weave count varies considerably, ranging from about 28 to about 53 picks per cm. There is no true limning. Such jours as occur are of an accidental character. There is some eccentric wefting, but most of the oblique lines in the design are the result of a carefully calculated placing of the weft colors.

The design consists of human figures, large ones with small human attendants, all of them considerably conventionalized. There are also panels of step-sided frets. As a whole, the pattern displays very strong influence from Tiahuanaco II art, but the wide, flaring headdresses of the large men are definitely typical of Late Chimu art. Therefore this specimen may be dated as of the opening part of the Late Chimu period, between A.D. 900 and 1100.

SPECIMEN No. 5. FIGURE 21 a and b. (Acquisition No. 16.41).

A strip of tapestry.

Size, .75 x .10.

Cotton warp, woollen weft.

The weft count of this specimen is high, from about 35 to about 40 picks per cm.; but the comparative coarseness of the warp threads gives a distinct ribbed effect which is not, however, unsightly. There is neither true limning nor a system of jours, but there is a good deal of eccentric wefting.

There are seven panels of decoration, each one in a brownish black frame. The colors are: alternating grounds of deep red and light brown (four of the first, three of the second), upon which figures are wrought in dark brown, medium brown, brownish black, dark green, and cream color. The design contains seven pairs of highly conventionalized anthropomorphic individuals, each pair of which is accompanied by a conventionalized fish, a ceremonial staff, and sundry indeterminate objects. There is a strong feeling for symmetry, balance, and color rhythm throughout the design.

This design displays strong influence from Tiahuanaco II art, but the flaring headdresses and the fishes indicate unmistakably that it is Late Chimu. Therefore it may be dated as of the opening of the Late Chimu period, between A.D. 900 and 1100.

SPECIMEN No. 6. FIGURE 22. (Acquisition No. 78.80).

A tapestry border with fringe.

Size of tapestry part, .365 x .18; fringe .145 deep.

Cotton warp, wool and cotton weft.

The weave count of this specimen varies from about 22 to about 39 picks per cm. Limning and a system of jours are found, both of them elaborate and both carefully executed. The limning is largely carried out in eccentric wefting skilfully worked.

The ground color is yellow, with stripes in three shades of yellowish brown. Near the top and the bottom are handsome step-sided frets interlocking in rows, their colors being: red, pale gray, and white (cotton), with brownish-black limning. The diagonal stripes of interlocking fish-head motives are in yellow of two shades, red, pale lavender, and white (cotton), with brownish-black limning.

The sewn-on fringe has an upper edge of coarse weaving in which both warp threads and weft threads appear, the latter being generally grouped in pairs. Below the woven edging these weft threads form the fringe proper, hanging in long loops of two-ply thread.

Although the diagonal stripes on the central band of the pattern mark this specimen as undoubtedly Late Chimu, a strong influence from Tiahuanaco II art is visible in the step-sided frets, which are very like the step-sided frets seen in Specimen No. 1 of the present series. Therefore, this fabric may be dated as of the opening part of the Late Chimu period, between A.D. 900 and 1100.

SPECIMEN No. 7. FIGURE 23. (Acquisition No. 10.263).

Part of a tapestry border with fringe.

Size, .66 x .18.

Cotton warp, wool and cotton weft.

This border has paired warps which proceed from a basket weave cotton cloth (of which only a small part now remains) dark brown in color. The border itself is of unusual richness and variety, both as to design and as to technique. Limning, with considerable use of eccentric wefting and of jours, both single and double, occurs. The weft count varies from about 20 to about 30 picks per cm.

The general ground color is a fine light yellow shade. On its upper part, which consists of a series of stepped areas, there are highly conventionalized motives doubtless representing birds in flight. Below, between two narrow stripes which are embellished with scroll motives wrought in brocade upon the tapestry,⁴⁵ comes a series of bird figures. The colors in the pattern are: dark blue, crimson, brown, black, and white (cotton).

The fringe, light yellow in color, is an excellent example of the tab variety of fringe. Its warp threads are continuations of the warp threads of the main tapestry and each tab is a small bit of monochrome tapestry according to the definition of tapestry given above, on page 29. The tabs are separated from one another by jours which are not closed at their lower extremities.

Because there is distinct influence from Tiahuanaco II art in the rendering of the eyes, tails, and feet of the larger birds, while, at the same time, the general aspect of the pattern shows it to be Late Chimu, this specimen may be said to be of the earlier phase of the latter period, between A.D. 900 and 1100.

SPECIMEN No. 8. FIGURE 24. (Acquisition No. 78.72).

Part of a tapestry bag or pouch.

Size, .25 x .205.

Cotton warp, wool and cotton weft.

⁴⁵ This specimen is one of innumerable examples difficult of exact classification. It may seem to some readers that, because of the presence of the two brocaded stripes, it ought to have been grouped in I, B, rather than in I, A. But I have placed it in the latter category because the brocaded portion of the tapestry is here very small in comparison with the whole.

The weave of this fabric is even and fairly fine, with a weft count ranging from about 26 to about 33 picks per cm. There is a good deal of eccentric wefting, but no true limning, and also a skilful use of jours.

The design on this specimen is such that it gives a marked individuality to the piece. The pattern consists of a number of stripes, in black and in three shades of brown, some of them in plain color, others decorated either with animal motives or with handsome fret motives. The colors, in addition to those named are: red, pink, yellow, deep cream (cotton), and violet.

The frets, and the eyes and beaks and tails of the birds, as well as the general outline of the crustacean figures, are eloquent of influence from Tiahuanaco II art. But, as a whole, both in coloring and in general arrangement, the pattern is quite clearly Late Chimu. It is safe, therefore, to date this specimen as of the opening part of the Late Chimu period, between A.D. 900 and 1100.

SPECIMEN No. 9. FIGURE 25. (Acquisition No. 10.266).

Part of a hanging or of a garment of tapestry.

Size, .715 x .41.

Cotton warp, wool and cotton weft.

A peculiarity of this specimen is the excessive use of long jours, many of them double and separated by two warps which, in many cases, are each bound spirally in a distinct color. This results very often in a most unusual two-color limning. The weft count in this specimen varies from about 16 to about 28 picks per cm.

The ground color is rich yellow, and worked upon it are many highly conventionalized birds in deep pink, dark blue, medium blue, olive drab, dark green, dark purple, and white. The bird figures are evenly distributed over the surface of the fabric, their faces turned in alternate directions, row after row. Across the bottom is a panel of deep pink bearing conventionalized animals (monkeys) in the colors already named. The handsome yellow tab fringe is an integral part of the fabric proper.

There are some traces of Tiahuanaco II influence in the rendering of the various motives, in the rigidity of the design, and in the somewhat sombre, but very rich, coloration. Yet the pattern is unquestionably Late Chimu. Therefore the specimen may be dated as between A.D. 900 and 1100.

SPECIMEN No. 10. FIGURE 26. (Acquisition No. 30.254).

A short sleeve of tapestry.

Size, .19 x .16.

Cotton warp, wool and cotton weft.

Because of the coarseness of the warp threads the surface of this fabric presents a heavily ribbed appearance. The weft count varies from about 24 to about 32 picks per cm. Although there is a small amount of eccentric wefting in the limning of the eyes of the animal figures, the color areas are more often emphasized by means of jours of varying length, albeit the use of them is not consistent throughout the fabric. There is a very short sewn-on fringe of the cut loop sort.

The design consists of plain stripes, interlocking fret motives, and conventionalized zoö-morphic figures, the colors being: yellow (ground), pink, yellowish light brown, and white (cotton).

The style is Late Chimu, of between A.D. 900 and 1400.

SPECIMEN NO. 11. FIGURE 27. (Acquisition No. 10.264).

A fragment of a tapestry hanging or of a garment.
Size, .405 x .30.
Cotton warp, wool and cotton weft.

In this specimen the greater part of the design consists of step-sided zig-zag stripes of two colors each of which runs from the top nearly to the bottom of the fabric. The stripes are embellished with curious T-shaped motives which interlock in a most slightly manner with fret motives. The clearness of this intricate geometrical pattern is enhanced by an elaborate system of jours, of which, however, some of the longest have been sewn up. The colors are: dark reddish-brown, white (cotton), olive drab, reddish purple or magenta, brownish black, yellow, and deep pink.

The panel across the bottom of the fabric has interlocking curvilinear fret borders edged with eccentric wefting. Between the borders is a panel upon which is a series of conventionalized human figures limned with eccentric wefting supplemented by jours, some single and some double.

The yellow fringe is of the cut loop variety; but its construction is unusual, for the threads which form it are all worked into the outermost rows of the tapestry wefting and are held firmly in place by a special weft which uses the threads of the fringe as warp. This fringe is, therefore, of a very rare technique, for it is neither an integral part of the fabric nor yet a sewn-on fringe.

The specimen is Late Chimu in style, of the period between A.D. 900 and 1400.

SPECIMEN NO. 12. FIGURE 28. (Acquisition No. 24.276).

Part of a scarf or girdle with a tapestry border.
Width at widest place, .22.
Cotton and wool.

In the cotton part of this fabric both the warp and the weft are multiple, being doubled, tripled, or even quadrupled in some places, while single in others. In the tapestry area the cotton warp threads are paired or tripled, thus giving a heavily ribbed effect. The weft count is unusually low, ranging from about 11 to about 18 picks per cm.

The tapestry design consists of two main areas of decoration. The upper one is made up of diagonal tooth sided stripes limned with eccentric wefting, the colors here being: red, brownish black, pink, yellow, and grayish lavender. The same hues re-appear in the lower area of decoration, which consists of four tabs (sewn together) each of which bears a highly conventionalized bird head motive. The fringe is of the same type as that in Specimen No. 11, save that the workmanship here is much coarser.

This fabric is of the Late Chimu period, between A.D. 900 and 1400.

SPECIMEN NO. 13. FIGURE 29. (Acquisition No. 78.81).

Part of a tapestry border.
Size, .45 x .16; fringe, .165 deep.
Cotton warp, wool and cotton weft.

The weave of this specimen is distinguished by a skilful use of limning and of jours, as well as by a singularly felicitous use of eccentric wefting. Although the weft count

varies from about 21 to about 36 picks per cm., the general appearance of the piece is fine and even.

In coloration this border is notably rich: the ground color is a splendid golden yellow; in addition to various stripes of plain color, pink and two shades of yellow, there are richly decorated bands bearing bird and deer motives. At top and bottom there are birds woven in deep pink, pale pink, pale violet, dark brown, light brown (cotton), brownish black, and white (cotton). The diagonal stripes which combine to form the central band of decoration are edged by a system of jours arranged step-wise. On these diagonal stripes there are, alternately, pairs of antlered deer and groups of three bird figures, the colors here being: medium brown, light brown, brownish black, deep pink, and white (cotton). A peculiarity of this specimen is that limning occurs in several shades, brownish black being the commonest.

The fringe in this specimen has a loosely woven selvage which is attached to the tapestry by its weft threads. The fringe is of the loop type, some of the loops, however, being cut or broken.

We have here a specimen of Late Chimú textile art at its very best, with almost no trace of influence from Tiahuanaco II art. Therefore this specimen may be dated as between A.D. 1100 and 1400.

SPECIMEN No. 14. FIGURE 30. (Acquisition No. 78.76).

Part of a tapestry border.

Size, .45 x .15.

Cotton warp, wool and cotton weft.

The weave of this fabric is fine but very uneven, ranging from 16 to about 36 picks per cm., the divergency being largely due to the presence in the weft of both wool and cotton. It is a weave distinguished by an uncommonly subtle system of jours which not only serve to emphasize color and texture contrasts in a manner to be noted presently, but also form an intricate secondary pattern in and of themselves. The sewn-on border has an unusual edging consisting of step-sided figures contrived by a system of cutting away their warp threads so as to give an open-work effect enhanced by the narrow line of fine tapestry weave along their outer margins, joining them to one another.

The ground color of the design is medium brown, but it is wrought in both wool and cotton, the two contrasting textures combining to make a subtle interlocking fret motive which is materially emphasized by the system of jours already mentioned. Upon this ground are worked step-sided, lozenge-shaped panels, alternately crimson and yellow, each of which carries a charming design of a highly conventionalized running dog in pursuit of a bird. Both the lozenges themselves and the carefully limned figures within them are systematically edged with jours, some single, some double. The dogs and birds are colored in crimson, two shades of pink, and black. In spite of their extreme conventionalization the dogs and the birds in the design possess an extraordinary degree of vitality.

This fabric is typical of the latter phase of Late Chimú art, between A.D. 1100 and 1400.

SPECIMEN No. 15. FIGURE 31. (Acquisition No. 30.257).

A tapestry border for a breech clout.

Width, from .25 to .37.

Cotton warp, wool and cotton weft.

There is no true eccentric wefting in this fabric although the many oblique lines in the design would seem to call for it. There has been, however, an effort to get rid of some of the innumerable jours by sewing them up. The weft count varies from about 27 to about 40 picks per cm.

The design consists of conventionized fishes and birds in two shades of brown, in crimson, and white (cotton), the fishes being on a medium brown ground whose shade varies considerably, and the birds on a light brown ground.

This specimen clearly represents the latter part of the Late Chimu period, between A.D. 1100 and 1400.

SPECIMEN No. 16. FIGURE 32. (Acquisition No. 10.262).

Part of a tapestry border with fringe.

Size, .45 x .14.

Cotton warp, wool and cotton weft.

The weave of this tapestry is fine and even in appearance, in spite of the fact that the weave count varies from about 26 to about 52 picks per cm. There is very clever limning in a large part of the design, carried out with skilful use both of eccentric wefting and of jours. Many of the latter are double, their parts being separated either by pairs of warps bound together with figure 8 weave, or else by single warps bound spirally.

The pattern is very handsome. Near top and bottom are rows of interlocking frets with an elaborate system of jours but without limning. The rest of the pattern consists of stripes of various widths, the broad central one bearing six highly conventionized bird figures. The coloring is rich: yellow (ground of the central stripe), crimson, olive drab, pink, brownish black, and white (cotton). Beyond question this is one of the sightliest fabrics in the collection, both as a piece of color arrangement and as a linear design.

The fine sewn-on fringe is of the loop type. It is crimson.

The specimen represents the later phase of the Late Chimu period, between about A.D. 1100 and about 1400.

SPECIMEN No. 17. FIGURE 33. (Acquisition No. 16.40).

A small fragment of tapestry.

Size, .34 x .15.

Cotton and wool. Said to have come from Nazca.

A noteworthy feature of this specimen is that both the plain cotton part of the fabric and the decorative wool on cotton part are in the tapestry technique. Cotton tapestry, whether pre-Spanish or Spanish in period, is of the greatest rarity.

In both parts the weave is very fine, being about 32 to about 38 picks per cm. in the cotton part, and from about 37 to about 46 picks per cm. in the wool on cotton part.

In the decorative panel of woollen weft on cotton warp the ground color is deep reddish brown, and it bears a rich pattern made up of geometrical motives and zig-zags in which appear dark green, dark olive, dark yellow, and reddish brown. This pattern wrought in colors is supplemented by a secondary pattern carried out by an elaborate system of jours.

This design is representative of the Late Nazca style of decoration, of the period between A.D. 900 and 1400.

SPECIMEN No. 18. FIGURE 34. (Acquisition No. 24.285).

A tapestry bag or pouch.
Size, .27 x .15.
Cotton warp, woollen weft.

Each side of this handsome bag has a ground color of lustrous crimson. The design is arranged in three panels, sewn together, the two at the end being in a weave that appears to be loosely beaten-up tapestry having step-sided chevrons formed by a system of squares in black, blue, yellow, dark green, and cream. The central panel is of well beaten-up tapestry with a weft count ranging from 26 to 30 picks per cm. The pattern here is of highly conventionalized human heads connected with one another by zig-zag lines. In this panel the colors are: deep pink, medium brown, blue, and cream, with a little spot of dark green. There is a system of short jours.

The tassels are of dark brown and crimson and have neatly braided cords. The carrying straps, now much worn, were probably of tapestry. The bag is embroidered all round.

Late Chimu period, between A.D. 900 and 1400.

Brocaded Tapestries, Class I, B.

SPECIMEN No. 19. FIGURE 35. (Acquisition No. 30.252).

A sleeveless tunic of brocaded tapestry.
Length, 1.18.
Cotton warp, woollen weft.

In this fabric the warps run horizontally if the tunic is held in a natural position, as worn. The weft count is high, ranging from about 26 to about 38 picks per cm.

The ground color of this tunic is yellow. Evenly distributed over its surface are many small rectangles of brocade having bird motives worked in crimson, white, dark green, and yellow. Each of the brocaded areas has, to right and left of it, small patches of tapestry in crimson or in dark green. To the left hand side of the fabric there is a narrow stripe of dark green tapestry upon which, also, are rectangles of the sort described. Near the right hand side are other and narrower stripes colored black and green. In its general aspect this tunic, although now much worn and stained, is of uncommon richness.

The design is of the later phase of the Late Chimu period, between about A.D. 1100 and about 1400.

SPECIMEN No. 20. FIGURE 36. (Acquisition No. 78.95).

A fragment of a brocaded tapestry border.
Size, .39 x .06.
Cotton warp, woollen weft.

In this specimen the design is made up of fine tapestry stripes in red and three

shades of yellowish brown, with a brocaded central stripe. The brocade design is arranged in panels about .03 square, each of which contains a highly conventionalized bird motive wrought in yellow, red, pinkish lavender, yellowish brown, and black, the last being used for limning the bird motives.

The fringe is of yellow and consists of short loops depending from a relatively wide and rather coarse edging of unbeaten-up tapestry in which the weft threads are paired, their lower ends being the loops referred to. The fringe is sewn to the fabric proper.

This specimen represents the later phase of the Late Chimu period, between about A.D. 1100 and about 1400.

SPECIMEN No. 21. FIGURE 37. (Acquisition No. 30.241).

A sleeveless tunic with a border of brocaded tapestry.

Size, .89 x .70.

Cotton, and cotton and wool.

The body of this tunic is of well woven, rather heavy, cotton cloth of a natural, undyed, medium brown color.

The brocaded tapestry border, about .06 wide, has a woollen weft on a cotton warp. It has narrow stripes of ordinary tapestry, but the most important decorative element is a wider stripe of brocaded tapestry. Upon this stripe there are numerous diagonal bands of decoration in which very conventionalized bird motives and geometrical figures are wrought in brocade technique upon the tapestry. The colors here are: pale yellow, vivid yellow, crimson, medium brown, dark brown, dark violet, and white (cotton).

The design is typical of the latter part of the Late Chimu period, between about A.D. 1100 and about 1400.

SPECIMEN No. 22. FIGURE 38. (Acquisition No. 78.69).

Part of a brocaded tapestry tunic for a child.

Width, .385.

Cotton warp, woollen weft.

In this tunic the cotton warp is rather fine, with the result that the surface of the fabric has an appearance of great delicacy and elegance. Most of the surface is of painstakingly made ordinary tapestry whose weft count ranges from about 21 to about 35 picks per cm. The colors are: brownish red, medium brown, yellowish brown, and black, arranged chiefly in striking vertical stripes.

Peculiar richness is given to this infantile tunic by certain stripes adorned with chevron shaped areas of brocading upon tapestry, in which areas a design of highly conventionalized fish, bird, and fret motives is carefully wrought in the colors already named, with very careful and consistent limning in black. At the left hand side of the fabric there is a vertical area in which, for some reason that is not clear, the warps are doubled, giving a coarsely ribbed effect to the tapestry in that part. Another curious feature of this tunic is the use of jours that form an independent secondary pattern. Some of the jours have been sewn up in a seemingly arbitrary fashion.

This tunic represents the latter part of the Late Chimu period, between about A.D. 1100 and about 1400.

An Embroidered Tapestry, Class I, C.

SPECIMEN No. 23. FIGURE 39. (Acquisition No. 78.70).

A panel of embroidered tapestry.
Width, about .50.
Cotton warp, wool and cotton weft.

This is the only specimen in the collection of embroidered tapestry. Nor is this one solely that; for it might equally well be classed as an ordinary tapestry with incidental decoration in brocade. Still, as the embroidery upon this fabric is its most noteworthy feature, I classify it as an embroidered tapestry.

The yellow ground of the fabric is rather finely woven, with a weft count ranging from about 19 to about 32 weft threads per cm. Upon it is a bold X-shaped pattern made up of a system of stripes in crimson, greenish yellow, and yellow, together with a broader, central stripe in crimson which bears rows of bird figures wrought in pink, greenish yellow, yellow, and black. At the borders of this central stripe there is a system of jours which carry out the X-shaped pattern and greatly enhance its richness.

Two of the triangular areas between the arms of the X are embellished by highly conventionalized deer embroidered on the tapestry and dispersed in orderly arrangement over its surface, their colors being: greenish yellow, yellow, crimson, and white (cotton).

This design represents the latter part of the Late Chimu period, between about A.D. 1100 and about 1400.

In Class II, Plain webs, or ordinary basket weaves, we find an immense diversity of fabrics whose sole fundamental similarity is that they are ordinary cloths of simplex or, sometimes, of complex, basket weave, chiefly in cotton, with adornment widely various in kind and in quality applied to them during weaving or, much more often, after it.

It is neither possible nor necessary to illustrate here specific examples of Class II, A, B, and C. The cotton part of the cloth shown in Figure 37 would serve admirably as an example of plain web, or ordinary basket weave, undecorated, Class II, A. Class II, B, and C, can be adequately understood through a study of

Two Plain Webs with Gingham-like Patterns, Class II, D.

SPECIMEN No. 24. FIGURE 40. (Acquisition No. 24.326).

A fragment of cloth striped in the warp and in the weft.
Size, .19 x .17.
All cotton.

This piece of rather coarse basket weave cotton cloth has a ground color of brownish white. The stripes which embellish it in a very simple manner consist of

regularly spaced blue cotton warps and of regularly spaced blue cotton wefts, the two systems of blue threads combining to give a gingham-like pattern of extremely simple character.

The age of this specimen is indeterminate, but it is certainly pre-Spanish.

SPECIMEN No. 25. FIGURE 41. (Acquisition No. 24.327).

A fragment of gingham-like cloth.

Size, .53 x .59.

All cotton.

Said to have been found near Lima.

In this specimen we have a rather fine cotton cloth which has somewhat elaborate systems of stripes both in warp and in weft. The ground color is pale brownish white, now much stained and worn. The striping is in greenish blue and light brown. The width of the stripes and their grouping are so planned that a very attractive and somewhat complex pattern is made.

The age is indeterminate, but is certainly pre-Spanish.⁴⁶

This brings us to a large and specially important group of fabrics which is distinctively Peruvian, namely:

Plain Webs, or Ordinary Basket Weaves, Embroidered, Class II, E.

SPECIMEN No. 26. FIGURE 42, AND FIGURE 43. (Acquisition No. 21.2556).

An embroidered shawl.

Size, 2.42 x .68.

All wool.

The greater part of this garment is a basket weave cloth of crimson wool upon which at regular intervals decorative mythological figures are embroidered in crewel stitch. The border is also in crewel stitch, both as regards its greenish-blue ground color and as regards the figures worked upon it, the basket weave woollen base fabric entirely hidden from view throughout the border. All of the decorative figures are carefully limned in crewel stitch, chiefly black.

All of the decorative figures are conventionalized to some extent, their heads being oddly tilted out of the natural position. Some have mouth masks, but many do not; all, however, have headdresses, protruding, serpent-like tongues, and other minor elements typical of Early Nazca art. It should be noted, nevertheless, that in the rendering of the bodies, hands, feet, and raiment of these personages there is a degree of lifelikeness unusual in Early Nazca embroideries. This feature is particularly noticeable in Figure 43, herewith; for, to mention but one point, all the feet and hands of the personage there shown have the natural number of digits, albeit this is not true of the personages on the main body of the shawl. Moreover, the border personage carries—but in a manner not very naturalistic—a quite realistic spear-thrower in his right hand and a knife of the “chopper” type in the left hand.

⁴⁶ In these specimens there is no evidence of dyeing. The coloring is entirely due to the natural shades of the cottons used. Reference to these natural shades will be found above, on page 41.

The coloration of the stitching is rich, the hues being black, dark yellow, light yellow, deep crimson, pink, purple, dark brown, dark green, and light greenish blue.

Owing to the unusual degree of naturalness in the figures, all of which, nevertheless, are typically Early Nazca in style, this specimen may be dated as of the Early Nazca period, or between about A.D. 100 and about 600.

SPECIMEN No. 27. FIGURES 44 and 45. (Acquisition No. 21.2559).

A garment or a hanging with an embroidered border.

Size, 1.24 x .81.

Cotton base fabric, embroidery in wool.

In this specimen and the one which follows we have representatives of a rather important group of fabrics possessing many points in common. In all of them the base fabric is of well made basket weave cotton cloth, very pale brown in color; and in all of them the decorative element is an embroidered border with fringe which runs along three edges of the base fabric. All the fringes in this group consist of finely twisted cords, usually rather short.

Such are the general characteristics of this group. Two members of it will now be treated in detail, almost entirely with reference to their borders.

In the present specimen the stitching throughout is crewel stitch. The ground is greenish black in color, and the other hues are: dark green, red, pink, purple, buff, greenish blue, and black. The design is one of human figures, all in a curious posture, their heads being thrown violently backwards and their long hair hanging straight down behind them. Another quite justifiable interpretation is that the persons are falling head foremost through space. This interpretation is borne out by the agonized expression which the artist has managed—intentionally or otherwise—to impart to their countenances. The figures all wear short, skirt-like garments and carry knives of the "chopper" kind as well as what appear to be spear-throwers. The hands and feet have only three digits each. From the personages' chins hang odd, short objects which recall the protruding tongue so common in Early Nazca art, but these special objects seem to be weights of some kind rather than tongues.

Although these figures are very different from most of those which appear in Early Nazca art, we may, nevertheless, ascribe this specimen to the Early Nazca period because of its general technique and because of the fact that its aspect as a whole is consonant with the art of that period. It may be said, therefore, that this specimen is Early Nazca and of the period between about A.D. 100 and about 600.

SPECIMEN No. 28. FIGURES 46 and 47. (Acquisition No. 21.2560).

A garment or a hanging with an embroidered border.

Size, 1.19 x .73.

Cotton and wool.

The border of this specimen has a dark violet ground upon which are worked conventionalized birds in red, green, yellow, and creamy white wool. All the embroidery is in crewel stitch.

The birds which embellish the border have their feet in alternating directions, this being a formalistic element in decorative design. But in spite of it, the birds themselves have a perceptible air of realism, and it is clear enough that they are intended

to represent some kind of bird of prey, perhaps the buzzard. Figures not greatly dissimilar to these are frequently found on Early Nazca pottery. We may, therefore, say that this specimen represents the Early Nazca period of between about A. D. 100 and about 600.

SPECIMEN No. 29. FIGURES 48 and 49. (Acquisition No. 16.32).

An embroidered shawl.

Size, 2.53 x 1.2.

All wool.

In this specimen the base fabric is basket weave woollen cloth of dark green. Upon it, checkerboard fashion, are worked rectangles of crewel stitch in crimson. The lower margin of the shawl is adorned by a border worked in the same way and by a fringe of short cords.

On each of the crewel stitched rectangles, and also on the border, are worked strange looking men in cape-like garments who wear headdresses that vaguely suggest the possibility of their being the heads and skins of slain animals. The faces, hands, and feet of the men are far from naturalistic. In their hands the men hold long spear-throwers with hooks in the form of monkeys; in their other hands they hold knives of the "chopper" type. From just below, and over their shoulders, stream long, serpentine objects of indeterminate character. It is noteworthy that, as a composition, this piece of embroidered cloth is chaotic for the reason that the alternate rows of figures have their heads in opposite directions.

Although many of the elements usual in Early Nazca design are lacking here, there are others—the trophy heads along the serpentine objects, the stitching, and the general appearance of the garment—which justify the assertion that it represents the Early Nazca period, of between about A.D. 100 and about 600.

SPECIMEN No. 30. FIGURES 50 and 51. (Acquisition No. 16.33).

An embroidered shawl.

Size, 2.51 x .90.

All wool.

Said to come from near Pisco.

The base fabric is a basket weave woollen cloth of deep purple color covered, checkerboard fashion, with rectangles of golden brown crewel stitch upon each of which is wrought, in crewel stitch, a mythological personage. The colors are: reddish violet, pink, green, dark blue, light blue, yellow, medium brown, and creamy white. An unusual feature is that the base fabric is left uncovered in certain areas as a means of giving special emphasis to the design, in which it succeeds admirably.

Extreme elaboration is the chief characteristic of these strange creatures which, at all possible points about their persons, have human faces, serpent motives, and geometric embellishments. Oddly enough, considering their general aspect, they have the natural number of digits on both hands and feet.

Although they lack the typical headdress and the protruding tongue so common in Early Nazca designs, these personages have another type of headdress—which will be found towards the middle of their bodies and which can best be understood by turning the detail (Figure 51) upside down—as well as the trophy head, the spear-thrower, and other characteristic Early Nazca elements.

This specimen may be dated, therefore, as of the Early Nazca period, between about A.D. 100 and about 600.

SPECIMEN NO. 31. FIGURES 52 and 53. (Acquisition No. 16.34).

An embroidered shawl.

Size, 2.45 x 1.205.

All wool.

Said to come from Pisco.

In this specimen the base fabric is a basket weave cloth of black wool. Each of the four corners is embellished by a panel of solid golden brown crewel stitch. The design consists of sixty-five human figures worked chiefly in crewel stitch and disposed in an orderly fashion upon the base fabric and upon the corner panels. These figures wear fringed capes or shawls which are shown widely displayed, typical Early Nazca headdresses, and breech-clouts; and they carry ceremonial staffs and trophy heads. The colors are very rich and include: crimson, pink, brown, blue, dark green, yellow, and grayish green.

It is noteworthy that neither the eight figures on the corner panels nor the two somewhat smaller figures on the base fabric between the two left hand panels are finished. The former still lack their eyes and mouths; the latter are represented only by outlines. This situation throws light on the manner in which these embroidered figures were made: first of all their general shape was wrought in crewel stitch, and later the filling-in process by which the desired masses of color were set in place was carried out, the whole, in this case, being done with crewel stitch.

Quite clearly this specimen represents the Early Nazca period of between about A.D. 100 and about 600.

SPECIMEN NO. 32. FIGURE 54. (Acquisition No. 16.36).

A fragment of an embroidered border.

Size, .36 x .05.

All wool.

Said to come from the Nazca Valley.

The base fabric is a basket weave woollen cloth of good quality and of a fine golden brown color. The garment which this border originally adorned was doubtless chiefly composed of the material of the base fabric.

In the border the base fabric is hidden by crewel stitch embroidery of great evenness and regularity which is made to form masses of solid color that serve as stepped grounds for the designs. These last are also executed in crewel stitch, but the direction of the "grain" of the stitching varies frequently according to the demands of the pattern. Along the left hand side of the embroidery are two or three rows of chain stitch which probably had to do with a fringe of the cord type which has since disappeared.

The design consists of highly conventionalized semi-human creatures which hold trophy heads aloft between upraised four-digit hands and which grasp serpents, with protruding tongues, in their four-digit feet. These creatures have no proper bodies, but their large heads have elaborate headdresses and they wear typical Early Nazca mouth masks with whisker-like projections at the sides. The coloration is very rich, the ground shades being yellow, deep violet, and salmon pink. The creatures already

described are worked in deep violet, yellow, greenish blue, green, pale green, crimson, pink, medium brown, and creamy white.

Throughout the design is characteristic of Early Nazca art and the creatures here shown seem clearly to be versions of the Cat Demon who is so often seen on the pottery of the period. This specimen may be dated, therefore, as of the Early Nazca period of between about A.D. 100 and 600.

SPECIMEN No. 33. FIGURE 55. (Acquisition No. 21.2557).

A fragment of an embroidered shawl.

Size, .79 x .22.

All wool.

In this specimen we have a basket weave fabric of fine woollen thread, purplish black in color, which has an embroidered border carefully executed in crewel stitch. The ground color of the border is deep pink, and the design consists of centipede-like creatures with a feline head at each end of their bodies. Entangled in the whiskers of these heads are human trophy heads. These figures are worked in dark green, dark yellow, dark blue, and creamy white. They seem to be a combination of the Cat Demon and the Centipede God personages found on Early Nazca pottery.

The fringe consists of a narrow knitted margin from which depend short (.05) finely twisted cords in which the colors already mentioned reappear.

Beyond doubt this specimen represents the Early Nazca period of between about A.D. 100 and 600.

SPECIMEN No. 34. FIGURE 56. (Acquisition No. 24.306).

A fragment of cotton cloth embroidered in wool.

Size, .16 x .15.

Both this specimen and the following one present a superficial resemblance to tapestry. In this case the cotton base fabric is brownish white in color, and the embroidery pattern is worked in wool with a very even darning stitch which invariably covers two warp threads at each stitch, with the result that there is a marked ribbed effect like that of tapestry.

In this specimen the design is a conventionalized puma motive enclosed in a frame of still more conventionalized animal motives. The puma is spotted with cruciform and other geometric embellishments, and there is no hint of realism about him save a trace of it in the tail. The colors of the embroidery are: crimson, medium yellow, light yellow, dark green, and black. In many parts of the design there is limning, but the use of it is not constant.

This design is certainly in the Tiahuanaco II style and may be dated as between about A.D. 600 and about 900.⁴⁷

SPECIMEN No. 35. FIGURE 57. (Acquisition No. 24.308).

A fragment of embroidered cloth.

Size, .23 x .09.

Cotton base, wool embroidery.

⁴⁷ This specimen and the following one represent a very rare type of Peruvian embroidery which, as explained in Means, 1930b, is perhaps the direct ancestor, in Peru, of the tapestry technique.

Like the foregoing specimen this one bears a superficial resemblance to tapestry. The base fabric is of light reddish-brown cotton of close-packed basket weave and upon it figures are wrought in very even and regular darning stitch.

The design consists of highly conventionalized human figures between stripes of indeterminate motives. The colors are: crimson, pinkish violet, yellow, green, cream, and black. Limning in several shades is general throughout the design.

This specimen represents the period when Late Chimu art was beginning to win free from Tiahuanaco II influence. The flaring headdresses and the manner of rendering the ears and feet are typical of Late Chimu art; but the general aspect of the figures is eloquent of strong Tiahuanaco II influence. Therefore this fabric may be dated as of the opening part of the Late Chimu period, between about A.D. 900 and about 1100.

This brings us to a group of fabrics which, so far as this Museum's collection is concerned, represents the Late Chimu period. The group is that designated:

Plain Webs, or Ordinary Basket Weaves, Brocaded, Class II, F.

SPECIMEN No. 36. FIGURE 58. (Acquisition No. 30.243).

A fragment of brocaded cloth.

Length, .14.

Cotton base-fabric, woollen brocading.

In this specimen the basket weave cotton base fabric is dark brown in color. It bears a brocaded design in which the base fabric plays a definite decorative part, being allowed to show at regular intervals among the threads of the brocade weft in the form of small dots which give a stippled effect to the brocaded area of the cloth.

The design is a highly conventionalized fish motive wrought in crimson and yellow wool.

The pattern is typical of the Late Chimu period of about A.D. 900 to about 1400.

SPECIMEN No. 37. FIGURE 59. (Acquisition No. 30.240).

A fragment of brocaded cloth.

Part shown, .36 x .28.

Cotton and wool.

The base fabric is a loosely woven cloth of brown cotton. The brocading is of yellow, crimson, and pink wool. The design consists of two types of panels which alternate, one of them containing rows of conventionalized birds, the other containing a marginal decoration of geometric figures (perhaps intended to represent blossoms) and a central lozenge of highly conventionalized bird and fish motives which are made to interlock in a very subtle manner.

This design is typical of the Late Chimu period, about 900 A.D. to about 1400.

SPECIMEN No. 38. FIGURE 60. (Acquisition No. 24.314).

A fragment of cloth with a brocaded border.

Size, .13 x .07.

Cotton and wool.

The base fabric of this specimen is dark brown basket weave cotton cloth. The decorative border has a brocade weft of lustrous pale yellow vicuña wool which forms an exceptionally charming and delicate pattern of step-sided, lozenge-shaped figures. The base fabric, as so often happens, is allowed to appear systematically on the surface in such a way that it plays an important part in the carrying out of the design.

This specimen is of the Late Chimu period, about A.D. 900 to about 1400.

SPECIMEN No. 39. FIGURE 61. (Acquisition No. 24.315).

A fragment of a brocaded hanging or of a garment.

Size, .51 x .14.

Cotton and wool.

The base fabric of this specimen is a rather coarsely and loosely woven cotton cloth of grayish-brown hue. The brocade weft is of yellow, violet, and red wool and of white cotton. The occurrence of cotton brocade weft is an unusual feature. The design is made up of a number of geometrical motives including a very uncommon foliated cross motive and a more usual stepped fret motive.

Late Chimu period, about A.D. 900 to about 1400.

SPECIMEN No. 40. FIGURE 62. (Acquisition No. 30.242).

A piece of quilted and brocaded cotton armor.

About .54 square.

Cotton and wool.

This specimen consists mainly of two thicknesses of brownish-white cotton cloth whose vertical threads are paired, giving a crêpe-like appearance to the cloth. Between the two thicknesses is the remains of a formerly thick padding or quilting of raw cotton fibres. Unquestionably, therefore, this is an example of the wadded or quilted cotton armor which is known to have been used in ancient Mexico and in ancient Peru during various periods of their pre-Spanish history. The Spaniards in the conquest of Mexico under Cortés found armor of this type to be better than steel as a protection against darts and spears and so, very early in the game, they borrowed it from the natives for use in their wars against them.⁴⁸

⁴⁸ Bernal Diaz del Castillo, in Book VI, Ch. xci, of his great work, *A true History of the Conquest of New Spain*, says: "There was also much quilted cotton armour, richly ornamented on the outside with many coloured feathers, used as devices and distinguishing marks. . ." (p. 65 of volume two of Maudslay's translation of the work). The same writer speaks of the Spaniards' adoption of this native armor in Book I, Ch. ix, Book II, Ch. xx, and Ch. xxiii.

A few references, early and modern, to quilted cotton armor in Peru are: Francisco de Xerez, who was in Peru in 1531 and 1532, specifically says that the Incas' soldiers wore jackets of quilted cotton, (Xerez, 1872, p. 60); López de Gómara, who wrote about 1550, also mentions them in his Book I, Ch. cxv; Pedro Sancho, also, who was present when the Spaniards made their first entry into Cuzco, speaks of "doublets thickly padded with cotton" (Sancho, 1917, p. 157); Cobo, who wrote in the first half of the seventeenth century, makes a clear reference to them in his Book XIV, Ch. ix, (Cobo, 1890-1893, IV, p. 193); Velasco, in his *History of the Kingdom of Quito*, Book II, Section 7, tells us that armor of this kind was called, in Quechua, *aucana-cushma*, or war tunic, (Velasco, 1841-1844, II, p. 52); Prescott tells us that quilted armor of this kind was used both in Mexico and Peru, (Prescott, 1847, I, p. 73); so also does Beuchat, (1912, p. 305); Joyce shows us an Early Chimu vase painting which displays a warrior in a thickly padded doublet, (Joyce, 1912, p. 127); and, finally, Montell, (1929, pp. 109 and 200), pictures and describes quilted cotton armor.

Upon the uppermost of the two thicknesses of cotton cloth in the present specimen two human figures, about .36 high, are brocaded in crimson, yellow, grayish brown, light brown, violet, and medium brown wool, and white cotton. They are conventionalized, having four-digit hands and feet, geometrically planned faces, and bandy legs. They wear headdresses with flaring ornaments, and also wear what appear to be short tunics.

The general aspect of the design justifies the assertion that this specimen is Late Chimu in style, of between A.D. 900 and 1400.

SPECIMEN No. 41. FIGURE 63. (Acquisition No. 24.313).

A fragment of brocaded cloth.

Size, .29 x .25.

Cotton and wool.

Said to have been found at Lima.

In this fabric the base material is of fine, light brown, basket weave cotton cloth across which runs a band of richly brocaded ornamentation in wool of three shades of brown. The design is formed both by the brocade weft itself and by the systematic appearances, through it, of the base fabric. The pattern is one of intricately interlocking fish head motives combined in a subtle manner with various geometric motives.

Quite clearly this specimen represents the latter part of the Late Chimu period, between about A.D. 1100 and about 1400.

Plain Webs, or Ordinary Basket Weaves, Painted or Printed, Class II, G.

SPECIMEN No. 42. FIGURE 64. (Acquisition No. 30.250).

A piece of painted cloth.

Total length, 4.18; length shown, 1.05; width, .61.

All cotton.

This specimen is basket weave throughout, but the warp threads—horizontal if the pattern is upright—all run in pairs and both they and the weft threads vary somewhat in size, which irregularities result in giving a crêpe-like surface to the fabric.

About one-half of the cloth's length is plain yellowish white on both sides. One side of the other half is painted or stained a dark purplish-brown shade. The ground color of the other side of this half—this being the portion of the cloth illustrated in Figure 64—is yellowish white, with an irregular narrow band of dark brown across the left hand end of the cloth, which band may be accidental.

On this part of the cloth are painted, in medium brown limned with dark brown, twelve human figures, arranged in rows of six and varying in height from .20 to .30. They are crudely drawn, and conventionalized, having less than the natural number of fingers and toes. Some of the feet are curiously rendered in the form of L-shaped areas. All of the human figures wear flaring headdresses.

Interspersed with these figures are various conventionalized patterns, including a most unusual one that has a circular centre against which impinge the apexes of five triangular areas. This curious device is found in the upper left hand corner of the cloth, and immediately below it is a triangular area which contains several crude but

attractive geometric patterns. Various minor motives of indeterminate character are scattered about among the human figures.

The general aspect of this painted decoration, and especially the flaring head-dresses, indicates that it belongs to the Late Chimu period of between about A.D. 900 and about 1400.

SPECIMEN No. 43. FIGURE 65. (Acquisition No. 30.249).

A fragment of painted cloth.

Size, 1.07 x .38; part shown, .60 x .38.

All cotton.

This fabric—partly shown in Figure 65—is of cotton cloth so woven that it superficially resembles a tapestry, the weft being made of coarse, soft threads in which the finer and harder warp threads embed themselves and so give the tapestry-like appearance to the fabric. It is a creamy white color, and the decoration is painted in dark brown, and medium brown.

The painted design consists of narrow plain stripes having between them broad bands of monkey-, bird-, and fish-motives, somewhat crudely but nevertheless strikingly executed. The presence here of monkey figures is unusual, for monkeys do not occur naturally on the coast of Peru, albeit they are common in the eastern jungles.

This fabric is of the Late Chimu period, about A.D. 900 to about 1400.

SPECIMEN No. 44. FIGURE 66. (Acquisition No. 78.68).

A shirt with sleeves, probably intended for a mummy-pack.

Size, 1.04 x .315.

All cotton.

Probably the original color of this fabric was the light brown shade seen at the neck and at the upper part of the sleeves. The cloth is ordinary basket weave cotton cloth of good quality. The embellishment was all applied after the weaving was completed.

The applied design consists of bold zig-zag stripes containing interlocking fret motives and highly conventionalized bird- and animal-motives in dark brown and medium brown. These were either painted free-hand upon the cloth or else, as seems more likely in this case, were printed by means of stamps of the press type or of the roller type. It is possible that all three methods, *i.e.*, painting, press-stamping, and roller-stamping, were used.

The design is clearly of the Late Chimu period of about A.D. 900 to about 1400.⁴⁹

⁴⁹ It must be admitted that my claim that press-stamps or roller-stamps, or both, were used on this fabric is not susceptible of absolute proof. Nevertheless, we have ample evidence that, in Central America and in Peru, press-stamps (or, as Dr. Linné calls them, plane-stamps) were widely used in ancient times and that from them were developed roller-stamps. The materials used for both kinds were clay, wood, and perhaps metal, the desired pattern being wrought on the printing surface which was then employed in precisely the same way that we employ a rubber stamp. References to this interesting subject include: Wissler, 1922, p. 282; Schmidt, 1929, p. 536, shows us nine press-stamps made from fragments of gourd, and also a primitive stencil, together with its brushes, made of a thin slice of wood, all of these things coming from the coast of Peru; Linné, 1929, pp. 38-43, and Figures 12, E, 37, C, and 50, B and D, describes and pictures several examples of both types of stamps from widely separated regions; Means, 1931, pp. 487 and 506-507, describes a pottery roller-stamp from Ancón.

This brings us to a group of textiles in which the Museum is specially rich, chiefly through the generosity of Mr. Edward J. Holmes, its Director. The group in question is that made up of:

Double Cloths, Class III.

SPECIMEN No. 45. FIGURE 67. (Acquisition No. 78.92).

A fragment of an ornamental band.

Size, .40 x .055.

Cotton and wool.

Blue wool and white cotton are here woven in such a way that stippled areas in which both warp and weft are paired are made to alternate with panels of ordinary double cloth technique bearing conventionalized frogs. One of the panels, however, is without this embellishment, being all blue on one side and all white on the other. The fringe is of the loop type and contains both of the sorts of thread which constitute the fabric.

The design is clearly Late Chimú, of about A.D. 900 to about 1400.

SPECIMEN No. 46. FIGURE 68. (Acquisition No. 30.238).

Part of a garment or of a hanging.

Size, 1.75 x 1.12; part shown, .59 long, strip .30 wide.

All cotton.

This specimen consists of alternating strips of ordinary basket weave cotton cloth and of strips of double cloth, also of cotton, the weave being rather loose throughout. The strips are joined by sewing.

In the double cloth areas the colors are white and dark brown. The design is a bold and handsome one arranged in panels each of which contains a central pattern made up of a diamond shaped area with four conventionalized bird heads grouped in pairs at each end. Upon this area, and almost filling it, is a conventionalized fish, upon which, in turn, are arranged symmetrically small conventionalized birds and three lozenge motives. All around each of the central patterns are symmetrically disposed similar birds. All of these elements combine to make a very sightly, but highly conventionalized, design eloquent of interest in and contact with marine life. This impression is heightened by the narrow borders of interlocking fret or wave motives which run along the outer margins of the panels.

This fabric is quite clearly of the Late Chimú period, about A.D. 900 to about 1400.

SPECIMEN No. 47. FIGURE 69. (Acquisition No. 30.237).

Part of a long tunic.

Length, 1.65; part shown, .56 x .43.

All cotton.

In this tunic, as in various others, the decorative element consists of strips of double cloth technique in which the colors are white and dark brown. Tunics as large as this one are very unusual in ancient Peruvian weaving. As in Specimen No. 46, the

strips of ordinary white basket weave and the strips of double cloth are neatly sewn together longitudinally.

The pattern in the double cloth strips consists of orderly rows of conventionalized bird figures which are more densely packed in some bands of decoration than in others. Between the bands are interlocking fret or wave motives and plain strips. A peculiarity of this tunic is that the strips are sewn together in such a way that the bands of birds stand alternately on their feet and on their heads.

This fabric represents the Late Chimu period, between about A.D. 900 and about 1400.

SPECIMEN No. 48. FIGURE 70. (Acquisition No. 30.236).

Part of a hanging.

Size, 2.07 x 1.50; part shown, .64 x .62.

All cotton.

Save for the bottom margin, about .23 deep, where we find basket weave in dark brown, dark blue, light blue, and white, with a brocading of simple short lines of doubled thread, this fabric is of double cloth in light brown and dark brown cotton.

The pattern consists of many rectangles, each from .10 to .12 square, enclosed by a lattice of bands bearing conventionalized birds. Within each of the squares is an intricate decorative figure in the shape of a highly conventionalized two-headed human or animal motive.

The style is that of the Late Chimu period, between about A.D. 900 and 1400.

SPECIMEN No. 49. FIGURE 71. (Acquisition No. 10.268).

A double cloth with a decorative panel.

Size, .38 x .27.

All cotton.

The colors of this specimen are dark brown and brownish white. The weave of the double cloth area is such that the two webs composing it proceed directly from two ordinary basket weave fabrics, one brownish white and the other dark brown, which lie back to back until the point is reached where their threads begin a systematic interchange resulting in the formation of the double cloth panel.

The design is one of highly conventionalized faces surrounded by curling rays, each face being in a rectangle framed by bands of fret motives. The design is notably regular and harmonious.

This fabric is of the Late Chimu period, about A.D. 900 to about 1400.

SPECIMEN No. 50. FIGURE 72. (Acquisition No. 30.239).

A square of cloth, possibly for carrying purposes.

About .54 square.

All cotton.

In this fabric the weave is double cloth throughout, the colors being white and dark brown. Owing to irregularities in the sizes of the threads used in the weaving, the surface of the fabric has a slightly crêpe-like appearance.

The design is made up of eleven horizontal bands of decorative motives, of which three are animal or human in inspiration, the rest being of a geometric character.

The style is Late Chimú, of between A.D. 900 and 1400.

Because the Museum of Fine Arts does not at present own any examples of *Feather-Work, Class IV*, and of *Chaquiras, Class V*, of our classification, it is necessary to pass directly to:

Gauze and Voile, Class VI.

Of this class of webs the Museum has examples only of *Gauze, Embroidered, Class VI, C*.

SPECIMEN No. 51. FIGURE 73. (Acquisition No. 24.321).

A fragment of embroidered gauze.

Size, .29 x .14.

Cotton and wool.

The base fabric of this specimen is of light brown cotton gauze whose threads are extremely fine and delicate. The embroidery is in wool, worked with darning stitch.

The embroidered pattern is well executed and consists of pairs of triangles enclosed in lozenges of almost solid stitching. Each triangle bears a vague geometric design. The colors are: several shades of crimson, yellow, green, deep violet, and blue-green.

This design seems to be either Late Chimú or Late Nazca; in either case it would date from between about A.D. 900 and about 1400.

SPECIMEN No. 52. FIGURE 74. (Acquisition No. 24.320).

A fragment of embroidered gauze.

Size, .27 x .10.

Cotton and wool.

In this specimen the base fabric is made of fine, brown, one-ply cotton threads which are very loosely woven in such a way that those going in one direction are paired and twisted loosely around one another, whereas those going the other way are single and are systematically passed between the threads of the aforementioned pairs. There is, therefore, neither a true warp nor a true weft. Rather, the technique found here is much like Italian *buratto* work of the seventeenth century and onwards.

Upon the delicate gauze thus formed is embroidered an equally delicate design in lustrous vicuña wool. It is made up of a series of diamonds each of which is formed by a number of tiny embroidered spirals, the colors being: crimson, brown, and green. At the left hand end of the fabric there is a variation in the pattern, but it is so much worn that one cannot well describe it.

This specimen is almost certainly of the Late Chimú or Late Nazca period, between A.D. 900 and 1400.

The Museum owns no examples of:

Network, or Reticulated Meshes, Class VII.

Of necessity the final class of the present technological classification is somewhat vague in its limits and uncertain in its sub-divisions; it is, indeed, something in the nature of a makeshift, of a catch-all into which are dropped specimens that do not seem to fit in exactly elsewhere. Nevertheless, it is true that various important specimens are to be found in:

Miscellaneous, Rare, and Combined Techniques, Class VIII.

In this class as a whole it is the technological side of the tissues, rather than either the chronological or the aesthetic side, which must of necessity receive the greatest amount of attention. The first sub-division to interest us is:

Needle-coiling and Braided Fabrics, Class VIII, A.

SPECIMEN NO. 53. FIGURE 75a and b. (Acquisition No. 16.37).

Fragment of a needle-coiling border.

Size, .33 long.

Wool over a cotton core.

Said to come from Nazca.

In this specimen we have a tape-like brown cotton core which has around it a finely made covering of tubular needle-coiled fabric of wool whose colors are: brownish red, pink, dark green, medium green, medium blue, dark yellow, dark brown, and black.

The upper part of this border bears carefully executed bird designs; the lower part consists of a series of small tabs in the form of bell-shaped flowers having intricate patterns worked upon them in various colors.

It is by no means clear just how borders of this sort were made. They are fairly common, and are always—so far as we know—representative of the Early Nazca period. The most famous example of this kind of work is the celebrated Paracas Textile, which belongs to Don Rafael Larco Herrera, of the Hacienda Chiclin, Chicama Valley. That amazing fabric has been well described by Mme. Levillier with the aid of admirable water-color drawings by Señorita Elena Izcue, and an interesting study of the technique has been made by Mr. Fritz Iklé.⁵⁰

This border, like others of its kind, represents the Early Nazca period, between about A.D. 100 and about 600.

⁵⁰ Levillier, 1928. See Iklé, 1930, and also, Means, 1931, pp. 106-107 and Figures 53 and 54 thereof.

SPECIMEN No. 54. FIGURE 76. (Acquisition No. 16.38).

An ornament for a shawl.

Size, .29 x .055.

Cotton and wool.

The foundation of this fabric is a black cotton web, whose threads appear to be braided in tubular fashion rather than woven. Part of the tissue thus made is surrounded by a tubular needle-coiled band bearing a design of a warrior with helmet, weapons, and a long tunic, the colors being: golden brown (ground), light blue, dark blue, dark green, crimson, pink, dark yellow, and white. On the warrior's chest and along the lower margin of his tunic are tiny motives which seem to be trophy heads.

At the lower end of this knitted ornament is a fringe of four smaller braided strips one of which is in better condition than the others and has, at its nether extremity, a small tubular outer covering like the larger one already described.

This specimen is specially interesting as displaying a combination of Early Nazca technique with something very like Tiahuanaco II subject-matter. Therefore it may be dated as of the time when those two cultures were reacting upon one another in the manner described on pages 18-19, or, in other words, about A.D. 600.

Tassels, Ropes, and Fringes, Class VIII, B.

In the course of studying various kinds of fabrics we have seen, incidentally, that there were three principal types of fringes, namely: the cord fringe, made up of twisted or braided cords attached to the main fabric or else composed of threads proceeding therefrom; the loop fringe; and the cut loop fringe. Properly speaking the subject of early Peruvian fringes requires a monograph to itself; but enough has been said of fringes in the foregoing descriptions to give at any rate a general idea of the subject.

Ropes, cords, etc., do not require any specific description here for the reason that they were made in the same manner in ancient Peru that was used everywhere else, the materials for the purpose being, in Peru, rather various and including substances as diverse as cotton and aloë-fibre, wool, and human hair. The sizes of ropes and cords in Peru range all the way from slender cords for tying bundles or parts of the apparel to cables as thick as a man's torso used for holding up suspension bridges over deep ravines.

The Museum has, however, one specimen that requires a brief description here:

SPECIMEN No. 55. FIGURE 77. (Acquisition No. 78.188).

An ornamental rope.

Length, .32.

All wool.

A central cord is here surrounded by a succession of short loop fringes of wool, each fringe being laid over the one below in shingle fashion, and the whole series combining to make an attractive ornament. The colors are: grayish blue, medium brown, pale yellow, crimson, and orange. Each color area is made up by a pair of adjacent fringes.

It is impossible to date this specimen further than to say that it is certainly pre-Spanish.

Rare or Indeterminate Weaves, Class VIII, C.

SPECIMEN No. 56. FIGURE 78. (Acquisition No. 09.128).

A fragment of pile-knot cloth, like velvet.

Size, .75 x .055.

Wool and cotton.

Said to come from Ancón.

According to Mr. Crawford,⁵¹ the difference between pile-knot fabrics in Peru and pile-knot fabrics in the Orient and elsewhere is that the latter have a base material composed of warp and weft, whereas the Peruvian pile-knot stuffs "contain only two elements, bunches of fibre, and a single thread which is looped upon itself in such a manner as to form a very open knitted web."

In these words Mr. Crawford has succinctly described the technique of the present specimen. The basic network thread is here made of cotton. The "bunches of fibre" which here form the pile-knot element are of wool, the colors being: yellow (ground), medium brown, and brownish red.

The design is a very simple geometric one which appears to represent the art of the Late Chimú period, between about A.D. 900 and about 1400.

SPECIMEN No. 57. FIGURES 79 and 80. (Acquisition No. 78.64).

An ornamental tunic with short sleeves.

Size, .92 x .68.

Cotton and wool.

Beyond doubt this is one of the most uncommon fabrics in the Museum's collection. The greater part of it is a cotton fabric which partakes of the nature of drawn work. There is, however, a carefully planned series of small areas which are left undrawn and which are of ordinary basket weave. Elsewhere than in these areas the warp threads and the weft threads are bunched together to make sets of threads which cross, vertically and horizontally, respectively, from one undrawn area to each one of its neighbors. Moreover, the fabric thus created has been subjected to the process of tie-dyeing in such a way that the only parts of the fabric which did not receive the brown dye are the small white (undyed) circles upon the undrawn areas. Thus, both from the point of view of weaving and from that of coloring, this tissue is highly unusual.

The sleeves are of tapestry embellished by loop fringes made of unwoven weft pro-

⁵¹ Crawford, 1916, pp. 157-159.

ceeding from the tapestry proper. Brocade in wave pattern in blue and brown are sewn upon the sleeves. The colors in the tapestry are: yellow, brown, and blue. The lower margin of the tunic is embellished by three strips of brocade and two of tapestry all sewn to the main fabric and there was originally a fringe.

To judge by the character of the designs on the sleeves and on the border, this remarkable fabric represents the Late Chimu period, between about A.D. 900 and about 1400.

Sundry Combinations of Techniques, Class VIII, D.

SPECIMEN NO. 58. FIGURE 81. (Acquisitions Nos. 30.244-30.246).

Decorative bands for a tunic.
Length of central piece, .32.
Cotton and wool.

Because of its technical characteristics this specimen is somewhat difficult to describe clearly and briefly. The central band includes the sleeve opening of a one-time tunic of brown basket weave cotton. It is edged with a beautifully wrought herringbone stitch in crimson, light blue, pale yellow, and black wool. The decoration below the opening has for its base fabric the basket weave cotton cloth. The design upon it is a geometric figure wrought in the colors already mentioned, the ground color being crimson.

In the two other bands we find a very intricate and rare embroidery stitch so contrived as to appear the same on both sides of the base fabric. In these pieces the ground color is a rich pink shade upon which geometric figures like those already mentioned are wrought in black, greenish blue, and yellow.

This specimen is of the Late Chimu period, between about A.D. 900 and about 1400.

SPECIMEN NO. 59. FIGURES 82 and 83. (Acquisition No. 24.305).

Part of a garment.
Size, .65 across bottom; part shown, in fig. 82, .34 x .23; in fig. 83, .09 x .06.
Cotton and wool.
Said to have come from near Lima.

A cloth such as this extremely rare—perhaps unique—specimen can best be described as two-storeyed. At first glance it appears to have a velvety upper surface with a subdued lustrous sheen, but the detail photograph herewith shows clearly the true nature of the fabric.

The base fabric is basket weave white cotton cloth with paired warp threads. To this is added the upper "storey", consisting of tapestry which has for its warps the same paired warp threads as does the lower "storey". The tapestry weft is of wool in various shades of brown, yellow, dark blue, and greenish blue. The areas of tapestry are so planned that they form a rich and pleasing pattern of highly conventionalized fish head motives and of interlocking frets, which pattern is thrown into relief against the white cotton base fabric.

This design represents the art of the Late Chimu period, between about A.D. 900 and about 1400.

As I have said, in the earlier part of the present monograph, the Spanish conquest of Peru had a much less disruptive influence on native Andean civilization than is commonly supposed. However bloodthirsty, rapacious, and destructive the Spanish soldiery may have been—and these qualities are greatly overemphasized in school-books and even in pseudo-serious works of the last century—the greater number of Spanish administrators, churchmen, and army-officers were men of high intellectual attainments and, consequently, were fully alive to the admirable qualities displayed to such a marked degree by the subjects of the Inca throughout the broad and varied realm of Ttahuantinsuyu.⁵² As a result of the intellectual sympathy awakened in the best type of Spaniards by the wonders that they beheld in the Andean area we have not only that extraordinary series of descriptive and historical narratives which is usually designated collectively by the term *The Chronicles of Peru*, but also we have many material objects of an artistic, architectural, or utilitarian nature in which the preponderance of native ideas, technique, and taste is very conspicuous, being combined with other ideas, technique, and taste derived from Spain and, to a less degree, from other parts of Europe.

The combination here referred to is particularly noticeable in the textiles of the Colonial period. A few choice examples of these will now be examined and described exactly as the foregoing specimens of pre-Spanish fabrics have been.

SPECIMEN No. 60. FIGURE 84. (Acquisition No. 97.448).

A poncho.

Size, 1.185 x .935.

Cotton warp, woollen weft.

The technique of this fabric is tapestry of exactly the same sort found in pre-Spanish tapestries. The two broad stripes strewn with a variety of animal and conventional figures have a rich dark purple ground color. The numerous much narrower stripes embellished with geometrical patterns have yellow, red, and blue grounds. The figures on the broad stripes are wrought in light blue, red, yellow, and white (cotton); the patterns on the narrow stripes are colored dark blue, light blue, red, yellow, and white (cotton). Taken as a whole, the fabric is amazingly rich in bold and striking color.

The figures upon the broad stripes are largely of pre-Incaic, *i.e.*, Late Chimu, origin, notably the fish, the pumas, the viscachas, and the birds. Others, notably most of the floral motives and the curious squares with lateral trimming that resemble

⁵² Literally, The Four United Provinces. This term was the native name for the Inca Empire as it was from the middle of the fifteenth century reign of the great Emperor, Pachacutec, onwards. For the *Chronicles of Peru* see Means, 1928.

fringed mantles, have a decided Spanish air. On the other hand, the narrow stripes bear geometric motives which, for the most part, seem to be derived directly from Incaic art. Nearly all of the patterns are limned with white (cotton) wherever the clarity of the design demands it.

On the whole it may be said that this specimen is, from the aesthetic standpoint, a blending of native art with Spanish. As for the purpose of the fabric, it is clear enough that it was intended for a poncho, that is, a rectangle of cloth with a slit for the wearer's head in the middle. In this case the cloth is neatly edged with stitching along the long sides, and the slit in the centre has been somewhat clumsily sewn up, perhaps at a later date. Dr. Montell has made it clear that, in Peru, the poncho, as differentiated from the pre-Spanish tunic was of post-Columbian origin.⁵³ This fact, taken together with the general aspect of the fabric, leads me to date it as of the first half of the seventeenth century.

SPECIMEN No. 61. FIGURE 85. (Acquisition No. 10.157).

A tapestry panel.

Size, 1.90 x 1.69.

Wool on cotton.

The concentric ground colors, of greatly varying widths, and counting from the outside inwards, are: purple, crimson, white, dark blue, white, deep pink, white, purple, and crimson. On them are wrought with exquisite delicacy conventionalized floral, bird, and animal motives, the colors used being: dark blue, medium blue, violet, pink, deep reddish brown, greenish yellow, and olive. In general terms it may be said that the floral motives are Spanish or perhaps Hispano-Moresque in inspiration while the bird and animal motives appear to be at least partly derived from native art, but manifesting subtle influence from Spanish art. In the middle of the central panel is the double eagle of the Hapsburgs. This specimen may be dated, therefore, as of the Hapsburg period, of the late sixteenth century or of the seventeenth century.

SPECIMEN No. 62. FIGURE 86. (Acquisition No. 07.846).

A tapestry panel.

Size, 1.88 x 1.65.

Wool and cotton.

In this specimen the concentric ground colors, from the outside inwards, are: purple, white, crimson, white, purple, crimson, and dark blue. On them are wrought floral, bird, and animal motives whose colors are greenish yellow, brown, light blue, pinkish violet, and hues already mentioned.

Most of the motives here seen are of Spanish origin, with only slight influence from native art. The double eagle of the Hapsburg appears twice, but in this case it bears a heraldic device which seems to be the coat of arms of some family other than the Imperial family. The specimen may be dated as of the seventeenth century.

⁵³ Tunics, of which we have studied several examples, were sewn along the sides and had either neatly executed holes for the arms or else well made sleeves, and their neck-openings were made with considerable care; ponchos, on the other hand, are open at the sides and have a crude sort of neck-slit. See Montell, 1925. In another place, Dr. Montell shows clearly that the poncho makes its first appearance in Peru about 1629, and not much, if any, earlier than that. See Montell, 1929, pp. 238-241.

SPECIMEN No. 63. FIGURE 87. (Acquisition No. 07.845).

A tapestry panel.
Size, .67 x .45.
Wool on cotton.

In this specimen the concentric ground colors, from outside inwards, are: crimson, dark blue, two shades of yellow and greenish yellow, dark blue, crimson, and, in the centre, an oval medallion of black and white with a cruciform device of fleur-de-lys upon it.

On the outermost ground color is a design of the arbor motive embellished with various floral designs. Elsewhere the pattern consists of an orderly arrangement of floral, animal, and bird motives. Besides the various colors already mentioned there are: light blue, pink, pinkish violet, purple, and silvery white. All the many figures in the fabric are limned, wholly or in part, with various hues nicely calculated to aid in the general chromatic harmony of this richly colorful fabric.

The presence of the fleur-de-lys indicates that this panel was made during the Bourbon period, *i.e.*, in the eighteenth century.

SPECIMEN No. 64. FIGURE 88. (Acquisition No. 97.283).

A tapestry panel.
Size, 2.17 x 1.89.
Wool on cotton.

The concentric ground colors, of varying widths, from the outside inwards, are: purple, crimson, dark blue, crimson, purple, and crimson. Elaborate and densely packed designs are borne by these colors. The ornamental figures include flowers, animals, birds, and human beings, all of them more or less conventionalized, and all of them carefully limned in various hues. The colors throughout are very rich, including: three shades of blue, two of yellowish green, medium brown, olive, and white.

There is neither a double eagle nor a fleur-de-lys in the pattern to indicate its age; nor is there any perceptible influence—save in the matter of limning—from native Peruvian art. It is, therefore, impossible to say whether this specimen belongs to the Hapsburg or to the Bourbon period of colonial Peru.

SPECIMEN No. 65. FIGURE 89. (Acquisition No. 04.123).

A tapestry panel.
Size, 2.47 x 2.02.
Wool on cotton.

The concentric ground colors, from outside inwards, are: crimson, yellow, dark blue, yellow, crimson, yellow, dark blue, yellow, and, in the centre, blue with a lattice pattern of crimson in whose interstices a conventional figure, reminiscent in some of its parts of certain Early Nazca and Tiahuanaco II motives, is repeated with chromatic variations.

Upon the various other ground colors we find spirited and lifelike birds, possibly parrots or toucans, and rodent-like animals, possibly viscachas. These figures are faintly reminiscent of native art, but they seem to derive chiefly from Spanish taste

in design. The rich floral and foliage motives which form a great part of the pattern seem to be derived wholly from Spanish art. The colors in these various designs and motives are: crimson, pink, dark blue, medium green, white, and various mixtures.

In the absence of the Hapsburg double eagle it seems likely that this panel is of the eighteenth century; but as the fleur-de-lys is also absent one cannot be sure.

SPECIMEN No. 66. FIGURE 90. (Acquisition No. 04.1619).

A tapestry panel.

Size, 2.42 x 2.10.

All wool.

Beginning at the outside the concentric ground colors, wide and narrow, are: pink, dark blue, yellow, dark blue, yellow, and, in the centre, dark blue. In addition to the more usual conventionalized floral, animal, and bird motives, this tapestry is embellished with urn and basket motives very unusual in Peruvian colonial tapestries, and with still more uncommon pictorial panels.

The urns and baskets are obviously derived, together with their flowery contents, from the French taste of the eighteenth century. The pictorial panels each display two human beings, in number eight, all told. Of these four appear to be native Peruvians who wear costumes of the kind used during the middle and latest decades of the colonial period; the other four appear to be Spaniards, armed with swords, and extremely menacing in aspect. Just what message, if any, these panels are intended to convey cannot be guessed.

In all parts of this fabric the coloring is exceptionally rich and subtle, even for Peru. The colors are: three shades of blue, three shades of pink, two shades of yellow, two shades of olive, and white.

The costumes worn by the Spaniards in the pictorial panels and the general character of the design justify us in dating this beautiful, if ornate, tapestry as of the eighteenth century.

SPECIMEN No. 67. FIGURE 91. (Acquisition No. 21.2577).

A rug.

Size, 1.09 x .82.

Cotton and wool.

The base fabric of this specimen is a rather coarse cream-colored cloth with woollen warp and cotton weft upon which a pattern has been formed by a process which involves the twisting of short pieces of woollen yarn around the warp threads of the base fabric, thus making a series of pile-knots similar to those in Turkish rugs.

The design is in three shades of pink, blue, medium green, two shades of yellow, and dark brown, and contains human, animal, floral, and conventional motives arranged with symmetry within a triple border. It is curious to note that, in general, this Peruvian fabric of rare technique possesses the same naïve charm as do many New England samplers of a century or more ago.

It is difficult to say whether this specimen represents the eighteenth or the nineteenth century. Rugs of this type are met with frequently in the houses of noble Peruvian families, and it is commonly asserted that they are only a century or a century and a half old.

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ABBREVIATIONS USED TO DESIGNATE PERIODICALS

AA	American Anthropologist.
AMJ	American Museum Journal, New York.
AMNHGL	American Museum of Natural History, Guide Leaflet.
APAMNH	Anthropological Papers of the American Museum of Natural History.
ARBAE	Annual Report of the Bureau of American Ethnology, Washington, D.C.
ArchAnth	Archiv für Anthropologie, Brunswick, Germany.
BAE	Bureau of American Ethnology, Washington.
BA	Baessler-Archiv, Leipzig and Berlin.
BNBC	Bulletin of the Needle and Bobbin Club, New York.
BSEEHA	Boletín de la Sociedad Ecuatoriana de Estudios Históricos Americanos, Quito.
BSGL	Boletín de la Sociedad Geográfica de Lima.
ICA	International Congress of Americanists.
JAP	Journal de la Société des Américanistes de Paris.
MJP	Museum Journal, Museum of the University of Pennsylvania, Philadelphia.
NH	Natural History, New York.
PMM	Peabody Museum Memoirs, Cambridge, Massachusetts.
PMP	Peabody Museum Papers, Cambridge, Massachusetts.
RH	Revista Histórica, Lima.
SPASCP	Second Pan-American Scientific Congress Proceedings, Washington, D.C.
TCAAS	Transactions of the Connecticut Academy of Arts and Sciences, New Haven, Connecticut.
UCPAAE	University of California Publications in American Archaeology and Ethnology, Berkeley, California.
ZE	Zeitschrift für Ethnologie, Berlin.

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Figure 9. A plant of the *Gossypium Peruvianum*,
Cavanilles.
Chira Valley, Northern Peru.
Photograph by Courtesy of
Dr Don José Antonio de Lavalle y García.



Figure 10. A view in a field of *Gossypium Peruvianum*, Cavanilles.
Chira Valley, Northern Peru.

Photograph by Courtesy of Dr. Don José Antonio de Lavalle y García.



Figure 11. A herd of llamas fording a river, in the Central Highlands of Peru.
Photograph by Courtesy of W. V. Alford, Esq.



Figure 12. A Quechua woman, at Huaracaca,
Central Peruvian Highlands, spinning wool.
Photograph by Courtesy of W. V. Alford, Esq.



Figure 13. A group of women and children, at Huaracaca, Peru, showing modern methods of spinning.

Photograph by Courtesy of W. V. Alford, Esq.



Figure 14. An Indian man, near Cerro de Pasco, Peru, spinning with use of both hands and feet.
Photograph by Courtesy of W. V. Alford, Esq.



Figure 15. An Indian woman, in the Huallaga Valley, eastern part of north-central Peru, showing the use of a loom of ancient type. (Looms of this kind are still in use throughout Peru among the Indian peasants.)

Photograph by Courtesy of W. V. Alford, Esq.

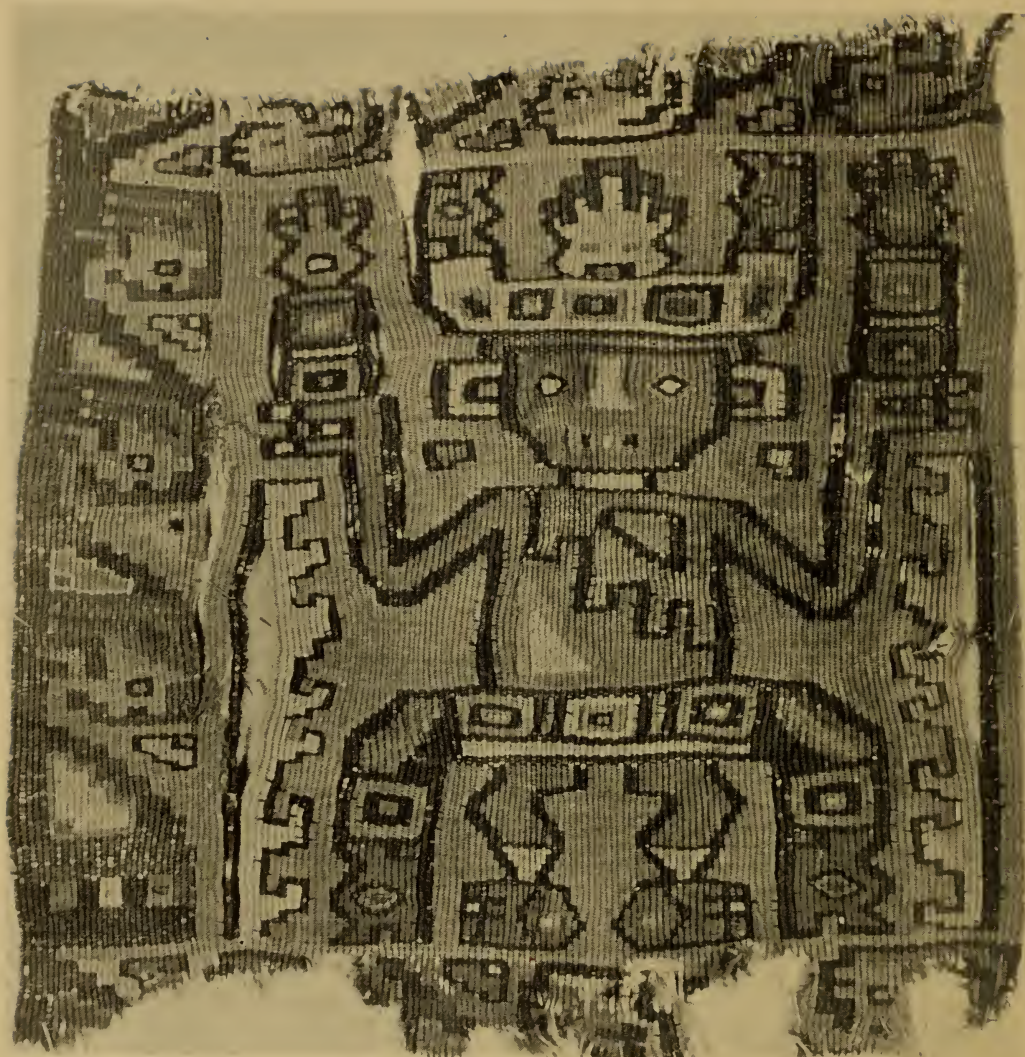
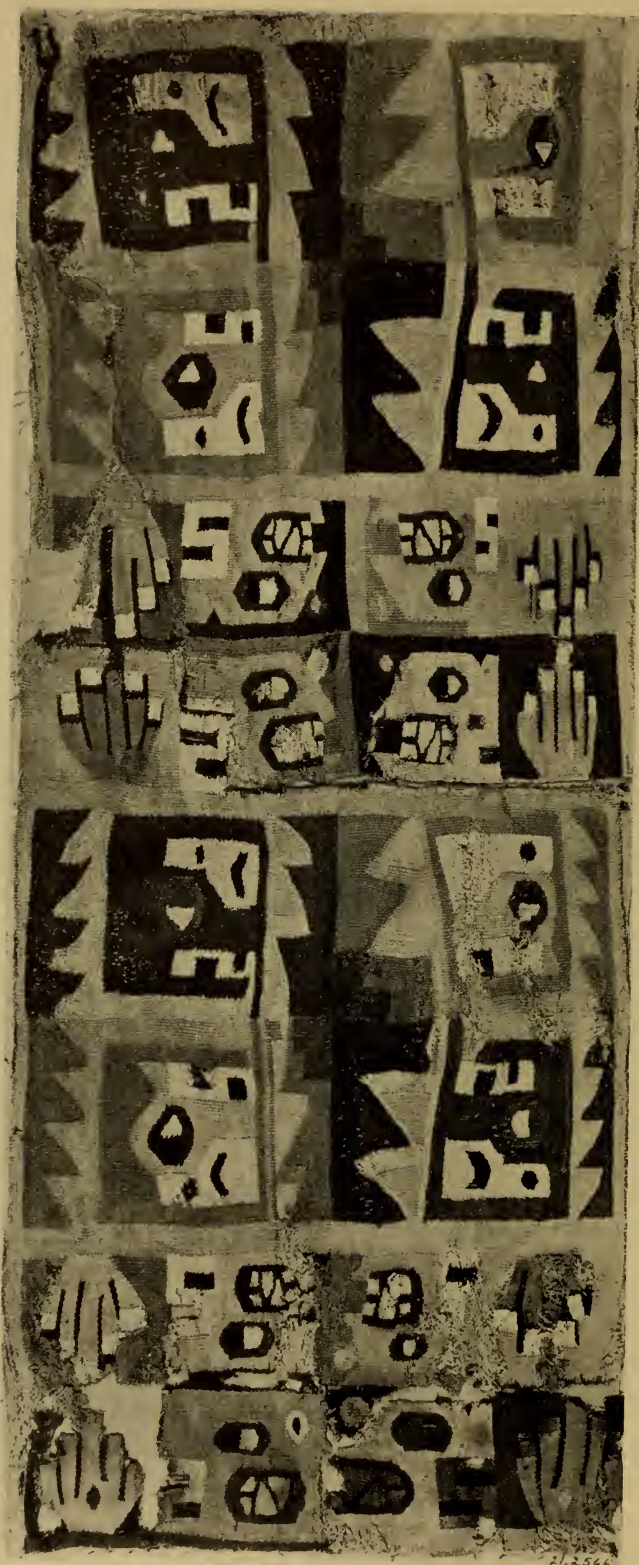


Figure 16. A tapestry pouch.



Figure 17. The monolithic gateway at Tiahuanaco, Bolivia.

*Small
on hands
7-10-9-2000*



21.2566

Figure 18. A fragment of tapestry.

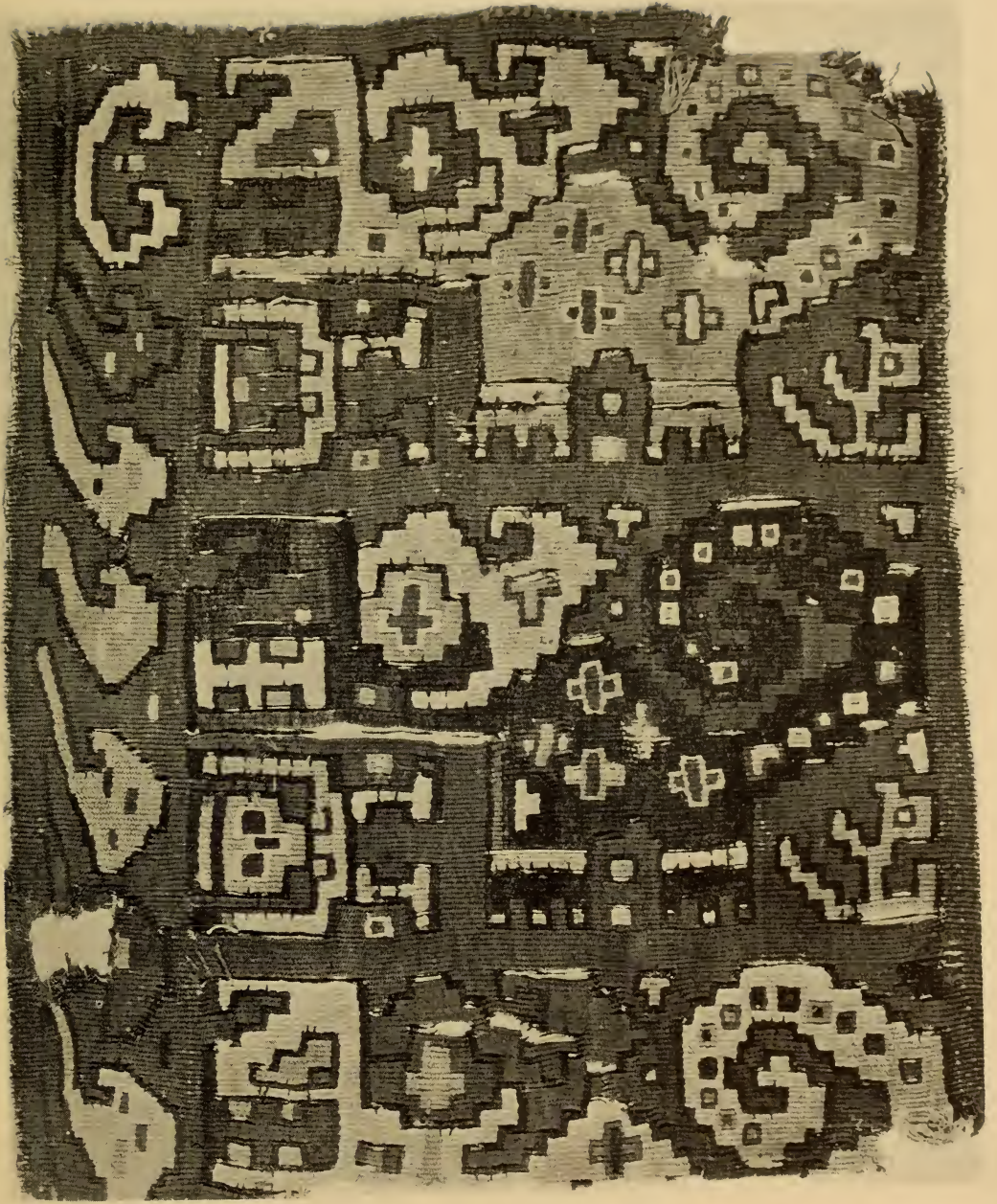


Figure 19. A fragment of tapestry.

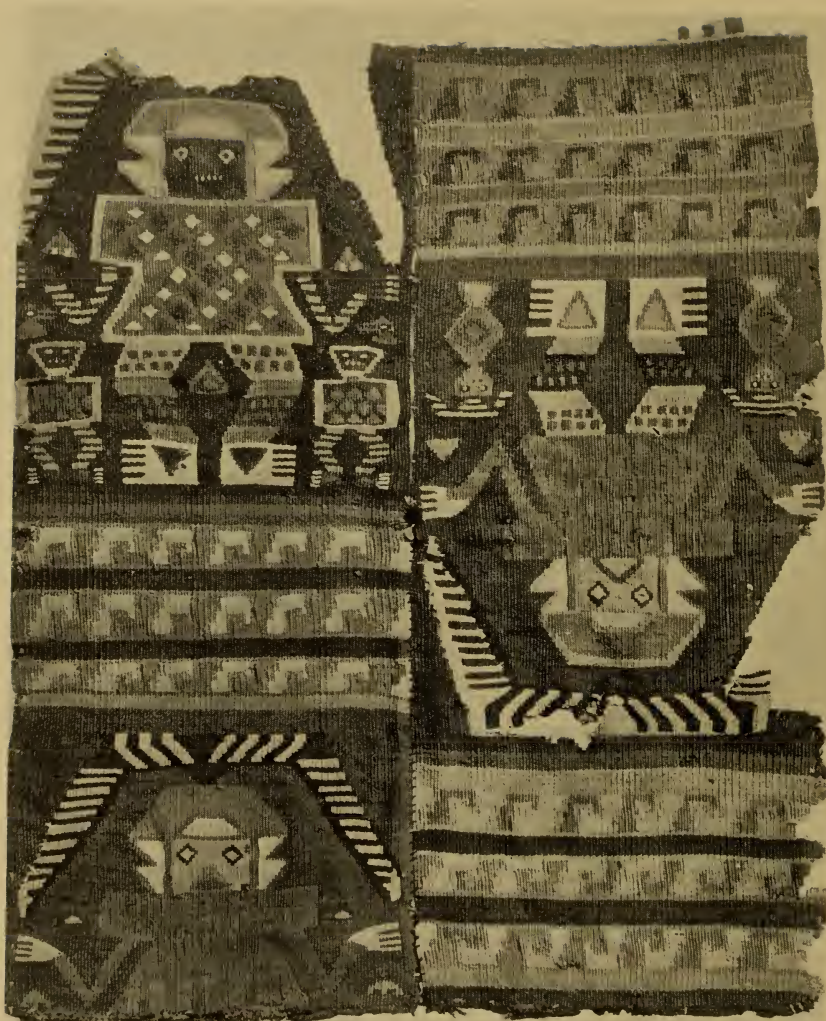


Figure 20. A fragment of a tapestry garment, probably a sleeve.



Figure 21b.
Detail of Figure 21a.



Figure 21a.
A strip of tapestry.

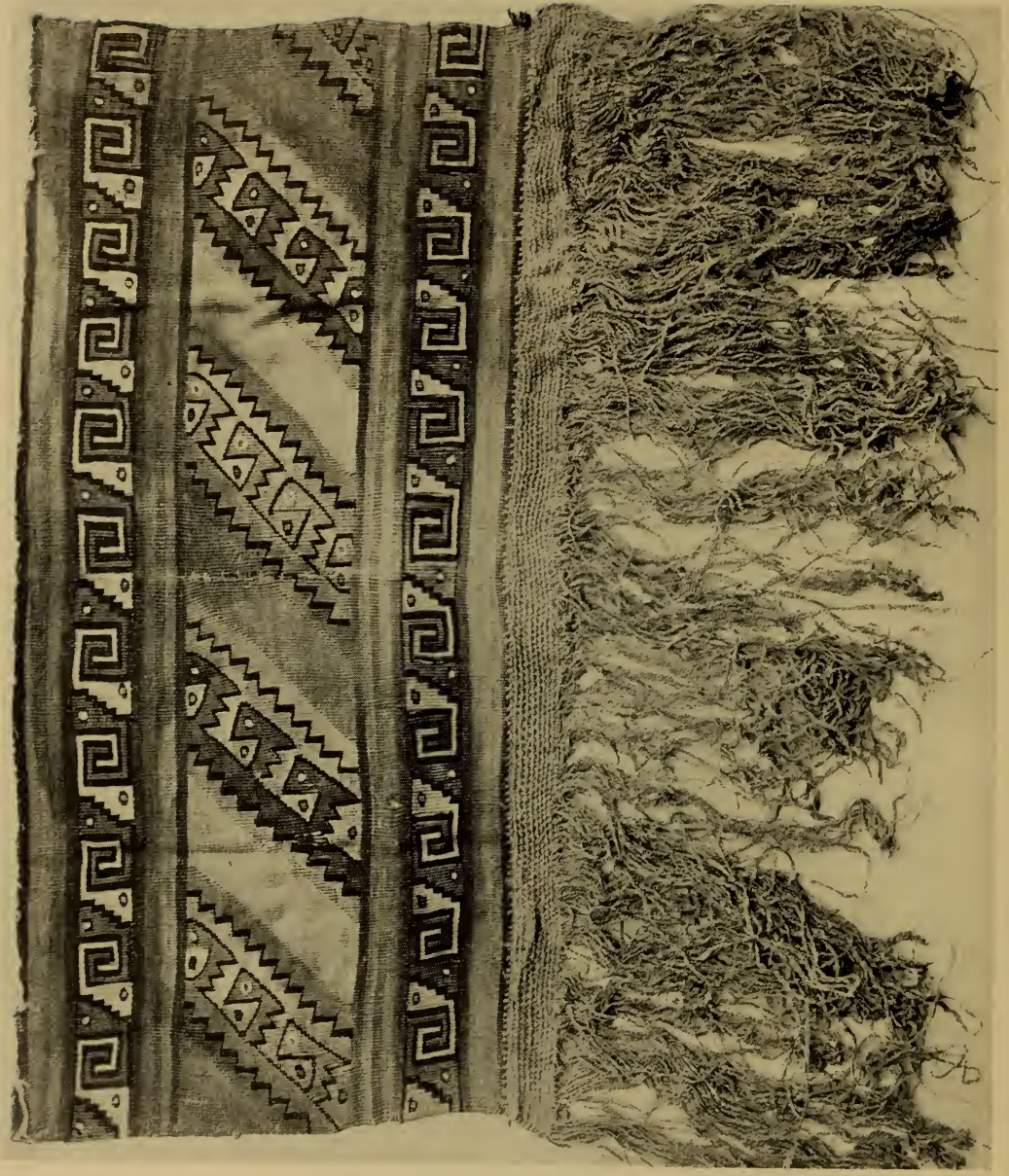


Figure 22. A tapestry border with fringe.

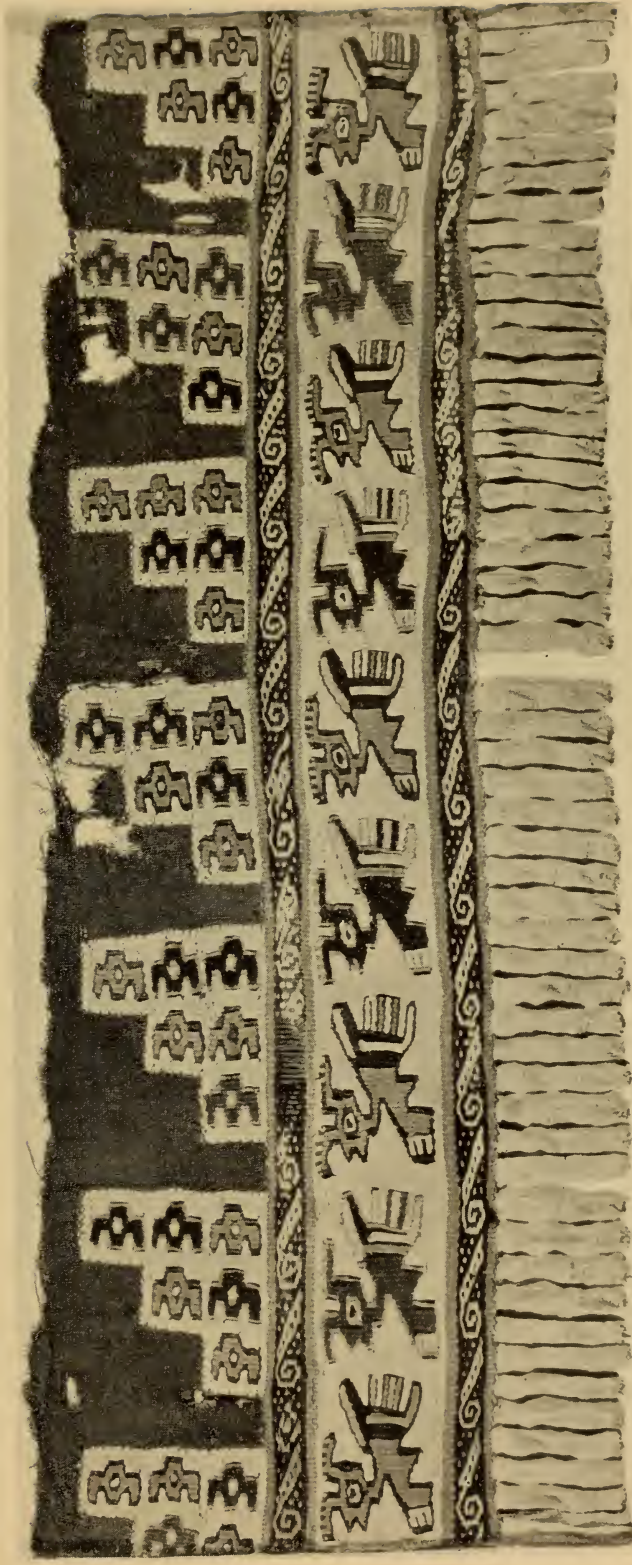


Figure 23. Part of a tapestry border with fringe.



Figure 24. Part of a tapestry bag or pouch.

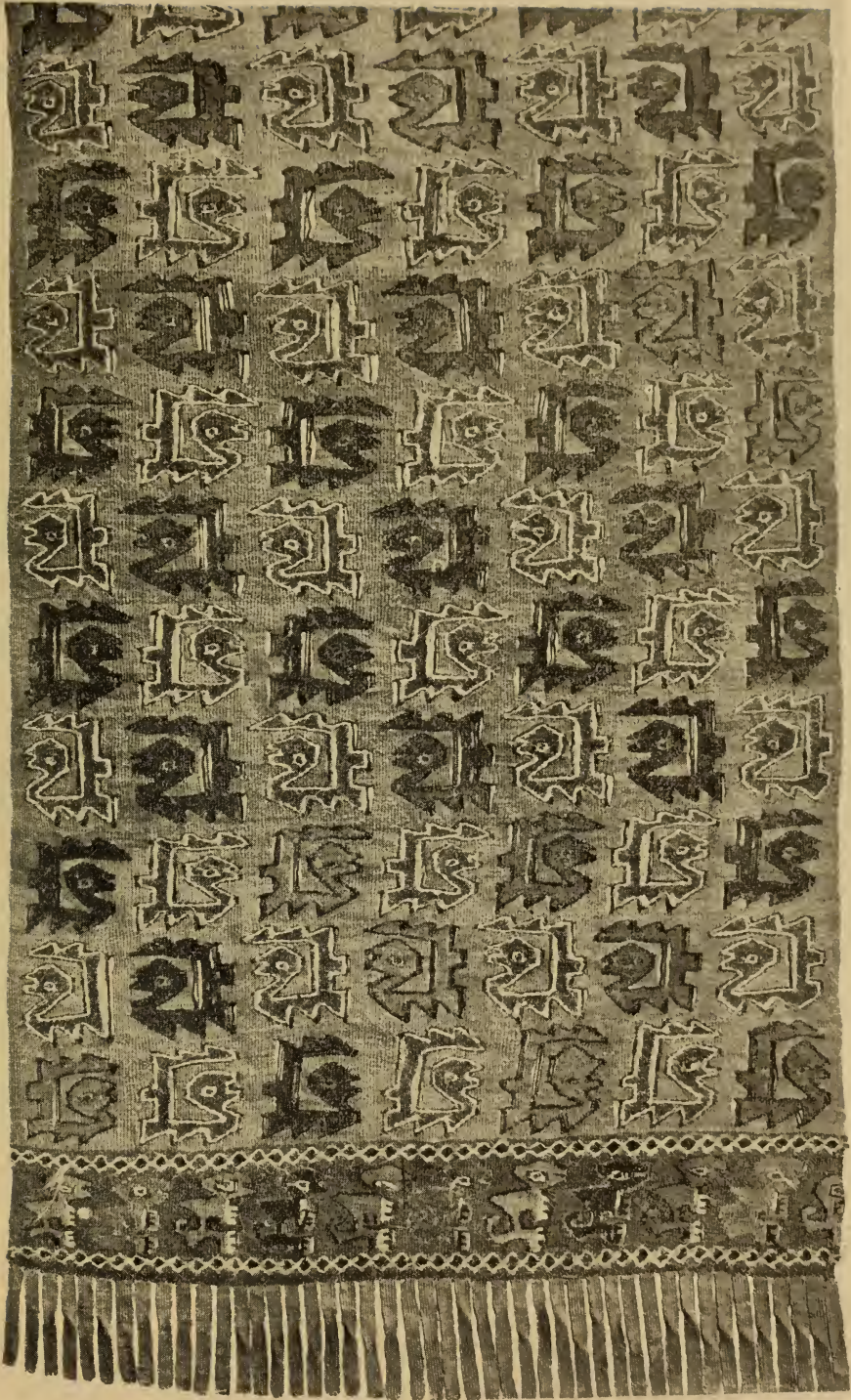


Figure 25. Part of a hanging or of a garment of tapestry.

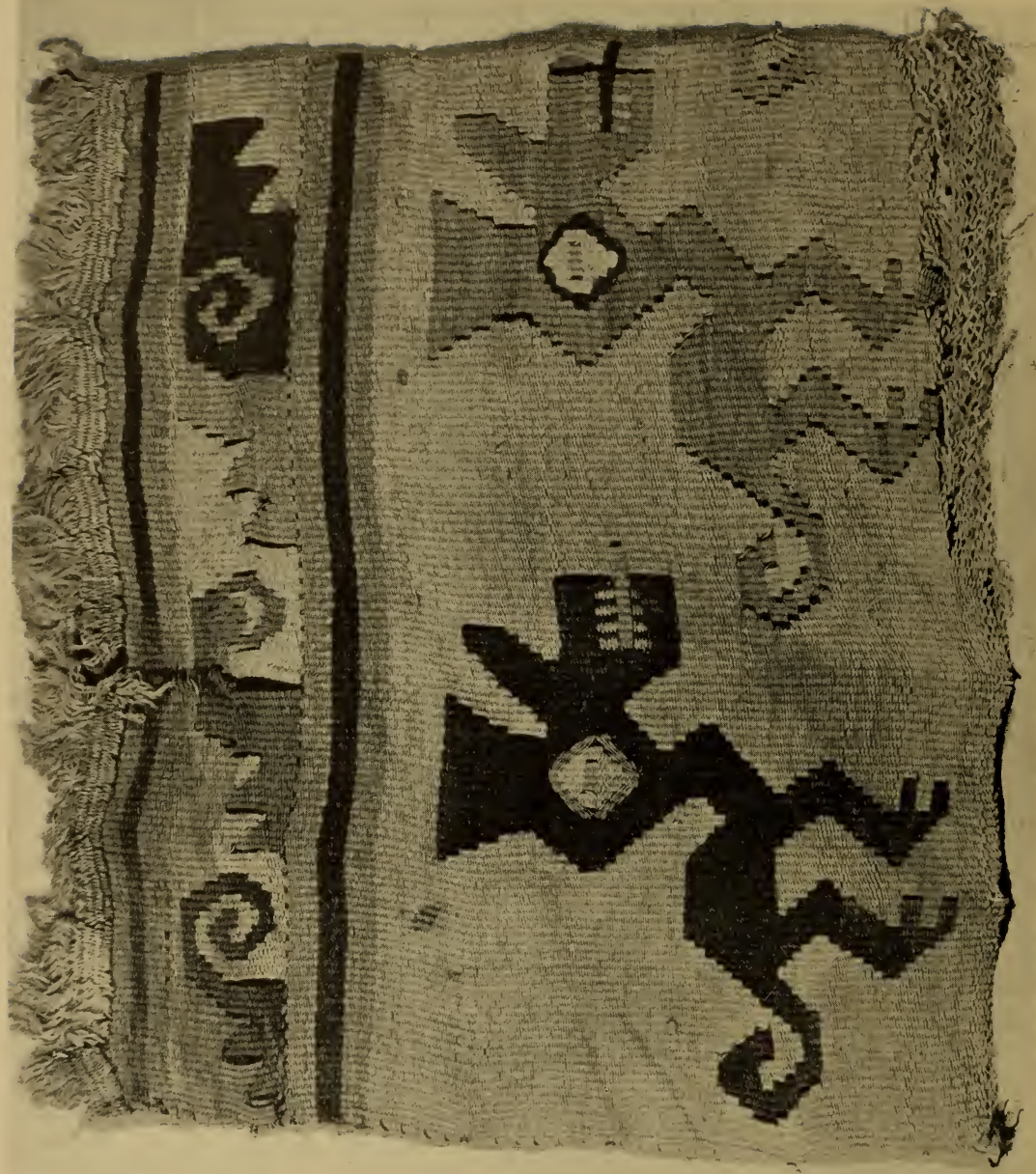


Figure 26. A short sleeve of tapestry.

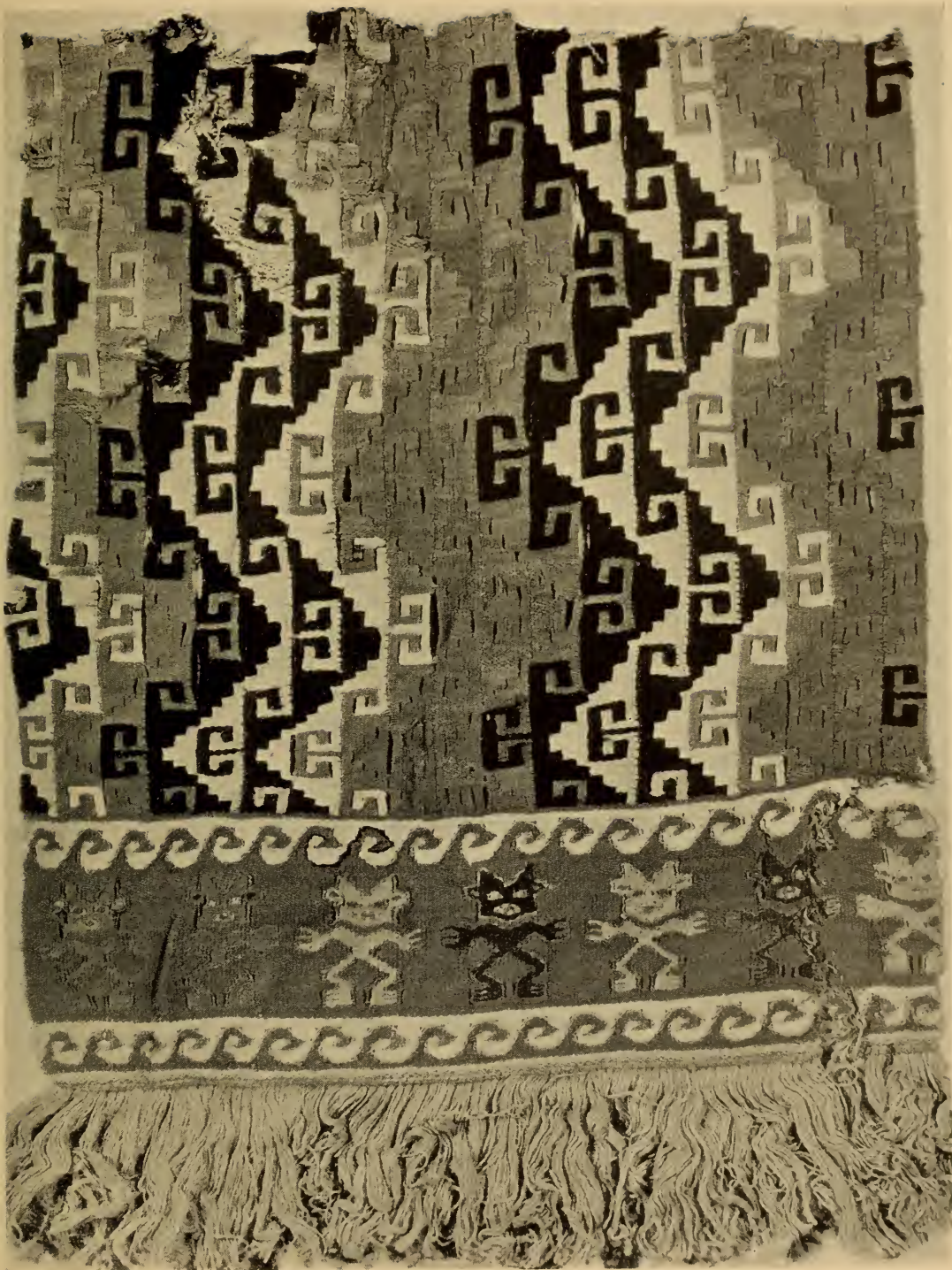


Figure 27. A fragment of a tapestry hanging or of a garment.



Figure 28. Part of a scarf or girdle with a tapestry border.

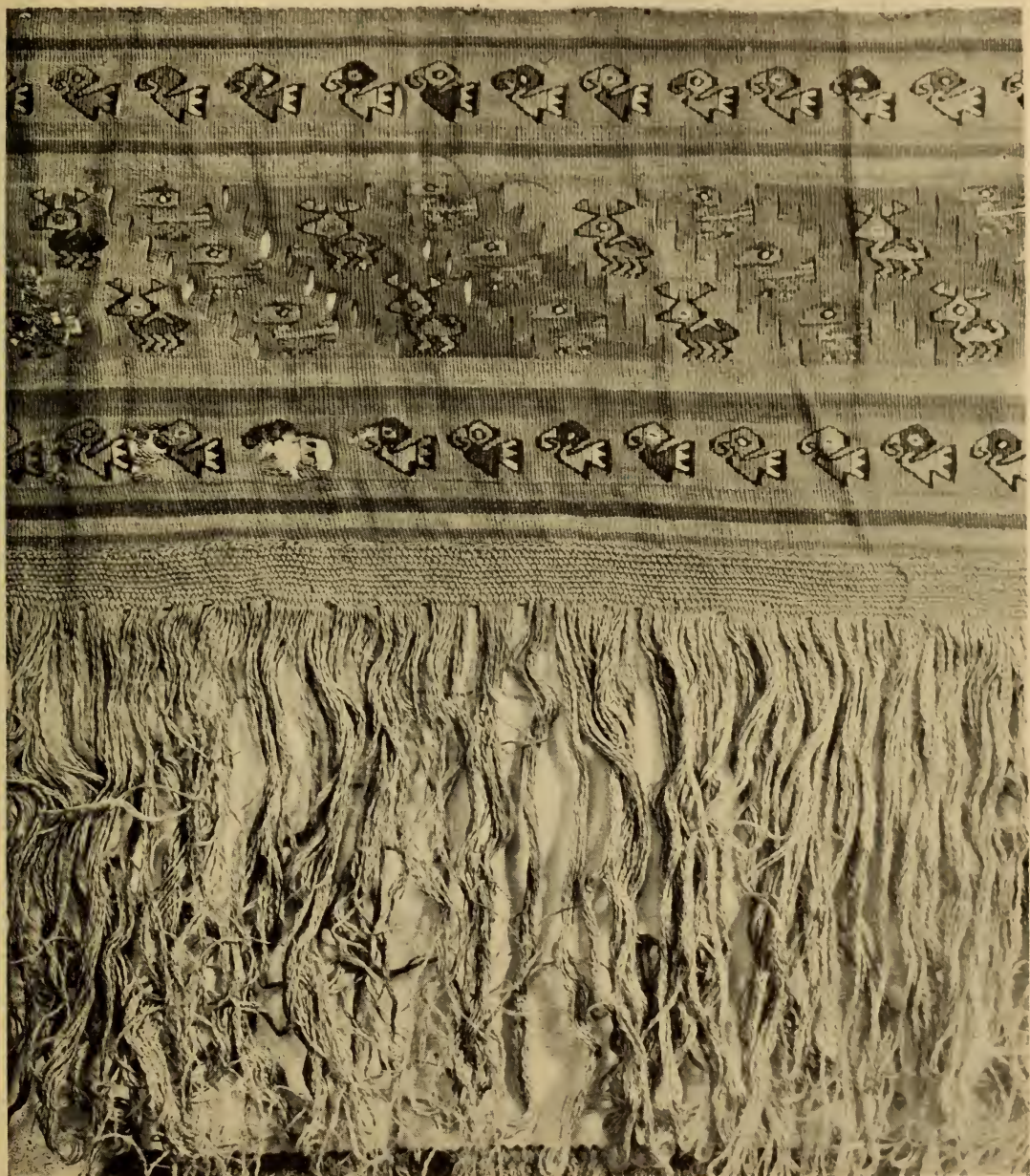


Figure 29. Part of a tapestry border.

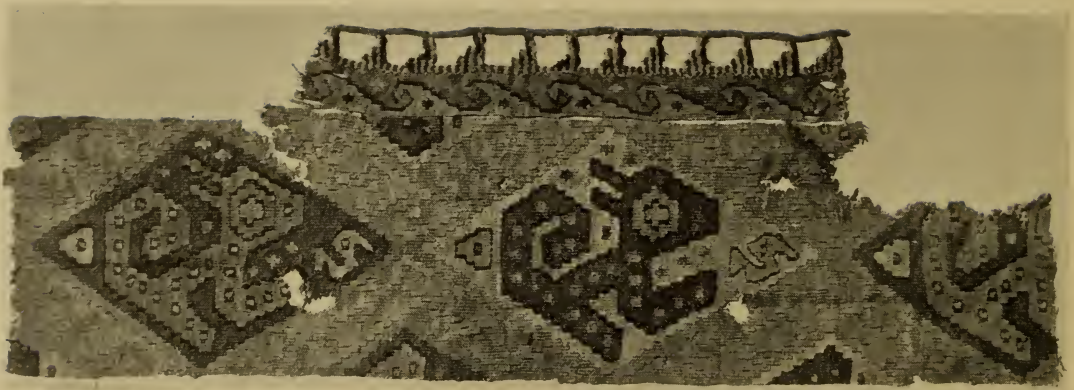


Figure 30. Part of a tapestry border.



Figure 31. A tapestry border for a breech clout.

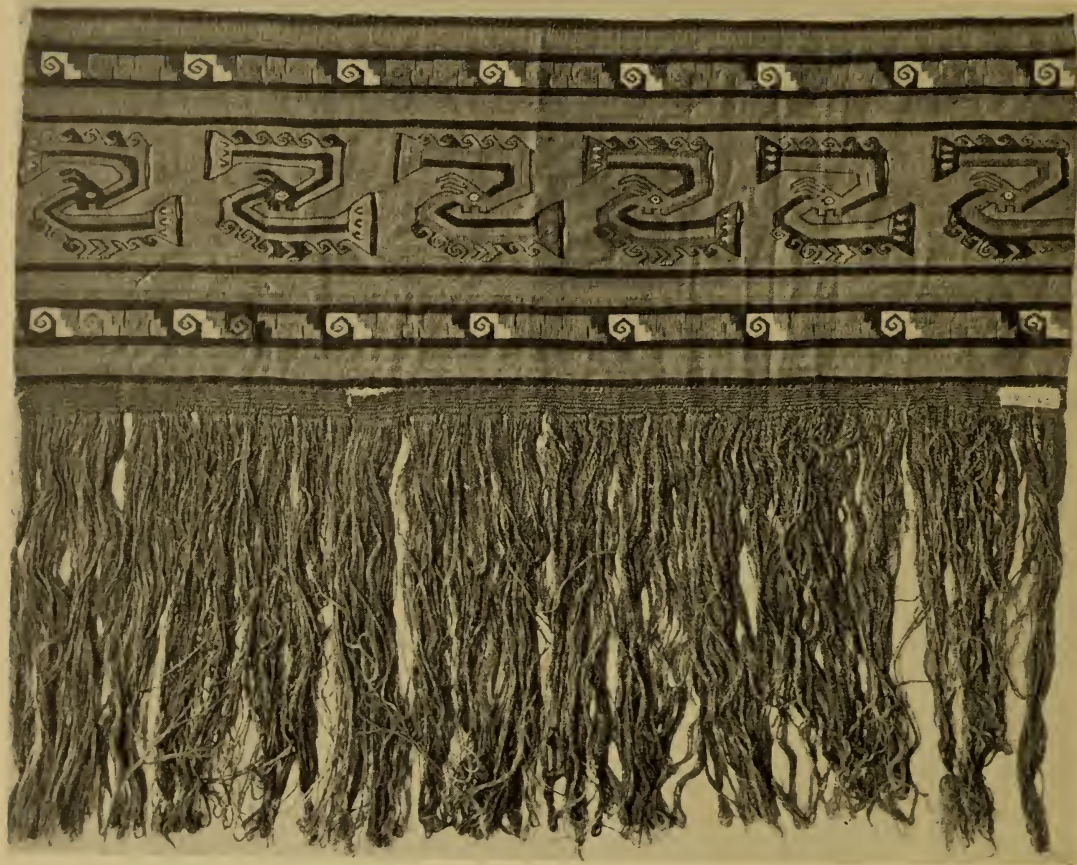


Figure 32. Part of a tapestry border with fringe.



Figure 33. A small fragment
of tapestry



Figure 34. A tapestry bag or pouch.

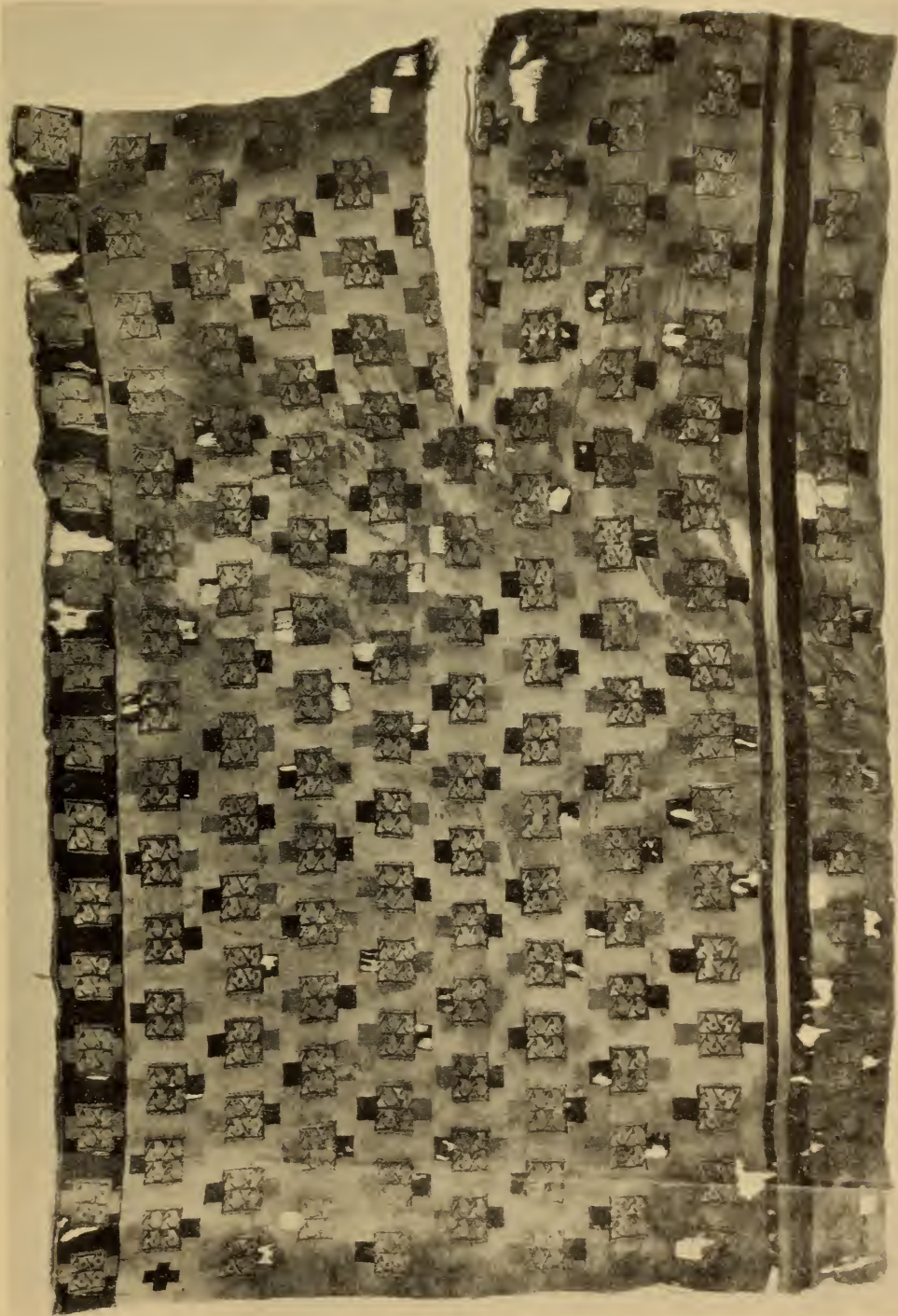


Figure 35. A sleeveless tunic of brocaded tapestry.



Figure 36. A fragment of brocaded tapestry border.



Figure 37. A sleeveless tunic with a border of brocaded tapestry.

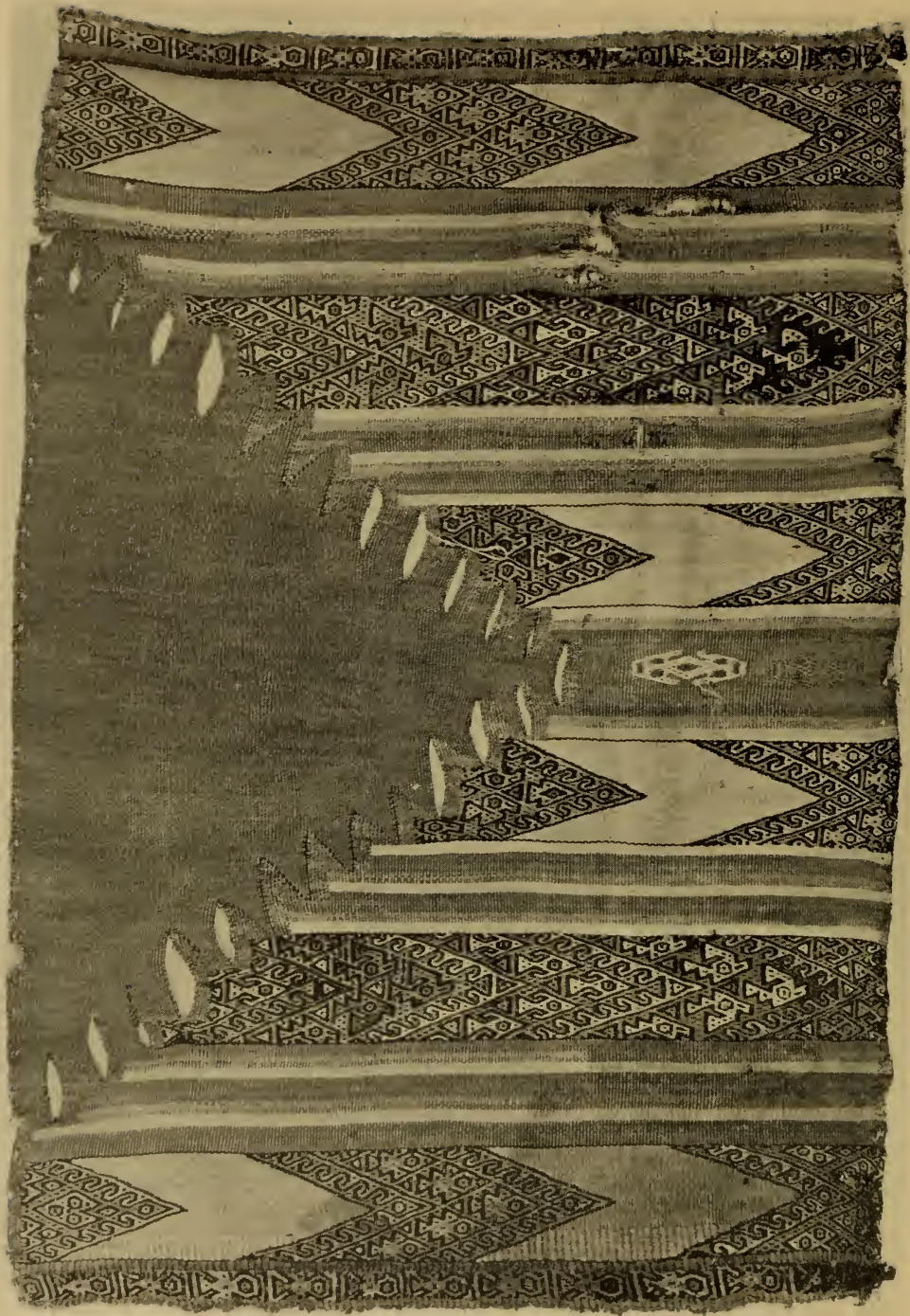


Figure 38. Part of a brocaded tunic for a child.

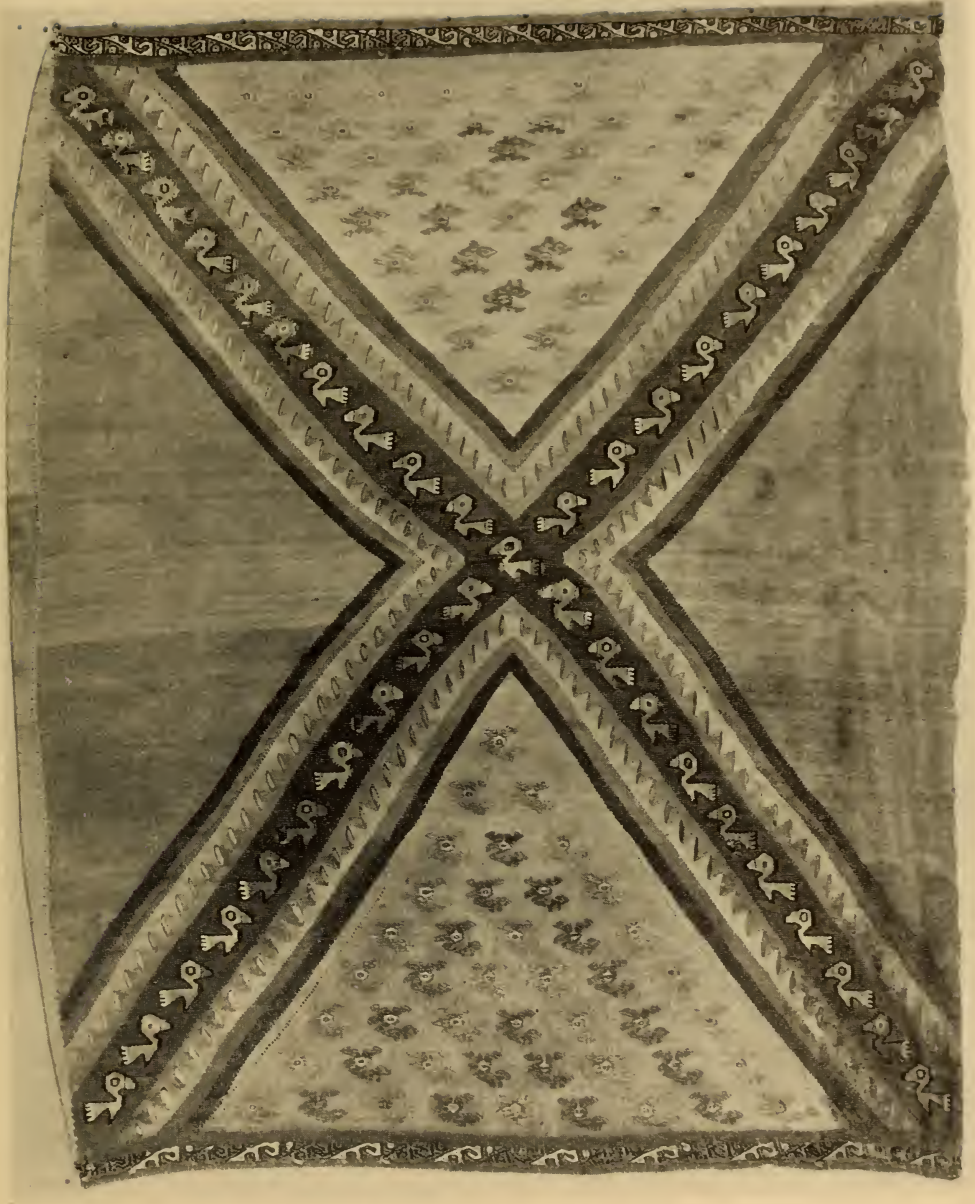


Figure 39. A panel of embroidered tapestry.

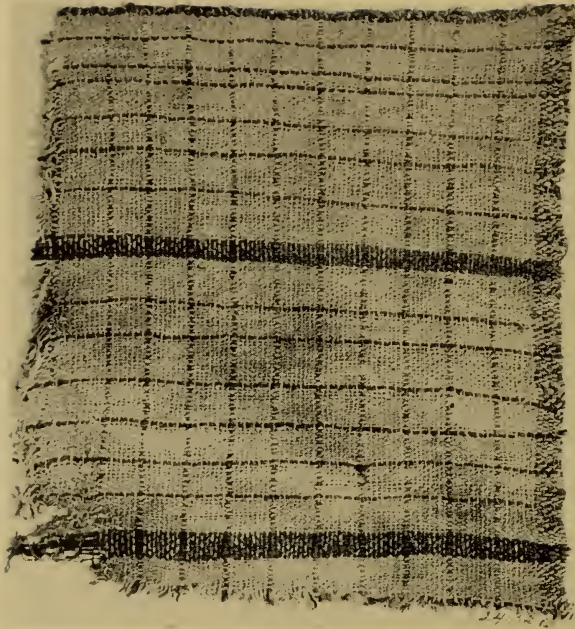


Figure 40. A fragment of cloth striped
in the warp and in the weft.

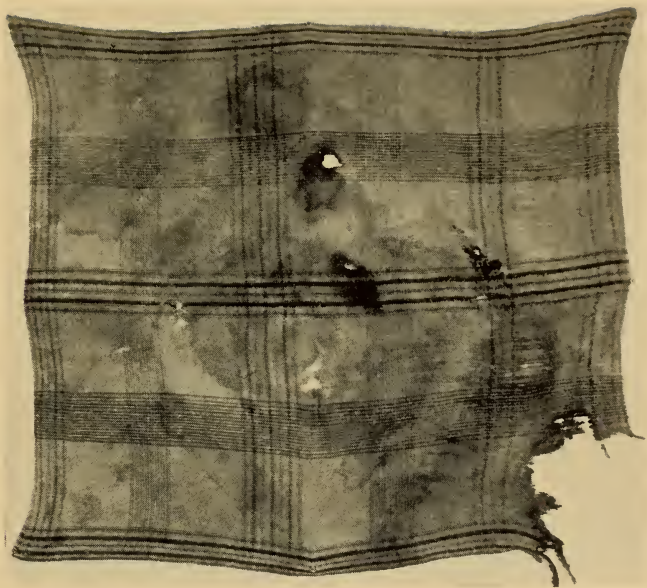


Figure 41. A fragment of gingham-like cloth.

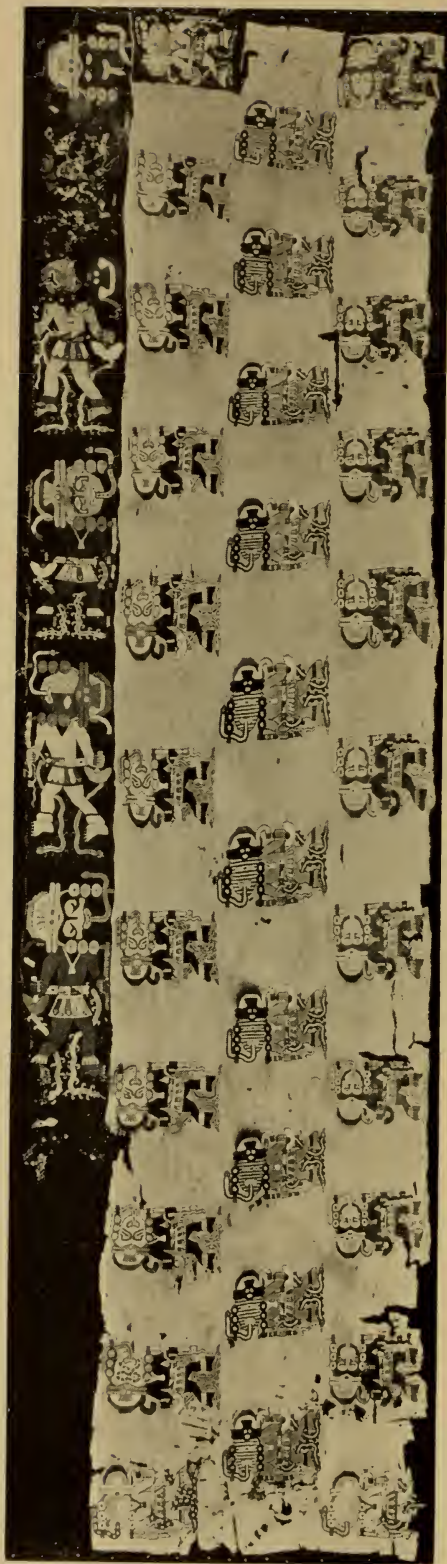


Figure 42. An embroidered shawl.

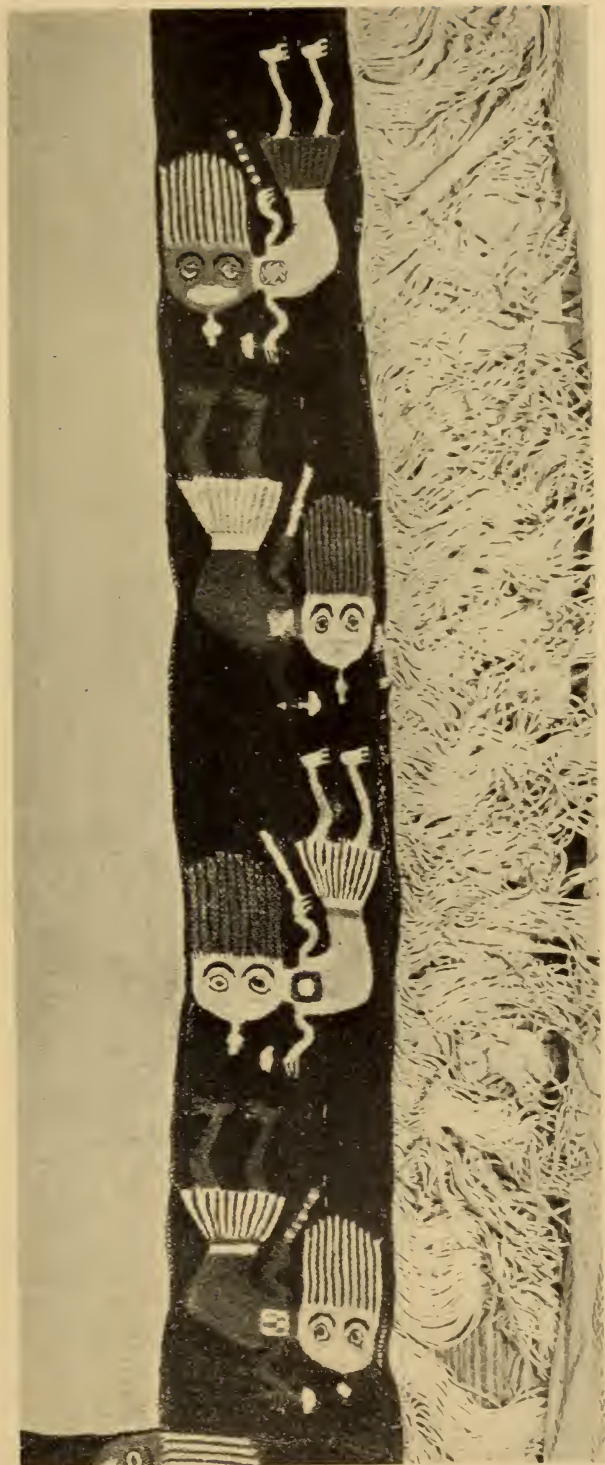


Figure 45. Detail of Figure 44.

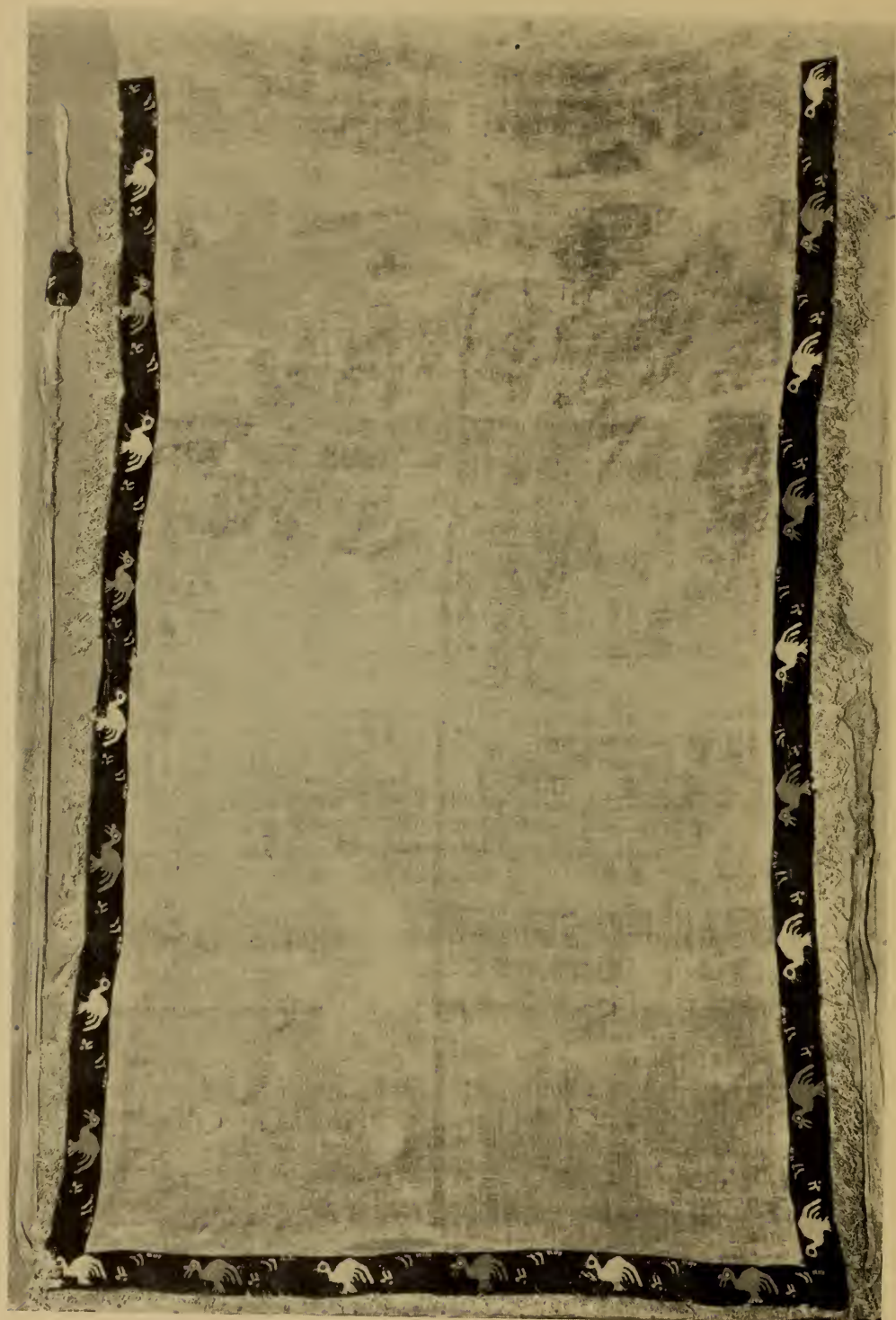


Figure 46. A garment or hanging with an embroidered border.

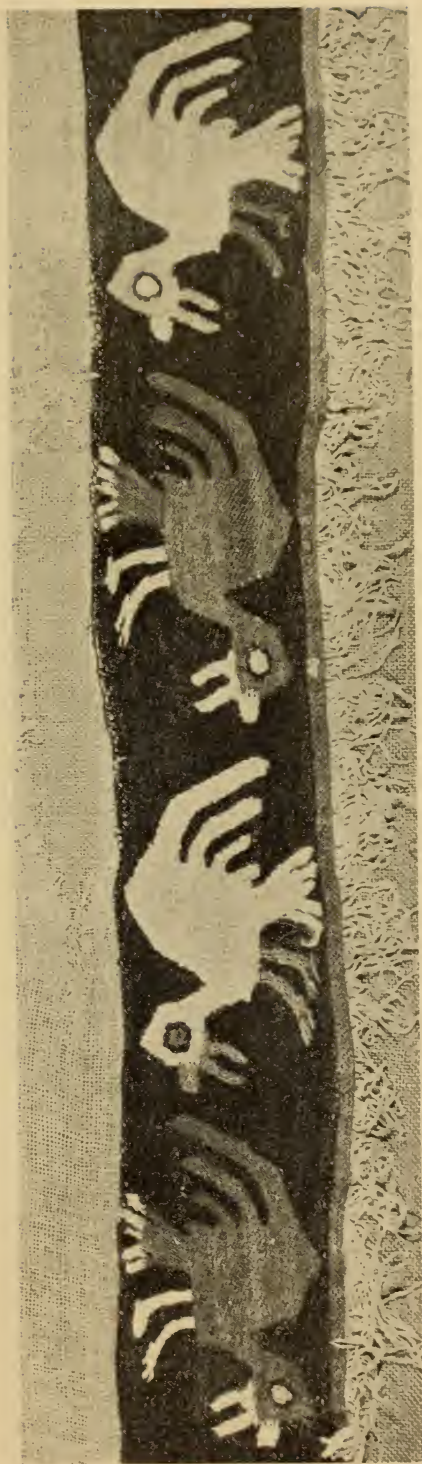


Figure 47. A detail of Figure 46.

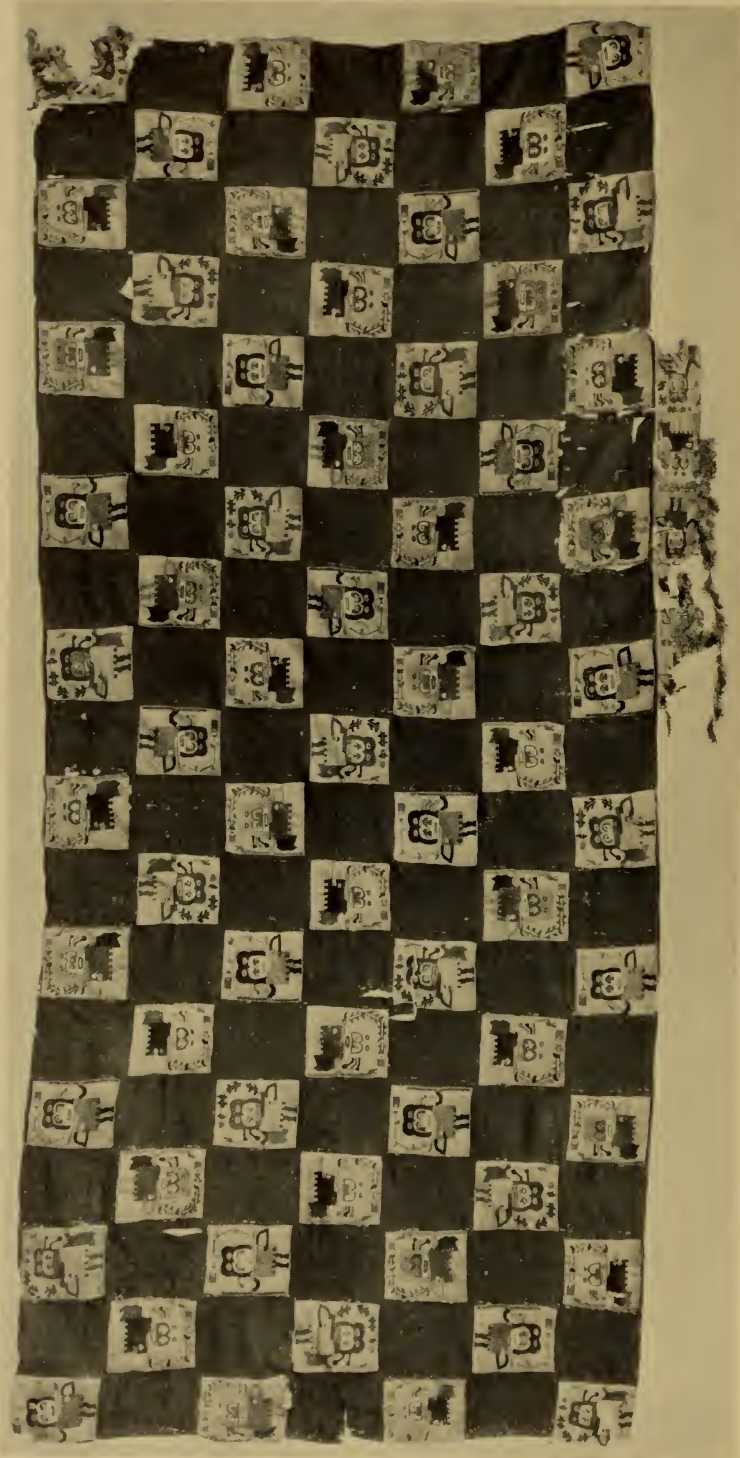


Figure 48. An embroidered shawl.



Figure 49. A detail of Figure 48.

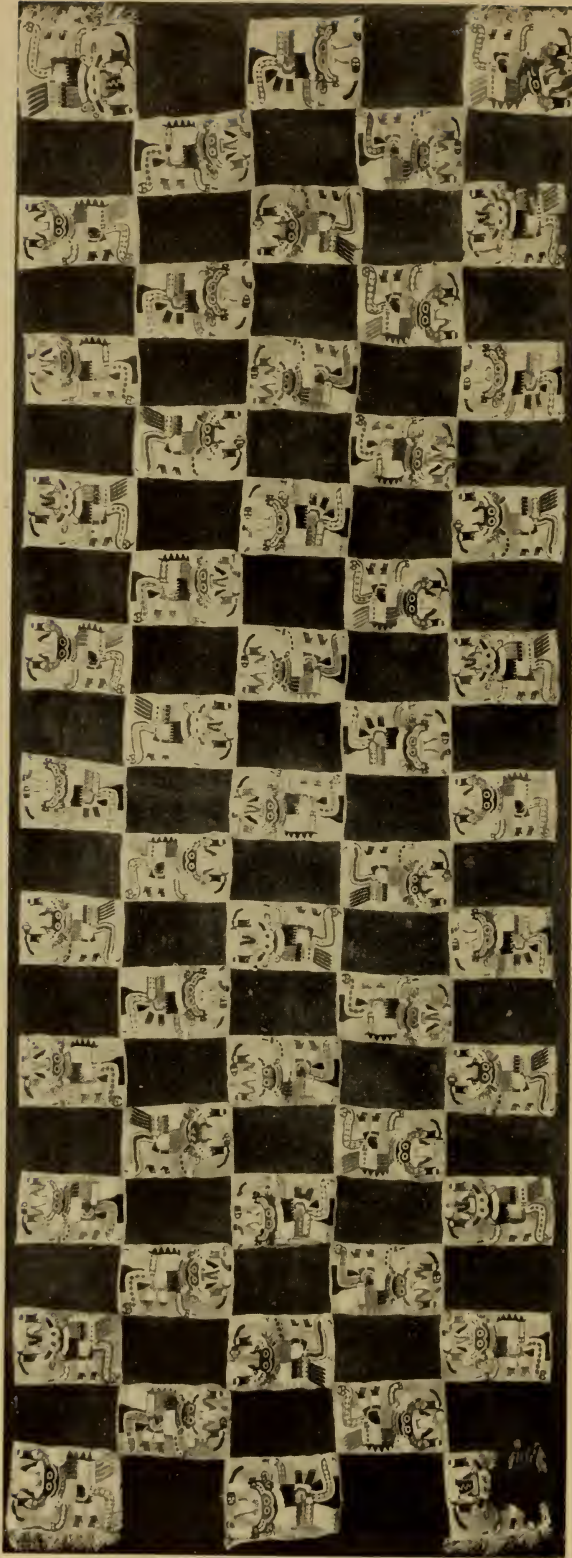


Figure 50. An embroidered shawl.

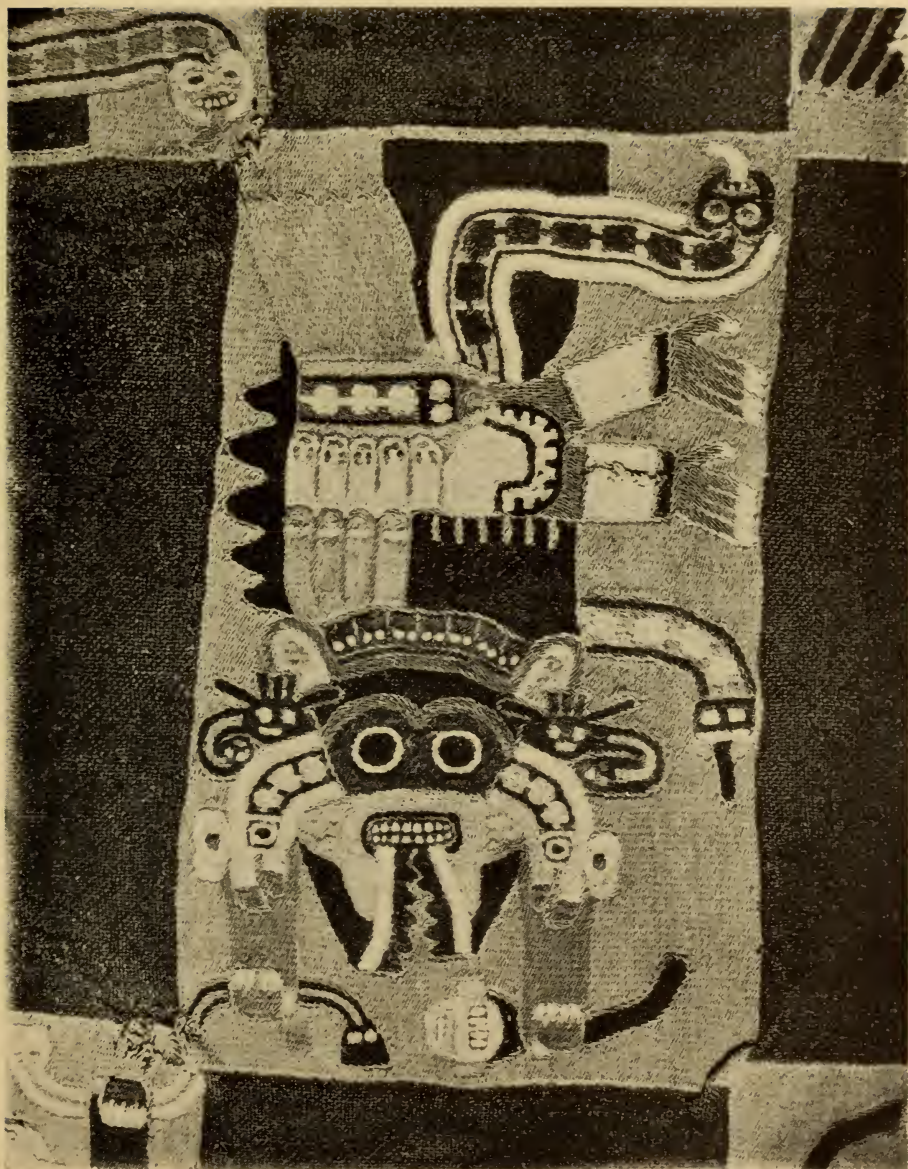


Figure 51. A detail of Figure 50. *P.O.*



Figure 52. An embroidered shawl.

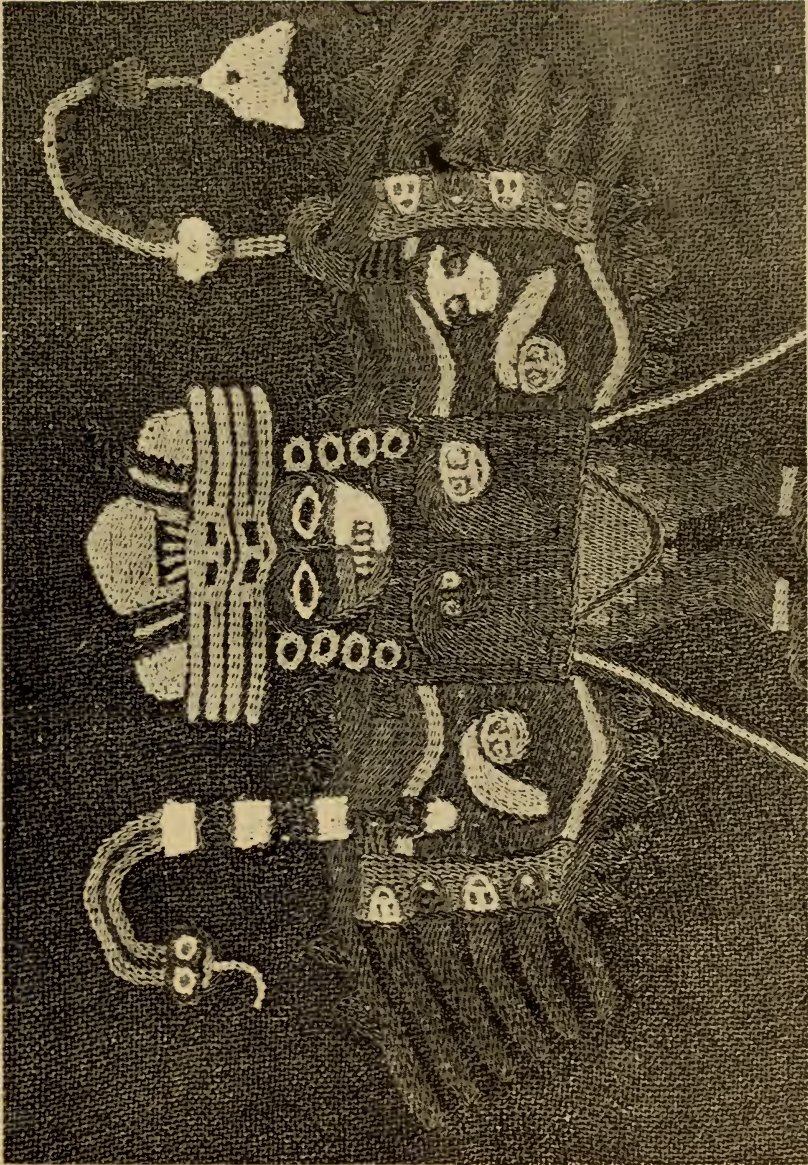


Figure 53. A detail of Figure 52.



Figure 54. A fragment of an embroidered border.

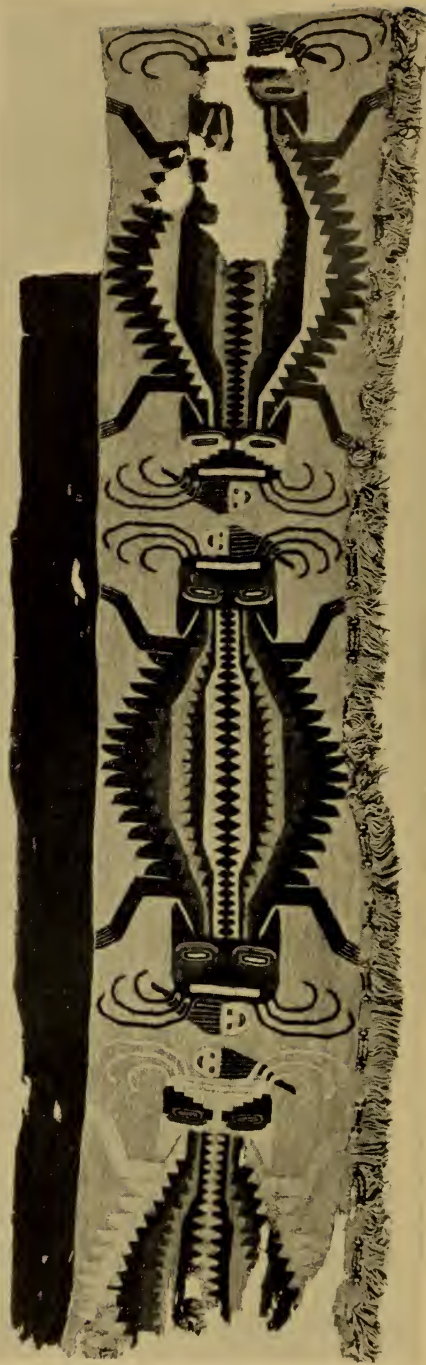


Figure 55. A fragment of an embroidered shawl.

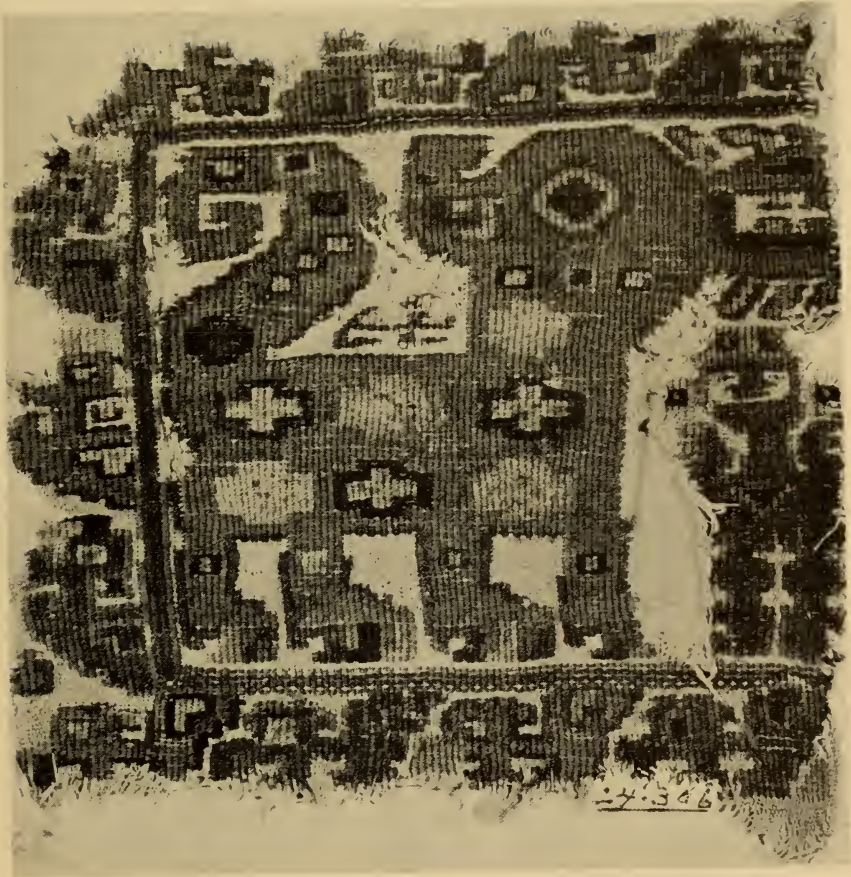


Figure 56. A fragment of cotton cloth embroidered in wool.

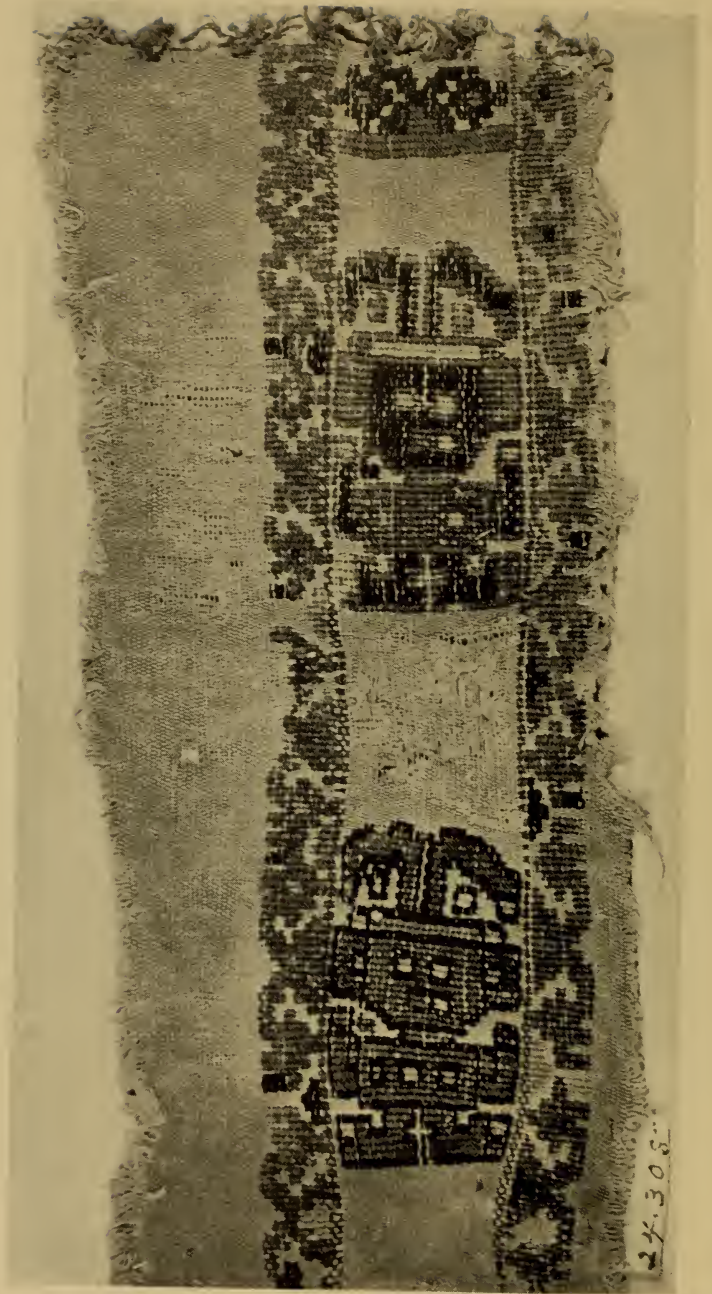


Figure 57. A fragment of embroidered cloth.



Figure 60. A fragment of cloth with a brocaded border.



Figure 58. A fragment of brocaded cloth.

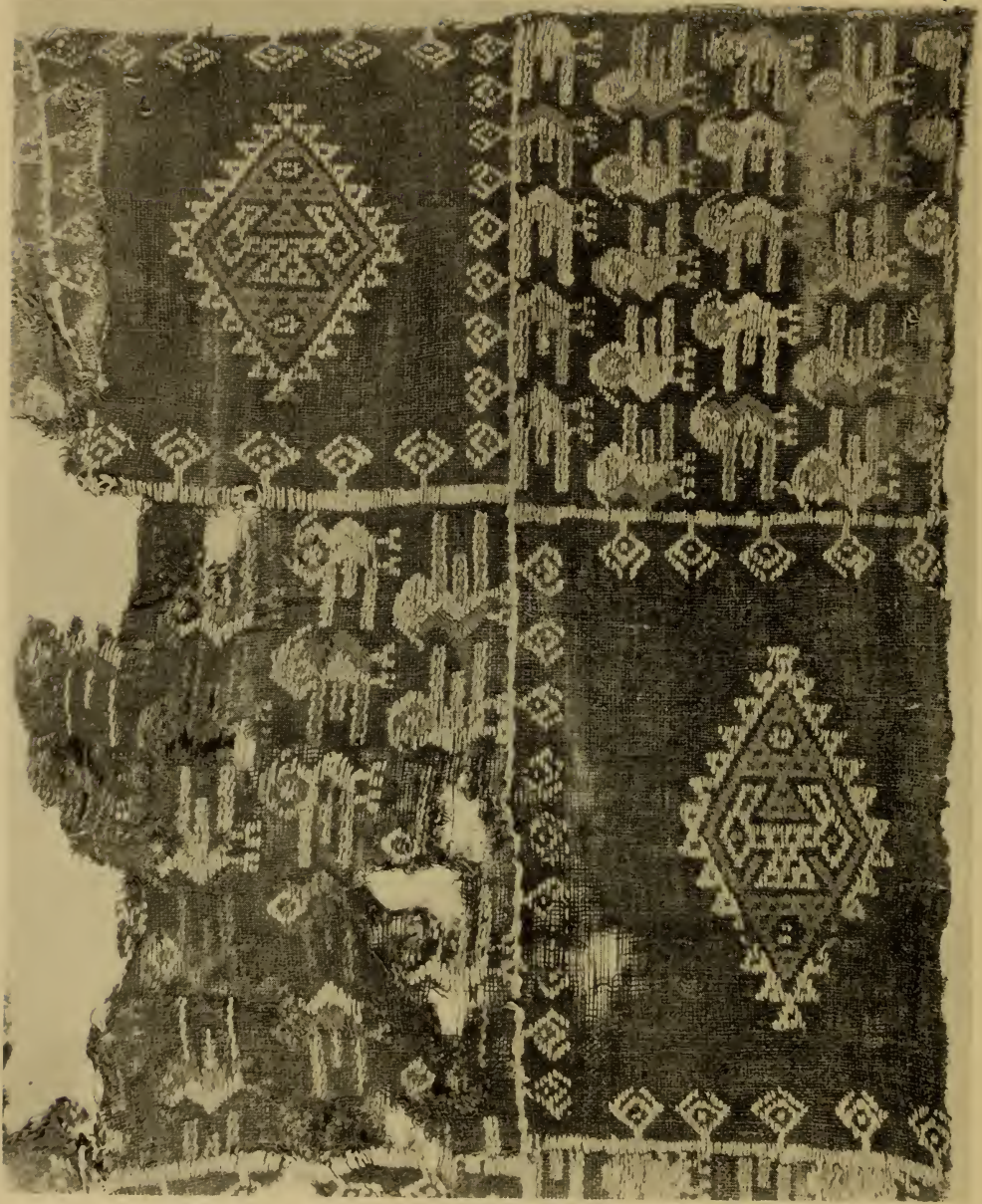


Figure 59. A fragment of brocaded cloth.

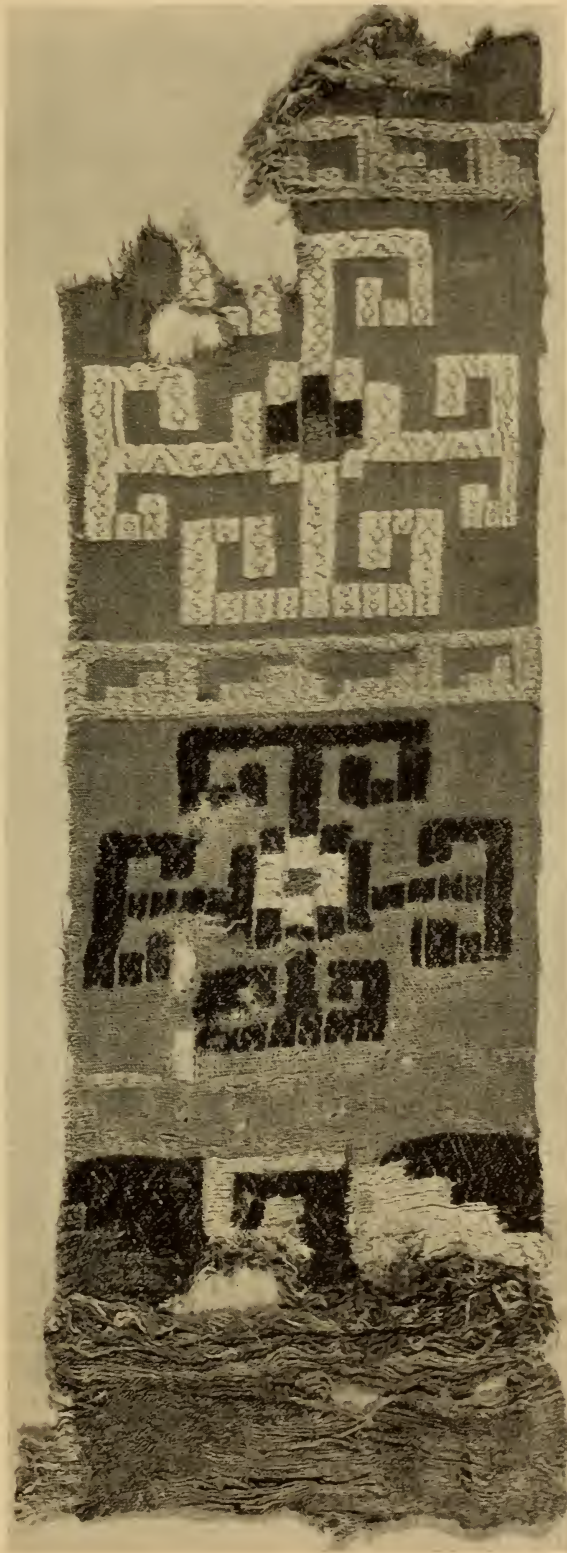


Figure 61. A fragment of a brocaded hanging
or of a garment.



Figure 62. A piece of quilted and brocaded cotton armor.



Figure 63. A fragment of brocaded cloth.

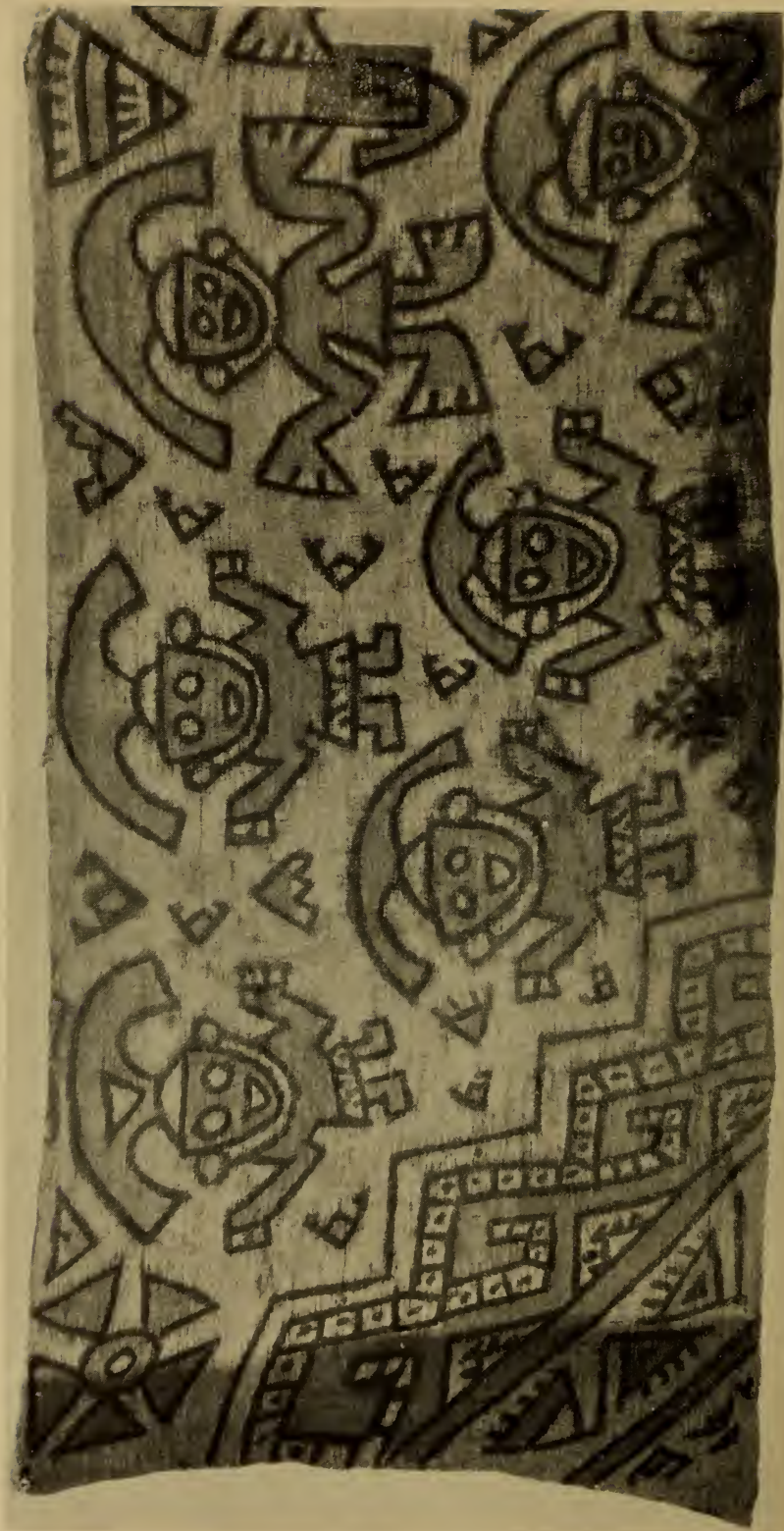


Figure 64. A piece of painted cloth.



Figure 65. A fragment of painted cloth.



Figure 66. A shirt with sleeves, probably intended for a mummy-pack.

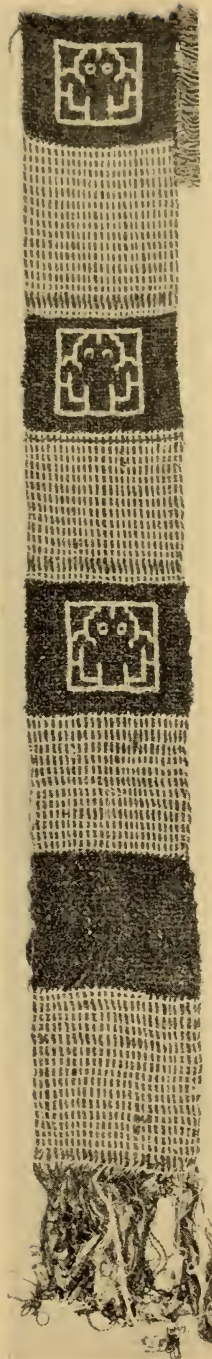


Figure 67. A fragment of an ornamental band.



Figure 68. Part of a garment or of a hanging.

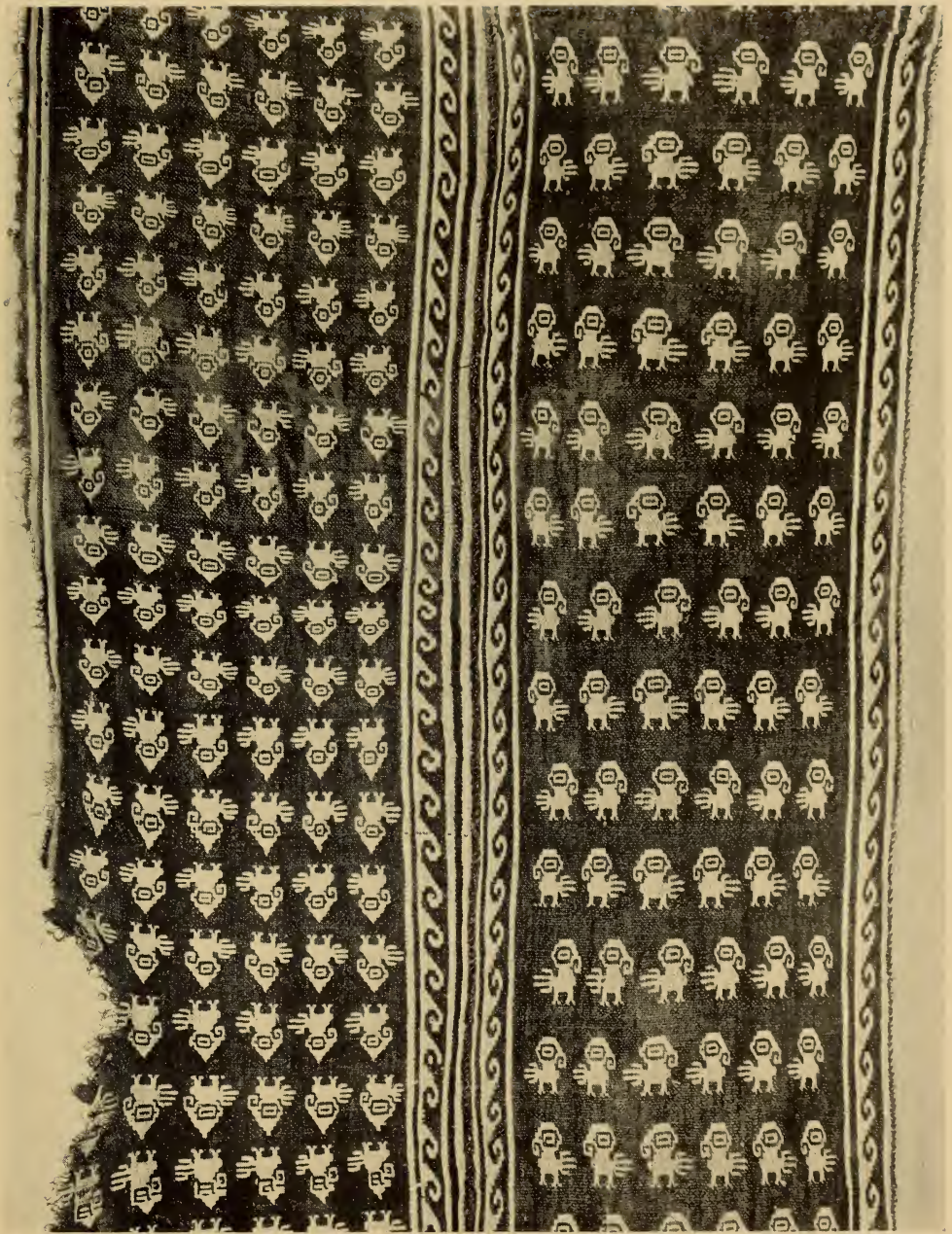


Figure 69. Part of a long tunic.



Figure 70. Part of a hanging.

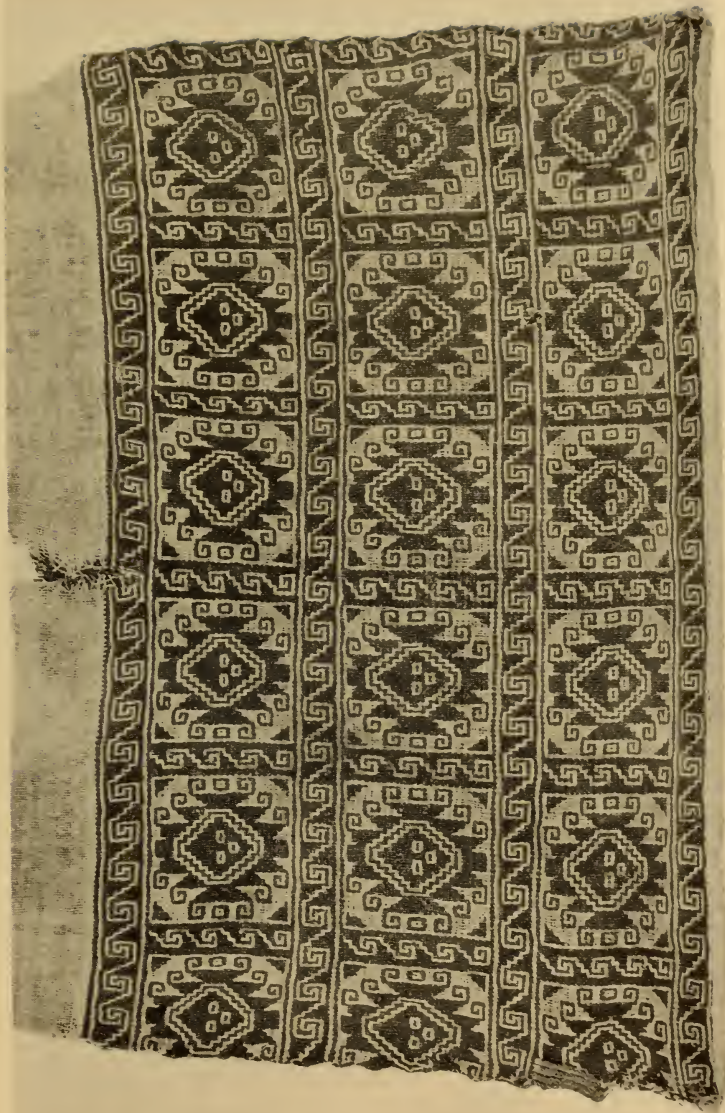


Figure 71. A double cloth with a decorative panel.



Figure 72. A square of cloth possibly for carrying purposes.

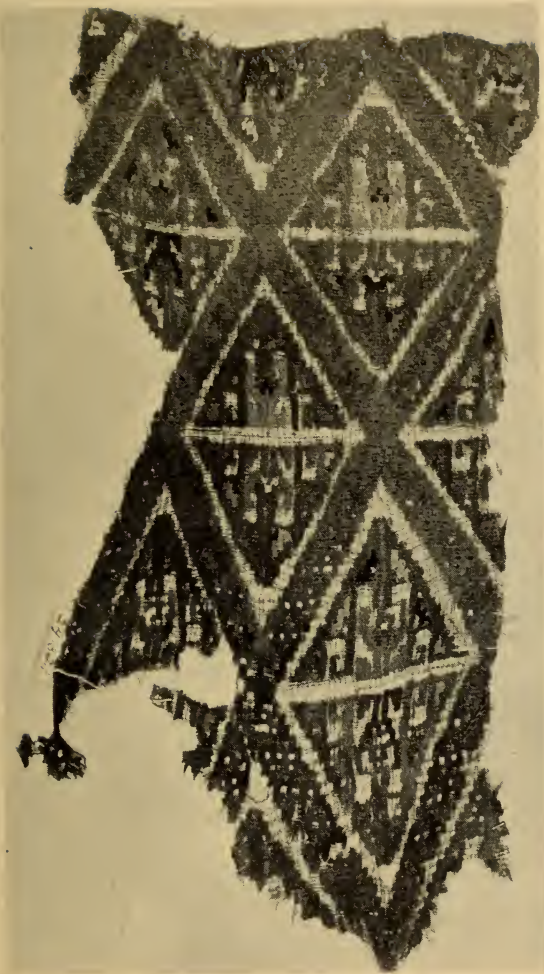


Figure 73. A fragment of embroidered gauze.

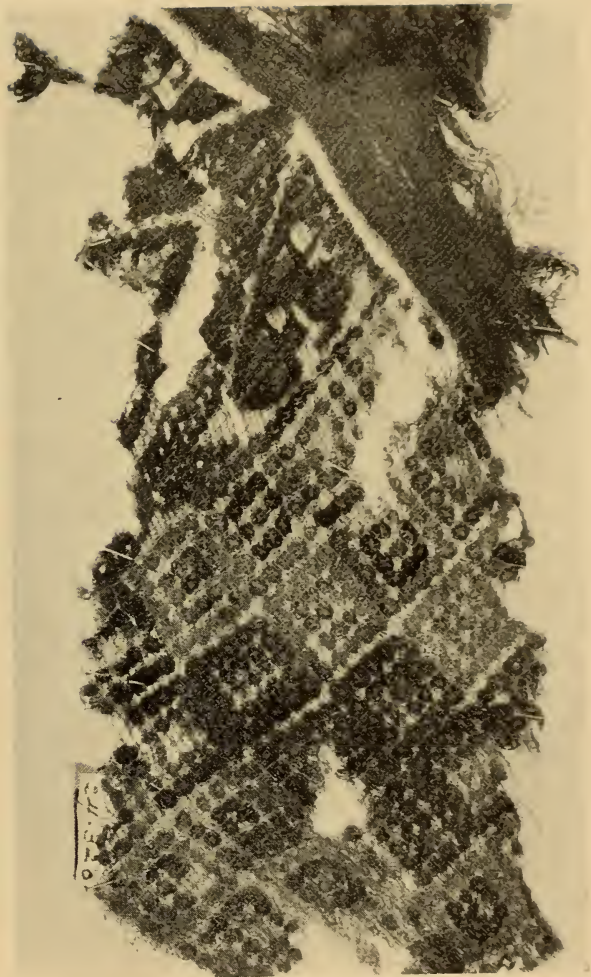


Figure 74. A fragment of embroidered gauze.

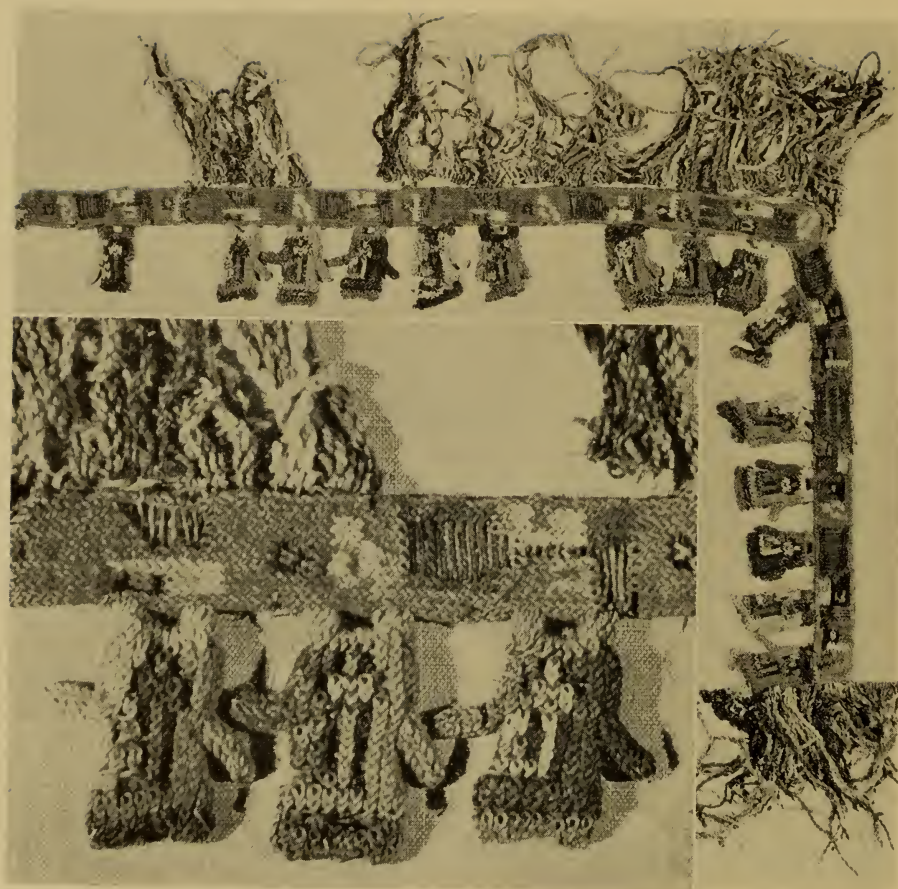


Figure 75b. Detail of Figure 75a.

Figure 75a. A fragment of needle-coiling border.



Figure 76. An ornament for a shawl.



Figure 77. An ornamental rope.

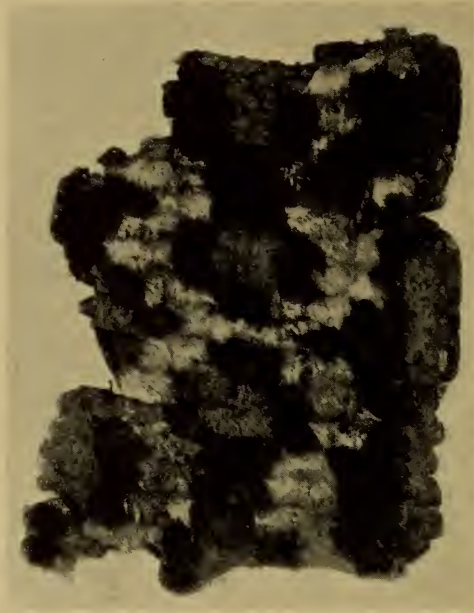


Figure 78. A fragment of pile-knot cloth,
like velvet.

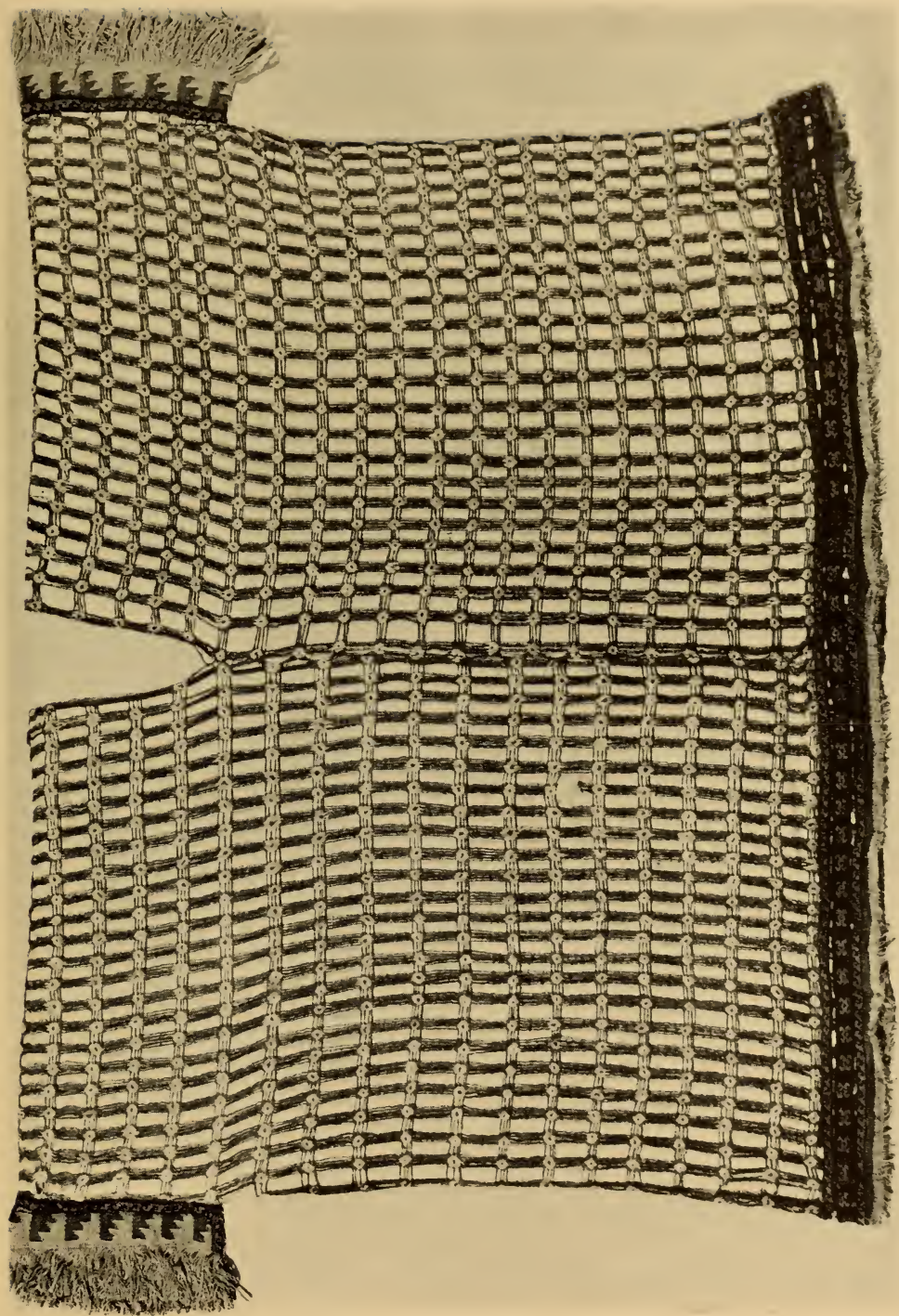


Figure 79. An ornamental tunic with short sleeves.

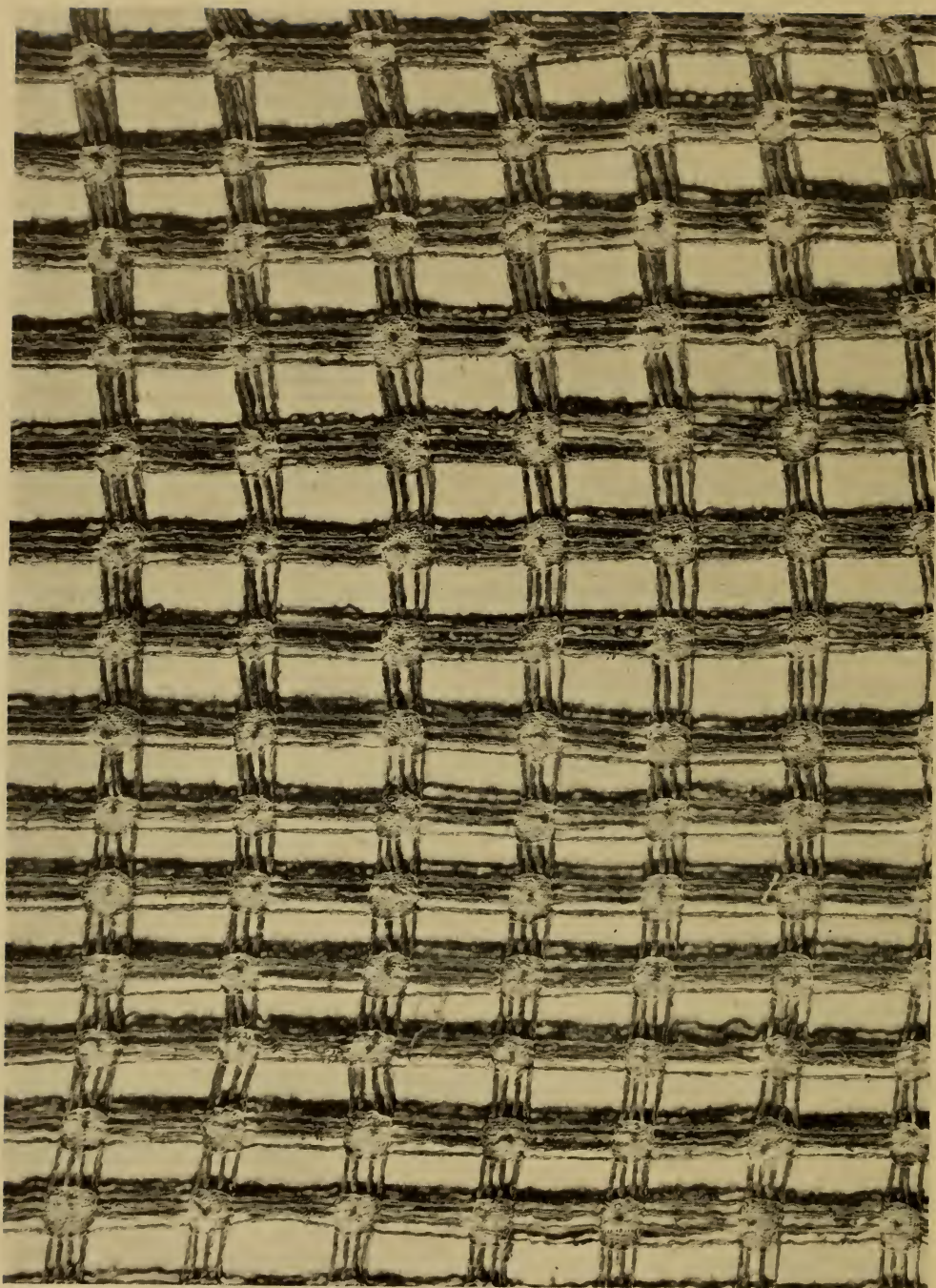


Figure 80. A detail of Figure 79.



Figure 81. Decorative bands for a tunic.

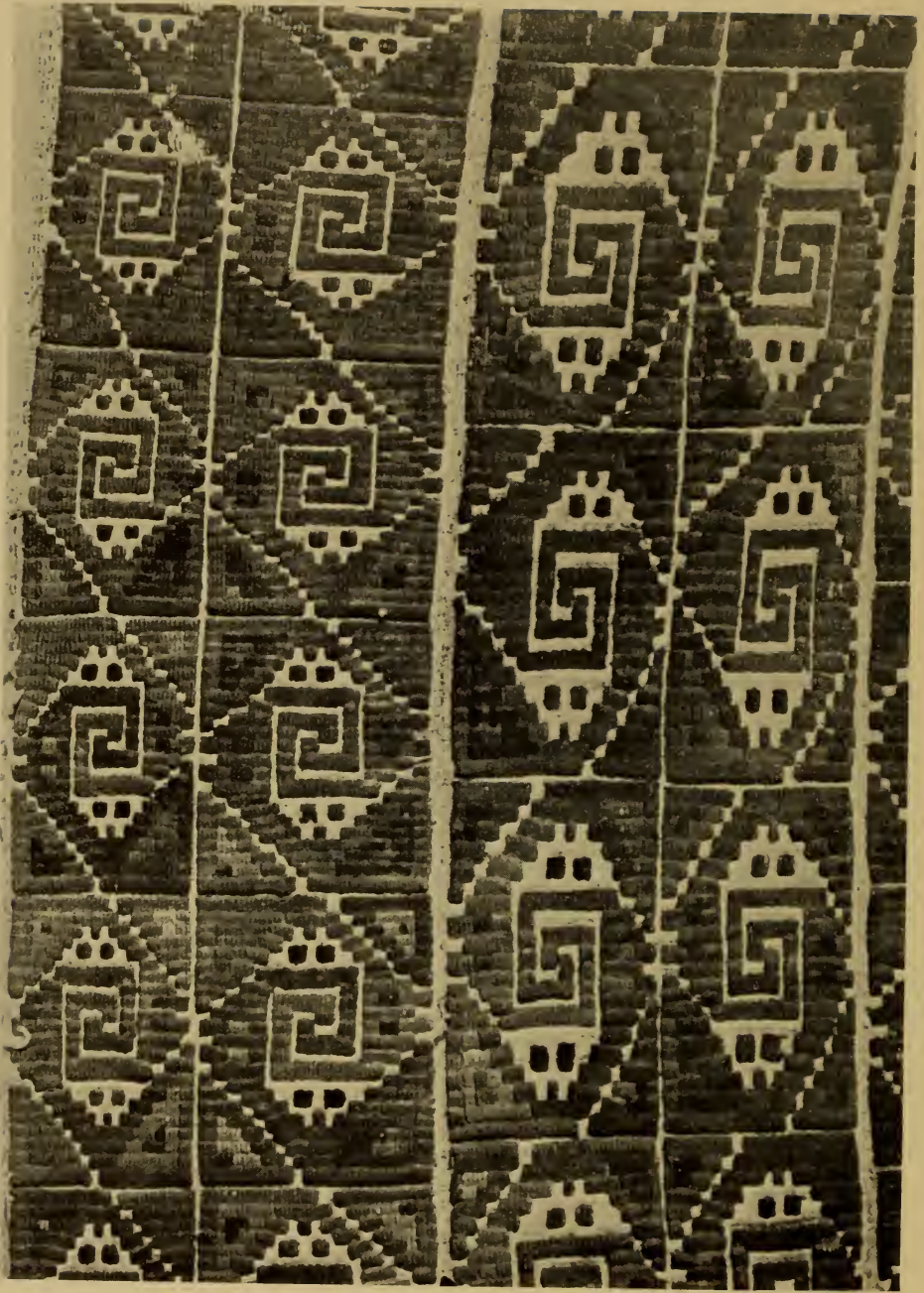


Figure 82. Part of a garment.

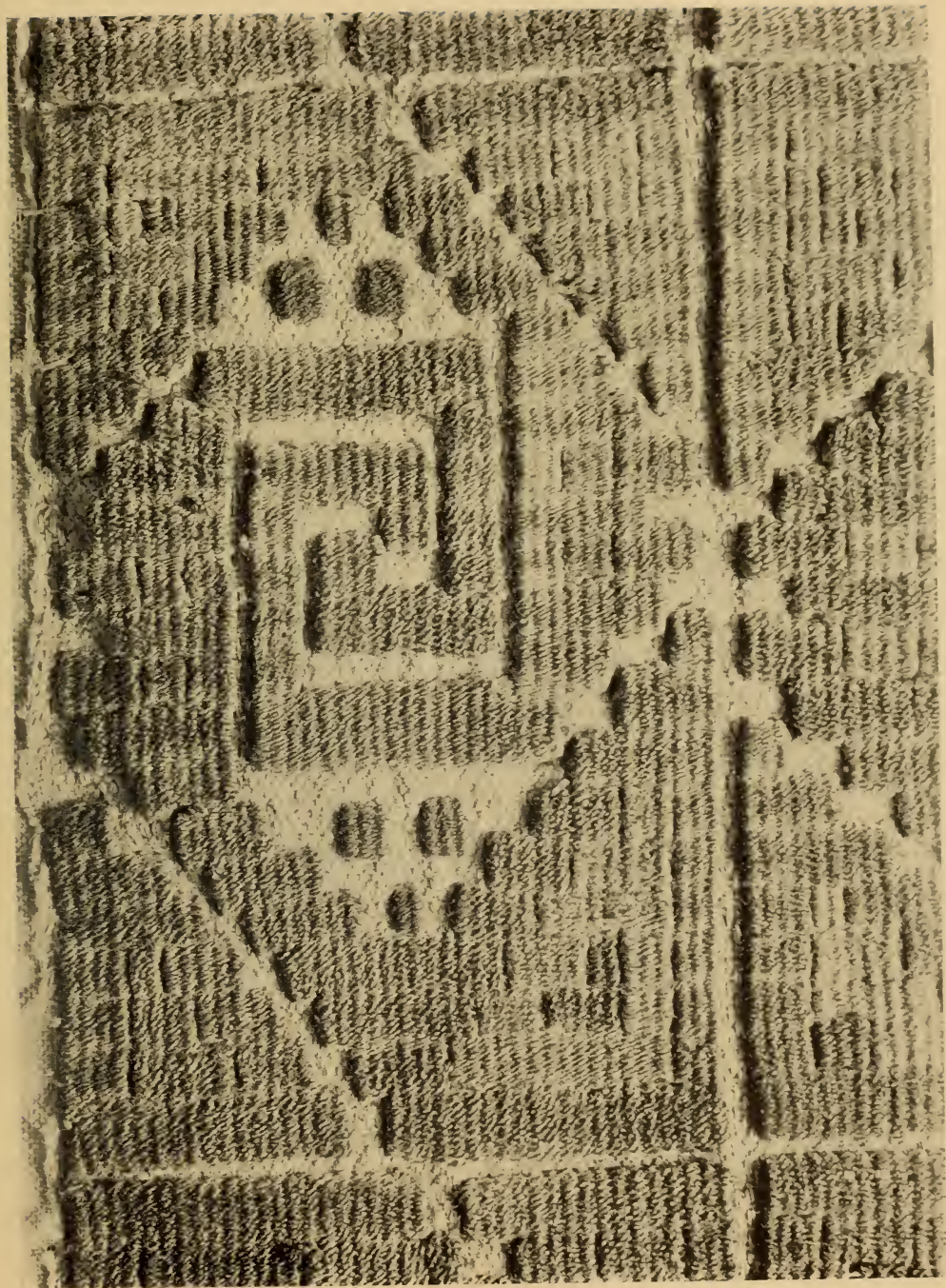


Figure 83. Detail of Figure 82.

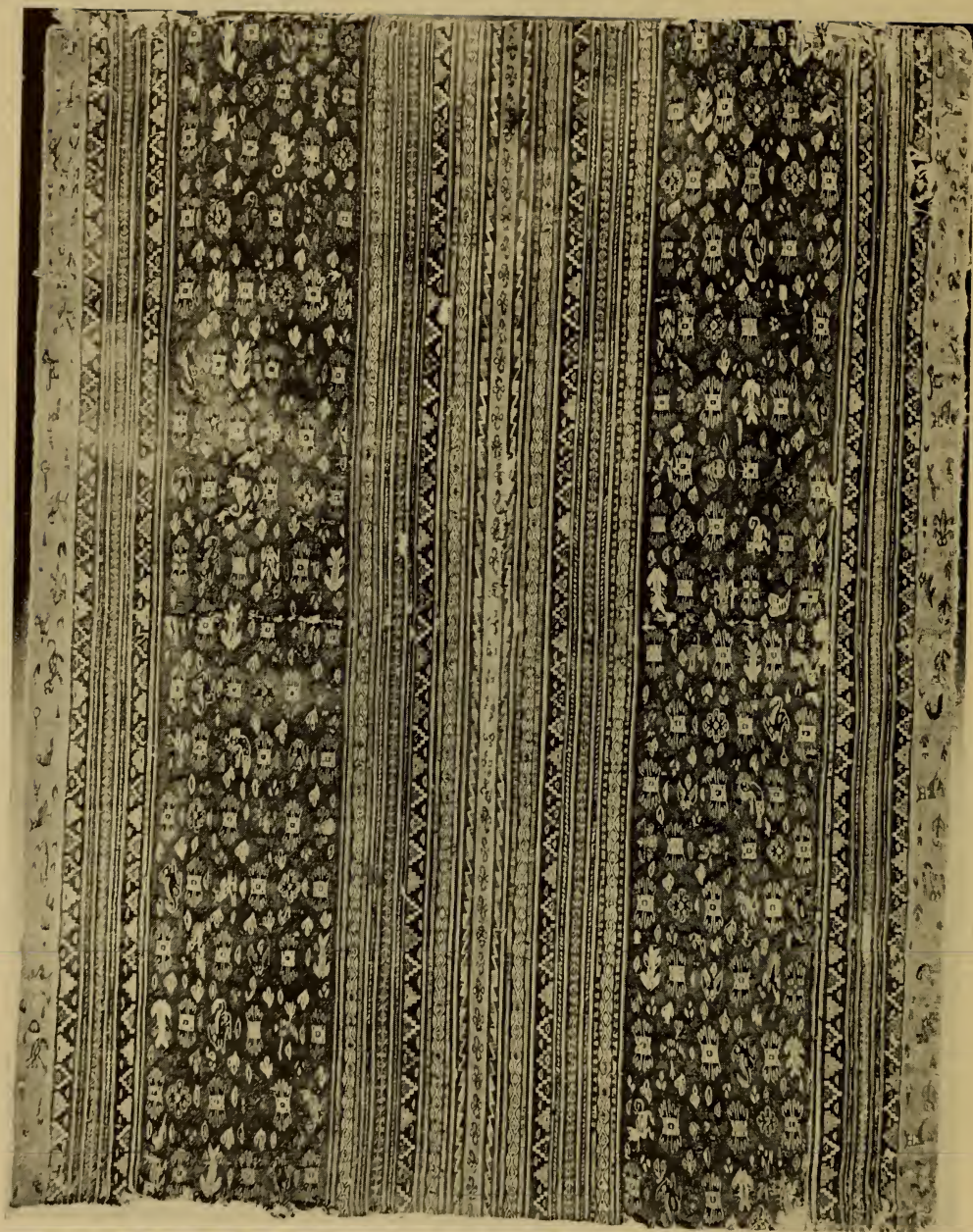


Figure 84. A poncho.

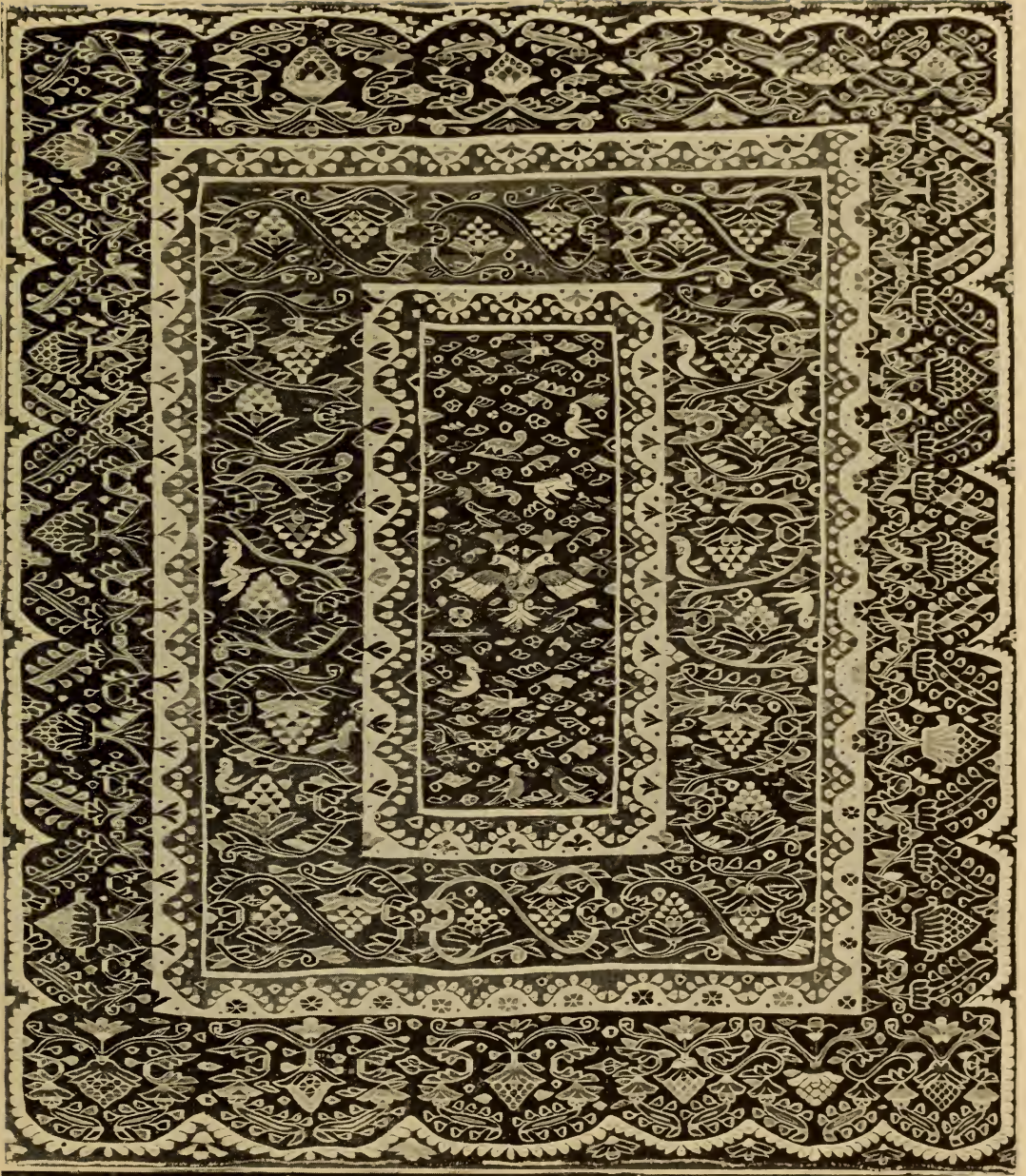


Figure 85. A tapestry panel.



Figure 86. A tapestry panel.



Figure 87. A tapestry panel.

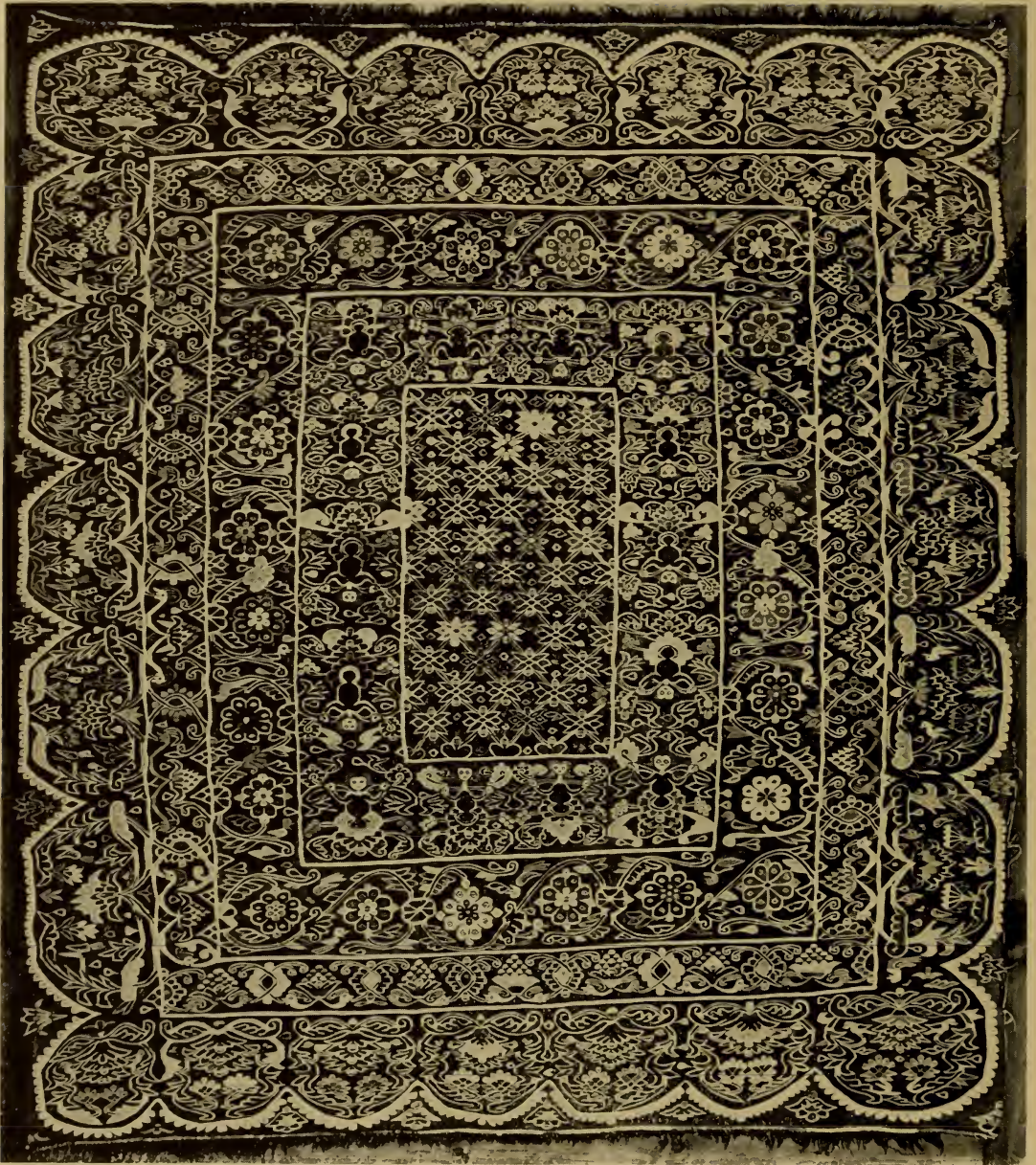


Figure 88. A tapestry panel.

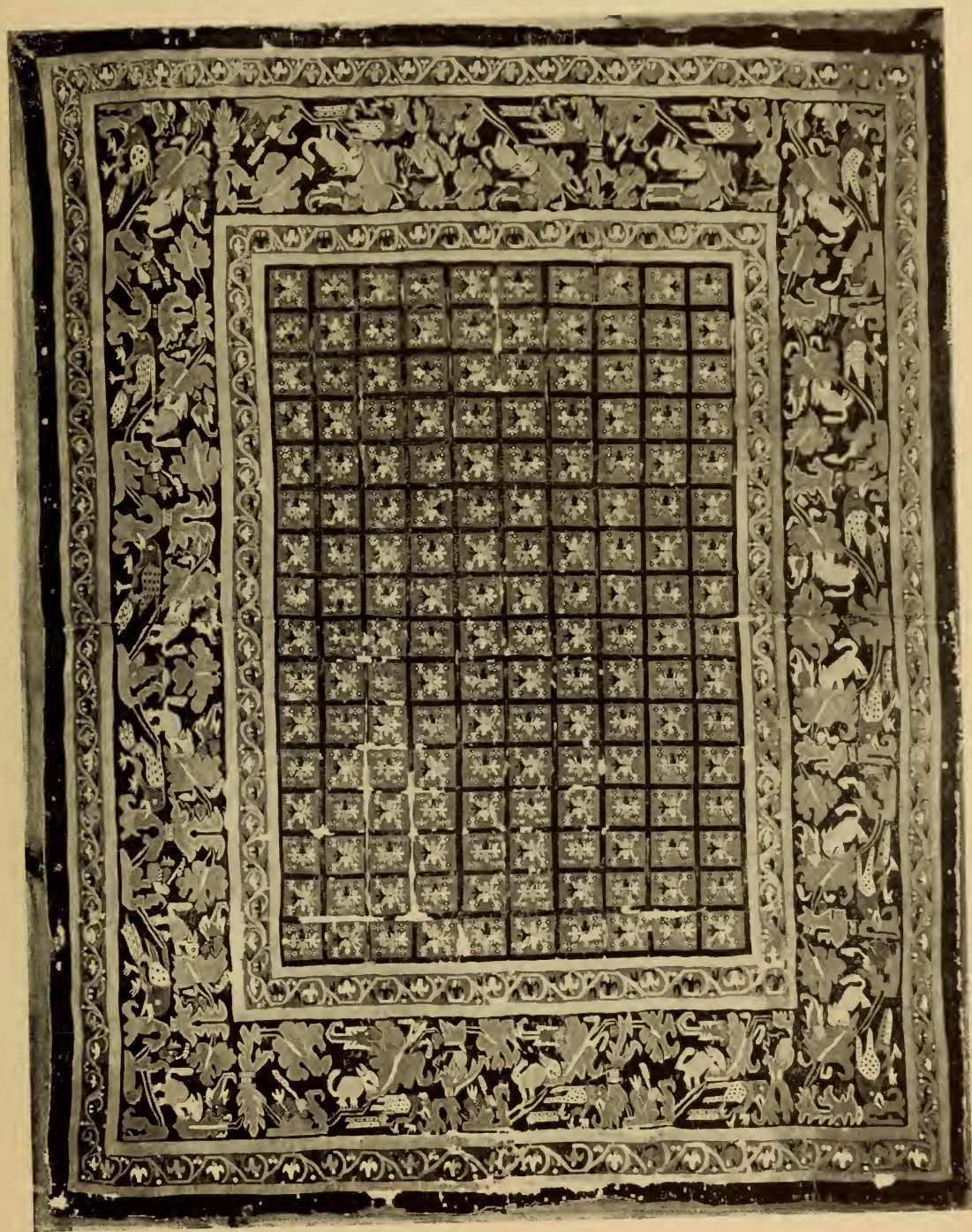


Figure 89. A tapestry panel.

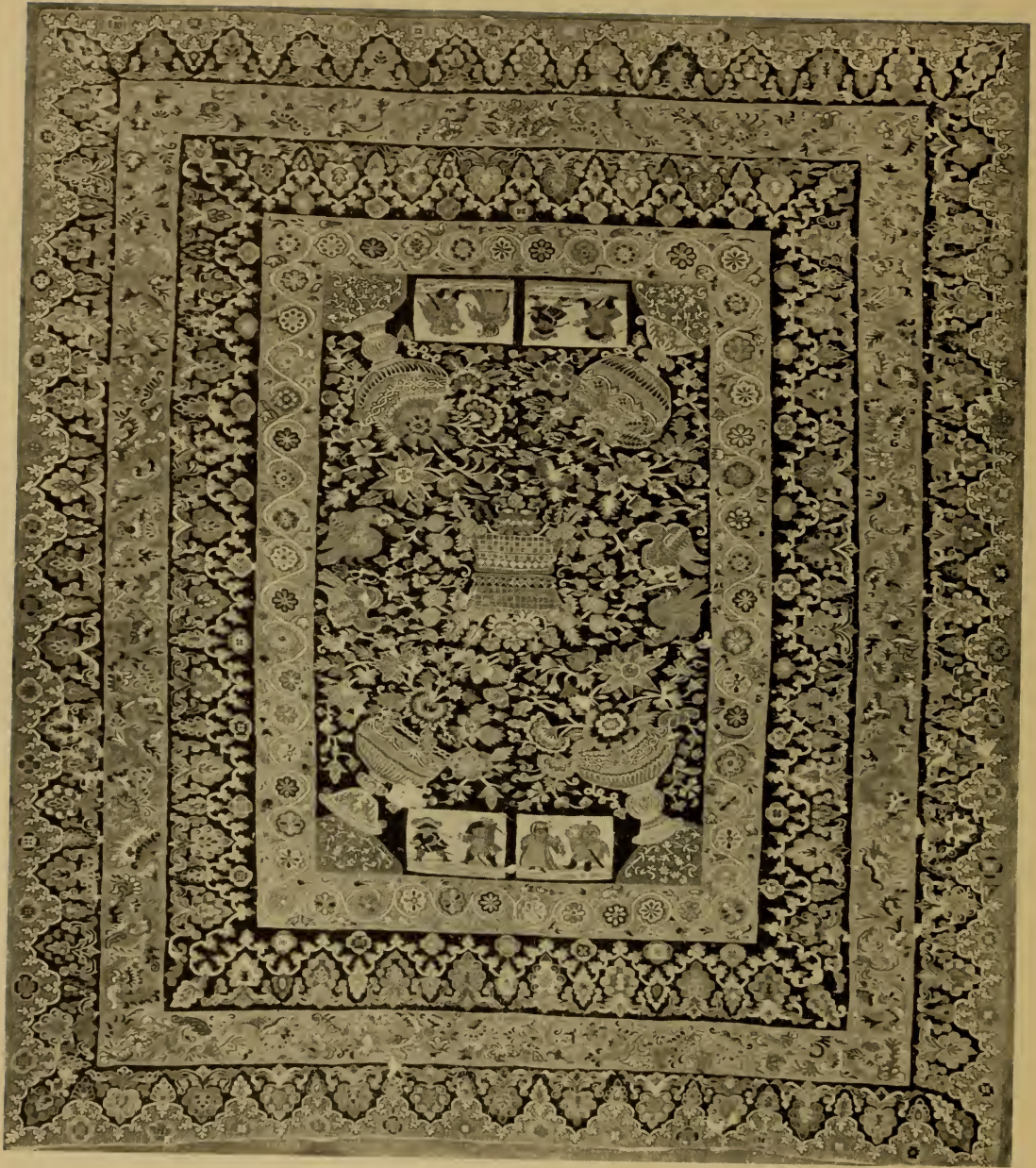


Figure 90. A tapestry panel.



Figure 91. A rug.



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