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CEREMONIAL STONE AXE.

FIELD COLUMBIAN MUSEUM

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ARCHÆOLOGICAL
INVESTIGATIONS ON THE ISLAND
OF LA PLATA, ECUADOR.

BY

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CHICAGO, U. S. A.

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INTRODUCTION.

While on an exploring expedition in South America in 1891-92, on behalf of the Department of Ethnology of the World's Columbian Exposition, I learned of a rich find which had recently been made at La Plata Island, Ecuador. Having concluded my explorations in Peru I set out for Guayaquil. There I met General Manuel Flores, commander-in-chief of the Ecuadorian army, who had made a partial exploration of the island. He had discovered by chance, through the agency of a lighthouse keeper, one grave that had yielded about twenty-five ounces of gold ornaments and utensils which had, most unfortunately for science, been converted into bullion. He had also made a second exploration but without success. So firmly convinced, however, was he that a rich deposit of gold was to be found on the island, that he very readily consented to assist me in making a visit to the island, it being understood that for his share of the equipment General Flores was to receive currency to the amount of one-half the commercial value of whatever gold or silver might be found. The expedition consisted of ten soldiers of the Ecuadorian army, who were to do the excavating, and Thomas McKinley, my assistant. The government gun-boat *Tungarauhua*, under command of Captain Romero, was placed at my disposition.

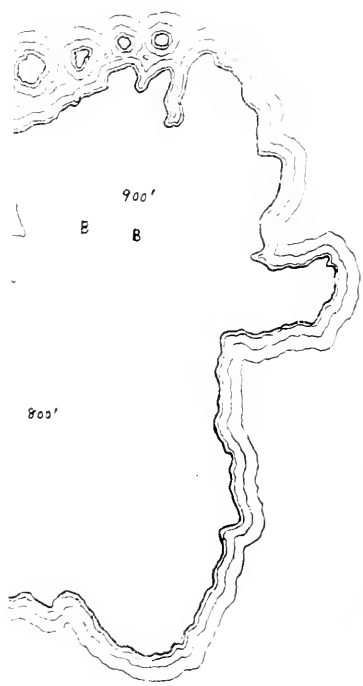
I wish to take this, my earliest opportunity, to make public acknowledgment of my indebtedness to General Flores and to Captain Romero for their uniform courtesy, and for their many expressions of sympathy with the aims of my expedition.

All of the material referred to in this paper is on exhibition in the Field Columbian Museum.



ISLAND OF
LA PLATA,
ECUADOR.

FIG. 37.



ARCHÆOLOGICAL INVESTIGATIONS ON THE ISLAND OF LA PLATA, ECUADOR.

THE JOURNEY TO THE ISLAND.

Having taken supplies to last for a period of two weeks, we left Guayaquil on the morning of July 17, 1892, and after an interval of three hours we had arrived at the mouth of the Guayaquil river, where we turned abruptly to the north and skirted the coast during the entire day, arriving at the island late in the evening. A small natural bay is to be found on the shore side of the island where we dropped anchor and remained for sixteen days. During this time we ate and slept on board the boat, making two trips ashore each day in a small rowboat. Owing to the innumerable varieties of water fowl which invaded the island, and the great number of fish which were to be found on every side of us, we were never at a loss for sources of amusement, and in many ways the visit was one of the most delightful of my sojourn in South America.

GEOGRAPHICAL POSITION AND PHYSICAL CHARACTER OF THE ISLAND.

The island lies about thirty miles from the coast of Ecuador and is just south of the equator. It is about one mile and one-fourth in length and about three-fourths of a mile wide, having a general rectangular shape. As has been noted, there is a well defined bay on the east side of the island (see Fig. 37). Nearly the entire remaining shore line is steep and precipitous, and on the entire southern extremity rocky. The general surface of the island is that of an undulating plateau rising about one thousand feet above the level of the sea. The vegetation, owing to the scanty rainfall, is entirely confined to thick, scrubby underbrush and numerous varieties of large cacti. The island is infested with innumerable rats, while snakes of considerable size are not uncommon. A herd of some thirty or forty wild cattle exists on the island and was seen two or three times by my assistant, but although I made numerous excursions from one end of the island to the other I was unable to see them. The extreme

southern corner of the island, to the extent of several acres, is entirely destitute of vegetation and furnishes a vast breeding ground for pelicans which resort here in large numbers. The island has been uninhabited during historic times, except that since 1889 a lighthouse keeper has been stationed there. Points of archæological interest were found in two places, which from their character are of entirely different origin and must be treated separately (see Fig. 38). I. A number of graves were found near the sea and just back from the bay. II. On the plateau above this lowland were found several heaps of potsherds, squared stones, etc.

I. GRAVES.

The lowland just mentioned is formed from a deposit brought down from two ravines which extend back toward the center of the island. In the triangle thus formed were made the principal excavations and it was here that the gold and silver objects were found which so excited the interest of General Flores. The work of excavation had been chiefly done by the lighthouse keeper, a Jamaican negro. Although he was still on the island, he proved to be of little assistance to me in pointing out the localities from which material found up to that time had been taken. After much hesitation on his part, I finally located six holes which had been excavated. As near as I could find out, from the first one they took twenty or thirty ounces of gold and several pieces of pottery. In the second excavation were found two images, one gold the other silver; in the third, fourth and fifth holes nothing was found; in the sixth hole a large stone axe was encountered. At what depth these objects had been found, or in what position, I was unable to learn, so contradictory were the statements of the Jamaican. Thinking that there might be additional graves in this triangle, I decided to begin excavating at its apex and continue the work back to the base of the triangle. Naturally, as we proceeded back from the apex the excavated wall grew constantly deeper, so that, although it was but two feet deep at the beginning of operations, by the time we had concluded our base line was twenty-two feet deep. Inasmuch as the general nature of the earth thus excavated was usually the same throughout, one description may suffice for the entire area of the work and for this purpose we may consider the character of the final twenty-two-foot section.

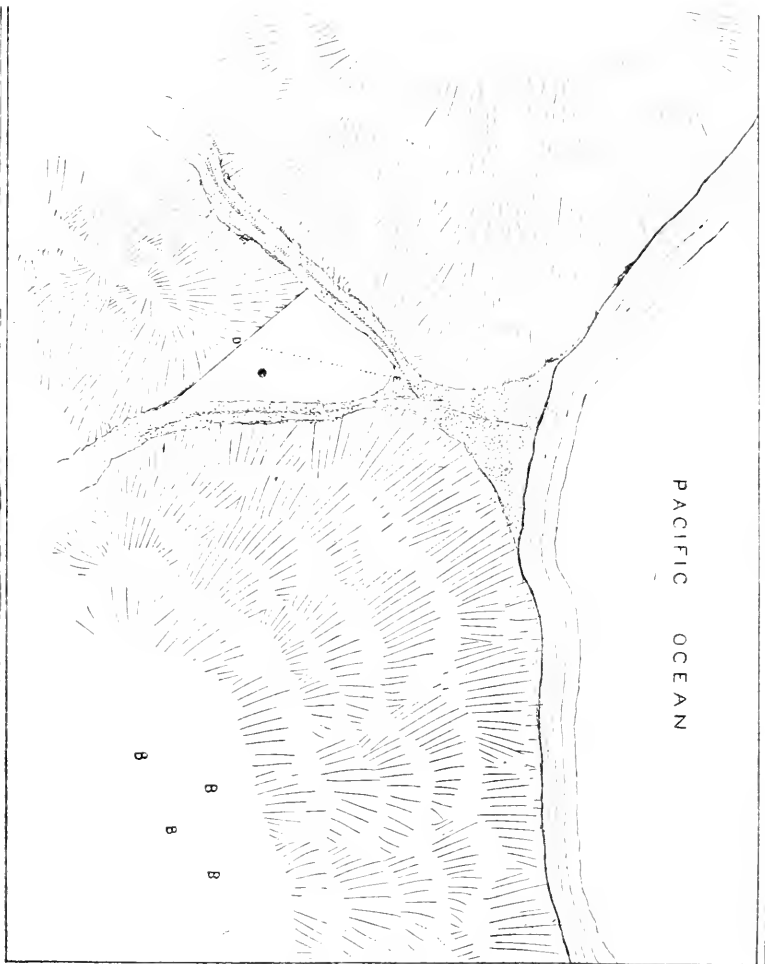
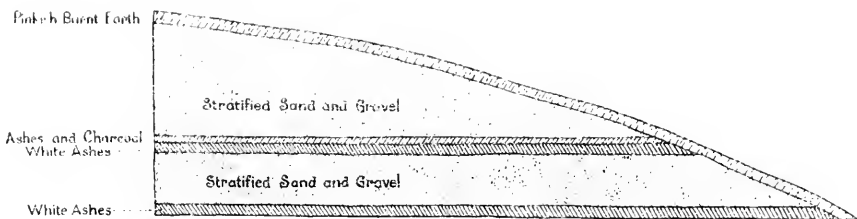


FIG. 38. MAP OF PORTION OF ISLAND EXPLORED.

100-200-100



CROSS SECTION D-E.

FIG. 39. IDEALIZED VIEW OF VERTICAL SECTION OF EXCAVATIONS IN THE TRIANGLE.

CHARACTER OF THE EARTH EXCAVATED.

The earth (see Fig. 39) to a depth of a foot or more was of a pinkish color and contained much charcoal. About nine feet beneath this was found a compressed stratum of charcoal and ashes one foot thick. This rested on a bed of pure ashes about two feet thick; eight feet below this was encountered another and thicker bed of pure ashes. In the intervening portions were found stratified layers of sand and gravel. In this sand and gravel were found many curious fragments of pottery which seem to have been originally in the form of images and idols. Besides potsherds, numerous squared and rectangular stones of different sizes and shapes were encountered. All this material was, I believe, brought down from the highlands above, for we discovered several refuse heaps on the summit of the plateau in which we found the same class of stones and pottery as below.

THE GRAVE AND ITS CONTENTS.

Near the center of the triangle and just above the lower bed of ashes was found a grave with the fragments of two skeletons, but in such poor state of preservation that no portion of them could be saved. With the skeletons were found several earthenware vessels, images of gold and silver, small gold pins and beads, several copper pins and a large stone axe. The grave was apparently an intrusive burial and sustained no relation either to the beds of ashes or to the stones and potsherds found elsewhere promiscuously. The other objects found in the grave consisted of three images of gold, one of silver and one of copper, copper bells, several earthenware vessels and a very remarkable stone axe. All this material is unlike that of the coast tribes of Ecuador or the Yuncas of Peru but closely resembles that found in Quichua territory throughout the highlands of Ecuador and Peru. It is thus quite clear that we have here two distinct kinds of material which, as seems highly probable, are the results of two periods of occupancy. I shall first describe the material from the graves. These, I believe, were of comparatively recent origin and their presence is, I think, to be regarded as accidental.

GOLD AND SILVER IMAGES.

The gold and silver images are of the usual form such as are found in the highlands of Peru and Ecuador. The largest image

(Pl. XL, Fig. *b*) is of silver and measures six and one-quarter inches in length, and one and one-half inches in breadth. This image is almost matched in size by one of gold (Pl. XL, Fig. *a*), there being less than one-half an inch difference in length. The smaller gold image (Pl. XLI, Fig. *a*) measures three and three-quarters inches in length. It requires only a superficial examination of all four images to disclose the identity of the design. In physiognomy, methods of dressing the hair, and general proportions, the specimens are all alike; in all likewise the sex is represented as that of the female. The hair is parted in a straight line from the middle of the forehead to the crown of the head and is loosely gathered about half way down the back by means of a curious device, the nature of which I have not yet determined. It is interesting to note also that in all the specimens the head is molded after the antero-posterior deformity which was practiced throughout the interior of Peru. It is also interesting to note the perfect agreement in design between the images from La Plata and those of the Cuzco Valley, Peru (see Pl. XLI, Fig. *b*).

To determine the method of manufacture of these images has not been an easy matter; nor am I now sure that I have reached the correct solution of the problem. The silver and the two gold images are hollow, while the copper image (see Pl. XLI, Fig. *d*) is solid and is without doubt a cast. Close examination of the hollow images does not reveal a seam of any sort except on the inside of the legs and from the junction of these two seams up to where it is concealed under the superimposed hair. The back seam is generally invisible throughout and requires the closest scrutiny to make it out. The back hair, covering head and back, was fashioned in a single piece and has been very skillfully and neatly applied to the head and back. That the images themselves were hammered into shape over some form seems to me to admit of no doubt and in Fig. *c* of Pl. XLI I believe we have such a form. This little image is of stalagmite and although it shows the effect of fire, still portrays the same cast of features which we find in the metal images. It is also to be noted that there has been no attempt in this stone image to represent the hair; on the other hand the head is of such shape as would be that of the other images without the hair ornament. It seems that a sheet of gold was hammered around the stone form until it was entirely covered, the seam extending from the crown of the head back to the crotch and so down and inside of each leg. The sheet was then slightly opened and the overlapping seams were hammered by abrasion together. Here and there small pieces of the metal were applied by means of heat to give the seam a smoother finish. The legs terminate in the form



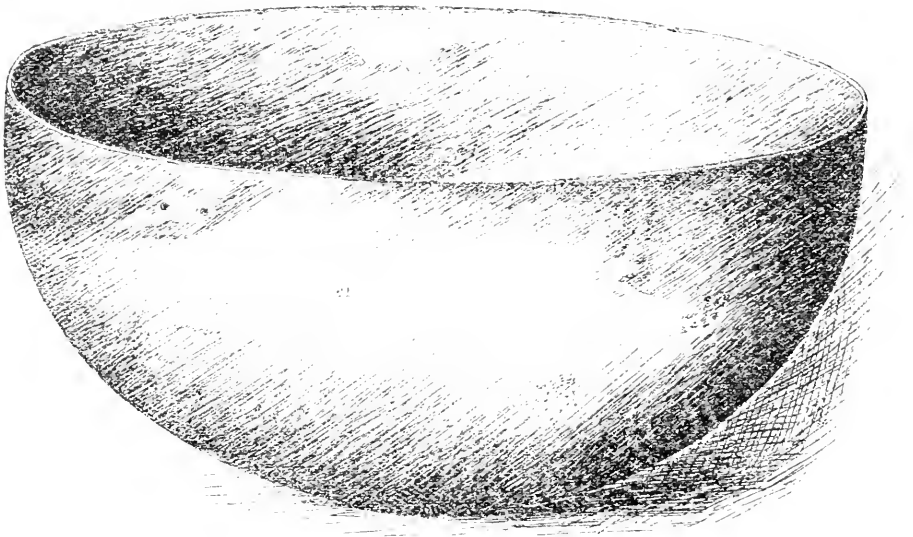


FIG. 40. GOLD CUP.

of round hollow tubes. To the ends were fastened sheets of gold cut in the shape of the foot, the toes being indicated simply by means of narrow grooves impressed in the sheet. The head covering, representing the parted and braided hair, is firmly fastened to the head by means of four pairs of most skillfully concealed and ingeniously applied rivets. The first pair are over the eyes, the third pair on a line with the shoulders and the last pair are under the broad object fastened to the end of the hair. The rivets are spines projecting from the inner side of the head covering and enter holes at the points mentioned in the body of the image where they have been riveted from the inside. The reason for making the head ornament in a separate piece lies, I think, in this manner of its application to the figure. It gives added strength to the head and especially it binds together and so strengthens the body seam in a manner which could not be readily accomplished in any other manner. Furthermore this method of applying the hair certainly gives it a more realistic appearance than it would have otherwise.

As for the composition of the metals of which the images are made, I cannot offer detailed results. Qualitative analysis has been made, however, of the two gold and of the copper image. The silver image (not analyzed) is much corroded and is apparently pure silver. The two gold images prove to be alloys of about 12-karat fine, the percents roughly estimated being gold 50, silver 30 and copper 20.

IMAGE OF BRONZE.

The copper figure proves equally interesting, for it contains 3 per cent of tin, and 7 per cent of iron, and so cannot be native copper, but a low grade bronze.

GOLD CUP.

The sixth specimen from the grave to be described is a gold cup (Fig. 40). This measures five inches in diameter and is almost three inches in height. It is regular in form and of very graceful outline. A chemical analysis of a fragment shows no trace of either silver or copper, and it seems probable that it was hammered out of a nugget of pure gold. On the side near the rim are two holes a quarter of an inch apart, made by some awl-like instrument by pressure from without.

PENDANTS, TOPOS AND OTHER OBJECTS OF COPPER AND GOLD.

A number of copper pendants were also found which are of interest owing to their resemblance to the type so common in the highlands of Ecuador and Peru. They average from three-quarters to an inch in length and are bell-shaped, being perforated near the upper end for suspension. With these pendants was found a similarly sized object of copper shaped like a vase, with rounded bottom, bulging rim and long and but slightly constricted neck. At opposite sides are handles. This vessel is too tiny to be of any real use and probably served as an ornament.

The usual number of metallic pins were found, and they differ in no manner from the typical specimens so common in Peruvian graves. Of the large copper specimens there were eight, with fragments of several others. These measure from six to ten inches in length and are of two types, one having a large, flat, nearly cylindrical head, the other having a head much smaller, thicker and more nearly semi-circular. Of the small pins there are four, two of pure gold and two of silver; they are all less than two inches in length and have the flat head perforated.

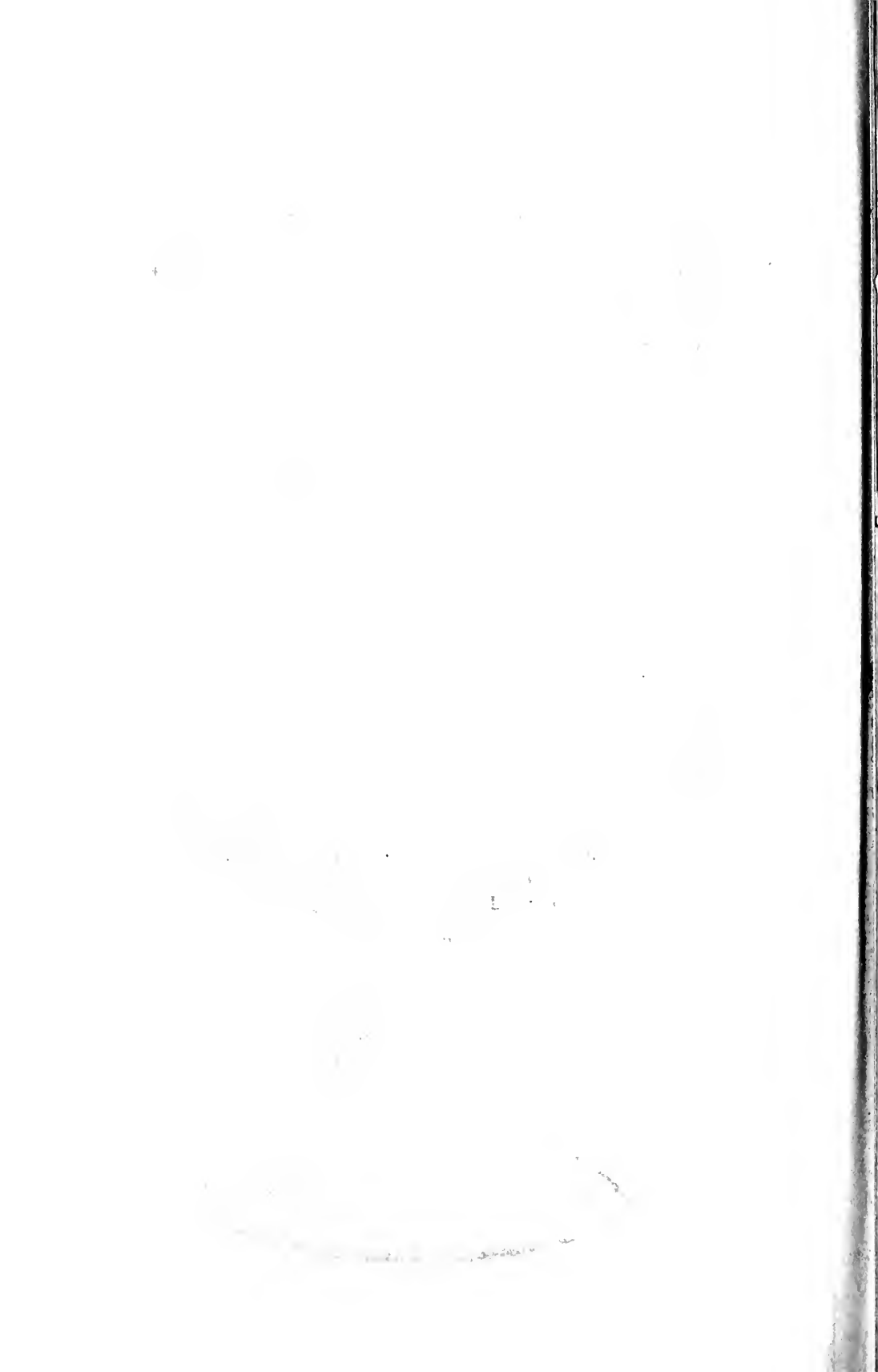
POTTERY.

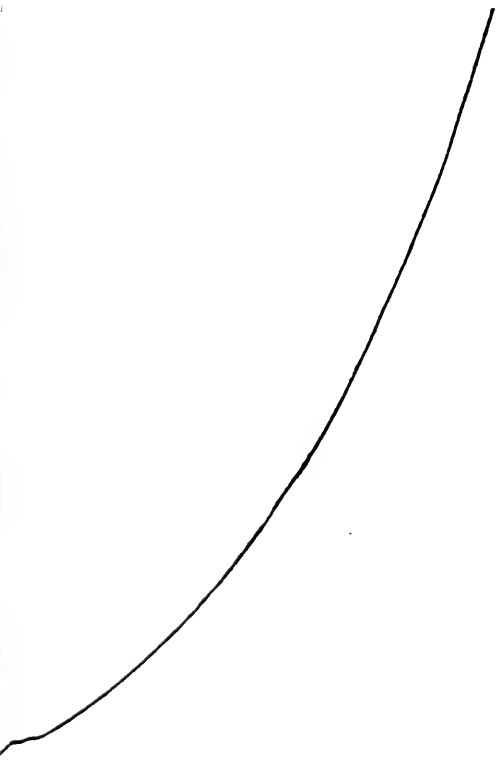
There were twelve entire pieces of pottery in the grave. The piece of the greatest interest is represented in Fig. 41. It is six inches in height and is painted a dull grayish color. In shape it resembles the typical Cuzco form inverted, and is a unique specimen, I believe, for South America. A gradually contracting globular body, terminating in a broad mouth with narrow recurved lip, rests on a graceful pedestal which in form is simply the neck of the ordinary Cuzco vase. On one side is a handle fashioned from a thin band of clay, while on the opposite side is a letter Y in relief. A further peculiarity of the vessel is the fact that it is provided with a flat, well-fitting cover which has a handle.

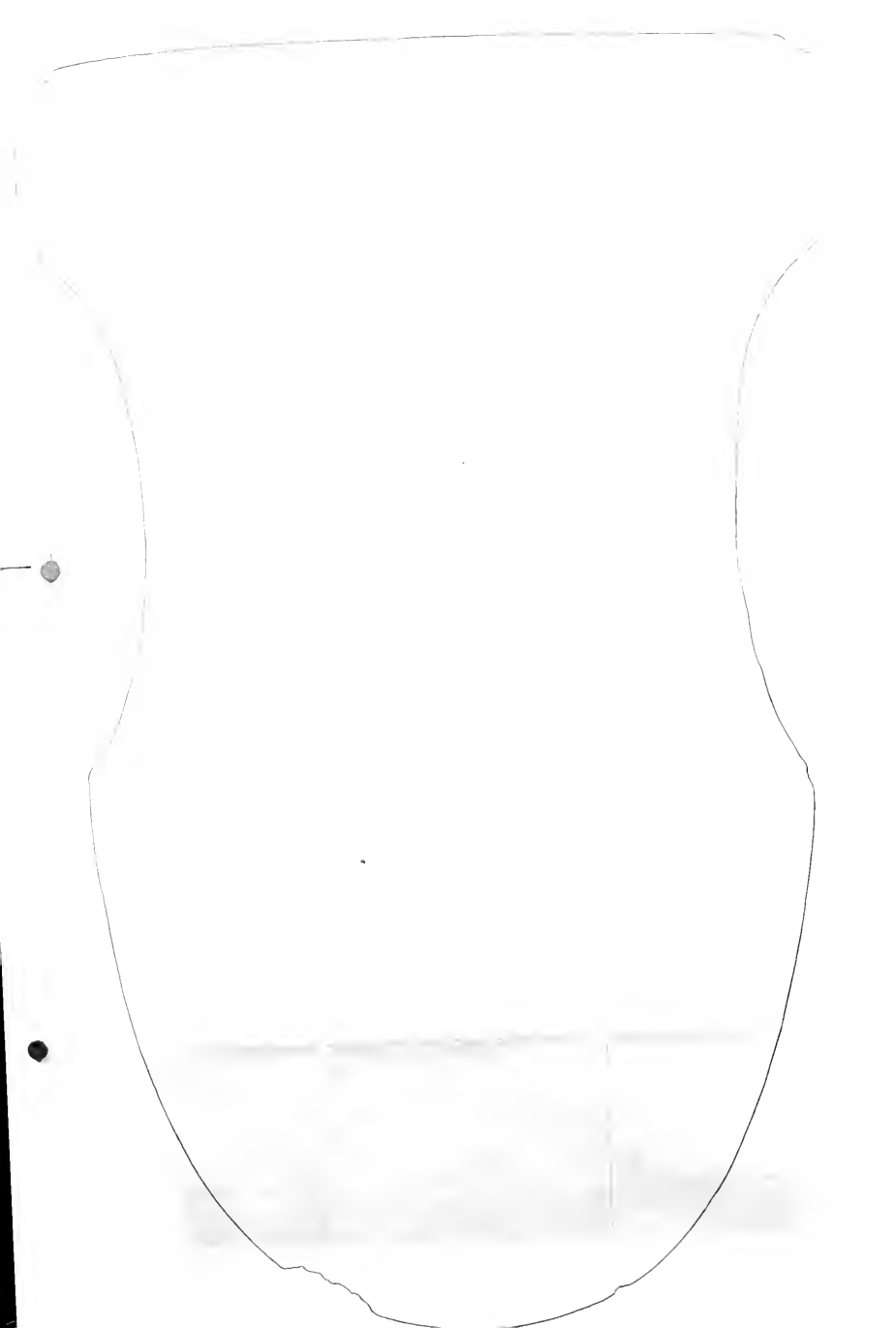
Second only in interest to the specimen described are two vases almost alike in form, one of which is figured in Pl. XLII. This specimen has nothing to distinguish it from hundreds of such specimens in the museum from the vicinity of Cuzco, and I may add that, according to my estimation, no more beautiful pottery has been found in America than this same graceful Cuzco type. It is characterized



FIG. 41. EARTHENWARE VESSEL FROM GRAVE.







by a pointed base, delicate neck, broadly turned mouth and large, gradually contracting body. Near the lower portion of the body of the vessel and on opposite sides are two handles, by means of thongs through which the vessel was carried. The decoration is typical and characteristic. The neck is encircled by white and red lines alternately, while on the body the decoration is confined to one side. Here we find three parallel red lines extending from the lower extremity of the neck to the beginning of the base; these lines enclose many short, black, horizontal, parallel lines arranged in groups of five. Beyond the three central red lines and on each side of them, and bordered by additional red lines, just in front of the handles, is a tree or plant-like ornamentation so characteristic of Cuzco pottery of this class. On the middle red line, and thus near the center of the vessel, is an equally characteristic ornament, consisting of the highly conventionalized head of a puma in bold relief.

In general shape the other vessel is like the one just described. The side of the vessel, upon which is a small puma head in relief, and the under portion of the vessel have been painted white, and upon this is a black line decoration of geometric figures which has almost entirely disappeared.

There are also three small vessels, devoid of general interest, which may have been used as toys. Two of them are undecorated, while the third has been painted red, upon which is a decoration of parallel rows of black triangles. The remaining pieces of pottery are dish or saucer-like forms, three of which have, as a handle, on one side a conventionalized duck's head. These three pieces are beautifully decorated inside with parallel red bands. All the pieces of pottery just described, with the exception of the piece first mentioned, have nothing to distinguish them from the ordinary forms found over the entire Quichua territory.

CEREMONIAL STONE AXE.

The remaining object to be described from the graves is probably the most remarkable of all and in many ways it may be considered as one of the most remarkable stone implements ever found. In length it measures nineteen and one-half inches and in the broadest part twelve and one-half inches, while its thickness in no part exceeds three-quarters of an inch (see Fig. 42). It is made of grayish trachyte, is most beautifully polished and is in perfect condition except for a small indentation near the lower edge. It requires but a superficial

examination to lead to the instant belief that it never could have been put to a utilitarian purpose, and that it was used ceremonially there can be, I think, no doubt. Near the lower extremity toward each corner, and on the corresponding opposite sides (see Pl. XLIII) is an irregular surface from two to three inches in diameter, which has been abraded by having been struck many times by some metallic or stone object. These surfaces, situated as they are, have led me to the belief that the axe was suspended by some sort of thong and that these abraded surfaces were produced by its being constantly struck to produce a sound. Suspending it in the manner indicated and striking it with a copper pin it gives forth a clear resonant tone not unlike that of a bell. Inasmuch as objects of a similar nature have been used as a sort of gong or bell in temple worship in different parts of the world, it may be possible that the axe under consideration was used in a similar manner.

II. REFUSE HEAPS OF THE PLATEAU.

Mention has already been made of squared and circular stones and curious fragments of pottery which were found during the work of excavation in the triangle near the beach. Inasmuch as all such fragments there encountered were found in various strata of drift which had been brought down from above, and as no pieces of this material were found in any of the layers of ashes, it would be reasonable to look to the summit of the plateau for the source of this material. The credit of finding the original location of these curious stones and pottery must be given to my assistant, McKinley, who while looking for cattle on the plateau, on the third day after our arrival, came unexpectedly upon a large heap of fragments of clay images. On the following day I examined that portion of the plateau lying just above and beyond the ravine and was so fortunate as to find additional heaps of this material. Whatever doubt I may have had regarding the supposition, that the objects found in the earth at the base of the plateau came from above, was set at rest by my finding the upper portion of a clay image in one of the refuse heaps on the plateau, the other half of which had been found at a depth of thirteen feet in the excavated triangle. For the purpose of convenience I shall treat the material from these two sources as a single collection.

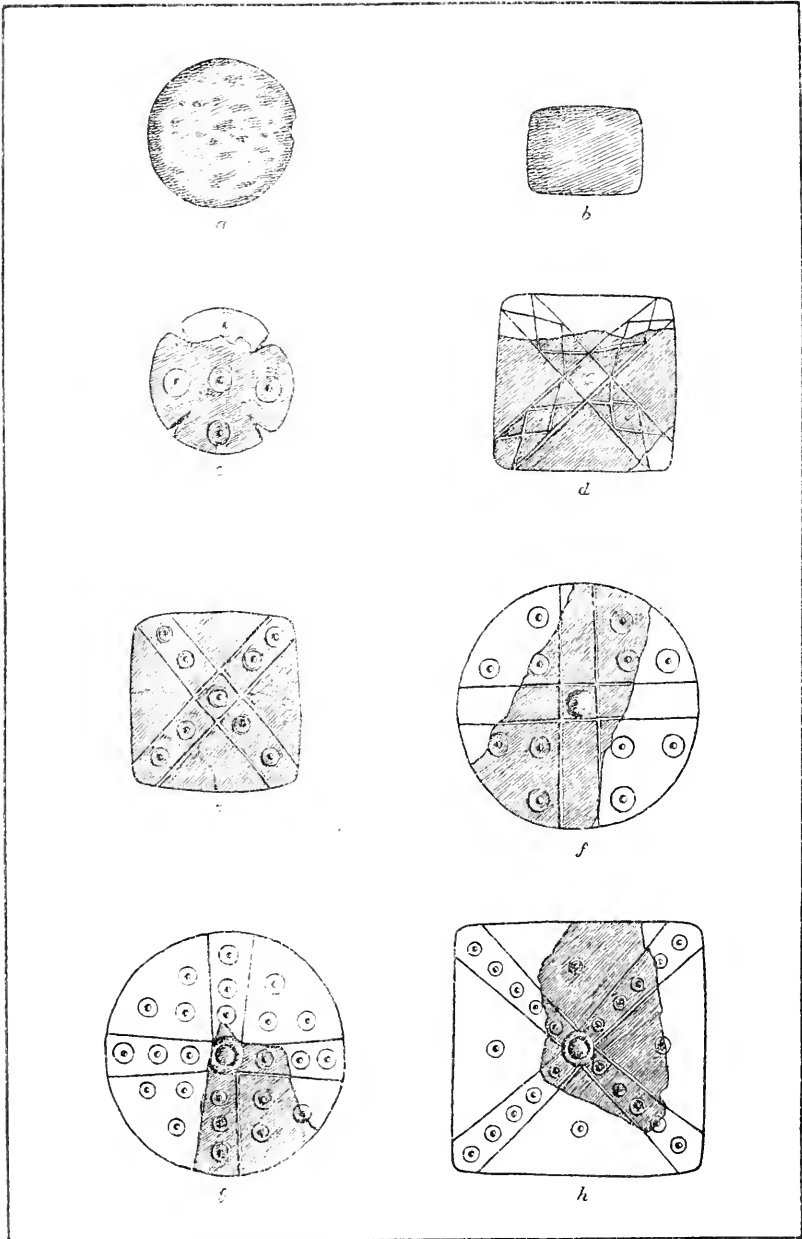


FIG. 43. REPRESENTATIVE SQUARED AND CIRCULAR ENGRAVED STONES.

RECTANGULAR AND CIRCULAR ENGRAVED STONES.

With equal frequency both in the refuse heaps on the plateau and in the drift earth at its base were large numbers of engraved rectangular and circular stones.

The stone used for all of the squared and rectangular blocks and for a few other forms which were encountered is a volcanic tuff, grayish white in color. The stones were probably brought to their present condition by the grinding or rubbing process. The incised lines were probably made with some sharp instrument and they are extraordinarily clean cut. In fact when one first examines one of these lines, so clean is it, there is such a total absence of the scratchings which would have resulted had the line been laboriously incised, one is tempted to believe that the specimens were made of clay and that the lines were engraved while the clay was wet. As a matter of fact, it is probable that when the rock was first quarried it was much softer than it is now, and that the clean cut lines, such as I have described, were made with a single stroke of some sharp-pointed instrument.

The largest stone measures five inches in length and breadth by two and one-half in thickness, while the smallest measures four inches by four by three and one-half. Of the circular specimens the largest one measures five and one-half inches in diameter by two inches in thickness, while the smallest one measures four and one-half in diameter by three inches in thickness. All of these stones (see Fig. 43) are engraved on one side only. This takes the form of two pairs of parallel lines extending, in the squared stones, diagonally across, crossing each other at right angles. The intervening space between the parallel lines varies in one specimen from one and one-fourth inches to one-half an inch in the smallest. In every specimen found the space formed by the parallel lines is occupied either by a series of circles (see Pl. XLIV), or by a series of zigzag lines, or, in one specimen, by both (see Pl. XLV). In one instance the parallel lines were three in number, crossing as usual at right angles (Pl. XLVI, *b*), while in still another specimen the parallel lines were four in number (Pl. XLV, *b*). In all of the specimens except three the space lying outside of the parallel lines was left vacant. In the three specimens where this was not the case, the space was occupied by one circle in one instance (Pl. XLV, *a*), three circles in another (Pl. XLVII, *a*) and by four in the third specimen (Pl. XLVII, *b*). The number of circles or triangles found within the parallel lines varies (see Pl. XLVIII) from two to five, four being the most common.

In two of the specimens the treatment of the region of the crossing of the parallel lines, that is, of the central region of this face of the stone, is somewhat unusual (see Pl. XLIX). In one, the two lines meet in a circle one inch in diameter, the central portion of which has been slightly excavated. In the other specimen the lines are bounded in the central portion of the stone by a raised circle which itself is decorated with a row of seven engraved circles. The treatment of this space in the other specimens varies from a single specimen, where the square formed by the crossing of the parallel lines is devoid of marks, to another specimen where the square is occupied by an incised circle.

In no specimen is there any marking on the side opposite the engraved surface, but in four of the specimens (see Pl. L) the remaining side has received some sort of treatment. In two instances the surfaces contain five parallel perpendicular lines arranged in pairs at each end, with a single line in the middle, all crossed by a horizontal incised line passing around the stone at its center. In another specimen a horizontal line is carried around the center of four sides of the stone extending down to which is a zigzag line so arranged as to form three triangles on each side of the stone. In the fourth specimen each surface contains two lines which, starting from the upper corner, converge at the center of the under surface of the stone.

With these stones must be described a single other specimen which in its character more nearly approaches these than any of the other material. This specimen (see Pl. LI, *a*) is circular, measuring three and three-quarters inches in diameter and less than one-fourth of an inch in thickness. At diagonally opposite sides notches have been cut into the stone, extending toward the center to a depth of one-half an inch. In each segment thus formed by these notches is an incised circle, the center of which is perforated. The center of the stone is also occupied by an engraved circle similar to the others, which is also perforated. The treatment of both sides of the stone is exactly alike.

As for the use of these curious stones, which have been prepared with much care, I can form no conclusion which is satisfactory, but it is possible that they were used in some game though this theory is considerably weakened by the fact that the number of circles within the parallel lines is not uniform, while the spaces outside the parallel lines are in some cases occupied by circles, and in other cases left plain, while, finally, an entirely different category of stones, yet to be described, are found which contain similar engraved circles, but which presumably could not have been used in any game.

RECTANGULAR STONES WITHOUT ORNAMENTATION.

These stones are of the same material as those in the category just described and all have been fashioned with similar care (see Pl. LII). The largest one found measures four and one-half inches in breadth by five and one-half in length and in the center measures one inch in thickness, the center being slightly thicker than the ends. The smallest specimen of this sort found measures one and one-half inches by one and one-quarter inches in length and breadth and is one-fourth of an inch thick. Between these two extreme sizes was found a complete intervening series, so that for whatever purpose the smallest stone was used, that also was probably the character of the largest of the series. What this purpose was I have no suggestion to offer. Closely related to these rectangular stones, and in fact forming a connecting link between them and the series next to be described, was a series of stones of somewhat the same general type but having an elliptical shape (see Pl. LIII). Stones in this series were found ranging from four inches in length down to two and one-half.

CIRCULAR-STONES WITHOUT ORNAMENTATION.

These stones (see Pl. LIV) vary in diameter from four inches in the case of the largest to one and one-half inches in the smallest. The diameter in no case exceeds one-half of an inch. The specimens are generally slightly thicker at the center than they are at the sides and all have been prepared with care. An examination of the edges does not reveal any mark of use and naturally owing to their softness, like the category previously described, they could not have served as implements. Two of the disc-shaped stones, one of which was made with unusual care, are perforated in the center (see Pl. LV). It might be possible to consider these as spindle whorls, were it not for the fact that in one of the refuse heaps two small beautifully engraved spindle whorls were found, which have nothing to distinguish them from those found throughout the west coast of South America from Ecuador to Chili.

CYLINDRICAL-SHAPED STONES, NOT PERFORATED.

The stones in this category are rather uniform in size and average about three inches in length by one in diameter (Pl. LVI).

None of them show use-marks of any sort and only one has been handled sufficiently to give it any degree of polish whatever. None of the specimens are perfectly true cylinders, the aim apparently being merely to produce a general cylindrical shape.

PERFORATED AND ENGRAVED STONES.

Somewhat similar in size to the cylindrical-shaped stones just mentioned is a large series of perforated rectangular stones (Pl. LVII). These vary from three and one-half to one and one-half inches in length and from one to three-quarters of an inch in thickness and breadth. The four long surfaces in all of these stones have been decorated with a row of engraved circles, varying from three inches in one instance to six in another. These circles have a general uniform diameter which varies from one-quarter to one-half an inch. In several of the specimens two sides, always opposite, have been further treated by the addition of two circles placed on either side of the row. In one instance the supernumerary circles are at the end of the stone, while in another they occupy the center (see Fig. 44). Like the circles on the upper side of the stones described in the first category, all of these have a slight excavation in the center. None of these specimens show any sign whatever of usage, nor does a careful examination of the central perforation lying through the entire length of the stone reveal the slightest trace of a mark such as would have been left by a cord, in case the stones had been suspended.

Interesting merely from the standpoint of technique are four fragments of the stones, being broken through the center, thus making it possible to determine the character of the perforation throughout its entire length (Pl. LVIII). In all of the specimens the drilling was done from both ends, the perforation meeting at or near the center.

PERFORATED STONE BEADS.

Exactly similar in general shape to the stones just described is a long series of perforated stones which may have been used as beads (Pl. LIX). These vary from cylindrical to rectangular in shape and are from one-half to three and one-half inches in length. Although these have been spoken of as beads, it must be admitted that no trace whatsoever of usage has been found, and it is not possible to conceive of stones of material so soft as are these to have been worn, even for a short period, without their showing use-marks.

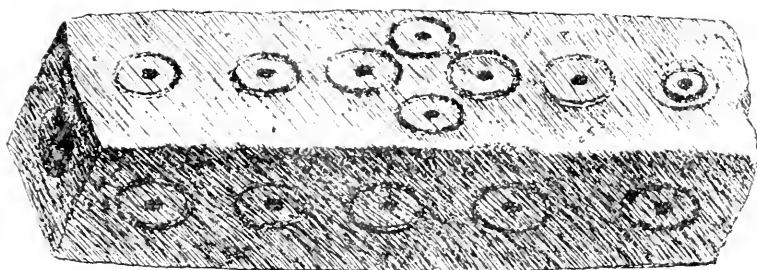


FIG. 44. PERFORATED AND ENGRAVED STONE.

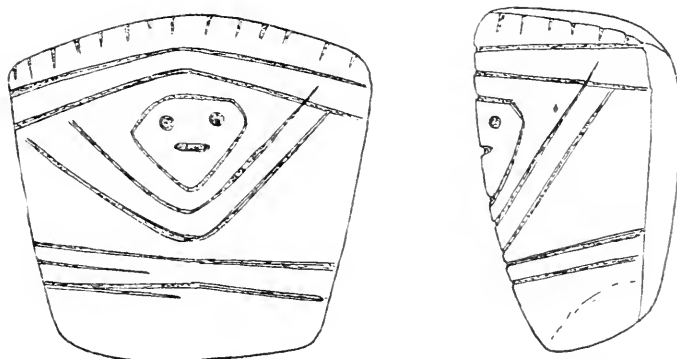


FIG. 45. ENGRAVED STONE REPRESENTING THE HUMAN FACE.

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Somewhat similar in shape to these perforated stones is a series of stones varying from two to three inches in length, rectangular in shape, but tapering somewhat on each face toward the end (Pl. LX, *e, f, g*). These stones have not been perforated from end to end, but instead there is a hole extending from each end toward the center for the extent of a quarter of an inch, which is met by a hole of similar size coming from one of the faces of the stone. In the illustration is a specimen which had been broken in two, which makes plain this manner of perforation.

Additional bead-like stones were found (see Pl. LX, *a-d*) all of which were perforated from side to side, but on three specimens the diameter along the perforation of the stones is considerably less than the transverse diameter. Only one of these specimens is more or less imperfect.

ENGRAVED STONES REPRESENTING THE HUMAN FACE.

Among the most interesting objects in stone found were three elongated V-shaped stones, the shortest one measuring four inches in length, the longest one five and one-half. These stones have a breadth of about one inch at the base and taper off toward the outside edge in all proportions. Each one bears on its edge a conventionalized human face consisting of a lateral incision for the mouth and excavations for the eyes. In Fig. *a*, Pl. LXI, two parallel lines start at the back of the head and take a downward direction meeting in front below the chin; while further down on the stone are two additional parallel lines which begin at the back and meet in front. Just over the eyes is a circular line which begins at one side of the base of the stone and passes around to the other side. On the narrow crown of the head are two lateral lines and one median line; these median lines are crossed at regular intervals by eleven sharp incisions. Fig. *b* resembles to a certain extent the figure just described. There is simply one line on the body of the figure which bounds the face and separates it from the body proper. Around the head, and passing over the forehead from one side to the other, are two parallel deep incisions, extending down into the top of which are a number of deep incisions at regular intervals which start just at the top of the head. Fig. *c* has exactly the same markings as have been noted for Fig. *a*. The top of the head, however, in this figure is not sharp but flat and is provided with little incised lines, as has been noted in Fig. *b* (see Fig. 45).

FRAGMENTARY MASSES AND WORKED BEADS OF
TURQUOISE, ETC.

A number of rough masses of turquoise, sodolite, serpentine (see Pl. LXII), gray marble (see Pl. LXIII), agalmatolite and pagodite were found, and in addition a large number of beads representing each of these minerals. The majority of the turquoise beads had not been worked. One, however, is an irregularly shaped mass, measuring two and one-half inches in length by one and one-half in diameter and drilled from end to end; its surface has been fairly well polished (see Pl. LXIV). Of lapis lazuli no less than twenty-eight carefully finished cylindrical beads were found (see Pl. LXV); while of beads of agalmatolite there were thirty-five (see Pl. LXVI). The majority of turquoise and lapis lazuli specimens were found at the base of the plateau and not in the pottery heaps of the summit of the plateau.

MISCELLANEOUS WORKED STONES.

Among the stones not falling within any of the categories mentioned are three worthy of brief notice. Perhaps of greatest interest is a finely carved specimen representing some small quadruped (Pl. LXVII, Fig. *a*). This is beautifully polished and has received unusual attention. The specimen measures two and one-quarter inches in length. Also of interest is a fragment of a stone metate (see Pl. LXVIII). This is five inches in width and in its original condition measured perhaps a foot in length. The fragment rests on two well made circular feet, one inch in length. The third specimen (see Pl. LXVII, *b*) is a cone-shaped stone, being about two and one-half inches in height. Just below the apex is an annular constriction, for what purpose it is not known, as the groove is not of a depth to permit of a cord having been passed around it so that it might be suspended. The apex of the cone is truncated and in the center of the surface thus formed is a slight depression. The under surface is without marks of any sort.

POTTERY—GENERAL CHARACTER.

In addition to the innumerable squared stones, etc., just described, the refuse heaps of the plateau yielded an immense amount of pottery. Practically all of this pottery was in fragments, only two

pieces being found in perfect condition. With the exception of possibly not more than a dozen pieces, all the fragments were parts of small images in the form of human figures. The clay used in the manufacture of the pottery, while of fairly good texture, and in many ways superior to that used by the inhabitants of the mainland of Ecuador, is greatly inferior to that used by the natives of Peru and to that used in the vessels which were found in the graves on the lowland of the island near the coast. From fragments representing perhaps a thousand images not more than a half dozen pieces were found which bore any trace of paint; these were painted red. The pottery reveals no uniform method of firing, many of the pieces being almost unburnt. No fragment was found, however, which had been subjected to a heat so intense as to cause the particles of sand in its composition to vitrify. All the pottery, with a very few exceptions, is hand made; that is, it was not made in a mould, which was commonly employed on the south mainland of Ecuador and throughout a large extent of Peru. In nearly all of the pieces, finger marks can be plainly distinguished on the inside of the images, which are generally hollow and often crudely executed, there being, as a rule, no attempt at finished work.

COMPLETE SPECIMENS.

As has been stated, but two specimens were found in an intact condition (see Pls. LXIX and LXX). These are similar in general character, both representing a man in a sitting posture, with the legs extended in a curved position in front and the hands resting on the knees. The face has been done with considerable detail and both wear a helmet or head-dress. On neither of the figures is there represented any trace of a garment or of clothing. Both figures have about the neck a cord-like enlargement, from which depends an object which may represent a conventionalized animal head.

The larger of the two figures measures nearly eight inches in height. In addition to the features already described, which it has in common with the other figures, there are several points worthy of notice. The image as a whole is rather rudely made and shows signs of haste and carelessness. At the same time the salient features of the human form are characterized with striking boldness. The legs consist simply of a hollow band of clay brought out in the form of a circle in front of the body. Resting on this circle are conventionalized arms, the fingers being represented by three deep incisions made in

the soft clay near the region where they join the legs. Placed near the center and on top of each arm is a clay fillet, each one with four deep incisions in the center made with a sharp instrument; these may represent arm bands. Over the head is a cap-shaped affair from which projected two cone-shaped masses, now broken off. Just beneath this cap is a depression running from back of the ear up and over across the forehead. Just beneath this and above the nose are three small, raised, knob-like protuberances; these are not unusual. The ears are simply triangular appendages of clay extended out from the face; into the center of the appendage is a deep incision which, as may be seen in other specimens, entirely pierces the ear. Under the nose there is represented a large nose ornament which entirely fills the space between the upper lip and the nose. The mouth itself, as in the majority of the heads, is represented as open and is simply an elliptical-shaped incision. The chin is interesting, inasmuch as from it project two bits of clay producing an effect not unlike that of a divided beard.

The second complete figure differs in no material respect from the one just described. The head-dress, instead of having two projections on the top of the head, has nine. There is only a faint indication of the ear. The eyes have the same general treatment as in the specimen just described, and as they are better shown in this specimen they may properly be noticed here. In forming the eye, the maker with his two fingers simply worked out a slight protuberance from the face, which was rounded off and elongated; into this, with the sharp point of some instrument, two elliptical incisions were made, thus giving the effect of the eyeball.

TREATMENT OF THE HEAD—NO COVERING.

In the specimen represented in Pl. LXXI, we have the fragment of a figure which must have stood at least twelve or fourteen inches in height. The treatment of the head is quite different from that of the specimens just described. Instead of the covering with the projections, the head is represented as the open mouth of a vessel. On the forehead are two protuberances, while running out from the nose and just over the eyes are two ridges. These may represent a very highly developed superciliary region, or perhaps be characterizations of tattoo marks. The head has been so mutilated that it is not possible to make out the character of the ears, but just in front of the place where the ears should be is, on one side, a large hole, while on the

other side this hole is occupied by a cup-shaped affair. In one or two other specimens similar objects were found represented as piercing the cheek. So far as I know this practice has not been observed except in very limited areas in South America. The Chunchos of the Pangoa Valley, Peru, have their cheeks pierced in a position similar to that indicated in the figure under discussion, and in these holes they wear feather ornaments.

HEAD DECORATIONS; PYRAMIDAL PROJECTIONS.

In the specimens shown in Pl. LXXII we have the same cup-shaped affair on one side of the head, while on the other side there is half of a hole, which probably originally contained an object similar to that on the other side. In this specimen, however, the cup-shaped object passes through a part of the cheek very close to the neighborhood of the ear. In fact it is possible that in this specimen the object was actually intended to represent an ear ornament. The head-dress consists of twelve horn-like projections, similar to those already described, arranged in three parallel, horizontal rows. The nose is very large, sharp and long.

In the specimen represented in Fig. A, Pl. LXXIII, we have five horn-like projections on the head, two of which have been broken off. The face is decidedly dish-shaped. A very large mouth is prolonged forward into a decidedly sharp chin. The entire face does not terminate in the usual way, but is prolonged out on all sides into a continuous ribbon-like band of clay. Two pellets of clay represent the eyes, while at the sides and slightly above the mouth on the cheek are two depressions which were made with the point of the little finger, the nail-marks being still quite apparent.

FACE BOUNDED BY BROAD PROJECTING BAND.

In another specimen (Pl. LXXIV) this ribbon-like projection bounding the face simply extends from above one ear to the other, its outer border being decorated with several small balls of clay. Behind this visor-like projection are the usual horn-like appendages. The ear is unusually well marked and has in its center a large depression, which may represent the opening into the ear, or it may be the indication of a place for an ear ornament.

In the two specimens shown on Pl. LXXV we have this ribbon-like projection from the face continuing considerably below the ear

in one specimen, while on the other it reaches down on to the shoulder. Each head bears the usual complement of horn-like projections on the back of the head. In Fig. *b* there is a raised band lying just between the face and the side appendage, terminating in a button-shaped object lying in the region of the ear. The beard-like representation will also be noted in this specimen, while below the nose may be made out two slight incisions, which may represent tattoo marks.

We have in the two specimens figured on Pl. LXXVI, interesting representations of heads having a treatment somewhat similar to that just described. In Fig. *a* the outer part of the band has been decorated with four ball-shaped objects, while in Fig. *b* there were only two of these objects, one of which has disappeared. Instead of the usual treatment of the head, we find in each specimen a band about one inch in width projecting upwards and backwards. Just what these are intended to represent cannot now be made out as the bands terminate at present in a fracture, having been broken.

In the specimen in Pl. LXXVII we have a treatment of the head which differs considerably from any already described. The head band is still present, but only in a very diminished form, consisting of a slight ridge running across the forehead. From the median part of this line extends backwards another ridge which has been partly divided by means of a sharp instrument when the clay was still wet. The nose in this specimen is provided with a well marked appendage, while the ear has received a treatment which is especially interesting. In the pinna are on one side seven and on the other side nine little clay pellets pressed close against the ear. These undoubtedly represent perforations made in the ear, which, during life, received some plug-like ornament.

HEADS WITH SIMPLE AND UNDECORATED TREATMENT.

From the specimen just described we pass, by an almost imperceptible gradation, to a number of heads which are interesting on account both of the simplicity of the treatment and of the great beauty betrayed in the face itself. In the two specimens represented in Pl. LXXVIII there is no indication of the head-dress, while the eyes, ears, nose and mouth are only faintly indicated.

In specimens represented in Pl. LXXIX we have a similar treatment for the head, but here there is a decided elongation upwards and backwards and the whole seems to be surmounted by a helmet



FIG. 46. EARTHENWARE IMAGE SHOWING POSITION OF WHISTLES.

or covering which vividly suggests the early Egyptian head-dress. The treatment of the face here is remarkable for its portrayal of refinement. In Fig. *a* there is sufficient of the image to show something of its character. The arms are treated in the most conventionalized manner. Near the center of the breast may be seen two objects projecting downward from the inside. These are both whistles which were blown through a hole in the back of the head. As a matter of fact, all of the specimens except the one already described, and nearly all of the remaining heads to be considered have this hole in the occipital region, and in every case where we have the body of the figure present we have either one or two whistles. The two figures under discussion are very interesting from the fact that both were made in the same mold. One of them has been subjected to a coat of red paint, which on one side has been very much blackened by means of smoke and fire.

The specimens on Pl. LXXX have also been made in a mold and in general characters do not differ materially from the two fragments just described. Both are remarkable specimens as works of primitive art.

In Pl. LXXXI we have a figure of unusual interest, inasmuch as it represents the upper portion of an image. There is evidence that this specimen was made in a mold. The figure is apparently that of a woman, there being two slight protuberances which may be considered as representations of the breast. In her hands and passing up over the back of her shoulder she holds some club-like object. About the neck is represented a string of beads. At first sight there appears to be a nose appendage, but closer inspection shows this rather to be an imperfection in the mold, a portion of which adhered to the upper lip.

GROTESQUE HEADS.

In Pl. LXXXII are four figures, all small in size. Fig. *a* consists of the head of an image which probably did not stand more than four inches high. Portions of the arms remain and the entire head. Over the head project four knob-like projections, the center one being in reality a whistle with the opening behind. The treatment of the face of this specimen is interesting. From the ears five ridges extend up over the eyes to a line above the nose. These probably represent facial incisions. In Fig. *b* we also have a whistle at the back of the head; also two horn-like projections, each terminating in a knob,

giving the head and ears of a jester of the Middle Ages. The nose has a large appendage, while around the forehead, terminating at the ears, is represented a band or fillet. In Fig. *c* we have an arrangement similar to that just described. The head appendages have been broken off midway their length. The nose of this specimen is fearfully distorted and apparently there was an attempt at the ludicrous. In Fig. *d* the same effect has been produced, but in this case the nose has been unusually shortened.

In Pl. LXXXIII a number of figures are shown differing in many ways from any described. Figs. *a* and *b* represent rather conventionalized faces, which look forward from the end of a tube. Fig. *c* is a crudely expressed caricature of the human face. The region of the forehead has been incised. In Fig. *d* a band passes medially up over the head; while from the sides of the head of Fig. *e* are lateral appendages hanging down below the ear.

In Pl. LXXXIV are two fragments of vessels. In Fig. *a* we have a portion of the face, one eye and one ear. This fragment in material is quite unlike the usual form of pottery found on the island. It is very thick and shows many fragments of pounded shell. It is possible of course that it was brought from a distance. I know of nothing like it on the mainland of Ecuador, but have seen pottery from Cauca Valley, Colombia, which is similar in composition.

In Fig. *b* we have only a portion of the body represented. It apparently was sitting on top of some vessel resembling a typical water bottle of the west coast.

TREATMENT OF THE NOSE.

On Pl. LXXXV four portions of the face have been grouped, as they show features and peculiarities not met with in any of the specimens so far described. Fig. *a* is remarkable for the prominent nose and for the nose appendage, not clearly shown in the illustration. In Fig. *b* the nose appendage is also very clearly shown, while the eyes have received a treatment which so far has not been encountered. In Fig. *c* we have still another form of the nose already described in previous examples, but here unusually well shown. It may be noted also that above the nose are three protuberances similar in every respect to those found on the figure first described. In Fig. *d* the nose appendage is also beautifully marked. In the ear a number of ornaments are represented.

In Pl. LXXXVI two figures are produced, both of which are of considerable interest. Fig. *a* is remarkable for the representation of the nose and pendant ornament, while Fig. *b* is interesting for its beak-like nose and pendant ornament, which terminates in a well executed appendage.

TREATMENT OF THE EYES.

In Pl. LXXXVII are grouped fragments of heads which show certain peculiarities in the treatment of the eye not shown in previous examples. In Fig. *a* the eyeball is very well shown, the lid being represented by a little band of clay. In Fig. *b* an elliptical incision has been made, describing the boundary of the eye. Within this has been placed an elliptical shaped mass of clay with a central depression, a method of representing the eyeball not found except in a few other specimens from this region. In Fig. *c* a rectangular shaped ridge, prolonged downward, marks the iris of the eye. The superorbital ridge of this specimen is unusually well indicated. In Fig. *d* the eye has been formed by drawing out the clay and then making the central region by an incision across the eyeball itself. This treatment of the eye is, so far as I am aware, not found in any of the other specimens from La Plata.

TREATMENT OF THE UPPER EXTREMITIES.

In connection with several of the vessels or fragments of vessels already described, I have spoken of a device fastened to the arms which probably represent amulets.

On Pl. LXXXVIII six fragments are shown, each one of which has some special features of interest. In Fig. *a* the arms are encircled by a small fillet, while the fingers are very rudely indicated by means of three deep incisions made in the soft clay. In Fig. *b*, in which the arm is represented as resting on the leg near the knee, there is fastened to the upper side a broad band bearing on its upper surface six button-shaped objects. This form of arm-band is one of the most common. In Fig. *c* the arm bears on its upper surface six cup-shaped objects exactly similar to those described above as forming ear ornaments. Fig. *d* is interesting inasmuch as, in addition to five small bands which encircle the arm, there has been an attempt to indicate the position of the thumb, there being also five additional

fingers. Fig. *e* bears on the arm, as ornaments, two rounded eminences. These are represented as attached to the wrist just above the fingers, which are represented as unusually long. In Fig. *f* we have a very interesting specimen and the only one of its kind found at La Plata. It represents a portion of the dress of some hollow figure, showing the hand resting on the leg, the upper arm itself, as well as the breast, being covered with something which may be considered a mantle. This is decorated with a number of small, round eminences.

TREATMENT OF THE LOWER EXTREMITIES.

In a large majority of the vessels the legs are represented as extending out in front of a sitting body in a circular form and in many cases highly conventionalized. A few fragments of feet, however, were found in which the figure apparently was represented as in a standing posture. In Fig. *a*, Pl. LXXXIX, we have represented a part of feet which from their shape could hardly permit of a standing figure. The toes are indicated by means of six incisions made with some sharp instrument. Down over the knee hangs a kilt-like representation, its lower edge being bordered with numerous small round pellets which perhaps represent beads. In Fig. *b* we have two boot-shaped objects. The figure of which they formed part was plainly intended to stand on its feet. Each one of the boots is encircled by two parallel, incised bands. Within are a number of rounded projections, the object of which I am not able to surmise.

On Pl. XC are represented four feet differing in character from those described. Fig. *a* represents a rudely fashioned foot with a well-defined heel and five fairly well made toes. This specimen, it may be noted, is solid, an unusual treatment for the figures found on the island. Fig. *b* is unusually well modeled and has been treated to a coat of red paint. Both on the ankle and on the front of the leg are represented two parallel ridges at a distance of one and one-quarter inches apart, which have been incised at short intervals. Fig. *c* is boot-shaped, there being no indication whatsoever of the toes. Just above the foot are four flattened ornaments. Fig. *d* is also the foot of a figure which was probably not made hollow. Four toes are roughly indicated.

On Pl. XCI is a fragment of some unusually large image. This probably represented a female, inasmuch as one of the breasts is

presented in a realistic manner. This is the only well-defined indication of sex encountered in the pottery of the island.

OBJECTS FOUND IN THE HANDS OF THE IMAGES.

Objects found in the hands of the images are few in number. On Pl. XCII, Fig. *a*, is shown a small seated figure with a representation of a bird resting on the left arm. Owing to the indication of the mammary glands here, it is possible that this was intended for a female figure. It is interesting to note also that projecting out over very short legs and extending almost to the feet, is represented an apron-like garment. The second figure of this plate is a small fragment of a figure not unlike that just described. A rudely modeled bird is represented as resting on the right arm.

On Pl. XCIII are fragments of figures consisting of three arms and a small detached earthenware vessel. Inasmuch as the vessels here presented are all the same, it is possible to believe that we have present the form usually employed for water on the island. It is to be remarked, however, that no fragments of vessels such as these were found.

On Pl. XCIV, Fig. *a*, we have a very interesting fragment of what was probably a very large image. Rudely fashioned hands are represented as extending out in front of the body, bearing on them a small solidly made human image, measuring five inches in length. From the position of the arms of this figure, the small image, which is represented as being carried, must have been pressed up close against the breast. In Figs. *b* and *c* are represented two similar fragments, in which a human image is being carried. In Fig. *b* we have the left hand bearing the head of a small image, the body of which has been broken off just below the neck. In Fig. *c* the treatment is somewhat different. The arms are represented as resting on the legs curved in front of the body. The hands hold a small image which like the others is solid. There is nothing in the treatment of the head-dress in this or the figures just mentioned, or in the treatment of the parts of the body in general, to lead to the belief that the attempt was made, in these carried figures, to represent children.

On Pl. XCV are four small images which from their similarity to those just described, may originally have been placed in the hands of some of the larger figures. In Fig. *b* of this plate the head is drawn unusually large, the eyes are represented as closed, the hands are only faintly represented, while the feet are not indicated, the region of the feet being perforated, as if for suspension.

SERPENT HEAD-DRESSES.

In addition to the various forms of head-dress which have already been described, there are several which from their great interest deserve special consideration. In Pl. XCVI we have one of the most remarkable fragments of heads found at La Plata. There is represented the upper left-hand portion of the head. The eye has received an unusual treatment. The upper lid is prolonged to an extent of half an inch out over the eye, and the edge of the lid has received two small rounded pellet decorations at the extreme sides. Over the head is a broad ribbon-like band passing from the region of the ear up on the forehead above the eye; this has a serrated edge. On the extremities of the serrations there are round masses, while the front surface has been decorated by lines and perforated circles. The band next the face bears a band of clay, terminating just in front of the ear in a spiral and over the forehead in the open mouth, with the projectile fangs of a serpent. On the lower side of this band are two reptilian feet. A close inspection however, of the broad lateral appendage makes it evident that the band itself is a component part of the serpent, there being an eye just above the mouth, while the band itself terminates in a double nostril. In the serration of the band we may have a representation of the plumed serpent common in Yucatan and other regions of Central and South America.

In Pl. XCVII we have additional specimens in which the conventionalized serpent appears, the form here being rather suggested than represented in detail. A band in both specimens passes from the ear up over the forehead and down on the other side. The bands project out over the side of the face as in the above specimen, and as in the preceding specimen, they are decorated with incised lines. In both specimens the projection above the eye bears three rounded pellets.

In Pl. XCVIII are three fragments all representing small portions of the right side of the body. In Fig. *b* the arm rests on the curved legs, while just over the shoulder appears the conventionalized serpent's head. In Fig. *c* only a portion of the shoulder is represented; this also bears a serpent's head. Fig. *a* must have been a very large image; also like the other two specimens, it bears a conventionalized serpent's head.

In Pl. XCIX we have four additional representations of the heads of serpents. In Fig. *a* we have a fragment possibly from some very large image. The head in this specimen as represented is unusually large, with a bifurcated nostril and large eyes. The body is

represented as serrated on its upper border. In Fig. *b* there is the highly conventionalized head of the serpent represented with fangs still more rudely conceived. Fig. *c* is that of a fragment of pottery showing a thin reptile-like creature, with a large head similar to the one just described. Fig. *d* consists of a head, triangular in shape, with a wide grinning mouth, two clearly defined nostrils separated by a deep incision, with eyes placed on the top of the head.

ANIMAL FORMS.

In addition to the representations of serpents just mentioned, a few other animals were found. On Pl. C are shown four representations of an animal resembling a fox. The body is long and tubular and is resting on short conventionalized legs. The heads in Figs. *a* and *b* are rather carefully drawn; both of them, however, are devoid of eyes. In Fig. *c* it is possible that there has been an attempt to represent a caricature of the human face. In Fig. *d* we have two animal heads, not unlike those of a fox, extending out from a hollow cylinder. In the heads of all the animals just described are well made whistles.

BIRD FORMS.

In Pl. CI are represented such few bird forms as were found at La Plata. Fig. *a* represents a small image of an owl, made with considerable care. The feather markings have been made with great pains, but do not appear to advantage in the illustration. In Fig. *b* we have represented the head of some young bird, possibly that of a duck. Within the head is a whistle. Fig. *c* also represents a bird and is a rather spirited piece of modeling. The wings are represented at the back as they may be seen in the young bird just about to attempt to fly. In Fig. *d* we have perhaps a combination of bird and human form. In front of a cylindrical-shaped object is represented, probably, the outstretched form of a man. Looking at the specimen from above, the wings and bill of the bird can be clearly distinguished.

MISCELLANEOUS OBJECTS OF POTTERY.

As has been stated, nearly all the fragments of pottery found on the island were images or portions of images either of man or of animal forms, but six specimens in all being found which did not

have their origin in the above conception. These are all grouped together on Pl. CII. In Fig. *a* we have a small dish-shaped vessel. This was painted red and showed evidence of having been subjected to great heat. Fig. *b* is a fragment, probably of a water bottle, a portion of the globular surface being represented, as well as a small portion of the neck. This fragment is marked with a number of deep incisions. In Fig. *c* we have a small fragment of the edge or rim of what must have been a very large vessel. This is decorated with numerous rows of parallel punctures made with a sharp-pointed instrument. Fig. *d* may represent either a projection which originally served as an ornament on the body of some figure, or it may be, as it appears, a representation of some spiral fossil form. Figs. *e* and *f* are portions of small objects having short handles at one end, and hollow globular surfaces at the other, and near the center a slight swelling which has been perforated from side to side. This swelling is restricted both from the handle and the globular head by means of an incision. These probably were originally diminutive rattles.

GENERAL OBSERVATIONS CONCERNING THE POTTERY.

The most striking fact brought out in a survey of the pottery as a whole is the almost total absence of vessels or fragments of vessels having utilitarian character. Practically all of the pottery may be said to be of the nature of images of the human form, ranging in height from six to possibly twenty inches. Nearly all of these images have secreted within them, either in the head or within the breast, one or two whistles. The workmanship in the majority of the images was hurried, and in many cases crude, but at the same time there is evidence of great ability on the part of the workmen to produce desired forms with great ease and rapidity. The range of expression, as seen in the faces of the images for example, is extremely varied and interesting, and yet in the majority of the cases the expression has been brought about without showing evidence of labored effort. The faces themselves vary in character from portrayals of excessive beauty to strange and grotesque forms. In many cases the countenance is portrayed as decidedly hideous and repulsive. Not the least interesting feature of the pottery is the presence of what we may call the plumed serpent, and in certain other examples of highly conventionalized serpents' heads. Of interest also is the variety of nose ornaments and ear decorations which are portrayed. The ability of the potters to produce different forms of eyes, each one expressive of

some phase of character, cannot be too highly admired. The many forms of arm and leg-bands and ornaments, revealed in the fragments of vessels, as well as the many ways of fashioning the arms and feet are also worthy of mention.

GENERAL CONCLUSIONS.

It seems probable that we have on the island of La Plata evidence, first, of the long occupation by a people who probably resorted here during certain seasons of the year, perhaps for the celebration of religious rites. In no other way can I account for the enormous accumulation of ashes and charcoal which was revealed in our excavations at the foot of the triangle, and in no other way can I account for the great quantities of engraved stones and of the thousands of fragments of earthenware images, which, so far as I can determine, did not serve a utilitarian purpose. That the island was not a place of permanent occupancy is shown, I think, from the absence of objects representing every-day phases of domestic life, such as we might naturally expect to find. One statement that I have been able to find after careful examination of the early writers on the west coast of South America is in this connection of unusual interest. Cieza de Leon, after speaking of certain events on the mainland, says:

“In another small island, at no great distance, the natives say that in the time of their ancestors there was a temple or *Huaca*, where they also worshiped their gods and performed sacrifices. Round the temple they had quantities of gold, silver, and other valuable things, such as woolen clothes and jewels, which had been offered up at different times.”

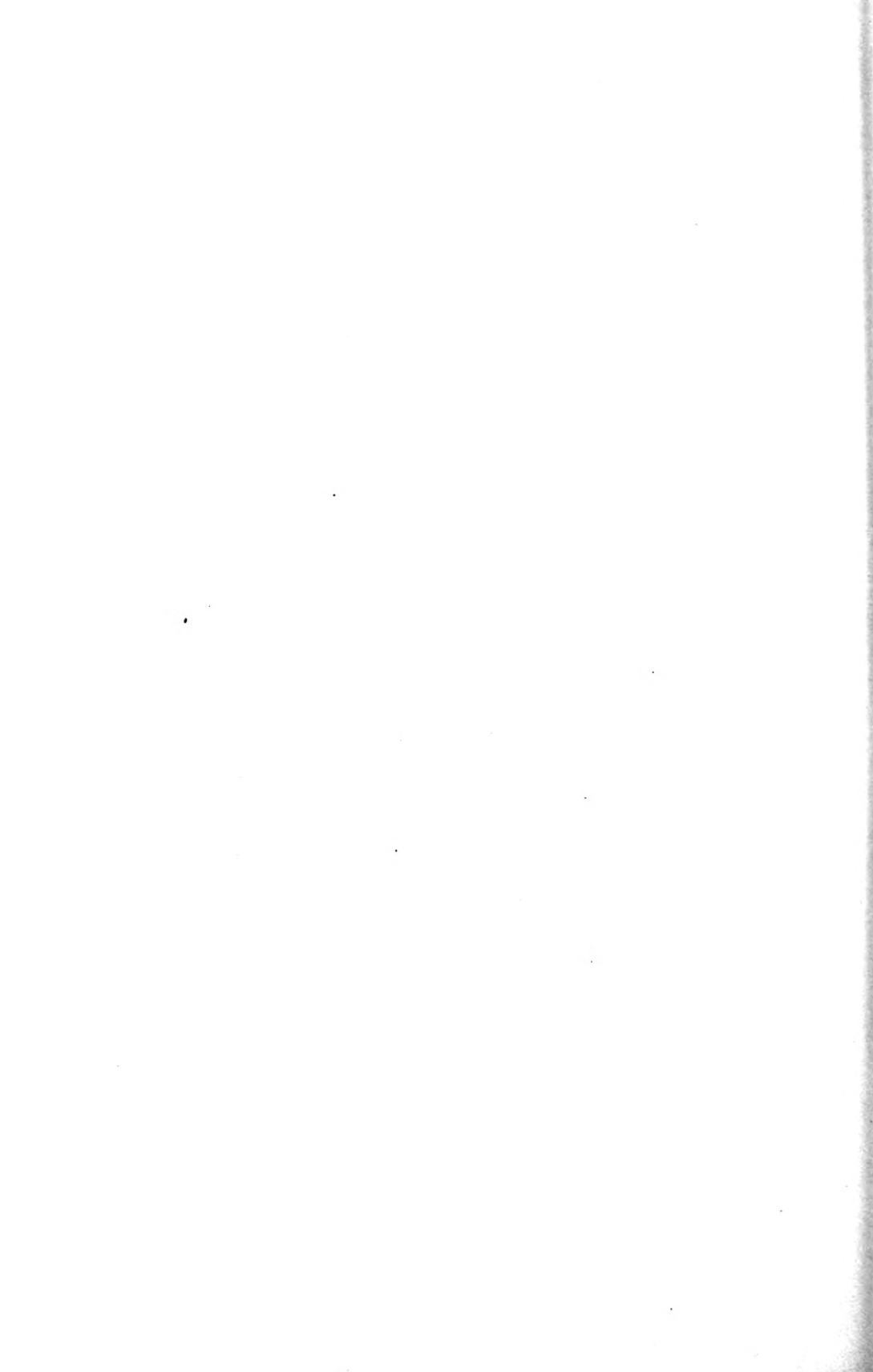
This, I believe, refers to the island of La Plata and perhaps solves the problem as to the presence on the island of the pottery images. Concerning the engraved stones, I am still, after much consideration, unable to offer any clew as to their probable use. The question that they might have entered into certain games has been carefully considered, but they show practically no marks of usage. There is such an enormous range of variation in the size, character, etc., of these stones that it is hard to conceive of any game or series of games in which they might have been used. The second conclusion which, I think, may safely be made is that the graves discovered by General Flores and myself in the explored triangle, represent intrusive burials. Furthermore, I am inclined to believe that the

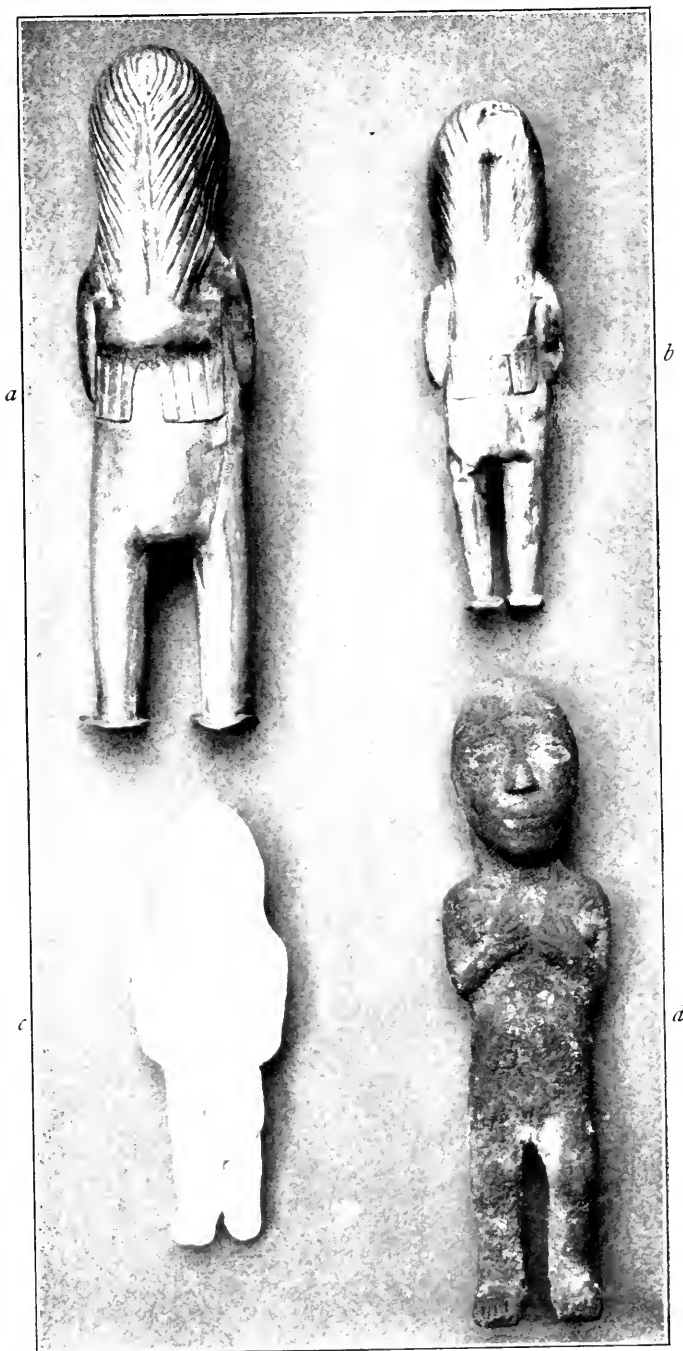
graves were not made by the people on the mainland, who resorted to the island for ceremonial purposes and who practiced rites involving great fires for many generations, but rather by some stray party from the conquering bands of Inca warriors, who, previous to the Spanish conquest of South America, had extended their operations north of Peru. During these operations the Quichuas, as is well known, made excursions to the coast of Ecuador and at the time of its occupancy by the Spanish they practically controlled the banks of the Guayaquil river to the ocean. That parties of the Quichuas also descended to the coast further north in Ecuador is entirely probable.

That the time expended in excavation on the island was quite inadequate to exhaust the possibilities of archæological discovery there is no doubt, and it is greatly to be desired that some investigator may take up the work of solving some of the interesting problems herewith presented. For such investigation, I believe, interesting results would be the reward.

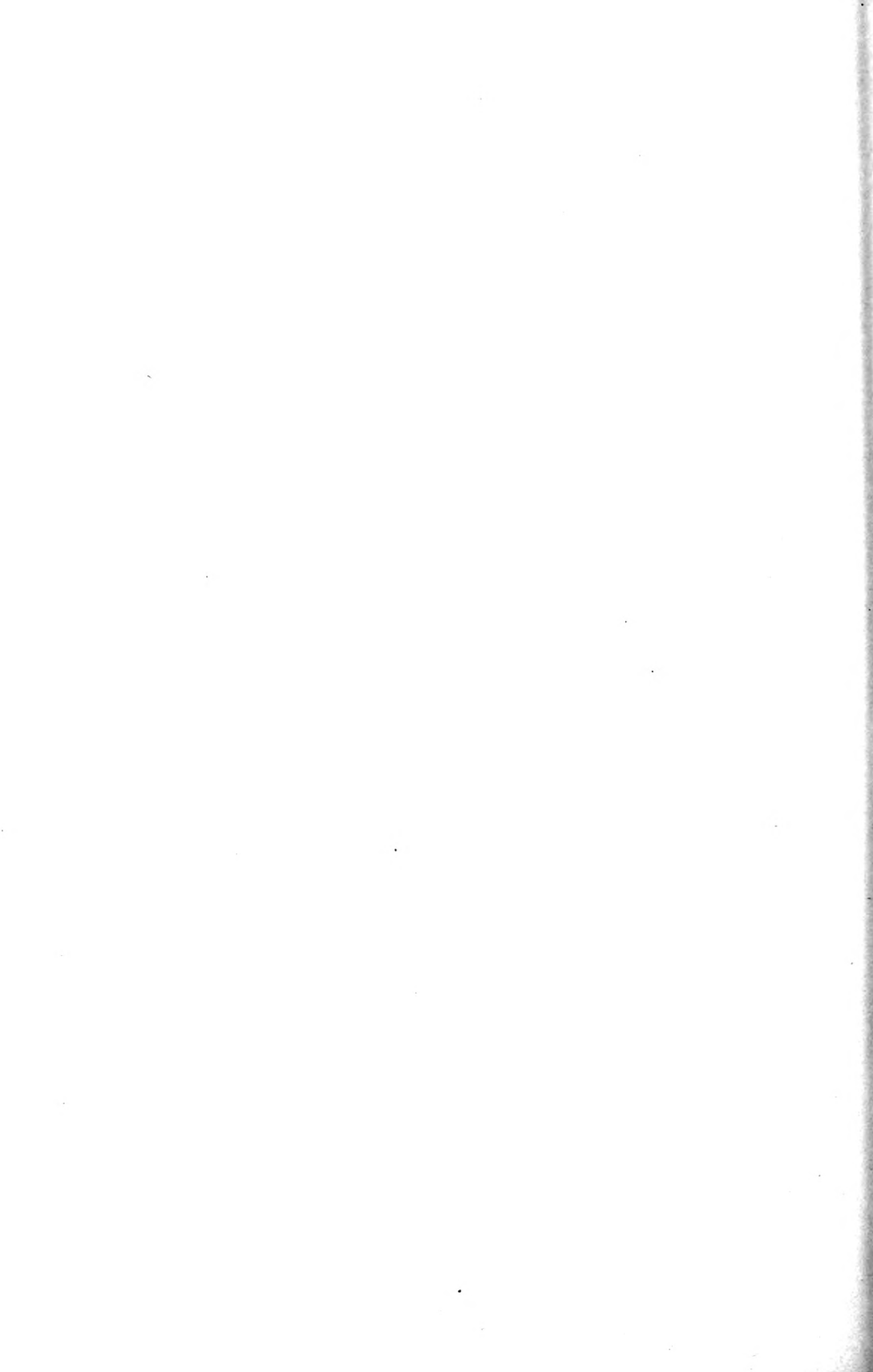


GOLD AND SILVER IMAGES.





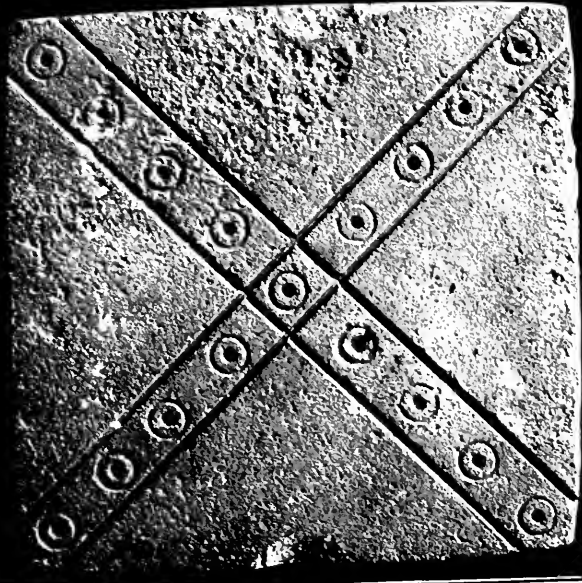
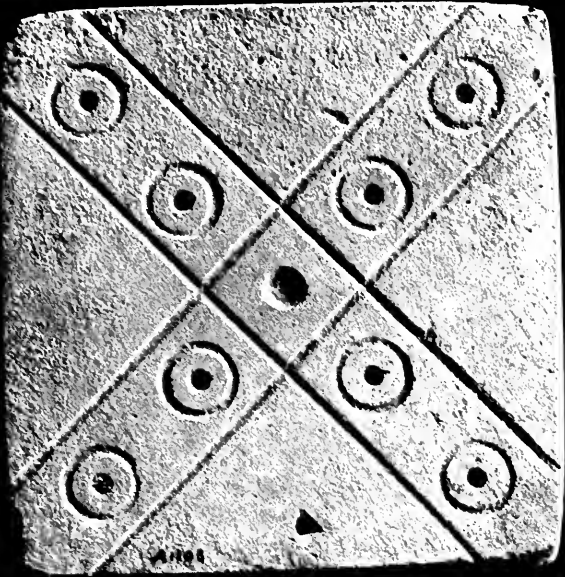
IMAGES OF GOLD, STONE AND BRONZE.





EARTHENWARE VESSEL FROM GRAVE.

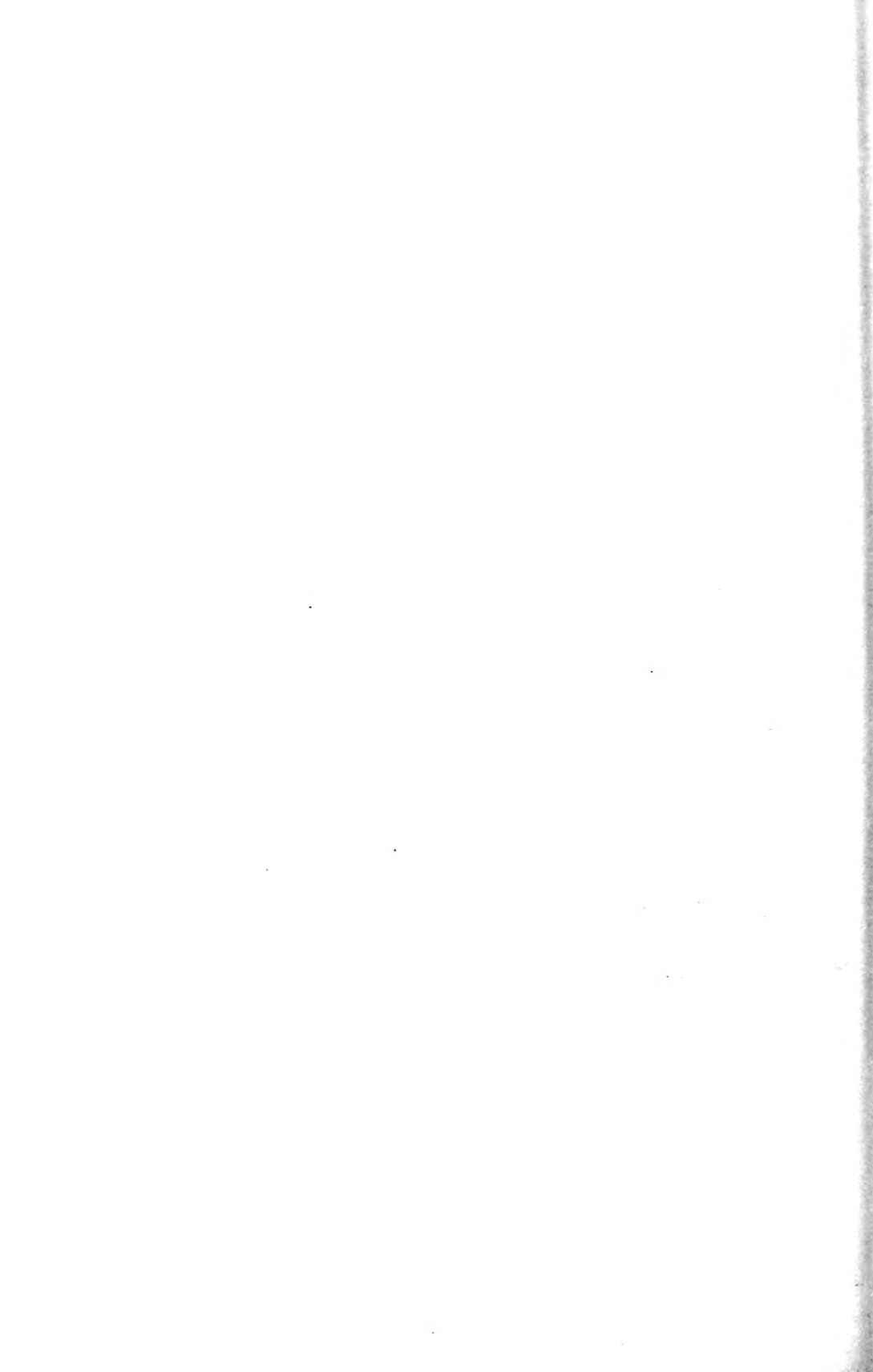




a

b

SQUARED INCISED STONES.

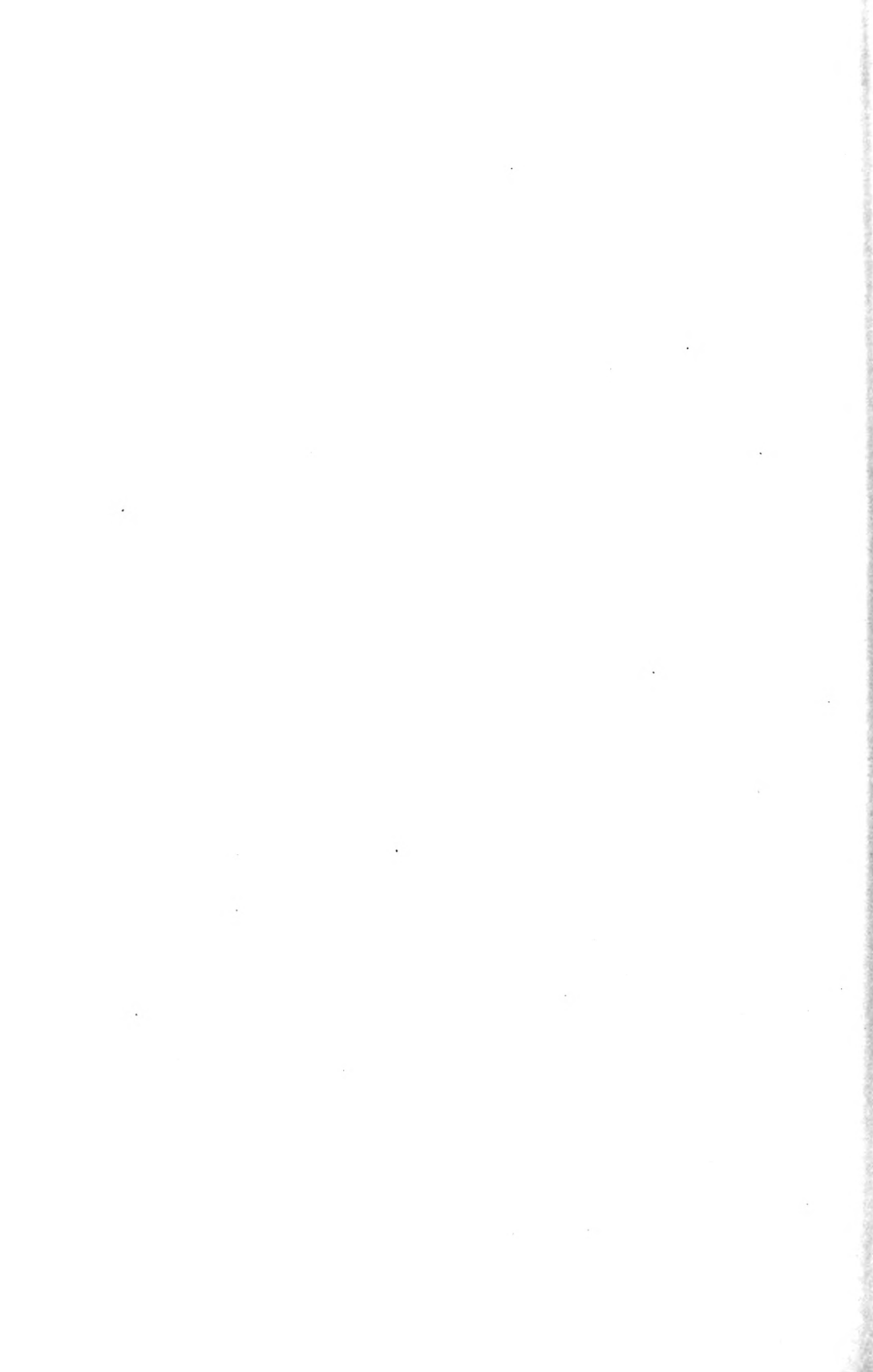


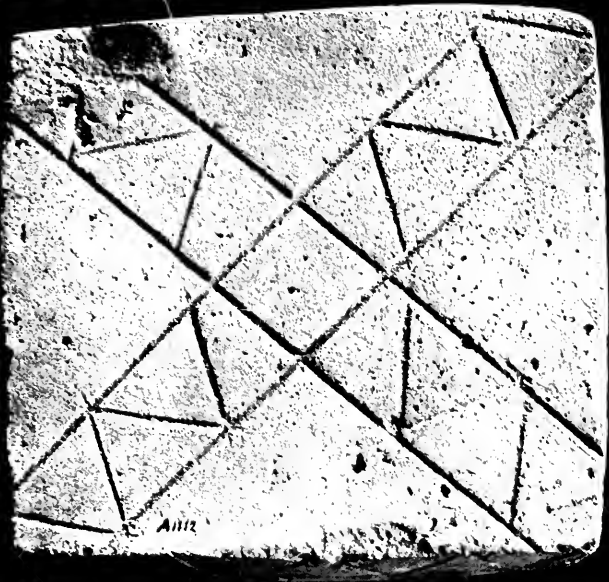


4

6

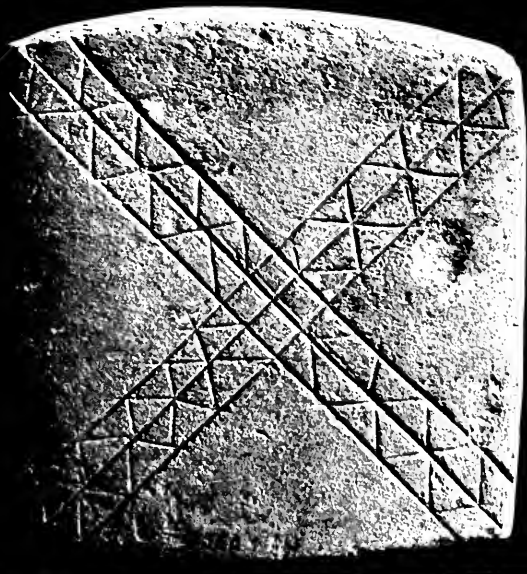
SQUARED INCISED STONES.





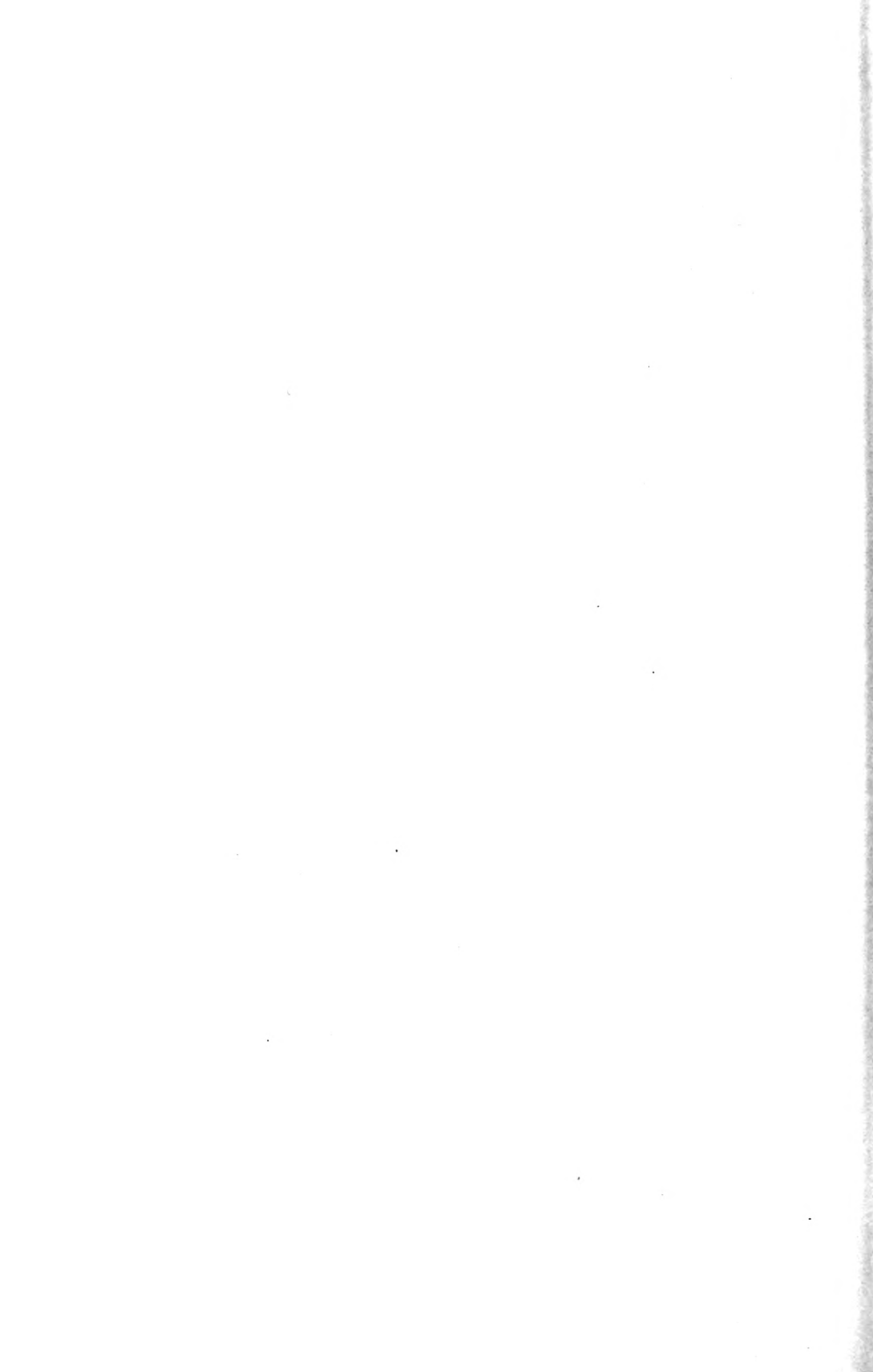
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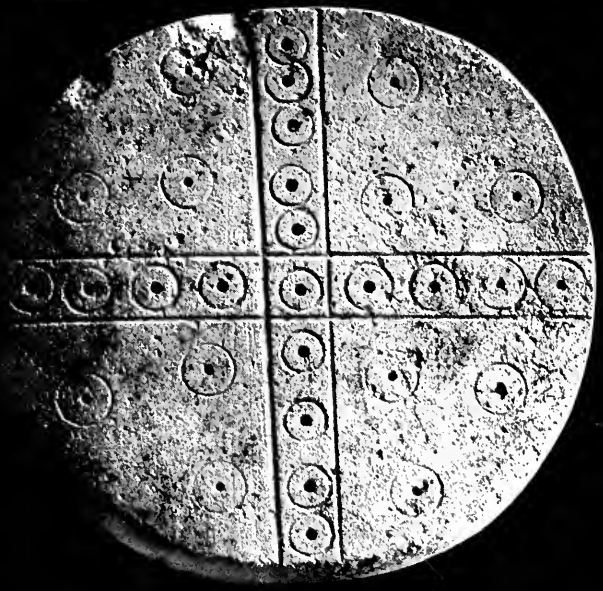
a



b

SQUARED INCISED STONES.



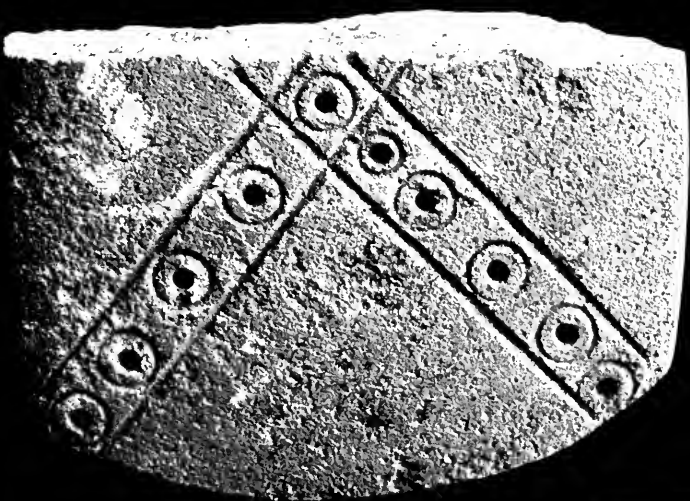
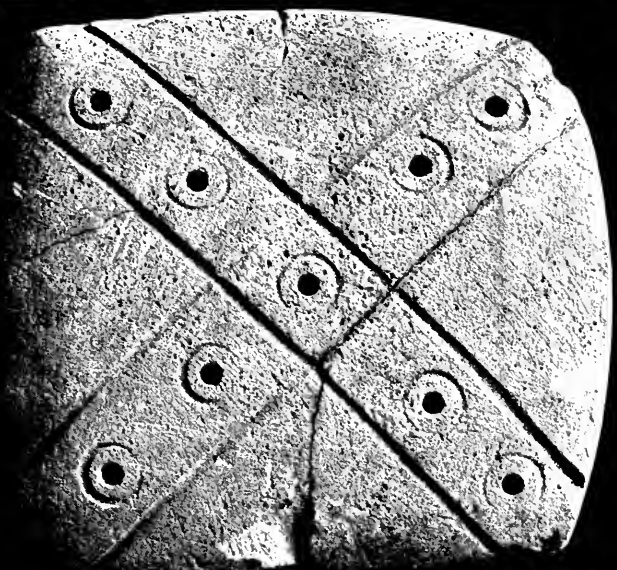


a

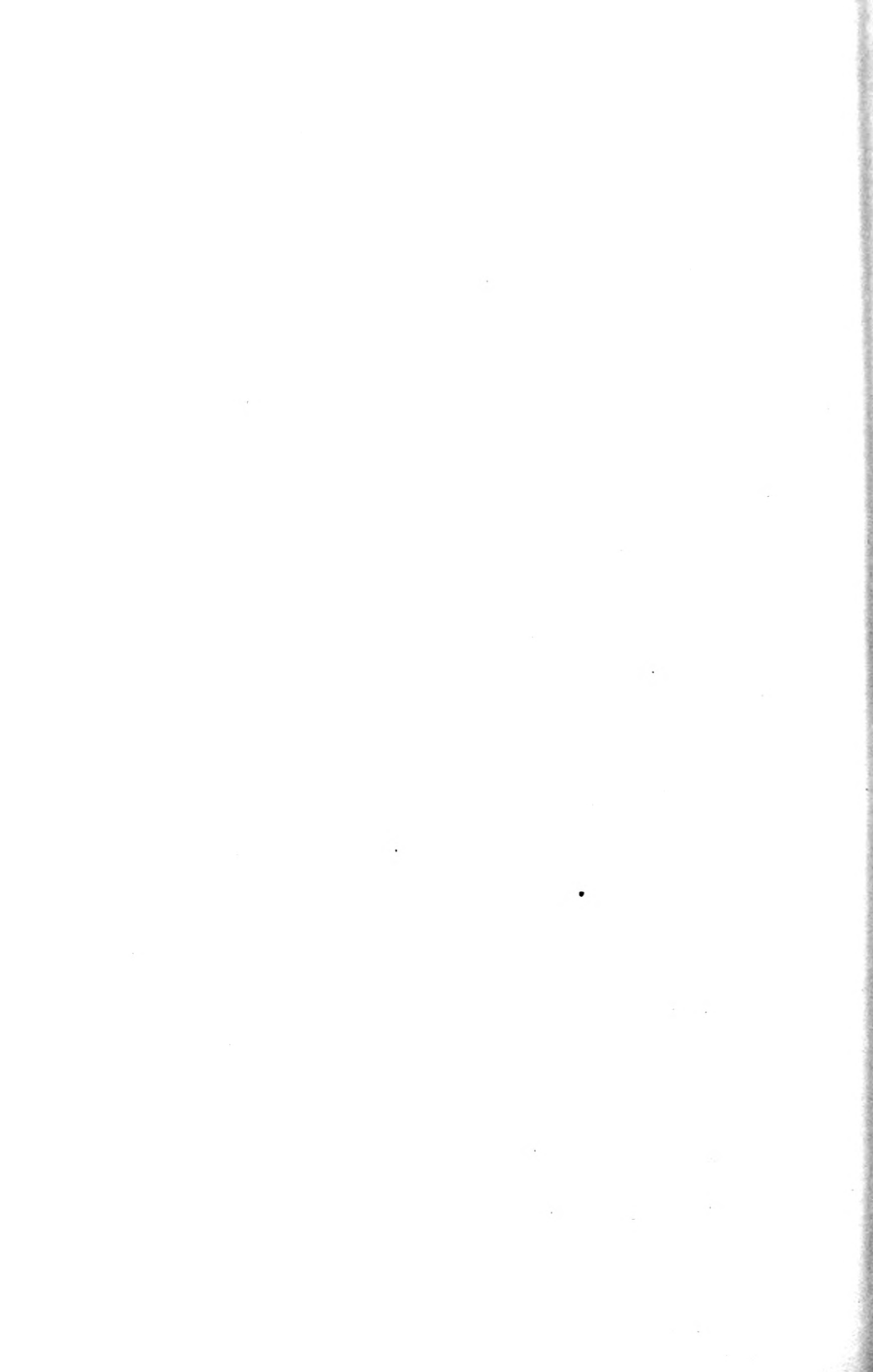


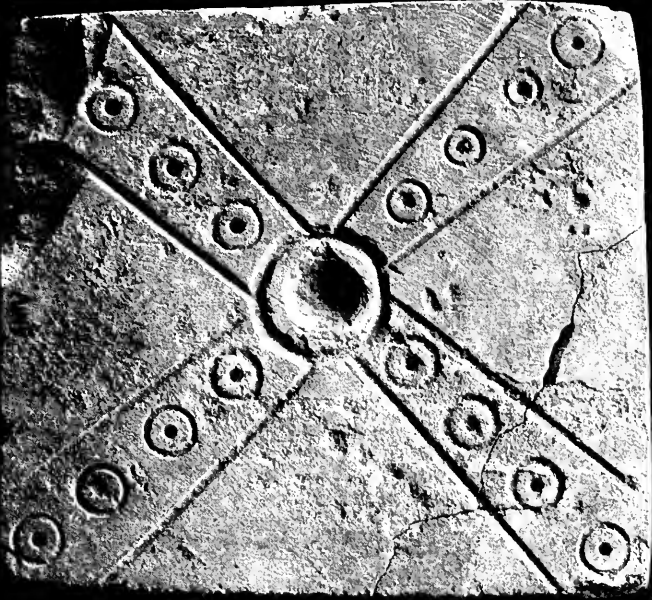
b

CIRCULAR INCISED STONES.

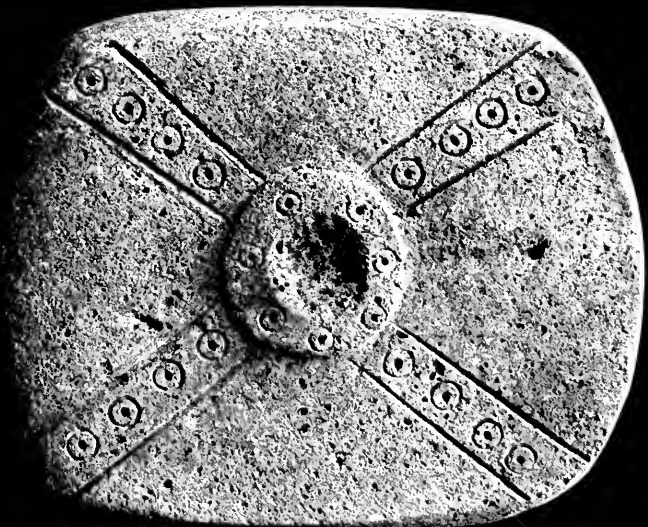


SQUARED INCISED STONES.



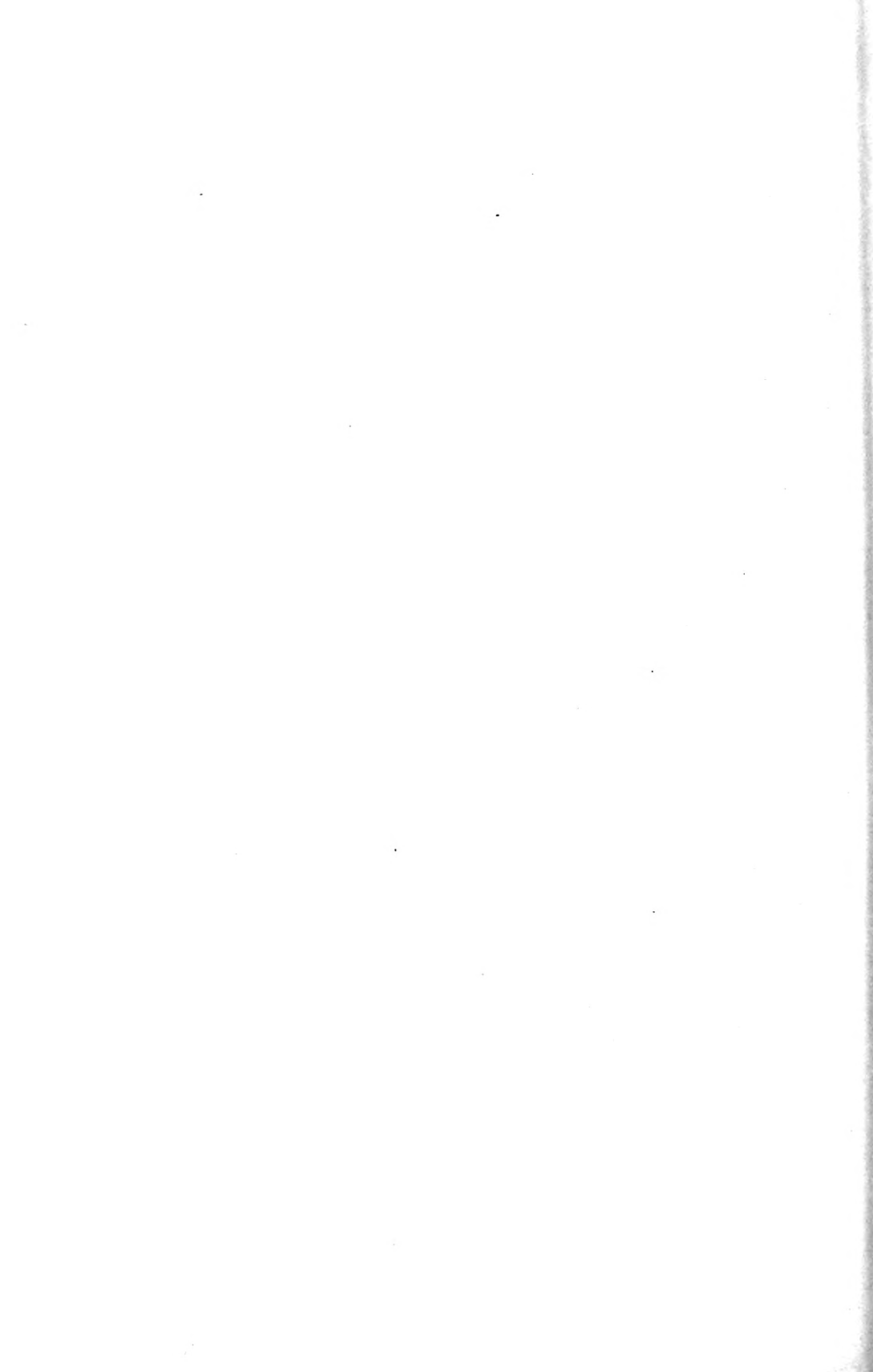


a



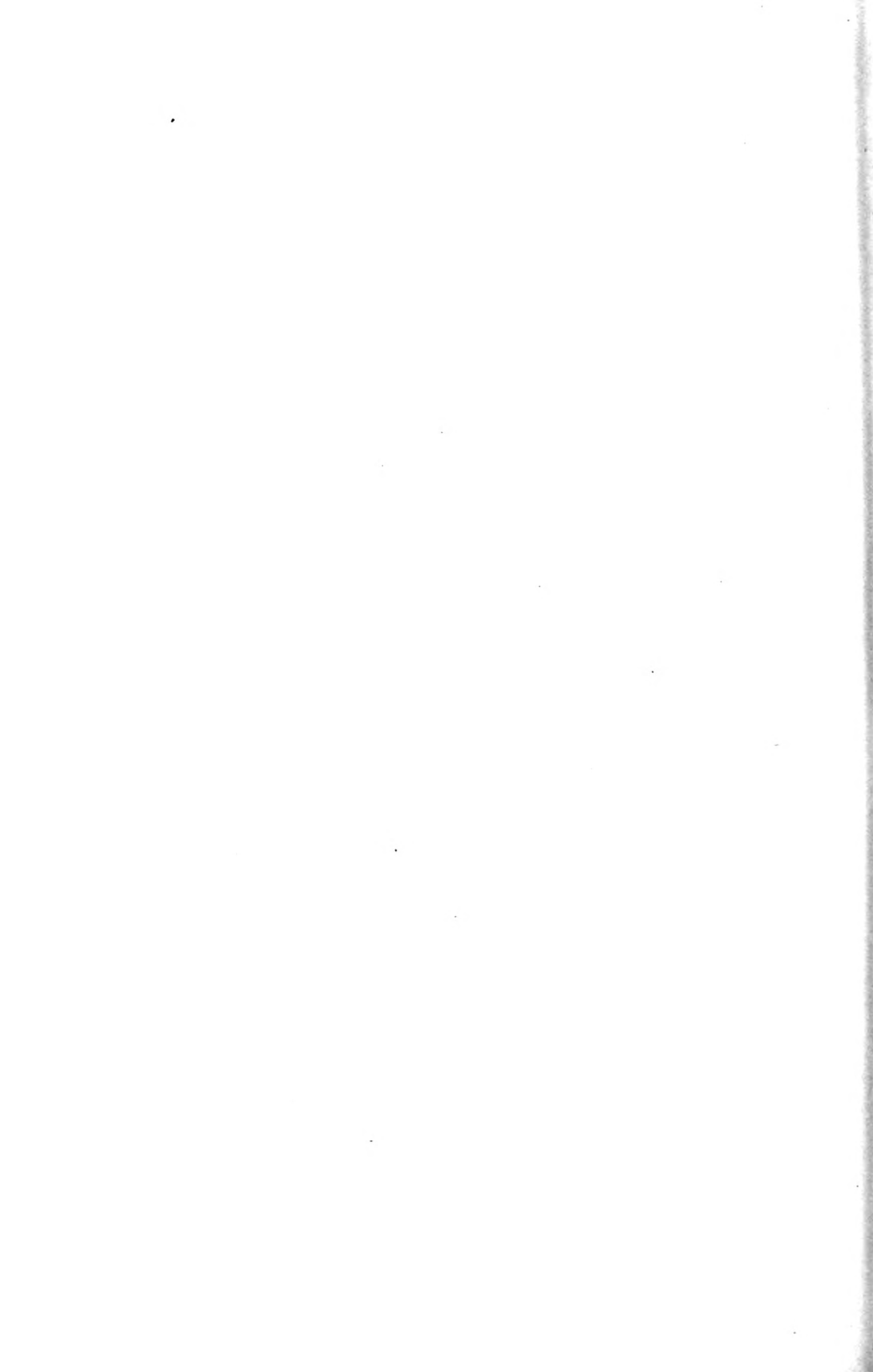
b

SQUARED INCISED STONES.





SQUARED STONES WITH INCISED EDGES.

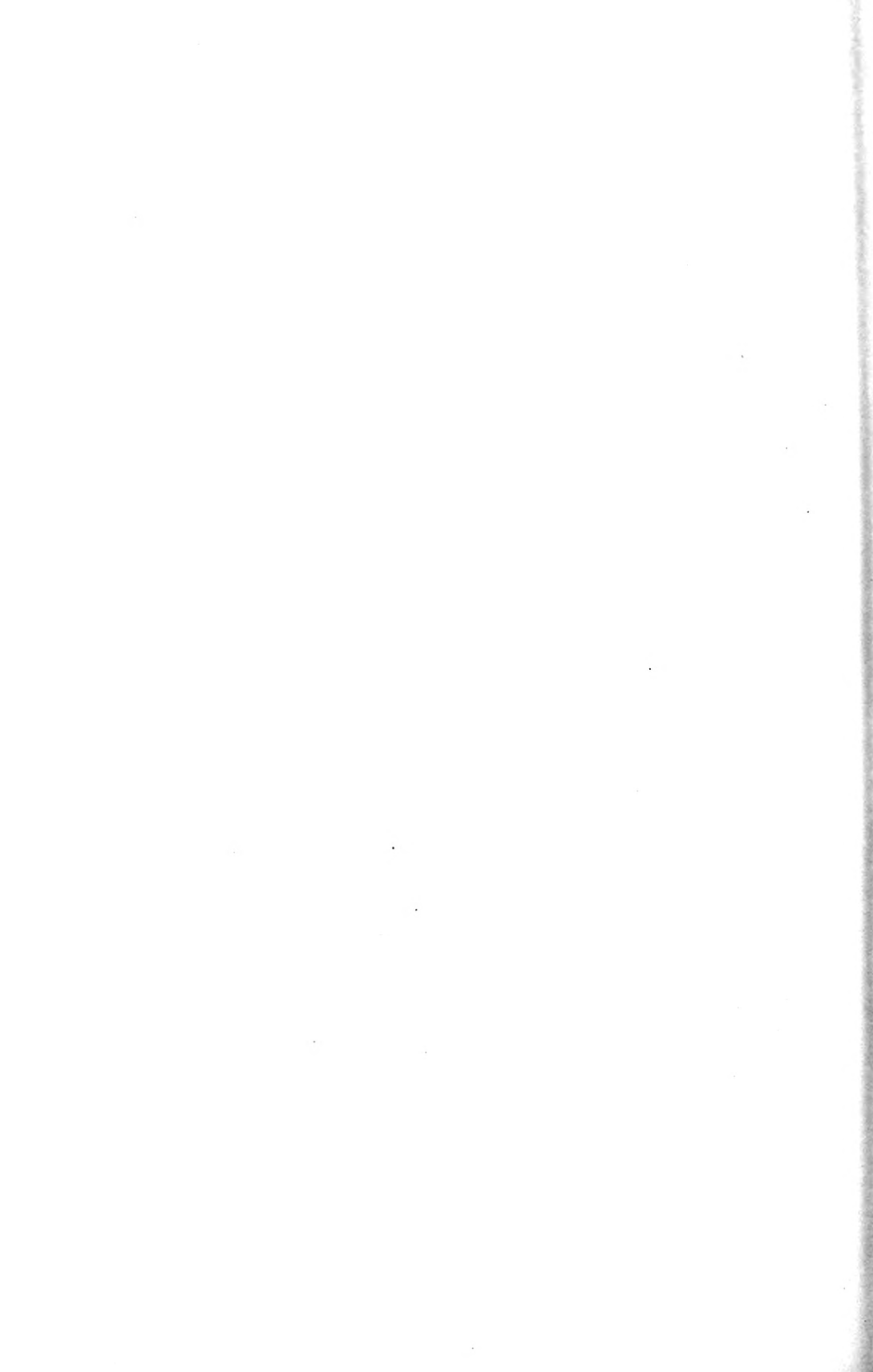




a

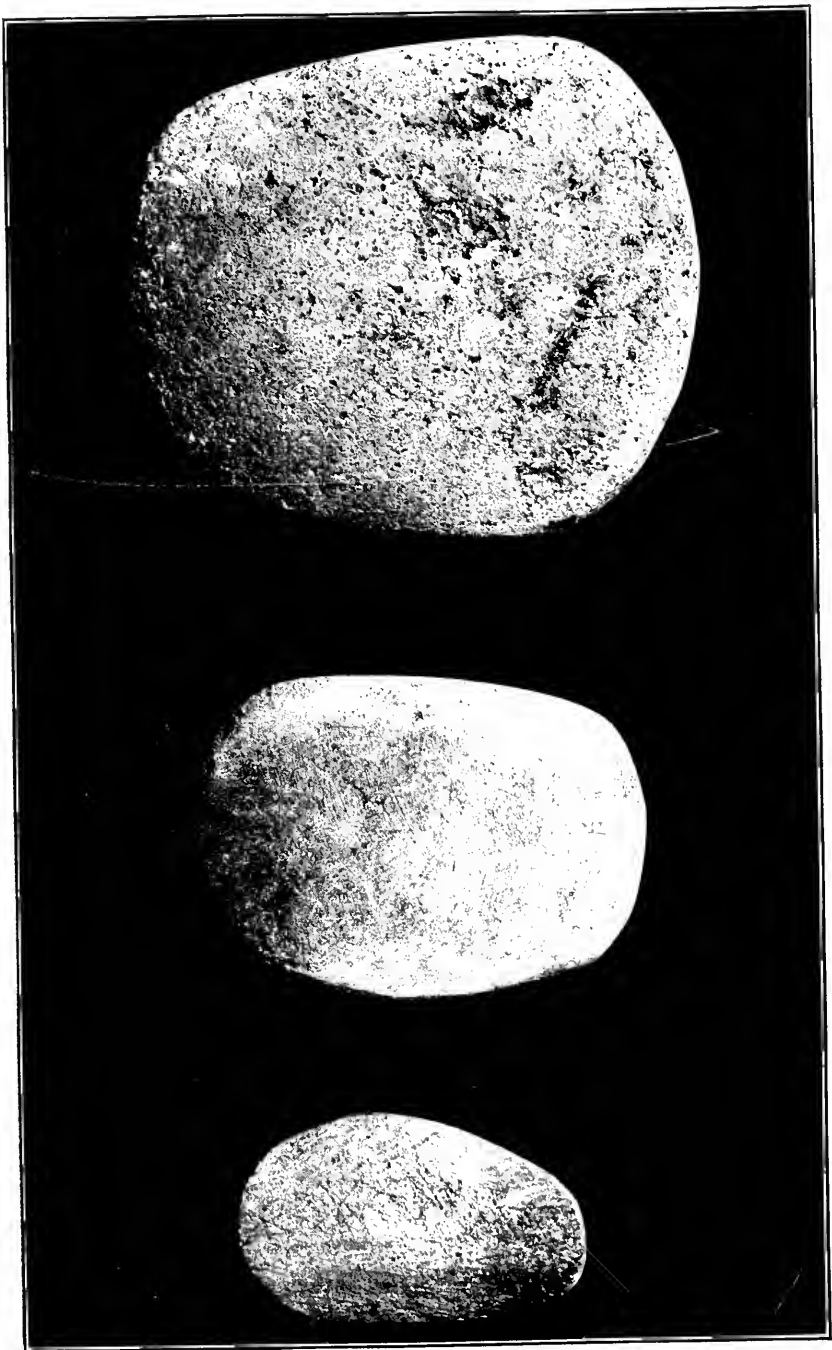
b

CIRCULAR INCISED STONES.

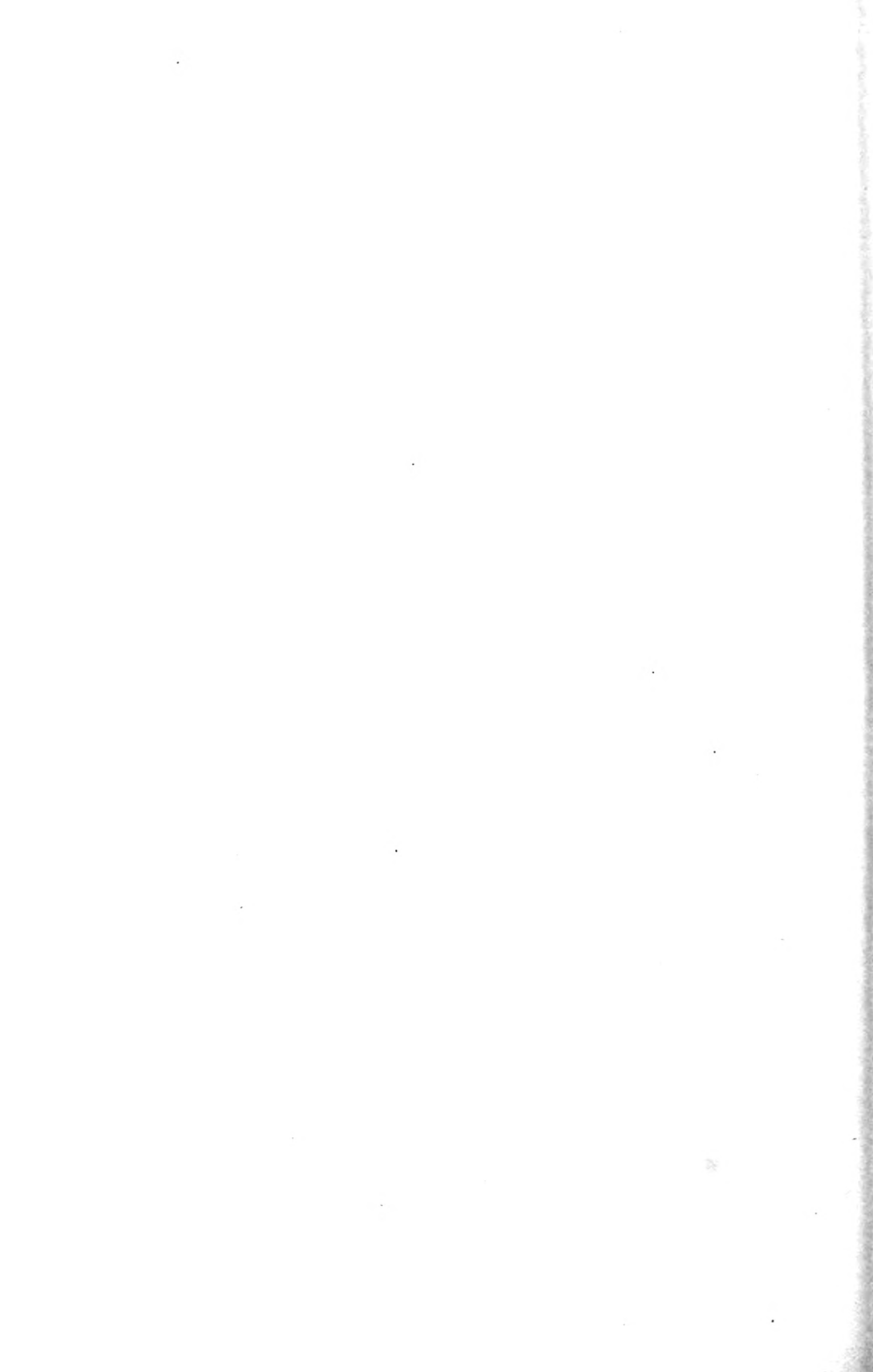


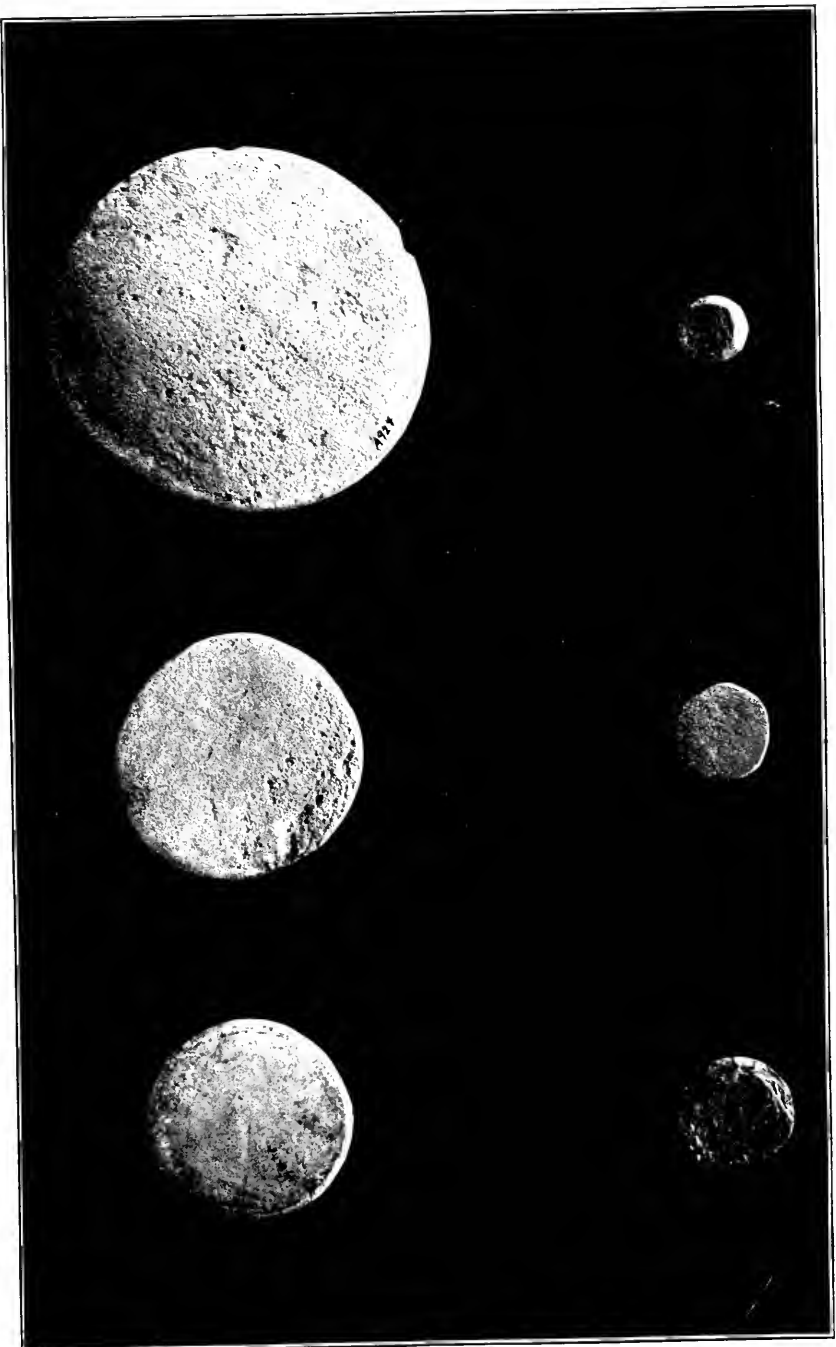


RECTANGULAR STONES WITHOUT ORNAMENTATION.

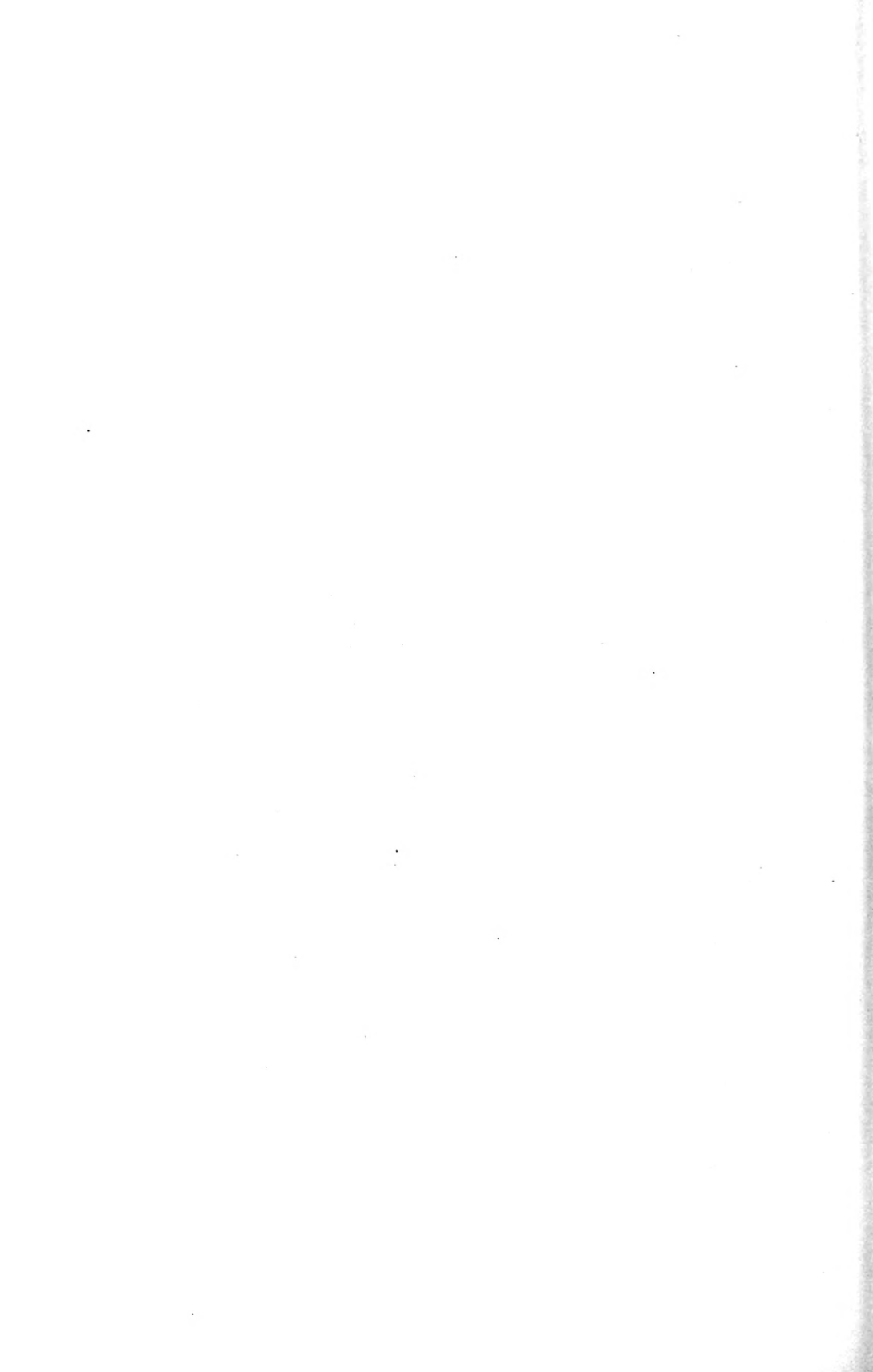


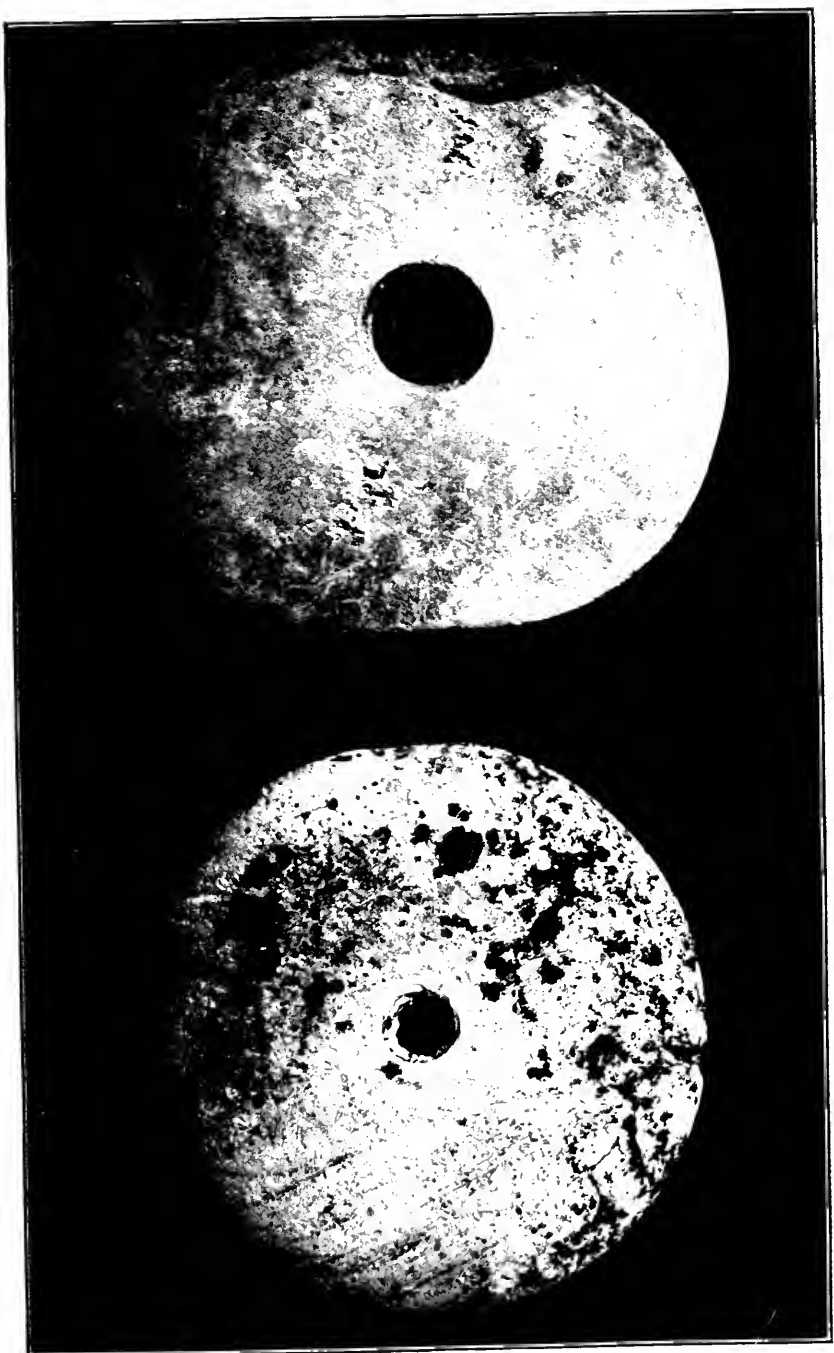
OBLONG STONES WITHOUT ORNAMENTATION.





CIRCULAR STONES WITHOUT ORNAMENTATION.





CIRCULAR PERFORATED STONES.

PLATE I

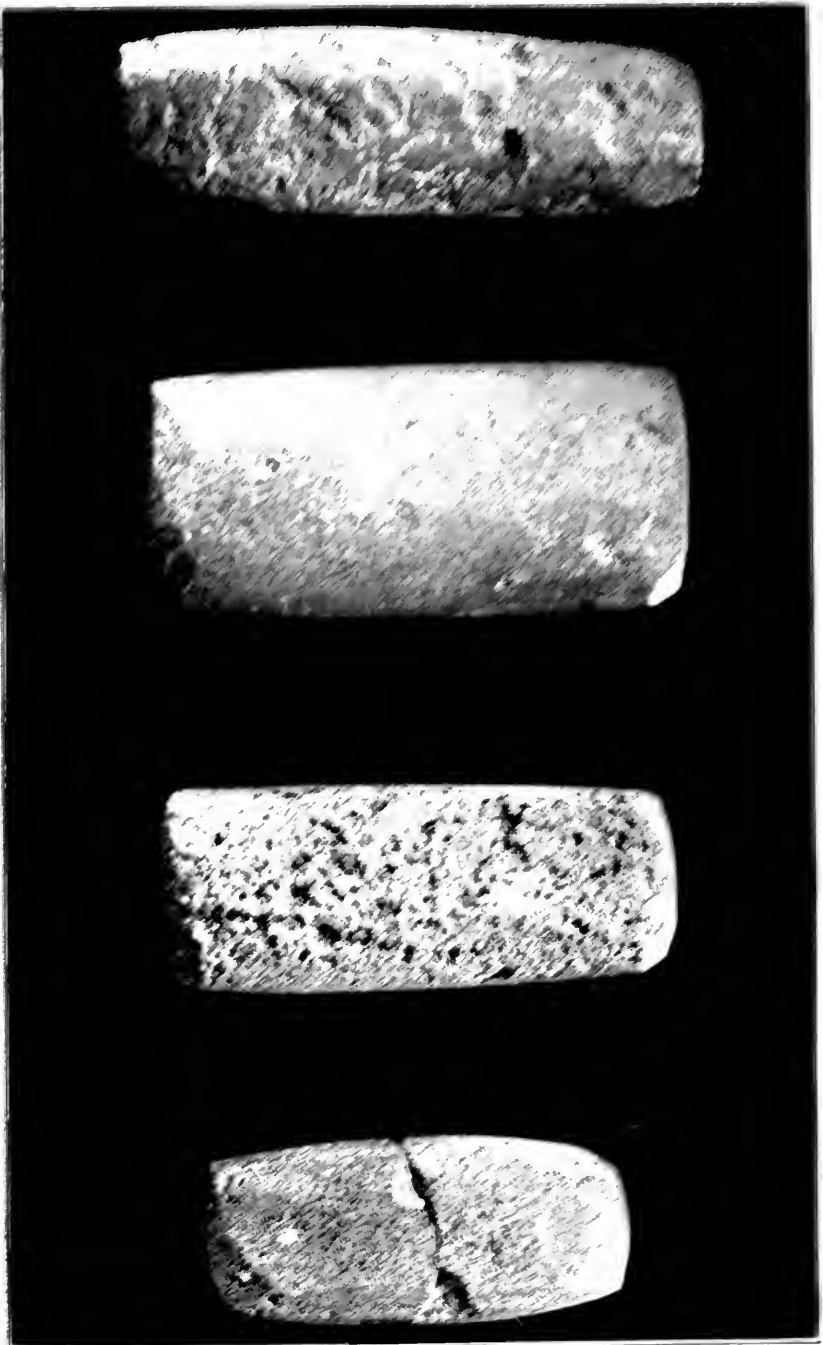
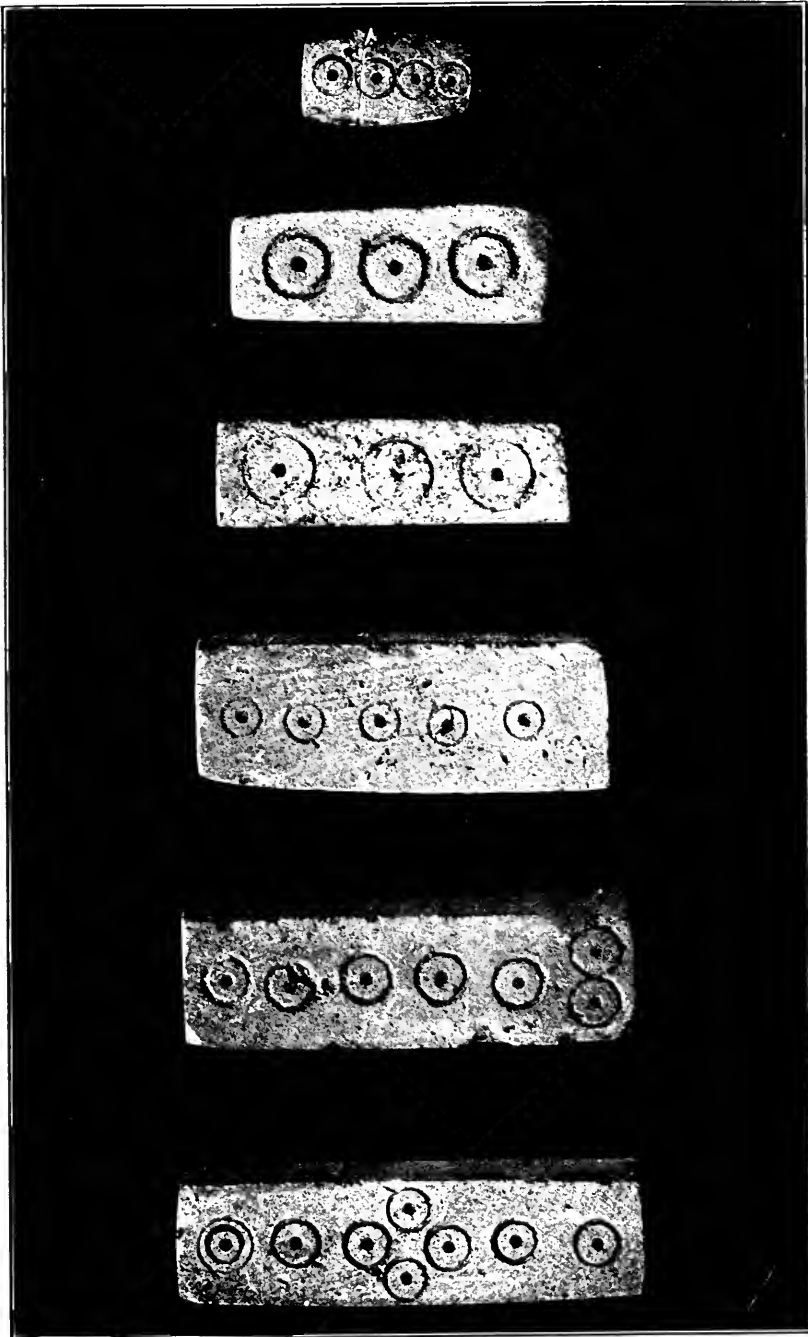
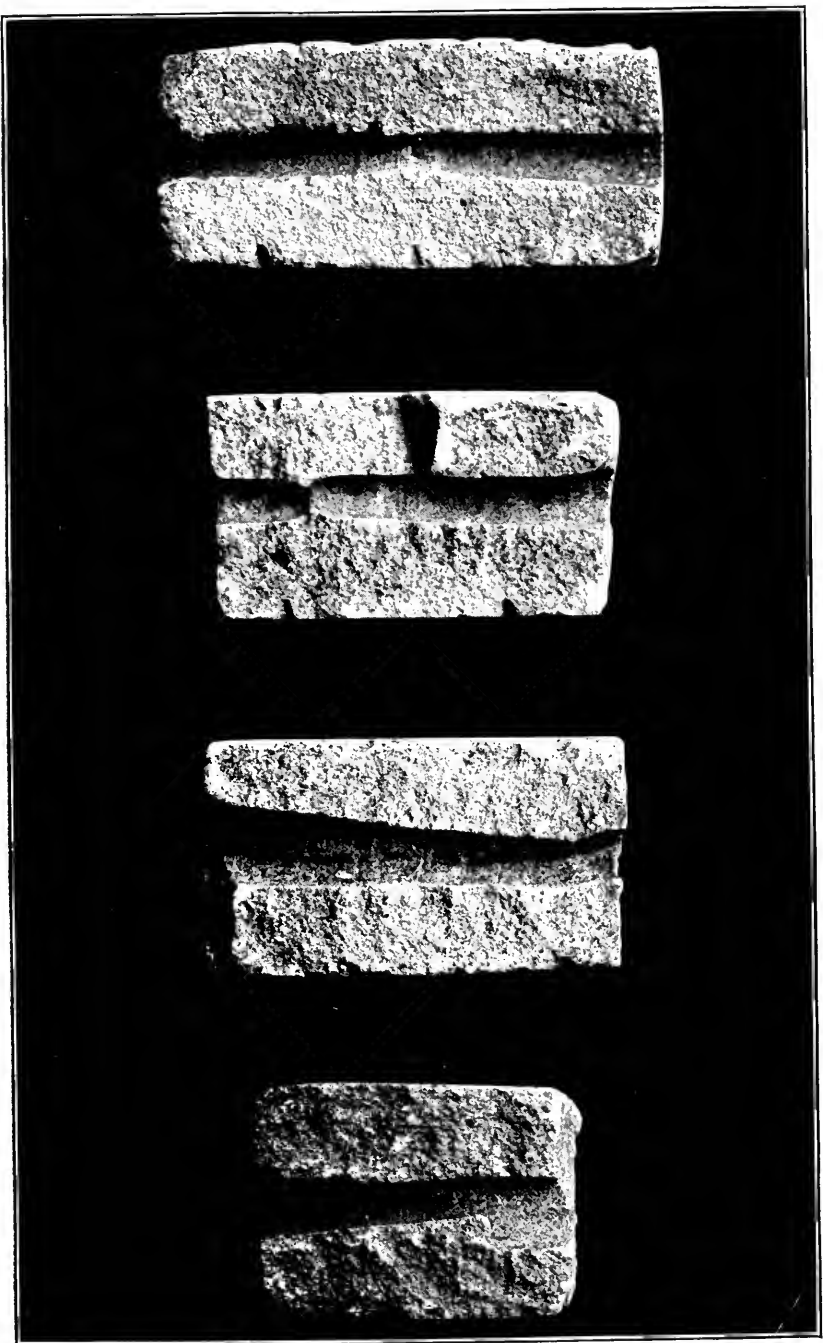


PLATE I

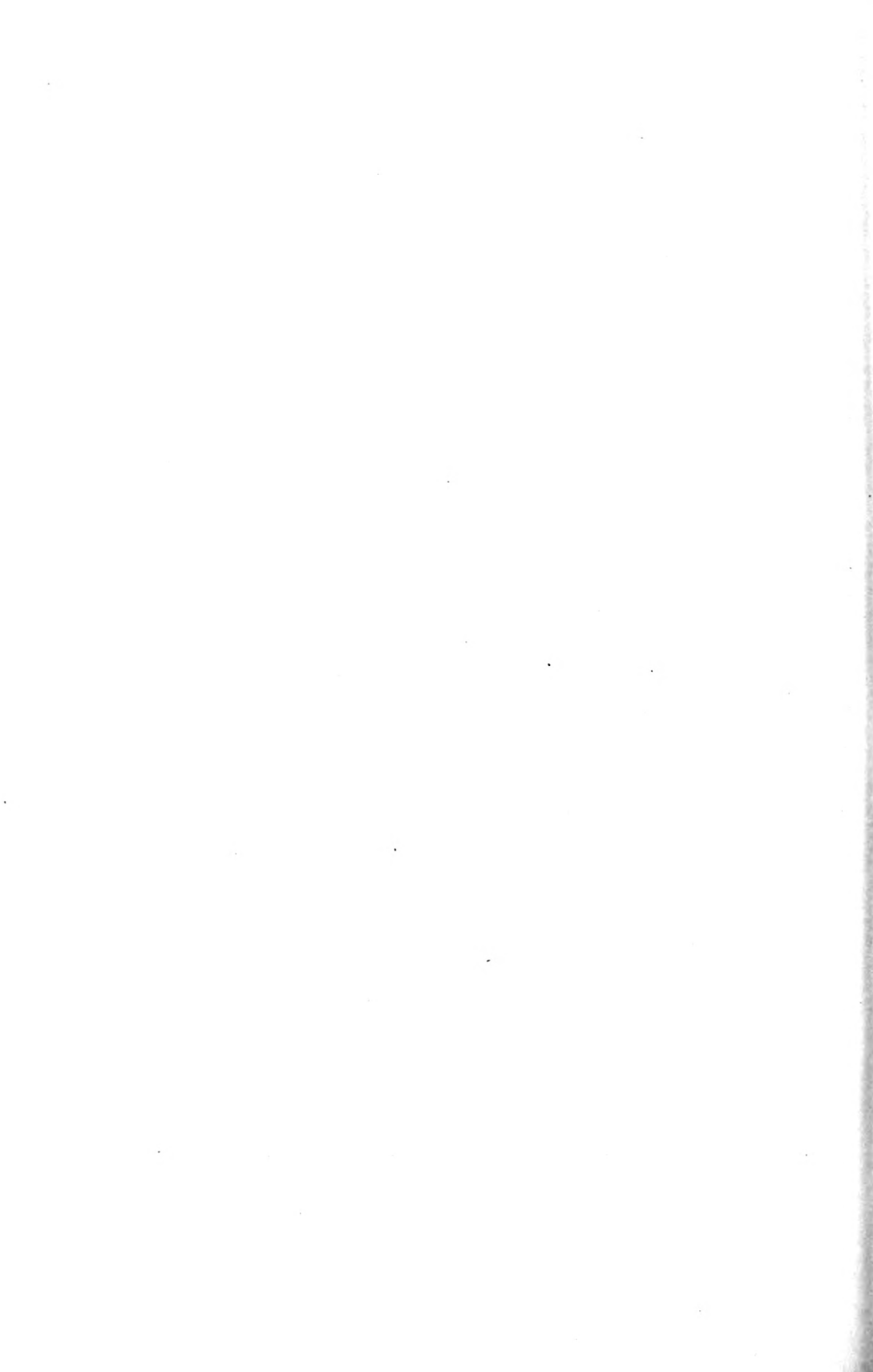


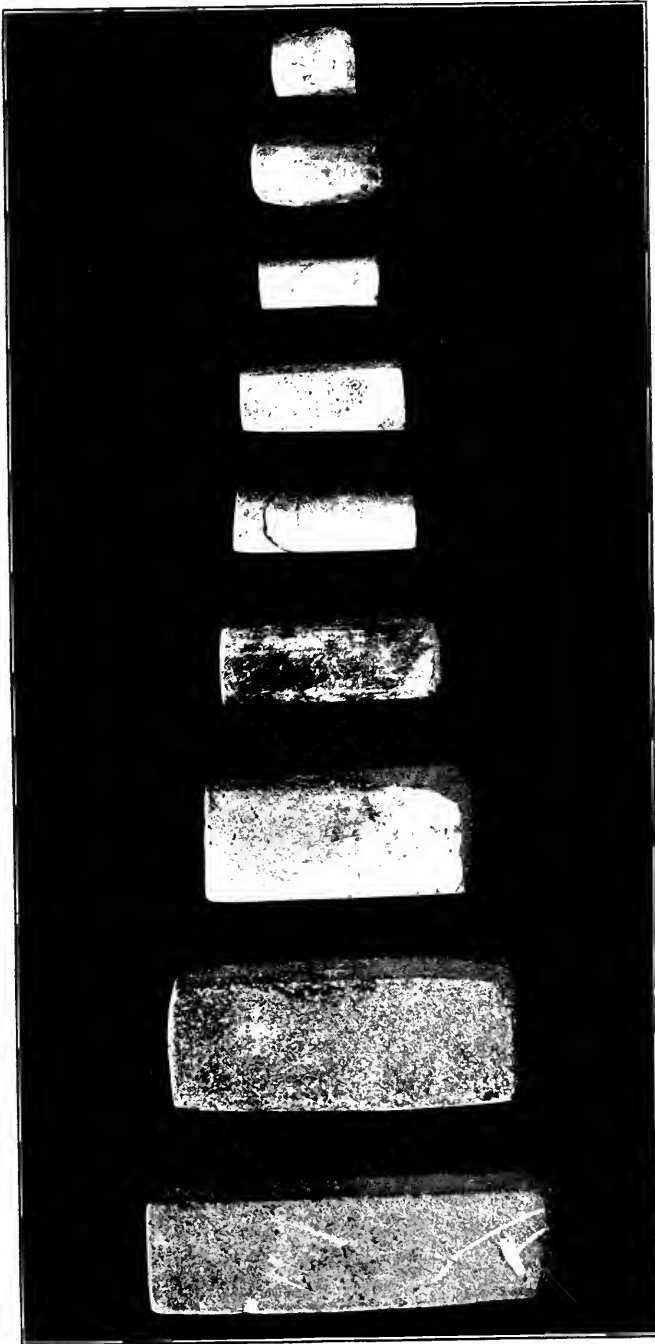
PERFORATED AND ENGRAVED STONES.



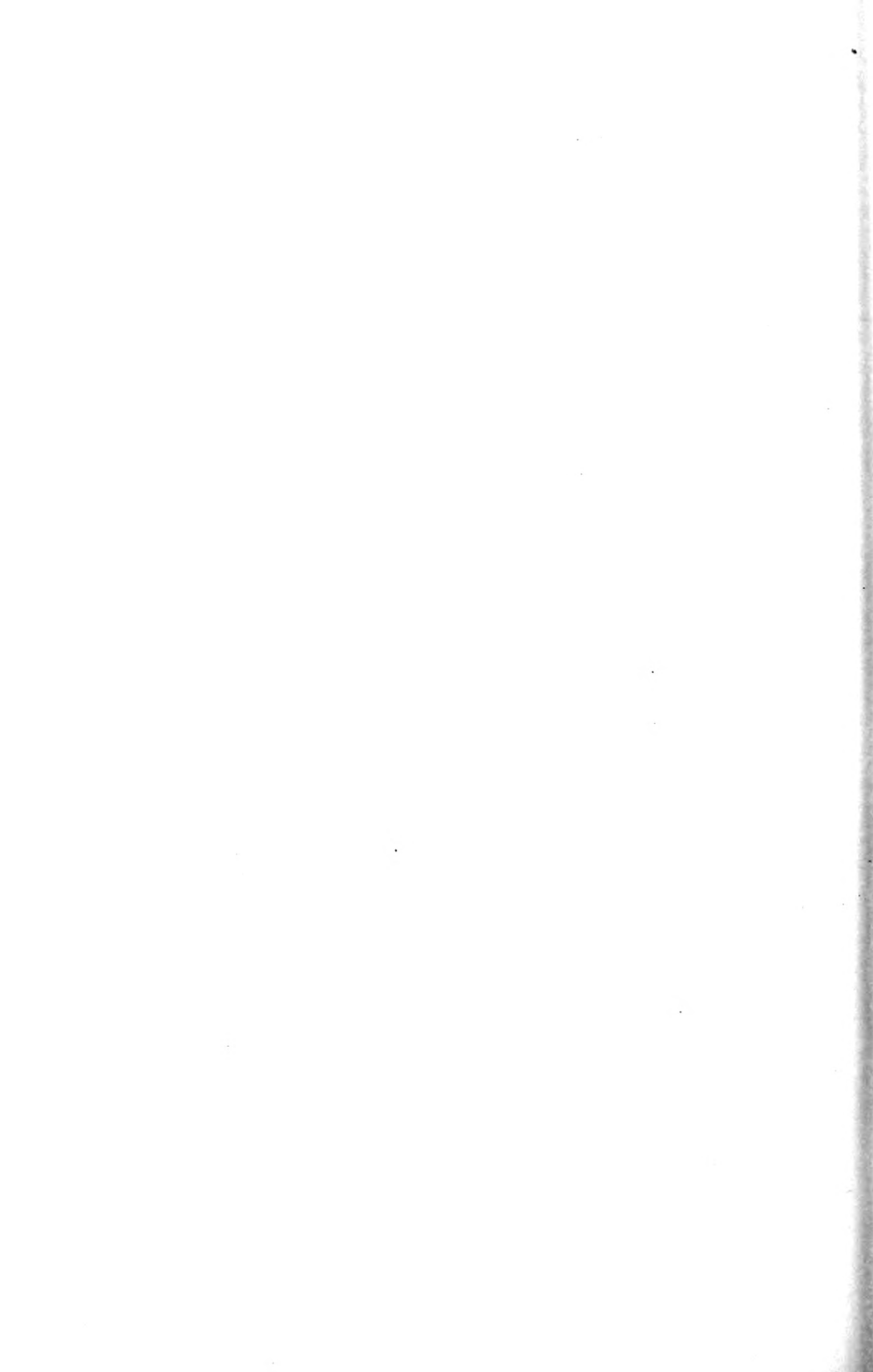


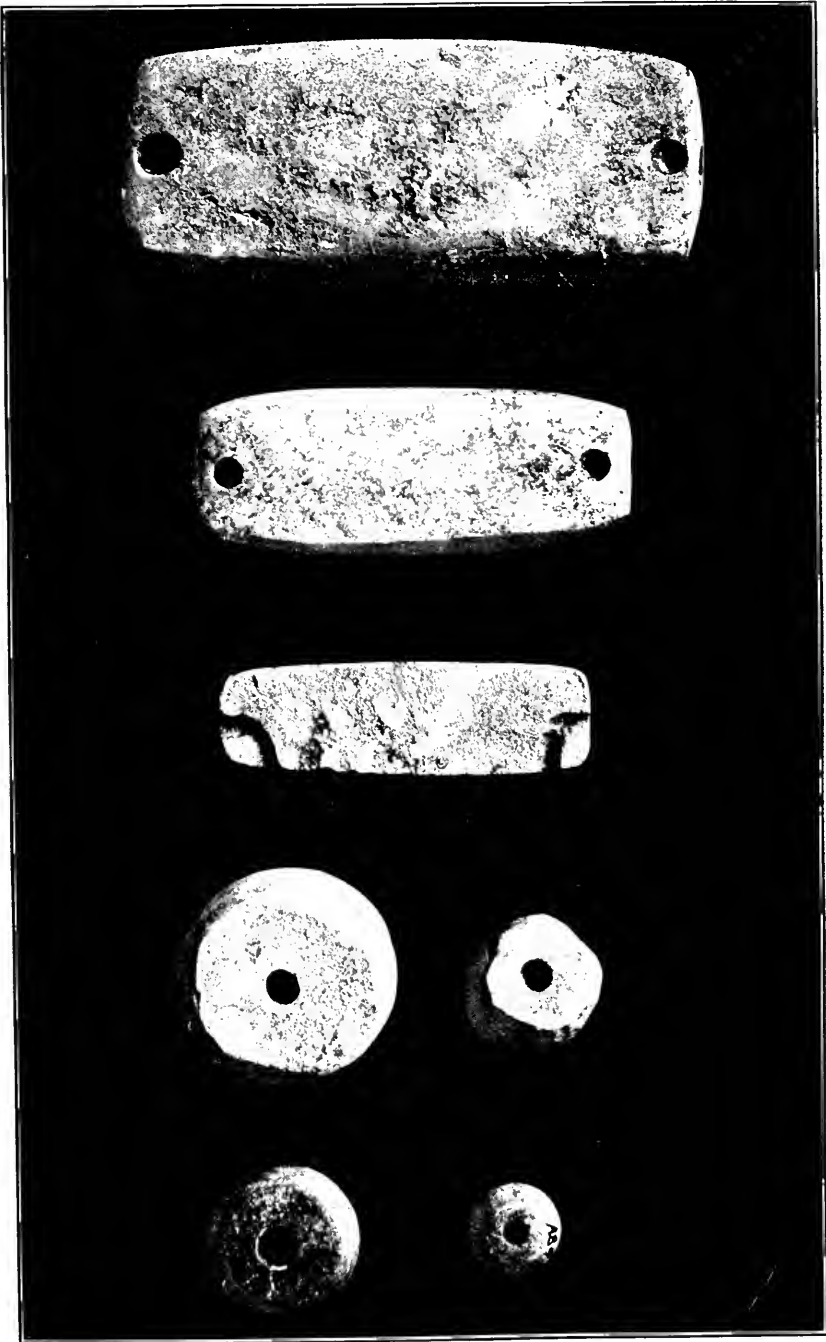
FRAGMENTS OF PERFORATED AND ENGRAVED STONES.



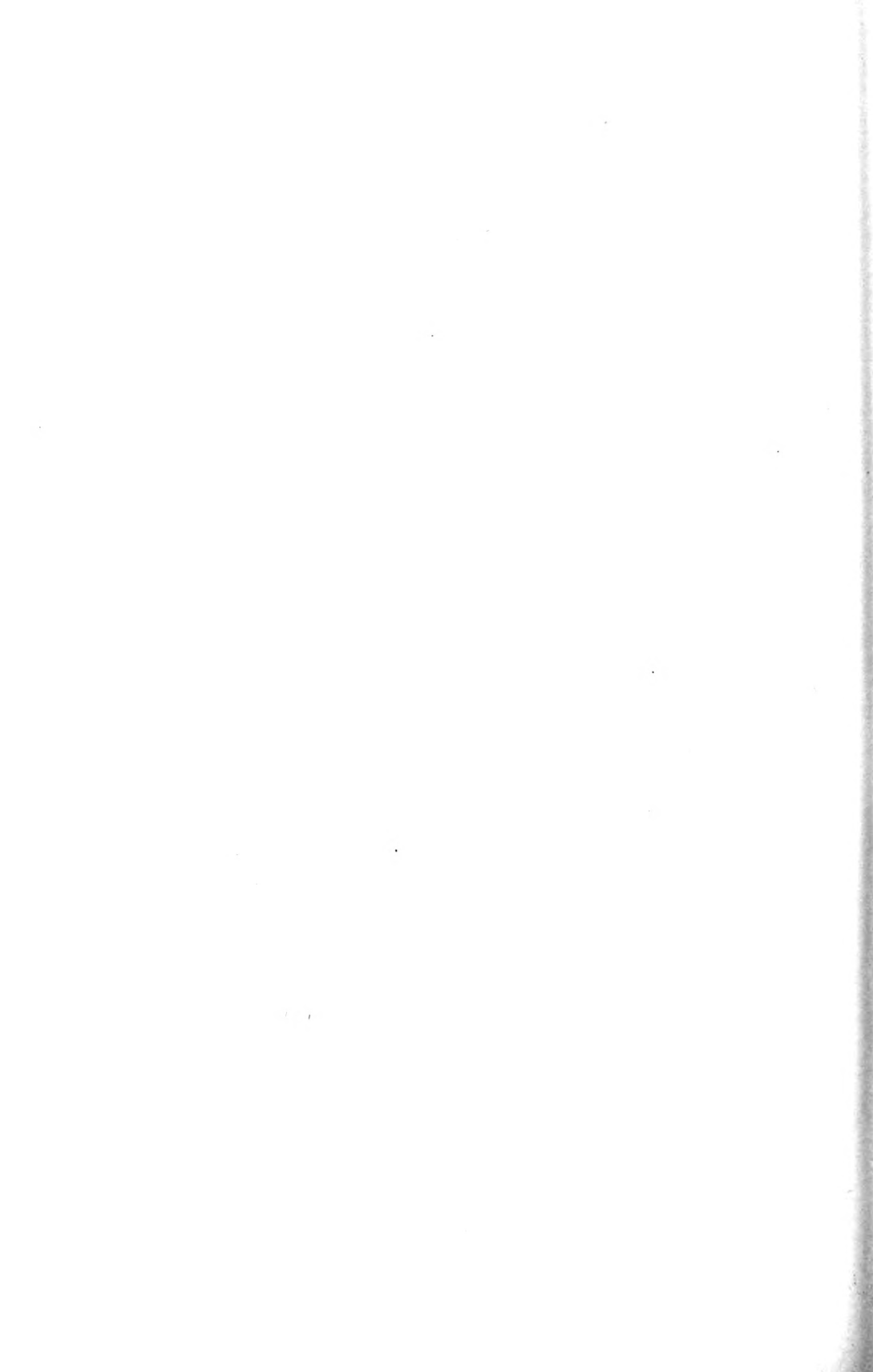


PERFORATED STONE BEADS.





PERFORATED STONE BEADS.





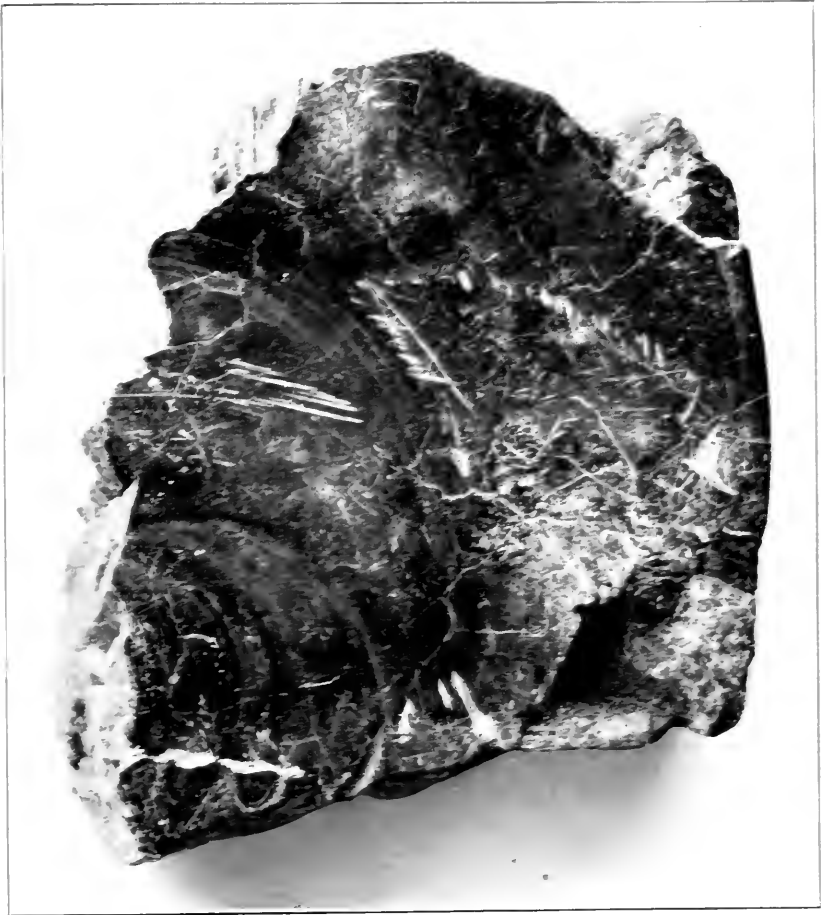
a

b

c

ENGRAVED STONES REPRESENTING THE HUMAN FACE.





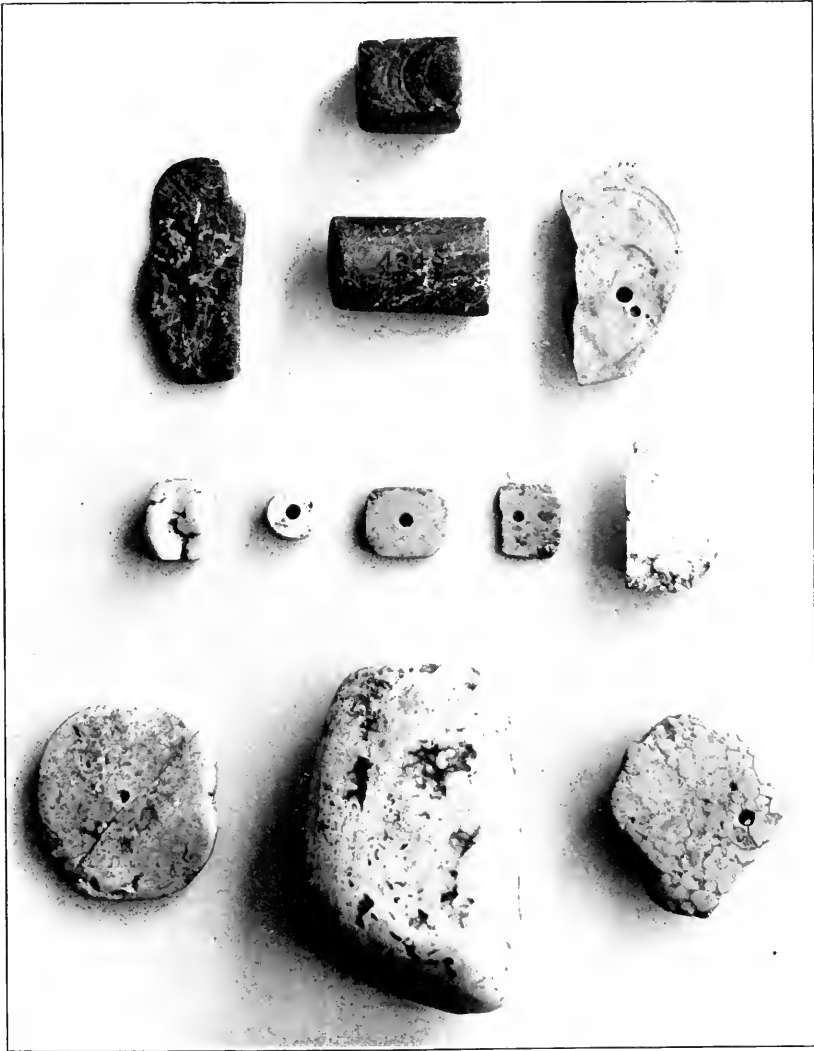
ROUGH MASS OF SERPENTINE.





ROUGH MASS OF GREEN MARBLE.



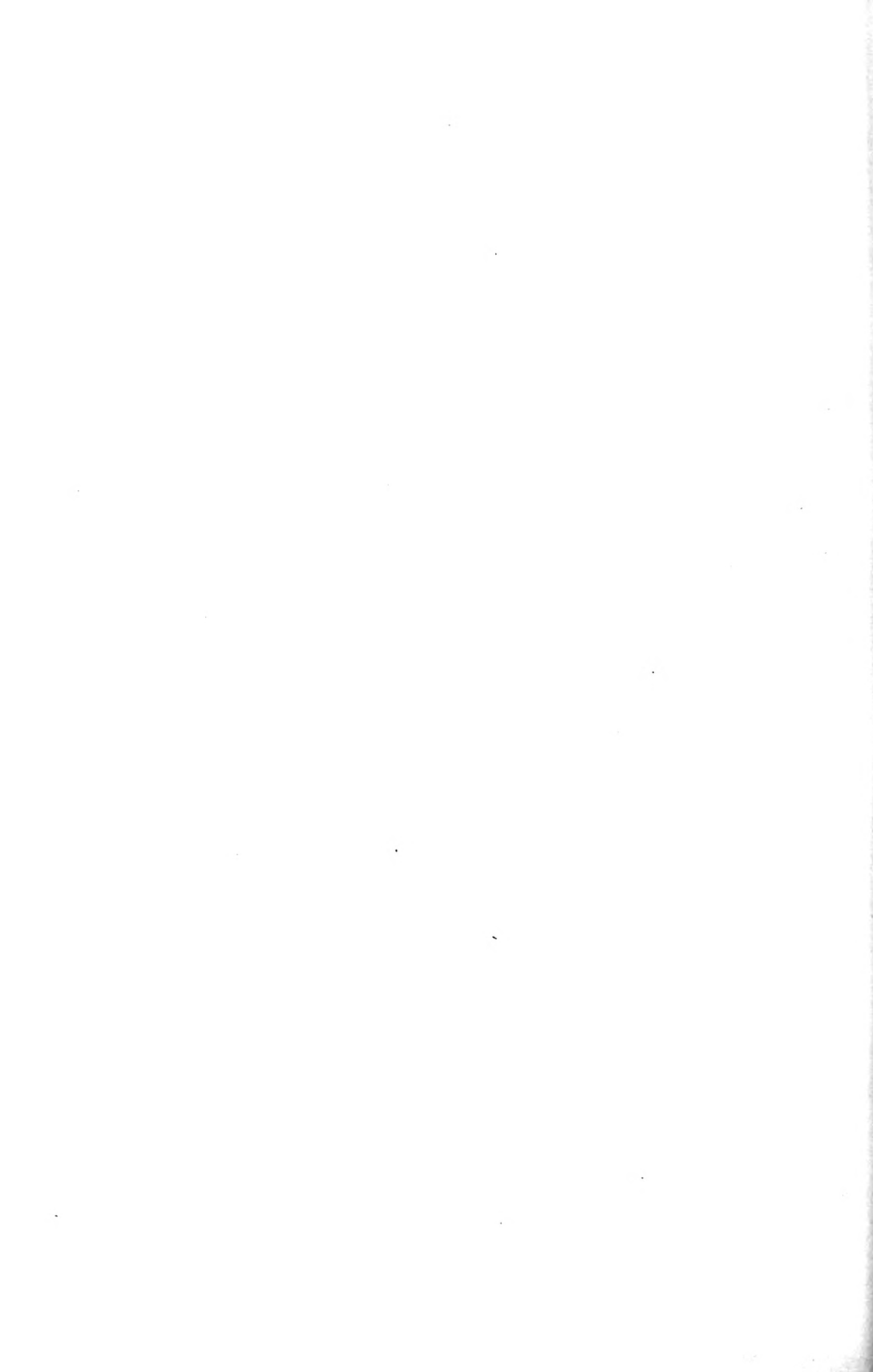


BEADS OF PAGODITE AND TURQUOISE.



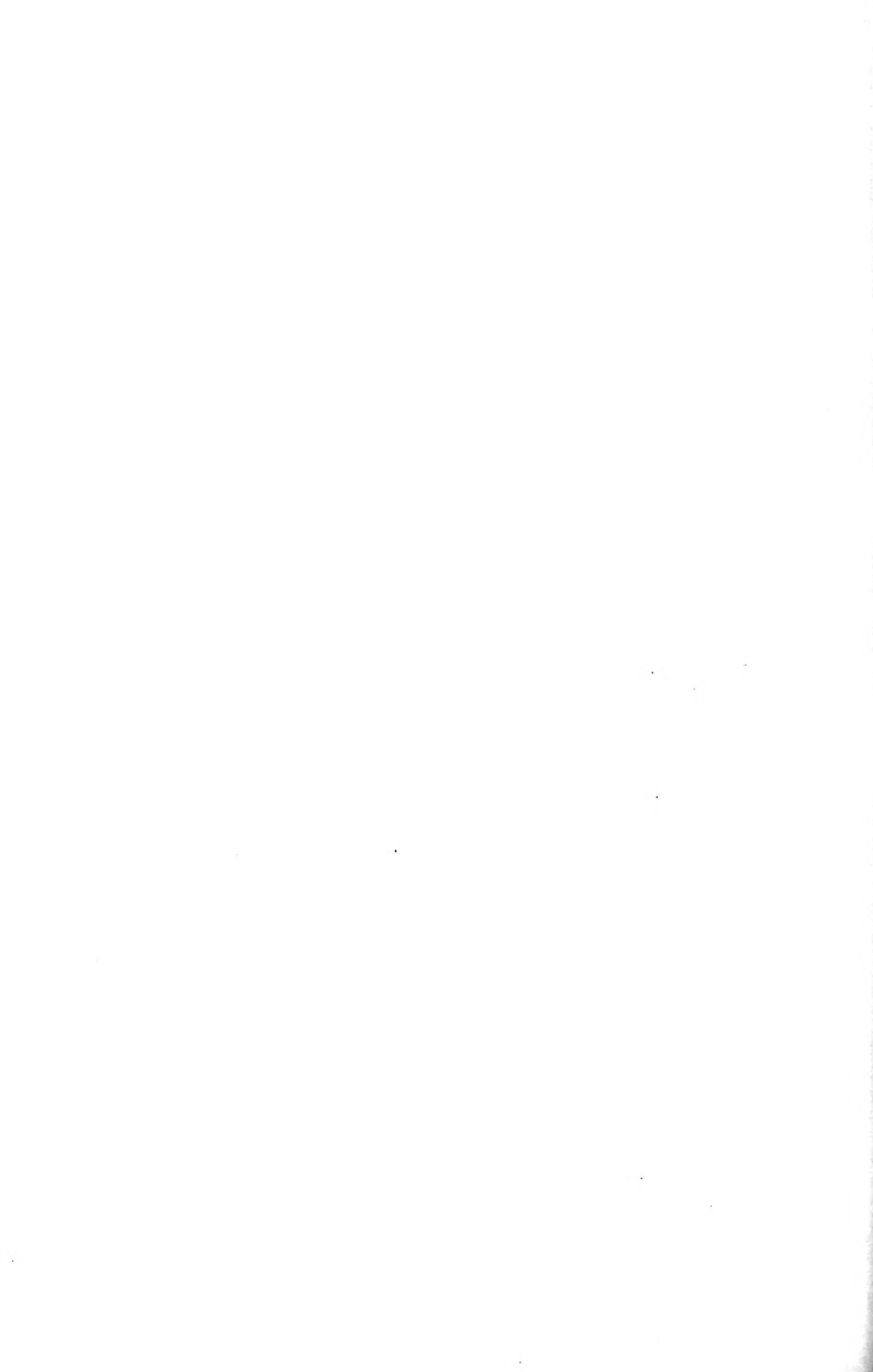


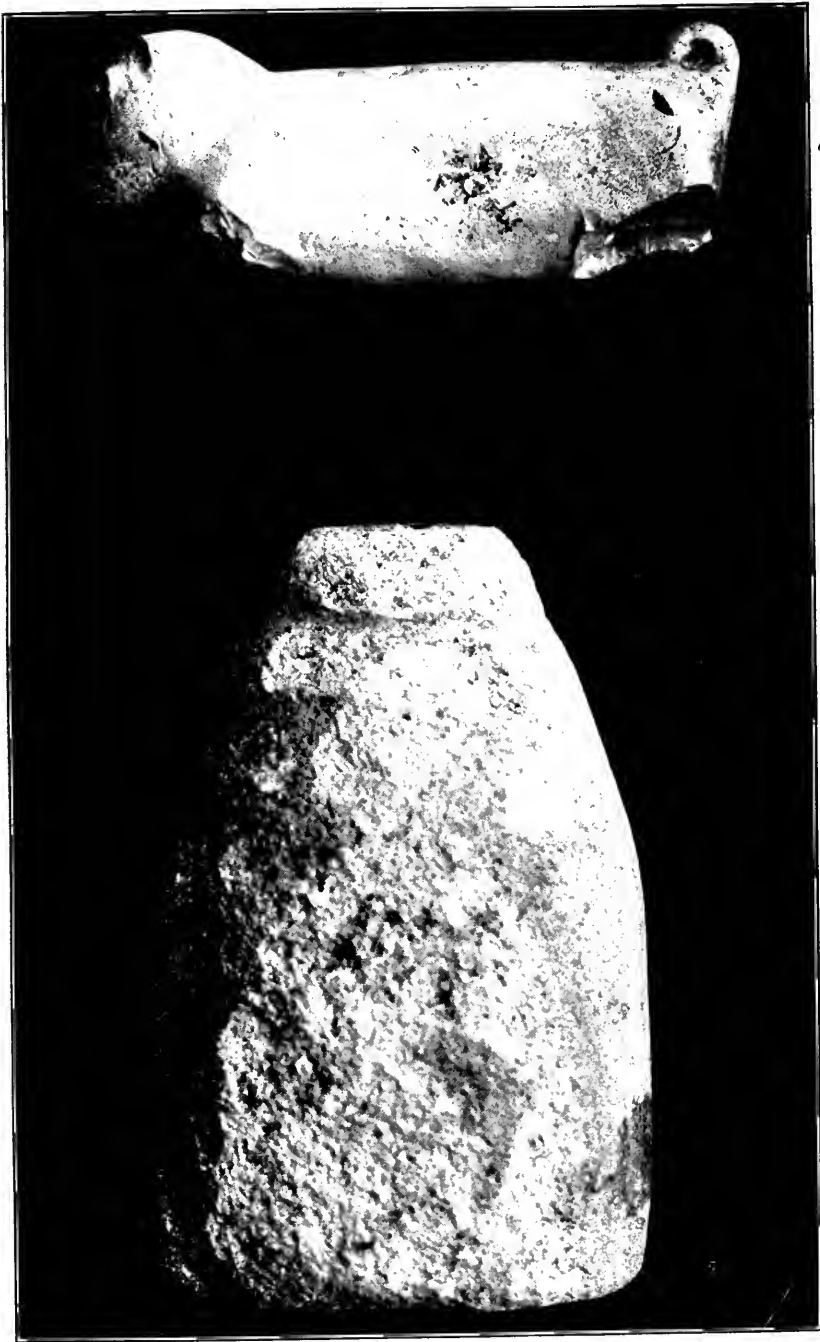
BEADS OF LAPIS LAZULI.





BEADS OF AGALMATOLITE.





a. SMALL STONE ANIMAL. *b.* CONE-SHAPED STONE.



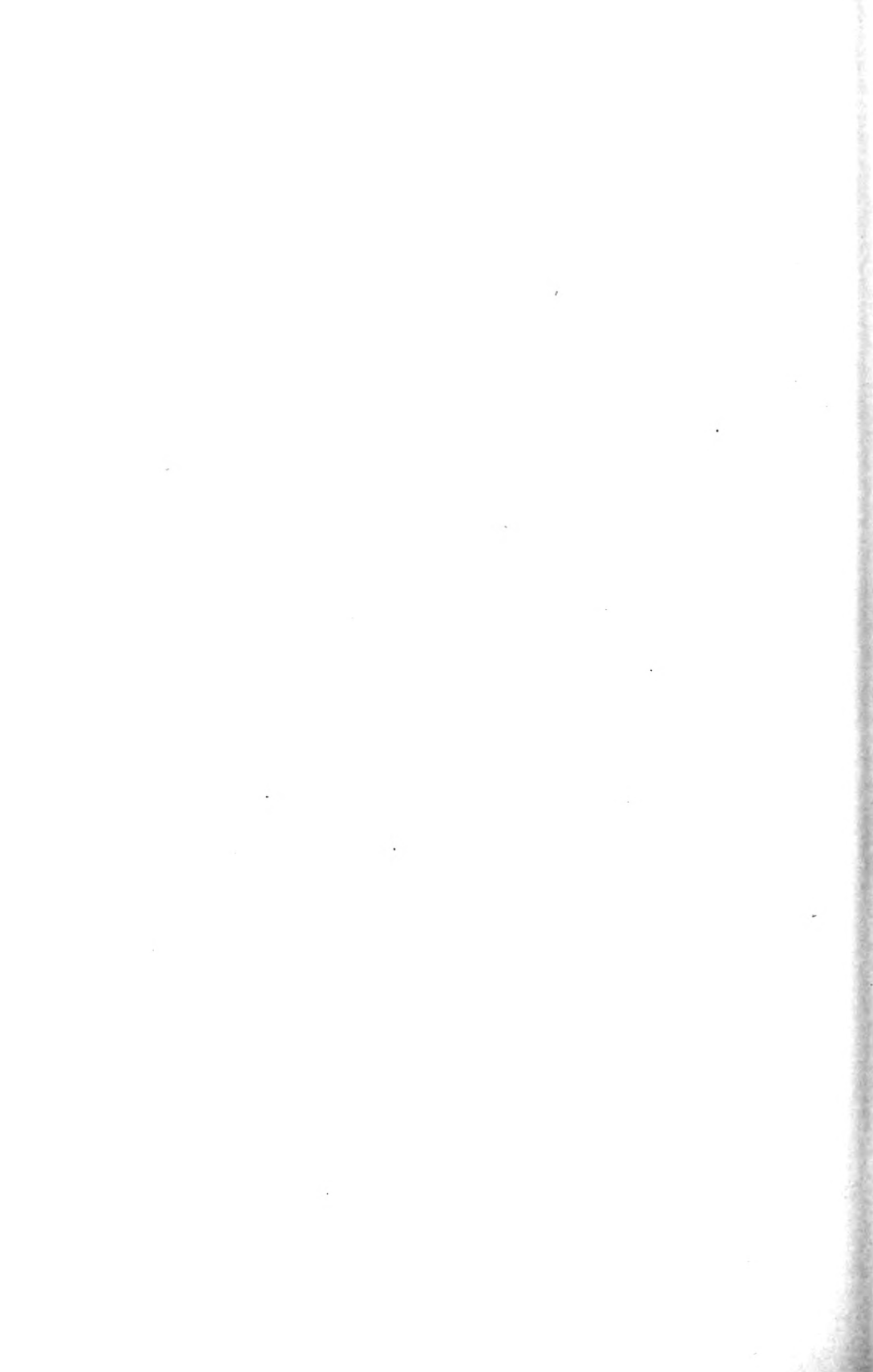


FRAGMENT OF STONE METATE.





TWO EARTHENWARE IMAGES.



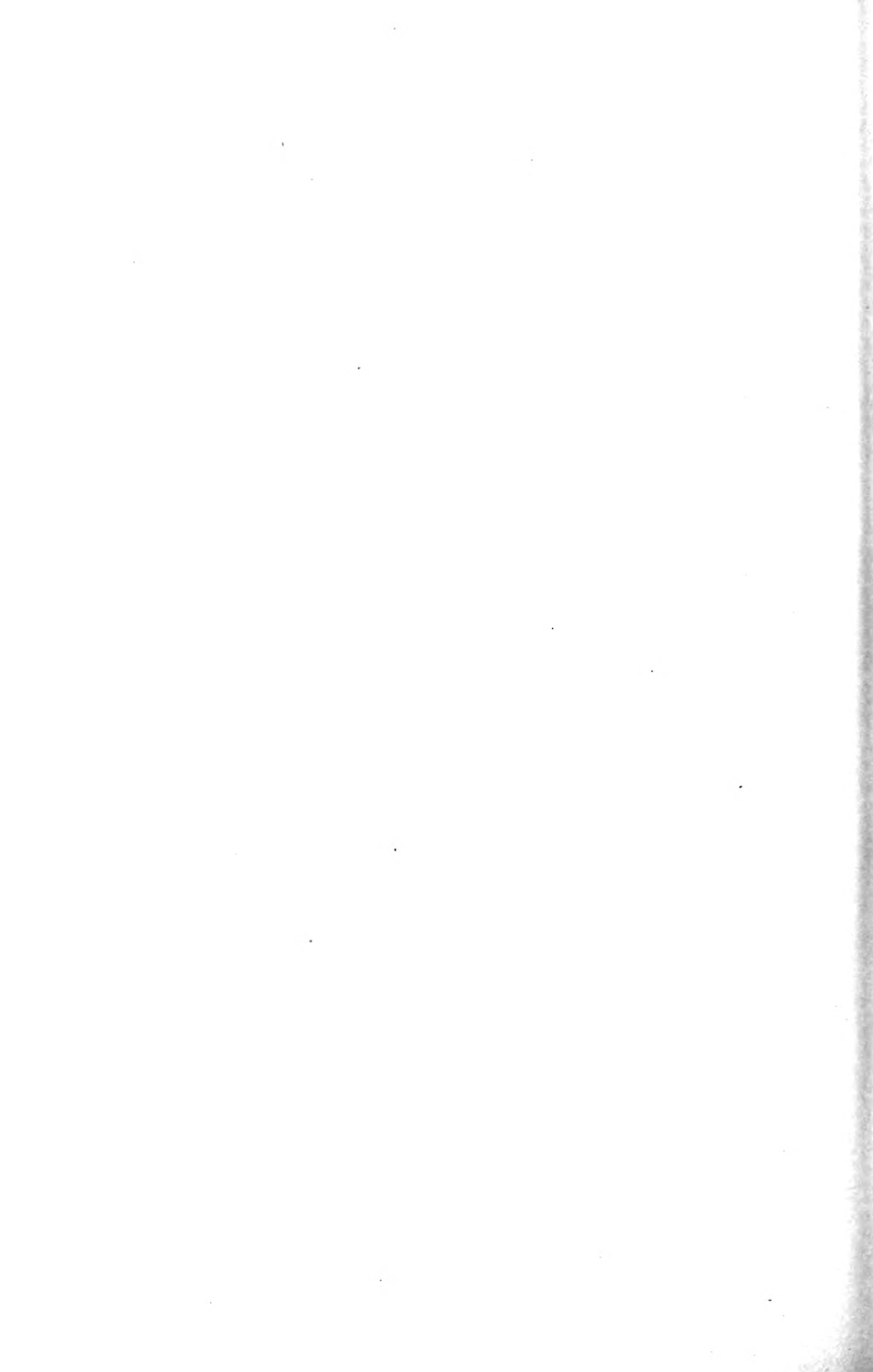


TWO EARTHENWARE IMAGES.





IMAGE, NO HEAD COVERING.



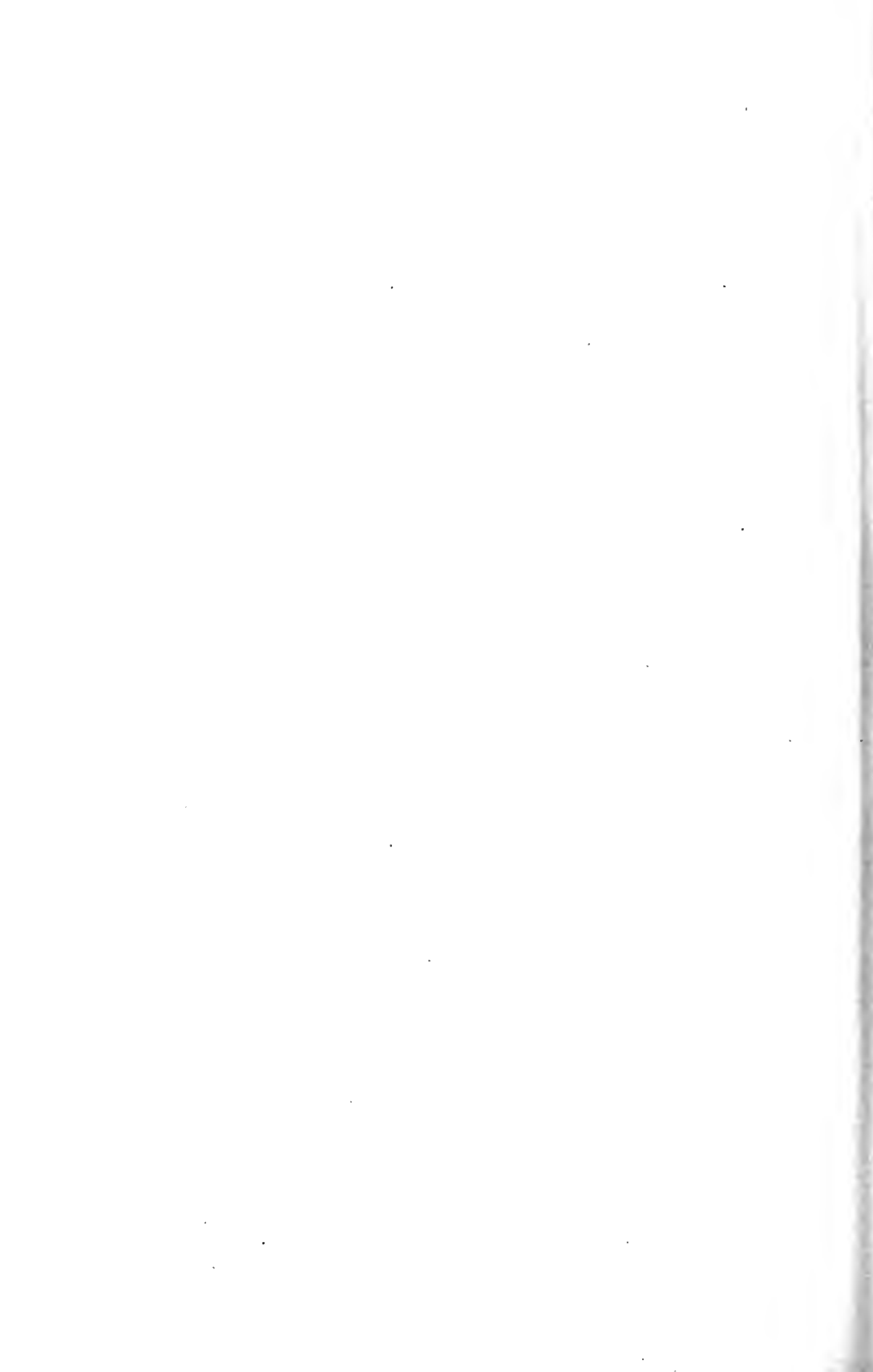


HEAD OF IMAGE, PYRAMIDAL PROJECTIONS.



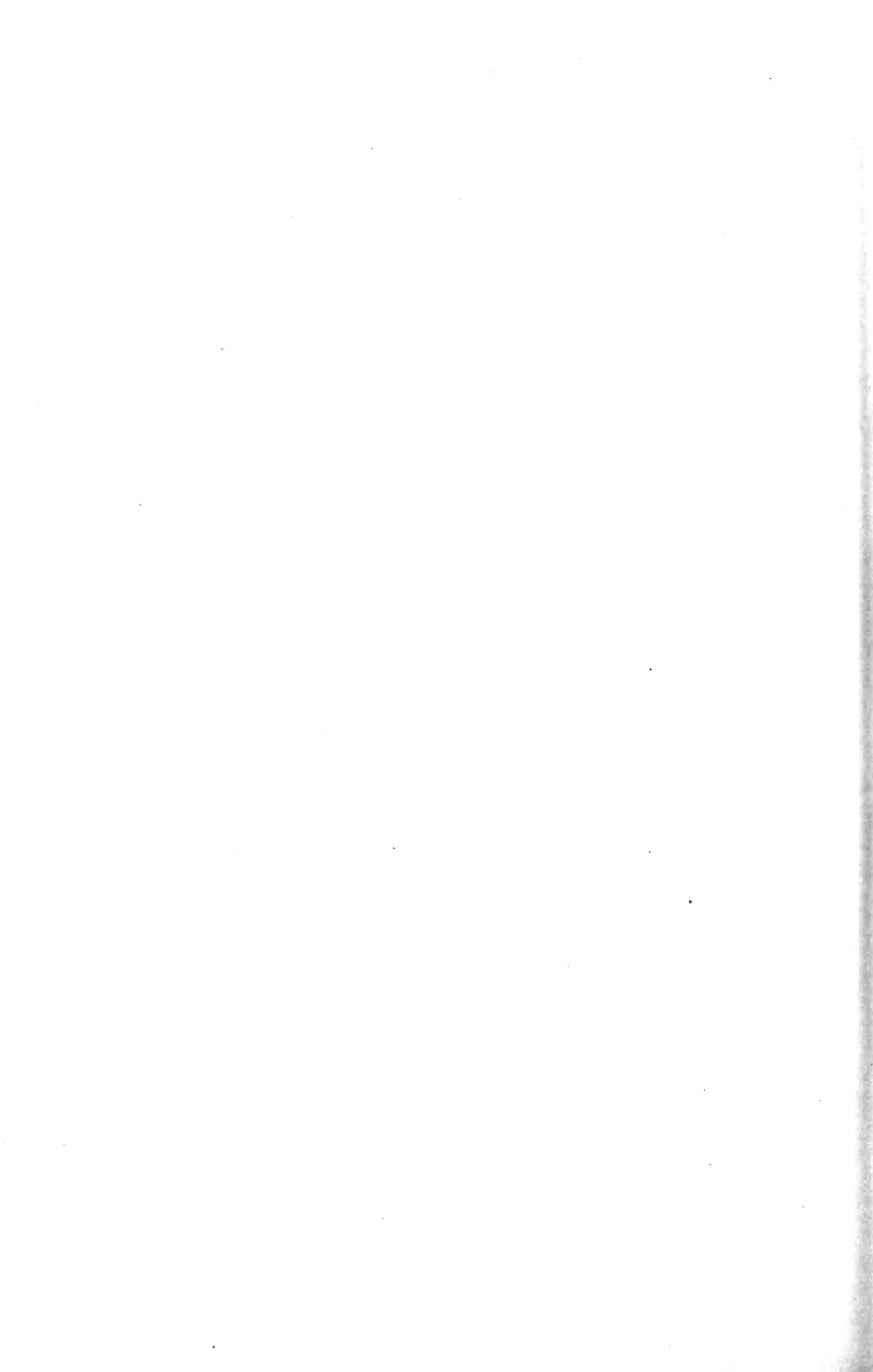


a. HEAD OF IMAGE. *b.* BODY OF IMAGE.
HEAD AND BODY OF IMAGE, PYRAMIDAL PROJECTIONS.





HEAD OF IMAGE.





HEADS OF IMAGES, FACES BOUNDED BY BROAD BANDS.



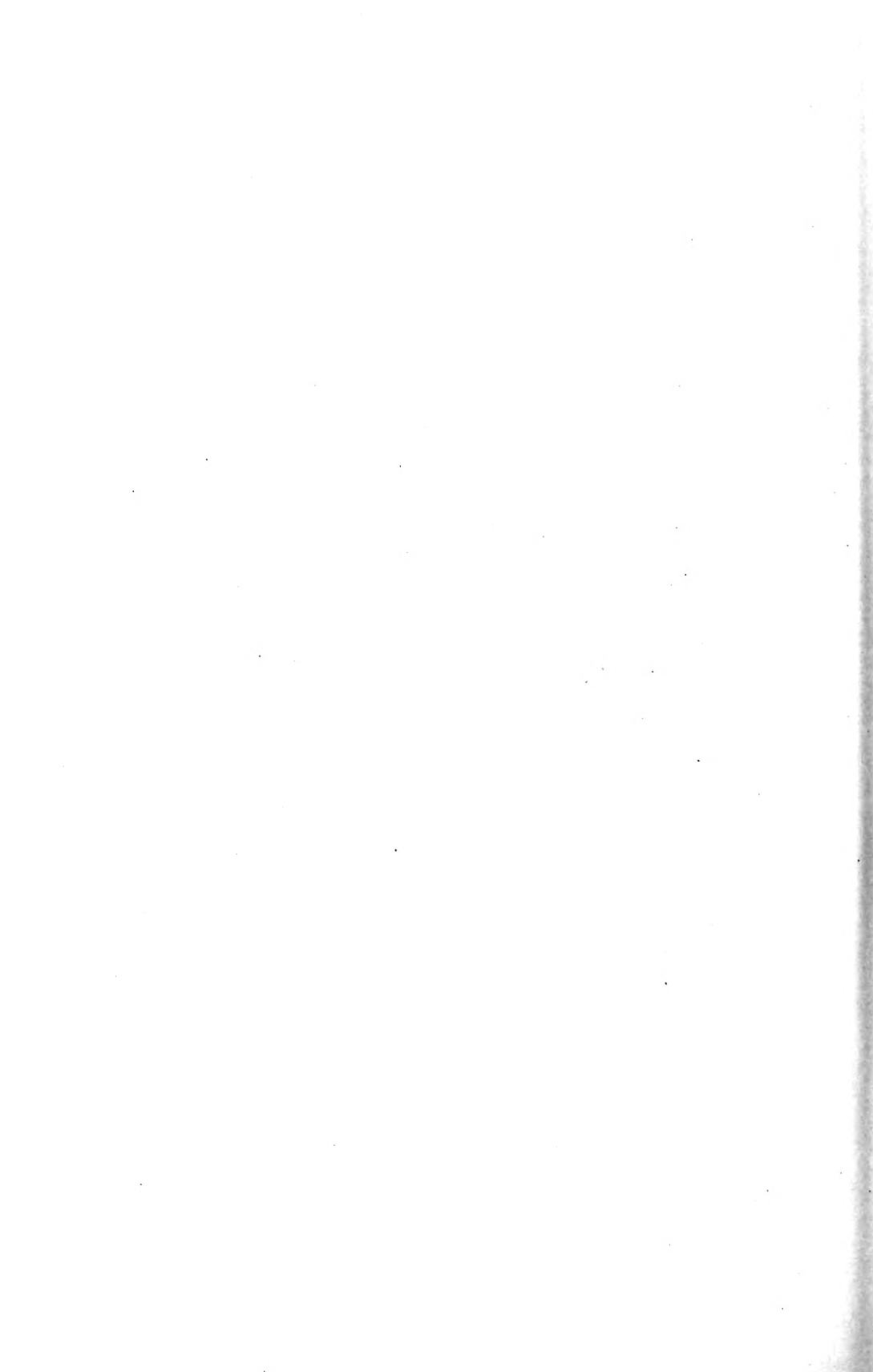


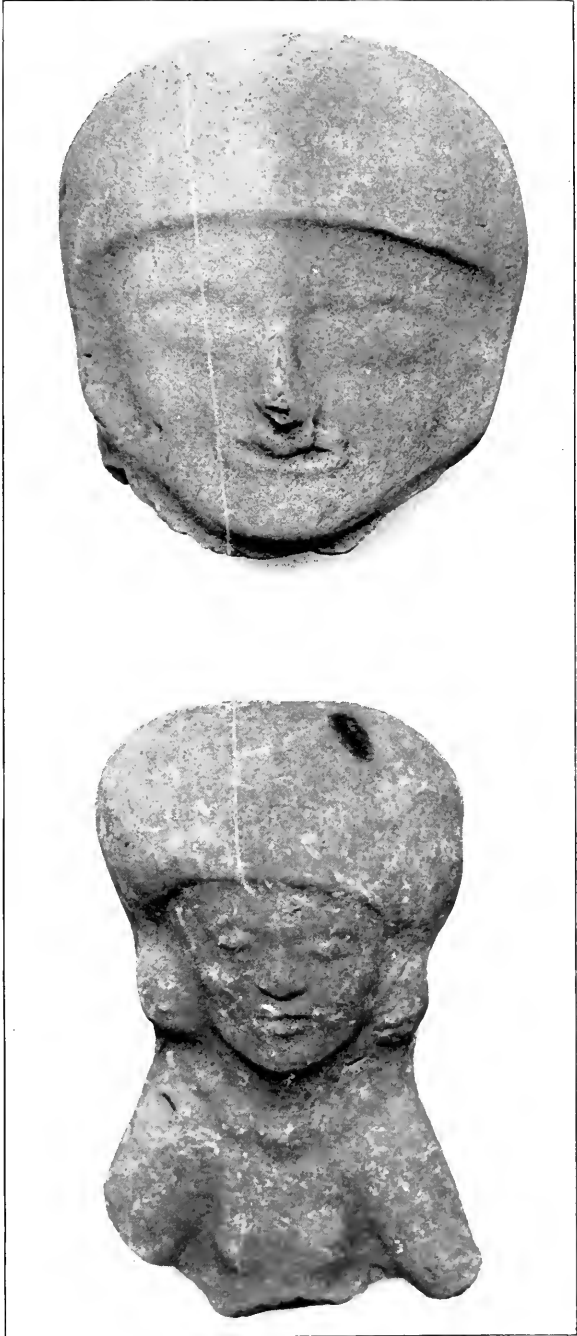
HEADS OF IMAGES, FACE BOUNDED BY BROAD BANDS.



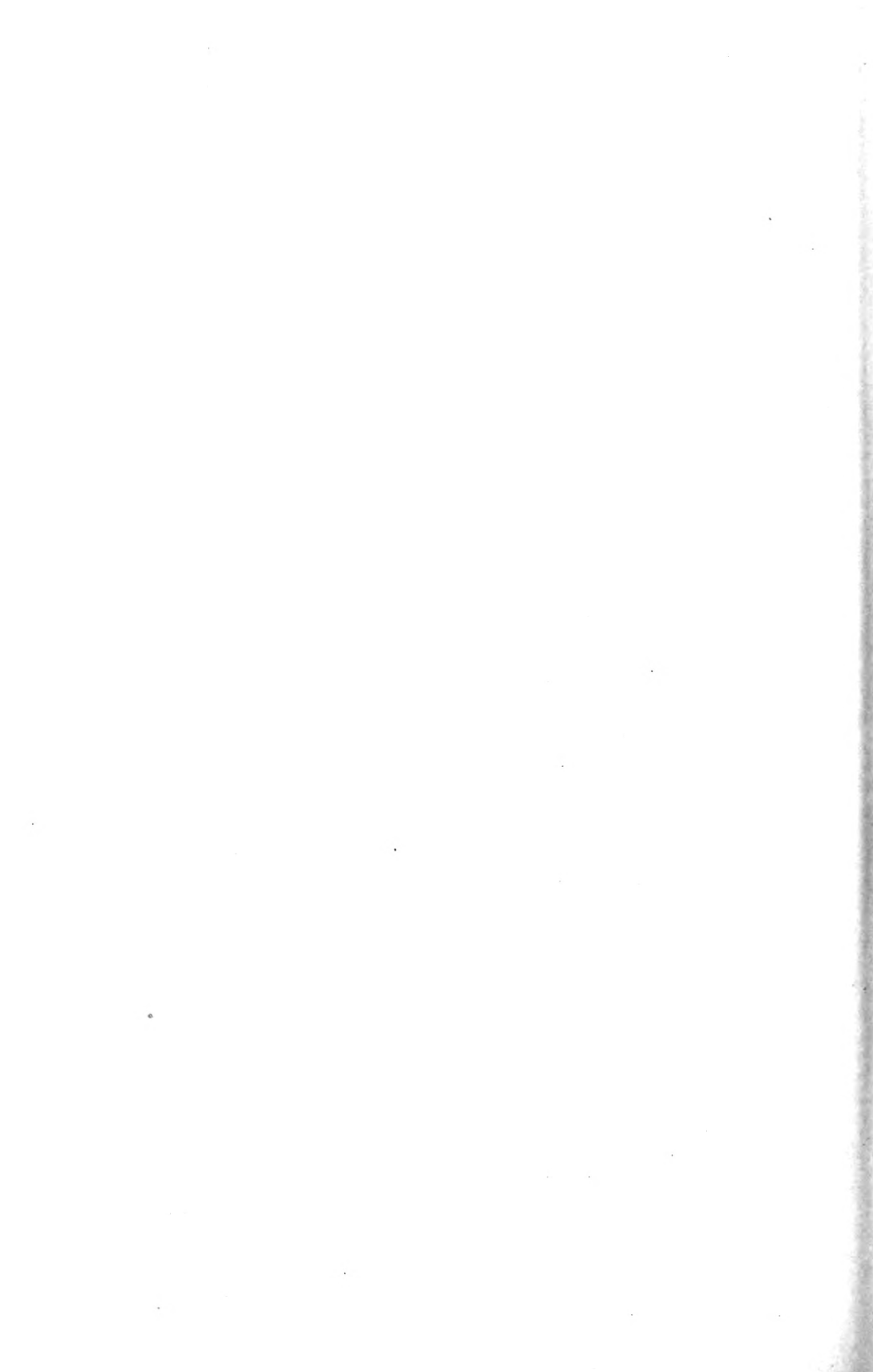


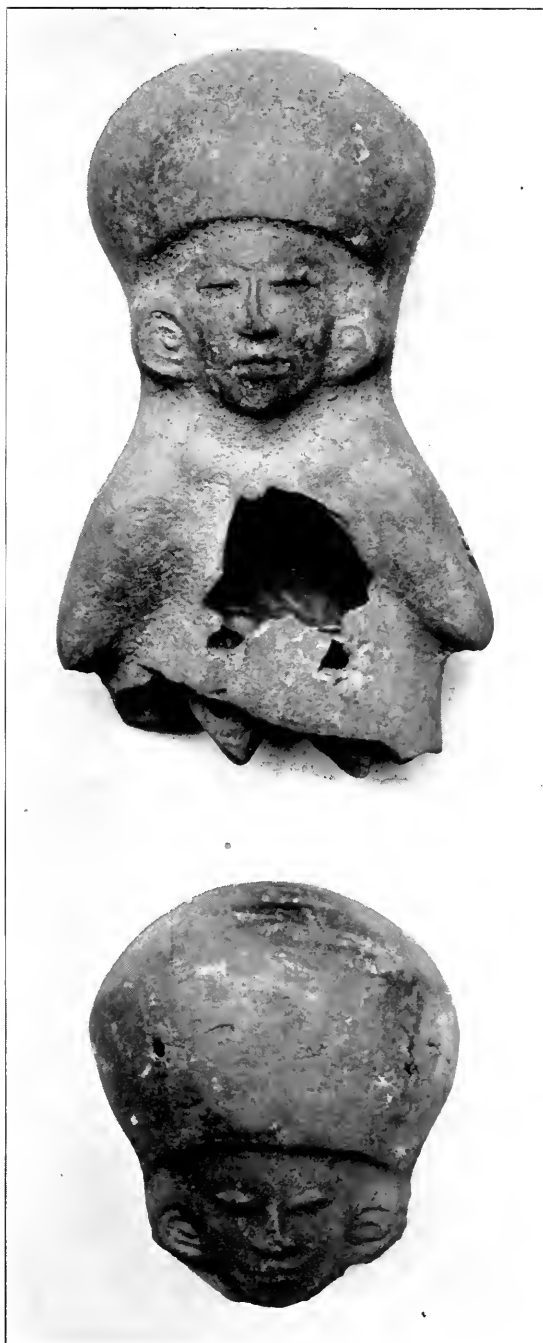
HEAD OF IMAGE, EAR ORNAMENTATION.



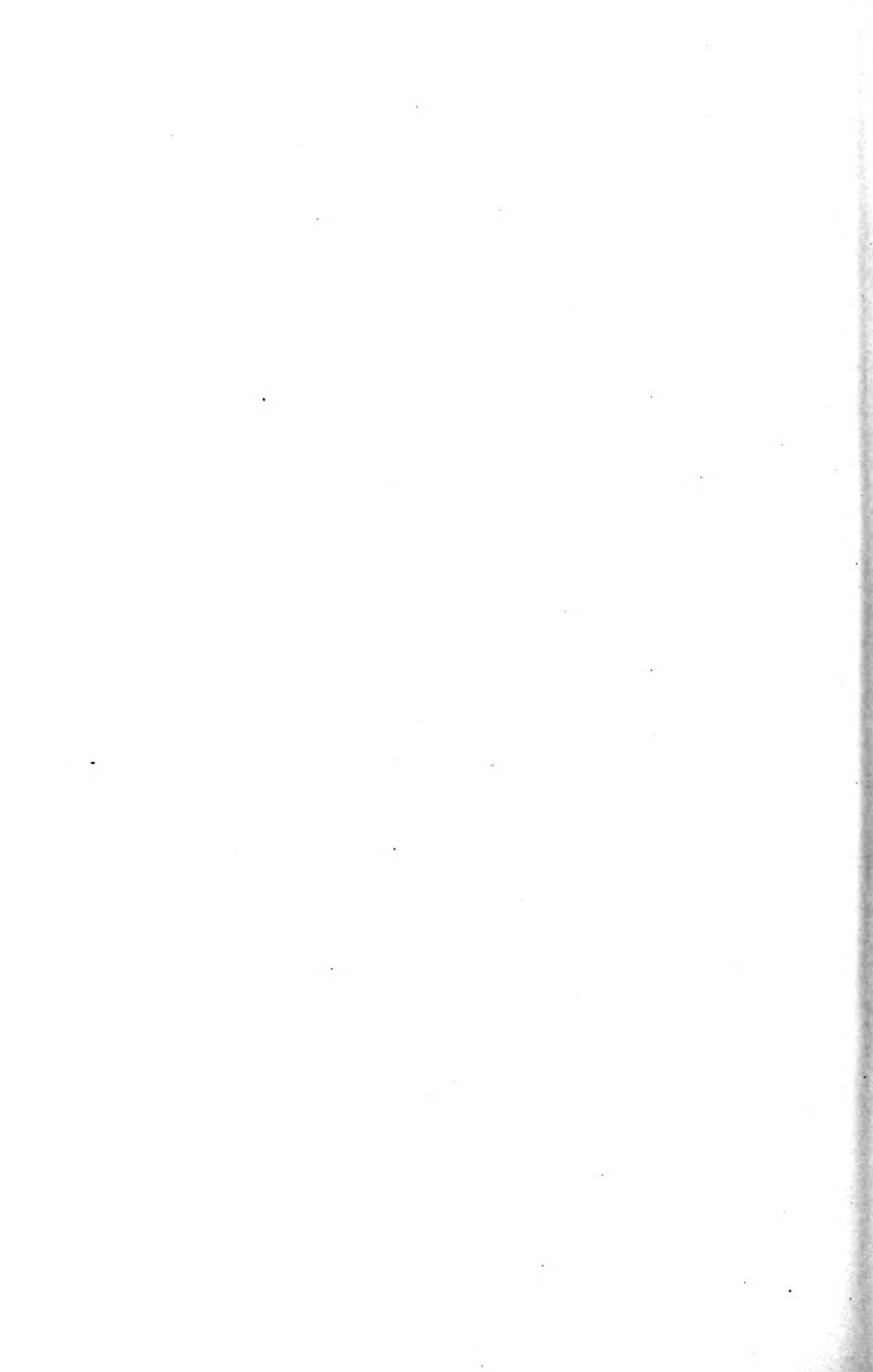


HEADS OF IMAGES.



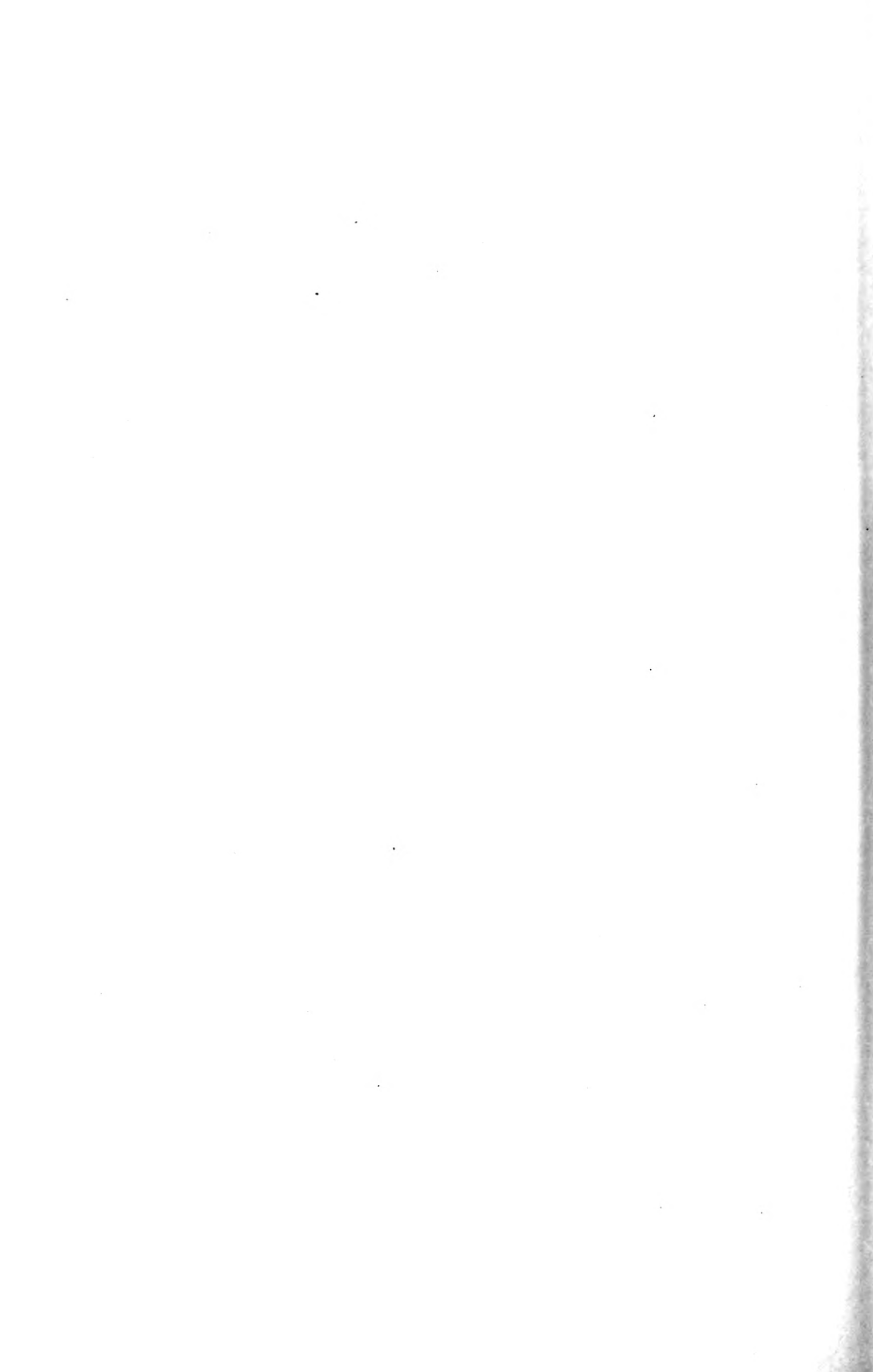


HEADS OF IMAGES



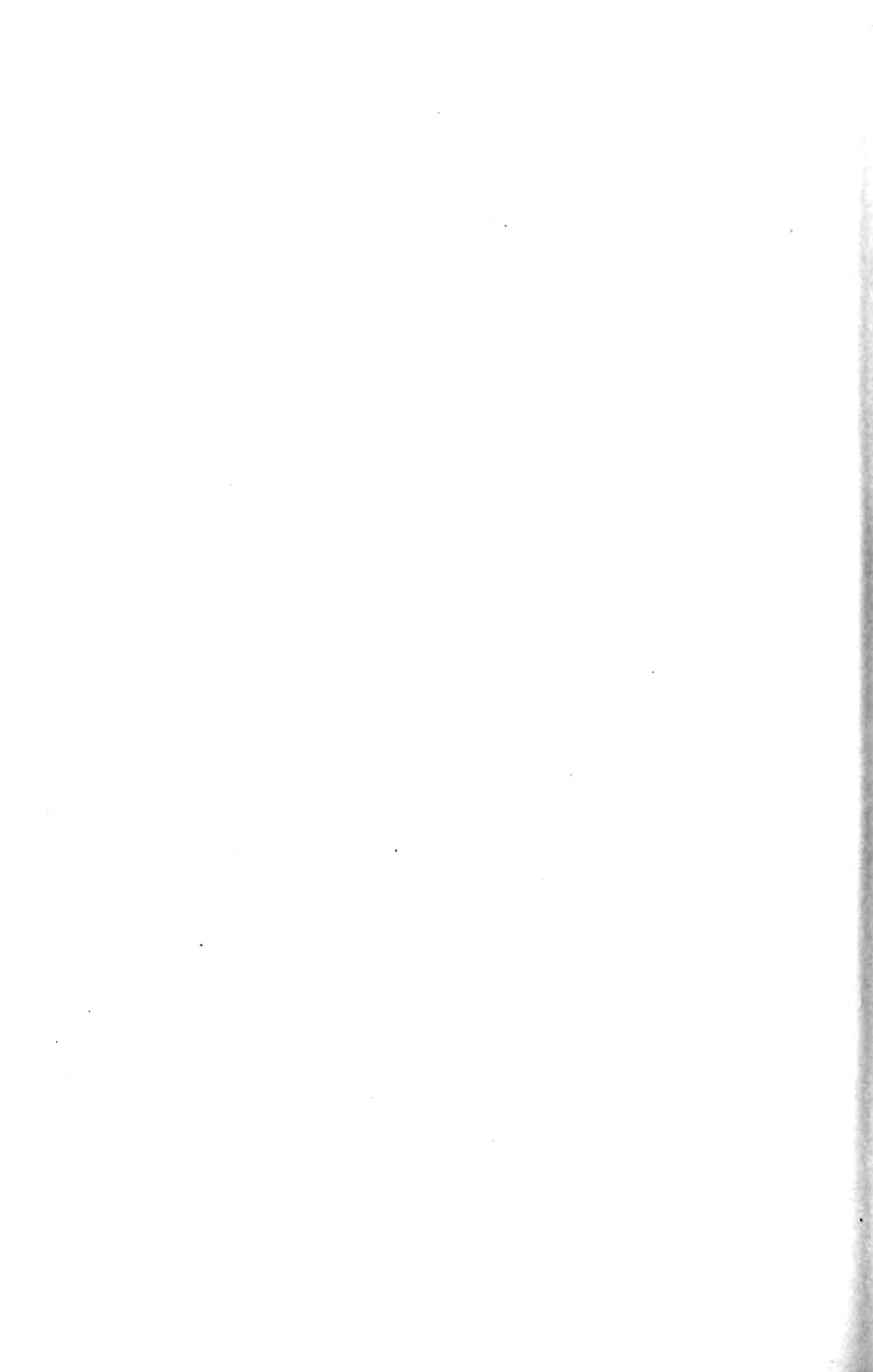


HEADS OF IMAGES.





PORTION OF FEMALE IMAGE HOLDING CLUB.



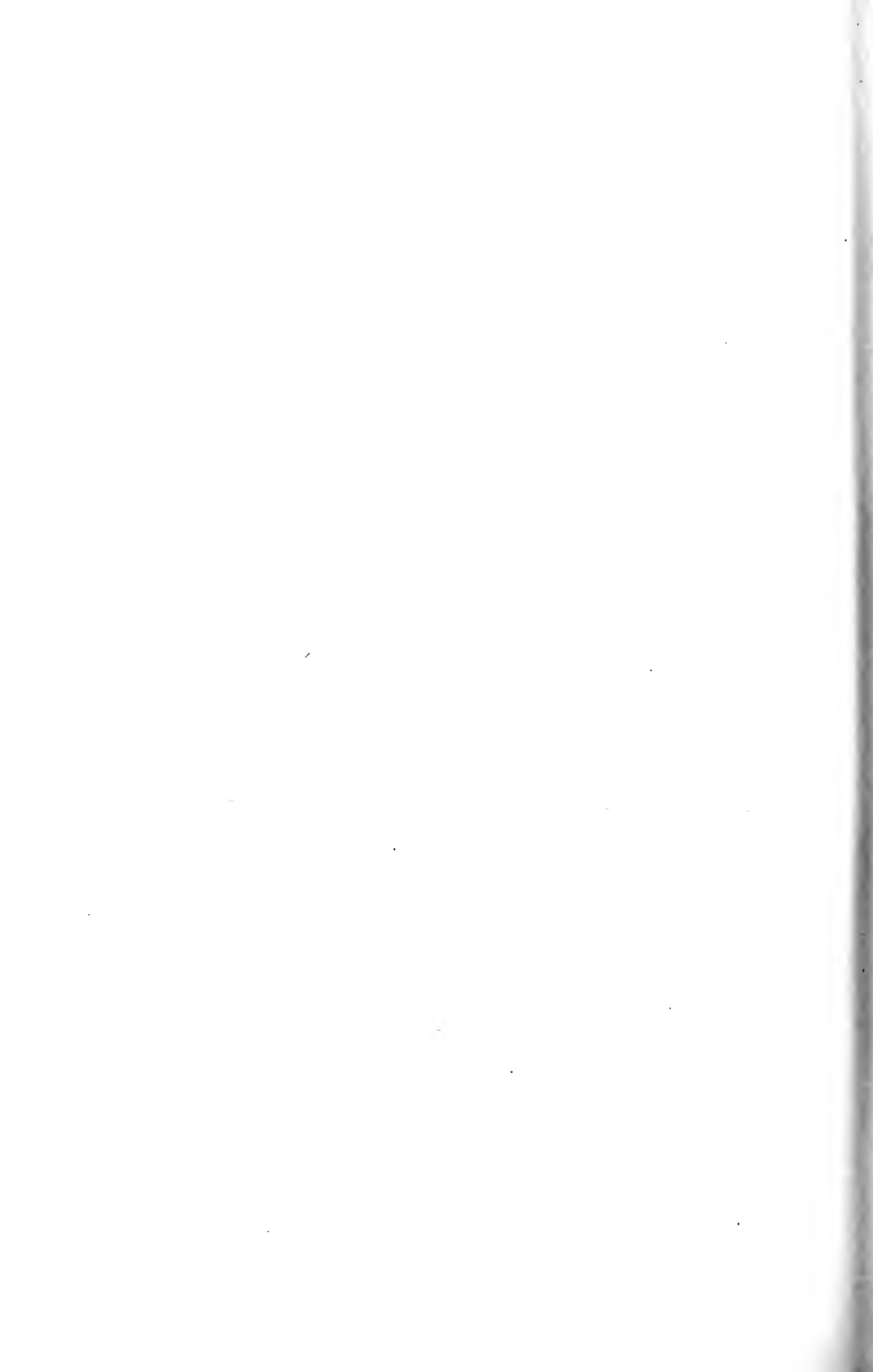


GROTESQUE HEADS.



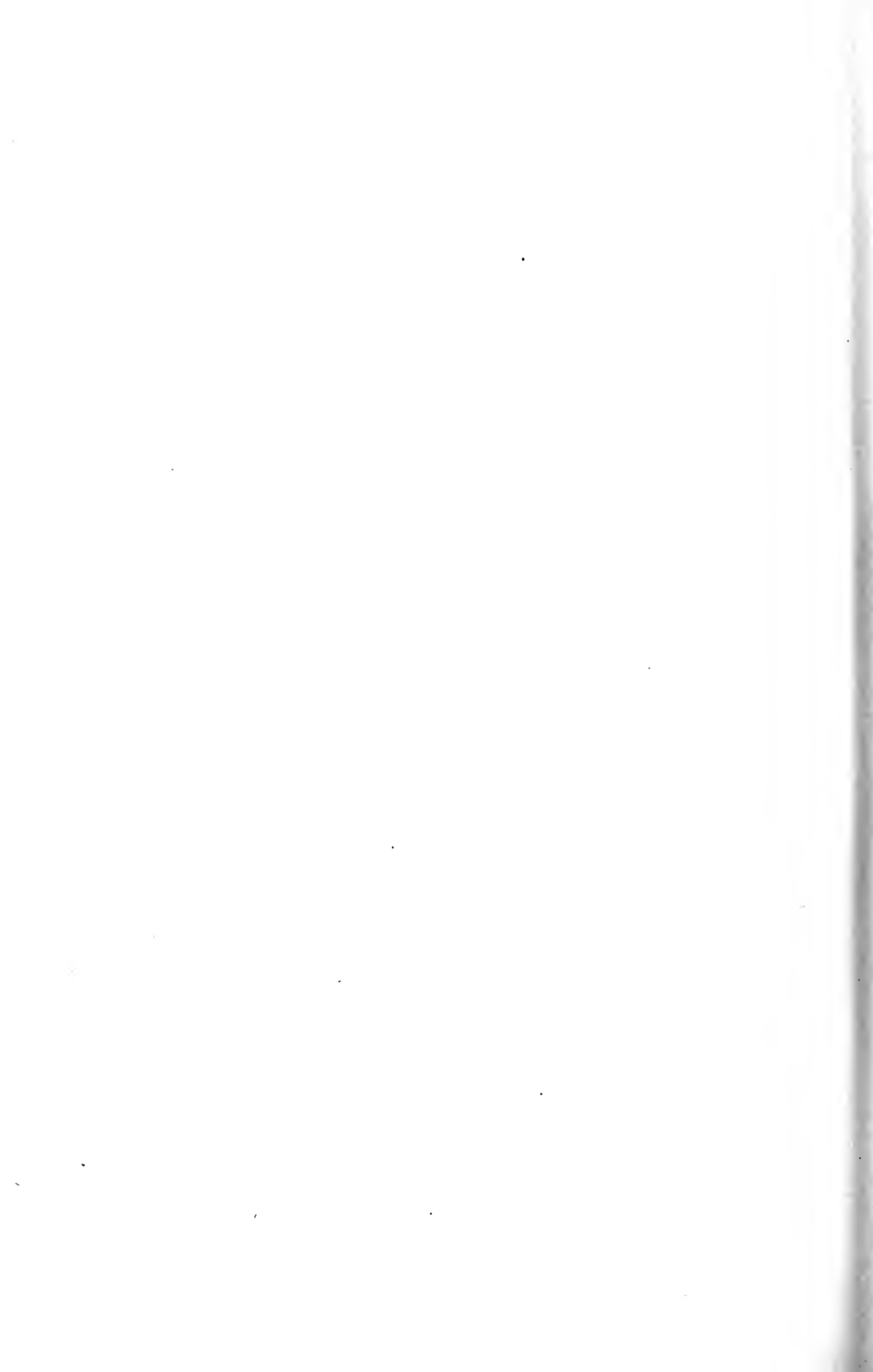


GROTESQUE HEADS.





FRAGMENTS OF VESSELS.



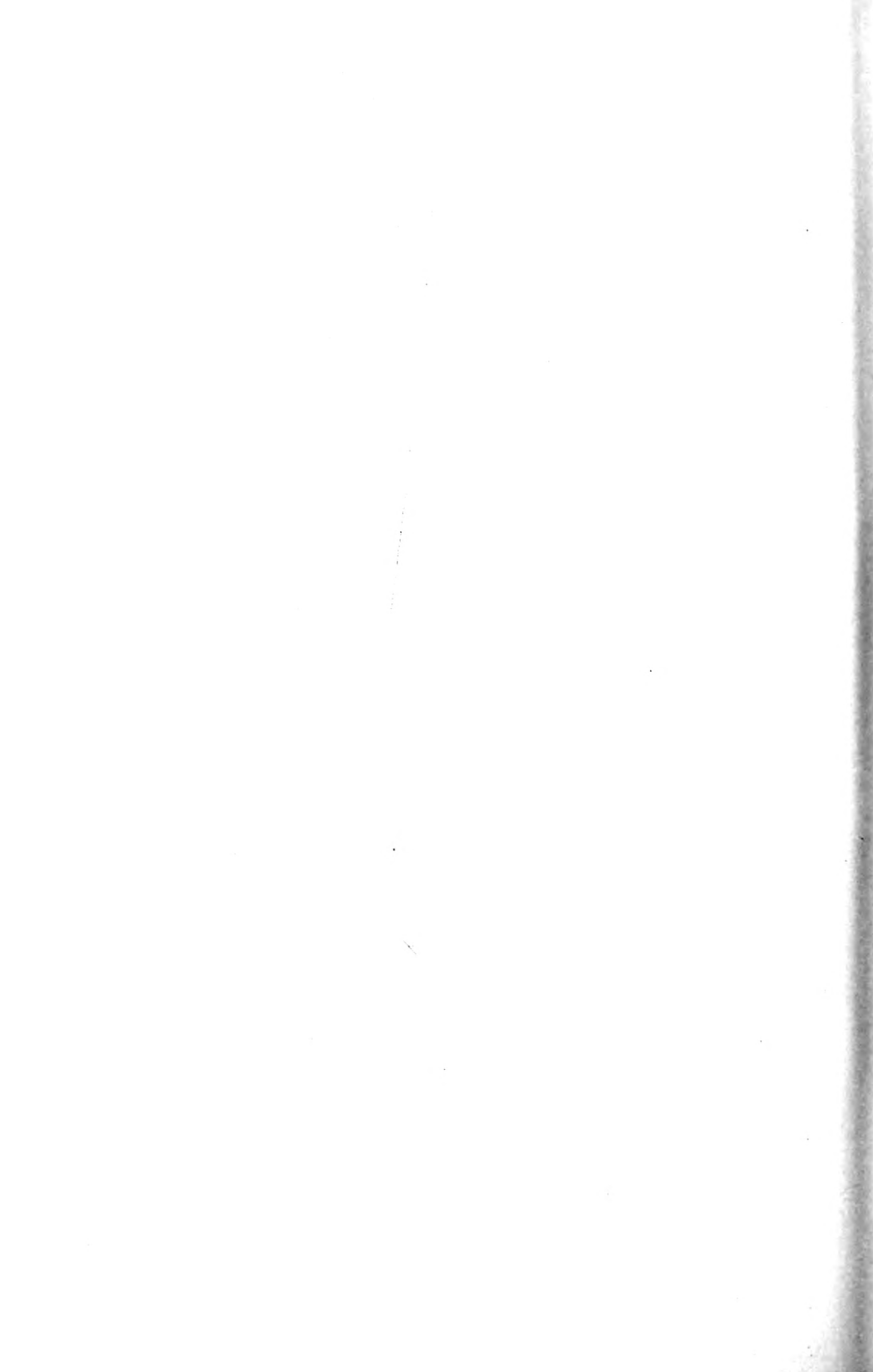


FRAGMENTS SHOWING TREATMENT OF THE NOSE.



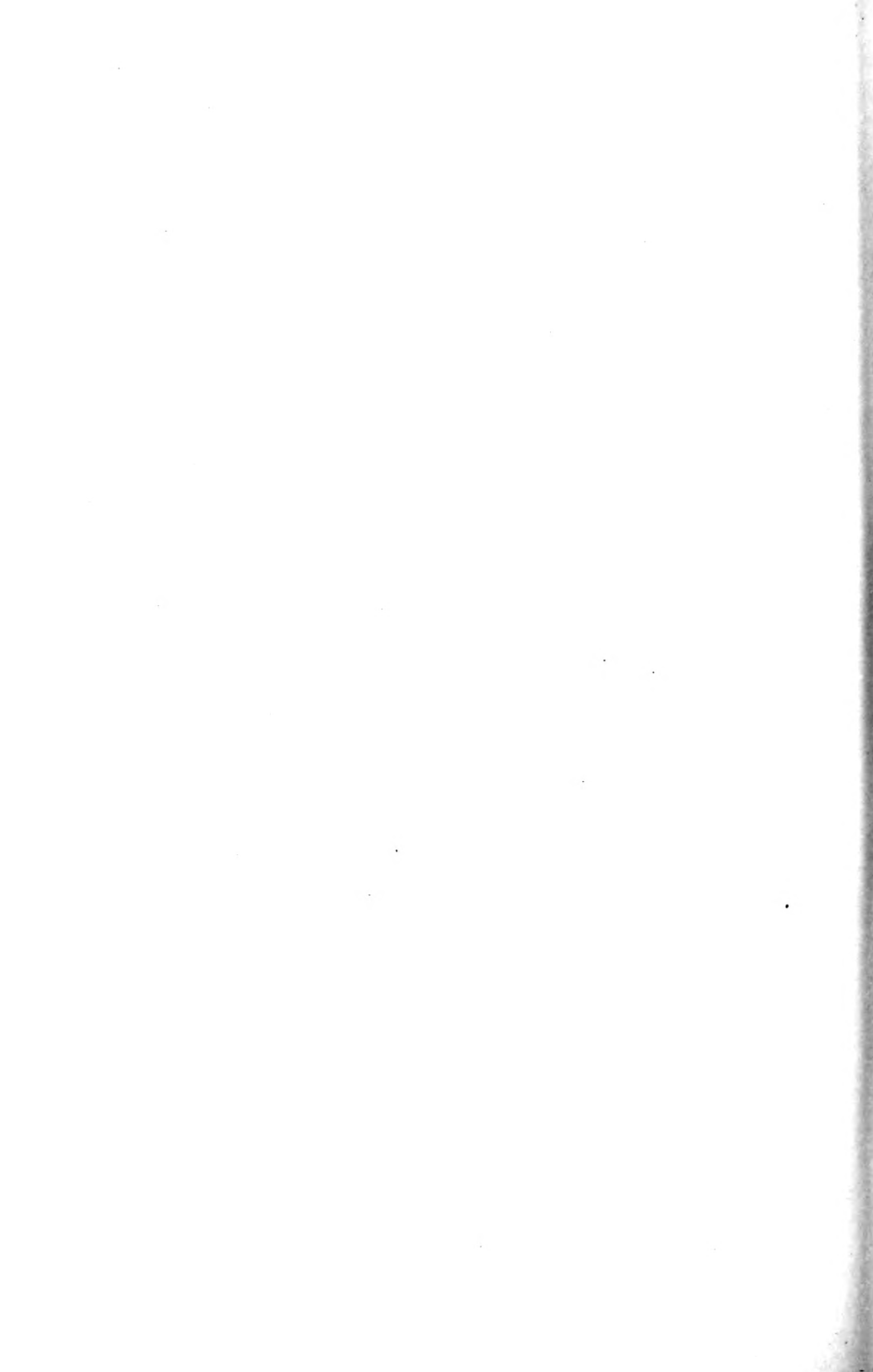


SPECIMENS SHOWING TREATMENT OF THE NOSE.





FRAGMENTS OF IMAGES SHOWING TREATMENT OF THE EYES.



d

c

c

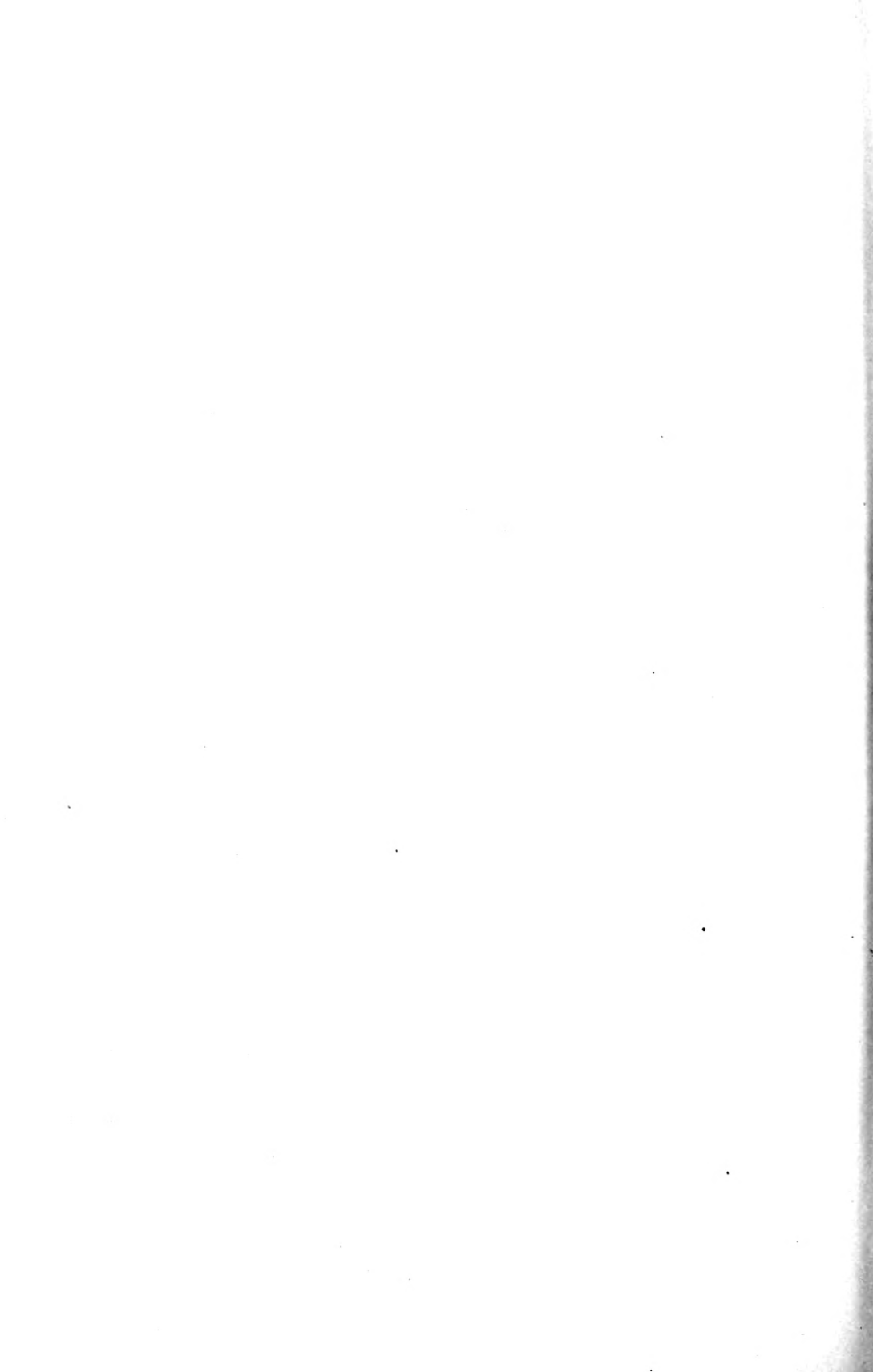


d

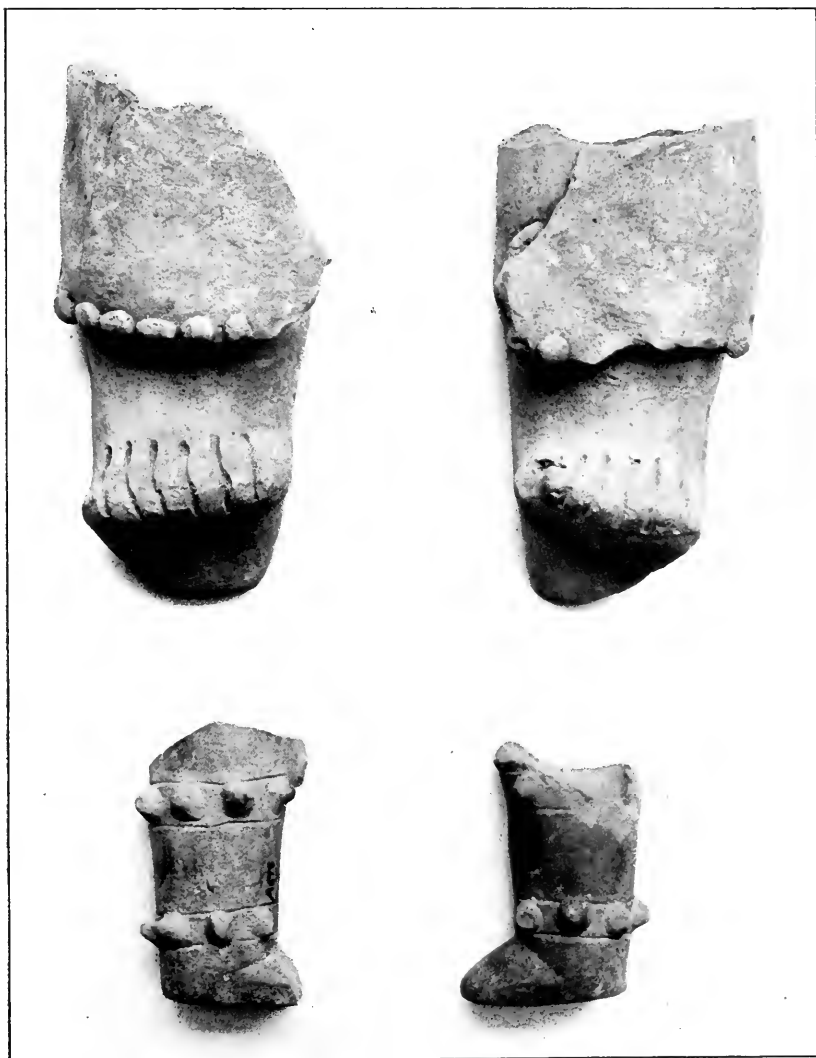
c

c

SPECIMENS SHOWING TREATMENT OF UPPER EXTREMITIES.

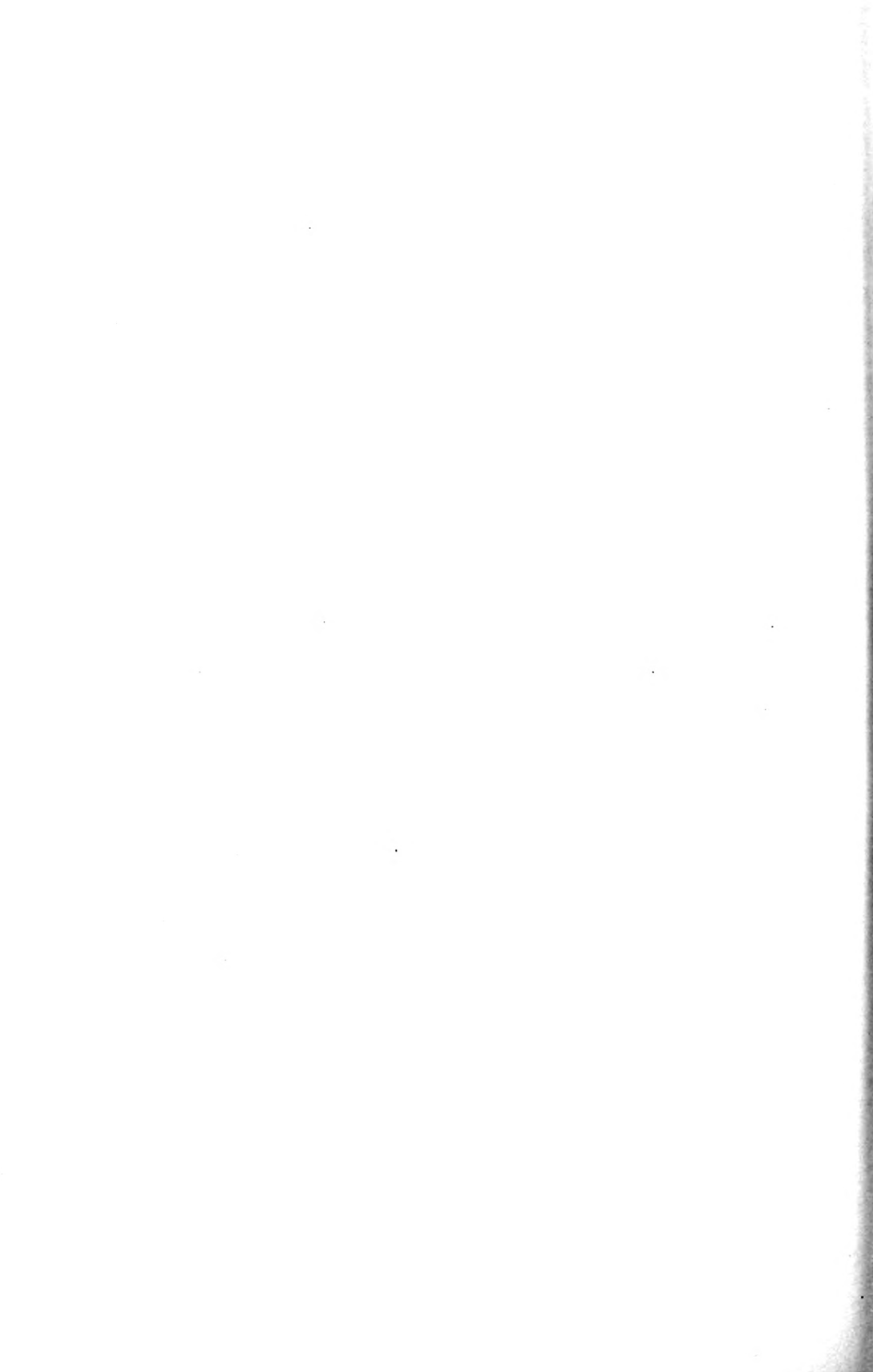


a



b

SPECIMENS SHOWING TREATMENT OF LOWER EXTREMITIES.





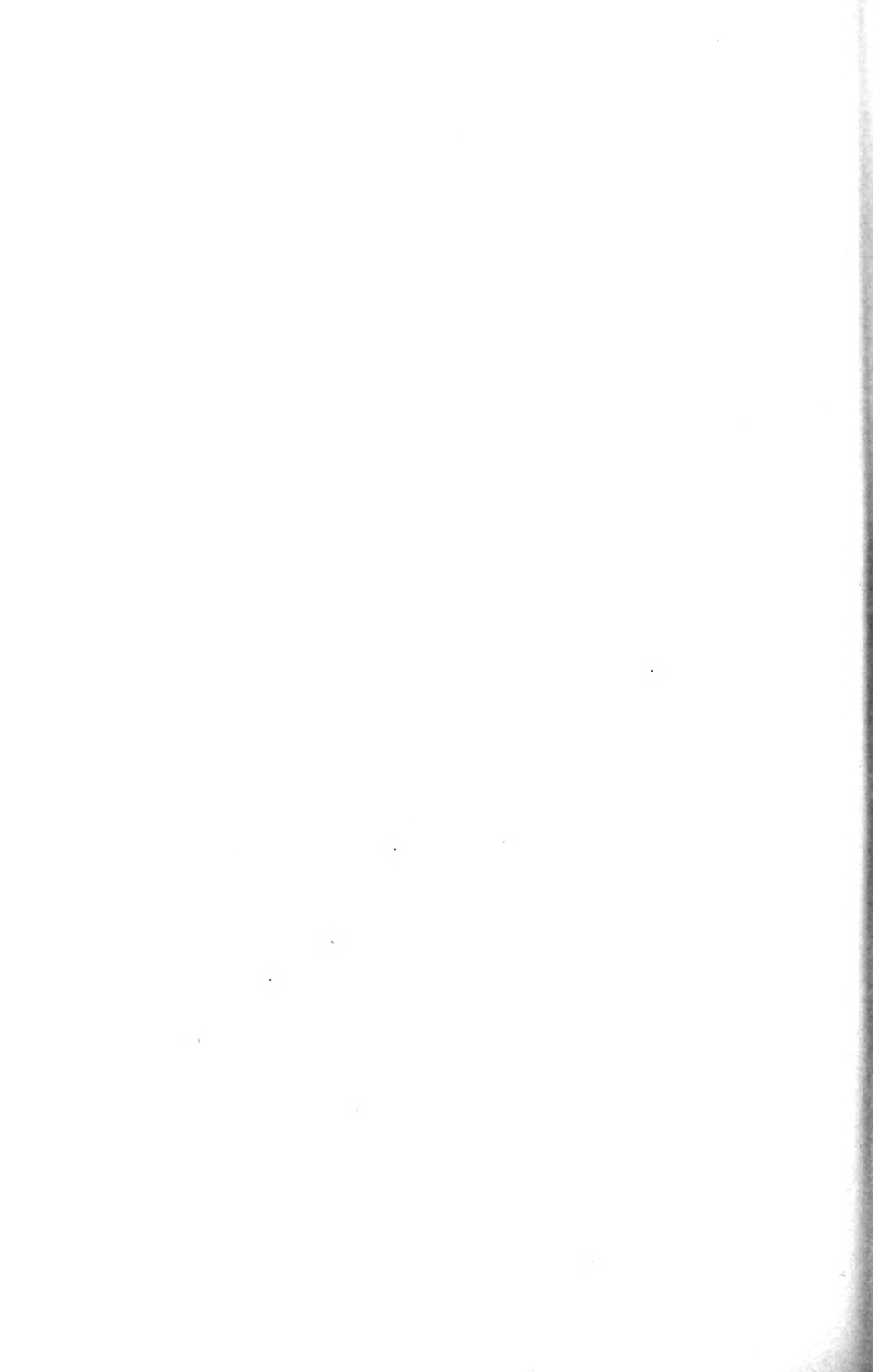
a

b

c

d

SPECIMENS SHOWING TREATMENT OF THE LOWER EXTREMITIES.





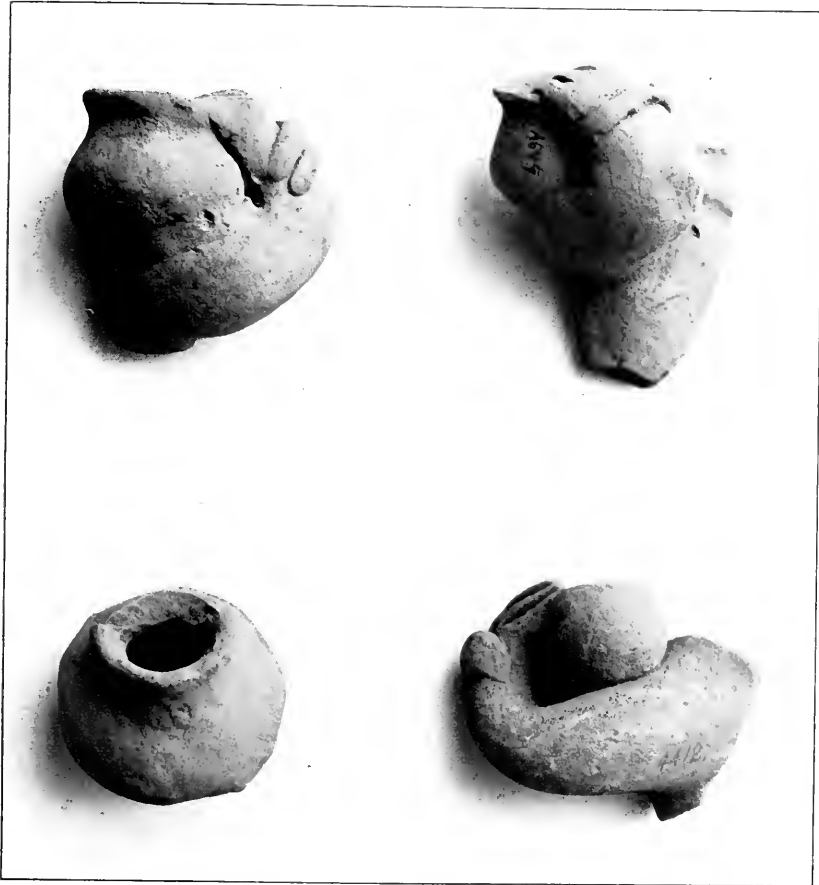
FRAGMENT OF LARGE IMAGE SHOWING FEMALE BREAST.



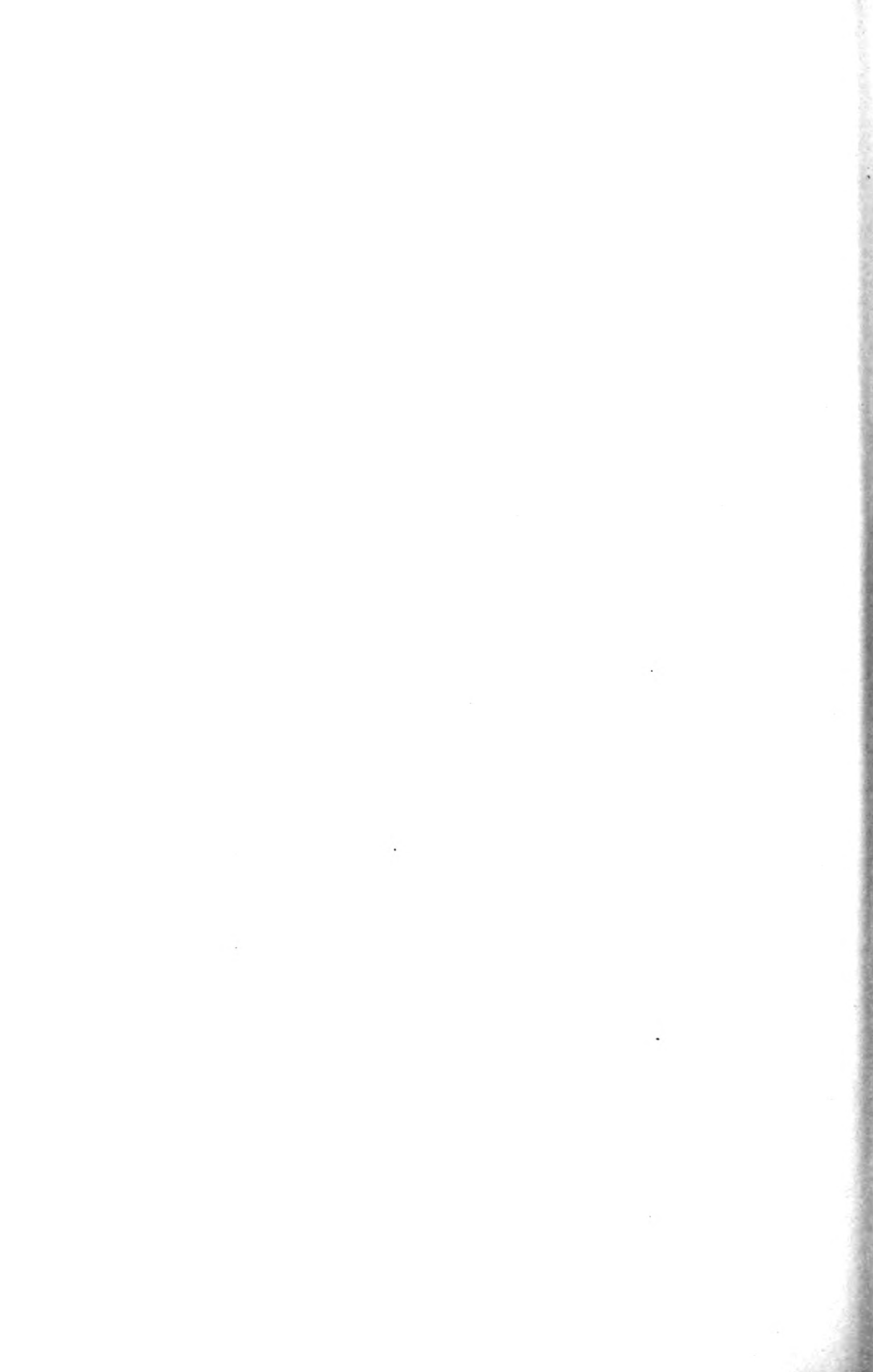


IMAGES WITH A BIRD RESTING ON THE ARM.



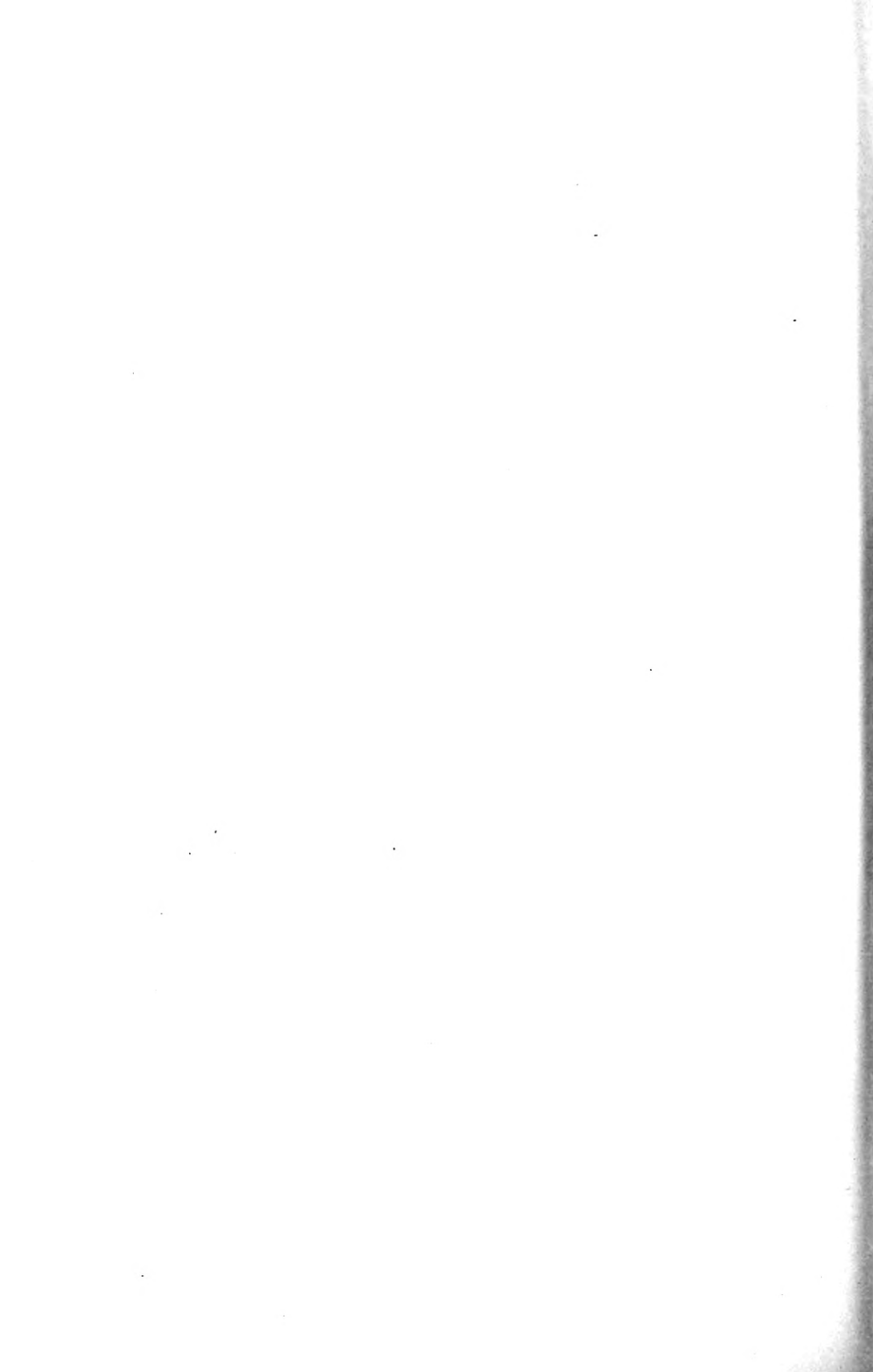


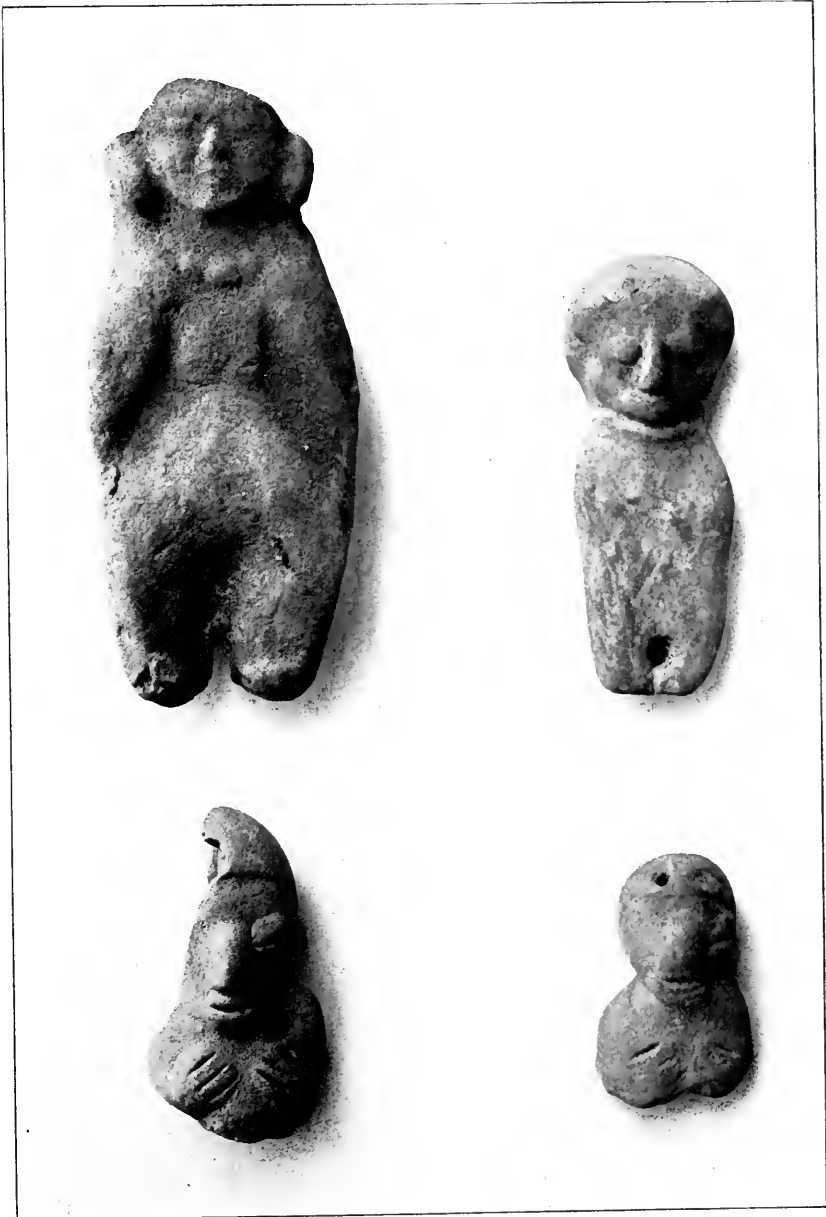
FRAGMENTS, WITH ARMS HOLDING SMALL JARS.





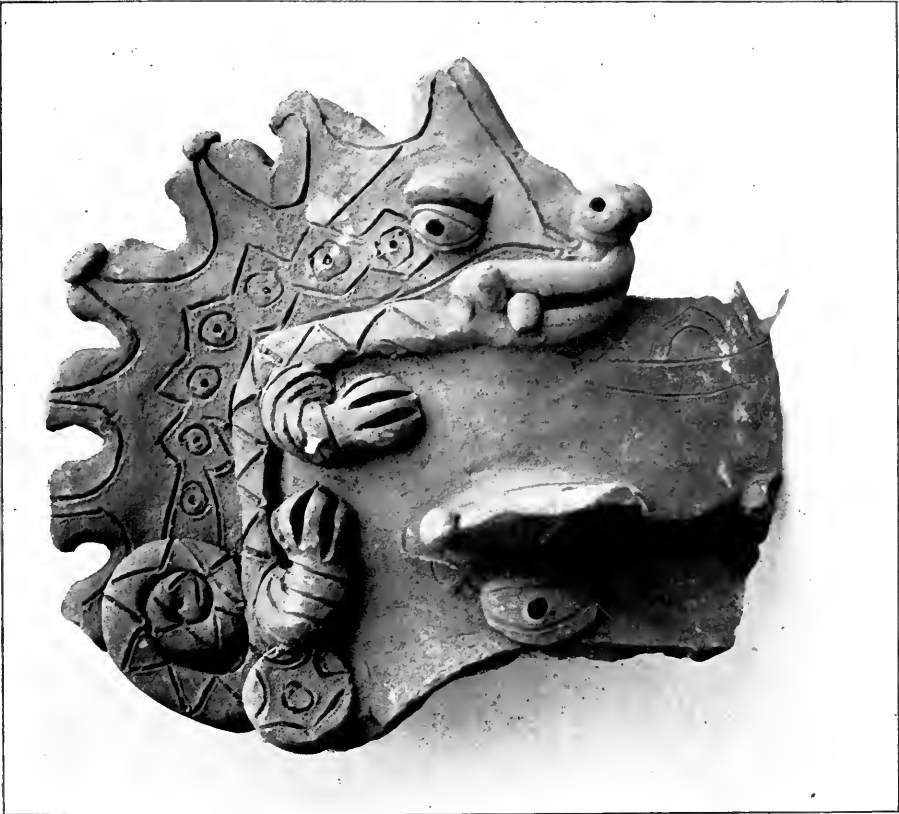
FRAGMENTS OF IMAGES SHOWING ARMS HOLDING SMALL IMAGE.



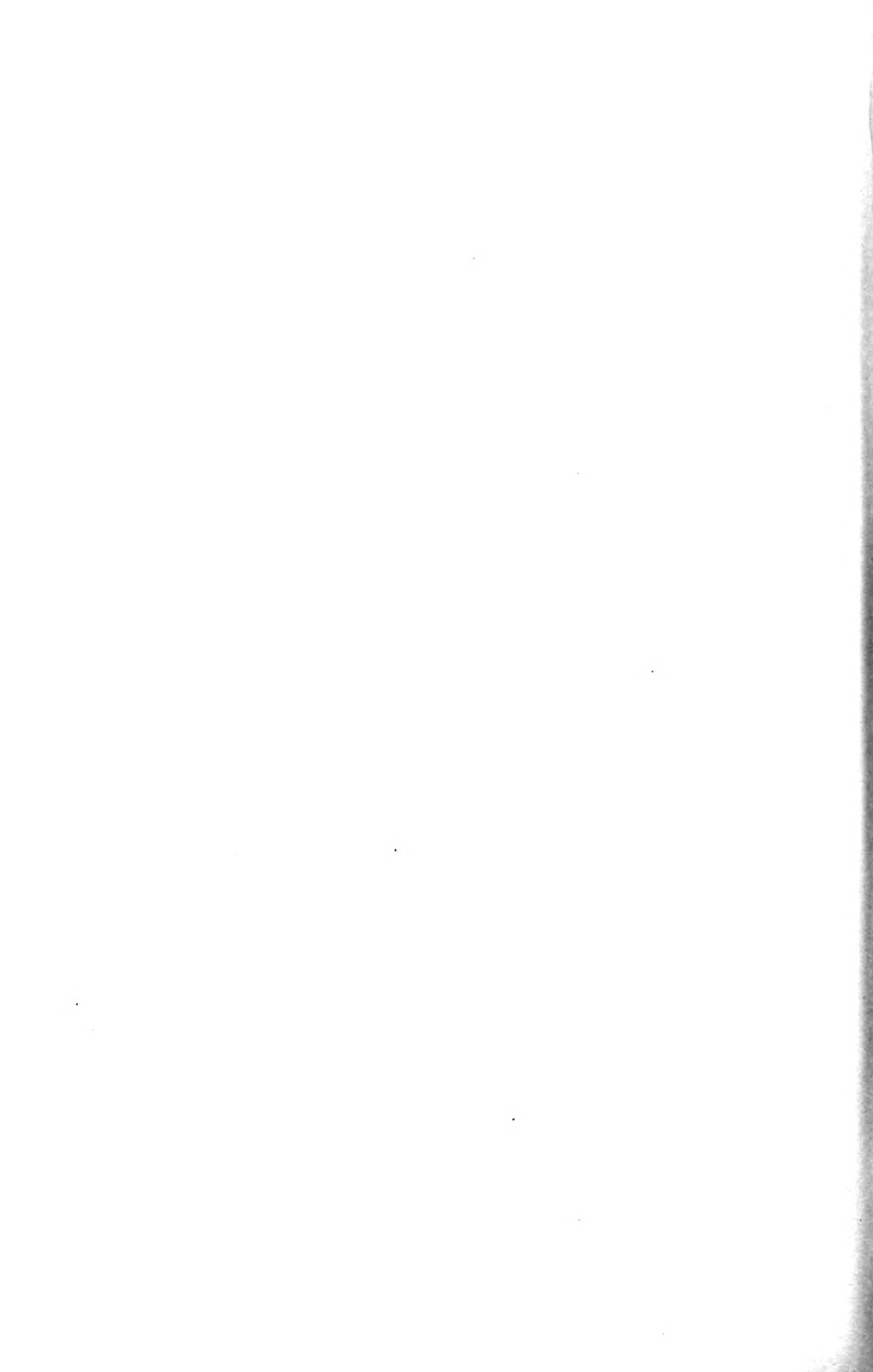


SMALL IMAGES.





FRAGMENT OF IMAGE SHOWING SERPENT HEAD DRESS.



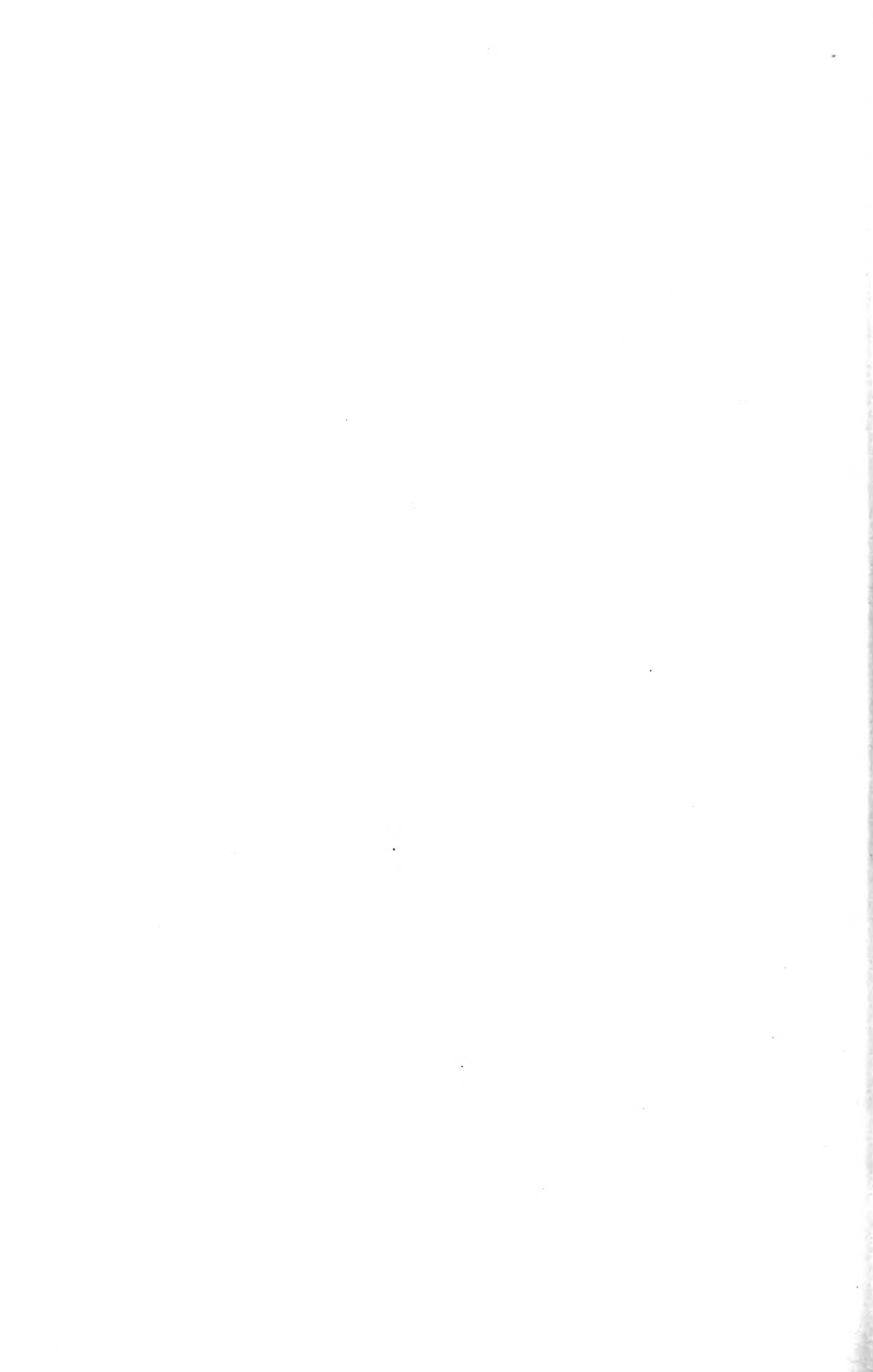


FRAGMENTS OF HEADS BEARING CONVENTIONALIZED SERPENTS' HEADS.





FRAGMENTS OF BODIES BEARING CONVENTIONALIZED SERPENTS' HEADS.





FRAGMENTS BEARING CONVENTIONALIZED SERPENTS' HEADS.



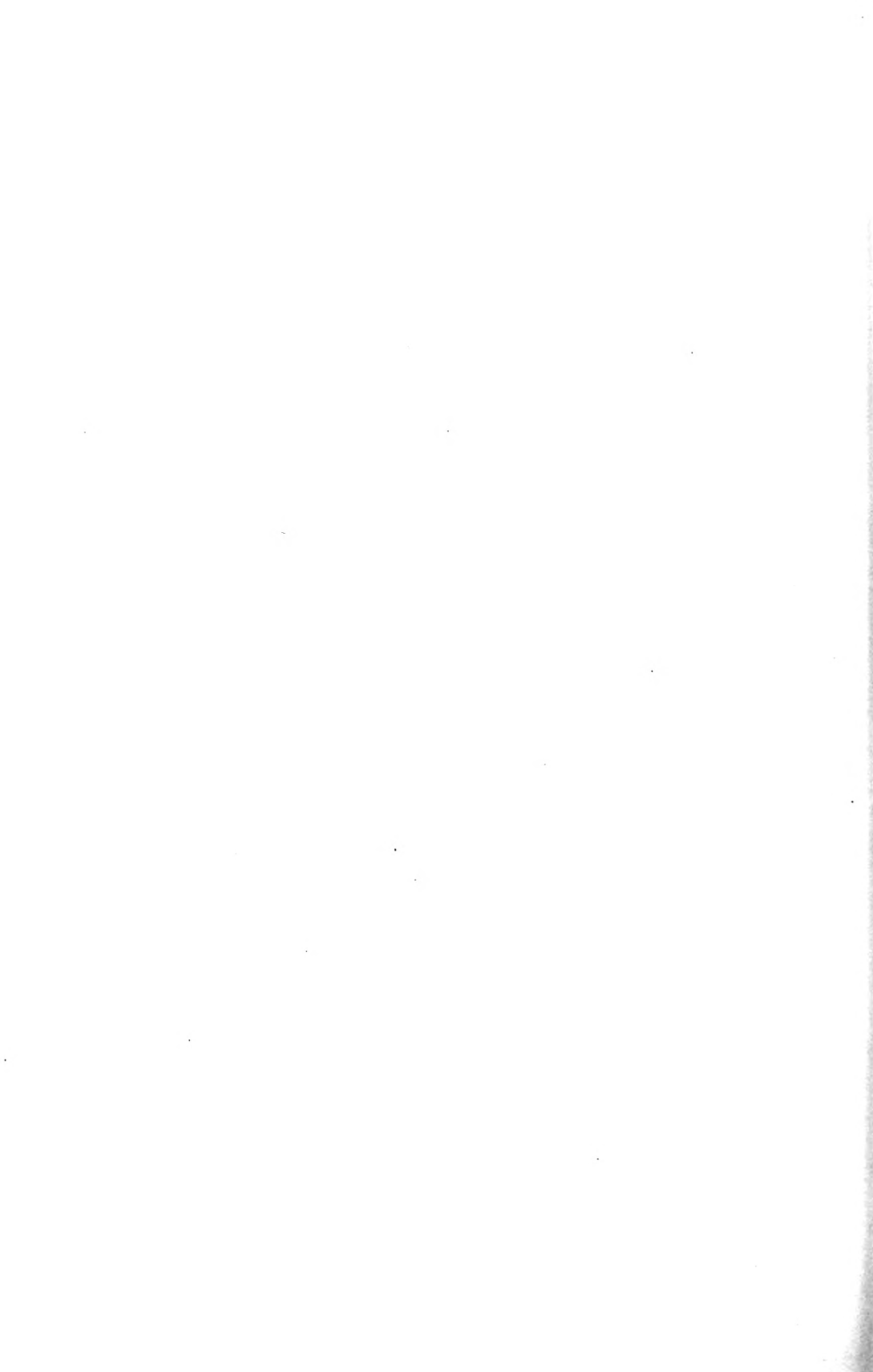


FRAGMENTS REPRESENTING CONVENTIONALIZED QUADRUPEDS.





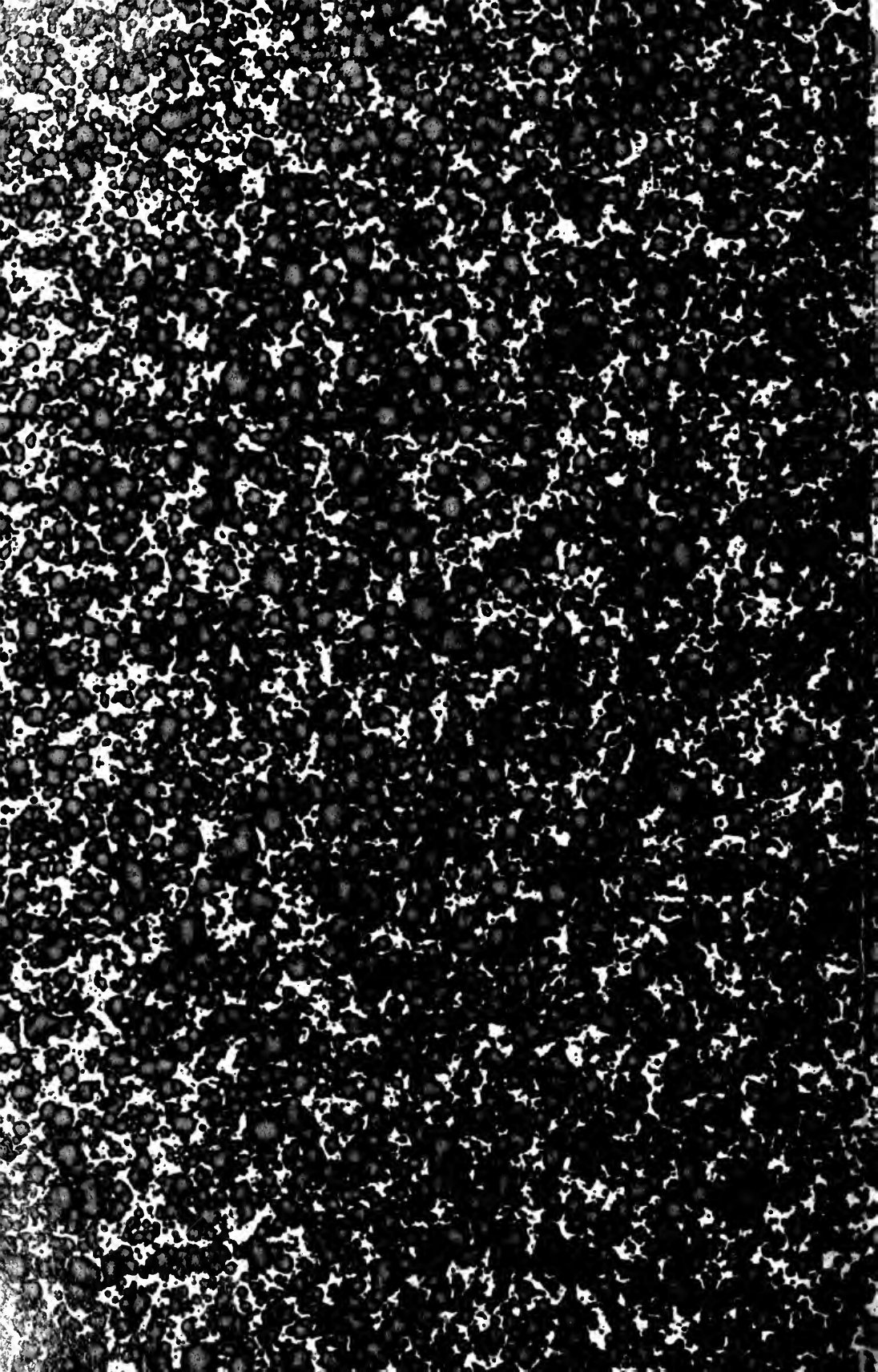
BIRD FORMS.

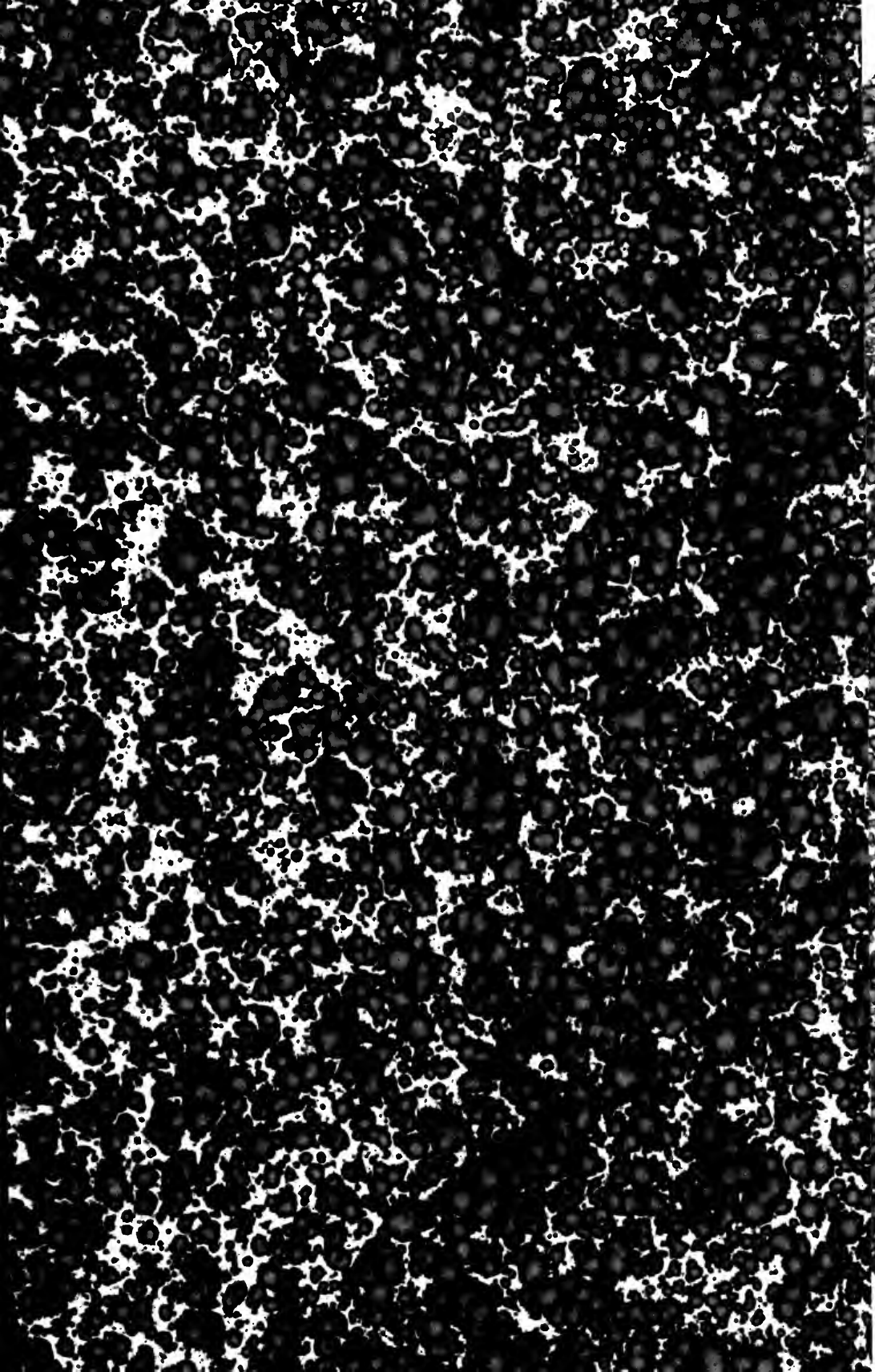




MISCELLANEOUS OBJECTS OF POTTERY.







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