

A BURIAL BUNDLE FROM COAHUILA, MEXICO

by

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In 1941, while working at the United States National Museum on archaeological materials from the State of Coahuila, Mexico, I was assigned the task of opening and studying a burial bundle (USNM Accession no. 9462, Catalogue no. 45581). This bundle had been found in Coahuila—but over fifty years before! It was one of a collection of “two or more mummies left [in Monterrey, Nuevo Leon, with Ignacio] Galindo and sent to the U.S.N.M. by Ed Palmer.” The accession notes further state that this particular bundle came from Coyote Cave in the vicinity of the city of Torreon, which lies in the so-called Laguna District of southwestern Coahuila. Coyote Cave (CM-88 in the Coahuila Survey of the U.S.N.M.) is one of those from which Edward Palmer, the famous “plant explorer” (McVaugh, 1956), had obtained the fabulous collection of cave materials now housed, but lying unstudied these long years, in the Peabody Museum of Harvard University (Studley, 1884; Hooton, 1930; Woodbury and Woodbury, 1935; Cosgrove, 1947; Aveleyra, et al., 1956). The site is one of the storied burial caves of Coahuila (Portillo, 1886) which have been visited and vandalized for many years but about which there is only one extensive, though partial, professional publication: *Cueva de la Candelaria* (Aveleyra, et al., 1956; for related bibliography, see Taylor, 1966).

The opening and study of the bundle took, as I recall it now, on the order of two months. The textile wrappings which formed the bulk of the packet were found to be in a remarkable state of preservation, somewhat faded as to color but virtually intact except for the side on which the bundle had evidently rested during its long sojourn in the cave. This side, that covering the right of the enclosed body, was badly stuck together, compacted, and decomposed, undoubtedly from the action of body juices draining downward from the decaying corpse. Textile fibers on the other three sides, even those of the “soft” variety, were firm and retained colors that are easily differentiated one from another, although in some places it is no longer possible to identify with any certainty what those colors may have been in aboriginal times. Specimens other than those of fiber were in practically mint condition,

although rodents had displaced a few objects and probably are responsible for the disappearance of pieces of what originally were quite surely complete artifacts.

The skeleton was found to be without skull, and the body had been wrapped and buried in that condition. On numerous occasions in northern Coahuila, I have heard rumors of sheltered sites in which skulls without other bones have been discovered; but if such sites do indeed exist, I have not been able to find one. Thus, it is not possible at present to say whether or not skull burial and/or skull-less burial is common in Coahuila. On the other hand, it is certain that complete bodies were often bundled and buried, both in the north and in the Laguna District as witness the findings of Palmer, Aveleyra, myself, and others. As for the post-cranial skeleton, the bones are well preserved and were in natural position, except for a few of the smaller hand and foot bones which had probably been carried off by the rodents. Support for this inference lies in the rodent nest which lay in the pelvis-ankle region and very close to which, if not demonstrably in it, were found several out-of-place cultural objects. The corpse had been flexed and the forearms placed between the legs. As far as I am presently aware, no study has been made of the bones (Fig. 1).

Several artifacts were found inside the bundle (Figs. 2-7). Some of these are undoubtedly ornaments which had been attached to the textile wrappings, but because of deterioration and post-burial disturbance it has not been possible to determine with positive assurance their original position upon the body. Nevertheless, by a process which may be called "inference by seriation," it is possible to develop at least some hypotheses concerning this matter. In the first place, no. A 3 is definitely tied to stranded material (no. F 2) although it was found, unattached to the main mass of that material, in the pelvic area close to the rodent nest; the tie-cord of no. A 2 was found between cords of stranded material and knotted so as to form a toggle to keep the pendant in place; and no. A 1 was among stranded material with its tie-cord free but knotted precisely as that of no. A 2. Thus it seems that all three multiple bead pendants were probably attached to the stranded material. The shell pendant (no. C 2) is also tied to cords of stranded material and was found with pendant no. C 3 below the body in the region of the chest; although neither no. C 1 nor 3 are fastened to stranded material, their tie-cords are identical to that of no. C 2 and could have been so fastened before the ties rotted or were chewed off; no. C 1 was found near the rodent nest, where no. A 3, tied to stranded material, was also discovered. It appears very probable that all six pendants were once attached to stranded material and that the three shell ones were located in the pectoral region; it is possible that the three beaded pendants were also located there.

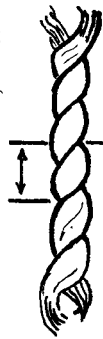
The engraved gourd (no. A 4) was found between the folds of the woven robe (no. F 7); it lay at the shoulders just in front of where the face should have been. The projectile point (no. S 1) came from beneath the body in the pelvic area; it is impossible to say whether rodents brought it there or whether

(as agent of death?) it was actually embedded in the body at time of burial. The pair of sandals (no. F 6) were found on the feet of the body; the left foot lay on the right foot, and the toe-tie of the former still ran between the great toe and the next, while the heel-tie was over the calcaneus.

There can be no doubt as to the order in which the body had been wrapped. First, the stranded material (no. F 2) was wound around the headless body (which had only a pair of sandals as mortuary clothing) and fastened by a hitch (type?) and a square-knot to hold it in place; the exact technique involved could not be worked out because of the stiffness, brittleness, and compaction of the fibers. Next the woven strips (no. F 5) were wrapped around the thoracic and lumbar regions extending to the area of the shoulders. The woven robe (no. F 7) was the third wrapping; the body was probably placed on the robe with the feet more or less in the center, and the robe was pulled up tightly around the corpse so that it was stretched somewhat out of shape over the feet; how it had been fastened at the head end could not be learned. Over the robe and drawn tightly around the ankles was a sling (no. F 1). Next, a netting textile (no. F 4) had been wrapped around the lower parts of the body; one of its long selvage edges was drawn around the soles of the feet leaving an uncovered oval space through which the underlying robe could be seen (Fig. 1). As the final wrapping, netting strips (no. F 3) were wound around and probably fastened, but it has not been possible to learn more of the way in which this was done.

In the following pages, the specimens will be described only in so far as the details have not been provided in the accompanying illustrations. Some comparative information will also be given in order to bring out certain facts which are deemed of special interest or significance. Full comparative studies will not be attempted.

No. A 1 - Multiple bead and cord pendant (Fig. 2). The wrapping cords and those securing the beads are of hard fiber (*?Agave lechuguilla*). The orange-colored tie-cord, however, is of soft fiber (*?Gossypium*). Identification of the shell in this specimen and in others of the collection was made by Dr. Harald A. Rehder, then Assistant Curator, Division of Mollusks Department of Biology, U.S. National Museum; for these and other courtesies, sincere thanks are given to Dr. Rehder. According to him, the shell bead "is *Marginella apicina* Menke, a common West Indian shell, which is also found along the shores of Mexico and Central America." Explanation should be given here of the meaning of the notation which pertains to cordage and which appears on many of the illustrations: "1 @ . 007" means that there is one twist of the constituent plies in 7 millimeters; "2 @ . 003" means that there are two in 3 millimeters; a "twist" is defined as that portion of a ply-cord between its appearance on, and disappearance from, one side of the finished cord, thus:



Taken together with the diameter of the finished cord, this measurement can be used to calculate an "index of tightness of twist" (Taylor, ms. a). This specimen and the other two multiple bead and cord pendants are remarkably like those found by Aveleyra in Candelaria Cave (Aveleyra, et al., 1956, Lam. 22-24); there can be little doubt but that the two sets of objects are indicative of the same cultural function and meaning—to use Linton's terms (1936, pp. 402ff).

No. A 3 - Multiple bead and cord pendant (Fig. 4). Of this specimen, Rehder wrote: the long, double-holed beads (no. 1, 3, 5, 6, 7) are "pieces of shell carved to resemble the *Olivella biplicata* Sowerby of the Pacific coast of Mexico. The simulation is very well executed and the model from which they were copied is unmistakable." It is notable that here we have a Pacific shell, while the shell of no. A 1 had come from Atlantic waters.

No. A 4 - Gourd bottle with engraved design (Fig. 5). This bottle was crushed and several pieces were missing. However, most of the design remains, although unfortunately the place where the lines of design intersect was not found. The workmanship of the engraving is rather crude, but the individual lines are quite sharply defined. The inside of the bottle was quite clean, indicating that it had probably contained no material substance when put in the bundle; on the other hand, it could have held water. We recognized no clues as to the idea(s) behind its inclusion, whether they might have had to do with sustenance in an after life, ornamentation, property values, or as surrogate for the missing head. It is worthy of note that Aveleyra makes much of the gourd fragments which he encountered in Candelaria and Paila caves (Aveleyra, et al., 1956, pp. 156 ff., 190, Lam. 10). He identifies them as being from a cultivated plant and recalls that the archival sources do not mention any cultivated plants for the Laguna District in aboriginal times, although they do mention the use of empty gourds as breathing devices in the underwater pursuit of aquatic birds (vide Martinez del Rio, 1954, p. 65). I am not aware of any evidence anywhere else in Coahuila for prehistoric agriculture. It is, of course, entirely possible that gourds were traded into the Laguna District: the valleys of both the Rio Nazas and the Rio Aguanaval provide excellent avenues of approach to the Laguna from areas of Mesoamerican and other agricultural peoples (Taylor, n.d., ms. b).

No. C 1-3 - Shell pendants (Fig. 6). According to Rehder, these "are probably derived from specimens of *Busycon perversum* L., which is found along the Gulf coasts from Florida to Texas and probably also along the Mexican shore." No. C 3 was drilled upward from the convex face; the drill broke through, leaving flake-scars on the concave surface.

No. C 4 - Shell bead (Fig. 7). This object has been so altered in the process of manufacture that biological identification is impossible. It was found in the vicinity of (or actually in?) the rodent nest; as with no. A 3 and no. C 1, it was probably carried there from its original position.

No. F 1 - Sling (Fig. 8). This is an unusual specimen, not only because of its uniqueness within the cultural inventory of pre-Columbian North America but also because of its preservation and completeness. Ethnographically, slings

have been reported from the American Southwest to the northern parts of South America; but particularly in the Southwest and northern Mexico there seems to be some doubt as to whether it was present aboriginally. On the other hand, padre Francisco Arista, writing at the end of the 16th century shortly after the first entradas into the Laguna District, says that slings were used in that region to kill aquatic birds (Alegre, 1841, p. 417; see also: Beals, 1932, table 94; Bennett and Zingg, 1935, p. 115; en contra, see: Russell, 1906, p. 120). However, preliminary perusal of archaeological publications on North America has failed to produce a single example.

Detailed study and analysis have revealed the method by which this sling was made. The first procedure was to make the three-strand braid which would serve as the pocket of the sling. This was then looped and, although it is possible that the cord to the finger-loop was made next, it is more probable that the cord to the tasseled end was the second step. The fibers which had already been used to make the braid were twisted upon each other to form an undecipherable number of multiple-ply cords which were in turn twisted together to make one large multiple-ply cord. At this point, another multiple-ply cord was brought in and twisted with the first creating a rather large, two-ply compound cord. However, one ply of the new cord was left free at the end nearest the braid and was used to bind the open end of the braid loop to form the pocket and reinforce it. The technique here was to use six half-hitches or button-hole stitches, three on top and three on the bottom. The large, two-ply compound was then further twisted but, by gradually eliminating fibers, was reduced in diameter and tapered as the work proceeded from the braid loop. This tapered segment was then whipped by 20 turns of a very fine two-ply cord that was both started and finished by being tucked under one of its own twists.

The main, two-ply cord, now smaller and of constant diameter, was continued for approximately .80 meter. At this point, the end of the artifact, a tassel was made by inserting untwisted fibers into the twists of the main cord and further securing them by a winding and finally a criss-crossing of the main cord. Precisely how this was accomplished could not be learned, but it is certain that at least one end of the main cord ends in an overhand-knot which serves as a toggle to hold it firmly in place among the fibers of the tassel.

At the other end of the artifact, a two-ply cord was strung through the loop of the braid pocket and then twisted upon itself to form a two-ply compound cord. Using the loop as a pivot, this one-ply cord was also twisted upon itself to form a two-ply cord which ended in a finger loop. The latter was formed by turning the cord back upon itself and inserting it twice between the twists of its own plies.

From all of the above, it is obvious that the manufacture of this sling was an intricate and integrated act which required over-all planning and the performance of a series of necessary and sequential operations. From this and what follows in describing the other textiles, it is plain that considerable technical skills were involved and, above all, that there was an obvious desire to create a

finished design (e.g., the tassel) and produce a well-made product (e.g., the taper of the main cord and its reinforcement by the whipping). A serviceable sling could probably have been made with much less trouble and with much less planning. There is a suggestion of virtuosity here and a feeling that value must have been placed upon workmanship for its own sake. As I have pointed out before (Taylor, 1967, p. 158), this contrasts quite sharply with a very apparent concern with precision and symmetry in operational (or only decorative?) wholes (e.g., no. A 4, no. F 4, and the patterns of bands, blocks, and colored warps of no. F 3a and b, no. F 7). Technological virtuosity and planning are contrasted with absence of these characteristics in decorative matters.

No. F 2 - Stranded material. This material was the innermost wrapping of the bundle and was encountered without apparent order from shoulder to pelvis. It consisted of a mass of originally soft and pliant, orange-colored twisted cordage. Whether this mass had originally been divided into sets or hands could not be told, although at present the cords do adhere in bunches, possibly due to action of the body juices during decay. However, the ends of two bunches are tied together by a square-knot; these cords are also seen to pass through at least one loop of a double or "figure-eight" loop made of identical cordage and self-wrapped in the middle to squeeze an original loop into a double one. The cordage is multiple-ply and compound. The primary cords are two-ply, S-twist, ranging from less than .001 to .001 meter in diameter, with three twists in .005 to .006 meter; these have been twisted together to form the finished cords, which are compound: 4-, 6-, 7-, and 8-ply, both S- and Z-twist (with no apparent correlation with the different plies), from .002 to .003 meter in diameter, and rather loosely twisted with one twist in .012 for six-ply and one in .015 to .02 meter for eight-ply. Specimens no. A 2 and 3 and no. C 2 were either attached to, or closely associated with, this stranded material.

No. F 3 - Netting strips (Figs. 9-12). These are of knotless netting made with fine, hard cordage (? *Agave lechuguilla*) and were the fifth and last wrapping of the bundle. There are now eight strips, although it is possible that some of them were parts of larger fabrics, but our attempts to match ends, weaves, and colors failed to provide conclusive evidence of original joining of any set of the fragments. However, it is certain that there must have been at least two textiles, because no. F 3b and c are of checker design, slightly narrower, tighter and less expandable than no. F 3a and d-h which are of banded design and of coarser and looser weave. Even with allowances for fading and discoloration, the colors and color-rhythm of the two checker strips give no clue as to whether or not they are parts of a single fabric; however, the number of netting "lines" is identical in each of the two at their broken ends, and it is unquestionable that b is the start of a textile, while c is the finish. Thus it is highly probable that no. F 3b and c are actually two ends of a single strip, parted by decay but with not much missing between them.

As for the six banded strips, although here also analysis failed to yield

conclusive evidence of joiner, I am inclined to believe that they are indeed parts of a smaller number of original fabrics. As with the checker strips, there are only two selvages, one of which is the start and one the finish of a textile; both no. F 3e and h taper, the latter to its selvage end and both of them in such a way as to suggest that they are adjacent, or not very distant, segments of an original strip. On the other hand, all the banded pieces together have a total length of 8.01 meters, which seems much too long for a single textile of this type. The indications are, then, that there had been more than one banded strip. In fact, the lengths of no. F 3a and d (2.68 and 3.27 meters respectively) would appear to argue against their having been parts of one original strip (although if no. F 3b and c compose one strip their combined lengths would be 5.42 meters, only about .50 meter shorter!). However, it seems that we probably have at least two strips, one containing no. F 3a and the other no. F 3d. It cannot now be told whether any of the other strips were joined with no. f 3a or with d; or possibly, although improbably, with yet a third strip. This is particularly unfortunate in the case of no. F 3e and h because of the finish-selvage of the latter. No. F 3f and g are relatively short, rather non-descript pieces with no special feature that associates them with any of the others. No. F 3a and b, one a banded and the other a checker strip, were tied together each at its starting selvage (Figs. 1, 9, 10).

A word is in order regarding the color identifications on the illustrations and in the text. Few if any of them can be considered exact, particularly the "red," "brown," and "red-brown" designations, all of which may have been one color or two colors at most. At times there may have been confusion between "brown" and "black," and what has been called "lavendar" may be merely faded red. "Yellow" has been used to indicate what is inferred to be the natural color of some of the cordage (? *Agave lechuguilla*). In all color designations, however, whether or not the original colors have been correctly identified, the *contrast* between colors has been generally recognizable and can be taken as indicative of an original color difference whatever those colors may have been. From this it follows that the color rhythms and patterning are undoubtedly real and as shown.

A further caveat must be made in regard to measurements. Netting fabrics both stretch and contract laterally with great facility, and it is quite impossible to know at precisely what tension, hence extension, to take measurements. It is also true that the borders of bands and color blocks are often very irregular, so that a mean dimension is all that can be given, unless long series of essentially meaningless measurements are provided. But it should be stated that other details which are presented without query in the illustrations and text can be taken as certain and verified to the limits of ability, judgment, and knowledge.

A word should be said about the meanings of the terms "line," "level," and "mesh." The term "line" refers to a single, vertically oriented, twisted segment of the cord in knotless netting; the number of "lines" is thus a

measure of horizontal distance or "width" (Fig. 9). The term "level" refers to the horizontal plane on which the terminal loops of the twisted segments of cord in knotless netting are aligned, and it is also used to designate the vertical distance between those planes; the number and dimension of "levels" is thus a measure of vertical distance or "length" (Fig. 9). The term "mesh" refers to the interstitial space between lines and levels; it has both vertical and horizontal dimensions, hence both "length" and "width" (Fig. 9).

No. F 3a (Fig. 9). This fabric starts with 31 lines of cord looped over 11 strands of selvage cord in the form of a roll approximately .145 meter in pulled-out diameter (i.e., double). By the second level the strip is 43 lines wide, additions being made as shown in Fig. 9. By the center of the second band (red) there are 55 lines, and in the last level of the third band (black) there are 65 lines, which is the maximum attained in the strip, although variation in the form of a fewer number of lines is not uncommon. The number of levels also varies within and between bands, often making the length of a band vary from one side of the strip to the other; only one band has a constant number of levels (6) from side to side. The length of the mesh varies between .02 and .04 meter; the width of the mesh is stretchable but "normally" seems to be about one-half of its length. It is noted that the length of the mesh does not depend on the number of twists given to the cord, but rather to the tightness of the twists themselves.

No. F 3b (Fig. 10). This textile of checker design is a tighter and more regularly fashioned piece of work than no. F 3a and the other banded strips. The length of its mesh is only .01 to .015 meter, and the total length of a six-level block is .065 to .068 meter, while an eight-level block ranges from .078 to .087 meter. The selvage is of a single, two-ply cord which is spliced into itself to form an unbroken, knotless circle about .33 meter in diameter; the selvage cords of no. F 3a are tied to this selvage by an overhand knot. Over this selvage circle, there are 60 loops which constitute the lines of the fabric. In the third block from the selvage, four new lines were added to make 64 in all, 32 on each side of the color-contrast line in the center of the strip. However, since the netting technique dictates that the adjacent lines of alternate color-blocks be twisted together at every other level, the line-count for alternate blocks is only 63. These dimensions continue without variation for nearly the full (present) length of the strip. But at the seventh block from the (present) end (the block with the level-count of eight), a significant variation does occur: five levels down from the start of this block, red cord from the left side begins to encroach upon the right or black side and, by the place where black changes to red at the beginning of the sixth block, there are 26 lines of black on the right and 38 lines of red on the left. This deviation is gradually rectified and, by the (present) end of the strip, the right line-count is back to 30 and the left to 34. This is precisely the count of the broken, non-selvage end of no. F 3c,

which strongly suggests that the two segments, despite apparent difficulties with color concordance, are from a single strip.

No. F 3f and g. These are relatively short, rather featureless fragments with no characteristic which will relate them specifically to any of the others. No. F 3f is approximately .44 meter long; its line-count is 63 and 64, and the numbers of levels in its two full bands are 8-1/2 and 9, 6 and 7; at one end there is a partial red band followed by black, then yellow, and a partial red-brown to terminate; it resembles no. F 3a in technique and cordage. No. F 3g is approximately .40 meter long but was in such a deteriorated condition that nothing could be learned with any certainty about other specifications; its color pattern is yellow-black-red-black-yellow; the notes say that in technique and cordage it is "same as no. a."

No. F 4 - Designed netting textile (Fig. 13). This nearly complete textile is probably the prime example of the "Coahuila characteristic" of technological virtuosity, decorative drive, and indifference to artistic harmony (Taylor, 1967, pp. 158-59). The netting is extremely tight and the cords have been twisted only once making the mesh small and even: there are 10 to 12 lines per .03 meter and 167 within the total width of only .42 meter. Each of the four strips does vary slightly within itself as to line-count, but this is because alternate lines are twisted around adjacent lines of the adjoining strip to join and consolidate the whole. There are from four to five levels per .02 meter. Because of deterioration, it has not been possible to work out the order of manufacture; it seems probable that it was made in strips starting at the lower left corner of the representation in Fig. 13 and that work ended at the lower right corner with the loop-knot.

No. F 5 - Woven strips (Figs. 14-18). These constituted the second wrapping of the bundle. They are undoubtedly the most unique and technologically complex examples of weaving in this collection. There are now four pieces, two of which obviously represent different fabrics (no. F 5a and b) and the other two of which give some, although not conclusive, evidence of having once been tied together to form a single, wrapping unit. The unusual technological feature is that each of the colored bands is made of a single weaving element, i.e., "warp" and "weft" consist of a single cord and are one continuous, uninterrupted element and operation. For this reason, the term "row" has been used to refer to the "warps" and "wefts" of the fabric, either separately or together, since there is no technological distinction between these two normally discontinuous weaving elements. In the present example, not only are the bands monolithic, or better "monocorded," but in the case of the bands immediately below the braided strands, both braid and band are woven of a single cord, only one renewal of which (in the three-braided part of no. F 5a) was discovered during analysis. Of course, a color change is accomplished by introduction of a new weaving element and cords within bands are often renewed with others of the same color. But essentially, from a technological point of view, each band is woven of a single cord. The same technique

was independently discovered by Irmgard Weitlaner Johnson among the textiles from Candelaria Cave, Coahuila (Johnson personal communication and ms.); it is most unfortunate that her important manuscript, incorporating the results of a minutely detailed and knowledgeable study, has not yet been published.

No. F 5a (Figs. 14-16). This piece was found immediately over and attached (? how) to stranded material (no. F 2). Over-all dimensions were impossible to ascertain because of the knot occurring at its "lower" end and because of the compaction and fragility of the fibers. However, the weaving process is reasonably clear. In starting, the cords which were later to be braided were looped over a series of seven two-ply cords (four red-brown or black, three red) which were tied in a loop-knot to hold. Slight technological variations will be noted between the right and the left pieces, but these appear to be of importance only to demonstrate once again the virtuosity of the artisans. One fact does seem to be of more significance, however, although a really detailed analysis was not possible: in the right, three-braided strip the number of cords are double those in the colored bands below; somehow, but by unknown means, the number of cords was reduced when the topmost band was started.

No. F 5b. This is a fragment of another woven strip having three braided strands at one end. It was in such delicate and deranged condition that no attempt was made to study it in detail. It has a twined selvage of black or red-brown cords; the first band is of yellow color, followed by a black or red-brown and then a red band. As far as could be told, cordage and weaving technique are the same as in no. F 5a.

No. F 5c (Fig. 17). Although decayed and broken, the loop of this specimen undoubtedly went around the corpse and was secured in position by two half-hitches. The broken end of the longer portion of the strip, beyond the hitches, is squeezed as if it had been knotted at one time. Since this same condition prevails at one end of no. F 5d, it is possible that the two were formerly tied together or were a single textile knotted in the middle. The cordage and weaving technique are the same as in no. F 5a. However, there seems to be more variation in both the start and the ending of weaving cords. The selvage of black or red-brown cord is generically similar to that of no. F 5a, but the twining has been done with only one pair of cords, instead of two. The striped band at the selvage-end is a unique feature; it is a "warp" face weave, yet the weaving technique is the same as that of the other bands; the color patterning is produced by introducing "warps" of different colors in some manner which was not learned.

No. F 5d (Fig. 18). In general, this strip is like no. F 5c, although here there is no striped band adjacent to the selvage. It is quite possible that the two pieces at one time composed a single textile: as in no. F 5c, its broken end is squeezed as if once knotted, and in both fragments the color of the broken, terminal band is red. One other feature associates them: the manner of ending weaving cords in both pieces is distinctive and found in no other speci-

men studied. The selvage end is tied with a square-knot to some stranded material (no. F 2), which at this place is itself square-knotted to a mass of soft fiber.

No. F 6 - Pair of sandals (Fig. 7). These were found in place on the (skeletal) feet of the corpse. They consist of a mass of coarse, hard, decorticated fibers sewed together. The sewing fibers (*Agave lechuguilla*) had also been decorticated and had been used in natural bunches as they came from the leaf, complete with terminal spines in place holding the fibers together and serving as needles. It is interesting to note that the toe-ties of the right and left sandals are mirror images of one another, an arrangement which is not usual in most sandals from Coahuila. The length and width as given in Fig. 7 are somewhat less than those dimensions would have been aboriginally because the sandals were molded around the foot evidently by the pressure exerted when the robe was wrapped around the body; it also suggests that at the time of bundling the sandals were rather pliable. Sewed sandals, but of a less formal pattern and construction, have been found in several places in Coahuila (Taylor, 1966, p. 73 and Fig. 16) and Durango (J. Alden Mason, personal communication; collections of the University Museum, Philadelphia).

No. F 7 - Woven robe (Fig. 19, 20). This specimen was the third wrapping of the bundle. It is a warp-face, one-over-one weave textile, tightly and regularly woven, of two pieces sewed together down their long sides with a simple binding stitch. The weft is of an olive color, except in one place at the "top" of the fabric where a black cord has been spliced to the olive to complete several rows. The cordage of the fabric is of soft fiber (? *Gossypium*), and that used to sew the two parts together is hard (? *Agave lechuguilla*).

All eight selvages are present and in good state of preservation. The four short ones are of two pairs of two-ply twining cords of soft fiber; the pairs are started and ended with overhand-knots or loop-knots—loss of the very ends prevents discrimination here. As in the woven strip no. F 5a, the end of the weft element is included in the knot at the end of the selvage. Renewals are not spliced or inserted but, as in no. F 5c, either wound around warps or other wefts or tied with an overhand-knot to form a toggle held by the tension of the fabric. The irregularity depicted in Fig. 20A (encountered at the 27th weft up from the bottom and the 12th warp in from the right edge-selvage) raises the question of whether or not a shed could have been used. The question is reinforced when it is noted that the same irregularity occurred at a point .305 meter from the "top" and 15 warps in from the right edge-selvage of the same piece. The only other irregularities noticed were also in the right piece (Fig. 20B and C): they are weft "turn-backs" and endings, and they create partial Kelim slots in the fabric.

No. S 1 - Projectile (arrow) point (Fig. 7). This has been designated an arrow point because of its small size and light weight. It is made of brown and red chert. Its shape and other specifications are not distinctive enough to provide comparative information of any present significance, although as a whole

it is entirely comparable to points of the Jora and Mayran Complexes (Taylor, 1966, pp. 81-84, Figs. 27, 28; Aveleyra, et al., 1956, Lam. 9b and f). It has not been possible to tell whether its inclusion inside the bundle was purposeful or not; it could have been in the body at the time of death and burial.

CONCLUSION

The above, largely descriptive account has not been presented as a definitive study, but more as an interim report. There are many aspects of the material which could not be investigated at that time, so long ago, when the bundle was opened. Broader and more intensive comparative studies are surely called for. The material and its descriptive details need to be placed in both their local and more general cultural contexts. But it is hoped that enough has been presented here to indicate something of the wealth of cultural information lying ripe for analysis, even within the remains of the more simple cultures. It is quite evident today, although at the time the bundle was opened it was not nearly so much so, that the geographic region comprising the State of Coahuila was a refuge area and cultural back-water for many millenia (Taylor, in press). Yet the cultural remains archaeologically resurrected from that region, representing as they do a relatively large percentage of what cultural inventory the ancient peoples did possess, provide opportunities to the archaeologically oriented cultural anthropologist which are considerable and which are not offered by many areas of higher culture. The range of material objects preserved in the dry repositories of the western deserts of North America should present the anthropological archaeologist with a challenge and with visions of culture-historical and anthropological bonanza.

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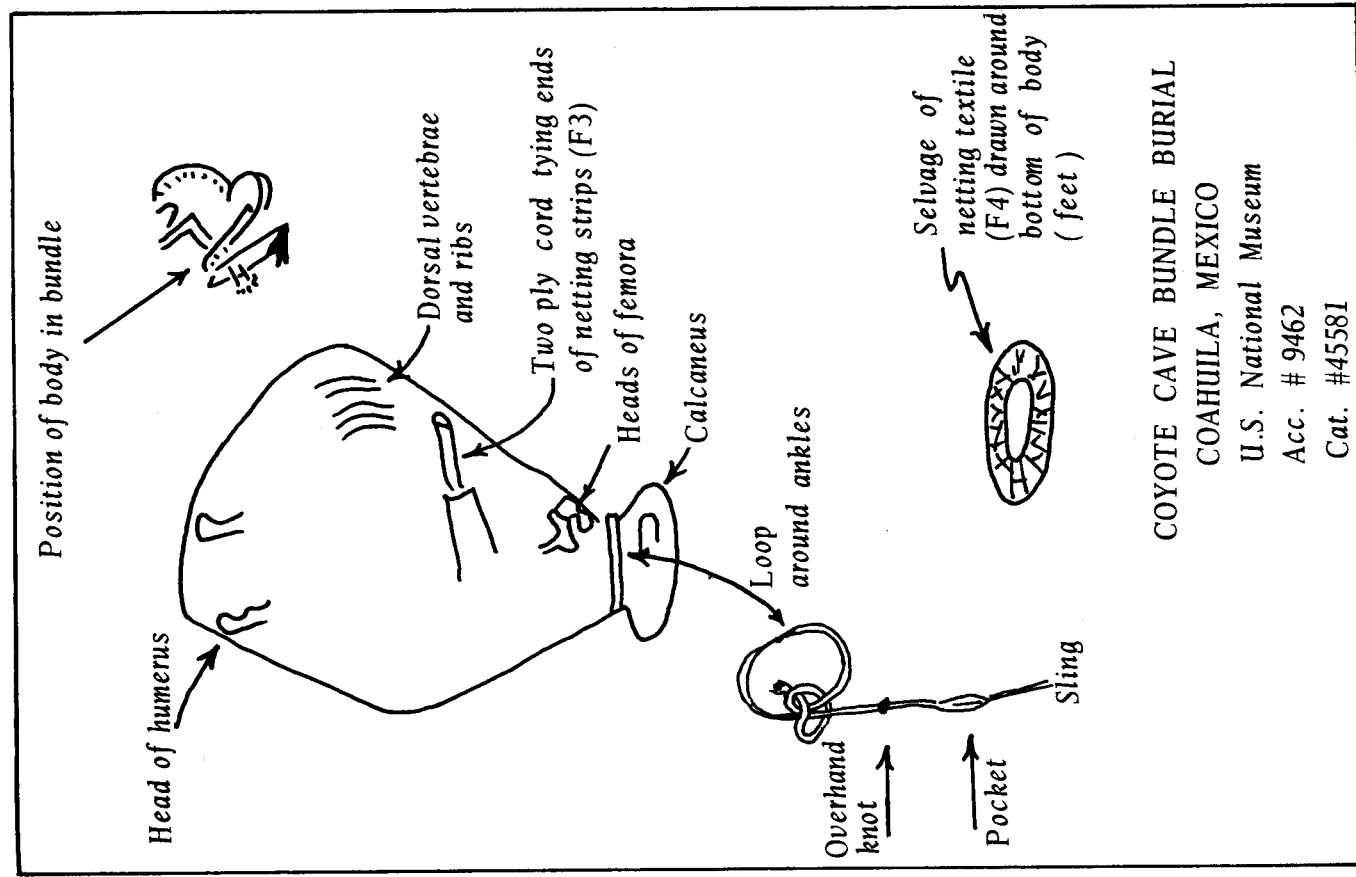
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- 1967 *A Study of Archaeology*. Arcturus Books edition, Southern Illinois University Press.
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- ms. b Report of Work Conducted under Project E: "Work in the Gran Chichimeca Paralleling the Mesoamerican Frontier." 1965.
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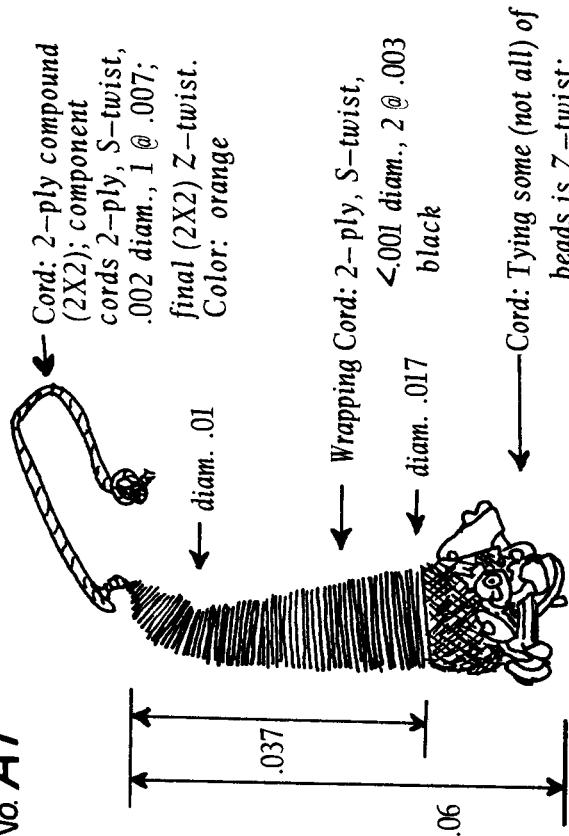
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COYOTE CAVE BUNDLE BURIAL
COAHUILA, MEXICO
U.S. National Museum
Acc. # 9462
Cat. #45581

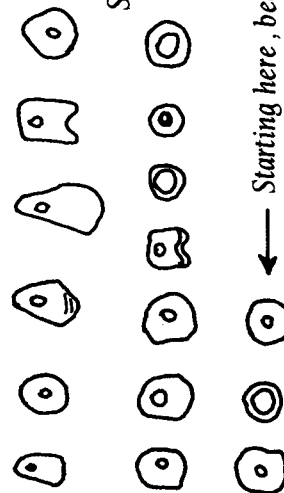
Fig. 1

No. A1



Marginella apicina Menke

Other beads are of bone.



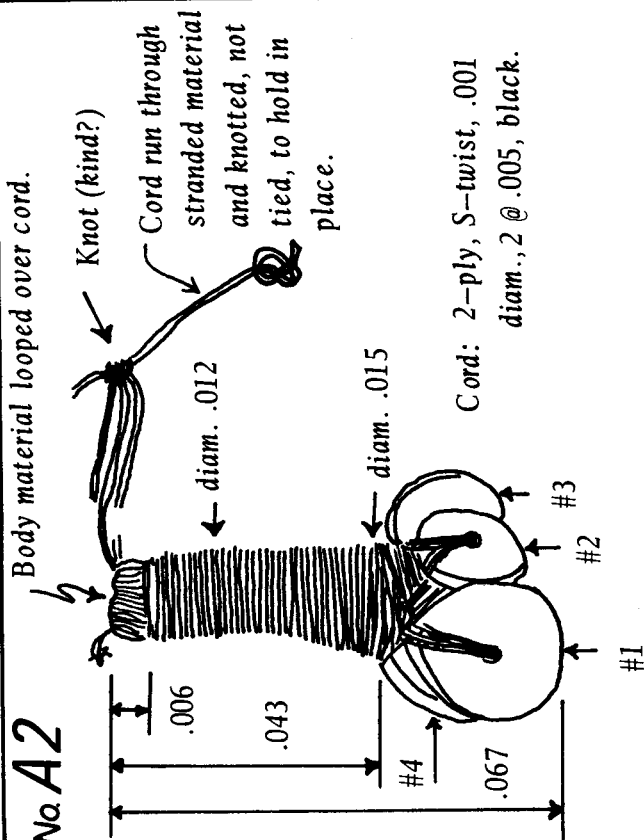
Scale approx.

Starting here, beads strung from center at lowest point counterclockwise and upward.

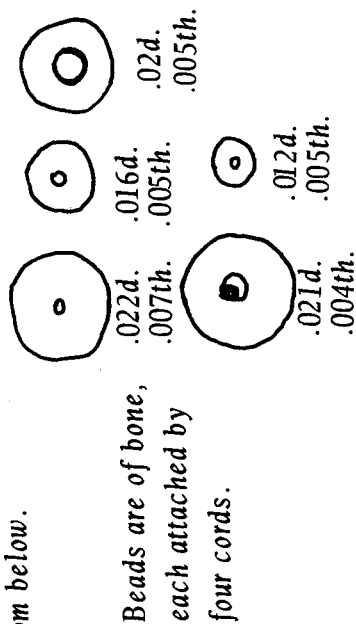
MULTIPLE BEAD AND CORD PENDANT, # A1

(Found with Stranded material, F2)

No. A2



Bead layout viewed from below.



Beads are of bone, each attached by four cords.

MULTIPLE BEAD AND CORD PENDANT, #A2

(Found with Stranded material, F2)

Fig. 2

Fig. 3

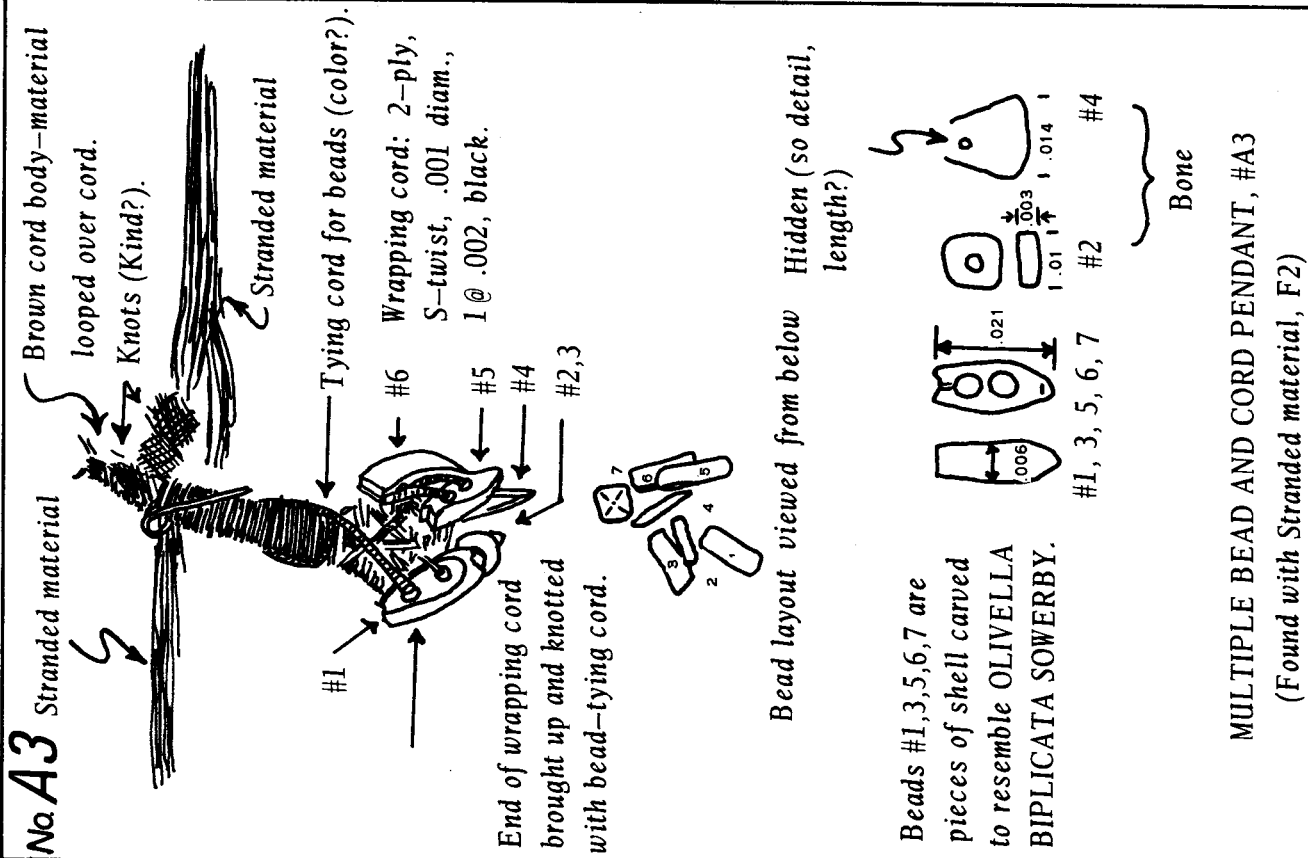


Fig. 4

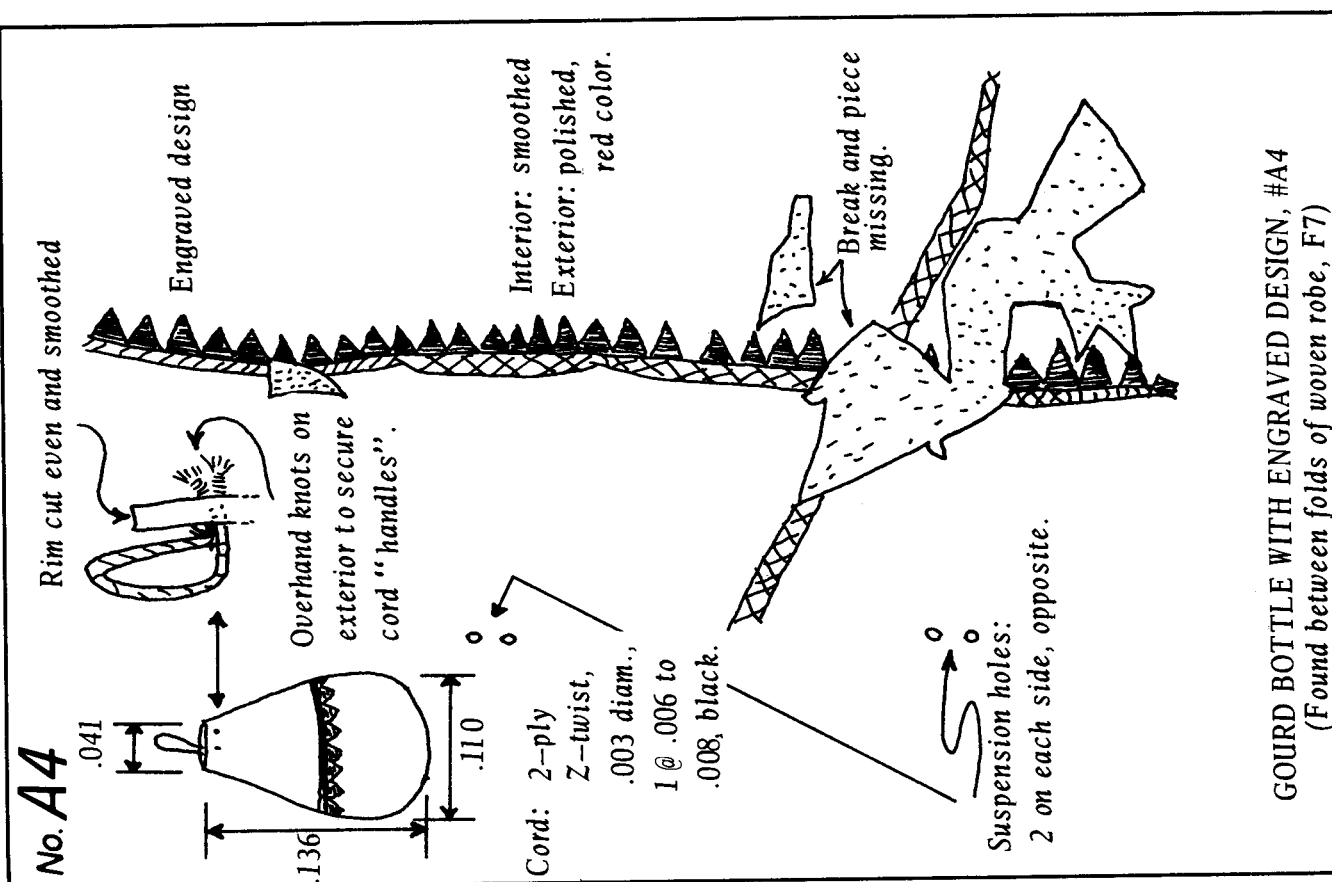


Fig. 5

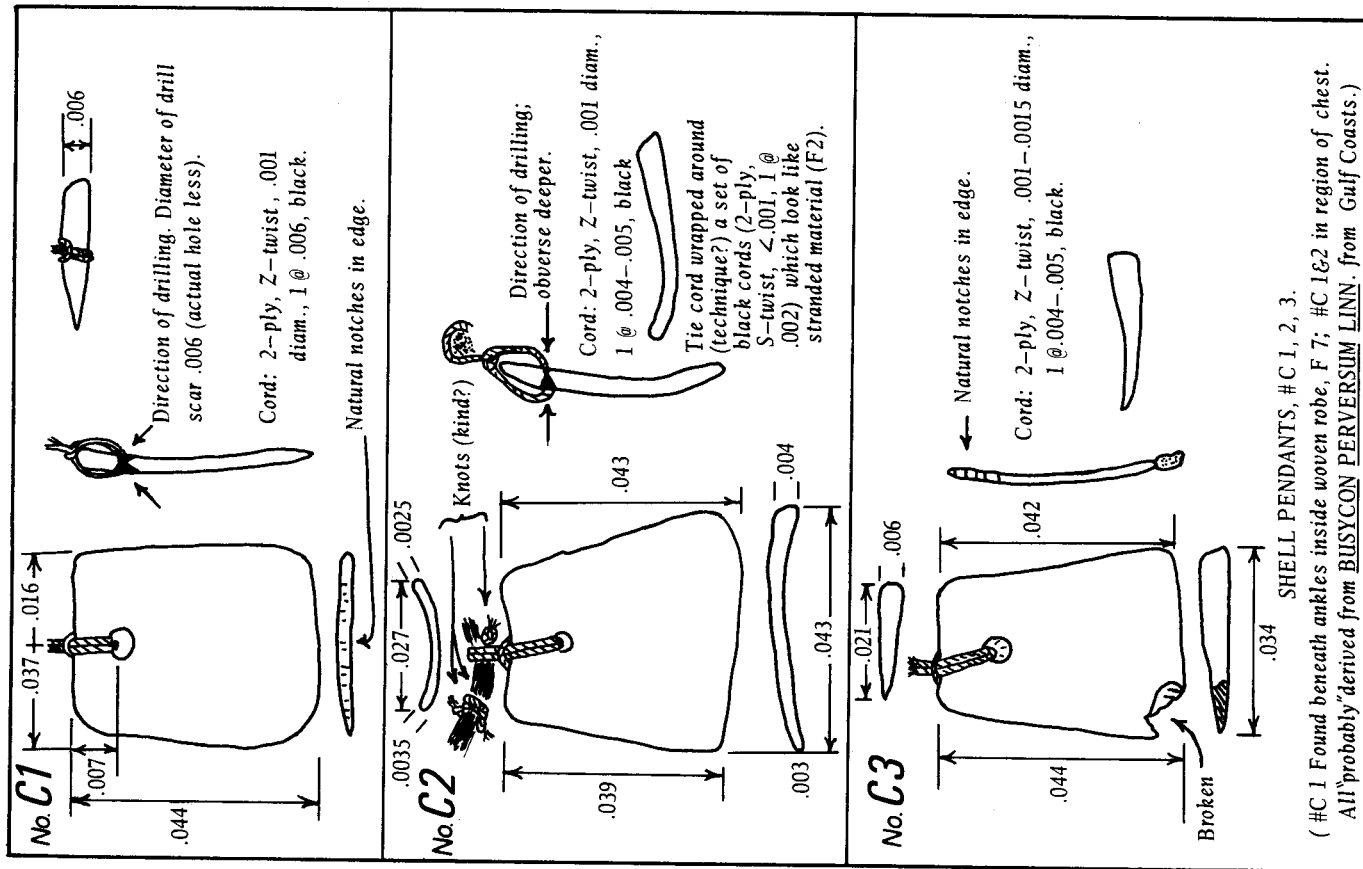


Fig. 6

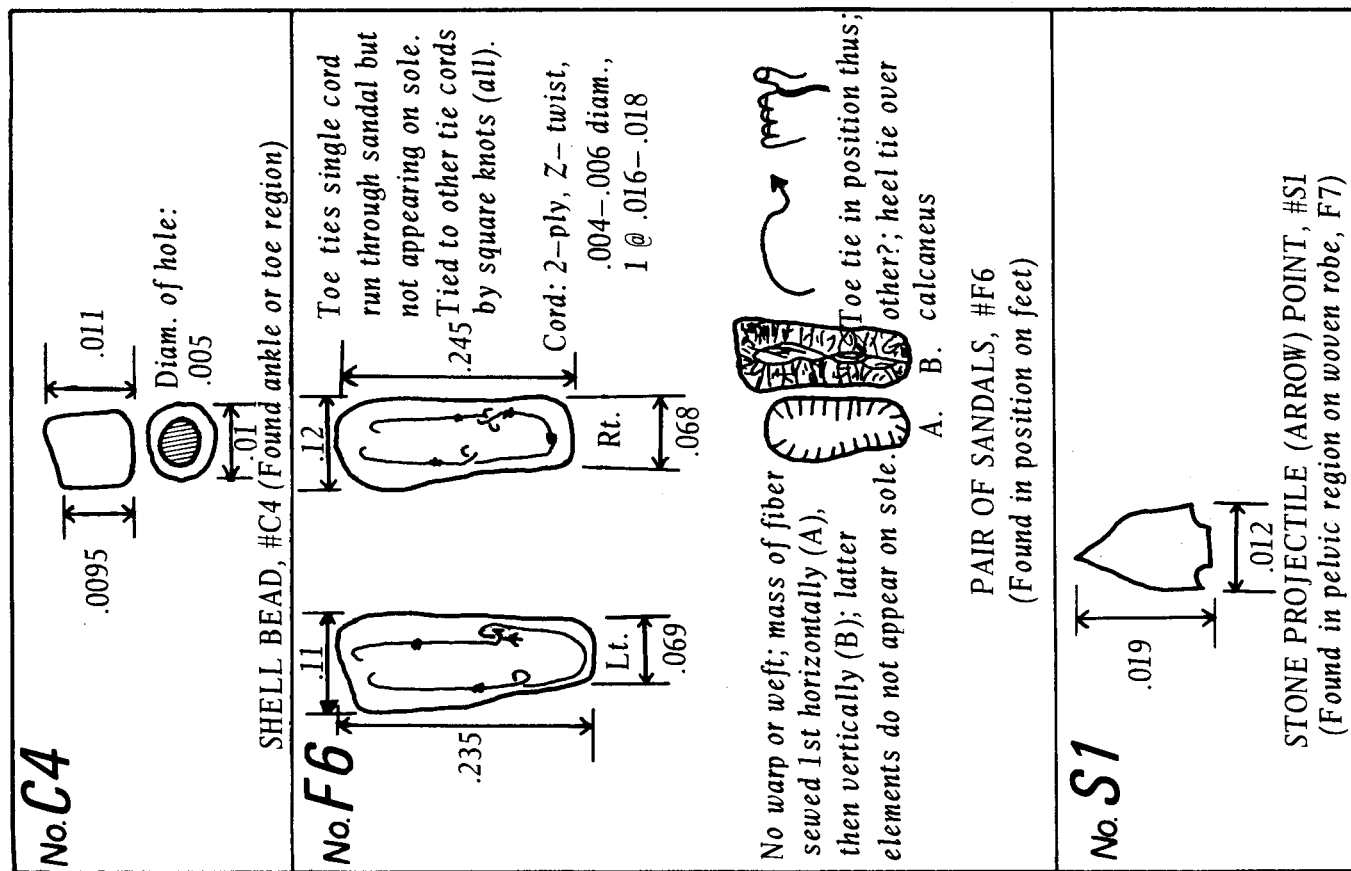


Fig. 7

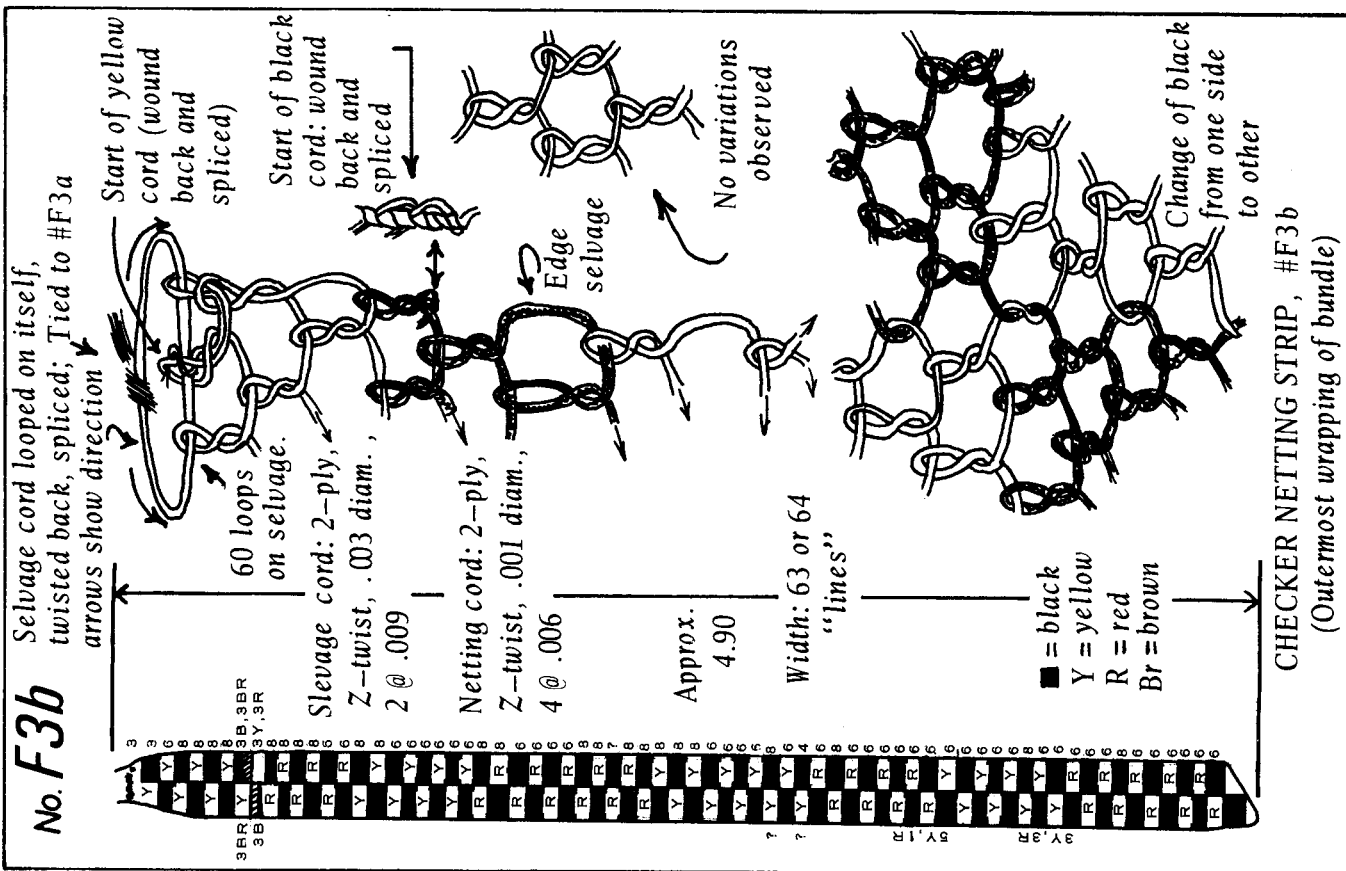


Fig. 10

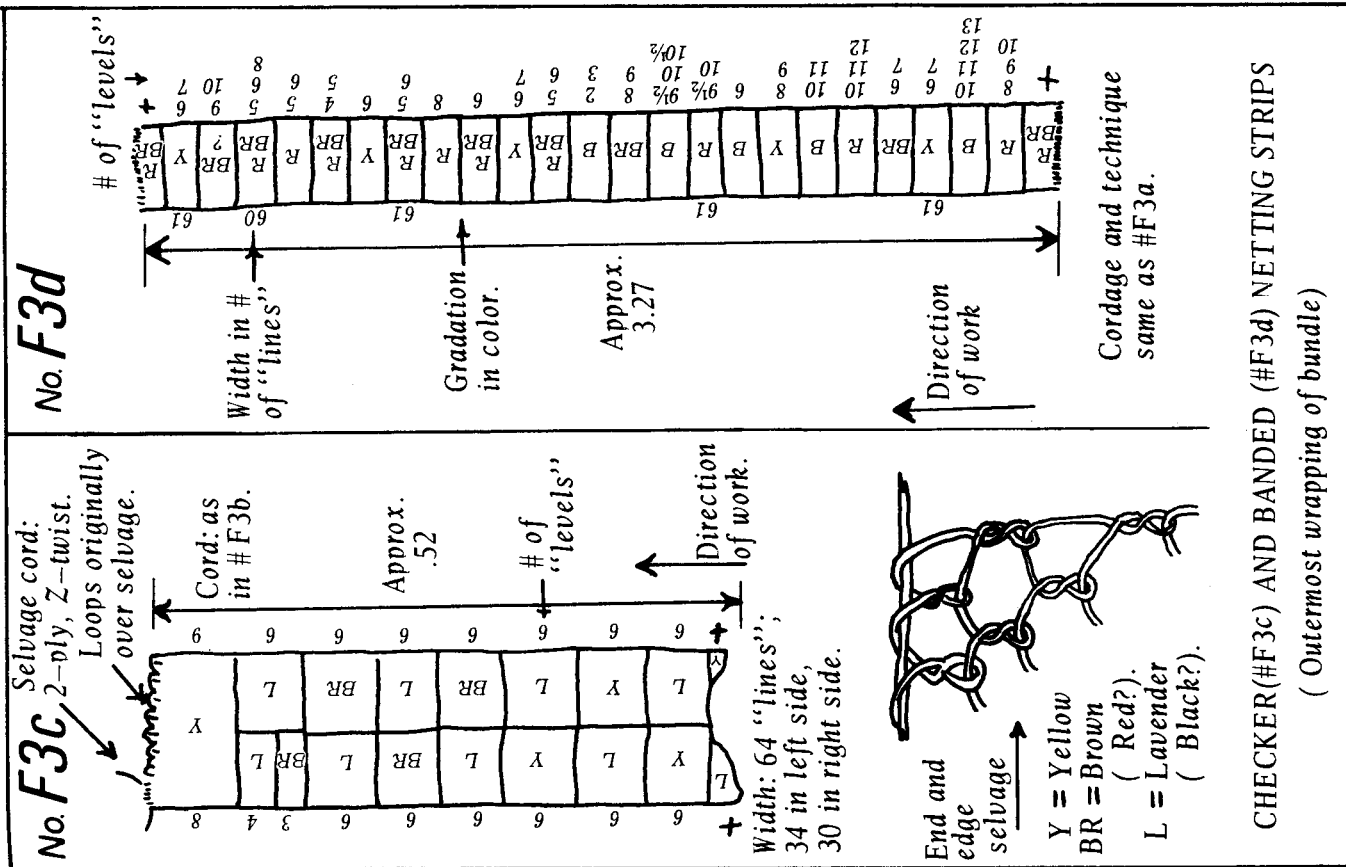


Fig. 11

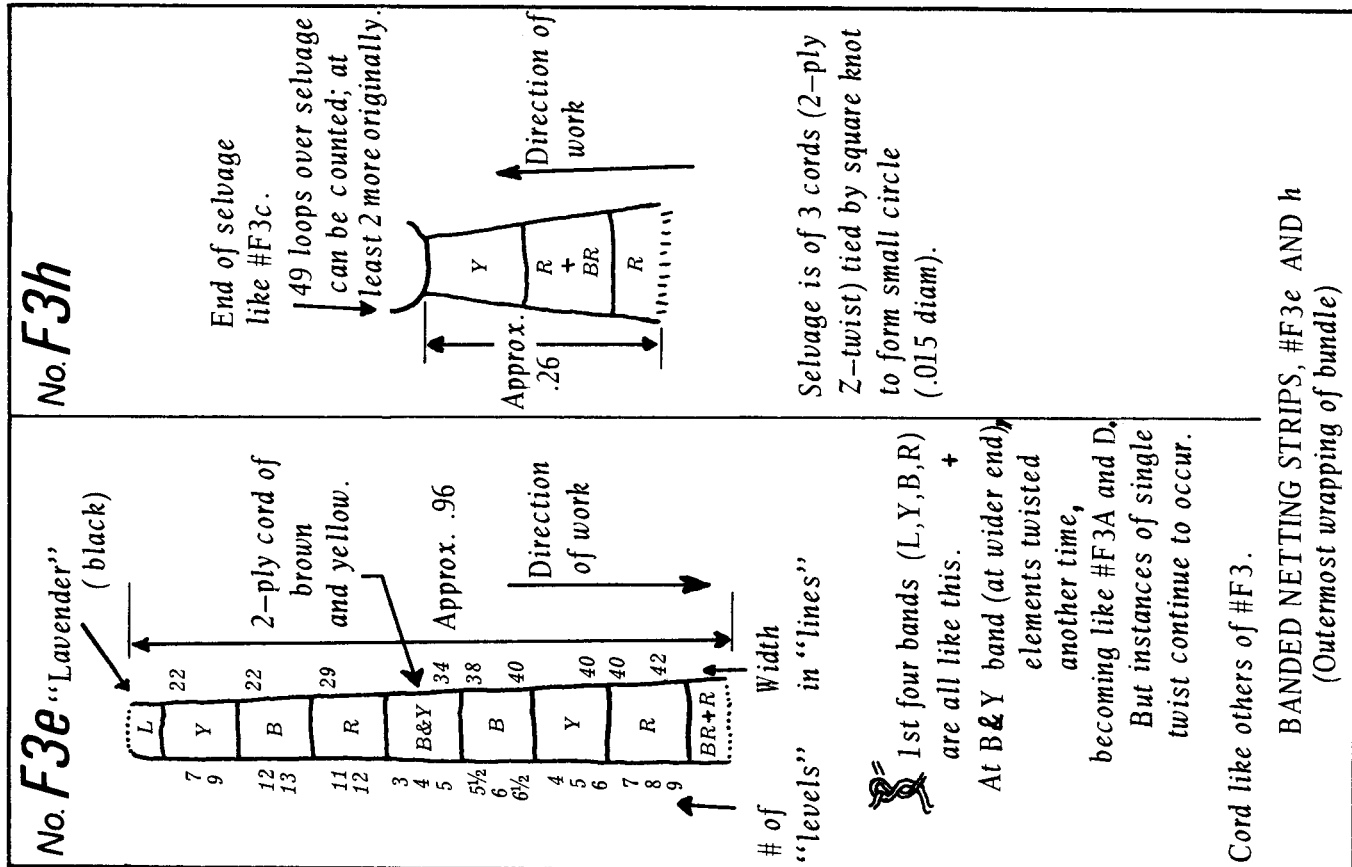


Fig. 12

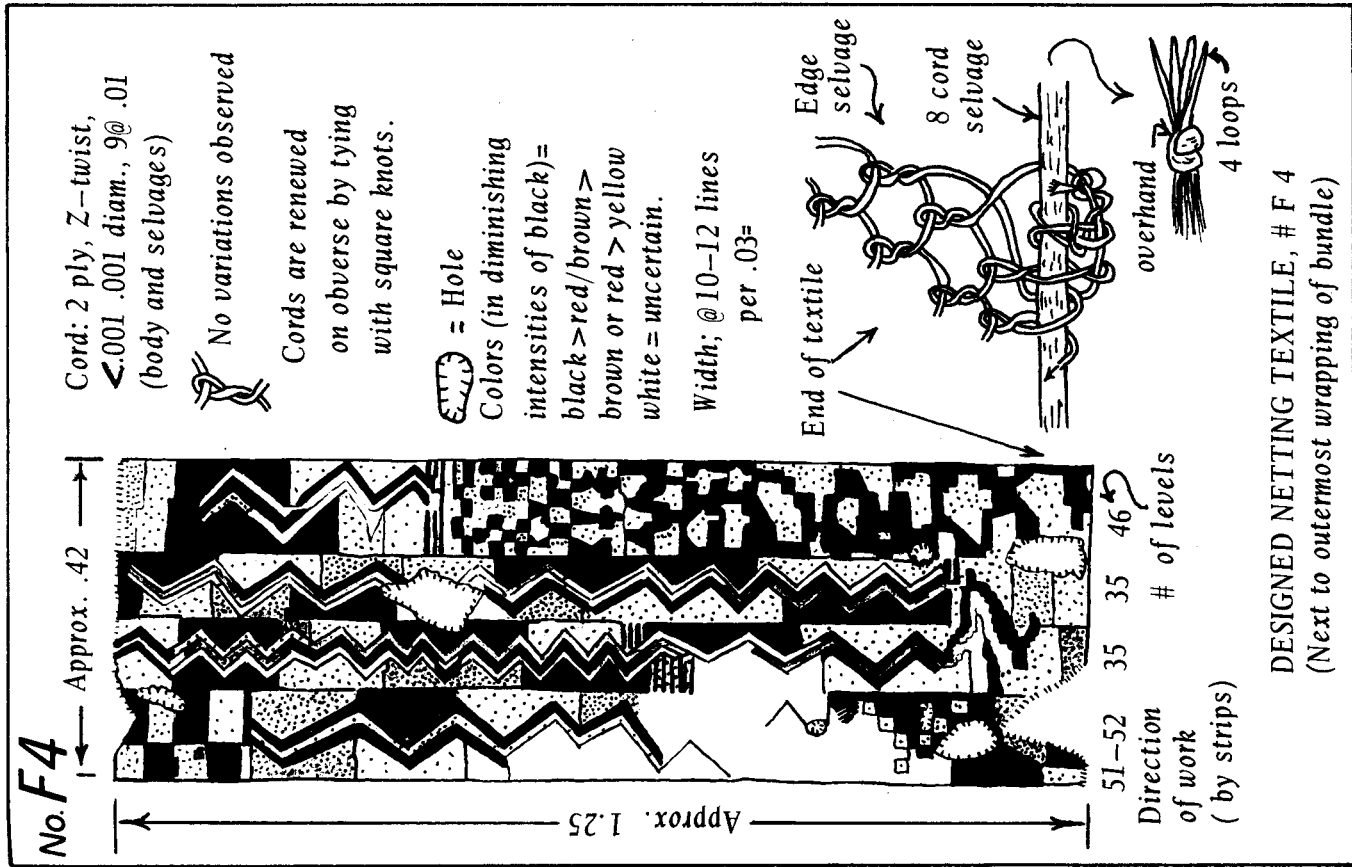
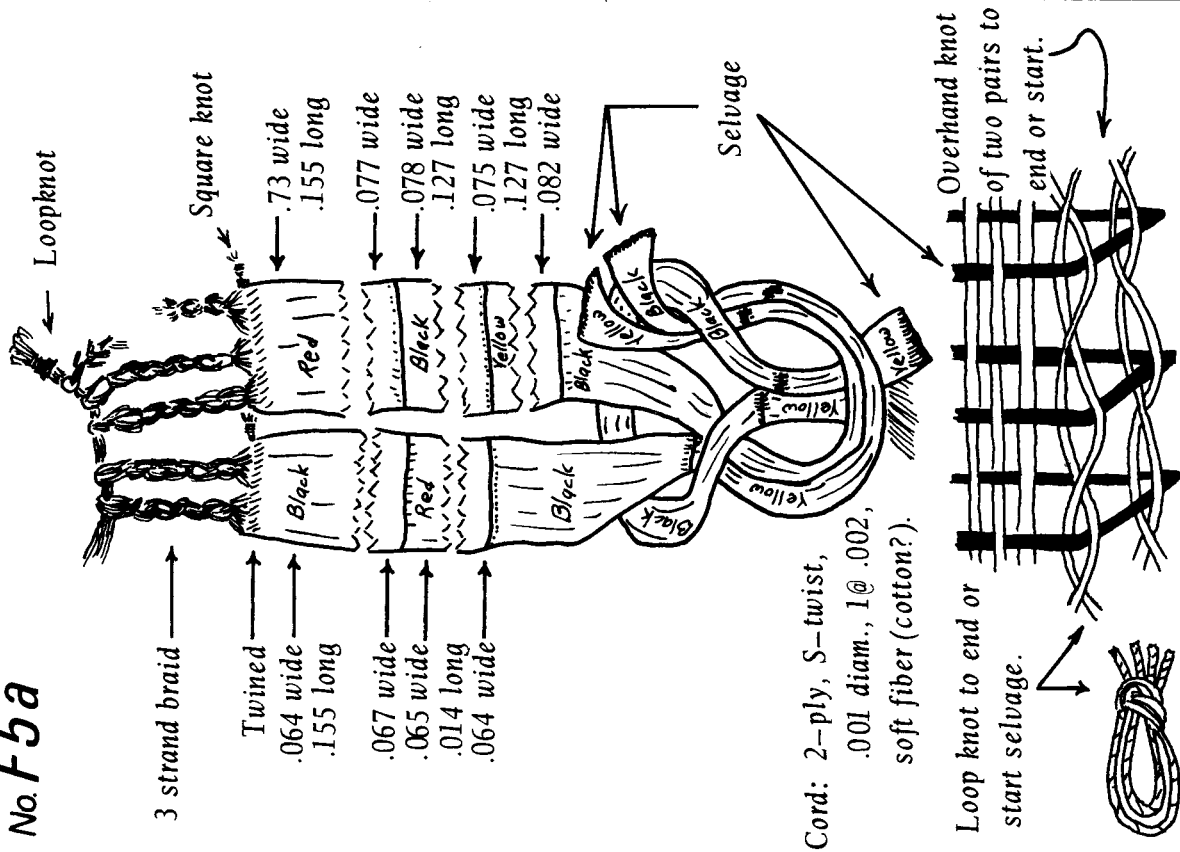


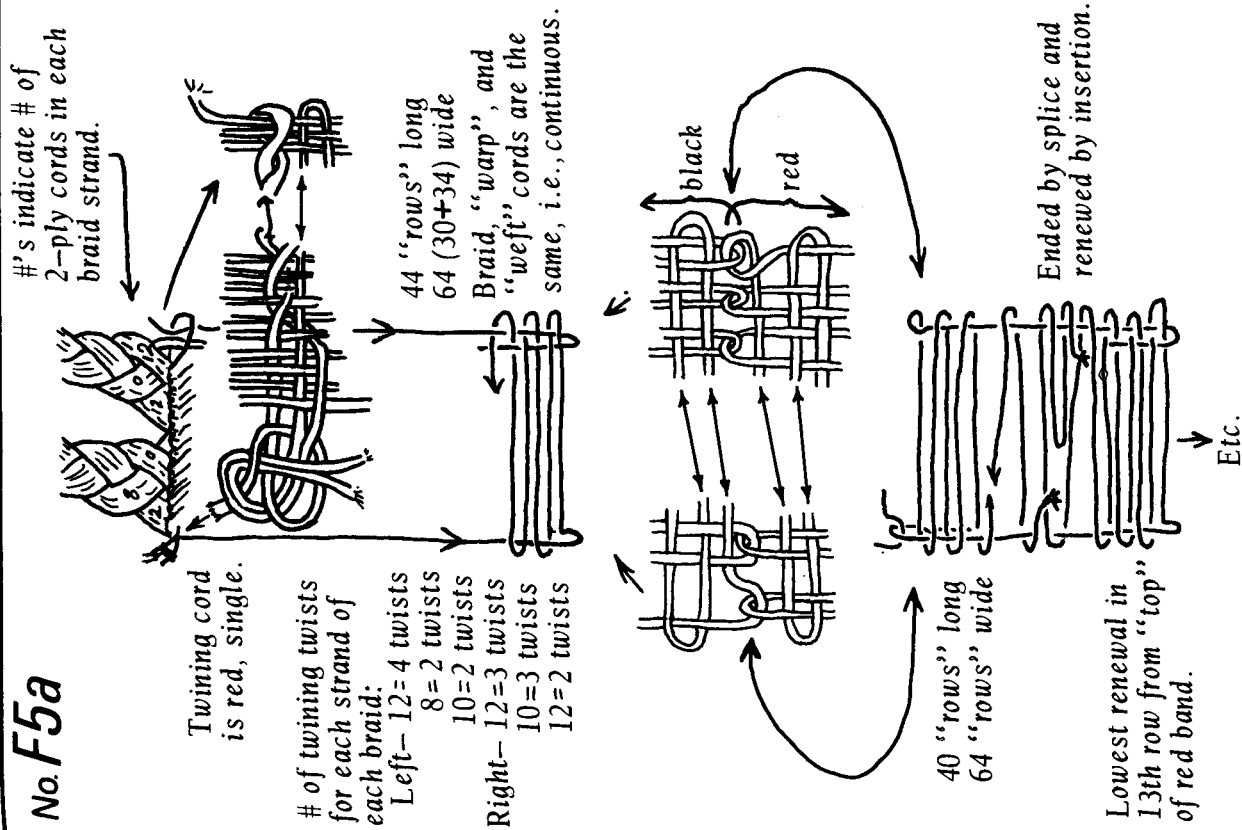
Fig. 13

No. F5a



WOVEN STRIP, #F5a
(2nd wrapping from body)

No. F5a



WOVEN STRIP, #F5a (detail #1).

No. F5a

#'s indicate # of 2-ply cords in each braid strand.

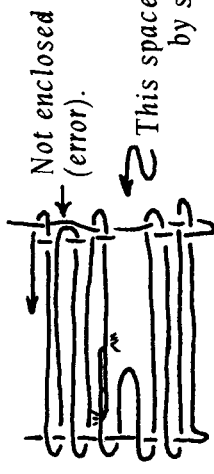
Again two ends of twining element (double here) are tied in square knot with end of uppermost "weft" element (as in detail #1).



of twining twists (\\) covering each strand. Twining cord is red-brown color and double (two cords).

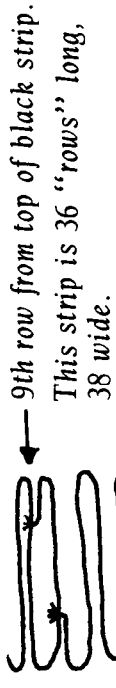
Unlike other strip of #F5a, here there is no loose end; all elements go up into braid on right edge.

This strip is 48 "rows" long, 38 wide.



Bottom of red strip

This space eliminated by sloping "wefts".

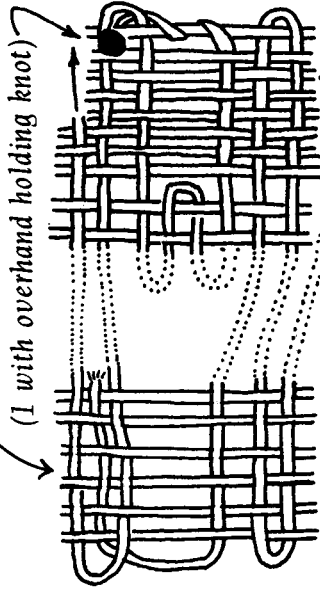


WOVEN STRIP, #F5a (detail #2)

Fig. 16

No. F5c

Detail of cord endings in black band



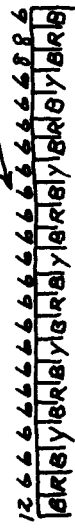
9th "weft" from bottom of band.

Large loop around body



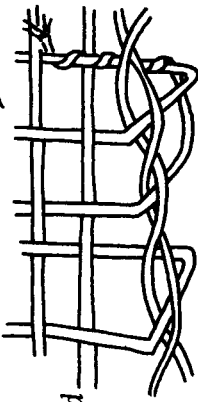
#'s in bands are #'s of horizontal rows (←→) and metric "width" measurements.

Last band



Cordage and weaving are same as in #F5a.

Detail of selvage and end of one "warp".



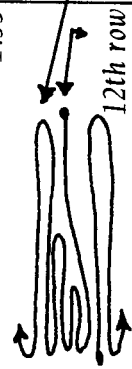
WOVEN STRIP, #F5c (2nd wrapping from body)

Fig. 17

No.F5d

Cordage and weaving are same as in #F5a

Approx. 1.99



Cords ending in overhand knots, not tucked or spliced or wrapped — just ended.

Selva is single pair as in #F5c

Soft cordage tied to fiber by square knot

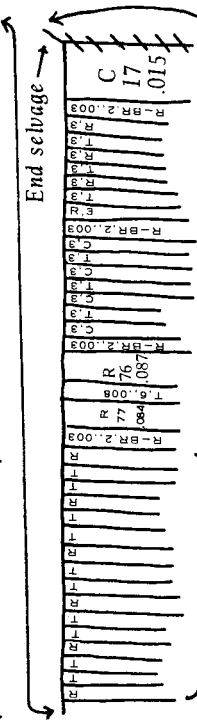
WOVEN STRIP, #F5d
(2nd wrapping from body)

Fig. 18

No.F7

End selva

R-Br	R	T
23	65	71
.025	.067	.083-.097
		(Stretched)



1 row each, whole=.018

Letters and figures give color and number of warps and width of "strip".

R = Red
R-Br = Red-Brown
T = Olive-tan/tan
C = Cream/yellow

Total number of warps 1208 (498 left, 710 right)
Total number of wefts 668.
Total length approx. 1.89m.
Total width approx. 1.272m.

Cordage is soft (cotton?).

WOVEN ROBE (left piece), #F7
(Third wrapping)

Fig. 19

by
Florence Hawley Ellis

In the last very few years there has been a marked return of interest to interpretation of the past, archaeology, in terms of the present, ethnology. Much of this has involved use of that intriguing toy of our programmed age, the computer; but manipulation of data, even with a time-saving device, is not interpretation, and conclusions must rest on the understanding of the anthropologist. Among some fertile fields hitherto largely untouched for lack of primary ethnographic understanding is that of customs and beliefs pertaining to disposal of the dead. In the Southwest, prehistoric graves and cremation deposits are considered choice finds because they so often yield rich rewards in accompanying objects. But except for a listing of items, a note as to customary physical arrangements and measurements, and the placing of such data in relative time and space for studies in relationships of prehistoric roots, stems, and branches, little has come from these finds. In other words, a minimum has been deduced in relation to the thinking of the culture carriers. The problem depends, to some extent, on shortage of clear cut and available data on historic usage and the beliefs of descendants of relatives of the prehistoric groups. A brief examination of some examples from the living Pueblos of the Rio Grande shows surprising parallels to little understood traits involved in disposal of the prehistoric dead.

Both inhumation and cremation were practiced by the pre-pottery Cochise people, with inhumation probably the more widespread. The oldest Cochise skeletal remains yet found, dating from either the Sulphur Spring or the Chiricahua stage at Sonora F:10:17, had washed out from the base of an arroyo bank, but they are thought to represent a burial. For the following San Pedro stage, we have eight formal inhumations from the Cienega Creek Basin in southeastern Arizona (Eddy, 1958, p. 52) where graves were dug into a midden deposit, and there are the pre-ceramic inhumations from Ventana Cave near Ajo (Haury, 1950, p. 460). Cremations from the pre-ceramic period were uncovered at the Cienega site at Point of Pines in eastern Arizona (Haury, 1957, p. 11), in the Guadalupe Mountains of southeastern New Mexico (Howard, 1935, p. 67), and near the mouth of the Pecos River in Texas (Cosgrove, 1947, pp. 162-163). As Wasley and Johnson (1965, p. 86) have pointed out, the Hohokam of the succeeding ceramic period chose cremation (possibly drawing on their Mexican background) though some inhumation does appear during the Sacaton Phase of the Sedentary Period and in the Classic. The Mogollon, in contrast, preferred

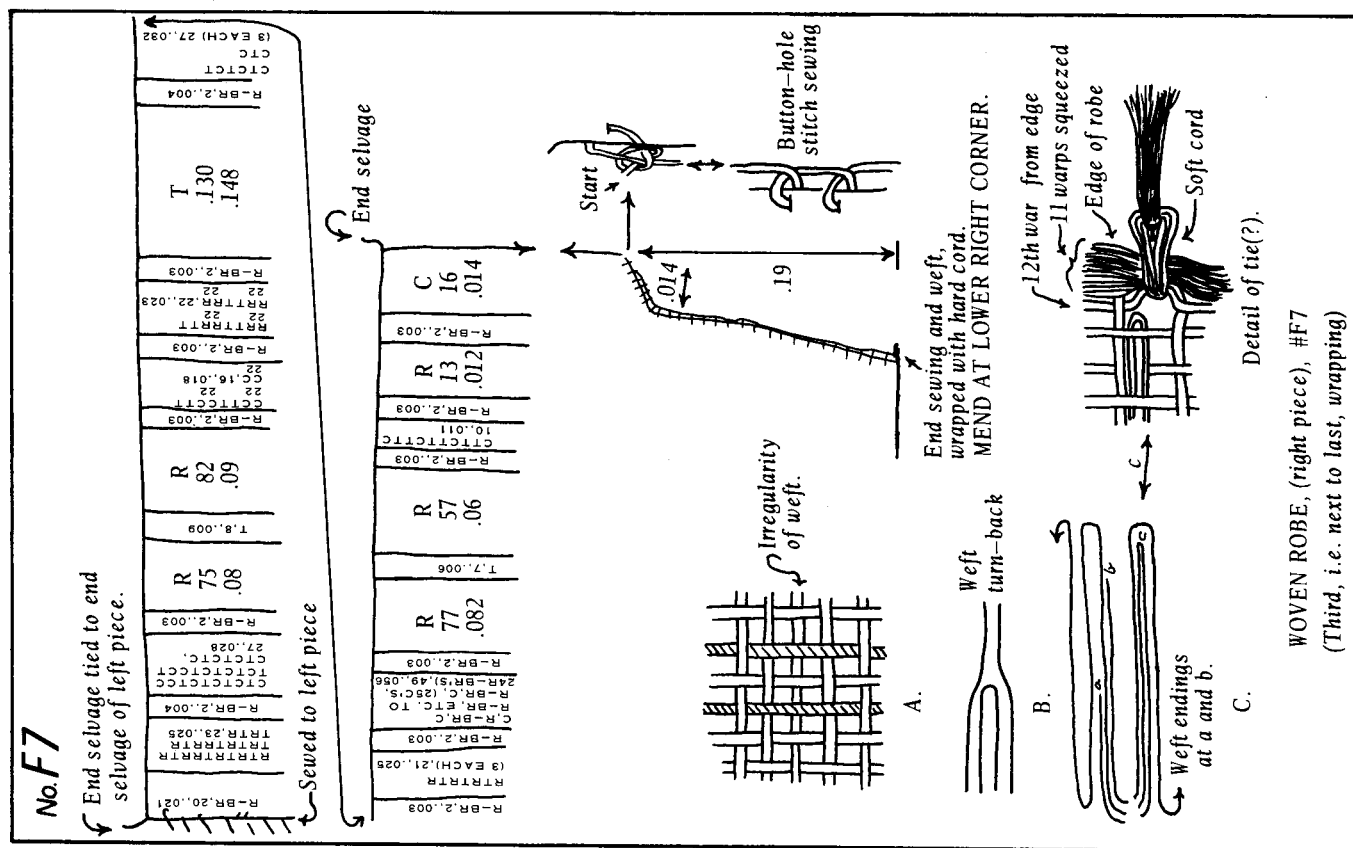


Fig. 20