

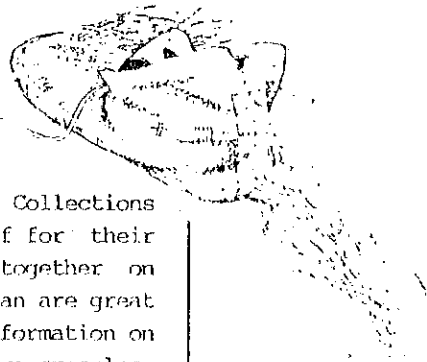
MOCCASIN CONSTRUCTION

Among the Southern Plains tribes, specifically the Comanche, Kiowa, Kiowa-Apache, Cheyenne-Arapaho, Wichita, and Tonkawa (Jones 1969) a distinctive form of moccasin has developed which defines the traditional style of the region. The style known locally as "dusters" describes any of several tribal styles of shoes which are characterized by fringes extending from the heel seam, semi-parallel lanes of beadwork extending from vamp to toe usually trimmed with metal cones or leather fringes, ornate ankle flaps or cuffs, and highly decorated tongues.

The most characteristic trait of dusters are the heel fringes. Heel fringes on Southern Plains moccasins is a tradition that extends far back into Southern Plains history. Among Comanche and Kiowa groups heel fringes were almost always a part of the shoe. It is not known whether moccasins with heel fringes pre-date the Comanche and Kiowa migrations to the Southern Plains or whether they were a trait acquired from more indigenous groups such as the Wichita. Cheyenne moccasins may have adopted heel fringes from their relationship with these tribes or they may have brought them down from the Northern Plains. The function of the heel fringes is to spiritually remove any trail left by the wearer (Wallace and Hoebel 1952). Not all Cheyenne partially beaded moccasins have heel fringes, but most contemporary ones still retain a remnant of the fringe in the inch long "tails" formed by the ends of the welt on the heel seam of the shoe (Stewart 1971).

Acknowledgements

The authors express their gratitude to Julie Droke, Collections Manager at OMNH, and to Susan Kowalczyk of the museum staff for their time and assistance in pulling the necessary information together on these moccasins to make the study possible. Julie and Susan are great people to work with. The junior author provided primary information on all Cheyenne examples and supportive work on the Kiowa examples. Thanks also to Tyrone Stewart of Sapulpa, Oklahoma for permission to reprint the section on moccasin construction. Without the fine artwork of Sumner Heman this paper would not be able to get the necessary details to the readers. From the senior author thanks go out to John Lovett, Photographic Archivist of the Western History Collections for his help in obtaining the accompanying old photographs. Most importantly I thank my wife, Michelle Hays for her encouraging support in all our projects and for helping me with bead identification and construction notes on the moccasins. She also helped retype the entire article after I vaporized it off of the computer disc. Any mistakes in the paper are the responsibilities of the authors.



...ABOUT THE ILLUSTRATIONS.. Illustration numbers are not sequential, but are placed for easier reference to the text.

If one is familiar with the technique for making Plains hard-soled moccasins, then constructing a pair of dusters will be a matter of making some changes in decoration to make them follow this distinct form of Southern Plains shoe. Figure 2 shows variations in moccasin sole shape for various Southern Plains groups. This should be taken into account when making dusters. Also, a consideration of the type of heel fringes, cuffs, tongues, and vamp decoration may involve necessary alterations in the upper pattern. All the sketches in this paper were designed to demonstrate the details of how these moccasins were put together and make it possible for someone to accurately reconstruct any of the moccasins analyzed in Parts 1 & 2. It is suggested that the readers study Figures 2, 3, 4.b, 6, and 8 before starting to build a pair. In particular Figure 6 will help in laying out the plans for your dusters.

Rather than beginning anew the authors have chosen to reprint with the author's permission the materials and construction section of the excellent Ty Stewart Cheyenne moccasin article (Stewart 1971b). Also reprinted with Mr. Stewart's permission are the upper size chart and Figures 6a and 6b. For additional references on patterning moccasin uppers see Sutton (1983).

¹⁰ Ideally, Indian tan buckskin, rawhide soles and sinew are traditional. Some modern moccasin makers prefer using commercially tanned sole leather because moisture will not be as hard on it. Split cowhide is in place of Indian tan, but only in the less expensive moccasins.

The first step is to draw your foot pattern. This is done by removing your shoe and while standing, have someone trace the outline of your foot. (careful not to indent too much at the instep.) Be using your foot outline, draw a sole as shown in Fig. 14. (see Hays and Ramsey Figure 6a) Keep it just slightly smaller than your foot outline to insure snug fit. This way the moccasins will form to your feet.

Now the moccasin upper is skived as shown Fig. 16 (Hays and Ramsey Figures 3 and 6b) and cut around as shown. Be sure to measure at the instep portion so the upper is cut wide enough to fit properly. We have provided a table to the average foot. It will be close enough to fit, but verify by measuring your own feet and draw an outline as shown.

When the sole and upper are cut out, you may wish, transfer the outlines to cardboard to make it easier when outlining these figures on leather.

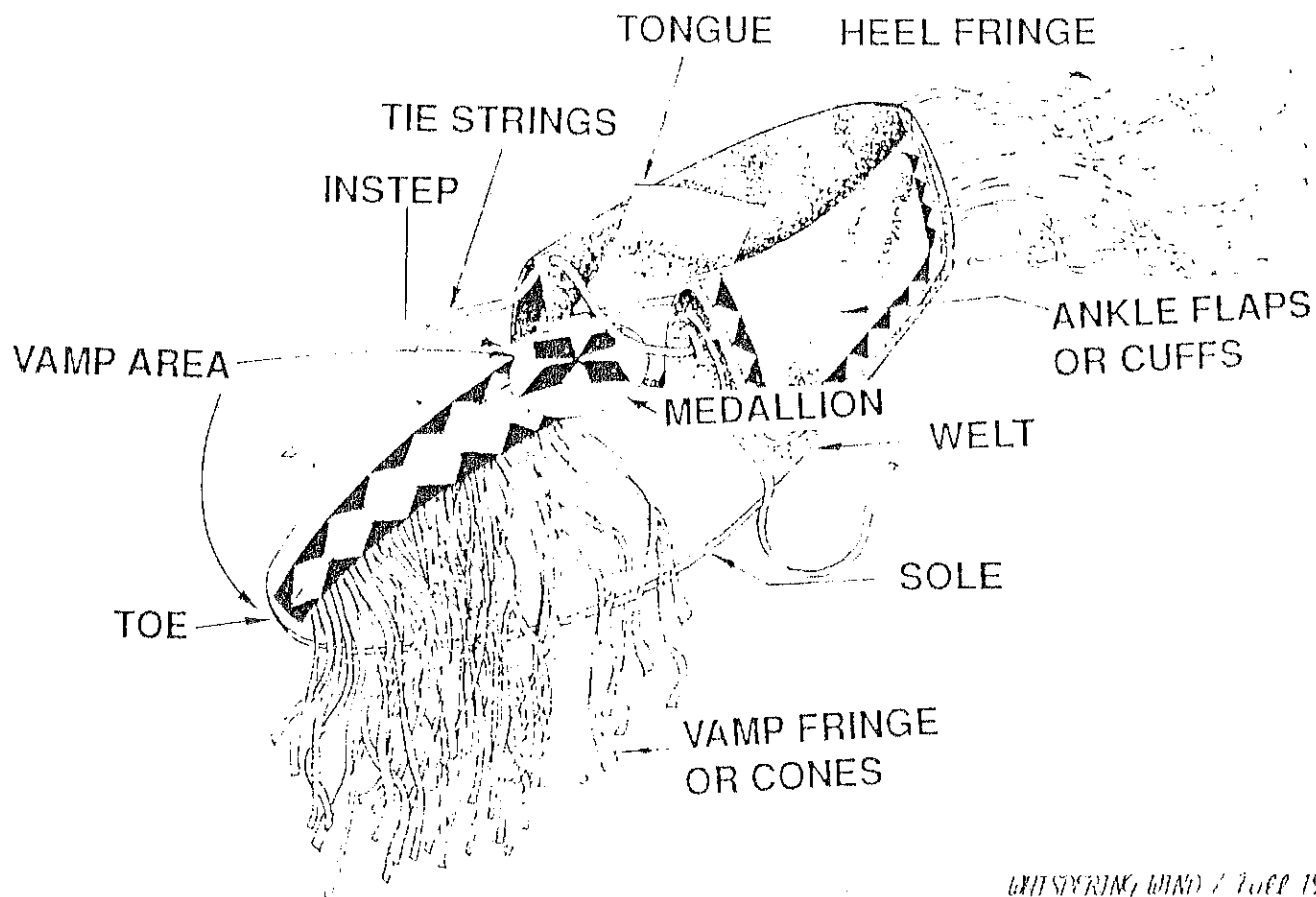
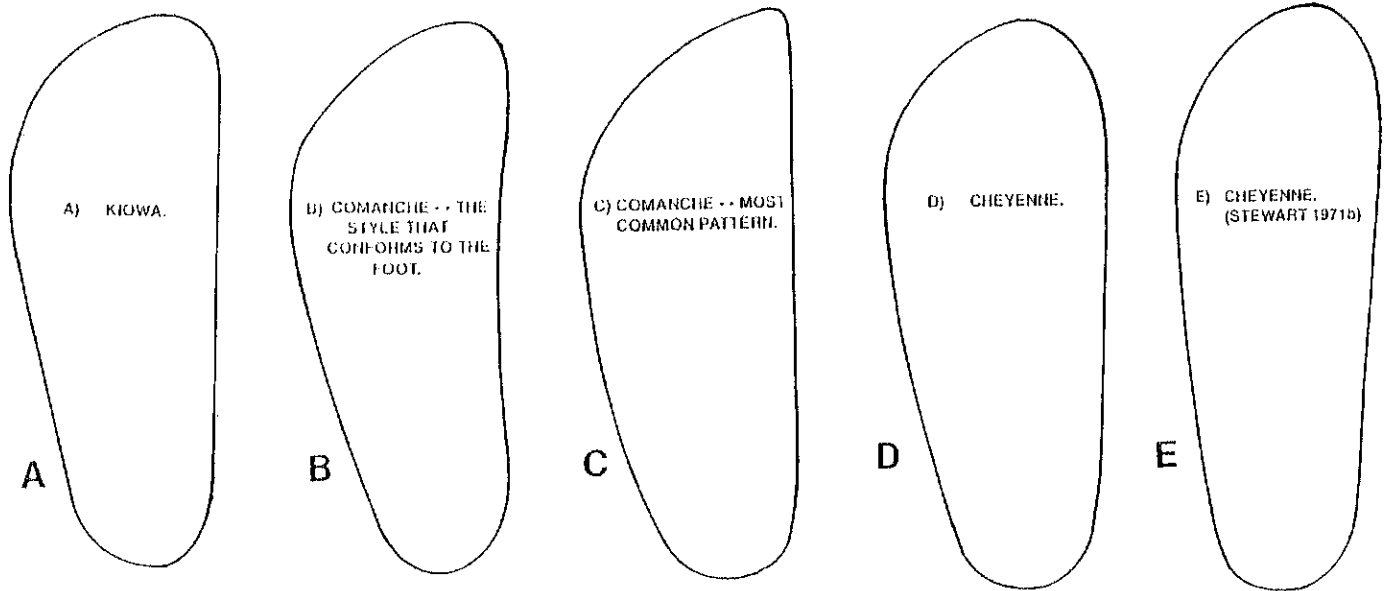


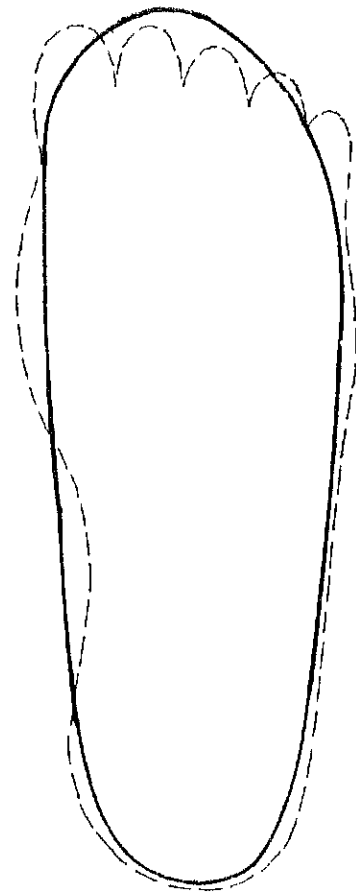
Fig. 2 - Sole Patterns

(Adapted from Evans & Stewart 1971b)



SIZE	L	W
4	9-1/2"	8"
5	10-1/4"	9"
6	10-1/2"	9-1/4"
7	10-3/4"	9-3/8"
8	11-1/16"	9-1/2"
9	11-3/8"	9-3/4"
10	11-3/4"	9-7/8"
11	12"	10-1/8"
12	12-1/2"	10-3/8"
14	12-3/4"	10-1/2"

The foot sizes shown will give an approximate size for your moccasin uppers. The critical area will be the width and instep portion, and it would be best to verify these areas by cutting pattern from paper.



6 a. Developing the sole pattern from a foot tracing see also Fig. 2

"It is now time to apply the beads. If you wish to do so, draw your design on the buckskin using a ballpoint pen, although it's not absolutely necessary if you have worked it out on paper. (Hays and Ramsey suggest not marking up the leather with ink of any kind, but instead use a pencil or the tip of an awl to scratch in the lane and design marks.) The first lane of beads around the perimeter is applied about 3/8" away from the edge of the leather. At the point where the heel seam is joined, end the lane about 3/16" away from the edge to allow for sewing and the application of the row of beads up the heel seam. (There is no lane over this heel seam on dusters as the fringe goes there.)

"The row across the top of the instep should be considered next, depending on the type of design you wish to use (refer to Part I, Figs 10, A to P, page 17.) (not shown) When the beadwork is completed, with the exception of the heel seam, it is time to attach the sole. Moccasins are sewn inside out so the beaded portion will be face down when sewn.

"Position the sole, the welt if using one, and the upper in place and tack down at the toe and each side to avoid movement of the welt and upper. You can tack down the heel if you so desire. Beginning at the toe work down one side, inserting the awl as shown in figure 17 (See Hays and Ramsey Figure 6c.) Use the large awl for going through the sole. When punching through the sole, be sure not to open up the hole too much but just enough to insert the needle. A whip stitch is used for this attachment. (Hays and Ramsey suggest wrapping moccasin sole rawhide in a damp cloth for several hours to soften them up. Rawhide soles are punched, sewn and turned much easier after this is done.) Small, tight stitches are taken in the areas shown in Fig 16. (see Hays and Ramsey Figure 6b) This seems to be the place where the most stress is applied when being worn.

Figure 4b

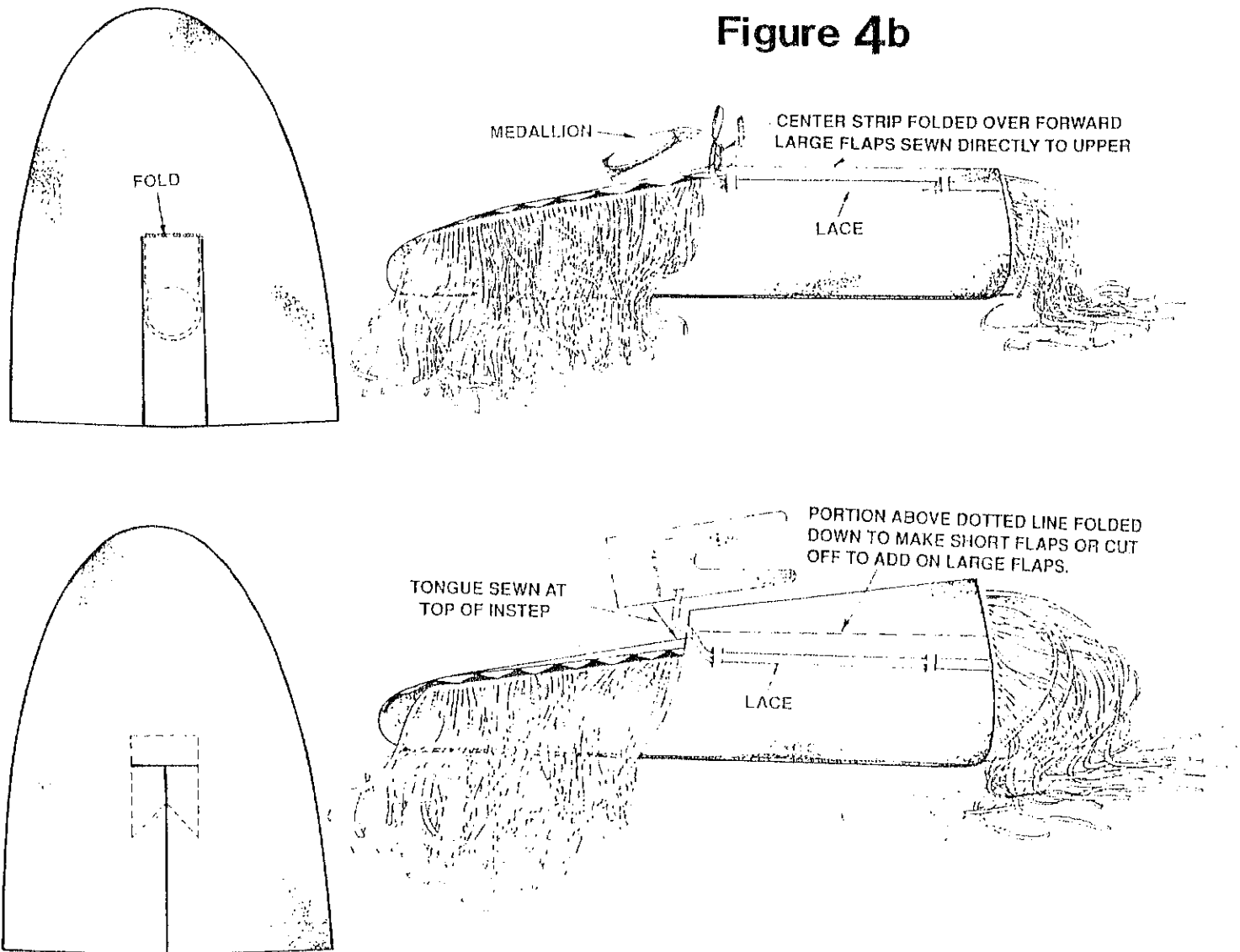
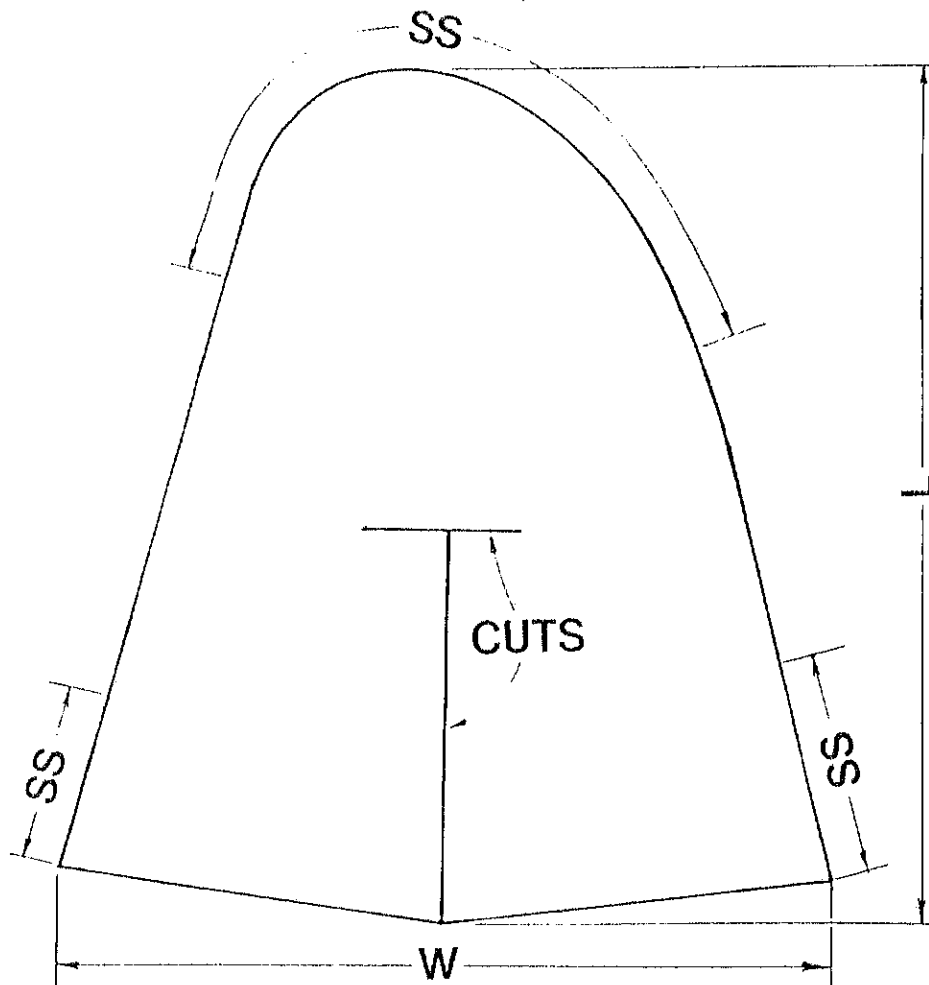
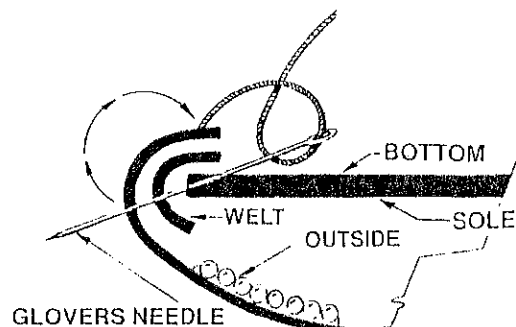


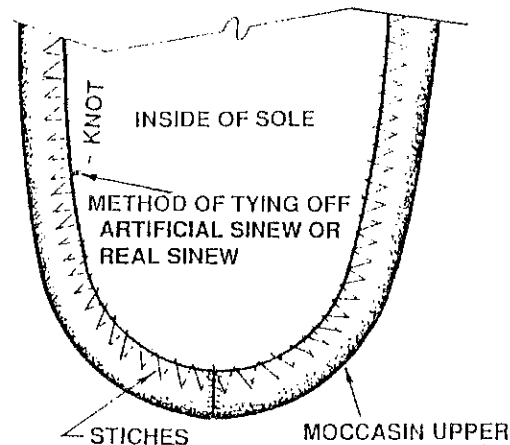
Fig. 6 — Construction



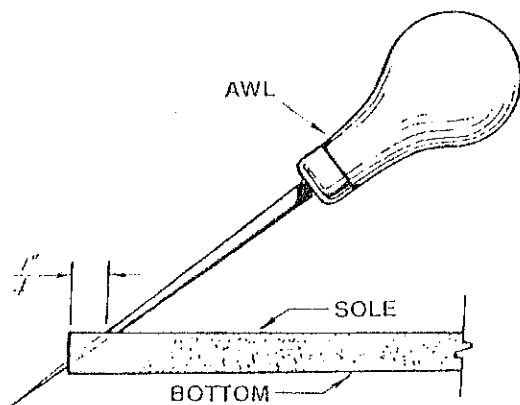
b. A typical moccasin upper is shown above. Its length's and width's for average feet are given in the table below. The "SS" indicates the area in which smaller stitches are to be taken.



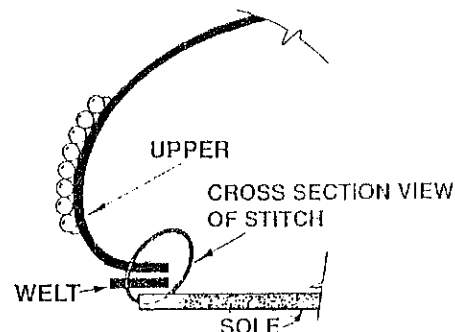
d. Placement of the welt and upper while sewing onto sole.



e. Detail of heel of moccasin before turning right-side out.

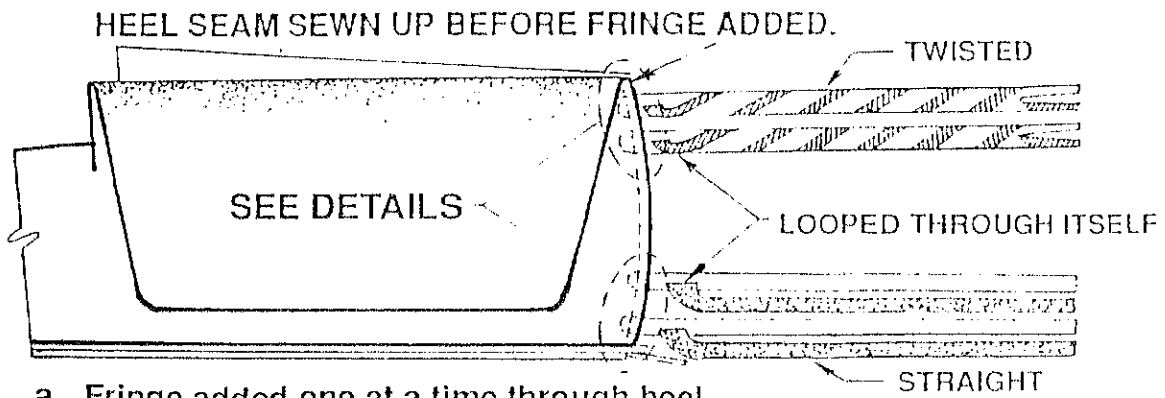


c. Using an awl of appropriate diameter prepare the holes in the rawhide soles as shown above.



f. Detail of moccasin stitches after moccasins are sewn up and turned right-side out.

Figure 8 - Heel Fringe Variations



a. Fringe added one at a time through heel seam, straight or twisted.

A

Straight: Examples 1,5,7
Twisted: Examples 4,9

"Use carpet thread or linen doubled and heavily waxed. (Hays and Ramsey suggest using artificial sinew which is nylon if one does not use real sinew.)

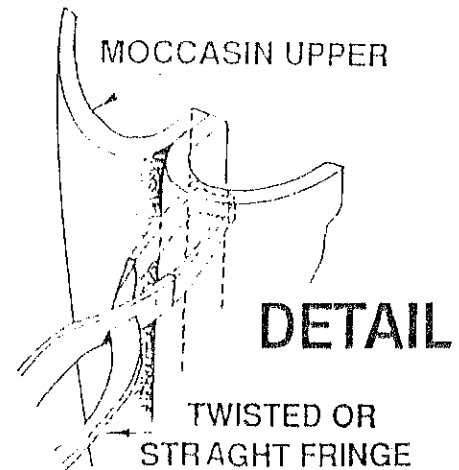
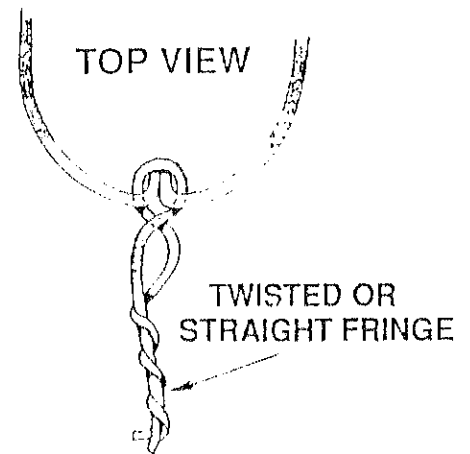
"When sewing up partially beaded moccasins the heel seam is sewn together first before sewing the upper to the sole. The reason for this is that on partially beaded moccasins the heel is sewn and folded as shown in Fig 18. (This method may not necessarily be used by all moccasin makers). (not shown in Hays and Ramsey 1988).

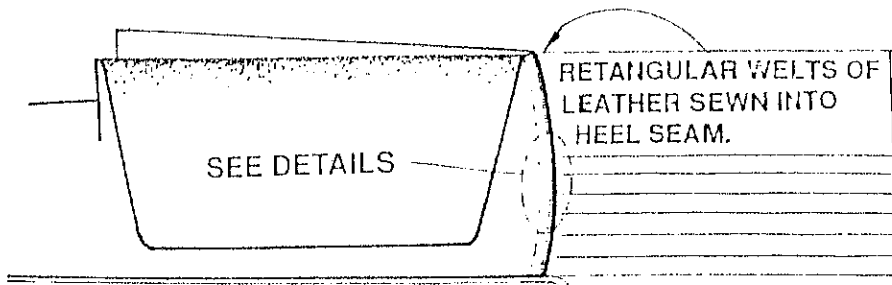
"Two little tails are sometimes sewn at the base just above the sole. They come to a point and extend out about one inch in back. When I asked what this represented the answer was 'to cover your tracks'. Grimmell states, 'Almost always the moccasins of modern times have two little tails of deerskin, an inch or more long and 1/8" wide which project backward from the heel, at the point where the heel seam joins the sole.' (THE CHEYENNE INDIANS, Vol 1, pages 219-220.)

"The tongue can be sewn on before or after the upper is sewn to the sole.

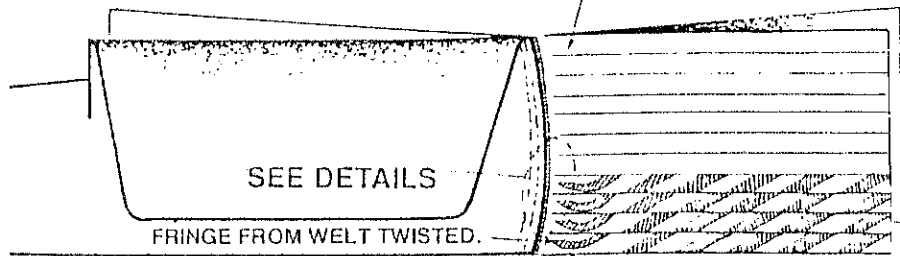
"The tie thongs, ideally, should run under the top row of beads or about halfway up the side, but can be placed in an exposed position. The tie thong is placed as shown in Fig 20 and 21. (see Hays and Ramsey Figure 5)

"As with all methods of craftwork, no doubt there are many ways to accomplish a specific end. The methods presented here are fairly common, but will vary to some degree from one area to another around Cheyenne country (Stewart 1971b)."

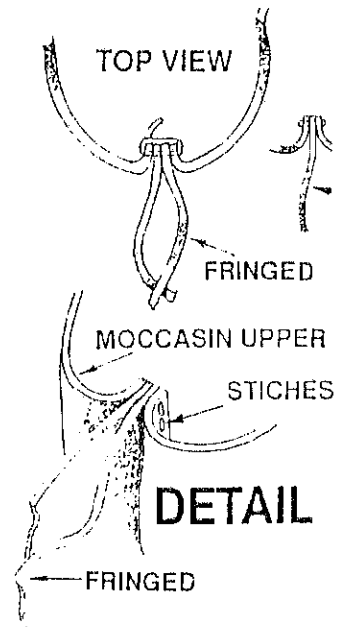




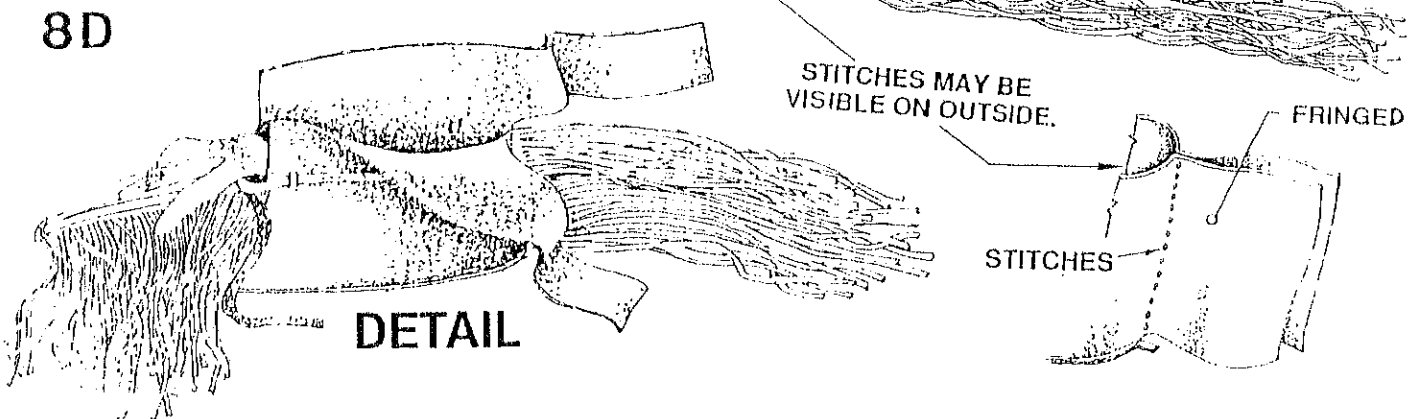
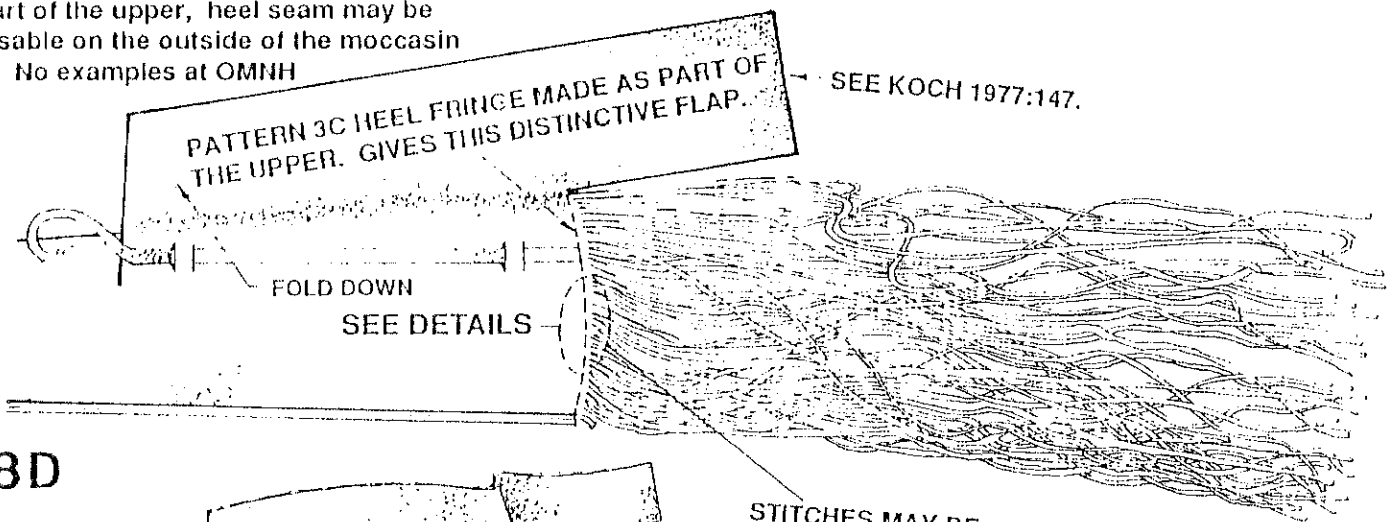
8B b. Single welt added into heel seam, straight fringe cut from this welt.
Examples 3, 8



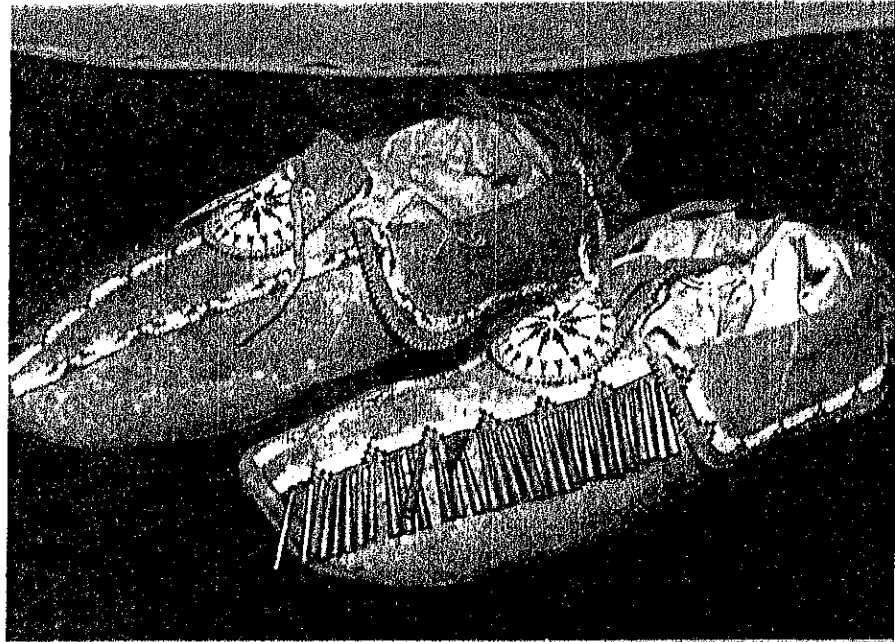
8C c. Two welts added into heel seam, these welts are cut into fringe and left straight or twisted.
Straight: Examples 2
Twisted: Examples 6



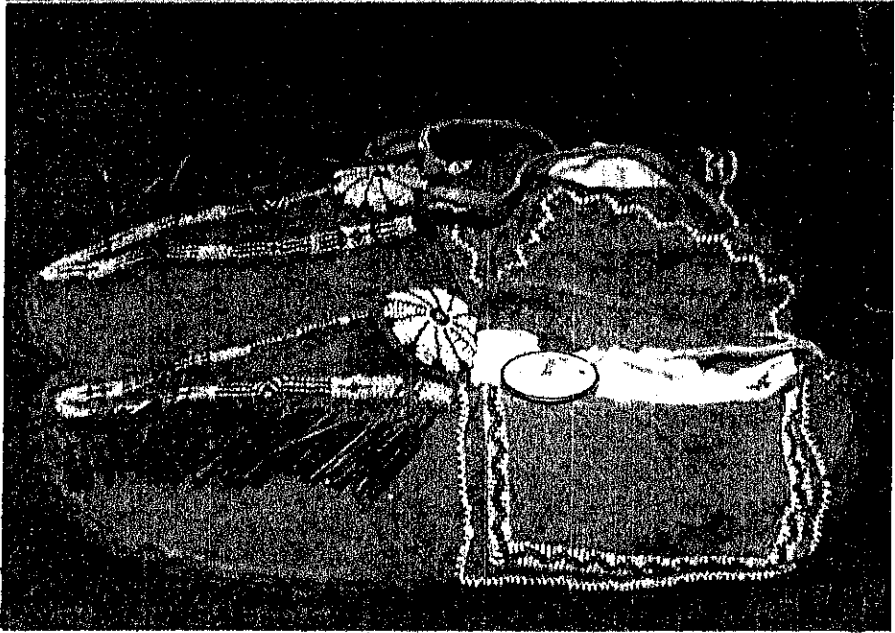
d. Heel fringe made on the moccasin as a part of the upper, heel seam may be visible on the outside of the moccasin
No examples at OMNH



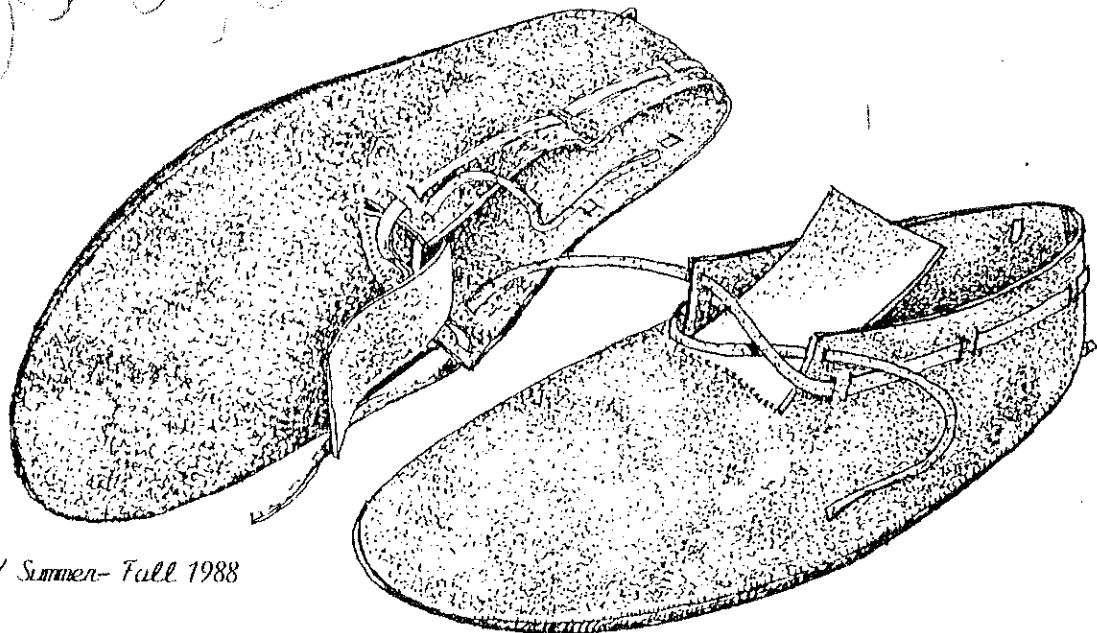
Example 9 (Cat.No. NPM 9-13-44)
 are Kiowa and are made of white
 leather consisting of two
 lanes of lazy stitch
 extending from instep to toe
 and a single lane around the
 margin of each cuff. The
 designs are the same on the
 outside of each moccasin and
 the same on the inside of
 each. The background color
 is white and design colors
 light red, navy, light blue,
 and greasy yellow.
 Authors' photo.



Example 10 (Cat.No. 9-13-9)
 are labeled Kiowa but in
 the authors' opinion may be
 Comanche based on the use of
 flat gourd stitch and the
 heavy application of green
 and yellow paint. The beads
 are 5/0 Italian and the
 gourd stitch is in a white
 background with red under-
 white, translucent navy,
 greasy yellow, medium green,
 light blue, and medium
 translucent blue (pony trade
 blue). Authors' photo.

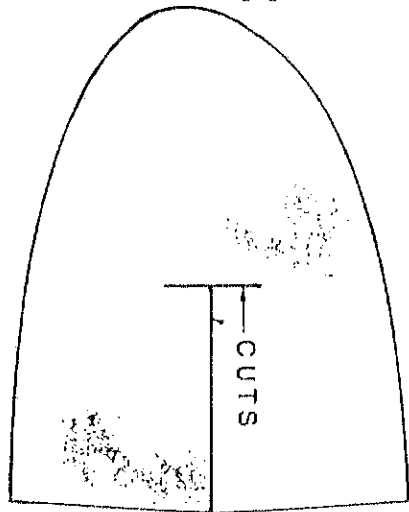


Handwritten notes:
 5/0 Italian
 UP

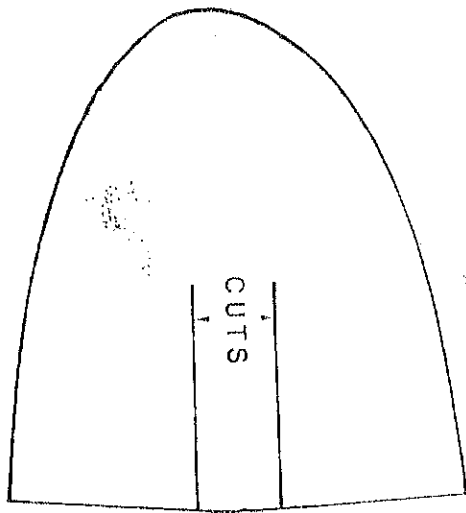


Certain portions of the above text which dealt with fully beaded moccasins were deleted. In addition it is suggested that the ends of the welt be crossed over at the heel seam and trimmed to form the small "tails".

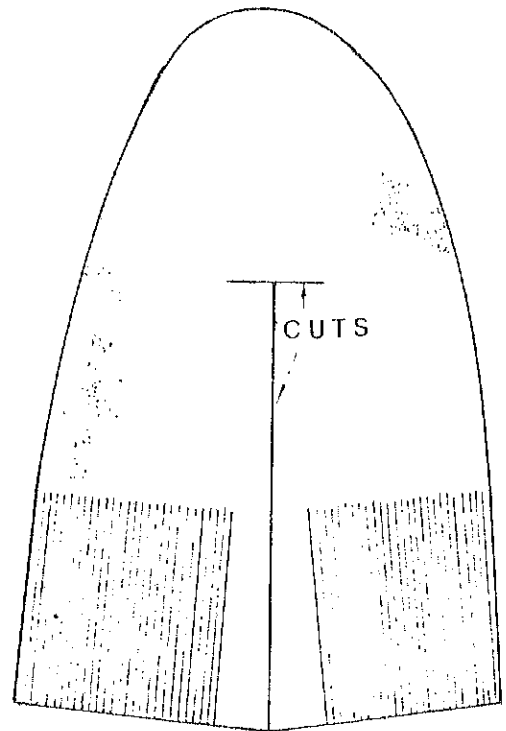
Fig. 3 - Southern Plains Moccasin Upper Variations



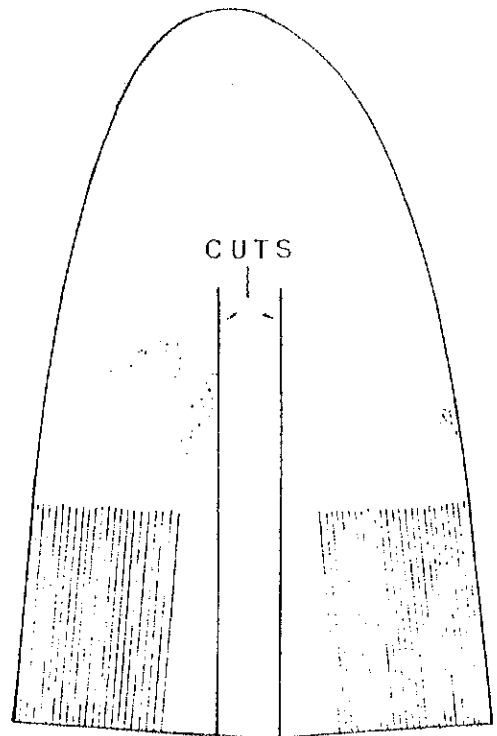
A. "T-Cut" upper pattern made without heel fringe attached.



B. "Parallel Cut" upper pattern made without heel fringe attached.



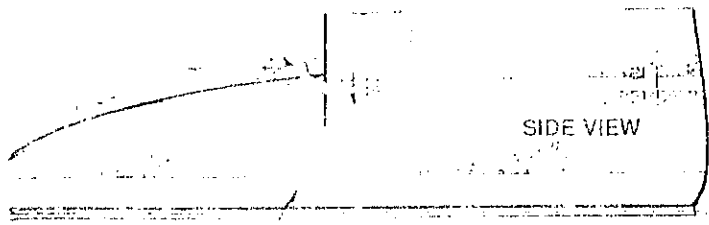
C. "T-Cut" upper pattern with heel fringe on.



D. "Parallel Cut" upper pattern with heel fringe made on.

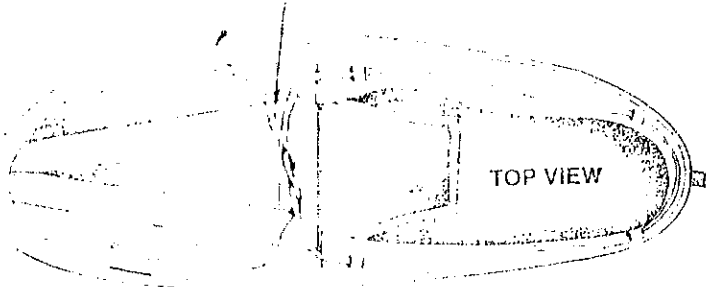
(Adapted from White 1969 and Stewart 1971b).

Fig. 5 Tie Thongs



SIDE VIEW

BEADWORK



TOP VIEW

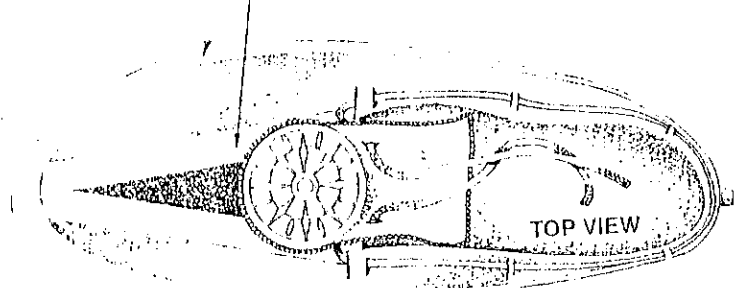
Variation A: Examples 1 and 10, thong tied on top of tongue.



MEDALLION

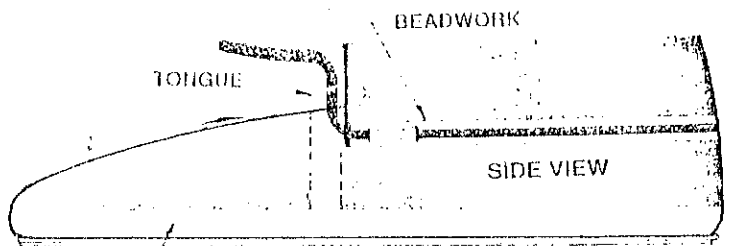
SIDE VIEW

BEADWORK



TOP VIEW

Variation B: Examples 2, 3, 4, 6, 8, 9, thong passed up through tongue.

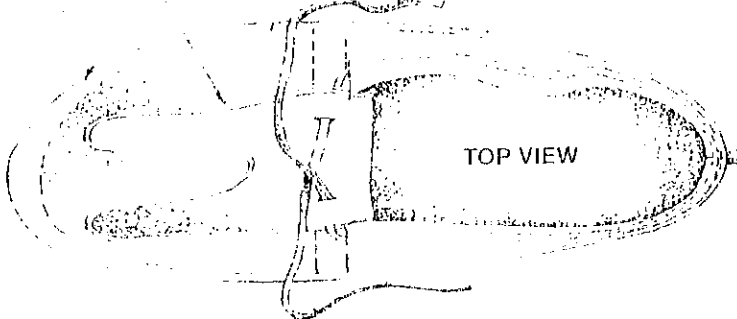


BEADWORK

TONGUE

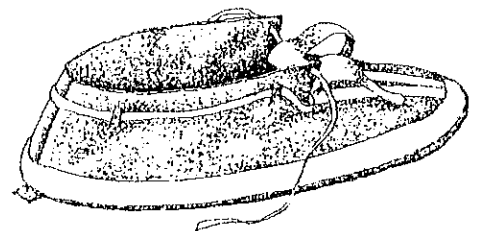
SIDE VIEW

BEADWORK



TOP VIEW

Variation C: Examples 5 and 7, thong passed through ankle beadwork and tied either on top or passed through tongue.



CONCLUSIONS

In examination of these ten pairs of moccasins, presented in Parts 1 & 2, several generalizations can be made regarding duster manufacture between about the years 1870-1950. The traits recognized as significant by the authors are summarized in Table 1. Although the sample size is too small to firmly speak for all moccasins of the period, this sample is thought to be fairly representative of what was being made and worn in Oklahoma during this time, for this particular style of shoe.

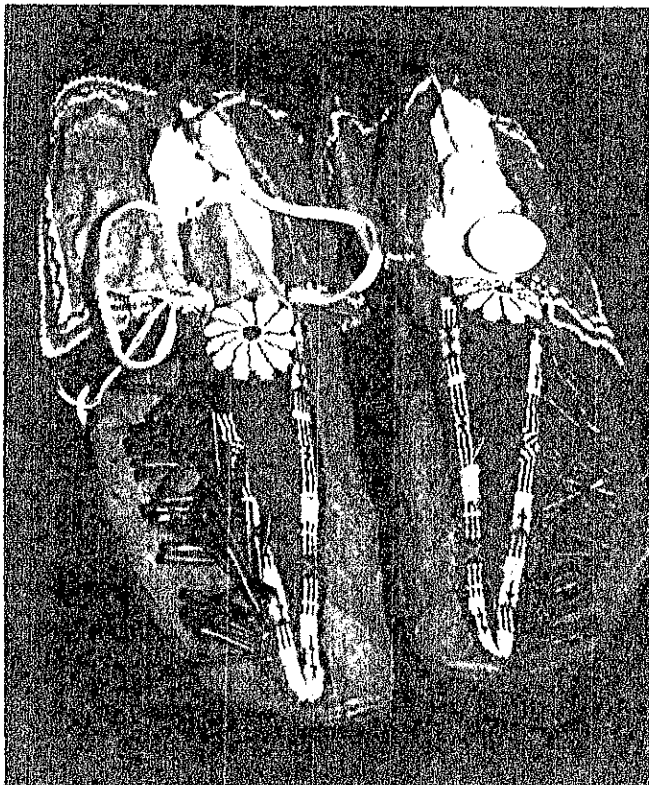
Several of the traits exhibited by these moccasins may represent a departure from older tribal styles. A comparison of the Cheyenne moccasins with the Kiowa shoes show several traits which seem to have been picked up by the other. For example, heel and vamp fringes may have been adopted by the Cheyenne only after their migrations to the Southern Plains. Likewise the row(s) of lazy stitched beadwork around the bottom of Kiowa moccasins seems to be a more recent feature, possibly acquired from contact with the Cheyenne. The older Kiowa/Comanche shoes appear to have an extremely long vamp length, whereas more recent examples appear to be made exactly like non-duster styles of Cheyenne partially beaded

moccasins, only trimmed in the Comanche/Kiowa manner. This denotes a departure from the older character of Comanche/Kiowa moccasin making. Two historical events make this increased cultural exchange between the Cheyenne-Arapaho tribes and other Southern Plains people more frequent. First of all the peace wade between the Comanche and Kiowa on the one hand and the Cheyenne and Arapaho on the other in 1840. Secondly, the Treaty of Medicine Lodge in 1867 brought all these tribes in closer contact with one another in Oklahoma. Four publications which examine changes in Plains Indian art are Conn (1986), Greene (1977), Koch (1977), and Schneider (1968).

After thirty or forty years of obscurity due in part to the popularity of non-duster styles of Cheyenne moccasins in Oklahoma, dusters are making a comeback in many powwow arenas, particularly in Southwest Oklahoma among straight dancers and some traditional dancers. This increased popularity is thought to be related in part to increased emphasis by tribal members of a return to their own tribal styles of clothing and a steering away from what has been called the Pan-Indian look. This should not be over-emphasized however as inter-tribal sharing and powwow fashion is bound to continue to change Plains Indian clothing in the future as it has in the past.

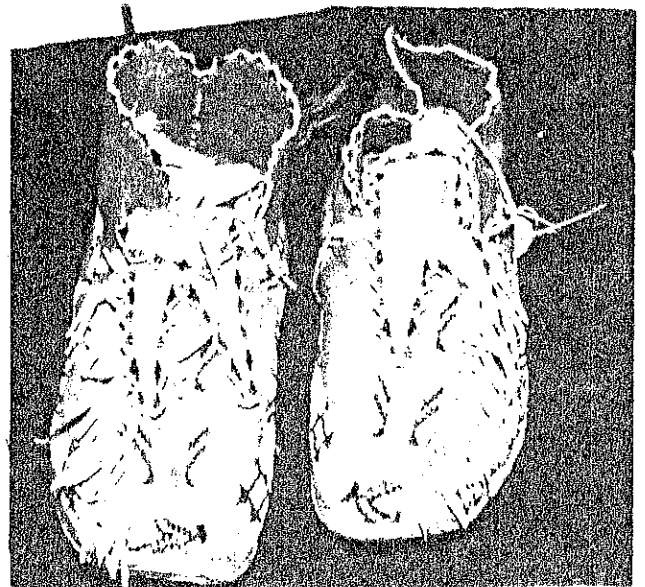
Moccasins (left) are probably Comanche based on the use of flat awl stitch beadwork and the heavy application of green and yellow paint. The heels are S/W Italian and the ground stitch is in a white background with red under-white. Authors' photo.

OPNH Cat. No. 9-13-9



Cheyenne moccasins (right) are of light brown leather. The "V" designs are more appropriate for a woman's moccasin. Authors' photo.

OPNH Cat. No. NAM-9-2102





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BACKGROUND:

The Indians of the Plains wear this hard-sole moccasin which was developed as protection from the hard, and sometimes rocky, ground of the prairie that is their home. Normally constructed of soft tanned elk or buckskin uppers and supple, but tough rawhide soles, they represent one of the most highly refined forms of Native American footwear ever developed. This popular style of moccasin is both comfortable and durable for dancing, or everyday wear.

Many styles of construction, decoration, & other more subtle variations, such as tongue style, exist from tribe to tribe. Many times these subtle differences even exist within the same tribe, between various craftworkers. Since Cheyenne moccasin makers have for years been the acknowledged masters of the art, we have chosen to present the typical, Cheyenne style of cut & construction.

If you prefer to make another tribal style, we suggest first hand research of old photographs & museum examples, in order to produce accurately styled and decorated moccasins. There are many excellent books available with good photos & proper identification of footwear. Some of these are: **'A Persistent Vision-Corn, Quill & Beadwork of the Western Sioux-Lyford, Blackfeet Crafts-Ewers, Crow Indian Beadwork-Wildschutt & Ewers, Circles of the World-Corn, The Arapaho-Kroeber, Hau Kola!-Hail, & American Indian Art-Feder**, as well as many others. There are also a number of excellent 35mm slides and photos available from some of the major museums which house large collections of American Indian material, such as The Museum of the American Indian in New York City and The Smithsonian Institution in Washington, D.C.

MATERIALS REQUIRED:

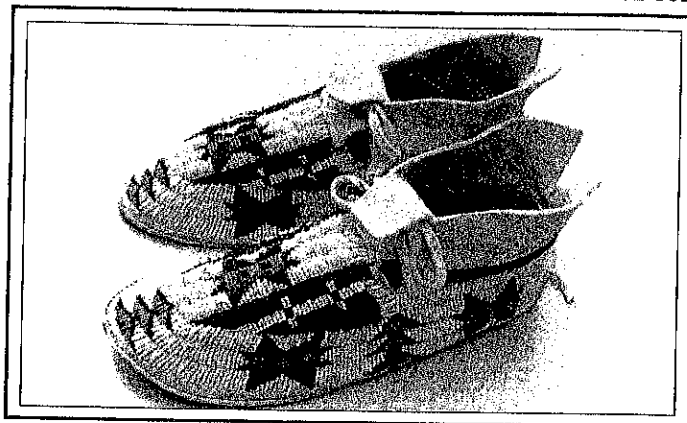
- Leather for uppers
- 2 yds. Simulated Sinew
- 1 pr. 4x12 Latigo Soles
- 1 #4 Glovers Needle

For the uppers, smoked, brain-tan buckskin is the preferred material, but smoked Kootenai-tan is an excellent second choice. These are rather difficult to obtain, so the next choice is commercially tanned buckskin, which has been widely used for some time. When selecting a hide, choose one that's not too thick, as these are too difficult to bead on, but one that is soft and stretchable and doesn't tend to tear. Soles should be made of rawhide, as it will outlast any other material; but, a good second choice would be a heavy harness leather or oil tanned latigo. When selecting leather & laying out patterns, try to ensure that the material for each moccasin has the same skin thickness and quality. This results in a nice, evenly matched pair of moccasins.

STEP 1: First, draw an outline of your foot on a large piece of paper. Heavy butcher paper or a grocery sack works well for this. Stand with both feet even & your weight evenly distributed. This is easier and more accurate if you have someone help by making the outline for you. Keep pencil upright and draw your sole pattern as shown in Fig. 1, approximately 1/4" to 3/8" longer than your foot. If you do not plan to wear socks with your

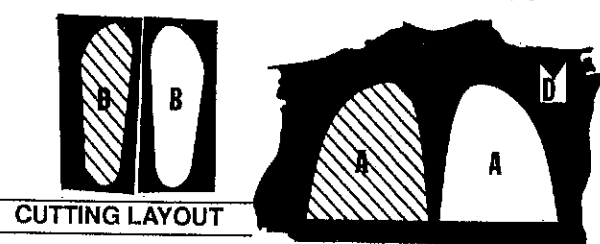
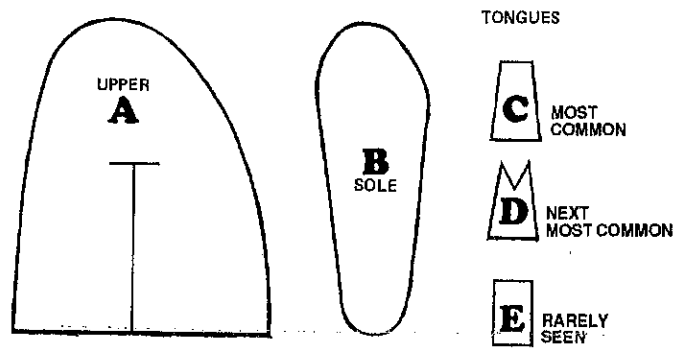
PLAINS HARD-SOLE MOCCASIN KIT

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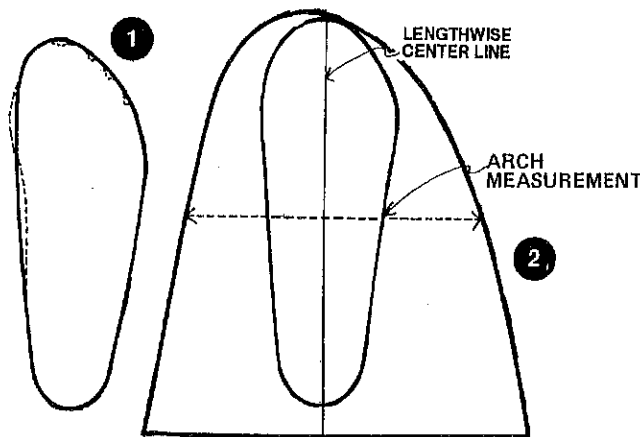


Beautifully made pair of typical Cheyenne style mocs by Mike Kostelnik

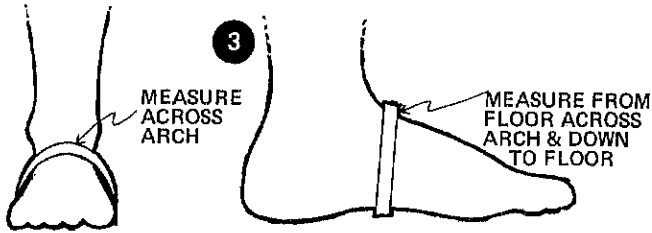
BASIC PATTERNS



moccasins, make the sole pattern approximately the same length as your foot. Usually part of the small toes & the protrudence on the inside of your foot just behind the big toe is ignored when drawing the sole pattern, and the inside line is almost perfectly straight. In this way the moccasins will form to your foot, ensuring a snug fit. Make a centerline lengthwise down the pattern as shown in Fig. 2.

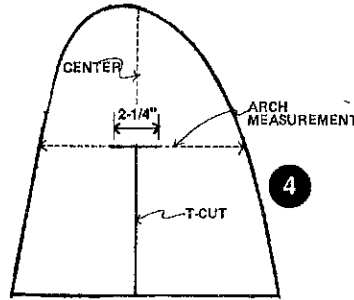


A common tendency when first beginning to make moccasins is to cut the sole too wide. We recommend cutting just inside the outline of the sole on both sides. However, this does not apply to the length of the sole! We suggest that you use the general shape of our sole pattern shown in Fig. 1 as a guide for drawing yours. Of course this will vary with an individual's foot shape.



STEP 2: In order to develop a proper upper pattern for your foot, cut a thin strip of paper & measure across your arch at the point where you would tie a shoestring. Measure from the floor across the arch to the floor on the opposite side as shown in Fig. 3. Find the middle of this measurement, place this point on the centerline, and transfer the dimension to your pattern.

Draw the pattern for the moccasin upper as follows: outline the toe area $\frac{1}{4}$ " to $\frac{1}{2}$ " out from the sole pattern. If mocs are to be fully beaded, allow $\frac{1}{2}$ " to $\frac{3}{4}$ ". After you draw around the toe, make a straight line through the points for the arch measurement (Fig. 4). Normally, the line of the arch measurement runs through the very center of the upper. Continue the pattern at least 1"-2" past the heel. See Fig. 2.

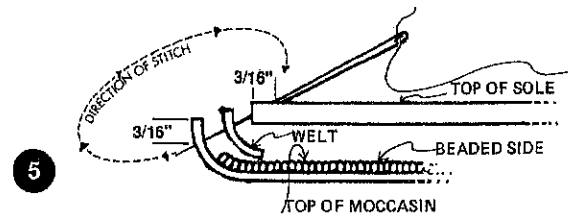


Starting at the heel, cut the pattern up the center line to the arch measurement (Fig. 4). At this point, make a perpendicular cut $2\frac{1}{4}$ " in total length ($1\frac{1}{8}$ " on each side of the center line). The resulting cut forms a tall "T".

STEP 3: Cut out the entire upper pattern and transfer it to your leather, including the T-cut as shown in Fig. 4. **Turn the pattern over** and do the same for the other foot. Be sure to mark the center point at the toe on your leather.

STEP 4: Cut out the sole portion of the pattern, transfer it to the sole leather, and cut out the soles. Again, be sure to cut one right & one left by turning the pattern over. Then, mark the center point at each toe. Note: the smooth side of the sole leather will be on the outside of the moccasin. When using real rawhide, the hair side will be outside.

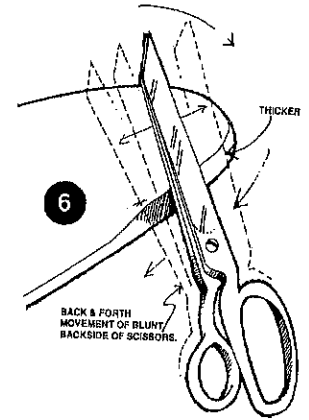
STEP 5: Any decoration which is to be done to the uppers should be applied now. The beading should begin $\frac{3}{8}$ " in from the edge, and at an angle perpendicular to this edge. This allows $\frac{1}{8}$ "



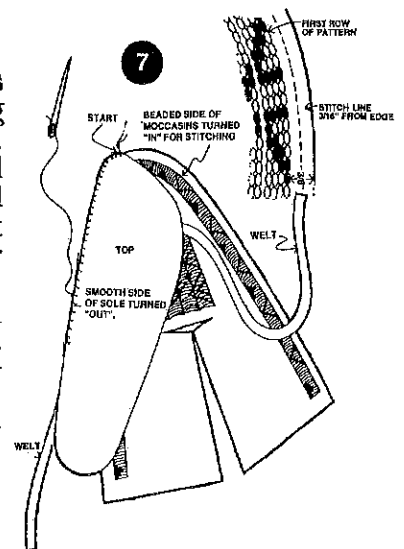
between the beadwork lane and sole, and $\frac{1}{4}$ " which is used in the whip stitch for added strength of the seam. The accompanying diagrams show typical bead row layouts. After the beadwork is completed, you are ready to attach the upper to the sole by sewing inside-out. The decorative part will be face down while sewing, as shown in Fig. 5.

STEP 6: Beginning sometime in the 1880's, a welt was usually added between the sole and upper of Cheyenne moccasins. This welt protects the stitches and helps keep out dirt, thereby contributing to the life of the moccasin. If a welt is desired (and we highly recommend using one), cut a $\frac{1}{4}$ " strip of buckskin that is long enough to go around your foot and slightly overlap in the back. Be sure you save enough soft, upper leather for tongues and tie strings.

STEP 7: Before sewing, thoroughly soften the leather sole by bending it, concentrating especially on the toe area. This is more essential when using genuine rawhide rather than commercially tanned leather such as latigo, but should be done regardless of the material used. Now, dampen the edge of the sole all the way around, and using the dull backside of a closed pair of scissors, scrape the edges very hard as shown in Fig. 6. This is an old Indian trick & tends to thicken the edge, thereby making sewing easier.



STEP 8: Simulated sinew is included for all sewing other than beading. Cut a 3 foot length and split it in two, then roll it on your leg to make it round. Align the center points on the sole, upper, & welt as shown in Fig. 7. Begin at this point & sew half-way down one side, then do the same on the other side. Use a whip-stitch as shown in Fig. 5 & 7, keeping your stitches very close together.



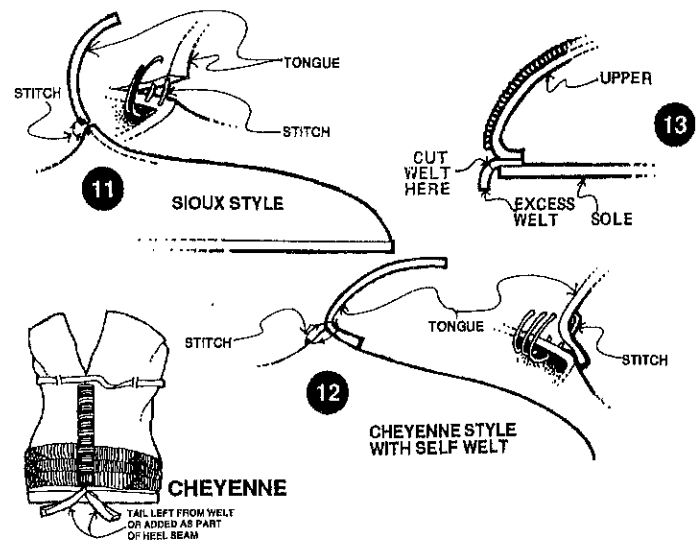
The best Cheyenne mocs are sewn with stitches that are approximately $\frac{1}{16}$ " to $\frac{3}{32}$ " apart, maximum. This gives a very fine appearance and makes the moccasin quite strong. Sewing is facilitated by first piercing a hole in the rawhide with a thin awl. Pull each stitch very tight so that the welt & upper are snug against the sole.

STEP 9: After sewing completely around the sole, turn the moccasin right-side-out. Begin by pushing in at the toe and continue by pulling the heel flaps towards the toe. When using very thick, stiff soles, it may be easier if the sole is dampened with a wet cloth for a time. Avoid getting water on the uppers, especially if using brain-tanned buckskin! This is normally not necessary when using commercially tanned soles. Next, try on the moccasins. Be very careful not to tear the upper while turning. Take your time and work the sole through the moccasin.

STEP 10: Now mark the leather at the heel, where any excess needs to be removed. An easy method is to simply put on the moccasin, hold the leather in place, and crease both pieces of the buckskin up the back of the heel with your fingernail. See Fig. 8 for a detailed view. Cut just outside your fingernail mark to remove the excess leather. This may or may not be necessary, but most often is.

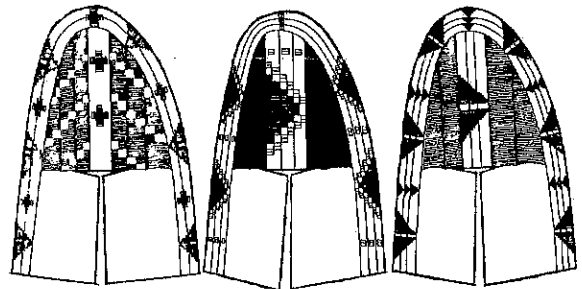
Overlap the two ends of the welt, then sew up the back using a whip-stitch or baseball stitch. The method of sewing the heel seam is shown in Fig. 9. For moccasins that are fully beaded with fully beaded flaps, the flaps should be cut to a shorter height as shown in Fig. 10. Partially beaded moccasin uppers are never trimmed in this manner.

STEP 11: Cut two tongues, using one of the styles shown in the "Basic Patterns". Fig. 11 shows the method of attaching the tongues to the moccasins with a whip-stitch. Fig. 12 shows the common Cheyenne method of attaching the tongue, by creating a "false" welt. Cut two thongs long enough for laces, pierce small slits, then lace up your moccasins. Two methods of lacing are shown in Fig. 10. If necessary, the sole welt can now be trimmed to make it even, so fold it down over the edge of



the sole and cut it off even with the ground as shown in Fig. 13. **Important Note:** One of the most traditional finishing touches for Cheyenne moccasins is the two little "tails" found at the base of the heel. These are formed from the two ends of the welt, but on moccasins made without a welt they are sewn on as an addition. Your moccasins are now ready to wear!

TYPICAL BEAD ROW LAYOUTS Sioux Beaded Designs



Cheyenne Beaded Designs

