

Size Tipi	#Poles - Length	Tripod Rope	Smokeflap Rope	Liner Rope		Stakes	Lacing Pins
				6'	9'		
12'	14 - 16'	28'	2 - 12'	84'	-	15	6
14'	17 - 16'	32'	2 - 13'	98'	-	17	8
16'	17 - 20'	35'	2 - 14'	111'	-	20	10
18'	17 - 24'	40'	2 - 15'	125'	158'	23	11
20'	17 - 27'	45'	2 - 16'	139'	175'	25	14
22'	17 - 30'	48'	2 - 17'	153'	191'	28	15
24'	17 - 32'	50'	2 - 18'	167'	208'	30	17
26'	20 - 32'	55'	2 - 19'	183'	224'	32	18
28'	20 - 36'	58'	2 - 20'	198'	241'	35	22

### **MATERIALS AND TOOLS YOU WILL NEED**

3/8" manila rope works well for the tripod and smoke flap ropes  
Polyester chord is suggested for hanging the liner.

Lacing pins should be 12" to 16" long and about 3/8" in diameter. Willow, chokecherry, or dowels work well.

Stakes can be wood or steel and should be at least 16" long for good holding power. The peg loops on your tipi will accept 1" diameter stakes; larger diameter stakes must be tied on.

### **YOU WILL ALSO NEED**

A heavy hammer for driving stakes.

A measuring tape.

A knife for cutting rope.

A bow saw.

Door cover stays: two 34" sticks, approximately 1" diameter to insert into the door cover, plus a 24" stick to hang the door cover from. Often, these sticks can be obtained when you cut your smoke flap poles down to size.

Plenty of patience - pitching a tipi for the first time is a learning experience, so take your time...

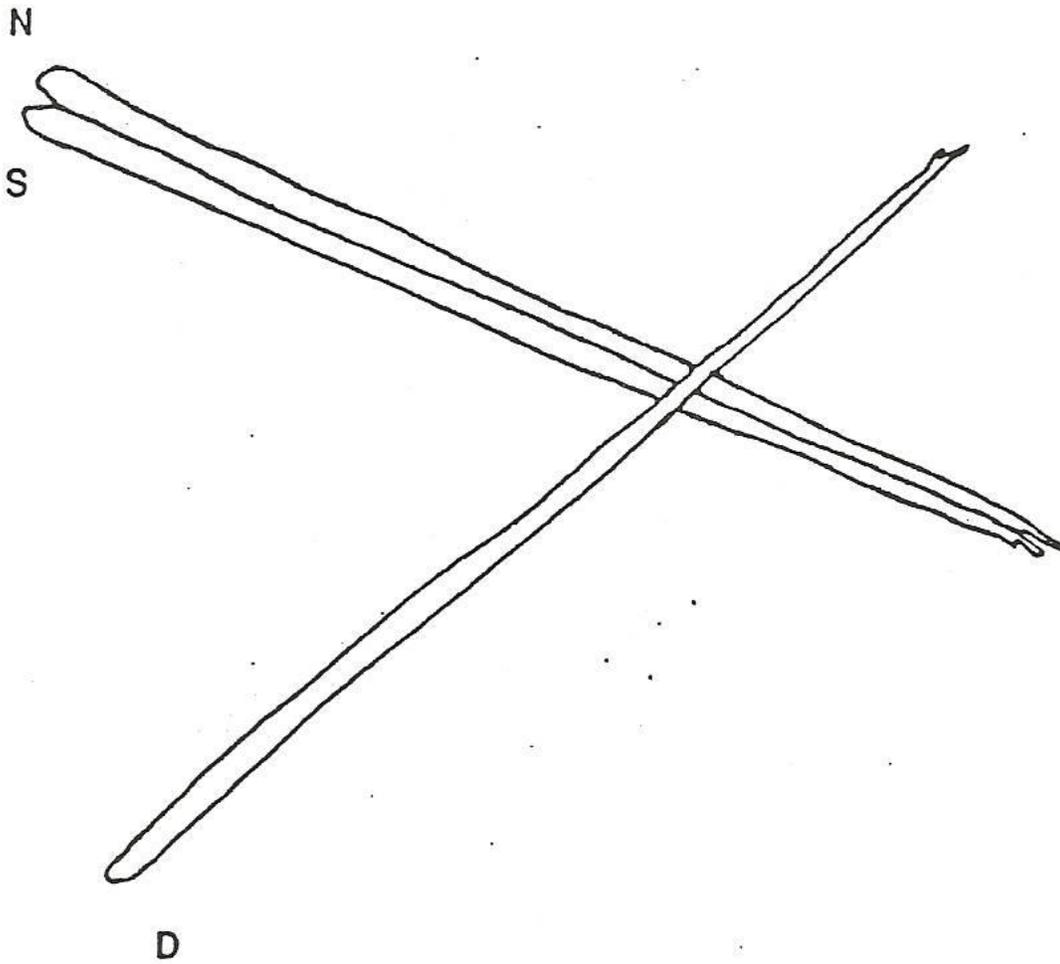
## PITCHING THE TIPI

1. Select a good spot. The tipi should be pitched on level ground, a little higher than the surrounding area for good drainage if possible. Traditionally, tipis face east, away from the prevailing wind. In these instructions the tipi faces east.
2. Choose your five largest poles. Designate one the Door Pole (D), on the North Pole (N), and one the South Pole (S). These will form the tripod. Designate one of the two remaining poles A-1 and the other the Lifting Pole (LP). You can also set aside your 2 smallest poles to be used as the Smoke Flap Poles.
3. Lay out the tripod poles as shown in illustration #1.
4. Refer to the dimensions below (Chart B) for your size tipi to position your tripod poles. It is not necessary to spread your tipi cover out on the ground at this time although many experienced tipi pitchers do.

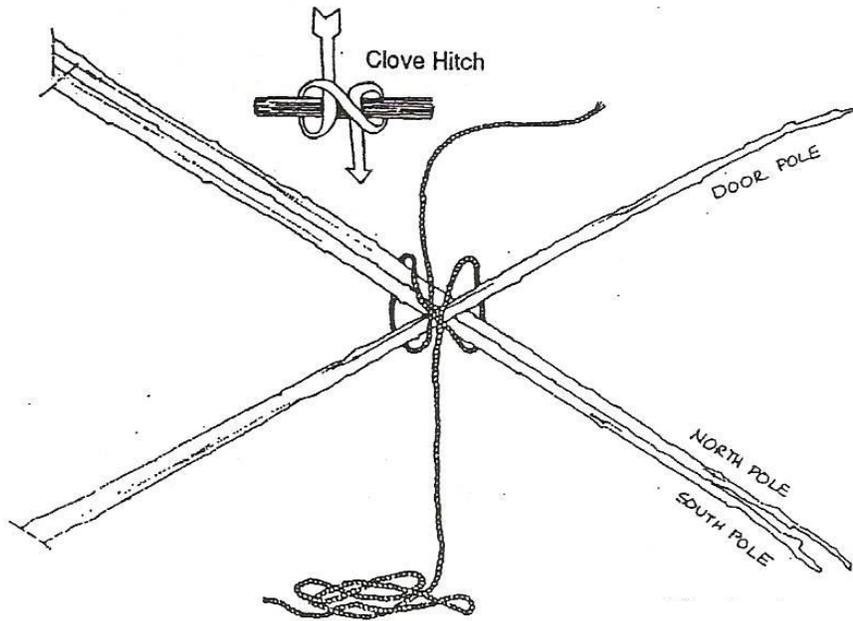
<b>Tipi Size</b>	<b>NS-Crosspoint</b>	<b>D-Crosspoint</b>
12'	10'-6"	12'-2"
14'	12'-6"	14'-2"
16'	14'	15'-9"
18'	16'	17'-9"
20'	18'	19'-9"
22'	20'	21'-9"
24'	22'	23'-9"
26'	24'	25'-9"
28'	26'	27'-9"

**CHART B**

Note: The dimensions given in Chart B apply to new tipis and are plus or minus two inches. Tipis made from marine army duck have a 2% "exposure shrinkage" factor. This shrinkage affects re-pitching a weathered tipi. For example, when pitching an 18' army duck tipi which has been exposed to the weather, the dimension "D to crosspoint" will change from 17'-9" to 17"-5" - a difference of about 2%. Lonestar tipis, made from single fill duck, have up to 10% exposure shrinkage, which will similarly need to be allowed for when re-pitching.

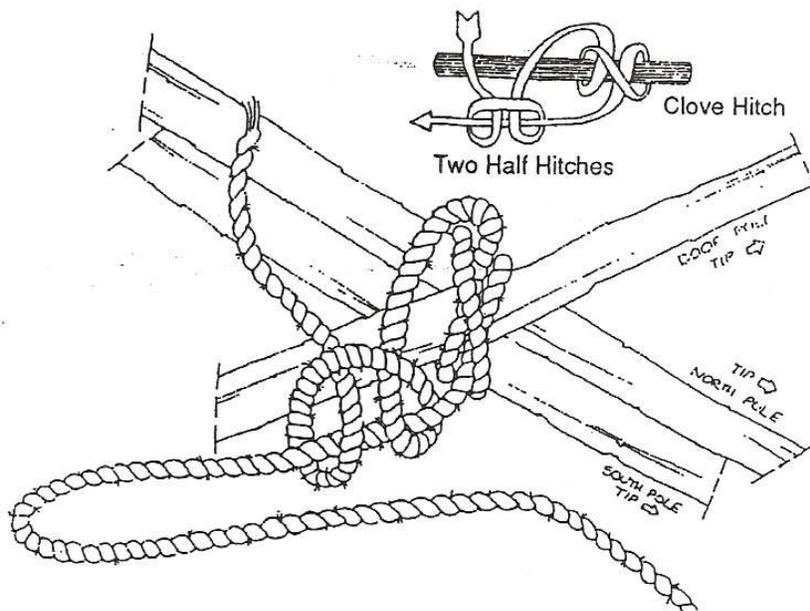


**Illustration #1  
(Overhead view)**



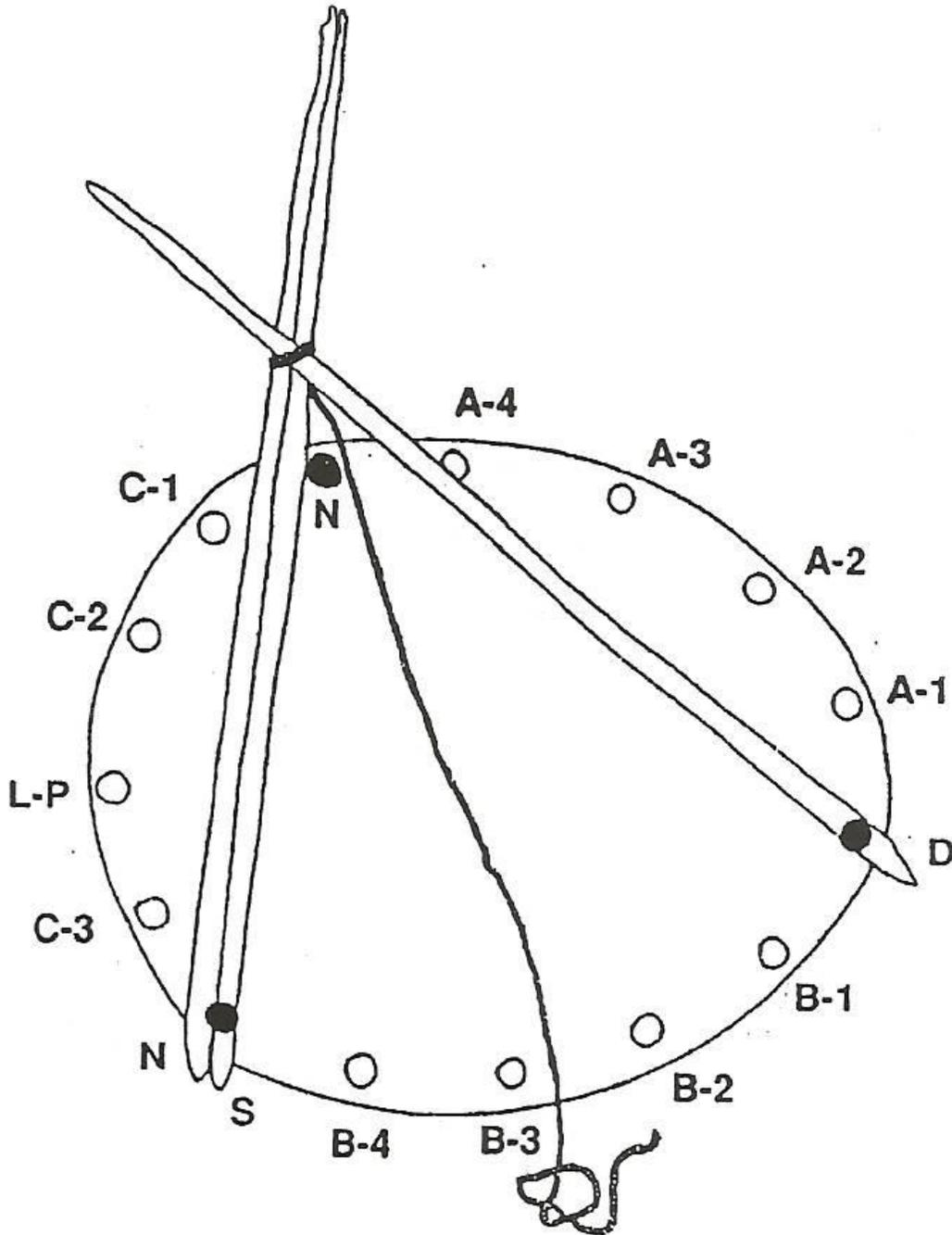
**Illustration #2A**

- Using the tripod rope, tie a clove hitch around all three poles (Illustration #2A and #2B). Lock the clove hitch by tying two half hitches with the short end of the rope around the long end. Tighten the tow half hitches down against the clove hitch. Don't cut off the leftover tripod rope after tying the knot; you'll use it later.



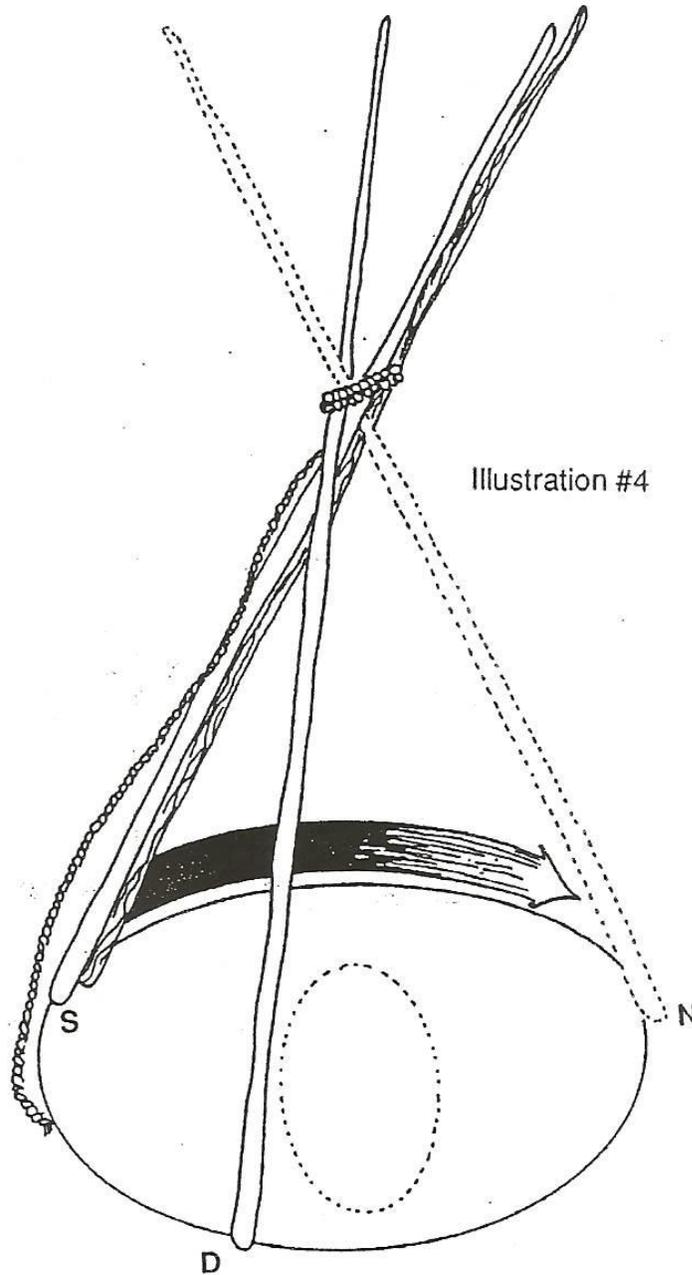
**Illustration #2B**

6. Position the tripod on your tipi spot according to the guidelines (Illustration #3 and Chart C). The butt ends of N and S should both be placed on the South Pole spot and the butt end of the Door Pole should be placed a few feet south of where you want your door opening.



**Illustration #3**

7. One person should place his feet against the butt ends of the N and S poles to keep them from "kicking out", while another person lifts the N and S Poles at the tips and walks up under them. For large tipis, have a third person foot the D pole and a fourth pull on the rope (be careful the knot doesn't slip). When the tripod is almost vertical, swing the N Pole out and place it in its proper spot (Illustration #4). This twists the knot to lock it.



8. Now, take a good look. The tripod should be the shape of a tipi. The D Pole should be less vertical than the N and S poles, tilting the tripod back. Measure the proper distances between the tripod poles (Chart C and Illustration #5).

**Chart C**

Tipi Size	DS	DN	NS
12'	10'	10'-9"	6'
14'	12'	12'-9"	8'
16'	14'	14'-9"	10'
18'	16'	16'-9"	12'
20'	18'	18'-9"	14'
22'	20'	20'-9"	16'
24'	22'	22'-9"	18'
26'	24'	24'-9"	20'
28'	26'	26'-9"	22'

Note: Although the tripod poles can be adjusted in and out or side to side after the cover is up, the height of the knot can't be changed. Be sure you have followed steps three through eight carefully.

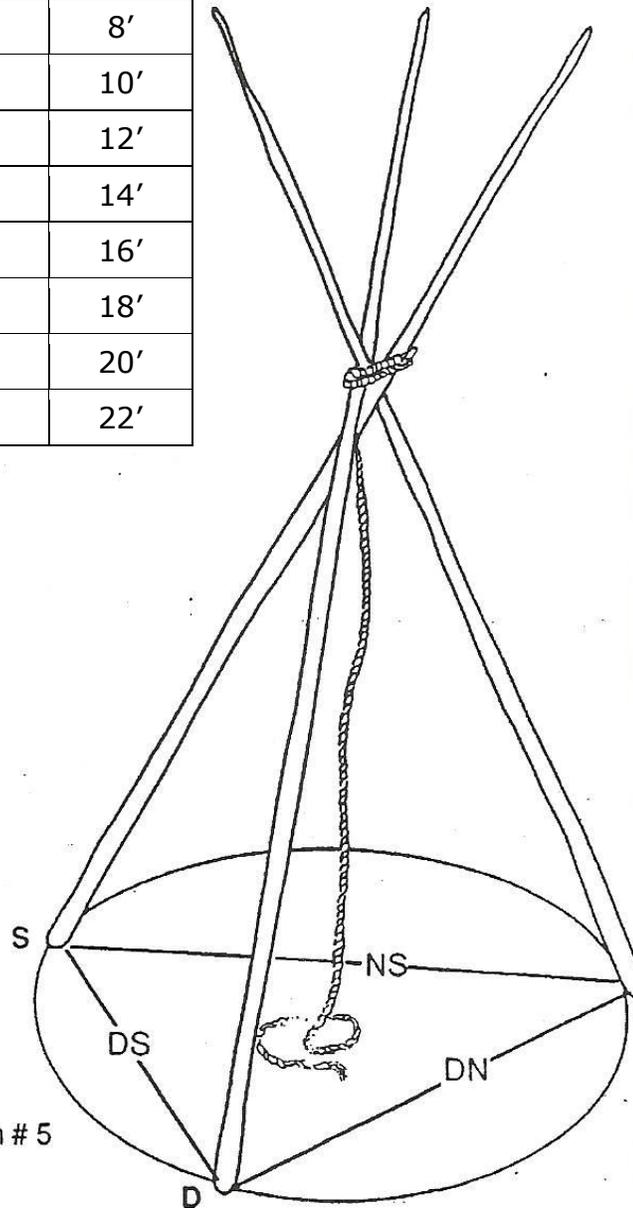


Illustration # 5

9. After the tripod is up you will have 12 interior poles left (including the ones set aside earlier) plus two Smoke Flap Poles. On a 12' tipi you will have nine interior poles left, plus two Smoke Flap Poles. Tipis 26' and larger will have fifteen interior poles and two Smoke Flap Poles left.

The number of interior poles is always divisible by three. For simplicity's sake, we refer to an 18' tipi with twelve interior poles left after the tripod is up.

The interior poles will be placed in the tripod framework in specific order, in three groups (Illustration #6).

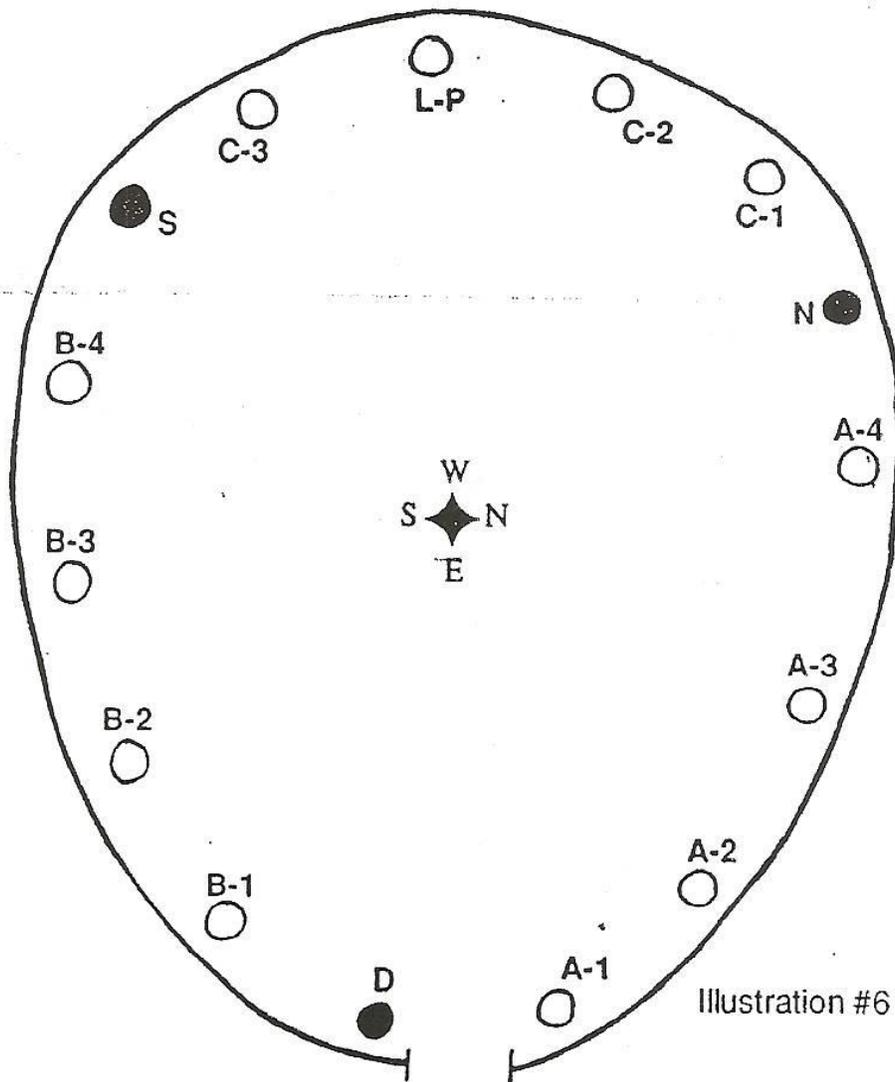
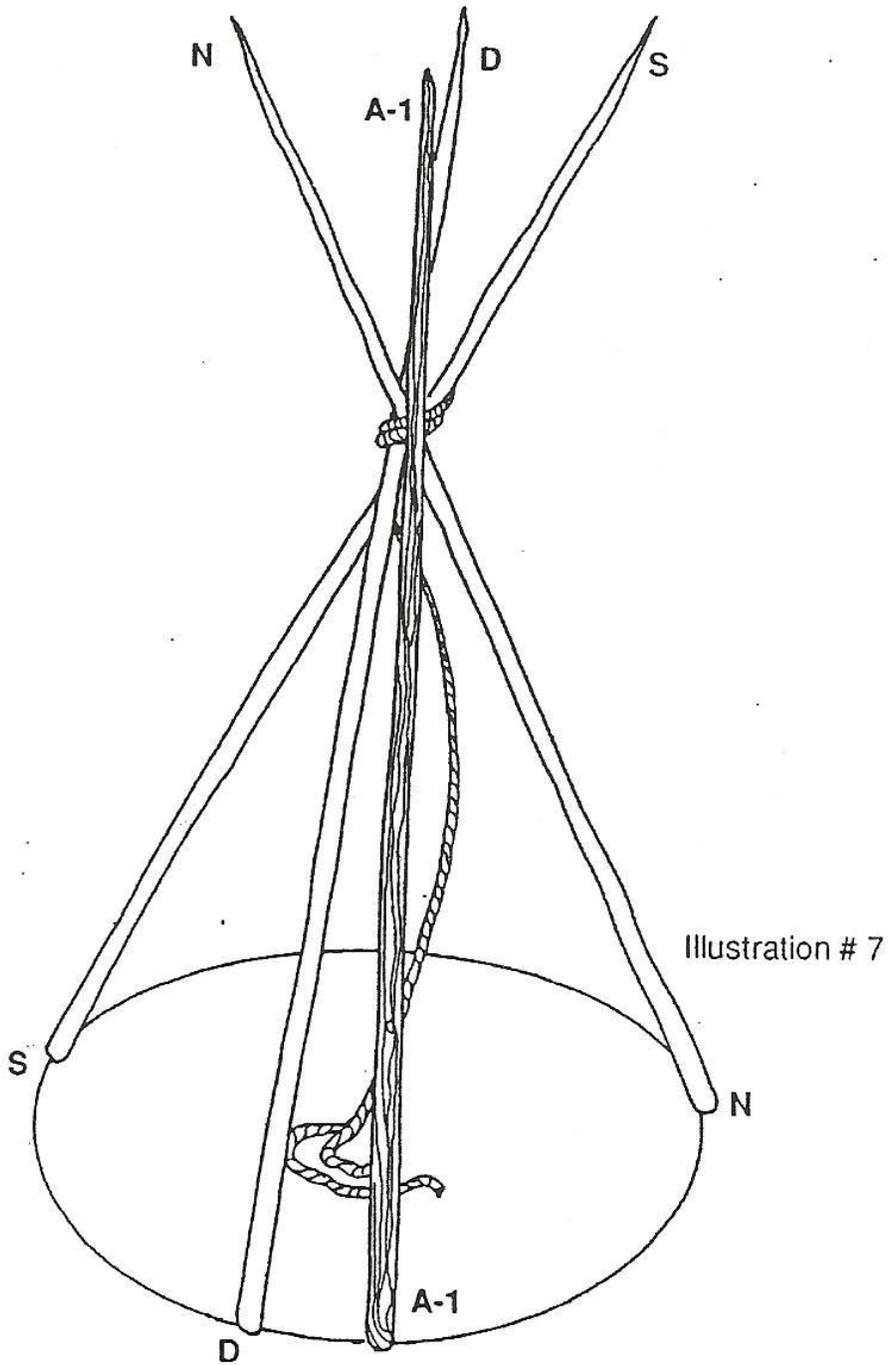
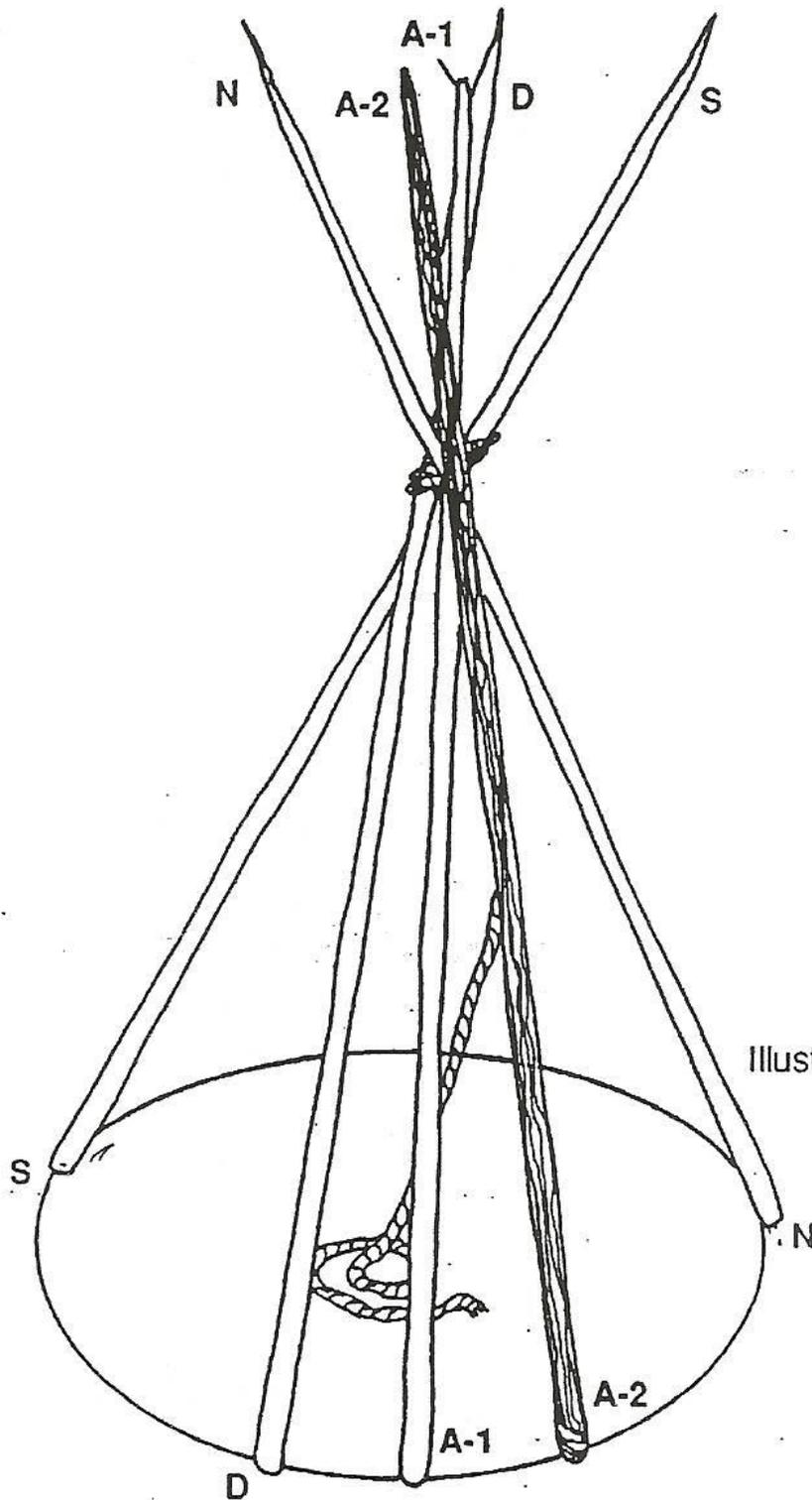


Illustration #6

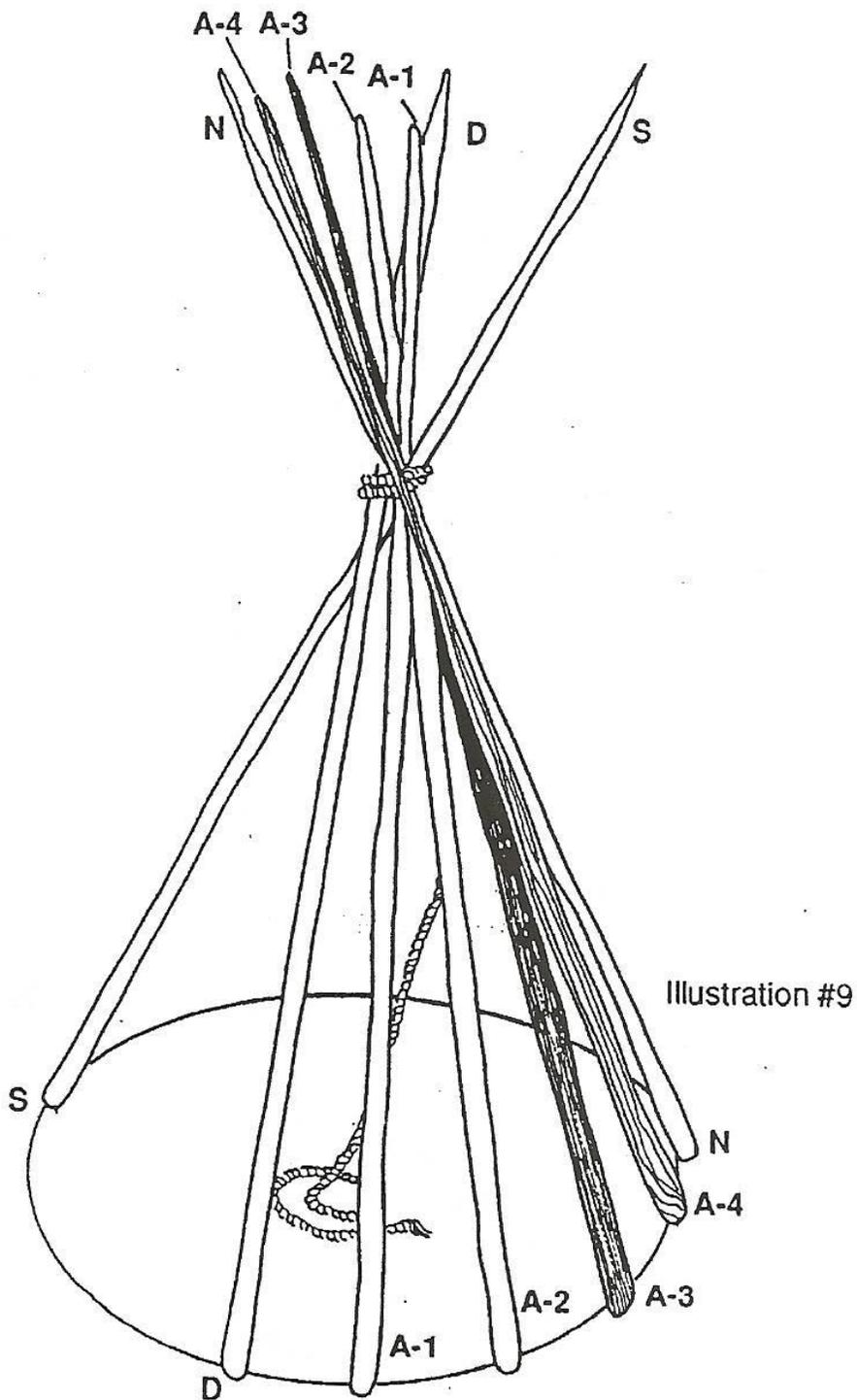
10. The four poles in group A are placed with the butt ends between tripod poles D and N. Place A-1 a few feet north of the D Pole and lean it into the crotch formed by N and S at the front of the tripod.



11. Now place the butt end of A-2 a few feet from A-1, and around the circle. Lean A-2 into the same crotch, NS, on top of A-1.

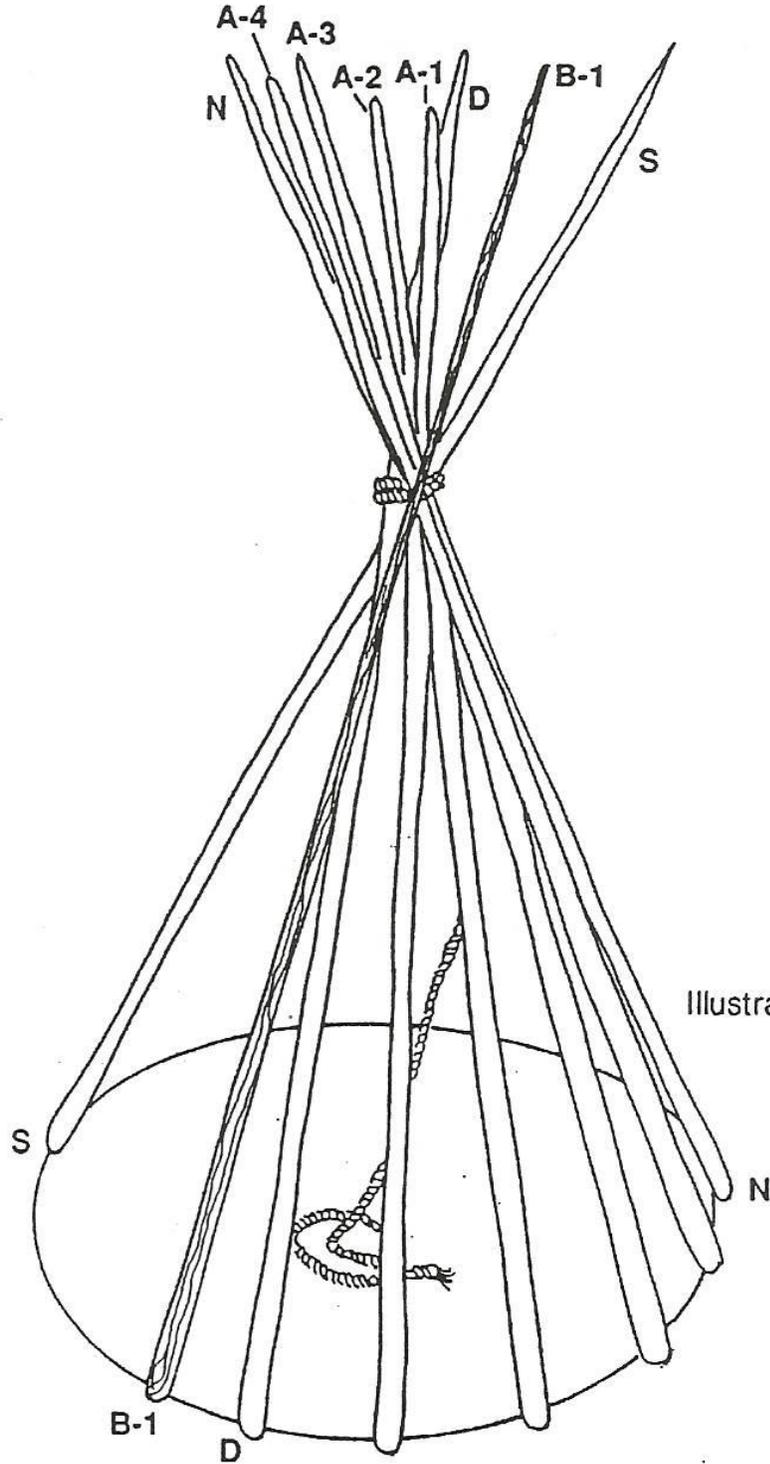


12. Poles A-3 and A-4 follow the same order, all in the same crotch, one on top of the other.



The poles in group A should be spaced more or less evenly between D and N.

13. The butt ends of the four poles in group B go between D and S. Begin by placing the butt end of B-1 a few feet south of D, and lean it into the crotch formed by A-4 and S. Lean it on top of A-4.



14. Place the butt end of B-2 a few feet around the circle from B-1 and lean it in on top of B-1.

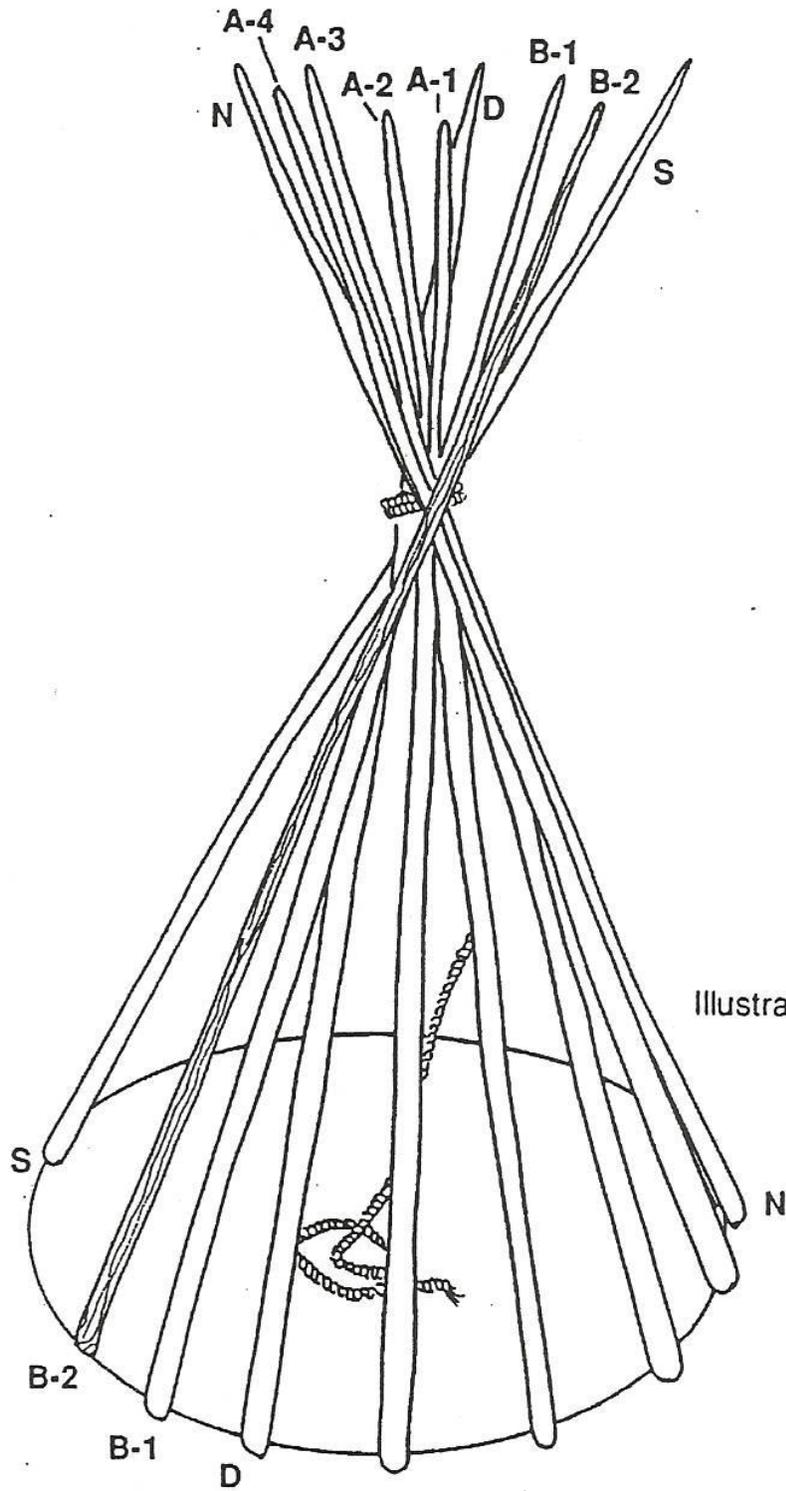
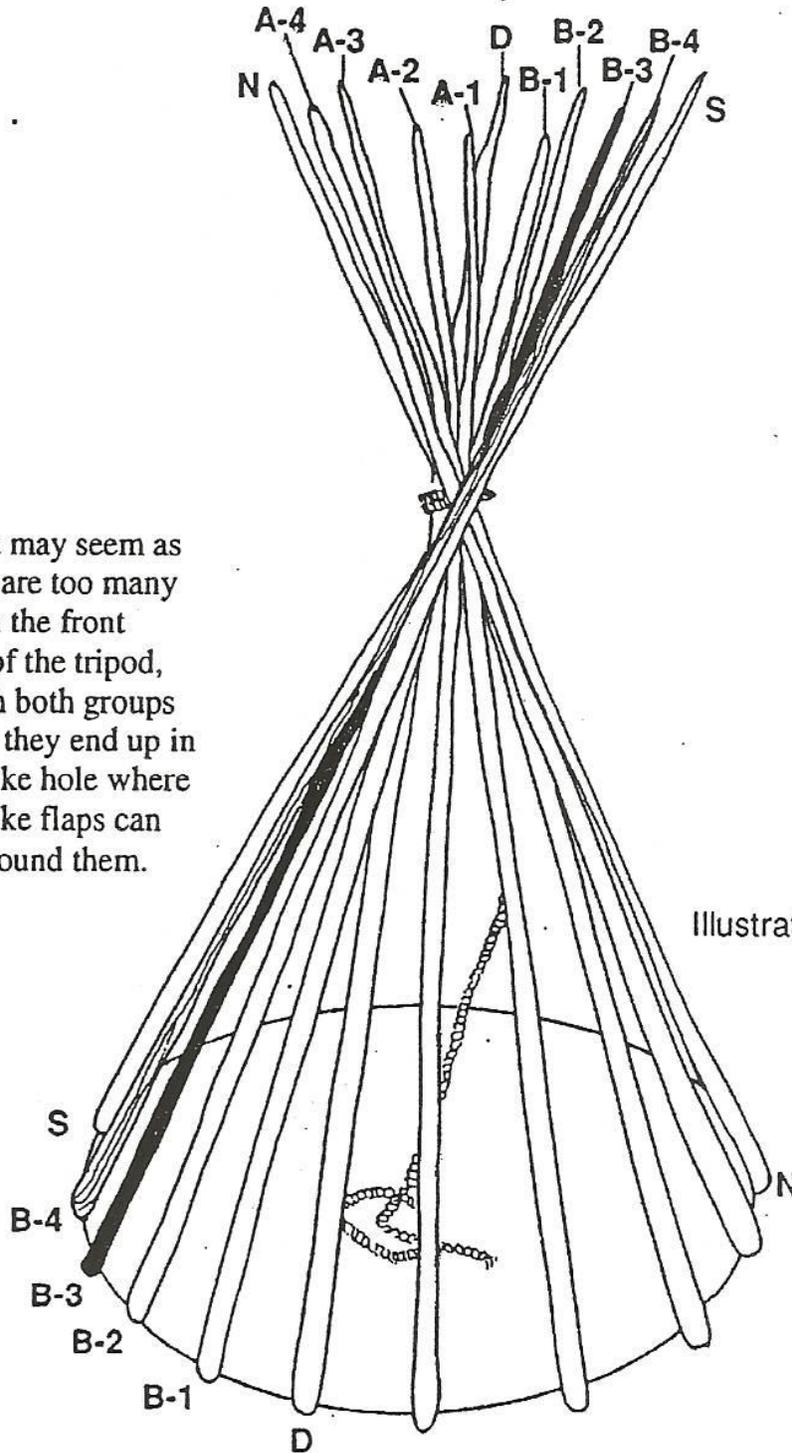


Illustration #11

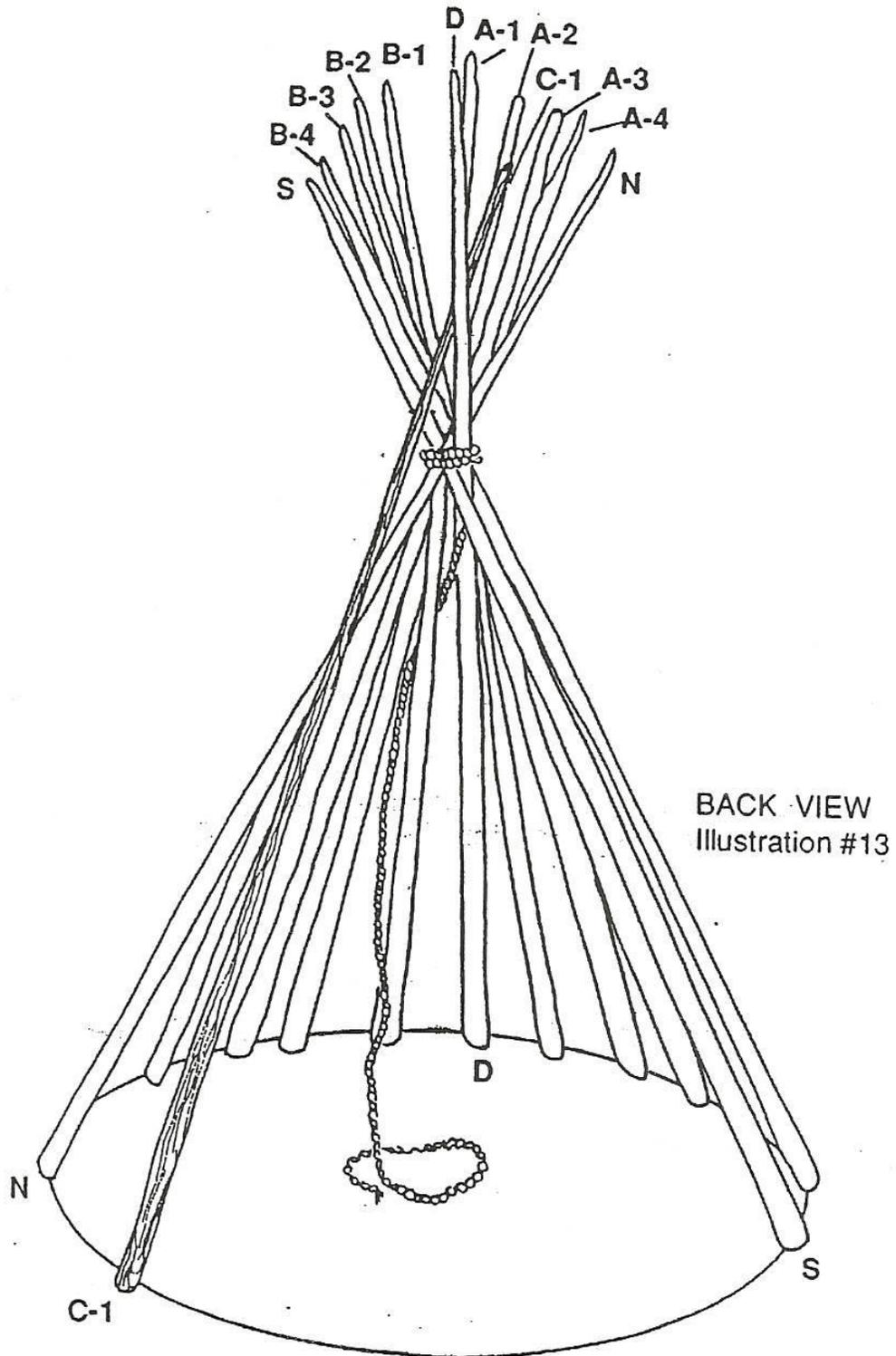
15. B-3 and B-4 go one on top of the other in the same crotch. You may want to hold these two in place until you begin to tie the poles off in step 19.



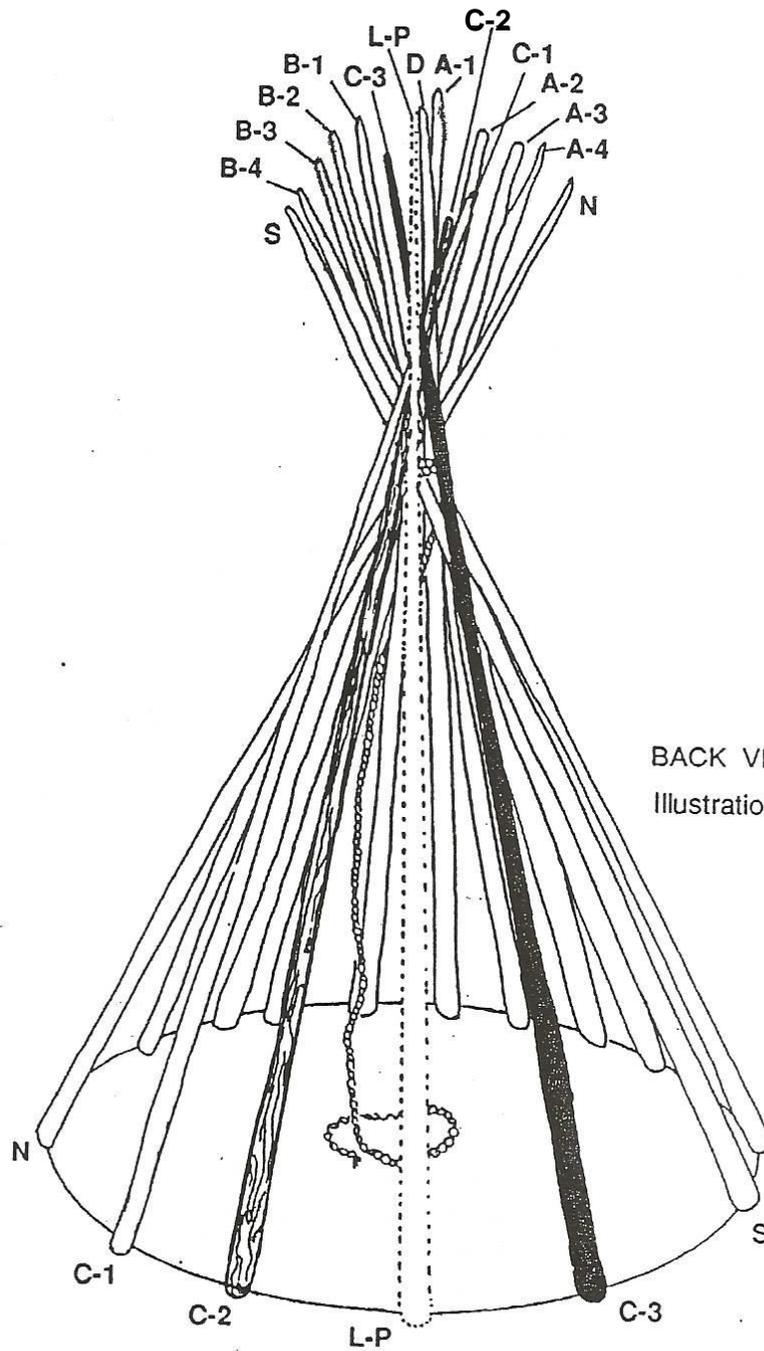
Note: It may seem as if there are too many poles in the front crotch of the tripod, but with both groups in front they end up in the smoke hole where the smoke flaps can wrap around them.

Illustration #12

16. The poles in group C, including the Lifting Pole, go at the back of the tipi between N and S. Start by placing the butt end of C-1 a few feet south of the N Pole, and lean it into the back crotch of the tipi formed by the poles in groups A and B.



17. Next place the butt end of C-2 a few feet around the circle from C-1 and lean it in on tip of C-1.
18. Now skip a space between C-2 and C-3 so that the Lifting Pole can go between them. Place the butt end of C-3 a few feet north of the S Pole and lean it on top of C-2.



BACK VIEW  
Illustration #14

19. Now that all your interior poles - except the Lifting Pole - are in place, you'll wrap the dangling tripod rope around them. Walk the rope out between S and B-4 and proceed clockwise around the back of poles toward N and around the front toward D. When you are completely around the tipi one time, whip the rope into place around the cluster of all the poles. Wrap the rope around the cluster four times, whipping it into place as you go.

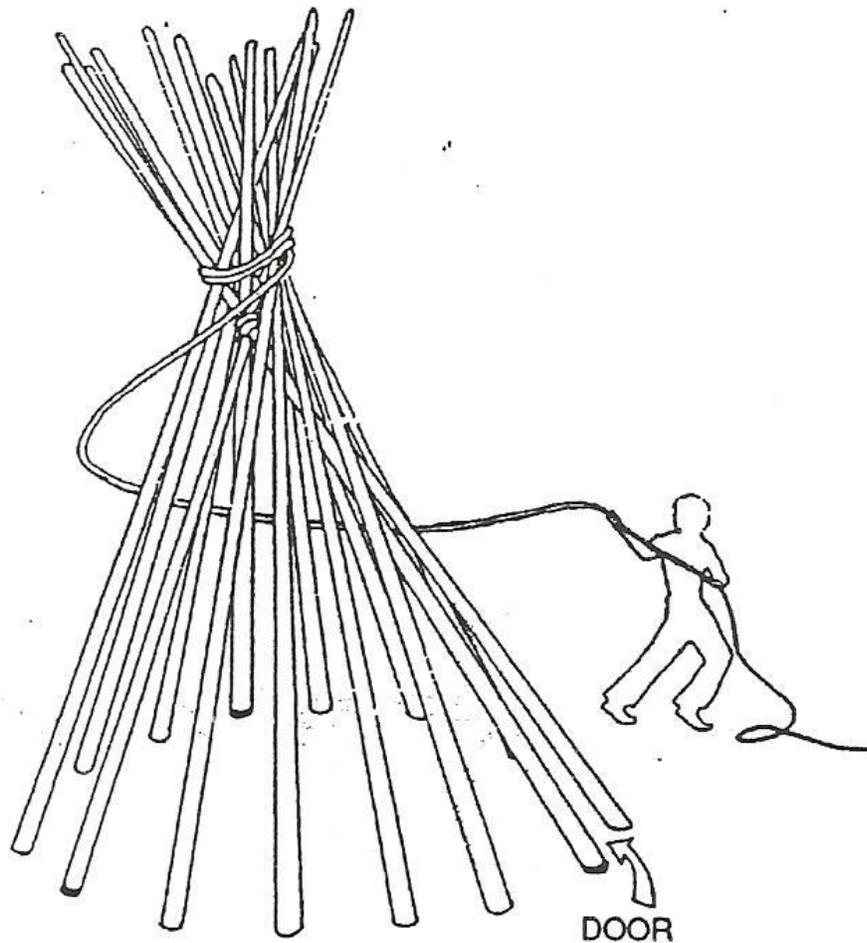
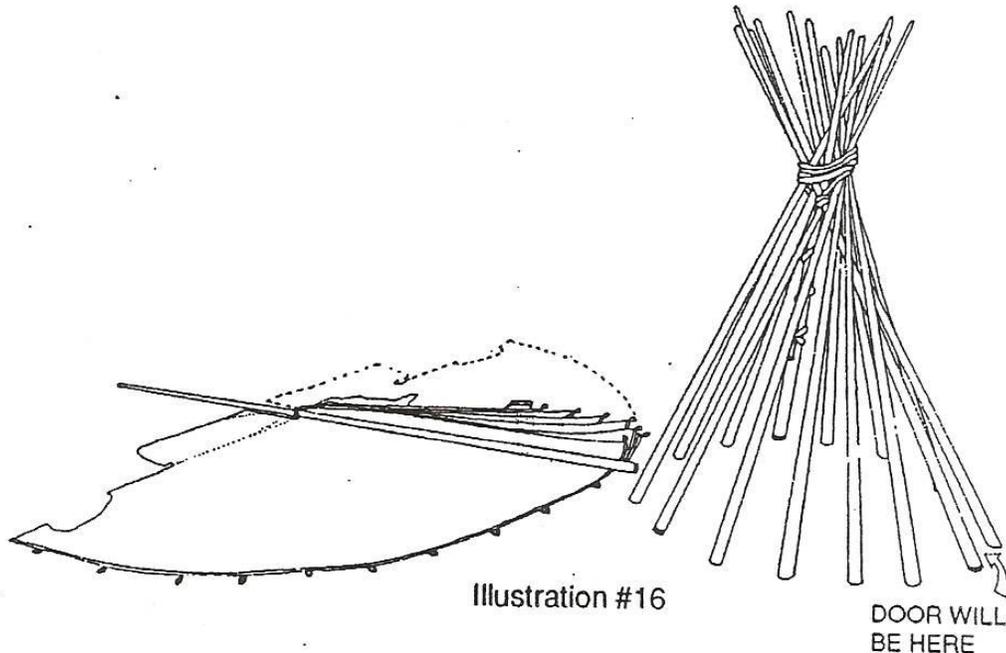


Illustration #15

You should have enough rope left to tie it off to the North Pole after the fourth wrap. During high winds this rope can be untied and staked to the center of the tipi floor to secure the tipi. If there is a strong wind now go ahead and stake it now.

20. When all the poles are in place and tied, spread the tipi cover out at the back of the poles.

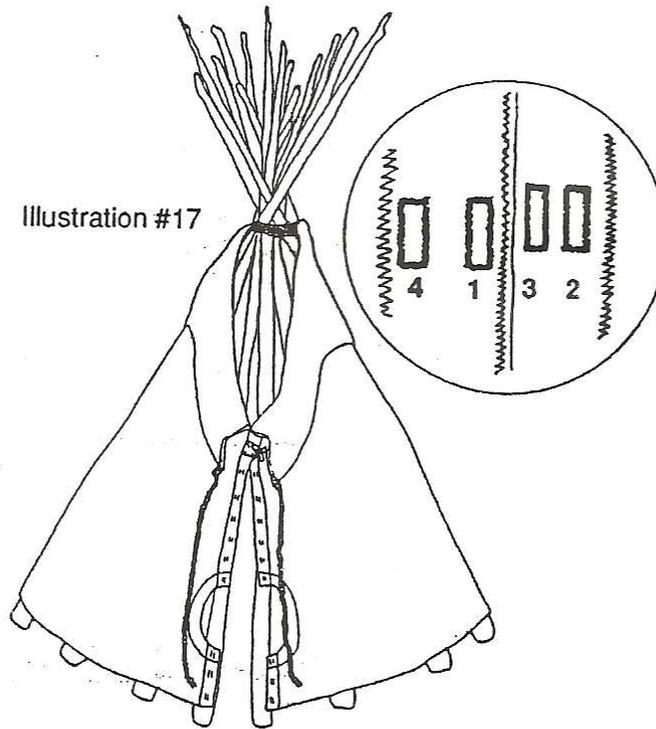
Note: Smoke flap pole pockets are on the outside of the cover; the 2" band of webbing at the bottom of the cover is on the inside.



The spread-out tipi cover forms a rough semi-circle. With the tipi cover inside up, lay the Lifting Pole on the cover so it bisects the cover. Allow the butt end of Lifting Pole to extend 8" (a few inches more for tipis larger than 18'; a few less for smaller tipis) beyond the hem. Using the cord provided, tie the tongue (at the top between the smoke flaps) to the Lifting Pole. If you are certain you are tying to the Lifting Pole at the right spot, you may want to cut a very small notch in the Lifting Pole to prevent the canvas from slipping.

21. Tie a smoke flap rope to the loops provided at the bottom of the smoke flaps.
22. Now "accordion" fold each side of the cover in toward the lifting pole. Keep the buttonholes, smoke flaps, and door opening outside the folds.
23. When the cover is folded in close to either side of the Lifting Pole, set the butt end of the Lifting Pole between C-2 and C-3. With one helper "footing" the butt, lift and walk up under the whole bundle, and lean it into the rear crotch. With the cover to the outside unfurl it, wrapping it around the poles as you would wrap a blanket around your shoulders. If the smoke flaps get caught in the poles, you can use a Smoke Flap Pole to free them.

24. When the cover is around the poles the front can be laced. Lay the left side over the right and tie the ties below the smoke flaps in a bow. Now put a lacing pin through the top set of buttonholes in the sequence shown (Illustration #17). (Buttonholes 2 and 3 will actually be underneath and not be visible). Continue lacing down the front of the tipi.



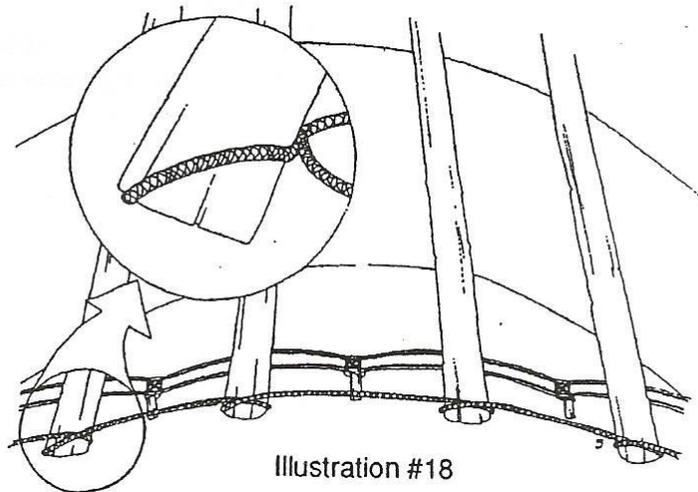
25. Until your tipi cover is staked it will hang some 5" to 10" from the ground. You can now move the non-tripod poles in or out to give the tipi its correct shape. Push or pull the poles through the cluster to move them inn or out. Don't pull the poles too tightly against the cover until it's staked.
26. Now stake your tipi. Slip the stake through the peg loop (tie oversized stakes to the loop). Pull the cover out as far as you can and drive the stake down tightening the cover as you go. Start by driving one or two stakes near each tripod pole, then work from front to back alternating from the north to the south side every few stakes. Don't be afraid to make your tipi cover drum tight.
27. Now put your Smoke Flap Poles into the pockets provided at the top of the smoke flaps. A good rule for the length of Smoke Flap Poles is 3' longer than the tipi size (e.g. 21' for an 18' tipi). Blunt the ends of the Smoke Flap Poles to prevent unnecessary pressure on the pole pockets.

Your tipi should now be pitched without wrinkles and stretched tight over the poles.

## HANGING THE LINER

Note: All liners are comprised of three sections marked "Back", "North Door", and "South Door". (Very large tipis may have four sections - two will be labeled "Back".)

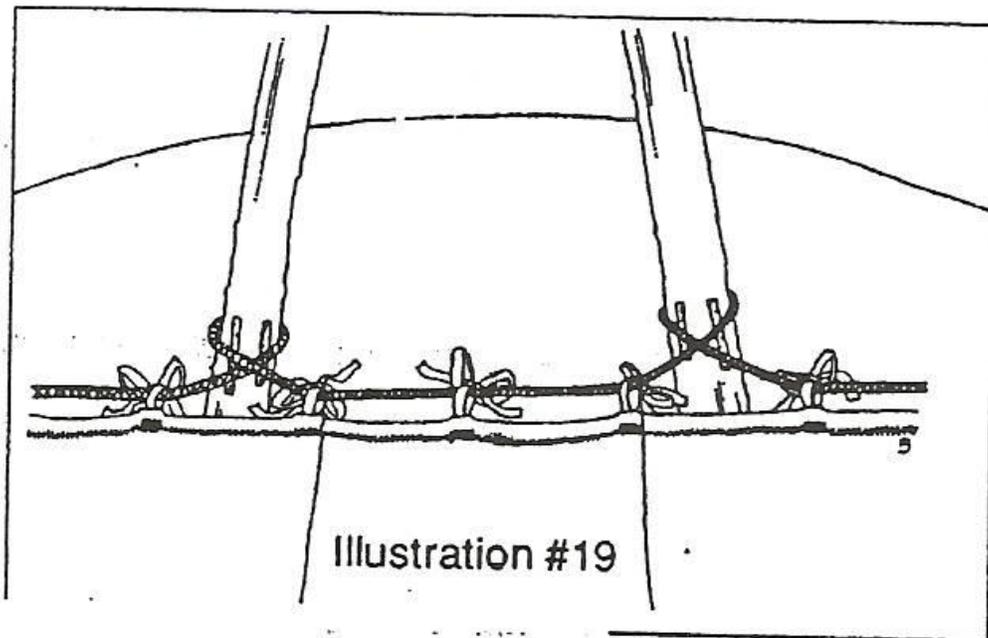
1. Starting at the Lifting Pole, run a rope around the bottom perimeter of the tipi, looping it around the back side of each pole, so it forms a continuous circle around the inside of the tipi. Catch the loop under the butt of each pole slightly so that the liner rope doesn't "ride up" when the liner is tied to it later. Make sure the rope is taut between poles.



2. Before you tie your upper liner rope to the poles, tie the bottom ties of each liner section to the bottom liner rope. The bottom ties on the liner are sewn 6" up from the bottom of the liner and face away from the tipi's living area. Start with the liner section labeled "South Door" and tie the bottom tie in the center of the first panel to the liner rope just to the left of the D Pole. Moving toward the S Pole tie each bottom tie of the South Section to the liner rope. Be sure to pull all the slack out of the liner between the ties.
3. Now begin tying the Back Section to the bottom liner rope. Overlap the South Section over the Back Section by about 8". Thread the ties on the South Section through the buttonhole on the Back Section, and then tie to the bottom liner rope. Moving, around the back of the tipi, tie each bottom tie of the Back Section to the bottom liner rope. Be sure to pull all the slack out of the liner between the ties.
4. Follow the same procedure for the "North" Section as for the Back Section. Overlap the Back Section by about 8" and tie each bottom tie moving from the back toward the door opening. The second to last tie (i.e., the middle tie on the panel marked "North Door") should end up near pole A-1.

Note: Each liner is made to fit the tipi cover when it is pitched about 2" off the ground. If your tipi is pitched higher off the ground or is improperly pitched, the liner may seem too small or too big.

5. Before tying the upper liner rope (or middle rope for a 9' liner) raise the liner at each pole, hold it taut and make a light pencil mark about 5" higher than the top of the liner. (The top of the liner will be noticeably lower near the door). Now start at the Lifting Pole and loop the rope around each pole at your pencil mark making a continuous circle around the inside of the tipi.
6. Now lift the liner and tie each tie to the rope. Draw the rope down to the ties so that the liner is taut vertically. (Repeat steps 5 and 6 for 9' liners). You may have to adjust the ties to the left or right, retying some, to minimize slack in the canvas.



Note: The tie farthest to the right on the South Section should be tied beyond the last two ties on the Back Section. Repeat for the North Section.

Note: Two small sticks placed vertically between the upper liner rope and each pole creates a channel where rain water can run down the poles and behind the liner.

7. You can now tie the ties near the door opening. Use the upper and lower liner rope like curtain rods so that you can draw the liner across the door opening. In foul weather you may want to cross tie the liner in front of the door.

## THE DOOR COVER

1. To hang the door cover cut two sticks or slats about 34" long and place them in the two lower pockets provided in the door cover. If you are careful to cut them just the right length they can be "pressure fit" in to the pockets.
2. Cut a third stick about 22" and slip it through the tube at the top of the door opening. Tie a length of cord to each end of the top stick and hang the door from a lacing pin above the door opening. Adjust the length of the cord so that the ties on the door cover line up with the hold-down loops sewn on the tipi cover.
3. To hold the door cover open, roll it up from the bottom and tie it with the ties provided at the top. Closure ties are also provided on the inside of the door for tying the door cover closed from the inside.

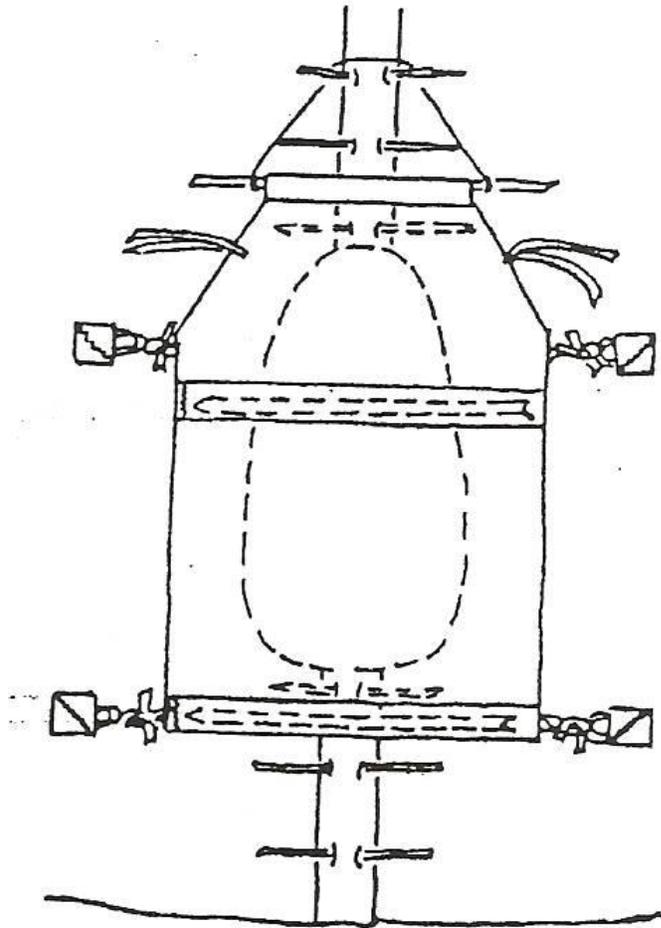


Illustration #20

## HANGING THE OZAN

1. Untie the top liner ties on the Back Liner Section. Tie a new rope 8" above the upper liner rope at the back so that you have two parallel ropes at the back of the tipi 8" apart. Tie the upper ozan ties to the higher rope and the lower ozan ties to the original upper liner rope.
2. Before you re-hang the Back Liner Section, tie guy ropes from the front edge of the roof of the ozan to poles at the front of the tipi. You can adjust the height and pitch of the ozan by tying it higher or lower on each pole.
3. Now tie another piece of rope through the belt loops provided at the bottom of the ozan and re-hang the Back Section of the liner.

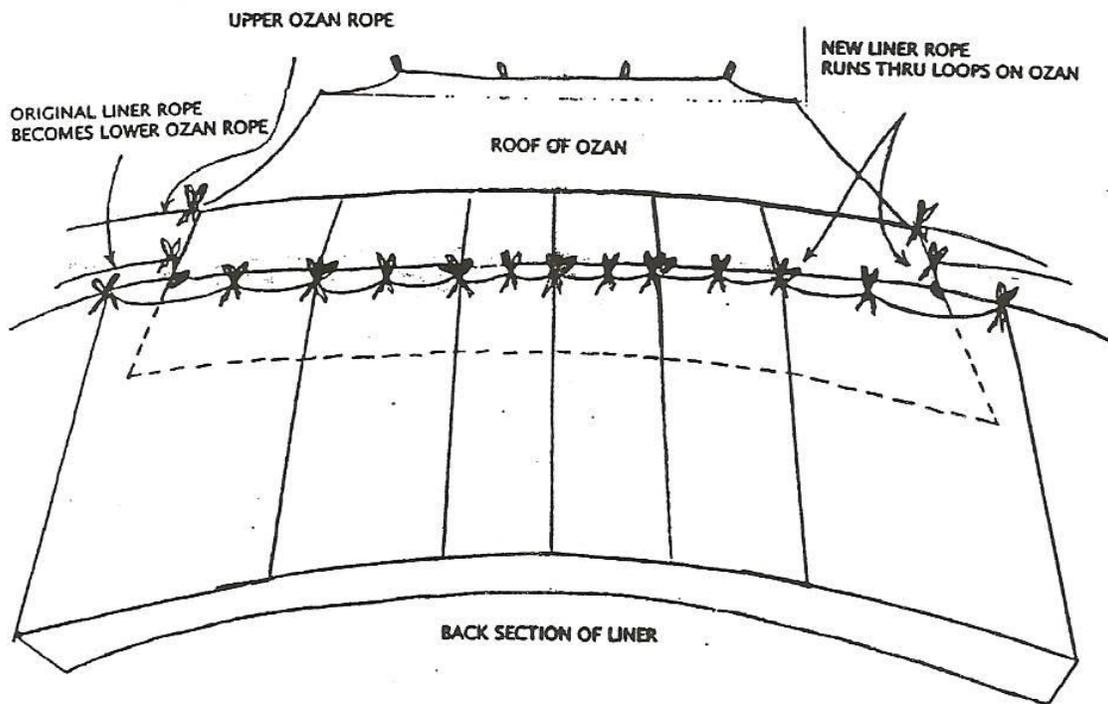


Illustration #21

## SUGGESTIONS FOR INSTALLING A WOOD BURNING STOVE

1. Place the stove on the "fire spot" of the tipi. Run stove pipe up vertically so it is above head height, then elbow the pipe and run it out the front of the tipi below the smoke flaps as illustrated. (Remove a couple of lacing pins to do this).

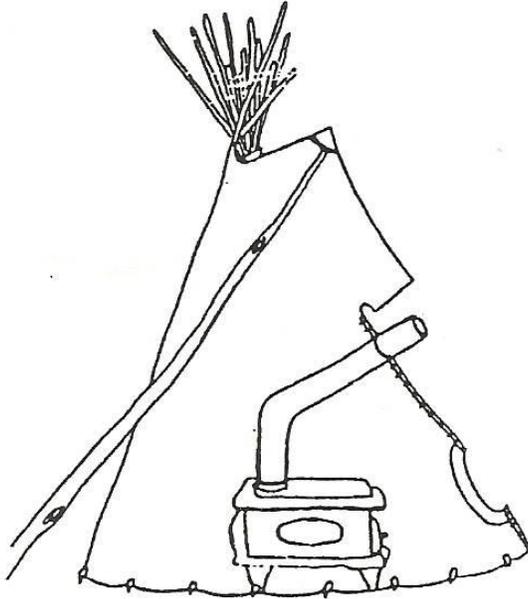


Illustration #22

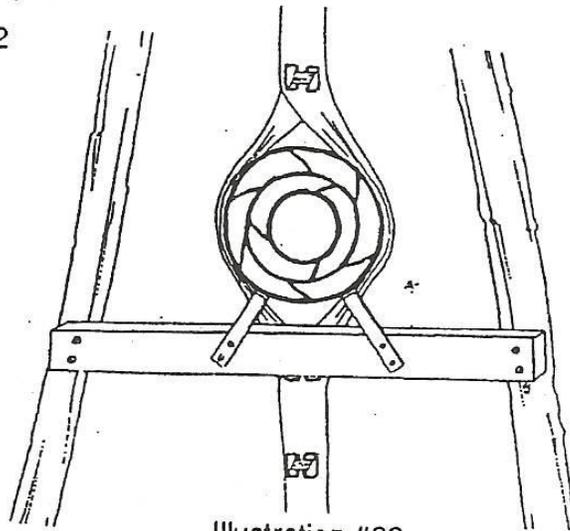
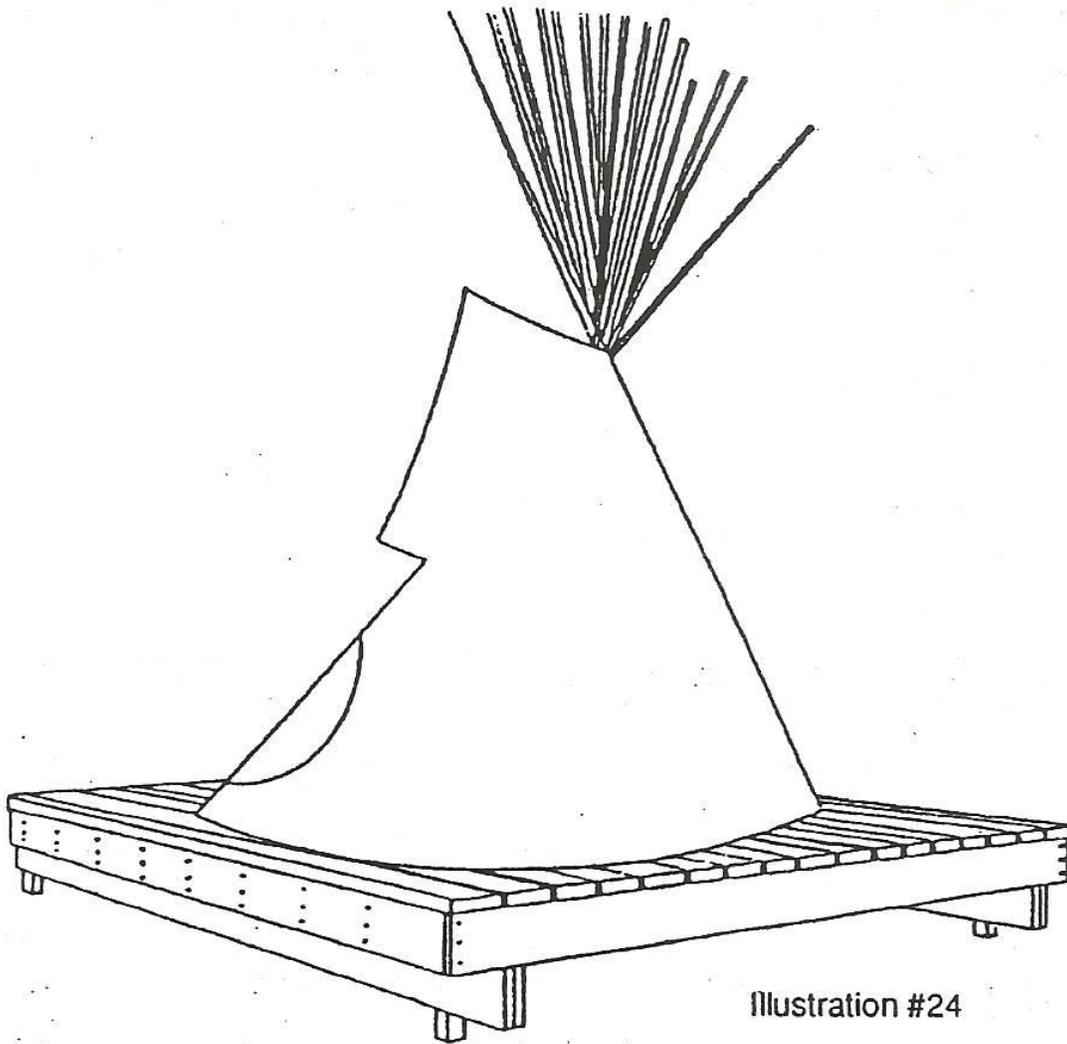


Illustration #23

2. Attach a horizontal stick between the D Pole and pole A-1 just below where your stove pipe will exit the tipi. Use at least one two foot section of the triple wall stove pipe to go through the tipi cover. Screw steel angle brackets to your horizontal stick; raise the stove pipe up a few inches and screw the brackets directly into the stove pipe. On the outside of the tipi, you may want to add another elbow and turn the stove pipe up for better draft.

## A DECK FOR A TIPI

- Use basic framing principles to determine lumber dimensions, span, etc.
- Post up from concrete pads, blocks, or flat rocks.
- Extra deck space around the tipi can be used for firewood storage, patio area, etc.



## **A FEW TIPS TO MAXIMIZE THE LIFE OF YOUR TIPI**

- Always fold and store your tipi dry, not wet or damp.
- Mice and other rodents like to eat cotton canvas. We suggest you store your tipi in a plastic or metal garbage can to prevent damage by rodents.
- Never put anything mildew prone against the tipi such as straw or sand.
- If mildew action starts, arrest it by scrubbing with a very mild bleach and water solution. Let it dry in the sun.
- If there is no mildew, but you wish to clean your tipi, it is best to brush it off with a medium soft bristle brush or use clean tap water with a soft brush. Solvents, detergents, and soaps should not be used. (Use bleach only when mildew is present).
- The leather on your tipi should be treated once a year with a bee's wax based leather treatment such as Sno-Seal™.

## **OTHER TIPS**

To prevent mildew, always store poles where air can circulate around them - never directly on the ground.

If you wish to decorate your tipi cover, liner, or door cover by painting them, we recommend a water-based textile paint called "Versatex", available through art supply stores. "The Indian Tipi" book has a good technique for painting your tipi.

Operation of your smoke flaps is also in "The Indian Tipi" book. We suggest you read this book cover to cover. It's very interesting and filled with helpful information.

## **ENJOY YOUR TIPI!**

