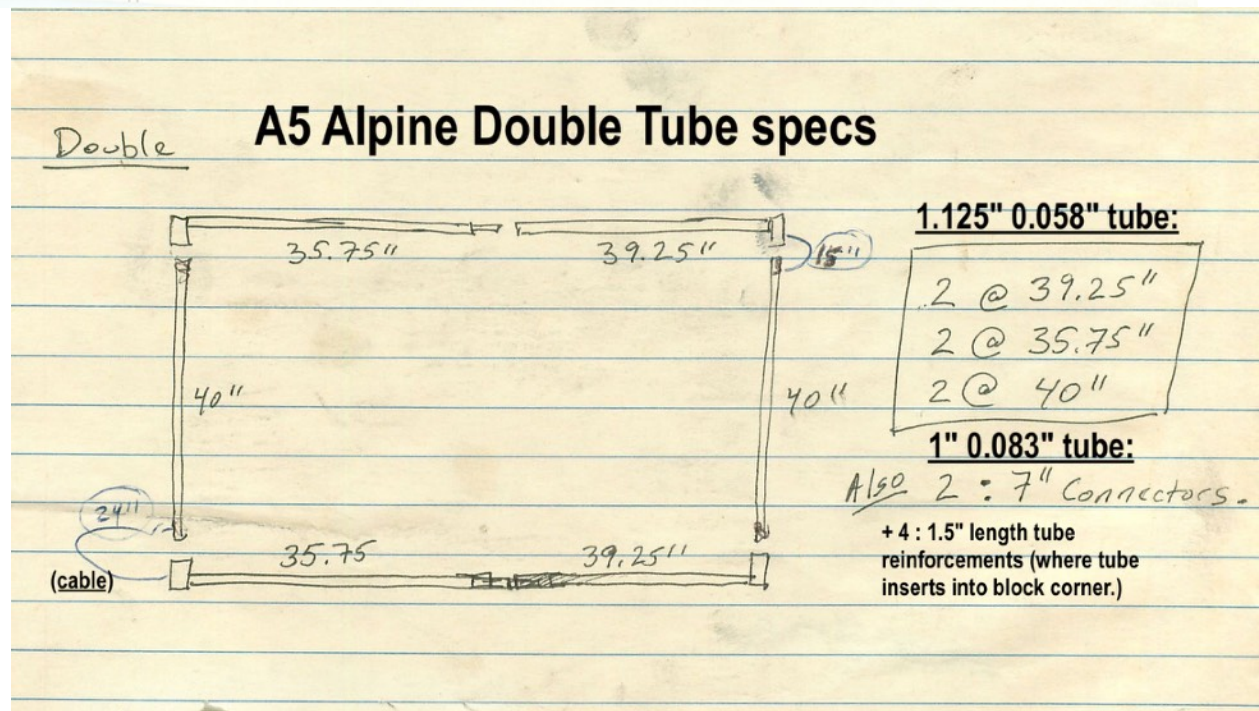
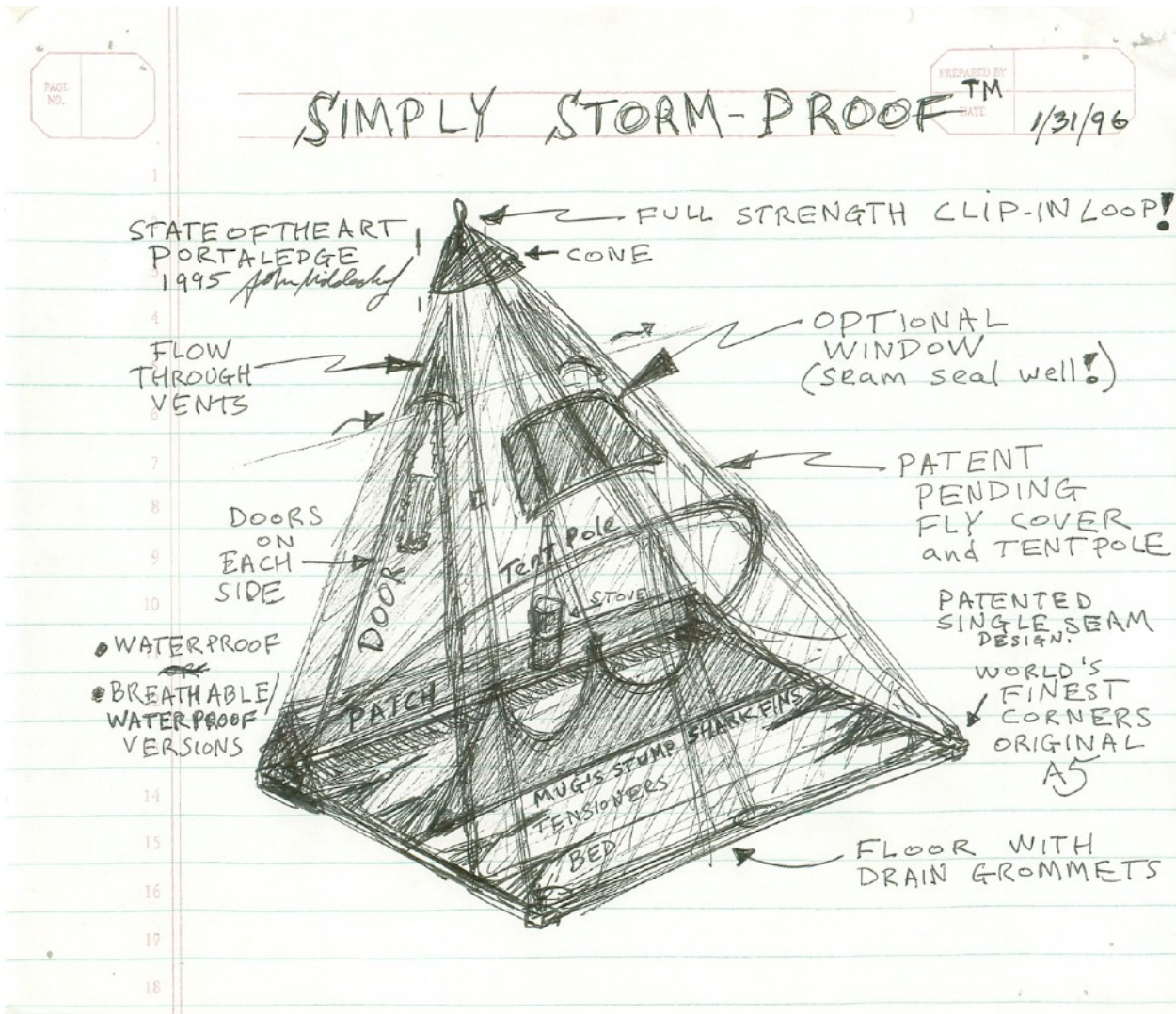


A5 Alpine Double Frame Specs



PORTALEDGE MANUFACTURE

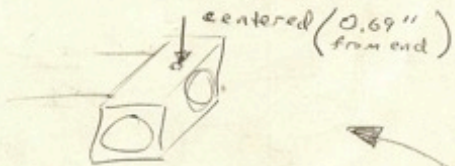
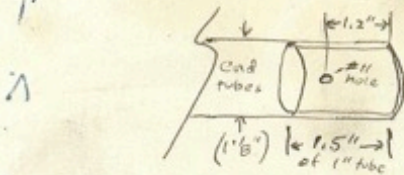
① Cut Tubing to Lengths - see cut sheets.

② Finish Tubing

Ⓐ sides get medium reams.

Ⓑ ends get lite reams.

③ Double Butt the end tubes (27" and 40") (both sides)



④ Mount Corners - side tubes (1/2 of each orientation!)

use mill

Ⓐ Singles (43.75", 40.25" lengths): drill #12 thru center.

Ⓑ Doubles (39.25", 35.75" lengths): drill 5/16" thru center.

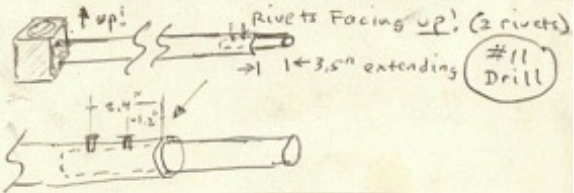
Ⓐ Countersink Singles TOP SIDE ONLY.

⑤ Secure corners with either: 5/16" eyebolts (doubles) or 10/32 screws (singles) (diagonal orientation). CHECK ORIENTATIONS

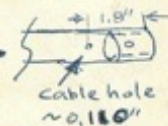
- hacksaw extra and give chopped ends a lite filing.
- use locknuts!

⑥ Attach 7" connector pieces

⊛ to 35.75" lengths - Doubles
to 40.25" lengths - Singles



⑦ Finish End Tubes - sanding, buffing, drill cable hole. (27" and 40") one hole per end tube!



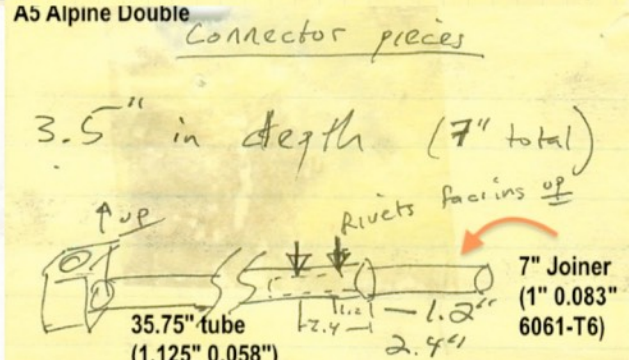
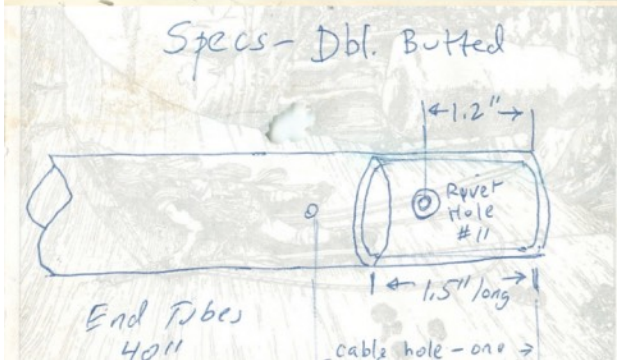
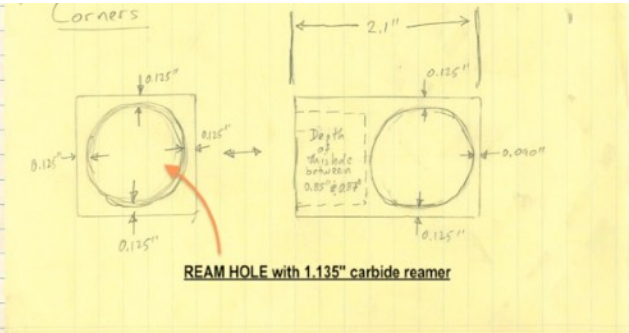
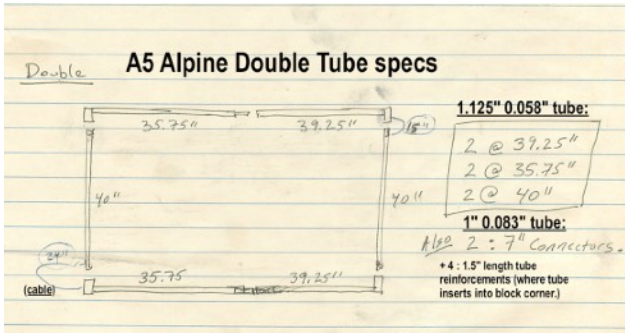
⑧ Finish Connector Pieces (7") : sand and buff. (on 35.75" and 40.25")

⑨ Drill Cable Hole in Corners for singles - 2 per ledge

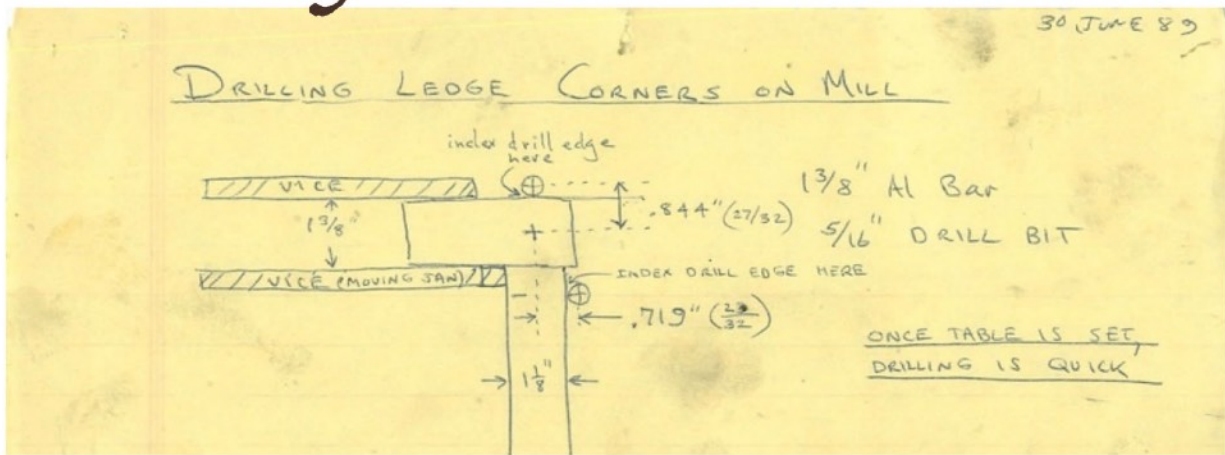
⑨½ Finish Female ends of side tubes w/ hand reamer. (optional) has no. 20

⑩ Attach Cables for swaging to end-tubes (one per end tube) **15"** and **25"** 3/32" cable

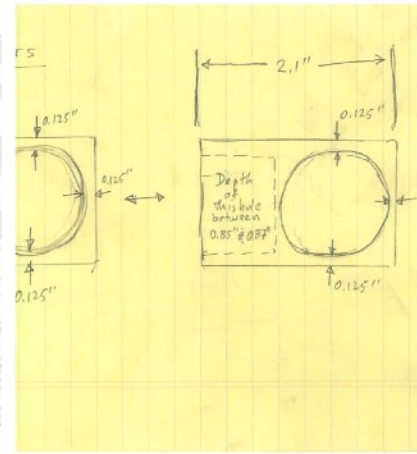
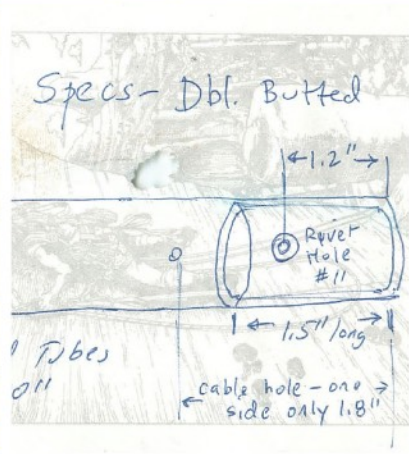
yer dun!



Goodbye Block corners!



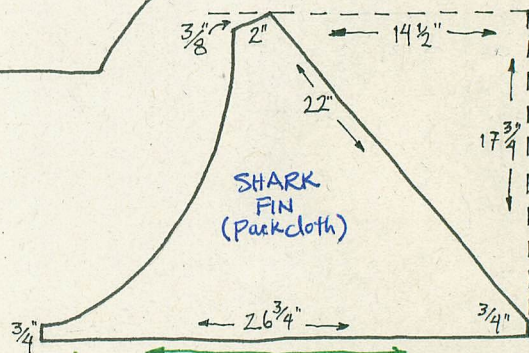
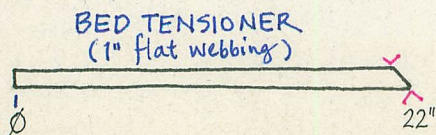
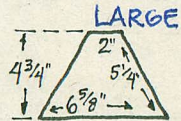
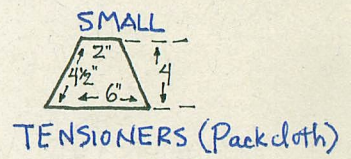
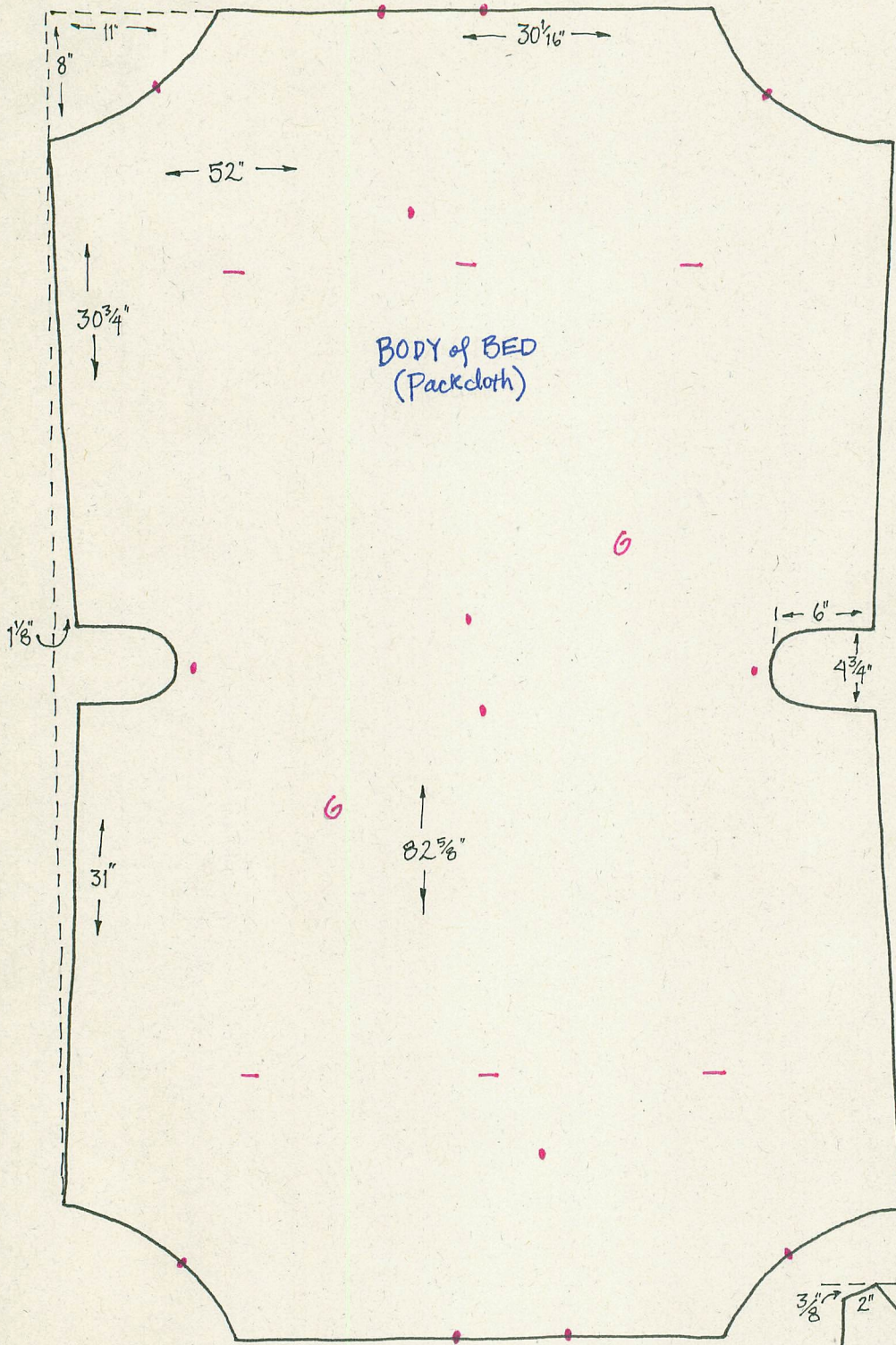
Making Corners
 Cut stock to 2.1"
 Sand off burrs.
 Stamp A5 - mark for the
 Mill Thru hole - 1/8"
 Mill 0.85" depth hole
 Ream 0.85" depth hole
 Sand off corners.
 Chamfer 0.85" depth hole
 Polish.



DOUBLE LEDGE BED

KEY:

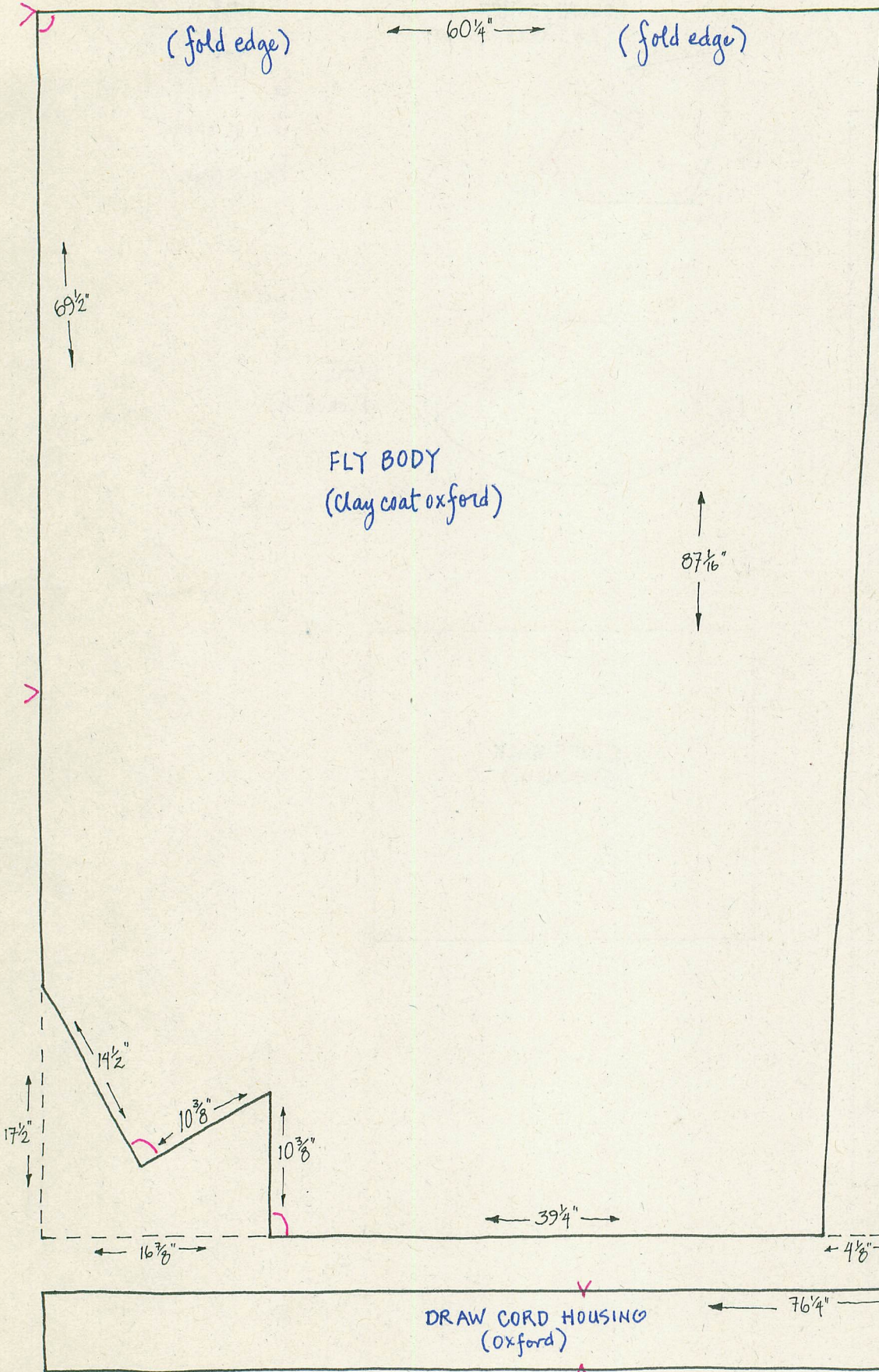
- mark
- ⊖ grommet
- $\frac{3}{32}$ scale



★ Align WITH warp or weft of fabric

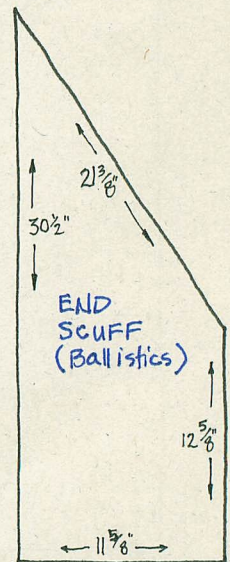
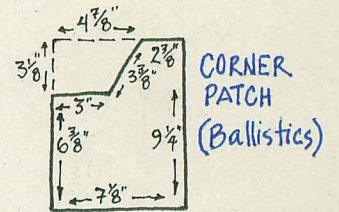
DOUBLE LEDGE RAINFLY

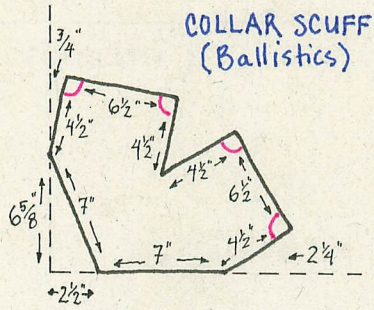
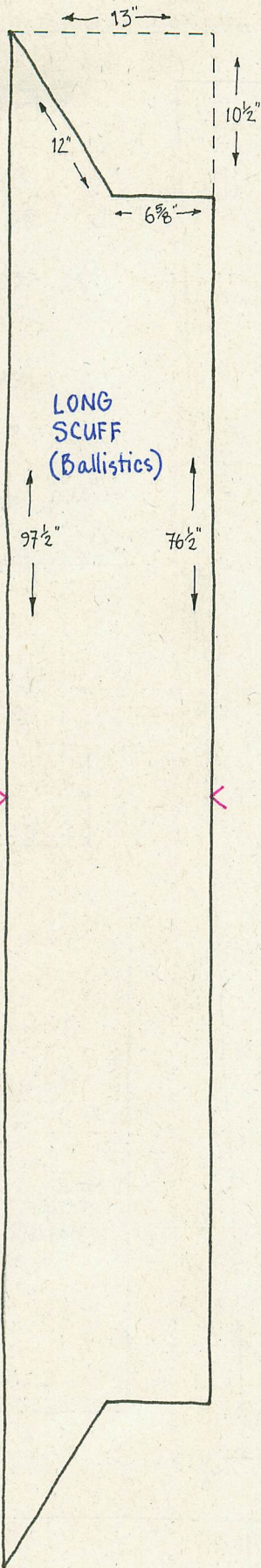
see reverse for additional parts



KEY:

- > - cut
- └ - 90° angle
- $\frac{3}{32}$ scale

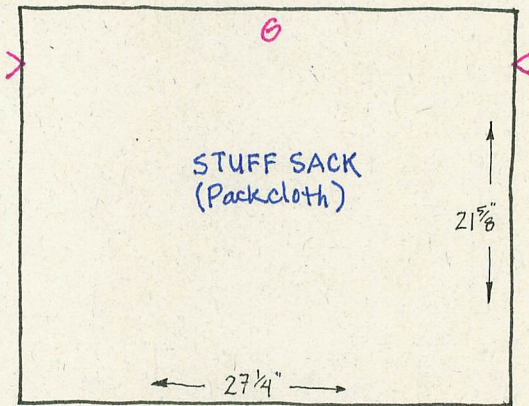
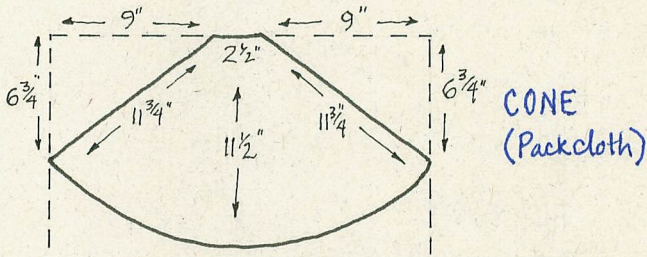




KEY:

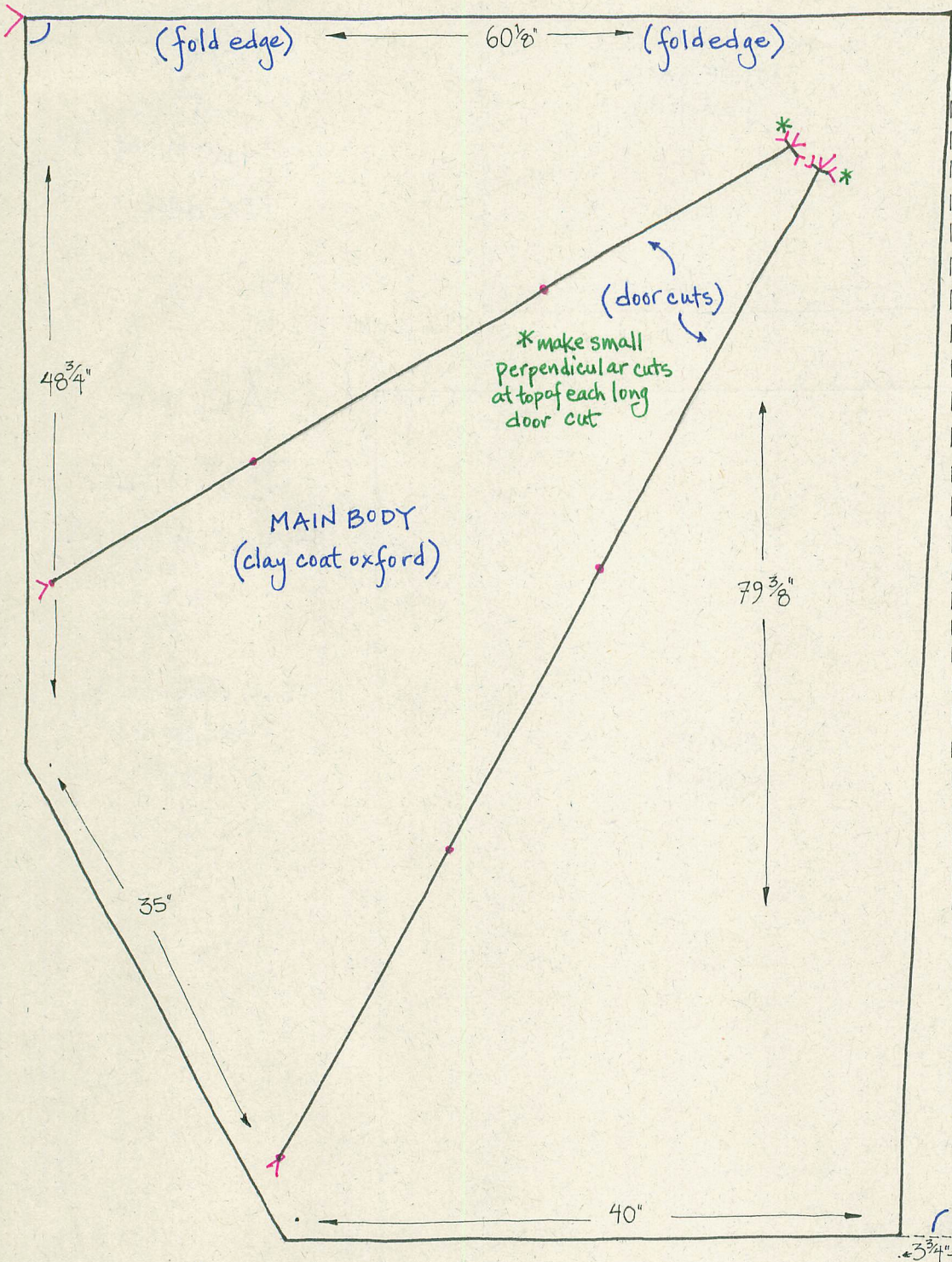
- > - cut
- ⊥ - 90° angle
- ⊙ - grommet

3/32-scale

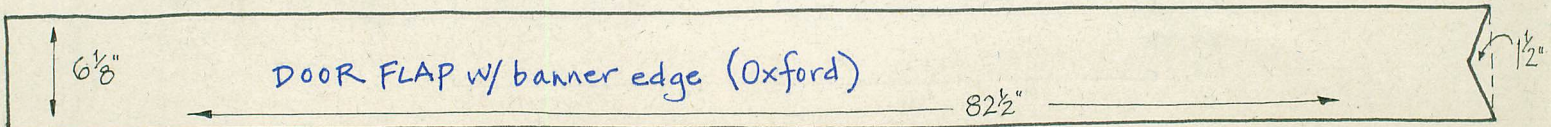
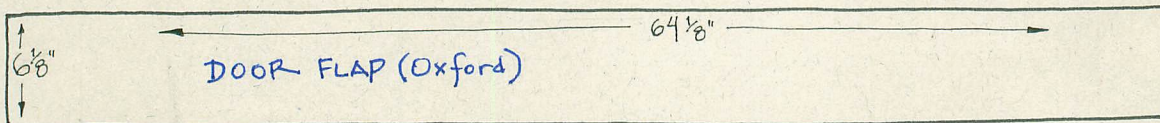
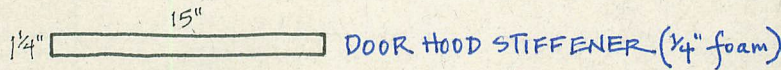
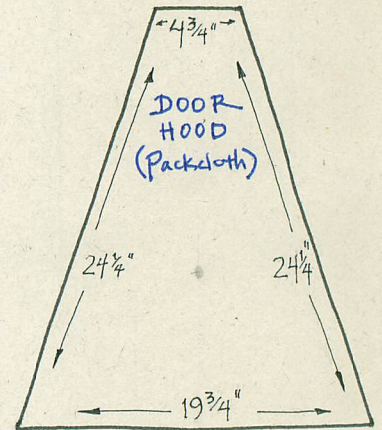
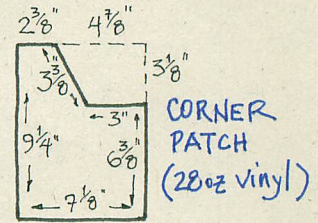
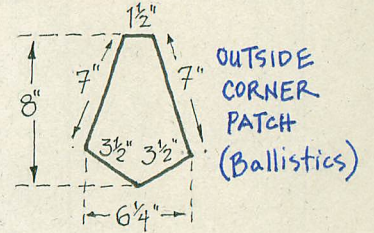


ALPINE DOUBLE EXPEDITION FLY

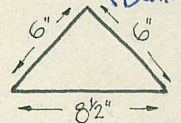
See reverse for additional parts

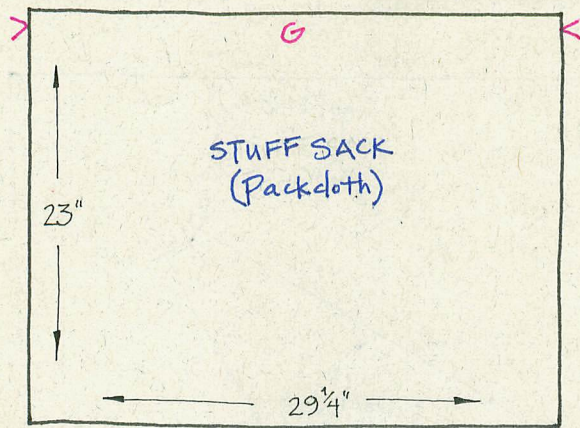
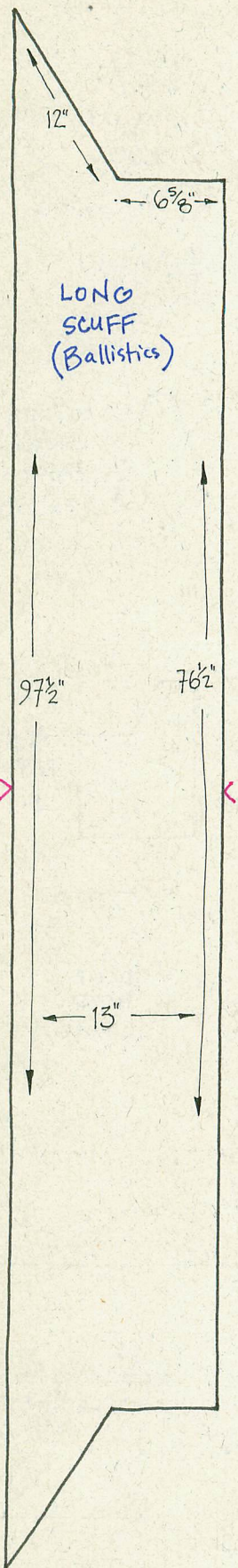


KEY:
 -• mark
 > cut
 L 90° angle
 3/32" scale

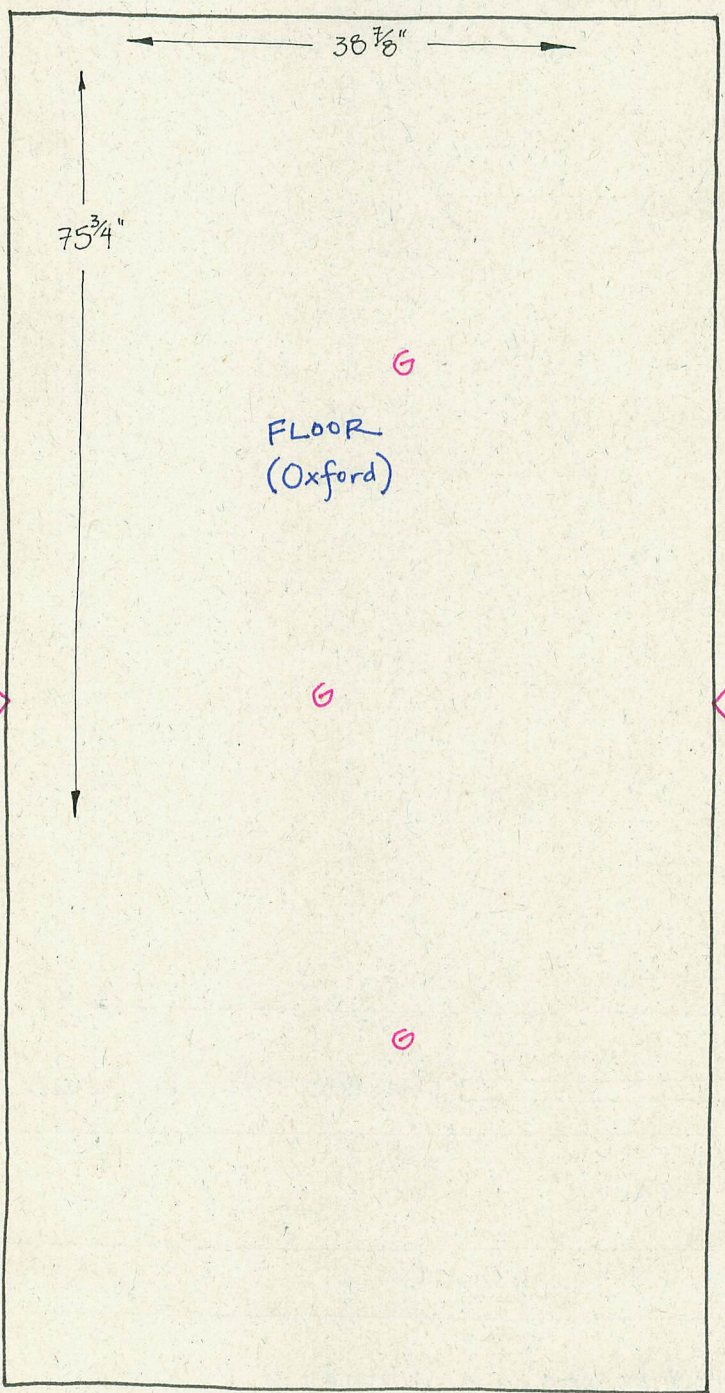


OUTSIDE CORNER SCUFF REINFORCEMENT (Ballistics)





KEY:
 > cut
 G grommet
 3/32" scale



ALPINE
 DOUBLE
 EXPEDITION
 FLY

see reverse for
 additional
 parts

ALPINE II DOUBLE LEDGE SUSPENSION

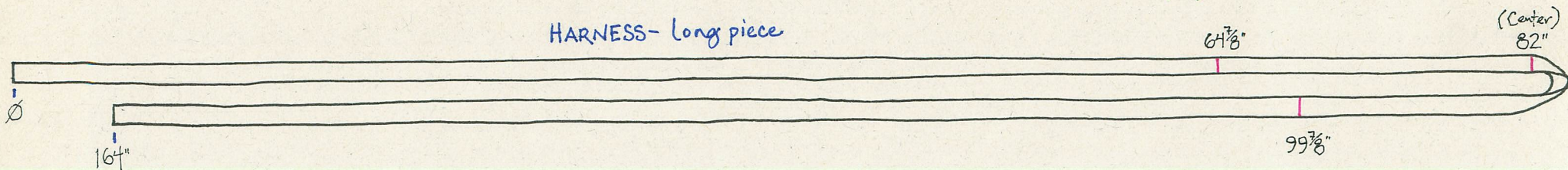
ALL 1" FLAT WEBBING

KEY:

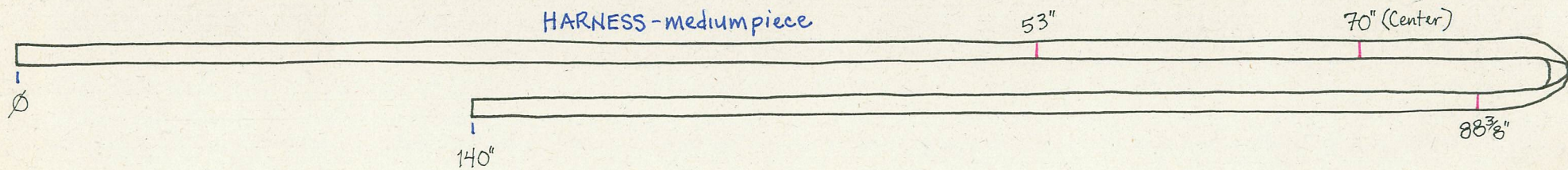
— mark★
> cut
1/8" scale

★ ALL MARKS ON SAME SIDE

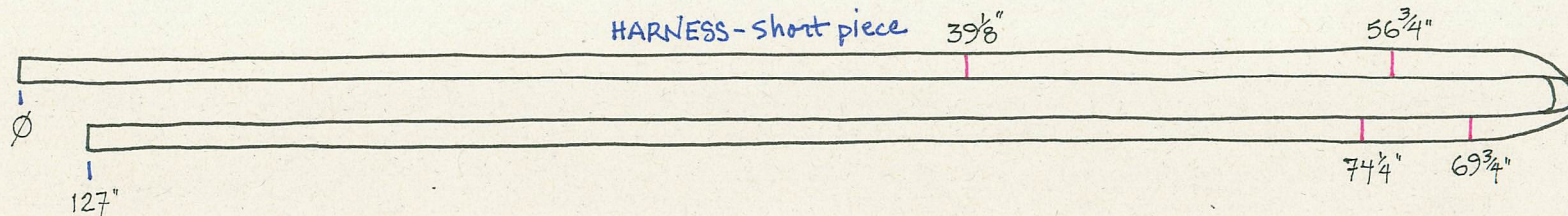
HARNESS - long piece



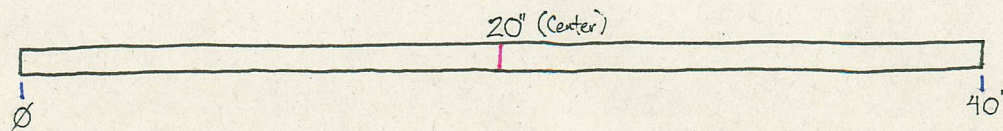
HARNESS - medium piece



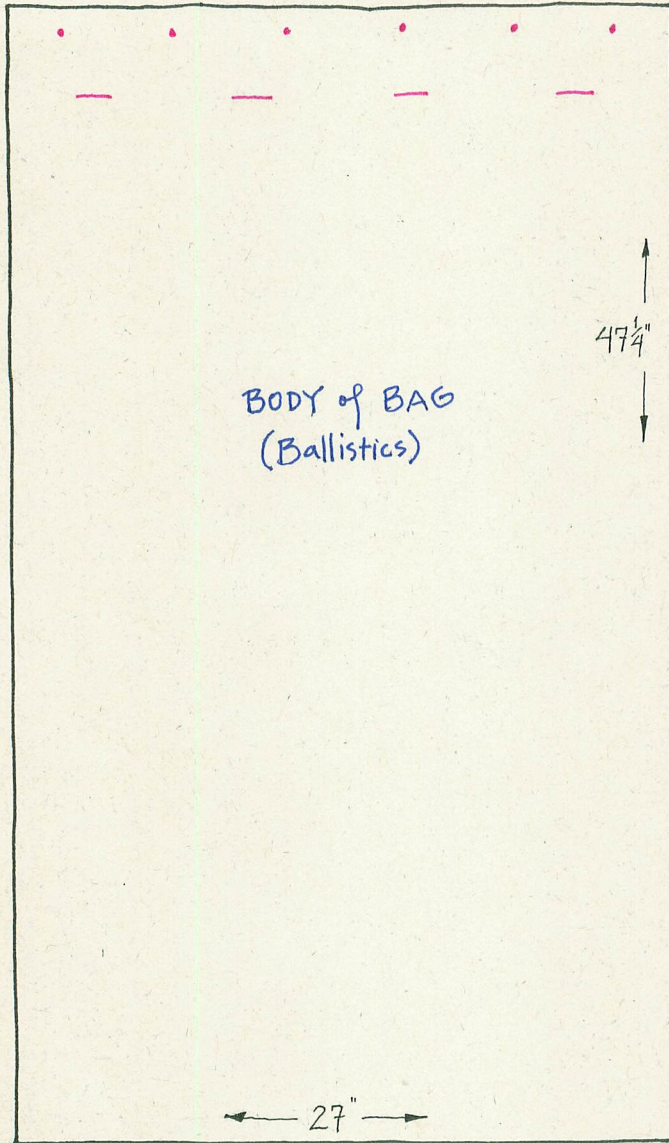
HARNESS - short piece



FINS SUPPORT



HAUL BAG - ALPINE DOUBLE LEDGE

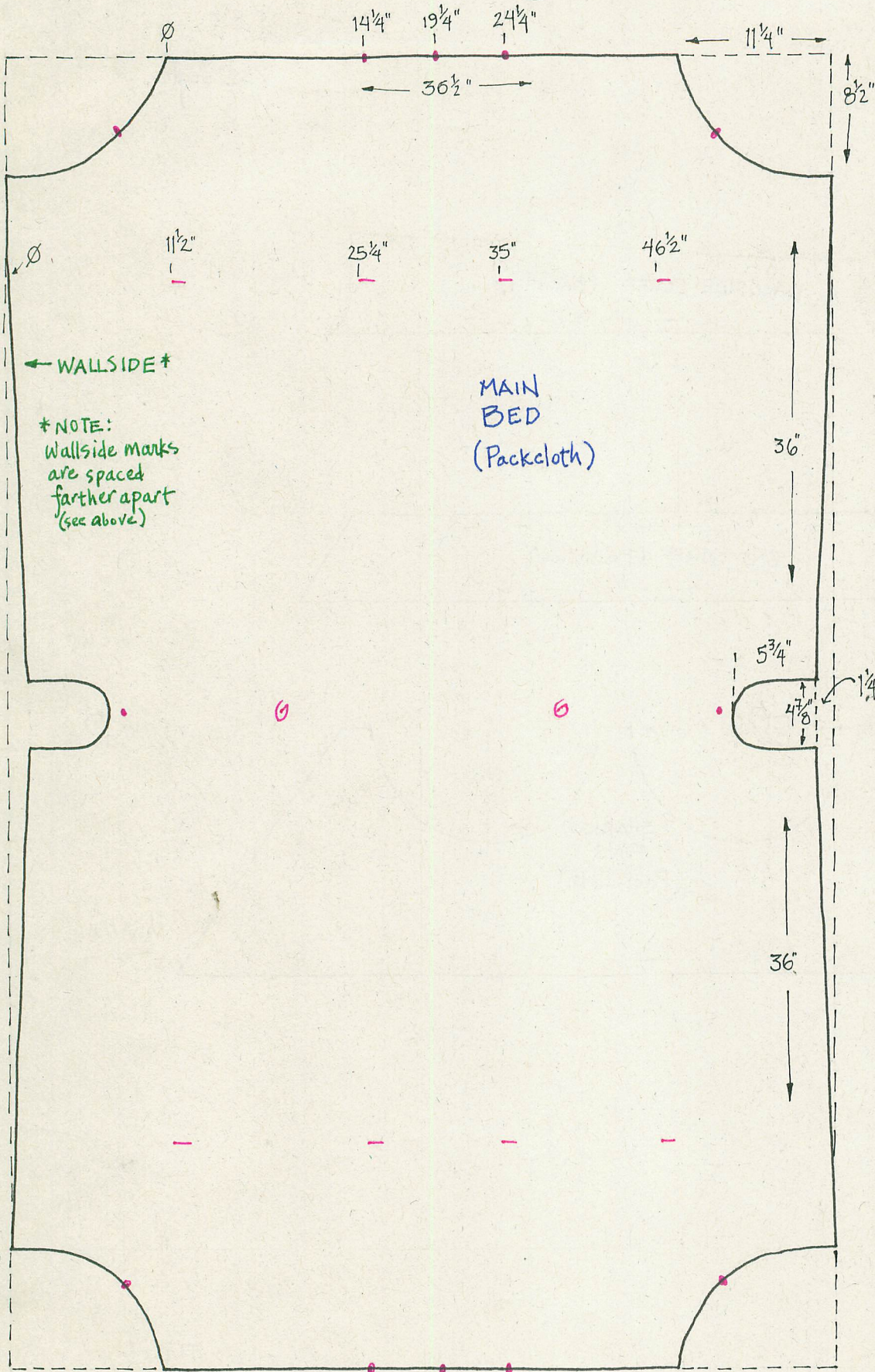


KEY:

—•— mark
 $\frac{1}{8}$ " scale

CLIFF CABANA™

See reverse for additional parts



KEY:

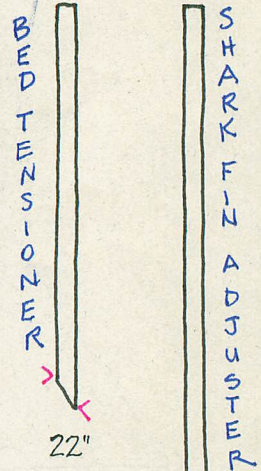
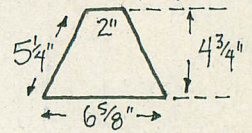
- • mark
- ⊙ grommet
- $\frac{3}{32}$ " scale

← WALLSIDE*

*NOTE:
Wallside marks
are spaced
farther apart
(see above)

MAIN
BED
(Packcloth)

(LG) TENSIONER (Packcloth)



1" FLAT
WEBBING

10 hrs / 10 frames . - Jason @ \$8.50

DOUBLE LEDGE FRAME COST ANALYSIS

(NOTE: % to cover shipping costs has been included)

CORNER-----	\$ 6.56
4 / \$5.96 + 10% = \$6.56	
5/16" EYE BOLT-----	\$ 1.61
4 / \$1.46 + 10% = \$1.61	
1/4" QUICK LINK-----	\$ 5.54
6 / \$5.04 + 10% = \$5.54	
5/16" LOCK NUT-----	\$.57
4 / \$.52 + 10% = \$.57	
3/8" AL FLAT WASHER-----	\$.53
4 / \$.48 + 10% = \$.53	
S.S. RIVET-----	\$ 1.39
8 / \$1.26 + 10% = \$1.39	
7 X 7 3/32" GALV. CABLE-----	\$.28
30" / \$.25 + 10% = \$.28	
188-3-VG 3/32" AL OVAL SLEEVE-----	\$.37
4 / \$.34 + 10% = \$.37	
5/16" SHOCK CORD-----	\$ 1.93
12' / \$1.75 + 10% = \$1.93	
1.0" ODX .083"W 6061 T-6-----	\$ 1.79
20" / \$1.63 + 10% = \$1.79	
1.125" ODX .058"W 6061 T-6-----	\$28.07
22' / \$25.52 + 10% = \$28.07	

TOTAL \$48.64

✓

✓

DOUBLE LEDGE BED (batches of 4)

1" FLAT WEBBING

(8) 2 @ 38" **cut angle at one end** middle triangle
(24) 6 @ 21" **cut angle at one end**
(24) 6 @ 15" bed

WEBBING REINFORCEMENTS (made with scraps):

small is two layers of 1" cut square and hole punched in center

large is 2" seatbelt webbing cut 4" long and hole is punched

PACKCLOTH (do not use black for main piece):

(4) 1 main piece **2 grommets, small and large webb. reinf. stacked on coated side** **long marks: 1 diagonal with dots, 1 along each side**

(8) 2 **flip flop pairs** sharkfins (black is a good color)
(32 individual pieces) 4 pair large tensioners (triangles)
(16 individual pieces) 2 pair small tensioners (triangles)

BALLISTICS CLOTH

(8) 2 scuffs (symmetrical piece)

(4) 1 *flip flop pair** scuff (one end is narrower than other)

DOUBLE LEDGE HAUL BAGS (stuff sacks) (batches of 18)

1/2" TUBULAR (or 9/16) WEBBING

(18) 1 @ 35"
(108) 6 @ 4"

1" TUBULAR WEBBING

(36) 2 @ 26"

1" FLAT WEBBING

(18) 1 @ 28"

CORDURA FABRIC

(18) 1 body piece **10 marks**

DOUBLE BED HARNESS (batches of 12)

1" FLAT WEBBING

(72) 6 @ 40" adjuster
(72) 6 @ 4.5" tension end
(12) 1 @ 32" center pull
(12) 1 @ 44" fins support **mark center point**

**the following three lengths are tied securely in sets

(making 12 total) with an overhand knot at the center point and the marks facing the inside**

marking locations and half way point pin are located on table

all marks must be on the same side of webbing

(12) 1 @ 82" **mark center and 17" from center on each side**

(12) 1 @ 70" **mark center and 17" from center on each side**

(12) 1 @ 63.5 **mark the offset on each, make the loose end side the center and then mark the 17" locations on both.

DOUBLE LEDGE FLY (batches of 4)

PACKCLOTH:

(4) 1 cone

(4) 1 stuff sack **grommet with webb. reinf. on noncoated side**

OXFORD CLOTH:

(4) 1 long narrow piece

CLAY COAT OXFORD CLOTH:

(4) 1 main body piece **two cuts**

BALLISTICS CLOTH:

(4) 1 large scuff **two cuts**

(4) 1 **flip flop pair** scuff with angled edge (can be odd color)

(8) 2 collar pieces

(4) 1 **flip flop pair** chimney piece (can be odd color)

(8) 2 small triangles (can be odd color)

ALPINE DBL LEDGE SUSPENSION.xls

TRIMS / FOAM / HARDWARE	DESCRIPTION	SUPPLIER / LOC	SIZE	COLOR	VEND STYLE	INCHES	QTY REQ
Webbing (main harness--long piece)	flat	Tape Craft / USA	1"	black	N0015--1"	164"	1
Webbing (main harness--medium piece)	flat	Tape Craft / USA	1"	black	N0015--1"	140"	1
Webbing (main harness--short piece)	flat	Tape Craft / USA	1"	black	N0015--1"	127"	1
Webbing (adjusters)	flat	Tape Craft / USA	1"	black	N0015--1"	40"	6
Webbing (tensioner ends)	flat	Tape Craft / USA	1"	black	N0015--1"	4 1/2"	6
Webbing (center pull)	flat	Tape Craft / USA	1"	black	N0015--1"	32"	1
Webbing (fins support)	flat	Tape Craft / USA	1"	black	N0015--1"	40"	1
Superlock Buckle (suspension)	plastic	Wirewright / USA	1"	black			4
Cam Buckle (suspension)	zinc	P & H / USA	1"				4
Sewing Thread	nylon bonded	John Howard / USA	69 wt.	black			

CENTER SUPPORTS.xls

TRIMS / FOAM / HARDWARE	DESCRIPTION	SUPPLIER / LOC	SIZE	COLOR	VEND STYLE	INCHES	QTY REQ
Sewing thread	nylon bonded	John Howard / USA	69 wt.	black			
Webbing	flat	Tape Craft / USA	2"	black	N0015--2"	8"	1
Webbing	flat	Tape Craft / USA	1"	black	N0015--1"	15"	1

TENT POLE INFOALL FLYS.xls

TRIMS / HARDWARE	DESCRIPTION	SUPPLIER / LOC	SIZE	COLOR	VEND STYLE	INCHES	QTY REQ
SINGLE--poles	aluminum	Easton / USA			7075-T9	24"	5
--shock cord		John Howard / USA	1/8"	black	P/N 2400B	115"	1
DOUBLE-- poles	aluminum	Easton / USA			7075-T9	24"	5
--shock cord	aluminum	Easton / USA			7075-T9	8"	1
		John Howard / USA	1/8"	black	P/N 2400B	122"	1
ALPINE DOUBLE EXPEDITION--poles							
--shock cord	aluminum	Easton / USA			7075-T9	24"	5
		John Howard / USA	1/8"	black	P/N 2400B	115"	1
CLIFF CABANA™ STORMFLY--poles	aluminum	Easton / USA			7075-T9	24"	5
--poles	aluminum	Easton / USA			7075-T9	18"	1
--shock cord		John Howard / USA	1/8"	black	P/N 2400B	133"	1
DIAMOND™ FLY--poles	aluminum	Easton / USA			7075-T9	24"	6
--shock cord		John Howard / USA	1/8"	black	P/N 2400B	140"	1
--poles	aluminum	Easton / USA			7075-T9	24"	7
--shock cord		John Howard / USA	1/8"	black	P/N 2400B	160"	1

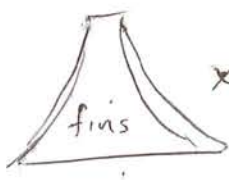
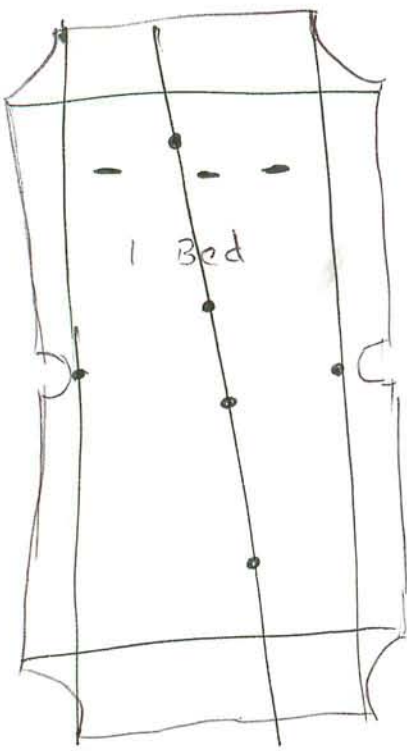
DOUBLE LEDGE BED.xls

FABRIC	DESCRIPTION	SUPPLIER / LOC	SIZE	COLOR	VENDOR STYLE	INCHES	QTY REQ
Ballistics (end scuffs)	coated	Top Value / USA			1050 denier		2
Ballistics (wall side scuff--flip-flop pair)	coated	Top Value / USA			1050 denier		1 f-f pair
Packcloth (main bed)	coated	Brookwood / USA			420 denier		1
Packcloth (shark fins--flip-flop pair).	coated	Brookwood / USA			420 denier		2 f-f pairs
Packcloth (large tensioners)	coated	Brookwood / USA			420 denier		4
Packcloth (small tensioners)	coated	Brookwood / USA			420 denier		2
TRIMS / FOAM / HARDWARE	DESCRIPTION	SUPPLIER / LOC	SIZE	COLOR	VEND STYLE	INCHES	QTY REQ
Webbing (middle shark fins)	flat	Tape Craft / USA	1"	black	N0015--1"	38"	2
Webbing (bed tensioners)	flat	Tape Craft / USA	1"	black	N0015--1"	22"	6
Webbing (Superlock buckle attachments to bed)	flat	Tape Craft / USA	1"	black	N0015--1"	15"	6
Webbing (small part of drain hole grommet reinforcement)	flat	Tape Craft / USA	1"	black	N0015--1"	1"	1
Webbing (large part of drain hole grommet reinforcement)	flat, 4 or 5 bar	Tape Craft / USA	2"	black	scrap	4"	1
Superlock buckle (tensioners)	plastic	Wirewright / USA	1"	black			6
Grommet (drain holes)	metal	Astrup / USA			#19605		2
Sewing thread	nylon bonded	John Howard / USA	69 wt.	black			
Seamtape (finishing)	starched nylon	Tape Craft / USA	1"	black	N0088--1"		



Jared Ogden on the North Face of Trango Tower in A5 Alpine Double portaledge with A5 PTFE Expedition Fly. (Designed by John Middendorf after his trip up the Trangos. The Grande Voyage has 2000' of north facing wall, and 2400' of east facing wall. The North Face of Trango is 4000 feet of north facing wall--a cold place.

Set-up/Parts - Doublewide



x 4

webbing ~ 1" Flat

→ 2 @ 38"



x 4

Large Bed T's

→ 3 @ 21"

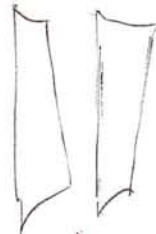


x 2

Small Bed T's

Foldover Tensioner

3 @ 14.5"



side scuffs

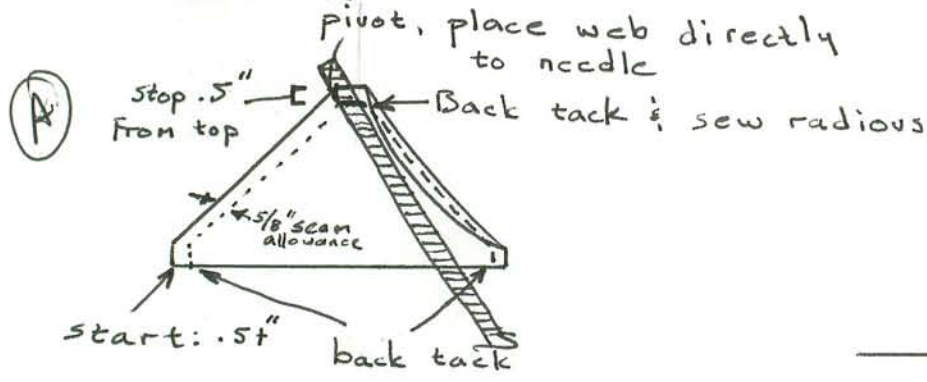


End scuff

Buckles

3 1" Superladder laces
Fastex.

Step 1 - Fins



See next page for better ill.

①

STEP ①

Ⓐ

Bed Fin: right side to
right side

stop .15"
from top

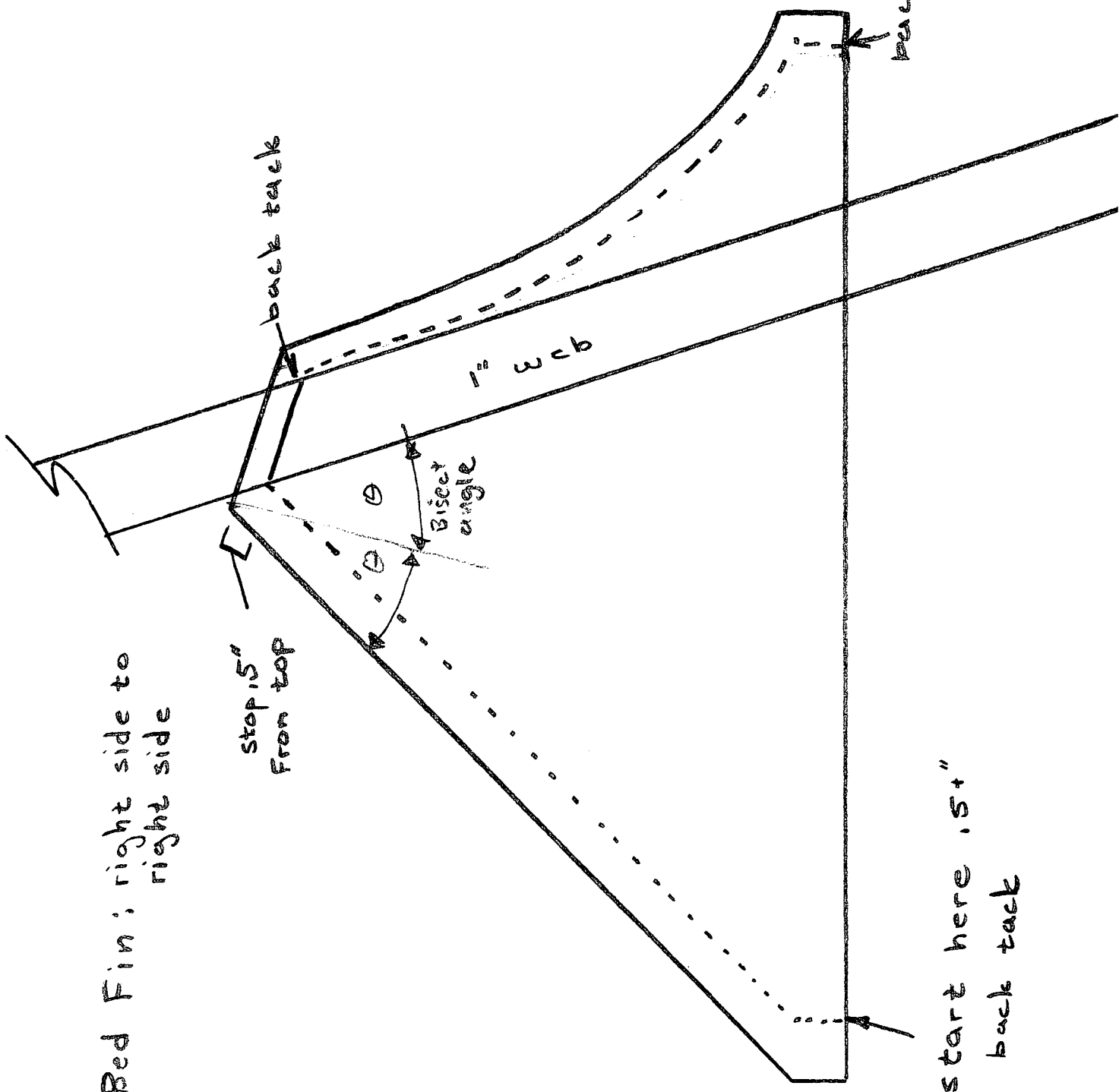
Bisect
angle

wcb

start here .15"
back tack

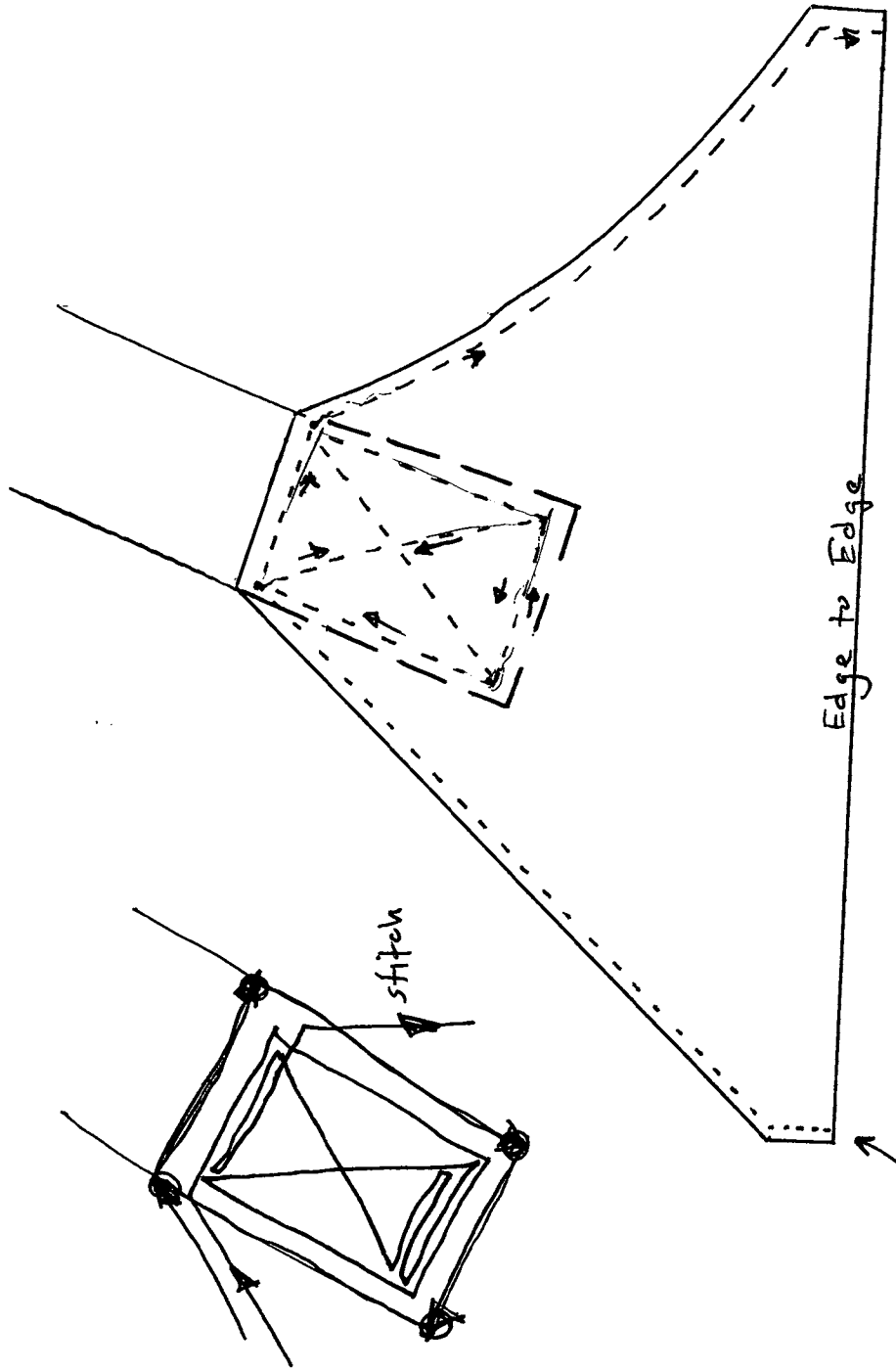
back tack

back tack



2

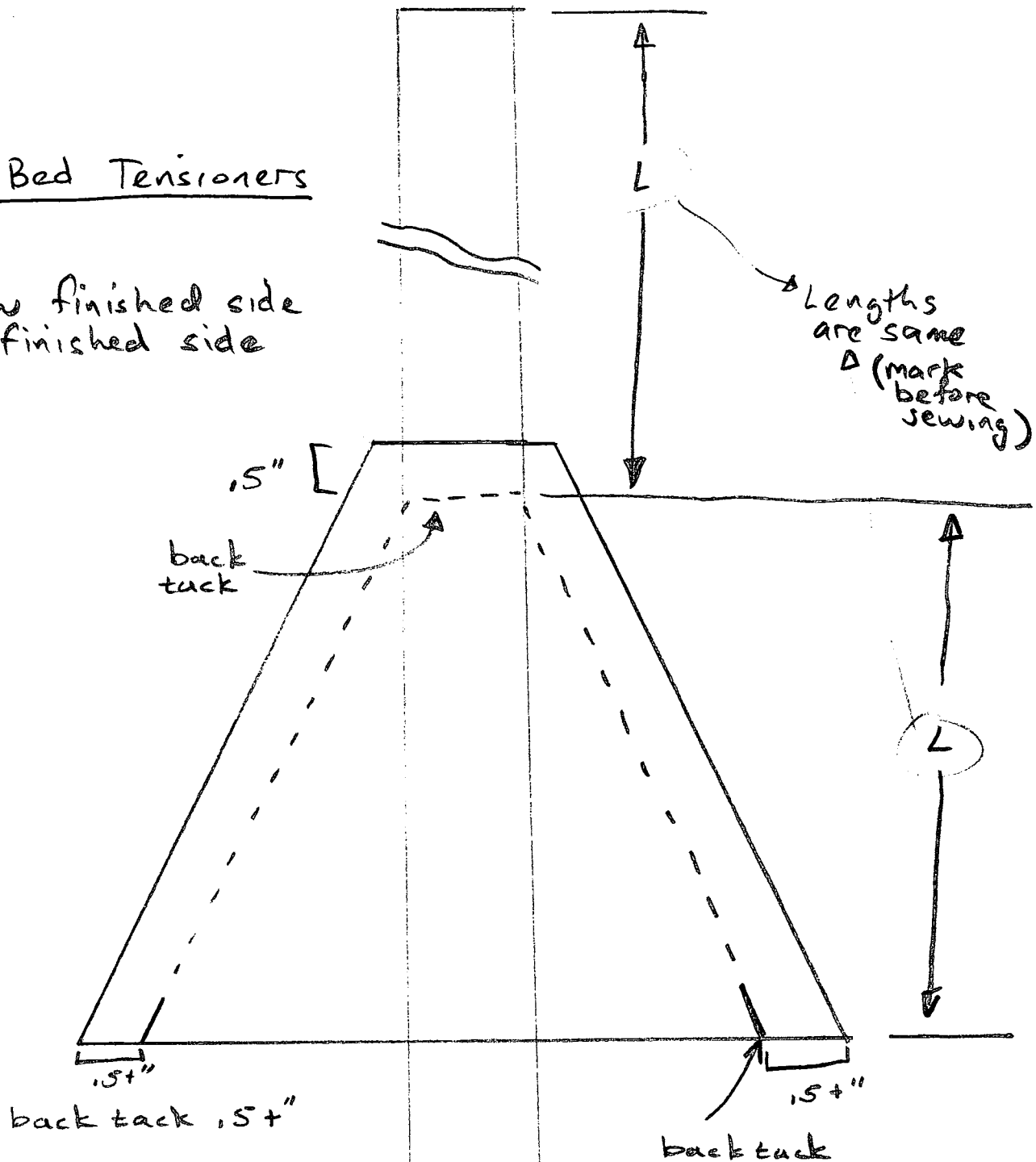
B Turn inside out (right side out)



start top
stitch here

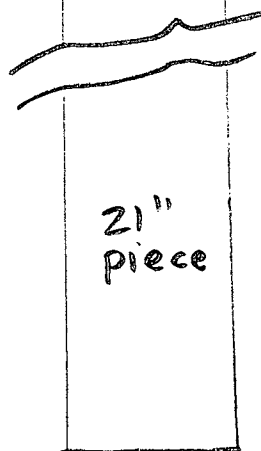
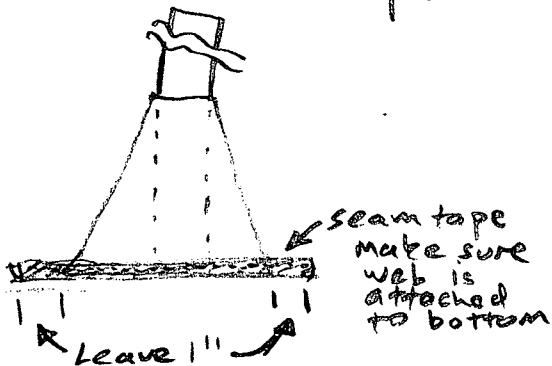
Step 2 - Bed Tensioners

① Sew finished side to finished side

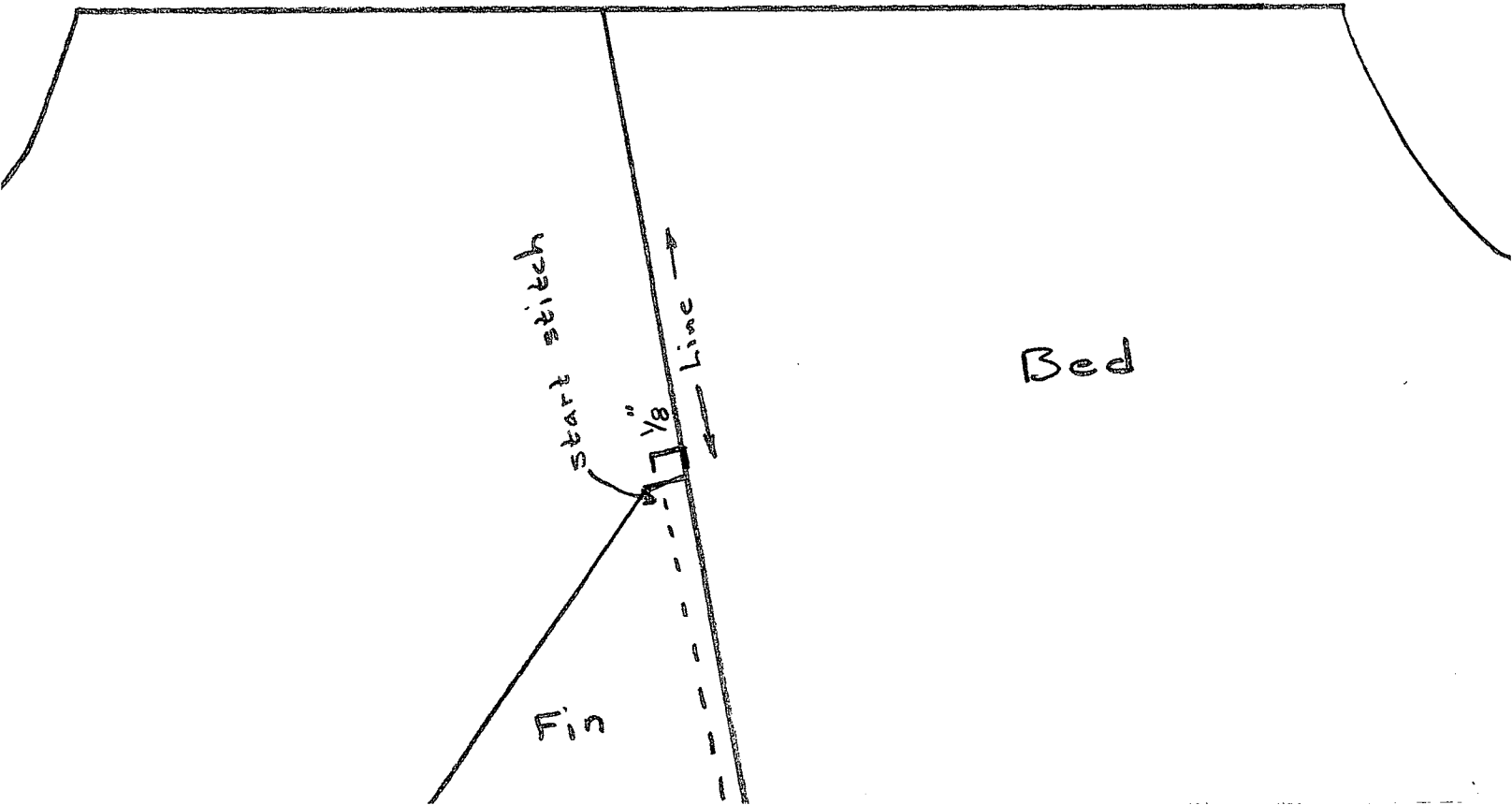
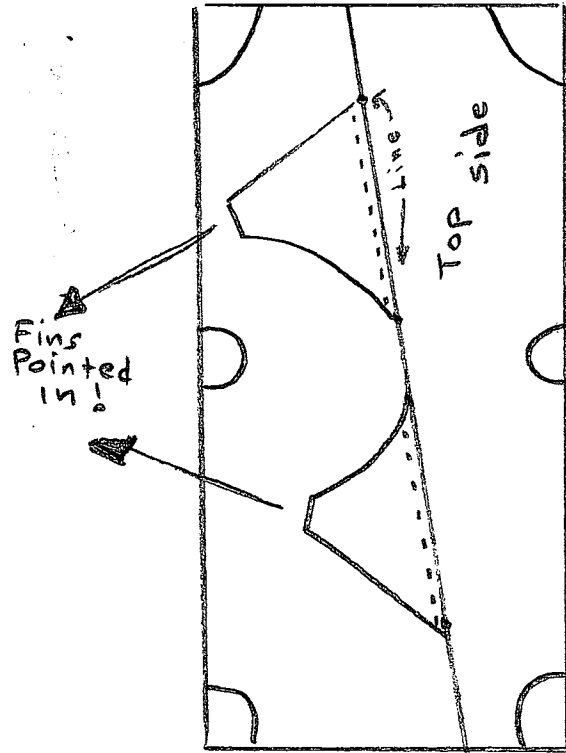


② Trim Bottom

③ Turn inside out and seam tape

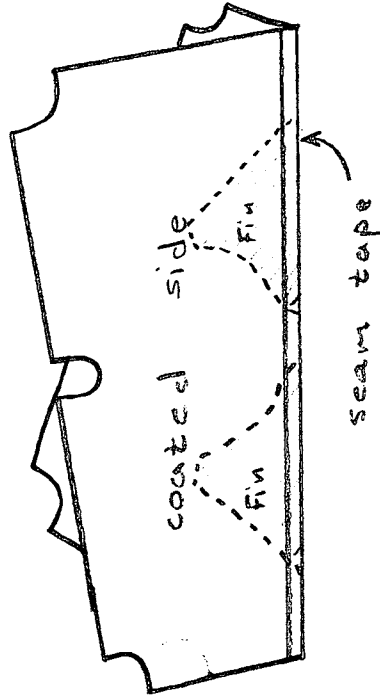


Step 3 Attach Fins to Bed.

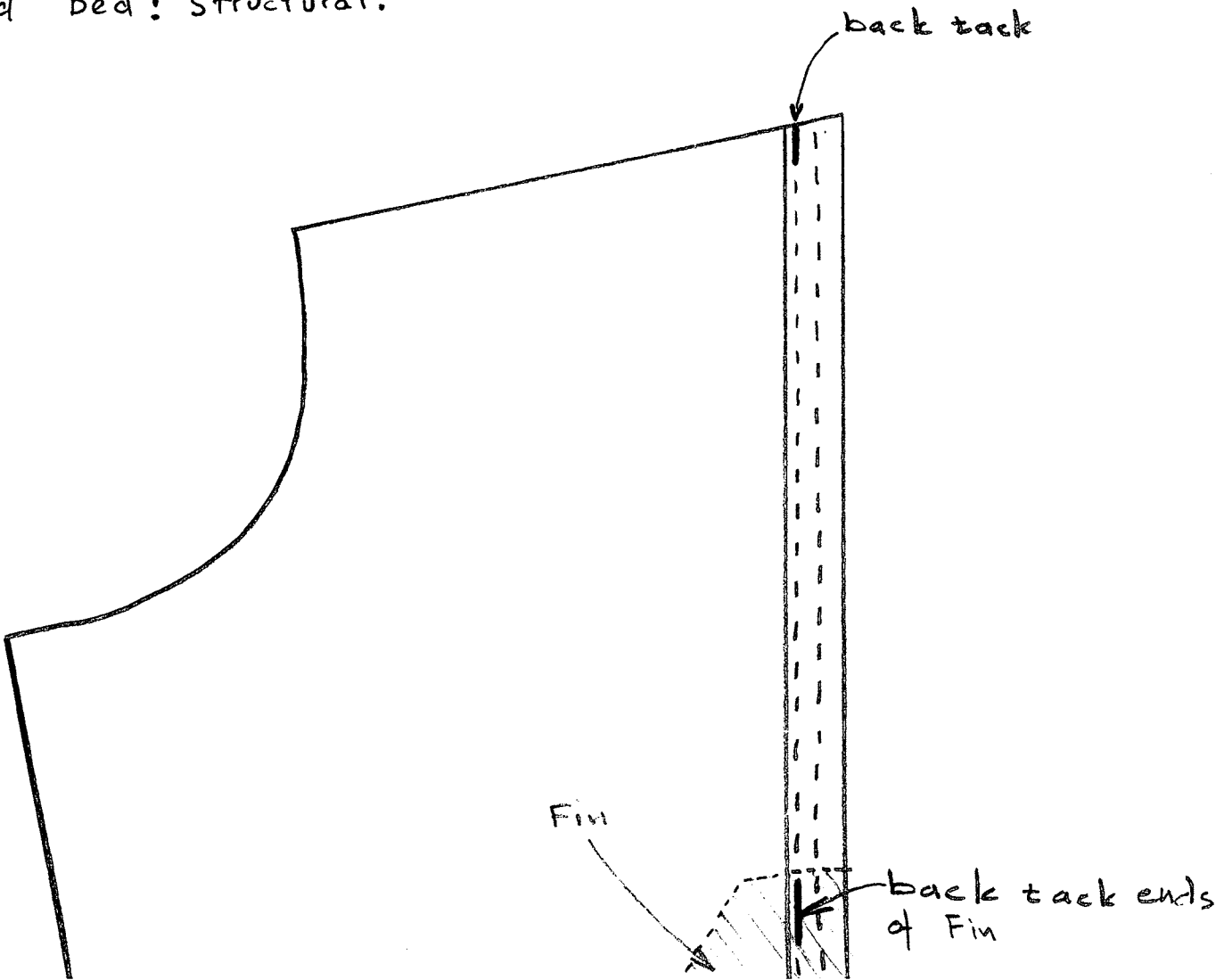


step ④

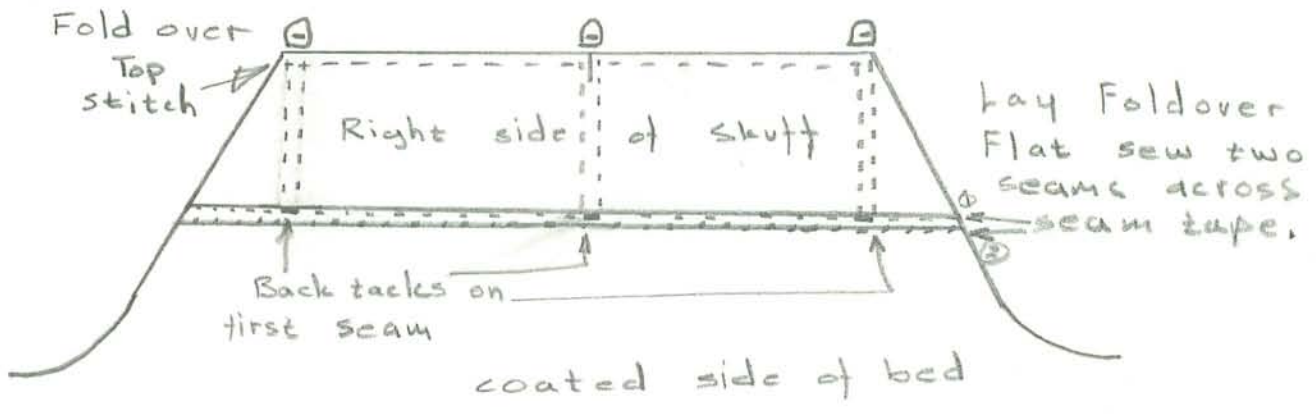
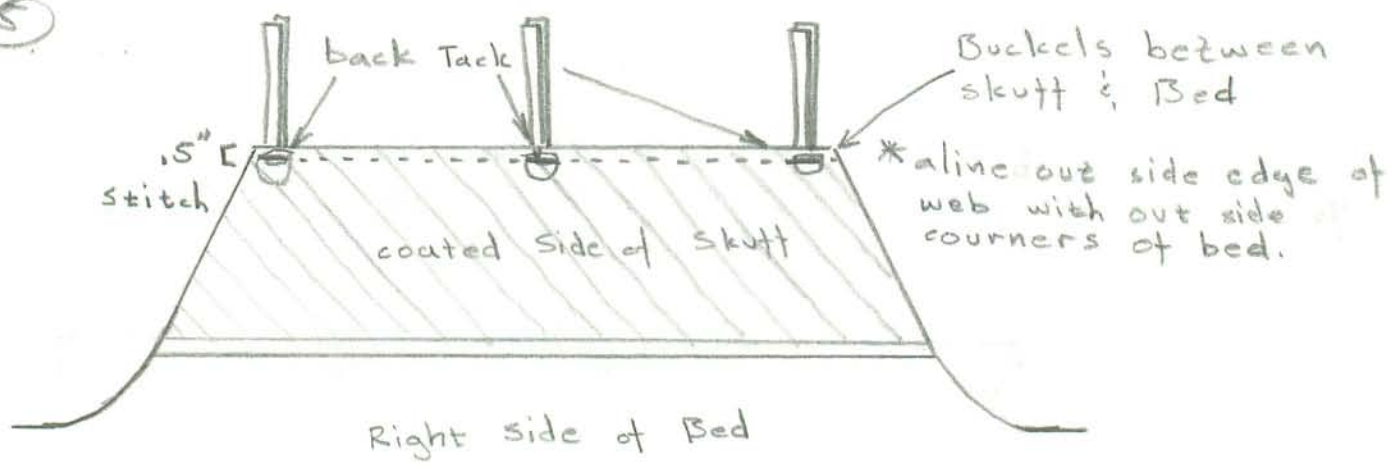
Fold Bed over stitch
seam tape



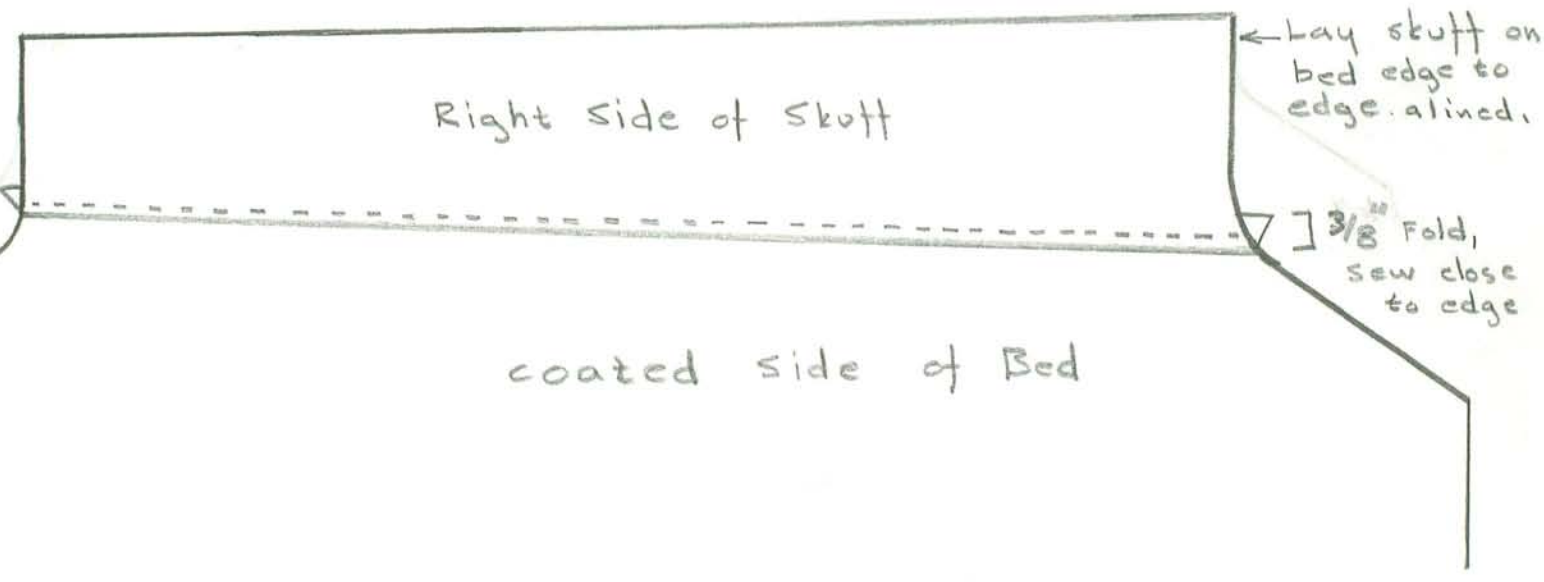
Critical! Fins must
sewn in solidly between
folded bed! Structural.



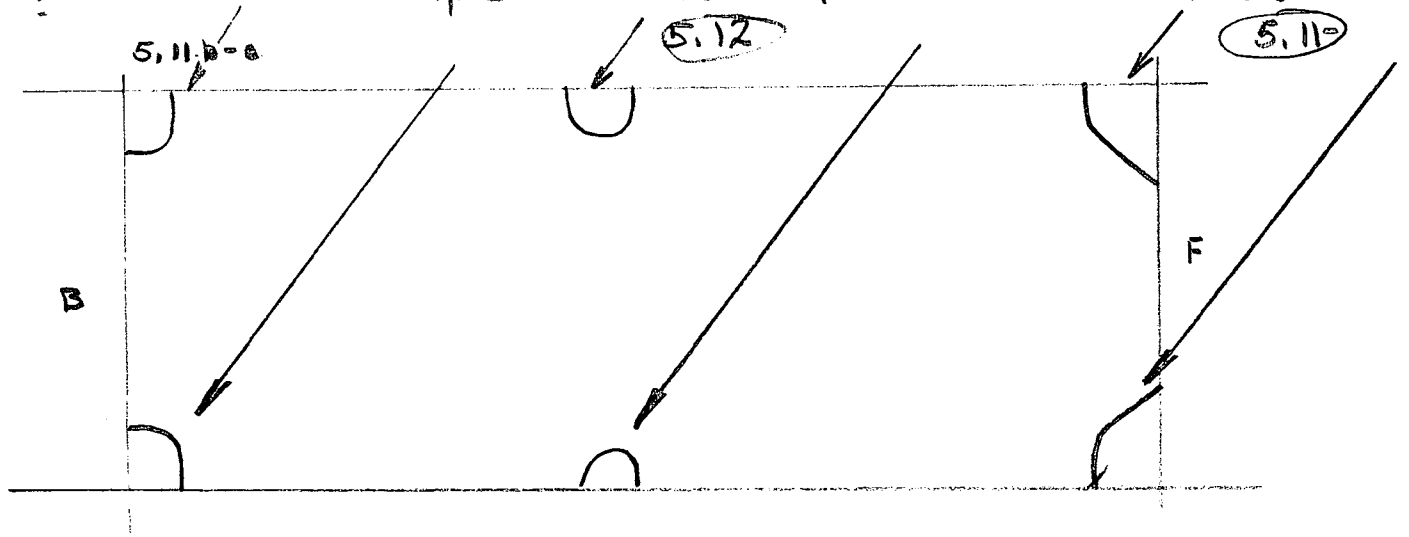
step 5



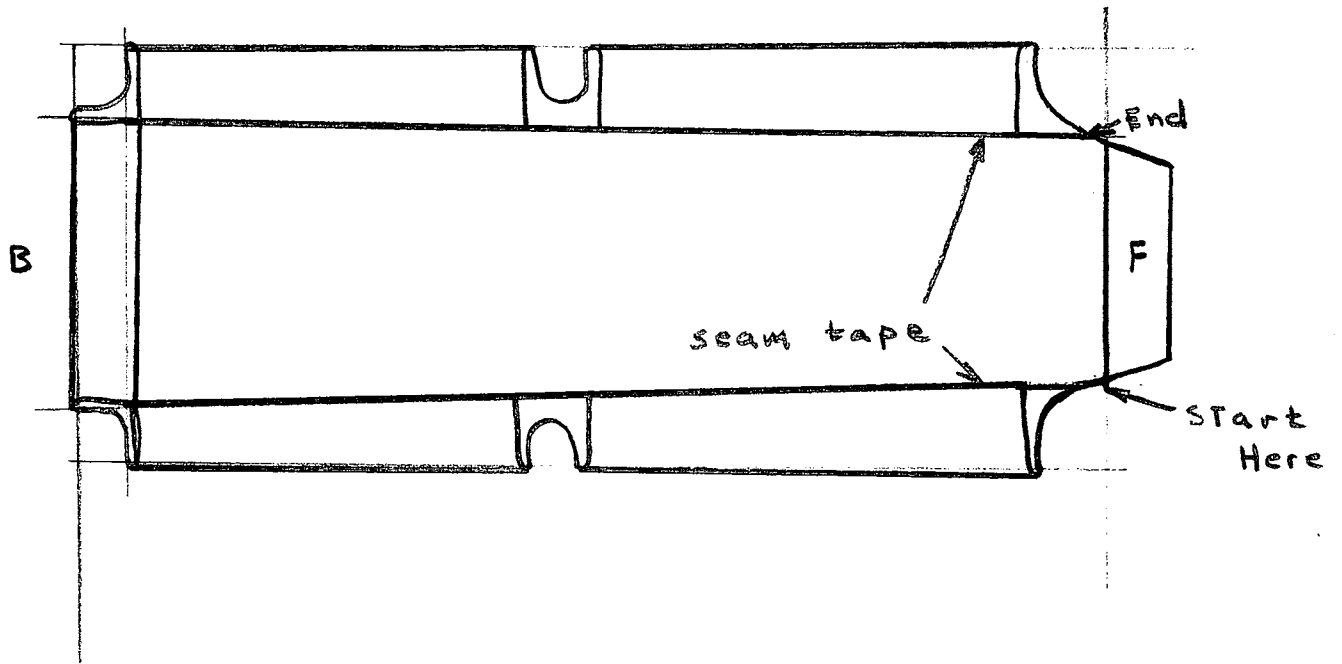
Step 6



Step ⑦ Seam Tape Corners & Center radiouses.

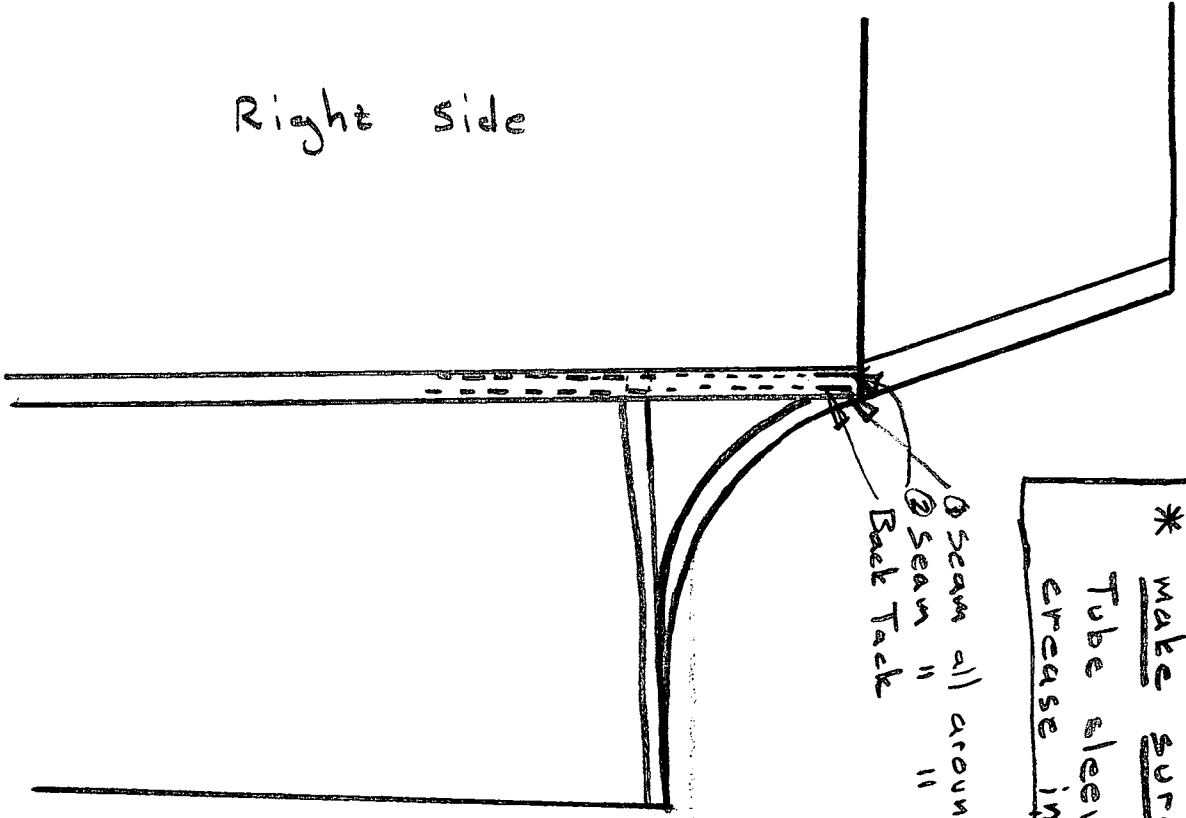


Step ⑧ Seam Tape Tube Sleeves to bed



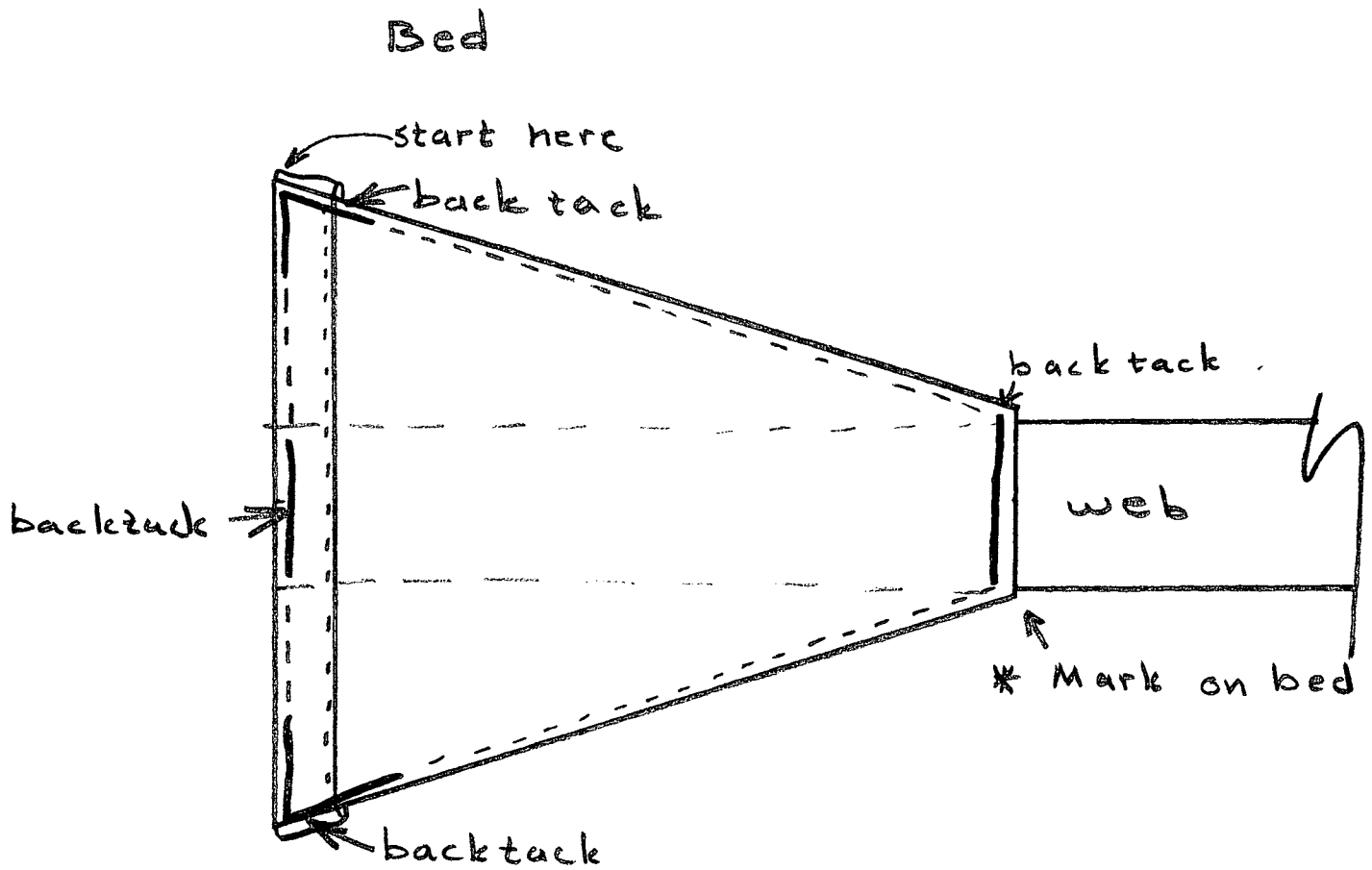
see illustration next page

Right side



* make sure rough edge of
Tube sleeve is banded to
crease in seam tape.

Step 9 Sew Tensioners to Bed.

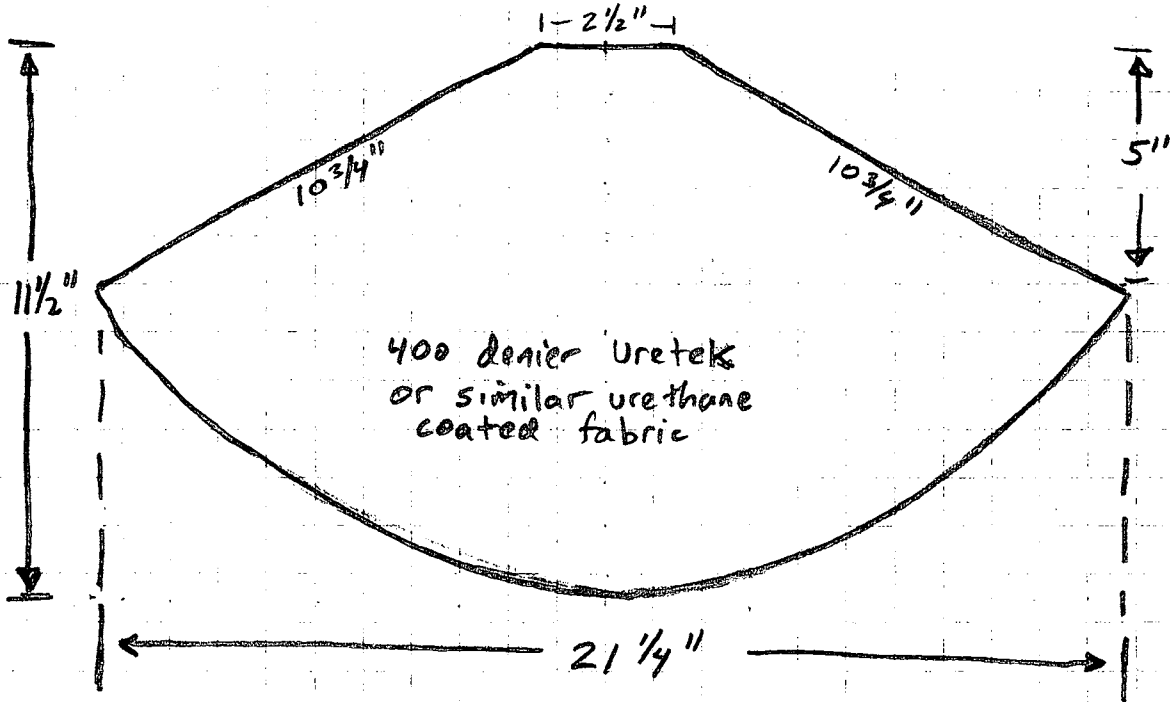


Step 10 Label

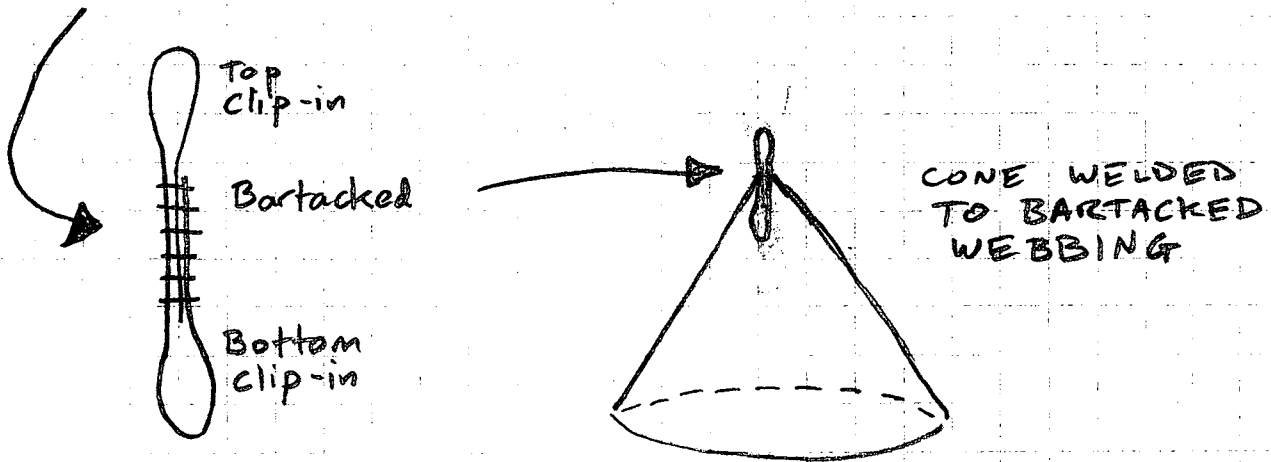
Finis !

CONE DESIGN

J.M.
7/97



15" of Urethane coated webbing 1" Tubular 4000 lb test



We are trying to achieve a waterproof seal between the top and bottom clip-in.

Some fabric will be sewn to the webbing above the bottom clip-in but below the cone.