

a  
beginner's  
manual of armor

construction

RETURN TO

ALLYSHIA ARMORY

A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

EDITED BY

LUDWIG VON LEMMINGHAUS  
KSCA, OL, OP, OLM, AA

MAY AS XVIII, BEING 1983 AD

This is not a publication of The Society for Creative  
Anachronism, Inc., and does not delineate its policies.

Second Printing - August AS XVIII

# A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

## TABLE OF CONTENTS

|                          |    |
|--------------------------|----|
| INTRODUCTION -----       | 2  |
| ACKNOWLEDGEMENTS -----   | 3  |
| THE SHOP -----           | 4  |
| MATERIALS -----          | 7  |
| BASIC TECHNIQUES -----   | 9  |
| PATTERNS                 |    |
| ABOUT THE PATTERNS ----- | 15 |
| BODY ARMOR -----         | 16 |
| HELMS -----              | 20 |
| NECK -----               | 25 |
| ARM -----                | 27 |
| LEG -----                | 32 |
| HAND -----               | 37 |
| HIP & KIDNEY -----       | 42 |
| REFERENCES -----         | 44 |

# A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

## INTRODUCTION

The armor shown in this book is designed to meet or exceed the coverage requirements for combat within the Society for Creative Anachronism, Inc., however this is not an official publication, and any questions with regard to your current requirements should be directed to a marshal in your area. Also remember that the armor should be inspected before each use, by you if not the marshal.

When starting work on your equipment, remember to begin simply and work up. Be patient, and take the time to ensure a well constructed, properly fitted piece of armor. Initially, a basic helm is a good project, 1) because it is an absolute requirement for combat training, and 2) because it is relatively simple. Assuming you are participating in local SCA fighting practice, work with the marshal and more experienced fighters to borrow what you can to start, and determine as you go what gear you want to fight in. You may have a style or period of armor you want to do, my recommendation is still to learn basic fighting first. You may change your design some to accomodate the way your body must move in SCA fighting styles.

This is somewhat of a "catch 22", but taking your time, learning what you want and how it needs to work may save you from putting a pretty piece up on the shelf until it rusts away.

If you enjoy making and using the armor described here, or some more of your own design, you may find yourself in business, or at least in a hobby, that you can enjoy, and use the fruits from.

Please note that this book does not cover mail, since that subject has been expounded on in many other articles and booklets within the SCA.

## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

### ACKNOWLEDGEMENTS

Thanks to those teachers of armouring that helped in ideas for content, provided patterns, and reviewed this book before publication, and to the students of the Three Mountains Armouring Workshops who taught me how to teach (at least a little bit). Special thanks and acknowledgement to:

Graf Manfred Kriegstreiber, MSCA, OL, who is the original source for most of the patterns, and has been regularly coming to teach all of us at the workshops.

Duke Steingrim Stellari, KSCA, OL, whose perfectionistic attitude on re-creation and finish has challenged many of us to greater achievement.

Garrick the Silent, KSCA, OLM, who provided ideas and critique while this was still on a notepad.

And lastly to Sir Blackhand, who arranged the actual printing, and to Lord Garth of Tryon Hill, who did the pattern reduction work.

Second printing - to Countess Morag Cambell of Glenbourne for proofreading this thing.

## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

### THE SHOP

Something to cut steel with

Hammer and chisel, authentic but gets old fast.

Saber saw with metal cutting blades, relatively cheap, but noisy, and the blade replacement will add up.

Sheet metal shears, such as Beverly (muscle power) or Stanley Uni-Shear (electric) are a high initial investment, but if you make a lot, or pool with others, well worth it. (The commercial tools can also be found in rental shops)

#### Hammers

Double Faced, short handle (called a Drilling Hammer or Hand Sledge), for chiselling.

Ball peen - 16 oz. for light sinking and general riveting.

24 oz. for general sinking and heavy riveting.

32+ oz. for heavier helm work and production pounding.

Wood or rubber mallet for rolling and outside forming without marring the surface of the metal.

#### Drills and punches

A hand or small, variable speed electric drill with a set of selected (i.e. rivet size) drill bits. With the power drill, lubricate the bit (bacon grease is excellent - unless you're kosher) and run at a slow speed. High speed will spin the bit on the metal and "burn" it.

Punches (such as the Roper-Whitney #5 Junior) speed things up considerably, and can be had for reasonable prices (the #5 costs as much as a good power drill - and it comes with 7 punches). The punches also require lubrication. The drill will still be necessary for seams away from the edge of the metal however.

Anvil (you thought I had forgotten it, didn't you)

A well secured machinist's vise, scrap chunks of heavy plate or bar/rod/rail stock work well for surfaces to rivet against. Curved plates may be rolled over a sawhorse (which will eventually wear down) if need be. Rail (railroad track) may be torch cut to a shape resembling a commercial anvil. Commercial anvils are (very) nice, but not a necessity to the occasional armorer. All that's

## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

needed for basic work is a hard edge to pound over, and a hard surface to set rivets against.

### Sinking die

For forming compound curved panels (e.g. knee cops). A hole chiselled in the end grain of a block of wood works very well, and if done in hardwood (banded with steel strap) will last fairly well. Metal pipe caps or short pipe sections (3"-6" diameter) work well for heavy production, but watch out for marring the metal on the pipe edge.

### Clamps

Preferably vise-grip type, you'll need at least a pair for holding pieces together while being marked, drilled and riveted.

### Layout tools

Measuring tape (1/4" wide blades are great since they will flex around for body measurements).

Steel rule.

Compass.

Soft pencil, felt marker, soapstone (thin blade is best for accuracy).

Center punch (for drill locations).

### Planishing stake(s)

The best are the so-called "mushroom" stakes that mount on a regular vise. A large carriage bolt, length of pipe with a rounded cap on it, or even a hardwood 2x2, well secured at the base will suffice.

### Welding equipment

Oxy-acetylene or light duty arc for putting together some of the two piece helmet patterns. Get some knowledgeable hands-on instruction in their use if possible, any welding is susceptible to cracks from the stress of receiving a killing blow.

### Forge

For working heavier helm sections, or trying advanced techniques (not shown in this book). They are not needed for basic armor, but if you get hooked you may want to get one anyway.

## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

Etc.

Leather working tools (punch, strip cutter, rivet set, awl, etc.) for strapping and leather armor.  
Assorted pliers, wrenches, hacksaw, heavy snips, and such for finish work.  
End nippers if you get into chain mail.  
Bench grinder and files for de-burring edges.  
Etc. like I said in the first place.



## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

### MATERIALS

#### Steel

14 ga. minimum for formed helm panels, recommended for knee cops.

16 ga. minimum for rolled and flat pieces on helms, legs, or any other spot subjected to heavy abuse.

18 ga. for arms, greaves, shoulder cops, etc.

Technically, there are no minimums for those parts of the body not requiring coverage, just make sure that if you do cover them with metal, it is heavy enough to withstand the abuse it will get. A deep dent not only looks bad, it aggravates the bruise underneath.

The above gauges are for mild steel, stainless steel may go one or two gauges lighter, except in helms, depending on alloy.

#### Leather

10-12 oz. latigo (yellow or red oil tanned top grain leather) is a minimum for coverage. Vegetable tanned sole leather is better, the vegetable tanning gives a more rigid finish, and as the name implies, it's intended for shoe soles, so is fairly tough.

6-8 oz. latigo for straps. Here you want to avoid the vegetable tanned leathers, they don't stand up to the damp very well. With any leather used, use a good grade of waterproofing to give them longer life.

Nylon strap in appropriate widths is an excellent (non-period) substitute for leather strapping.

3-4 oz. top grain (preferred) or sturdy suede splits for splinted armor and coats-of-plates, where rigid plates are rivetted to a flexible cover.

#### Carpet

Yes - carpet, good for beginner basic body armor, and can be made to look good by covering with surcoat or tabard.

#### Plastics

Several types of plastic are usable in SCA armor; the best probably being Polyethylene sheet - it's the same type of stuff as used in athletic gear. The sheet can be cut with ordinary wood and leather working tools, and some shaping done by dunking in boiling water.

## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

### Fabric

You will find use for heavy fabrics, particularly canvas, if you do something like a coat of plates, where plates of steel, leather, or plastic are riveted into a cover. Best choices are a very heavy (min 12 oz.) canvas, drier felt, or if you want to be fancy, good stout upholstery fabric (velvet was used for brigantines and coats-of-plate covers!). Acrylic blankets and cotton upholstery batting are used as padding in under-armor gambesons.

### Adhesives

Also essential are adhesives (contact type) such as Tandy Craftman Cement or Barge Cement for gluing padding into helms, plates into canvas coats-of-plates, leather and canvas seams before setting or riveting.

### Ready-Made

Football pads - especially good for kidney protection, and the shoulder pads have been used also.

Hockey - probably the closest commercially available coverage for SCA use. The gloves are considered minimum hand protection (LaCrosse gloves are better however, and you can make better yet), and all manner of shin, shoulder, and kidney protection are usable.

Other athletic padding is usable to some extent, but things like skate/skateboard pads need coverage extended around the sides of the joints, as they are designed to protect only the front from abrasion.

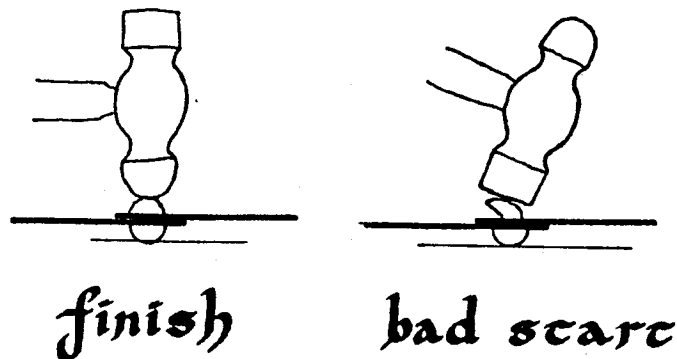
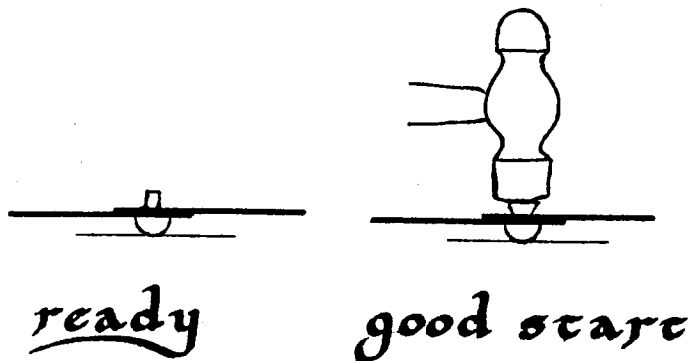
In any case - if you scrounge them, ok, but don't pay full price, real armor is a lot cheaper (especially to build).

# A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

## BASIC TECHNIQUES

### Riveting

Setting a rivet consists of putting the rivet in the holes through two or more plates, making sure the plates are tight to each other and the rivet head, and using a ball peen hammer to pound down the excess stem into another "head". Strike straight down to avoid bending the rivet.



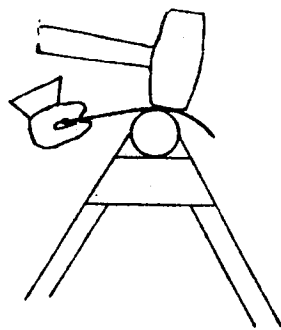
guide ~  $\frac{1}{8}$ " rivets, 1" apart, rigid seams only  
           $\frac{3}{16}$ "    "    ,  $1\frac{1}{2}$ " apart & limb articulation  
           $\frac{1}{4}$ "    "    , visor pivots  
iron only ~ no brass or copper in high stress  
            and wear areas.

## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

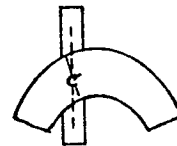
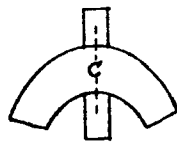
### Rolling curved plates

Work over a well-supported cross piece - railroad track, heavy pipe or bar, sawhorse, etc. Use a wooden or rubber mallet if possible, and hammer (gently and with the face square to the metal) the piece down over the cross bar. If you have some sort of clamp or grab bar to catch one end of the piece being rolled, so much the better - it saves your hand.

A lot of pieces you will curve are conic sections, where the line of the roll must follow the center line of the area being covered - not the edge of the piece.



*hammer evenly  
just past bar*



*top  
finish  
view  
side*



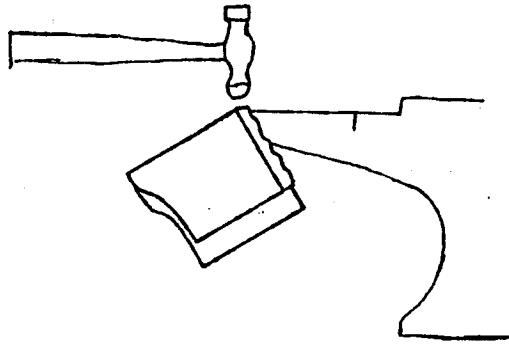
*good center  
on roll*

*twisted line  
~ warped mind*

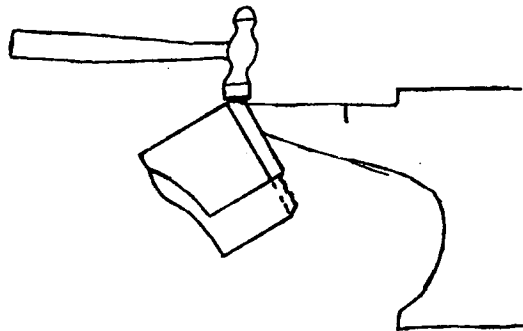
## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

### Flaring

(as for great helm skirt where it fits the crown of the helmet)



*first pass - with  
ball peen end*



*second pass - with  
flat face end*

## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

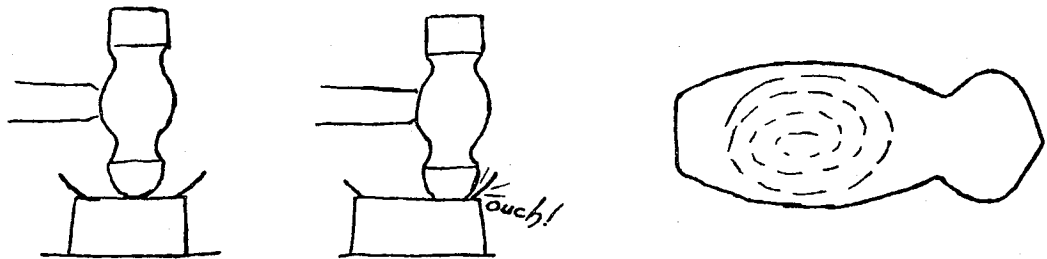
### Sinking (dishing)

This is basically pounding the metal into a hole of some sort to create a compound curve. The two biggest problems are pounding an even curve and thinning the center of the piece to the point that it tears through.

The first often results from the tendency to hold the panel in one spot and hit less forcefully when near the hand. The piece should be worked evenly and in a constantly moving pattern. Where possible the pattern we have found best will be indicated on the piece in the patterns section.

The second problem is avoidable by taking several precautions: 1, avoid nicks and gouges in the piece your cutting from, they're weak spots; 2, don't hit with the rim of the hammer face, it leaves nicks; and 3, work in an even pattern from the edge to the center of the piece. This last means that the center, where the most deformation will occur will be stretched last, after it is already partially dished by the hammering nearer the edge.

A good smooth dishing job is made by making many light blows close together, rather than heavy blows spaced out.



*with metal sinking work in a  
dies especially - stay spiral pattern  
in the center*

### Planishing

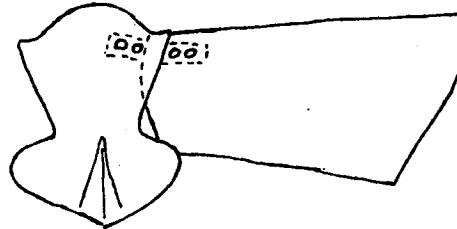
This process smooths out the bumps made in the sinking, or dishing pass. It can be started in the last dishing pass by using a relatively flat peen hammer, lightly working the entire inside of the piece. Final planishing is done by hammering the outside with a smooth hammer face, over a mushroom head stake, or some substitute. If you can't get hold of such an item, use the light inside hammering method against a hardwood block, the finish will be fairly good.

## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

### Articulating

The art of jointing steel so you don't come unglued!

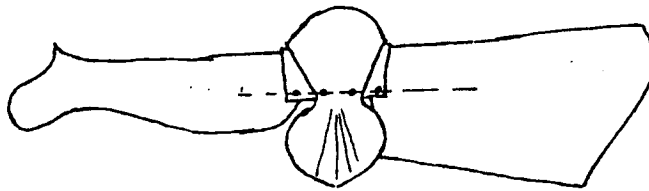
In its simplest form, articulation is hinging two pieces of rigid armor together so they bend with your body. For example - a basic leg:



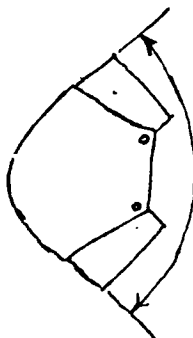
*scrap hinge*

At its most complex, it is pivoting several pieces together so they flex with the body - and keep everything covered. This is a bit more difficult.

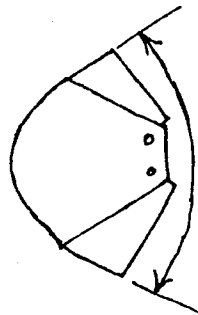
The basic idea is to pivot pieces that are cut and shaped to "nest" with each other in such a manner that they move from a straight line to full bend without binding or gaping. To start, line the pieces up in the "finished order" and mark holes in the outermost piece (usually the elbow or knee cap) about  $\frac{3}{8}$ " in from the edge and on a centerline with the body's joint. In general the closer together the rivets are, the more extension the joint will have.



*rivet holes  
marked in  
line*



*wide  
pivot  
& angle*



*narrow  
pivot  
& angle*

## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

Drill these holes. Next fit the lames under the cop in the maximum flex position and mark the hole locations on the lames. Work them back and forth from fully collapsed to extended positions to make sure the marks show at both extremes. Make sure also that the marks are evenly marked. Drill or punch the outside end first and temporarily bolt it in place (here's where a punch is really handy since the hole may be located more accurately with it than a drill). Now double check the other hole marking, remembering to hold the lame tight under the cop so no gaps will appear. When you're satisfied with the location, drill the second hole (number the lames to avoid mix-ups). Bolt both sides in and do a final check. If there are any disasters, you can weld the hole shut and try again, or make a new lame (they aren't too hard and you'll get the knack before you waste very much). Once this checks out, put in the rivets, and do a light planishing pass along the seam to snug the cop and lame together. As the piece is flexed, look for gouges where the cop is hitting the lame and planish in that area. Two things to make life easier for the finished product: 1) make sure the pivot points are parallel to each other; and 2) don't make the rivets tight, use 3/16" diameter, and peen a solid head that leaves some "slop" between the pieces. The joint should move under its own weight - not requiring any effort from the wearer to force it open and closed.





## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

### ABOUT THE PATTERNS

Most of these patterns are out of the drawers and boxes we keep in the armoury here, and as such have been fitted for someone in particular, or are a compromise size to be used as a basis for adaptation. They have been traced, at actual size, on a 1" grid, and reduced 66% to fit on 8 1/2" x 11" paper. To enlarge them, get (or make) 1" grid pattern paper, and redraw the outline at full size. I would suggest that you cut out the pattern oversize on heavy paper (or light cardboard) and fit that to your body to make adjustments before cutting the material. Once you have a pattern that fits, keep it on heavy stock for later reuse. The helms (except the panel spangenhelm and the small round top) are based on 30" circumference, which works for a head of 24-25 inches around, adjust the size as needed to allow for 1 to 1 1/2 inches of padding.

You will see the term Pattern Fold along the edges of some of the patterns. This was done where the template was too big to fit on the page. In most cases, the full pattern is just double the outlined portion, (i.e. it is two mirror image halves, centered on the fold line) however some of the patterns, such as the cuisse, have different halves. Both sides are outlined, and marked for the outer and inner edges.

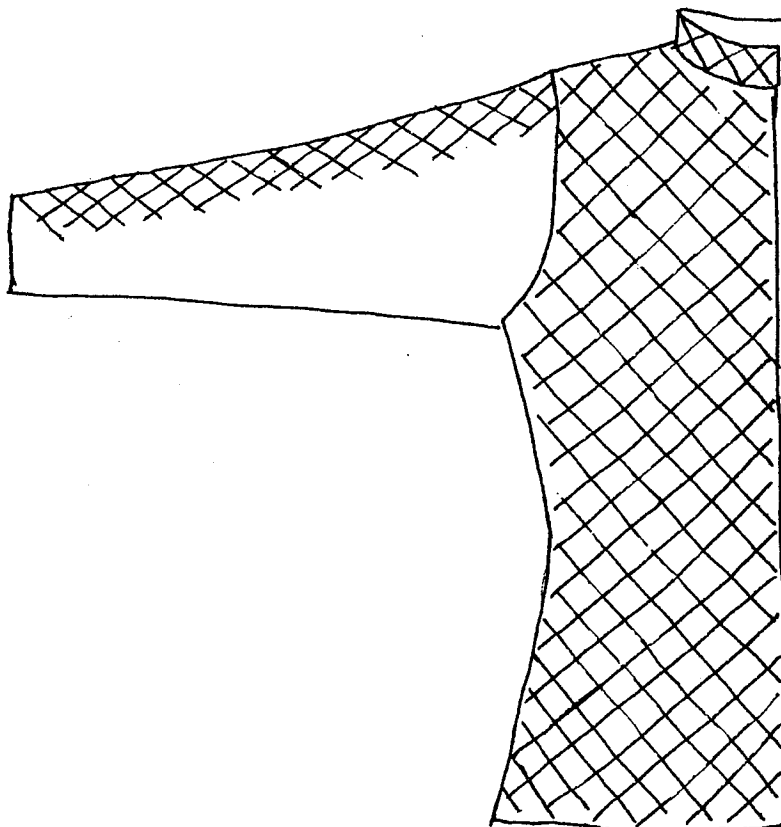
Good Luck!

## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

### BODY ARMOR - PADDED JUPON OR GAMBESON

The padded jupon is used basically as an undergarment for other armor (mail, coat-of-plates, etc.), and is unacceptable as armor worn alone.

The construction is similar to a ski-jacket, except that the padding is quilted in selected spots rather than all over. The sleeves should also be set straight out rather than at a downward angle, since the arms will more often than not be in a raised position, and you don't want the entire garment to rise up, leaving your legs or hips open. Use denim or an equivalently durable fabric for the outer cover, a lighter (softer) fabric for the liner (preferably with cotton content to absorb sweat) and ideally, 1" cotton upholstery batting for the padding. The cotton will absorb sweat and not mat down unlike the more readily available polyester quilt batting. The padding need only be applied on the body and optionally the outside of the arms (especially the elbows). When making the pattern allow 2" extra on all measurements around for the padding. Use ties, frogs, or other "soft" fasteners for the closings. You don't want buttons embedded in your chest or zippers rusted shut in August.



*crotch minimum*  
*split back below*  
*crotch level*  
*knee length max*

## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

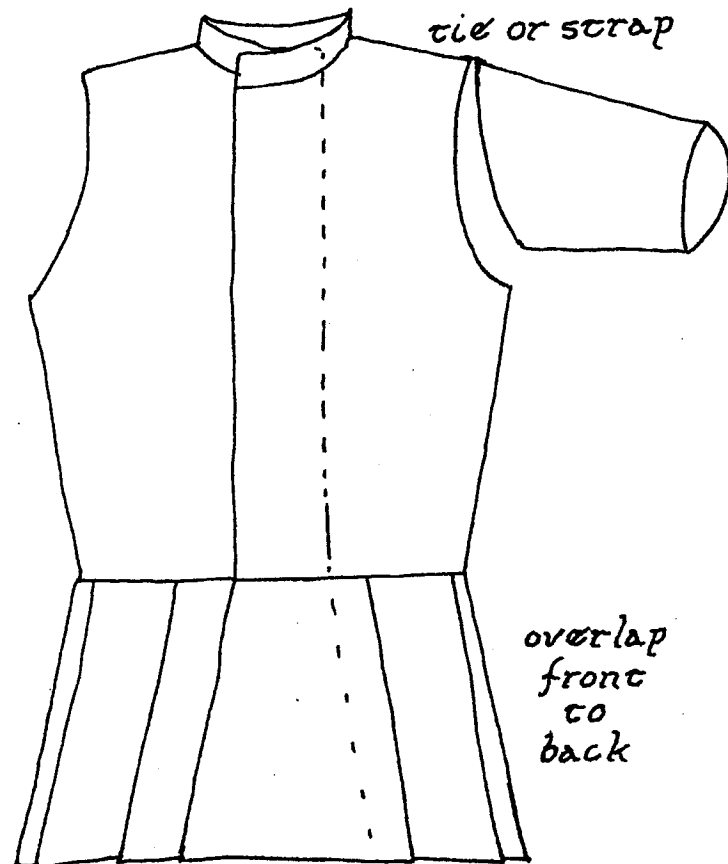
### BODY ARMOR - CARPET PLATE

Carpet "plate" is one of the quickest, easiest, and cheapest ways to start out on body armor - great for getting into practice before investing a whole lot of time in armor construction.

Using the measurements of your body at the points indicated, and adding an extra inch for thickness plus the 2" overlap on the front pieces, the torso is made from 3 pieces, with a skirt of overlapped tassets (which combine good flexibility and protection). A good rule of thumb is to overlap the shield side of the front on top of the weapon side as a thrust could slide into the gap if reversed.

The best carpet for this is the jute-backed (made to go over a separate padding) dense pile, with the rigid backing to the outside and the pile underneath. Stitch with heavy thread (carpet, upholstery, or leather).

Straps and buckles, ties, or some other sturdy closure should be used.

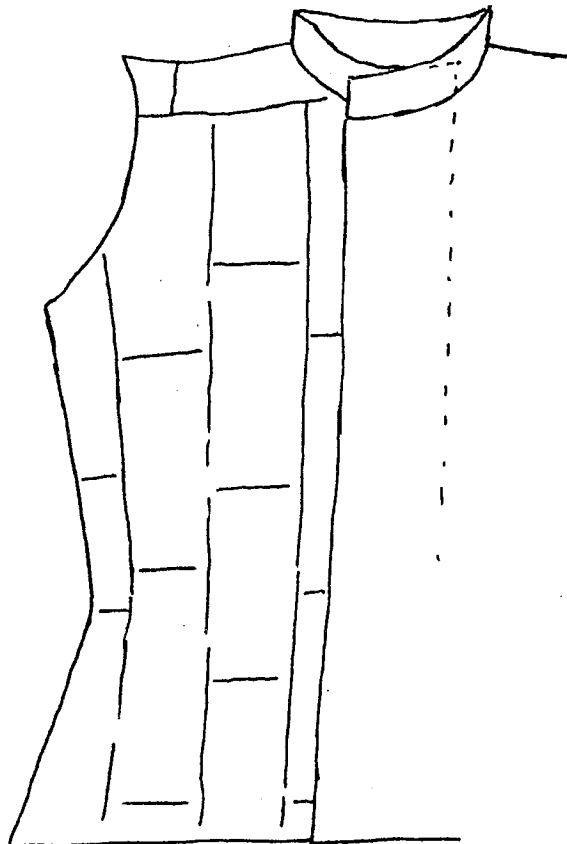


## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

### BODY ARMOR - CARPET GAMBESON

The carpet gambeson provides the same basic protection as the carpet plate, but is much better looking (you won't have to cover it with a tabard or surcoat).

Construction is started by making matching inner & outer sleeveless coats (normally either hip or knee length), which are 2" over the actual body measurements around (measured over any padding you will be wearing underneath) plus 2" overlap in front. Sew the two coats together along the front edges only, and then sew parallel seams all the way around the garment, about 4" apart, but divided evenly, and with one of the tubes centered over the spine. Working from the neck opening, arm holes and bottom edge, slide in carpet chunks, again jute-backing to the outside, and cross stitch (a zipper foot on the sewing machine will allow the closest seam) to form a pocket around the carpet. Double or even triple layers can be used in "trouble" areas like the sternum, kidneys, or spine. (The rigidity provided by the jute backing will eventually wear down however, so plates under those spots may be required at some point). Offset the horizontal joints for maximum protection. Sew or bind the neck, arm and bottom seams shut as the pockets are filled to keep the carpet in place.



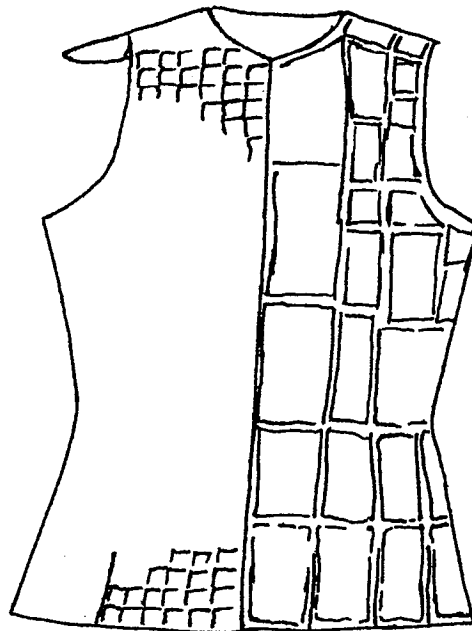
## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

### BODY ARMOR - COAT-OF-PLATES

The cover is the same basic shape as the carpet gambeson, only needing an extra inch around, however, since the plate is thinner, and should be made either of heavy (14 oz. +) canvas, sturdy (3-4 oz.) leather, or if you really want to look nice, upholstery velvet backed with canvas (they used velvet on their armor!).

The plates may be almost any size and shape you desire, from the small (1x3) plates of a brigantine to the large, fitted, plates that eventually joined together to make a breast and back plate. The smaller plates are much more flexible - both to you and to the weapon, and need to be overlapped or shingled for effectiveness. The larger plates may be butted together since you don't have to worry about a sword edge coming through. A good compromise is small plates around the shoulders where you need lots of flexibility, and large ones on the chest, spine, and kidneys. The skirt may again be done as tassets, or a solid skirt with two or three splits for mobility. See the materials section for ideas on the plate construction.

To help prevent abrasion of the cover material by the edges and corners of the plates, glue the plates in before rivetting them. And in fabric covers, DO NOT punch the rivet holes, poke them with a round awl to avoid cutting fibers and weakening the fabric.



# riveted spangen helm

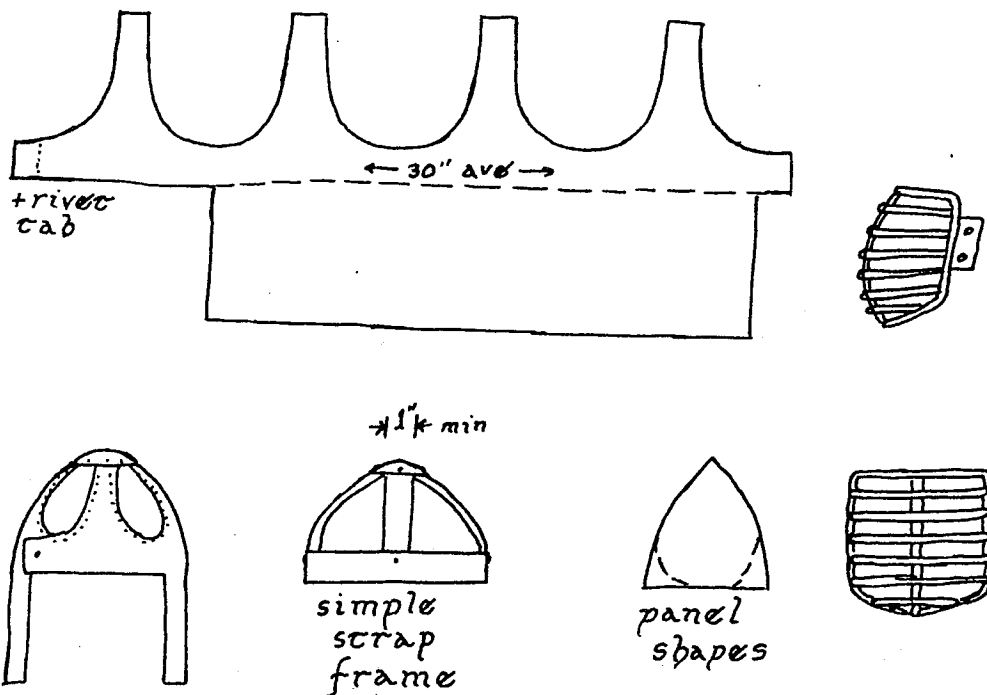
An adventure in pattern making; this helm can be done several ways, from the one main piece and panels to a built up top frame and panels.

Whichever way you want to do it, assemble the frame first, riveting the tops of each strap to a round dished center piece. Shape the frame so it is symmetrical and allows even padding all around the head. Now make the final pattern for the top panels by laying heavy paper/light cardboard against the opening and tracing the outline. Add  $\frac{1}{2}$ " for rivet margin and cut out. If you used the one piece top, the panels can be cut from the waste between the straps.

Form the panels to fit fairly closely before riveting them in. Remember that the frame, being less rigid than the panel will form to the panels. Therefore the first panel is the most critical since it "sets" the frame shape for the rest of the helm.

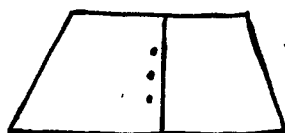
If you're doing a built up frame, or separate skirt pattern, put the skirt on last - it makes it easier to get to the rivets in the top.

Make grills out of  $\frac{1}{4}$ " steel rod, spaced on 1" centers. This will keep openings within the 1" maximum even if bent.

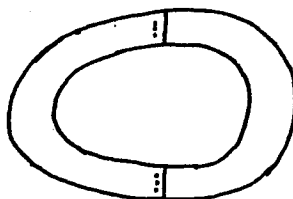


# greac helm

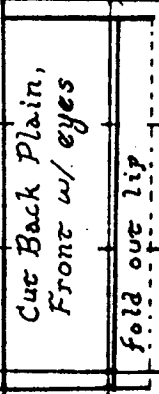
1.  
Rivet  
Crown



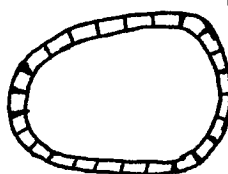
2.  
Shape  
to  
Head



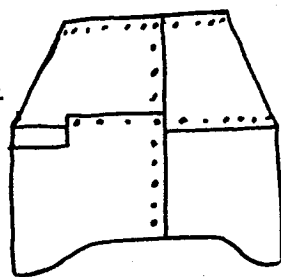
Pattern Fold



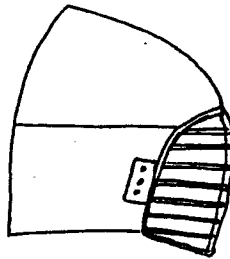
3.  
Trace  
Top +  
Tabs  
for Cap



4.  
Rivet on  
Cap,  
Back,  
and  
Front



basinec

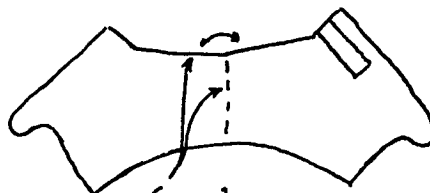
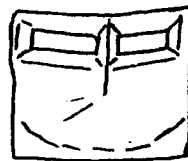


warning ~ this pattern  
has a right & left ~ don't make  
them the same



hammer  
pattern

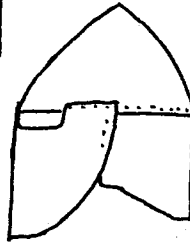
pig face



for longer snout,  
make these longer  
& widen angle



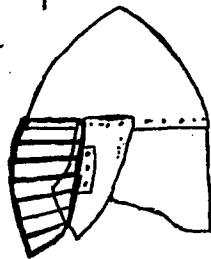
pattern fold



hammer  
pattern

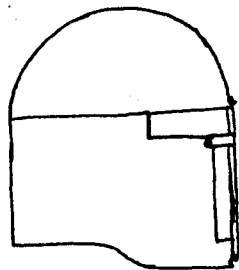


spangen helm

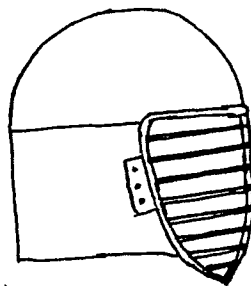


pattern fold

*round cop*



*barbuze*



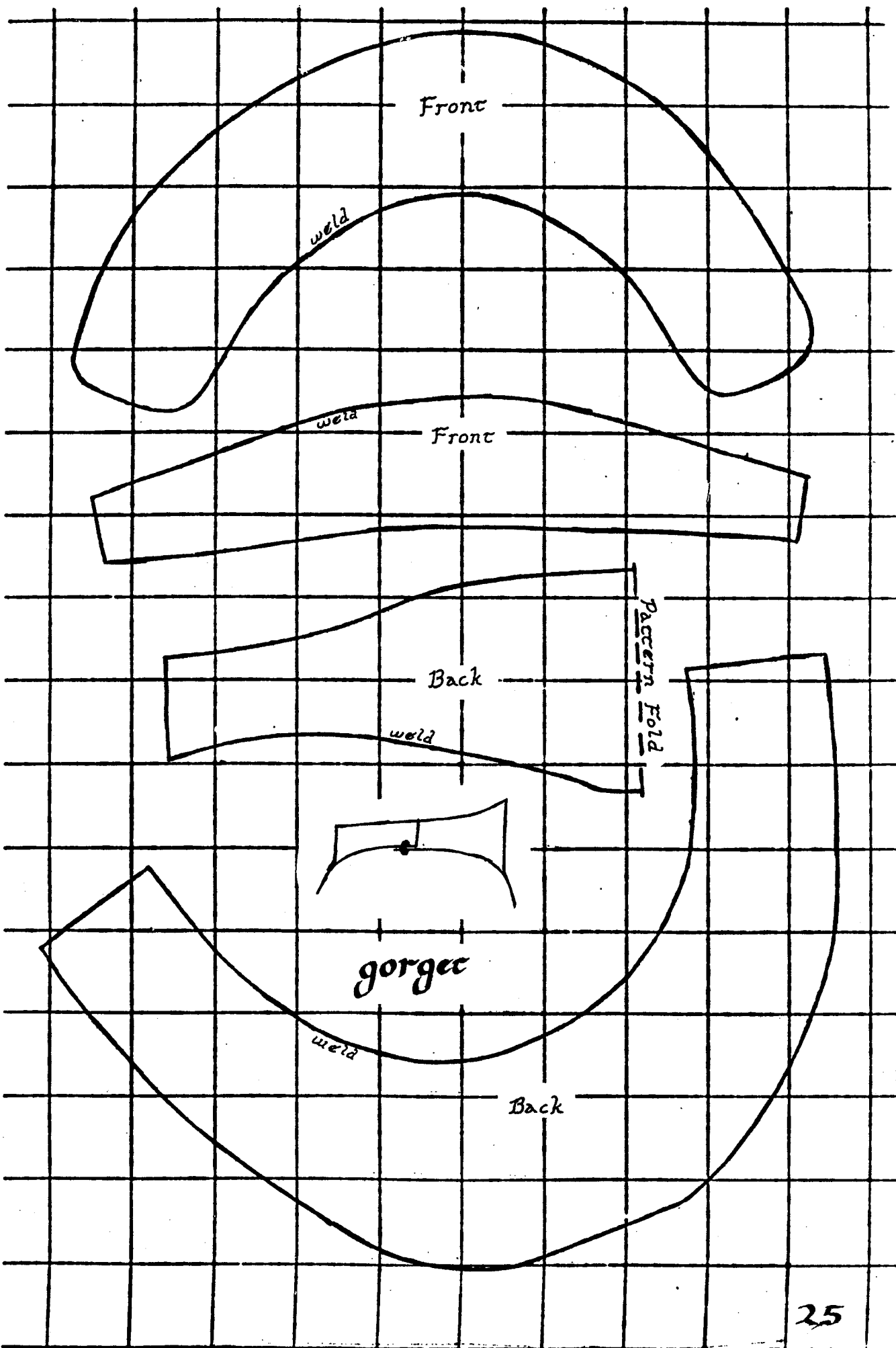
*add 1/2" rivet lap*

*top*

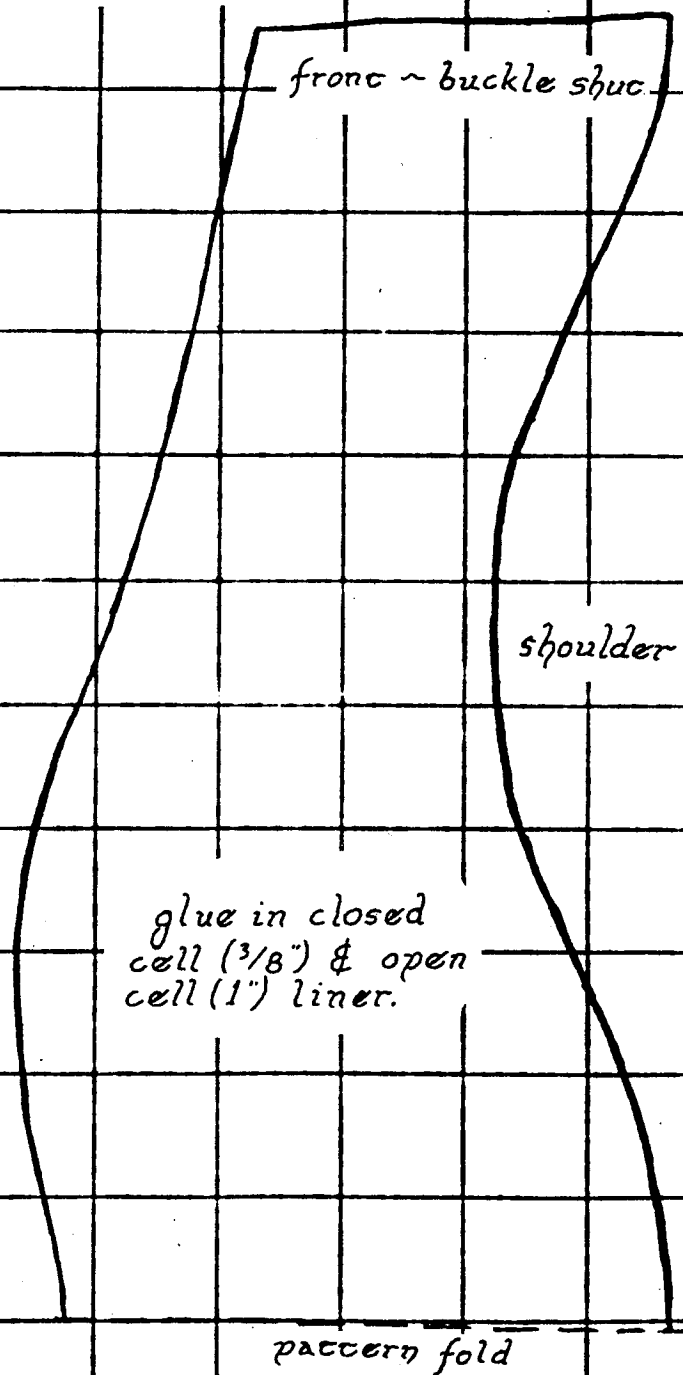
*small*

*large*

*pattern fold*



# leacher neck!



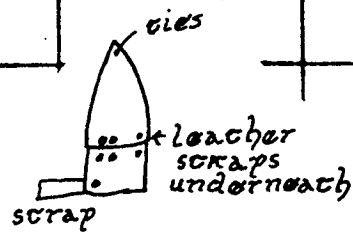
pauldron ~ dish like a knee cap

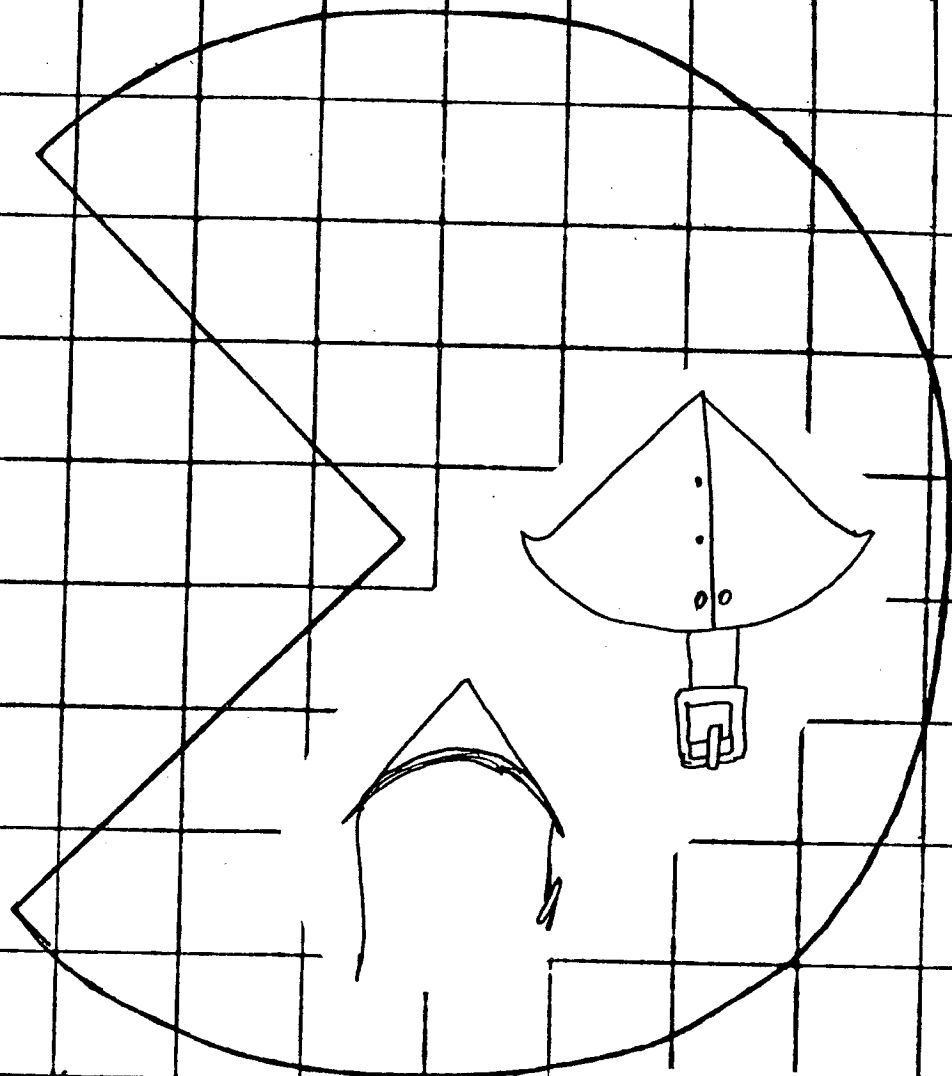


shoulder

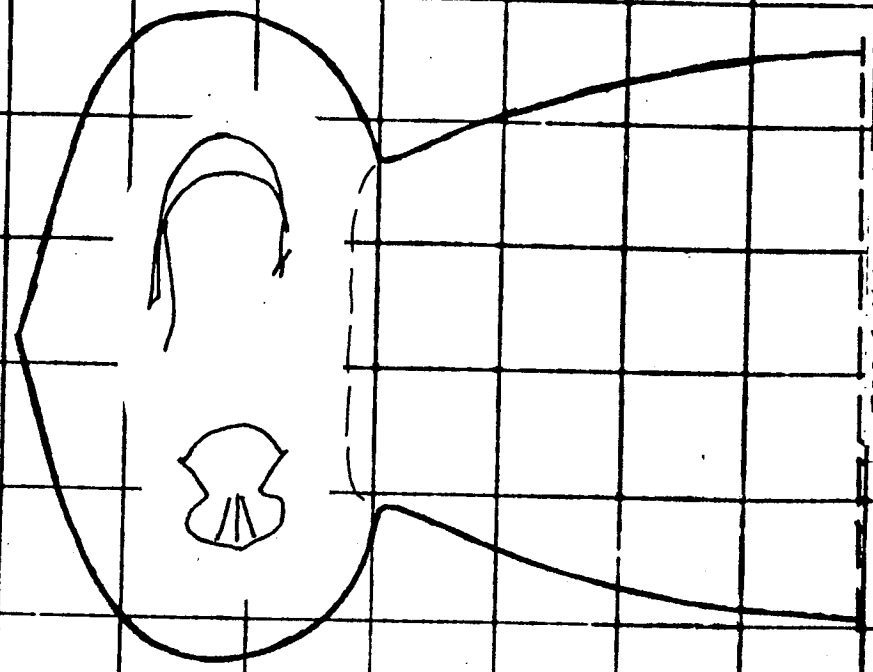
spaulder

upper arm  
plate





elbows

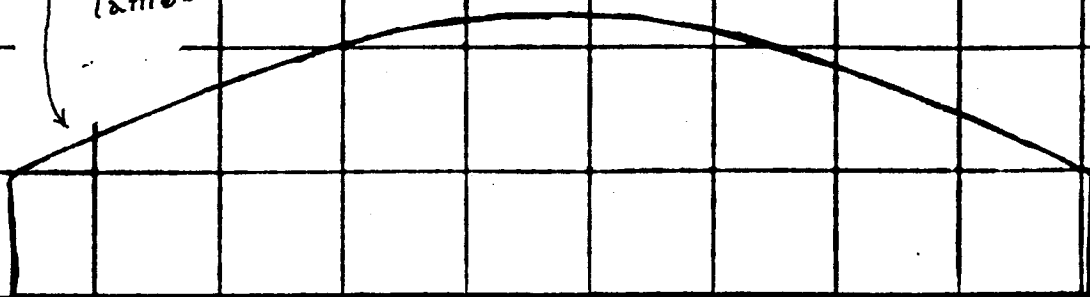
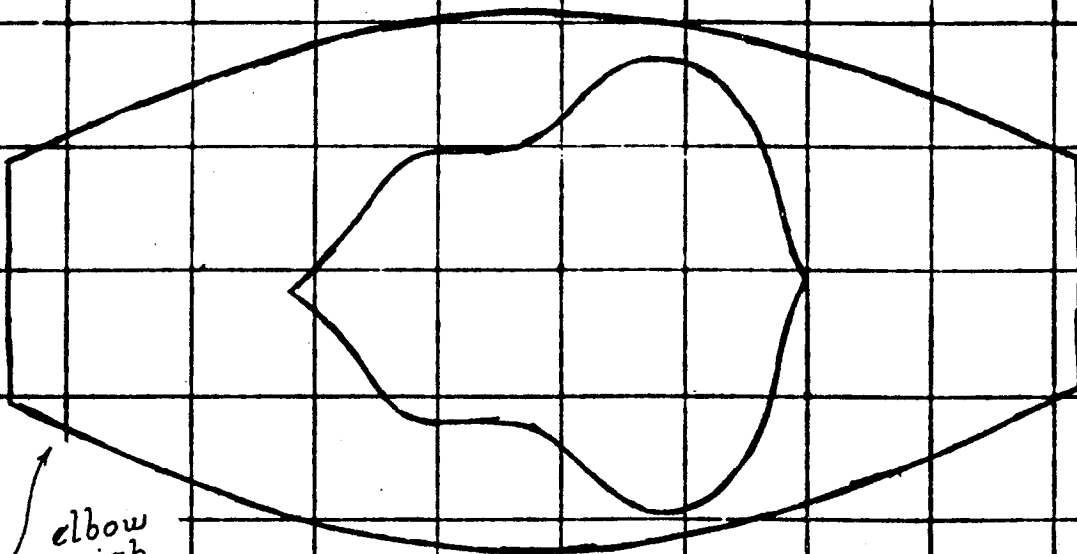
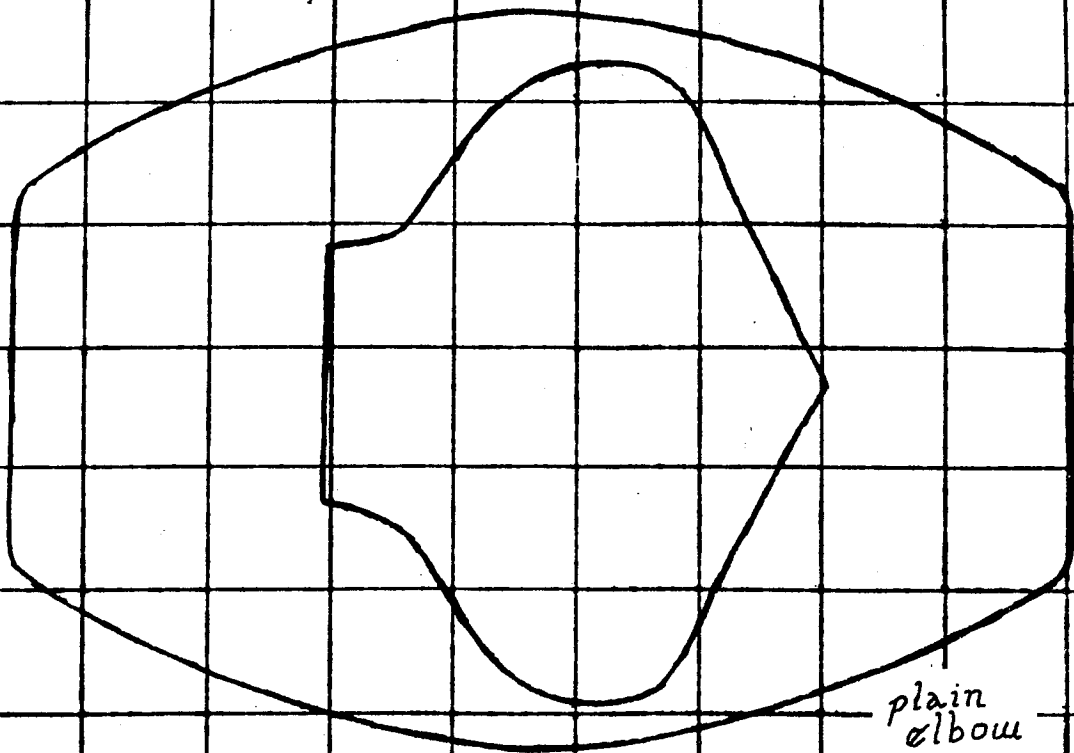


Pattern Fold

# splinted vambrace

use heavy leather with steel or plastic  
splints, or sole leather alone

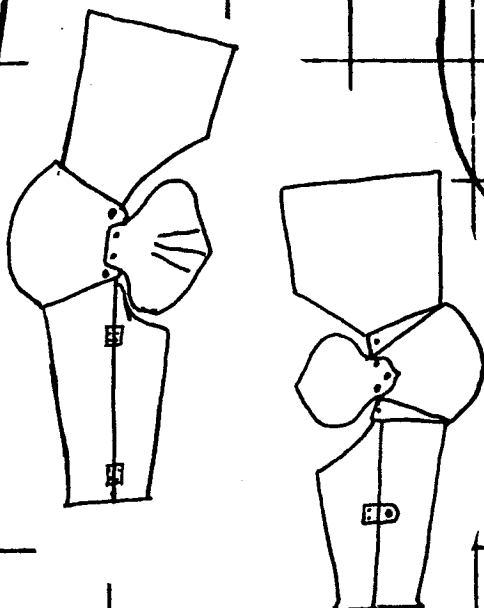
Pattern Fold



articulated vambrace

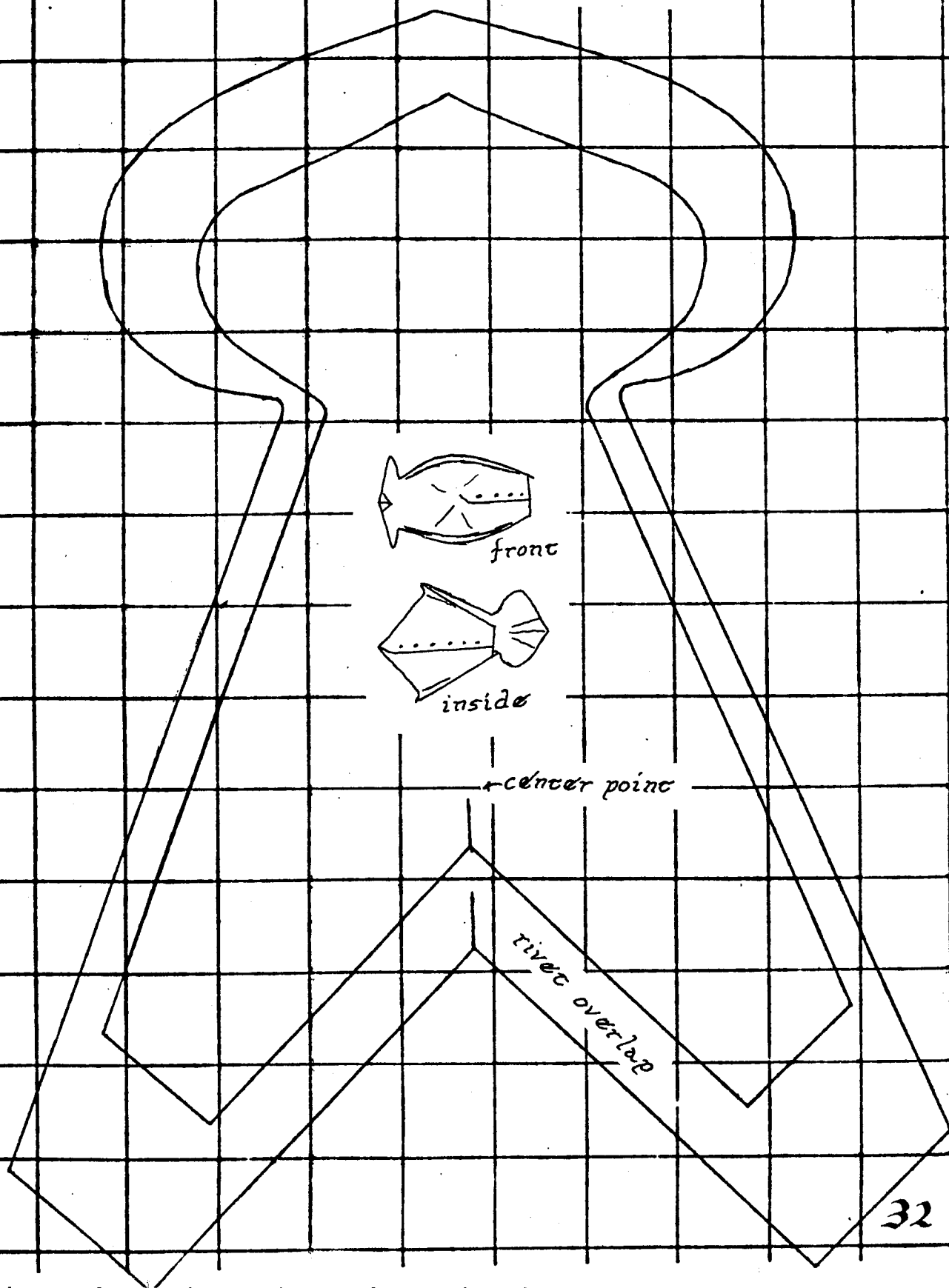


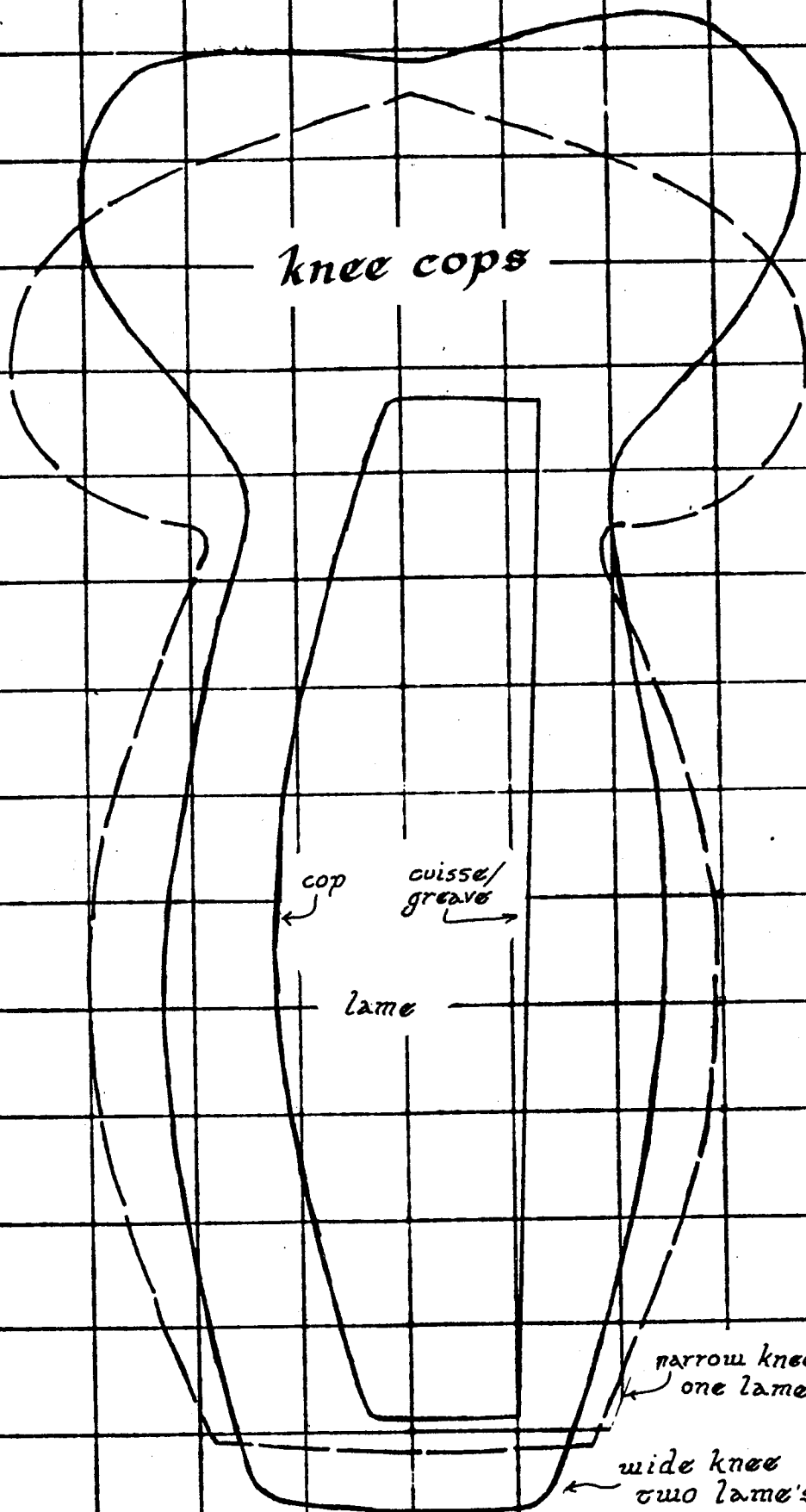
*articulated  
vambrace*



*line cuff with  
close cell foam*

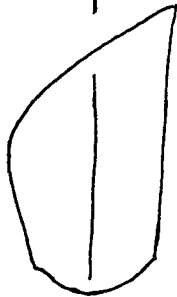
*very simple elbow  
& knee*



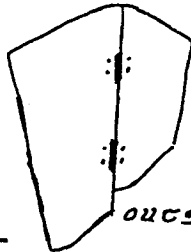


# *cuisse*

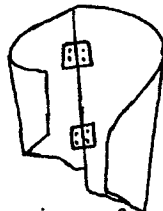
knee



front



outside



inside

pattern fold

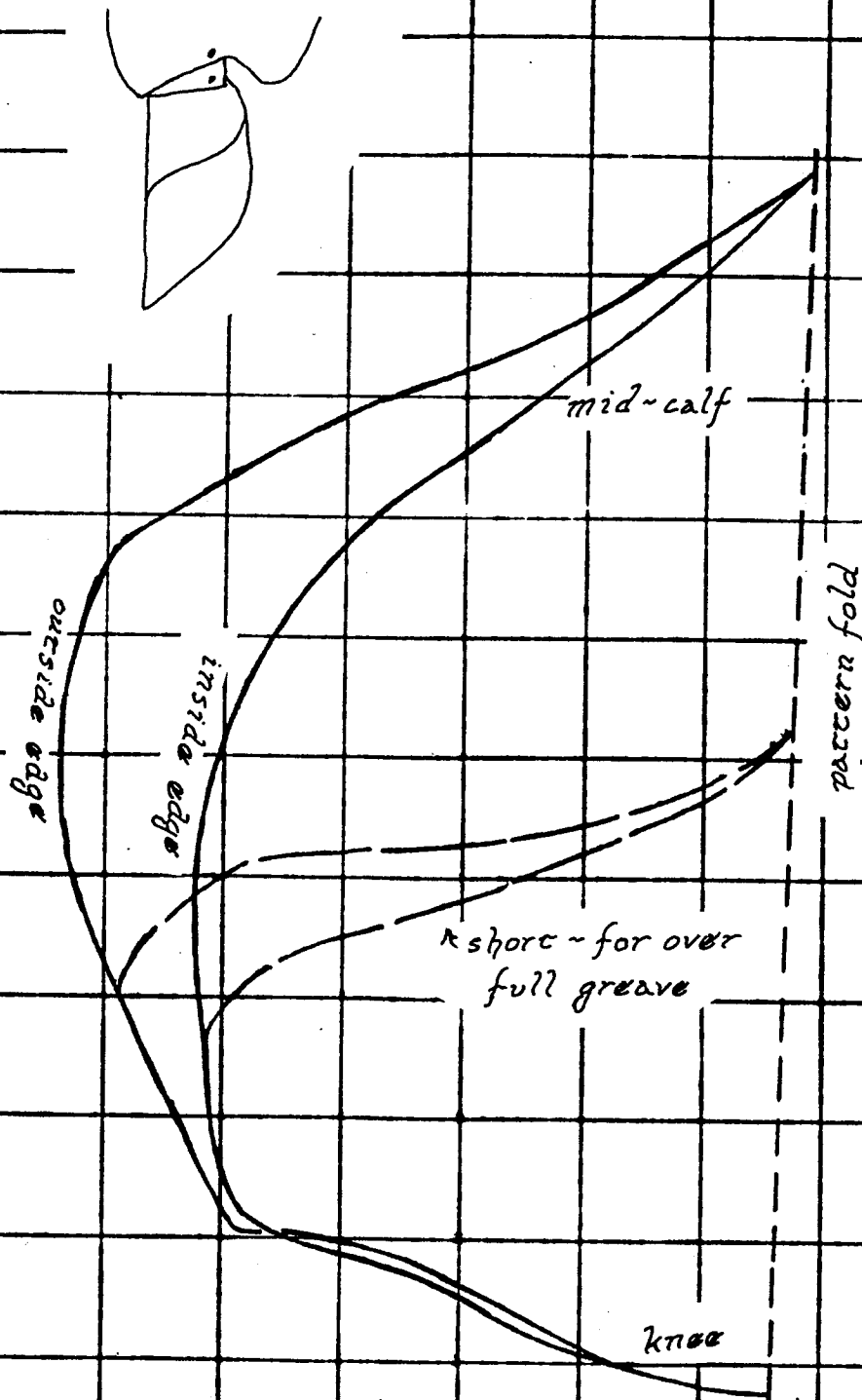
outside edge

inside edge

backplace  
(optional)

cuisse

# demi-greaves



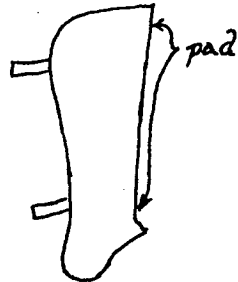
greave

ankle  
bone

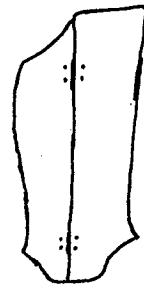
heel

foot

pattern fold



open



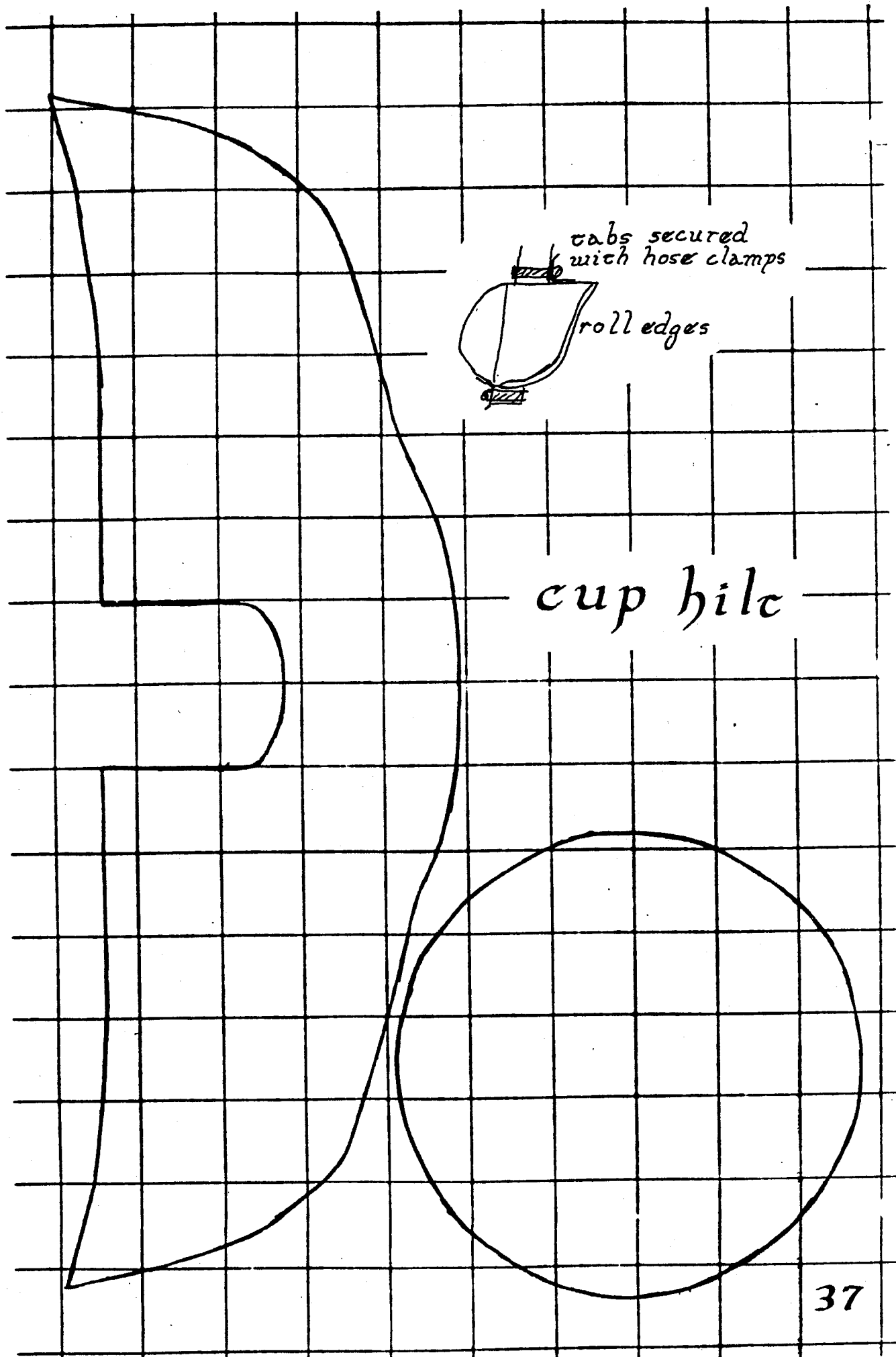
closed



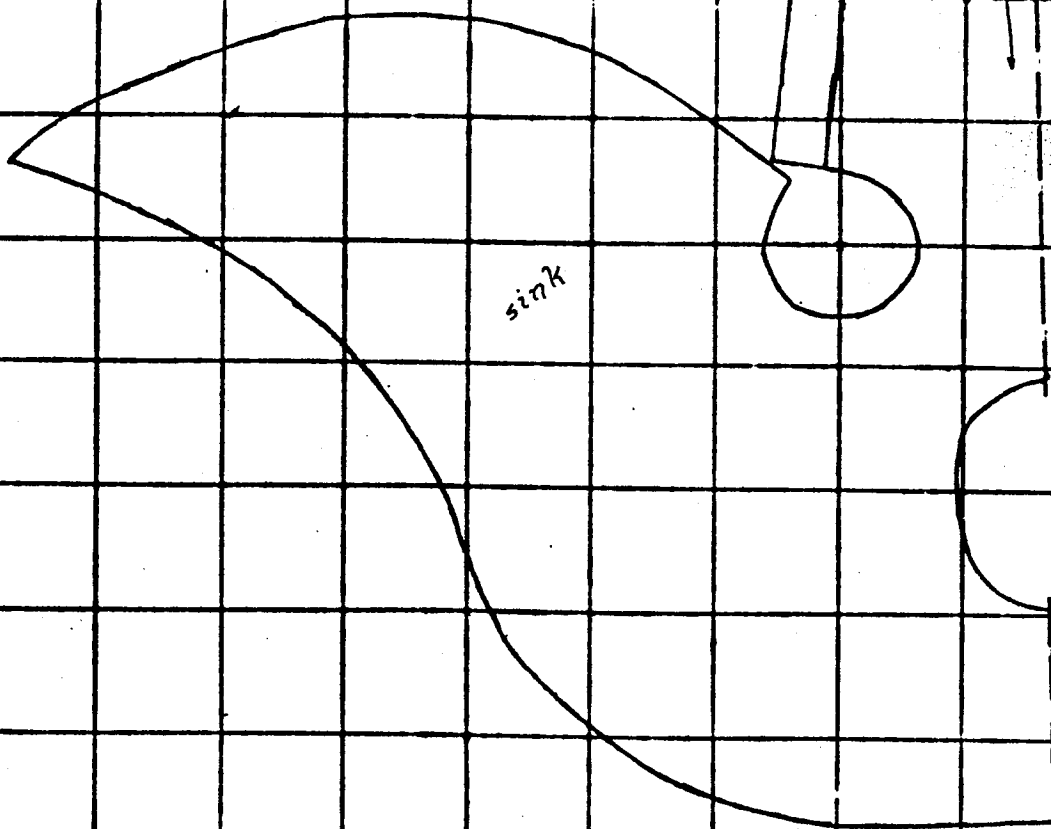
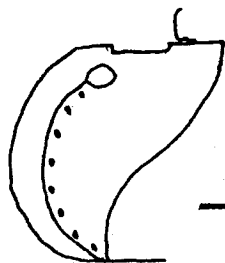
pattern fold

sink  
this  
area

this pattern is designed to  
go under a short demi-greave  
hung from a knee cap.



*cup hile*



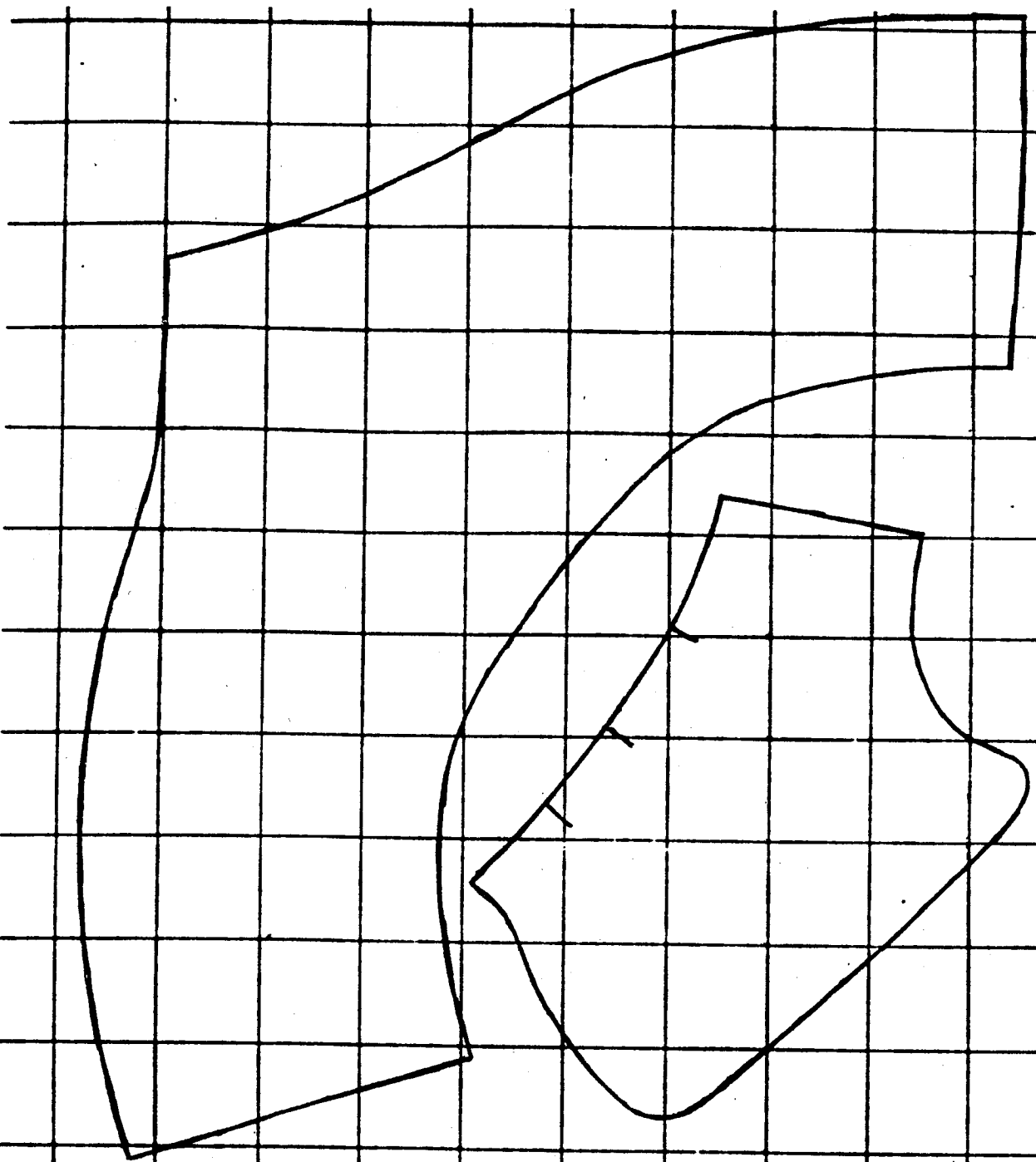
*or optional river tab*

*weld line*

*sink*

*pattern fold*

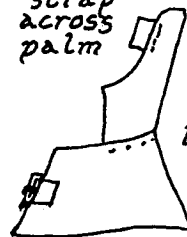




*half gauntlet*

*for use with a basket hilt*

*strap  
across  
palm*



*line cuff  
w/ close  
cell foam*

little

index

index

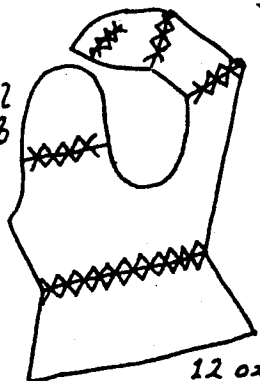
little

closed  
fist finger  
tip

little

index

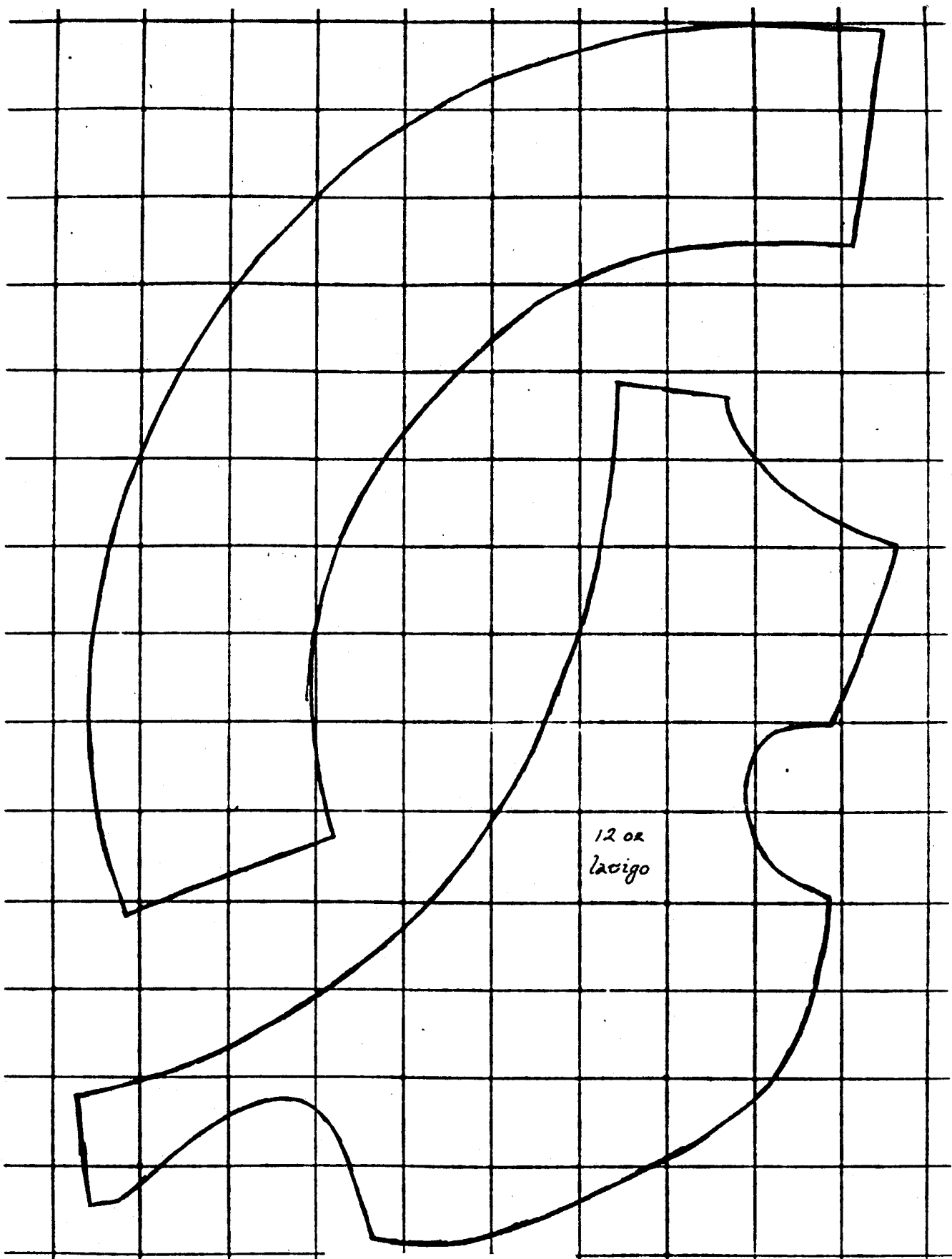
metal  
thumb



12 oz  
latigo

open fist  
finger tip  
(pole weapons)

leather mitten gauntlet



12 or  
lacigo

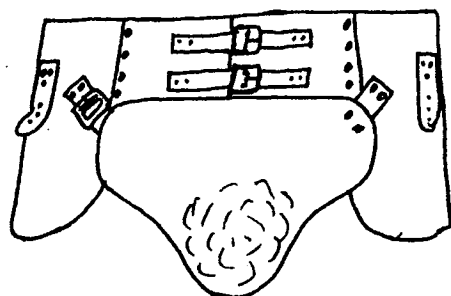
*gaunclec conc.*

Pattern Fold

Steel

Sink the  
area

side  
view

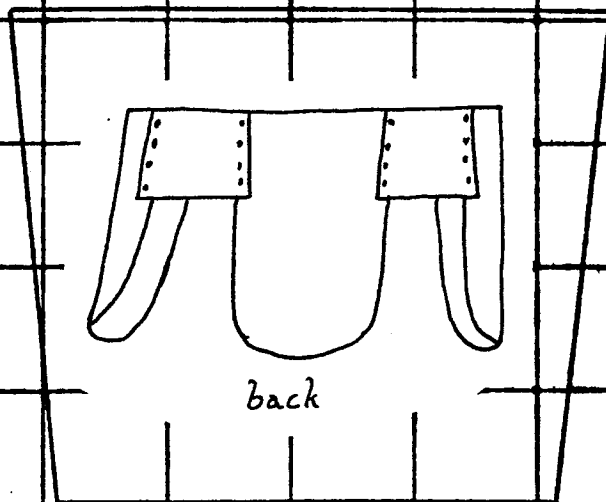


waist

hip

front

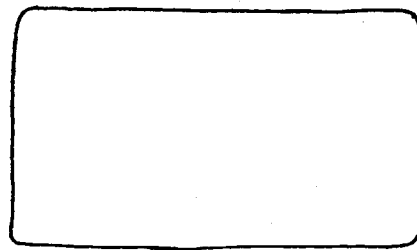
hip belt



back

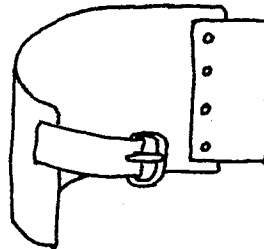
Leacher

# kidney places



6~8"

10~12"



leather  
hinge  
in back

roll plates to fit around sides of torso,  
hinge in back, and buckle across front.

## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

### References

These are by no means all the sources or books on making armor for SCA use, however they are the ones I have seen and had access to, and found useful. Where available, each book has the International Standard Book Number (ISBN) and the Library of Congress Card Catalog Number (LoC CCN) with it to help you find it.

### Publications of The Current Middle Ages

The Fighter's Handbook, Sir Kevin Perigryne, currently Earl Marshall of the SCA, available through the SCA archives.

Tournaments Illuminated, occasionally runs armor how-to articles.

The Compleat Anachronist, Vol I & II are "The Best of The Hammer".

The Hammer, the quarterly magazine of the Middle Kingdom Armourer's Guild. Publication may be ending soon. Contact Brian Flax (The Shield Press), 6758 N. Sheridan #239, Chicago Illinois, 60626, for availability. He also has armor patterns and an armourer's guide for sale.

### Other Publications of Interest

A Book of Armour, by Patrick Nicolle, Puffin Picture Book #97. This is a kids' picture book with good line drawings and brief explanatory text. Very Good.

Arms and Armour, by Frederick Wilkinson, Hamlyn, 1978. ISBN 0-600-303594. Has reasonable text and some good examples pictured of many periods. Good.

Arms and Armour Annual, Vol 1, Edited by Robert Held, Follet Publishing Co. ISBN 0-695-80407-3 (paper), 0-695-80435-9 (cloth), LoC CCN 73-83405. Several articles of interest, with some good line drawings. Good.

Arms Through the Ages, by William Reid, Harper & Row, 1976. ISBN 0-06-013527-1, LoC CCN 76-10105. Good text with a fair number of good colored line drawings, although text and illustrations don't always coincide. Good.

British and Continental Arms and Armour, by Charles Henry Ashdown, Dover reprint, 1970. ISBN 0-486-22490-2, LoC CCN 74-113862. Some good text and interesting drawings of

## A BEGINNER'S MANUAL OF ARMOR CONSTRUCTION

effigies, unfortunately done before a lot of archeological finds came to light and therefore contains some misconceptions and errors. Fair.

English Weapons and Warfare, 449-1600, by A.V.B. Norman and Don Pottinger, Prentice-Hall, Inc., 1979. ISBN 0-13-282871-5, LoC CCN 79-784833. Very good merger of text and line drawings in historical sequence. Shows the underpinnings as well as the outer layer. Very Good.

European Armour, by Claude Blair, B.T. Batsford LTD., reprint 1972. ISBN 0-8448-0052X, LoC CCN 72-80309. Good discussion of armour development and construction, accompanied by line drawings and pictures, and an appendix of line drawings of various pieces. Very Good.

A Glossary of the Construction, Decoration, and Use of Arms and Armour, by G.C. Stone, Jack Brussel, 1961. Not as impressive in person as the title is, this is a large book (700+ pages) organized alphabetically by common name, most pictures are photos (not all clear) and not a lot of useful detail shown. Warning, I have seen (and heard) of this book being sold at \$40 or more; it is frequently also seen (including through Publishers Central Bureau) for \$15.

Greece and Rome at War, by Peter Connolly, Prentice-Hall. ISBN 0-13-364976-8, LoC CCN 810218. Good drawings and descriptions of Greek and Roman era armour, including the fastenings and inside construction. (It has an exploded view of a Lorica Segmentada). Good.

Weapons and Armour, edited by Harold H. Hart, Dover picture series, 1982. ISBN 0-486-24242-2, LoC CCN 81-17323. Wood engravings of all sorts of weapons and armour, good for ideas. Fair.

2,500 Years of European Helmets, by Howard M. Curtis, Beinfeld Publishing, Inc., 1978. ISBN 0-917714-06-7, LoC CCN 76-20423. Pictures and describes a large variety of helms and helmets, the photography often appears to be either just out of focus or through museum display cases, but still has a lot of idea sources and some line drawings. Good text on each helm pictured. Good.