MODERN PATTERN CUTTING AND DESIGN

by

H. J. PATRICK
F.B.S.I.

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Twenty-five years teacher at the
Boot & Shoe Technical College, Kettering (Evening Classes)

A Treatise for the Student of the Boot and Shoe Industry

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FOREWORD

by

F. P. WOOTTON, M.B.E., F.B.S.I., A.M.B.I.M.
Director, Manfield & Sons Limited, Northampton

FASHION changes are now as frequent in footwear as in clothing generally and for the student of design this becomes a continual challenge as well as an exciting occupation. The most satisfying and more permanent art forms however are the result of a very thorough basic training in proportion and line which are fundamental to good taste particularly in manufactured products.

The industrial design student needs therefore much guidance and training in the accepted or traditional proportions in footwear styles and this work has been published to assist the technical pattern cutter in acquiring this experience.

Mr. H. J. Patrick has been for many years in charge of the Pattern Cutting and Pattern Making Department of Mobbs Miller Ltd., Kettering and has thus been closely connected with trade practice over a wide field of the shoe industry.

Using excellent diagrams of the model size, he has illustrated very clearly and very simply how to divide up the standard pattern to produce results in the finished shoe which can be regarded as accepted practice.

It is only by much training based on a sound but simple "scaffolding" that the student can build up his judgment of correct pattern proportions and thereafter develop those variations from the normal which we know as current fashion.

F. P. WOOTTON.

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INTRODUCTION

In preparing this work, I have endeavoured to meet a long felt need in the industry, that is to cover the Pattern Cutting section of our craft with a modern method that is more comprehensive than is usually attempted, dealing with the cutting of the insole, the outsole, the formes, the standard and the sectional parts of many designs in general use today, covering Men's, Women's and Children's work.

All standard constructions, with the exception of the boot standards, are to a method devised by myself and it is interesting to note that in this method full use is made of right angles, this being less confusing to the student or beginner than angles of varying degrees.

This tends to speed up the production of the pattern and there is less likelihood of error.

By the use of diagrams, the process evolved in the cutting of any design and the order of sequence is fully illustrated as in the following example, for the men's Oxford shoe.

Diagram

5 Showing the standard outline and the lines of construction.

7 Showing the outside sections and the position of the various parts.

8 Showing the lining superimposed on the standard and giving the seam, trim and stiffener allowances. Dotted line shows standard outline, solid line shows lining outline.

9 Showing the tongue and back strap and the measurements required.

10 The final diagram shows the complete upper and the number of sectional parts required for the finished shoe, also the allowances for seams, laps and edge treatment are given.

H. J. Patrick.

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CONTENTS

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THE INSOLE SHAPE

To construct the insole shape from the last, first cut a piece of paper about $\frac{1}{4}''$ larger than the bottom of the last. Fasten carefully to the last by inserting a tack in the toe, another at the joint, one in the waist and one in the seat.

Then take impressions of the forepart and seat where the edges of the last are clearly defined, remove the paper from the last and cut out to the impressions made.

In the waist where the last has no sharp edges the insole must be drawn in freehand. To the expert this presents no difficulty, but the student will need some method to assist him to obtain the correct proportions, such as shown in Diagram No. 1.

Draw a line to outside curves and mark S and J where the insole touches this line. Bisect S and J for W, mark insole curve $\frac{1}{4}''$ from this point.

The average width of insole at the waist is three-quarters the width of the seat plus $\frac{1}{4}''$ for men's work.

Waist curves vary according to type of footwear being made, also the contours of the last must be considered.

Light shoes will require narrow waist.
Heavy shoes will require wide waist.

Ladies' insoles vary according to the height of heel that the last will carry. This is shown in the following table, which gives the average width of waist required.

1″	heel	= $\frac{3}{4}$	of seat plus	$\frac{1}{4}''$
$1\frac{1}{2}''$	,,	= $\frac{3}{4}$	,,	$\frac{3}{16}''$
2″	,,	= $\frac{3}{4}$	,,	$\frac{1}{8}''$
$2\frac{1}{2}''$	,,	= $\frac{3}{4}$	,,	$\frac{1}{16}''$
3″	,,	= $\frac{3}{4}$	of seat	

These measurements may also vary for the requirements of fashion and style, as the waist is largely a matter of design.

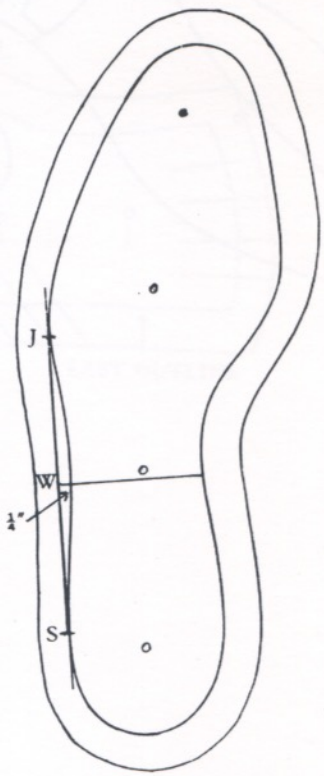

DIAGRAM No. 1

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FORME CUTTING

Before cutting a forme from the last, the dividing lines must be marked as shown on diagram No. 2.

Fig. 1. The line A-B-I which divides the front of the last, from the centre of toe through the front height to the instep.

Fig. 2. The line dividing the back of the heel.

Fig. 3. The lines in the waist can be marked in by the insole pattern.

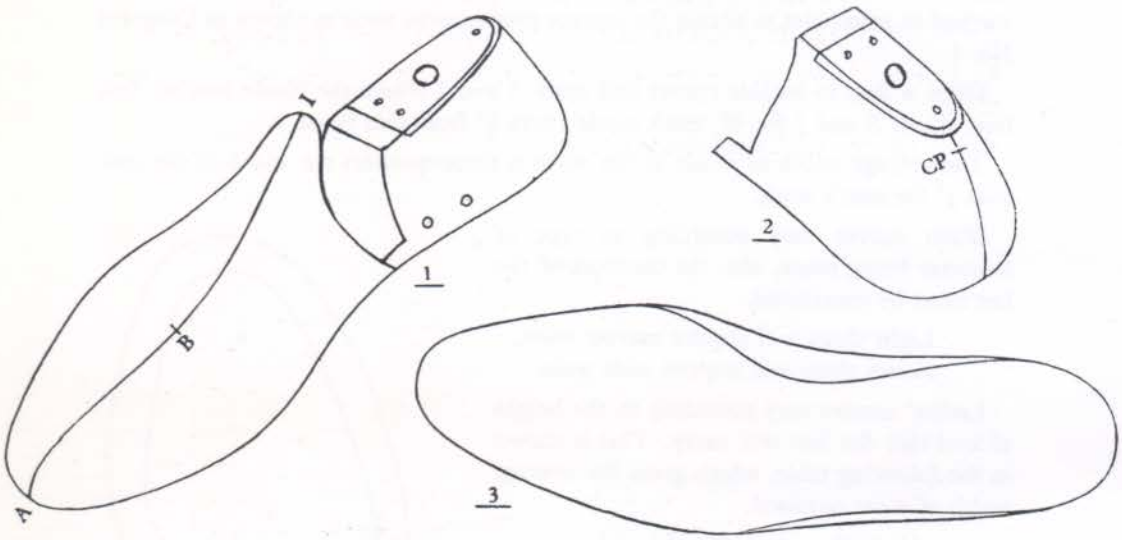

DIAGRAM NO. 2

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Marking the paper

Place the last on the paper and trace round the last to get the profile shape. Diagram No. 3.

Remove the last and cut out this shape leaving about $\frac{1}{2}$" above the lines so that there will be sufficient area of paper to cover the lines on the last.

Slots should be cut to follow the direction of the wood of the last.

The next step is to place the outside forme on the last so that the working allowances are evenly placed. Tacks are now inserted at the positions shown and numbered on diagram No. 3. Care should be taken to see that the paper lies smoothly along the side of the last. Now transfer the lines on the last to the paper forme, at the same time marking the forepart and seat.

Remove the forme from the last and cut to the pencil lines you have made.

Replace the forme on the last with tacks in the original holes and check for accuracy.

Repeat the process for the inside forme.

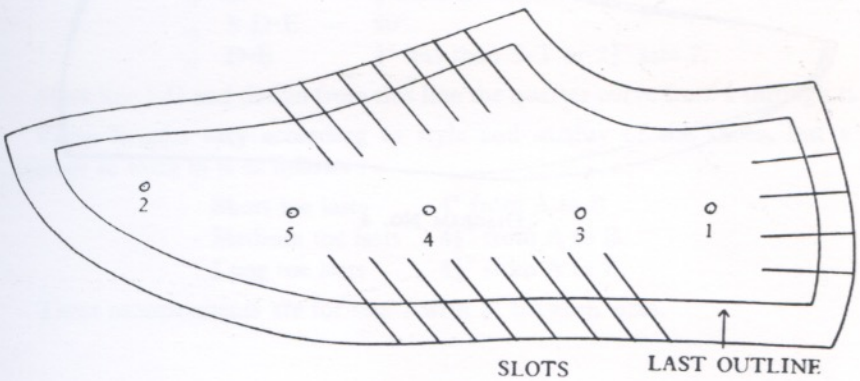

DIAGRAM No. 3

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Mean Forme. Diagram No. 4.

To obtain the mean forme first pencil round the outside forme, then place the inside forme on this outline so that the centre of the back curve, the base line at the seat and the top of toe are together. The variation between the two formes must now be divided, except along the bottom where the outside line is followed leaving the inside line intact.

We now have the finished mean forme with the inside line from the toe to the joint showing the difference between the inside and outside of the pattern.

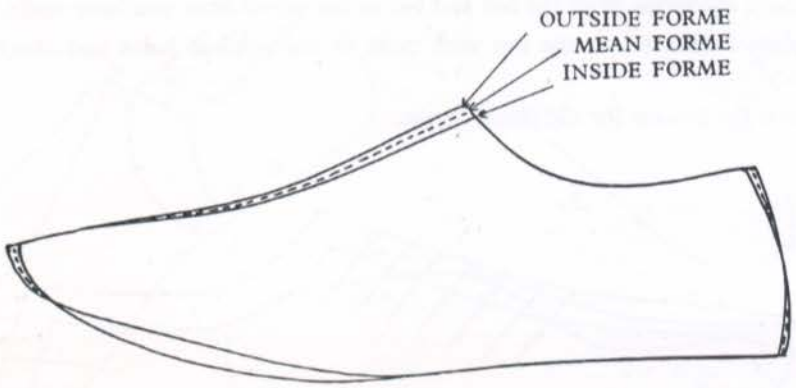

DIAGRAM No. 4

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MEN'S SHOE STANDARD

Diagram No. 5.

Mark outline of forme and add lasting allowance $\frac{9}{16}''$ for welted work. Add stiffener allowance $\frac{1}{8}''$ at S.

The following reference points are also marked (SLL is an abbreviation for 'standard last length'.), i.e., 10″ for size 5, with $\frac{1}{3}''$ between sizes.

Point	A		Toe.
,,	B		Front height.
,,	X		Contact point 90° to A-B.
,,	B-I	=	$\frac{1}{4}$ SLL + $\frac{1}{4}''$ or $2\frac{7}{8}$ size 7.
,,	I-XI		is parallel to B-X.
,,	S		Seat.
,,	S-CP	=	$\frac{1}{5}$ SLL.
,,	T		$\frac{1}{2}''$ above CP or $2\frac{5}{8}''$ size 7 from S.
,,	D		$\frac{1}{4}$ SLL from S.
,,	S-D-E	=	90°.
,,	D-E		$\frac{3}{8}''$ less than S-T or $2\frac{1}{4}''$ size 7.

Mark line I-D and design from this line the quarter curve from I through E to T.

Vamp lengths vary according to style and quality of the shoes, but a good average to work to is as follows :

Short toe lasts	4″ from A to B.
Medium toe lasts	$4\frac{1}{8}''$ from A to B.
Long toe lasts	$4\frac{1}{4}''$ from A to B.

These measurements are for size 7 with $\frac{1}{8}''$ between sizes.

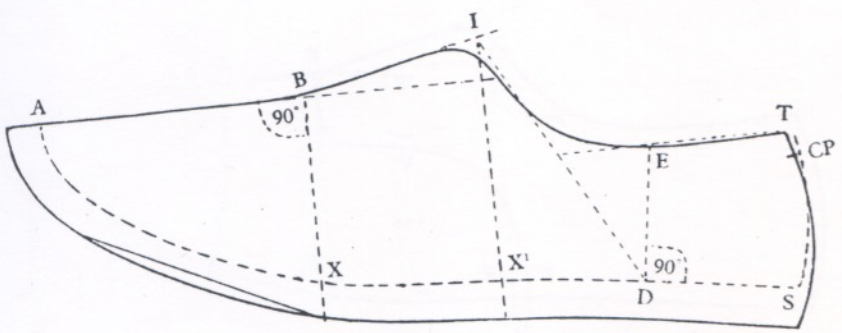

DIAGRAM No. 5

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To get the back curve of Standard correct so that it follows the shape of the back of the last, place the forme at the $\frac{1}{8}$" addition at S and pivot until the forme is $\frac{1}{16}$" inside at T. Diagram No. 6.

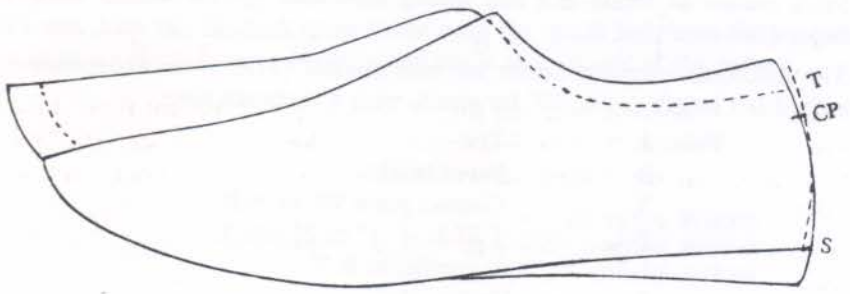

DIAGRAM No. 6

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Designing the sections. **Oxford Shoe.** Diagram No. 7.

Vamp

A-B Length of front.
B¹ is 1⅛″ (the width of a steel rule) from and parallel to B-X.
V is ⅓ of the width of standard measured from B¹.
W is ¼″ behind X¹.

Take a piece of paper twice as large as the vamp section of standard and fold down the centre.

Place the standard A-B to the folded edge of paper and cut from the toe of pattern to the point W. The line representing the difference between the inside and outside forepart lasting allowance is also transferred from the standard pattern.

Prick with an awl the points B-V-W and design the vamp curve through these points.

Cut off the inside lasting edge for rights and lefts.

Cap

B-R equals ⅓ of A-B.

Fold paper and place A-B of standard to the folded edge, cut round lasting edge of standard and transfer the point R.

Use a 14″ radius for the cap of an Oxford shoe.

Quarter

Cut round standard from B to X¹.

Prick holes for the vamp position B-V-W and draw vamp curve.

Add ⅜″ for Underlay.

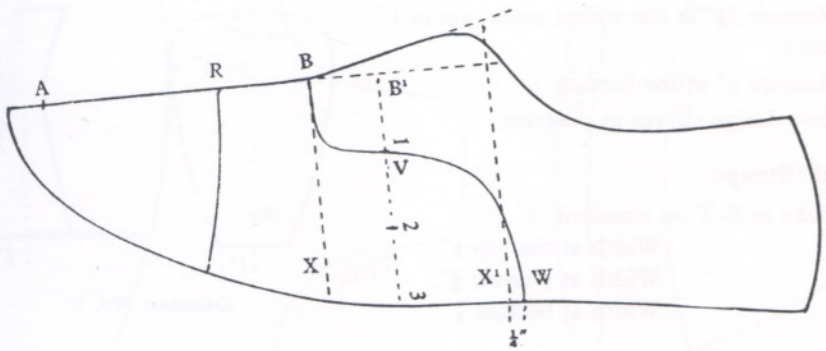

DIAGRAM NO. 7

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Quarter Lining Diagram No. 8.

Cut round the standard from T to X[1].

Trace the vamp line as dotted line B-V-W and add $\frac{1}{2}''$ to give the vamp lining seam. Add $\frac{1}{8}''$ trimming allowance from B to T.

Reduce pattern at S by $\frac{3}{16}''$ for counter pocket graduating to nothing at T, also reduce by $\frac{1}{8}''$ along bottom line.

Dotted line shows standard outline.

Solid line shows lining outline.

Vamp Lining

Fold a piece of paper as we did for the vamp.

Place standard A-B to the folded edge of paper and cut from the toe of pattern to the point W. Now prick through the holes where the quarter lining meets the vamp lining and draw line connecting these points. Add $\frac{3}{8}''$ for underlay from this line.

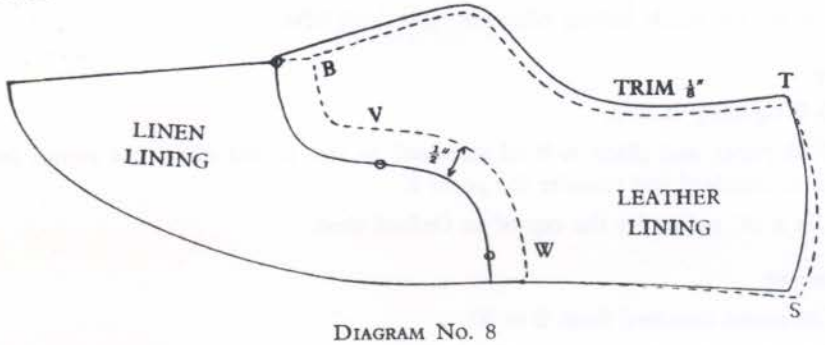

DIAGRAM NO. 8

Tongue Diagram No. 9.

Fold paper and mark on the folded edge the distance from B to I.

Add $\frac{1}{4}''$ above I. Add $\frac{1}{2}''$ below B.

Measure $1\frac{1}{4}''$ at the widest point, about $\frac{1}{2}''$ below I.

Measure $\frac{1}{2}''$ at the bottom.

Now design curves as diagram.

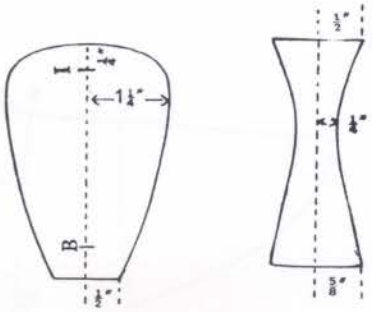

DIAGRAM NO. 9

Back Straps

Make as S-T on standard + $\frac{1}{8}''$.

Width at the top $\frac{1}{2}''$.

Width at $\frac{1}{3}$ down $\frac{1}{4}''$.

Width at bottom $\frac{5}{8}''$.

DIAGRAM NO. 10 *(opposite) shows the complete upper and the number of sectional parts required for the Oxford Shoe.*

Allowances for seams, laps and edge treatment are also given.

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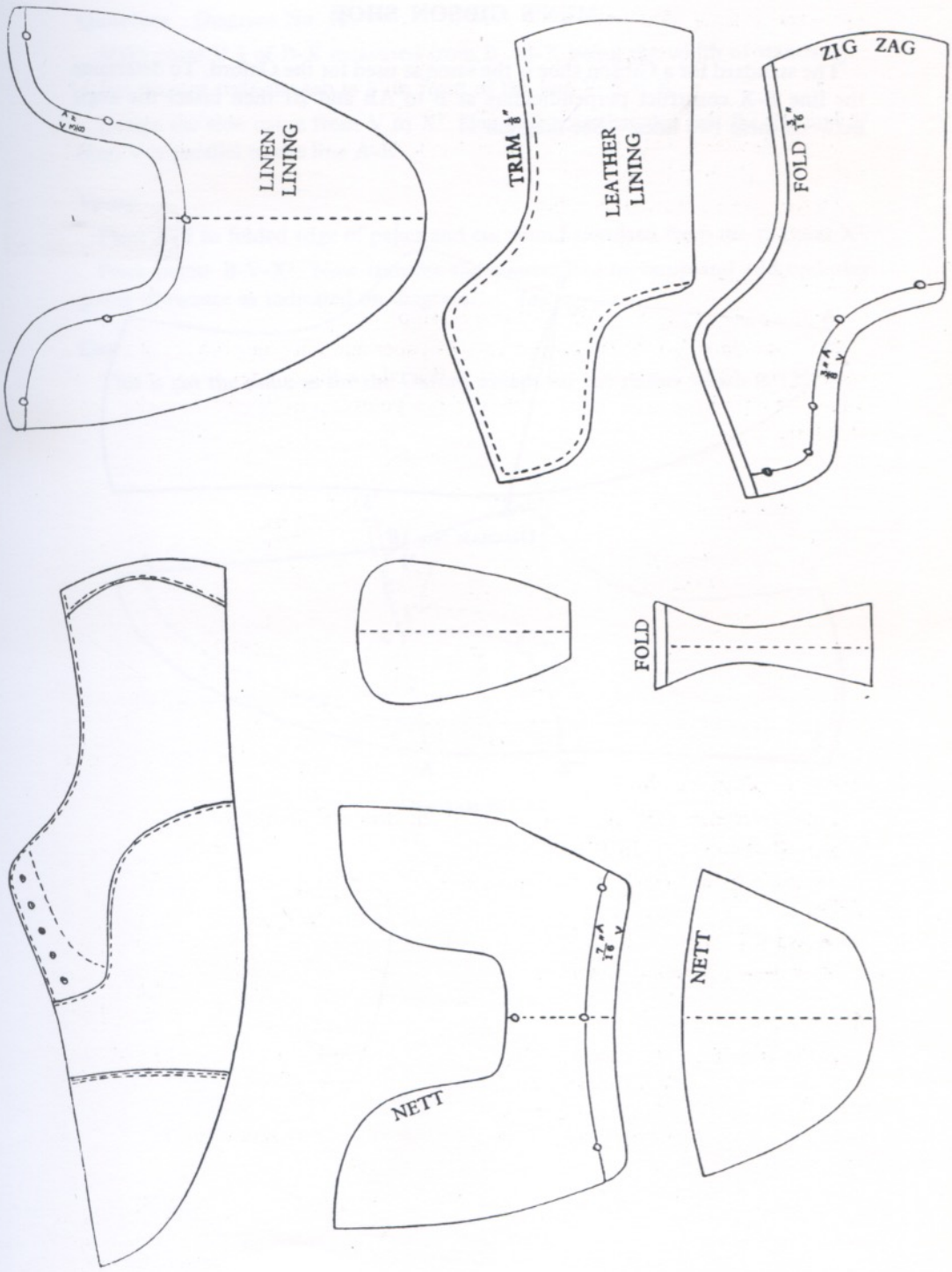

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MEN'S GIBSON SHOE

The standard for a Gibson shoe is the same as used for the Oxford. To determine the line B-X construct perpendiculars at B to AB and BI then bisect the angle between these two lines. See diagram 11.

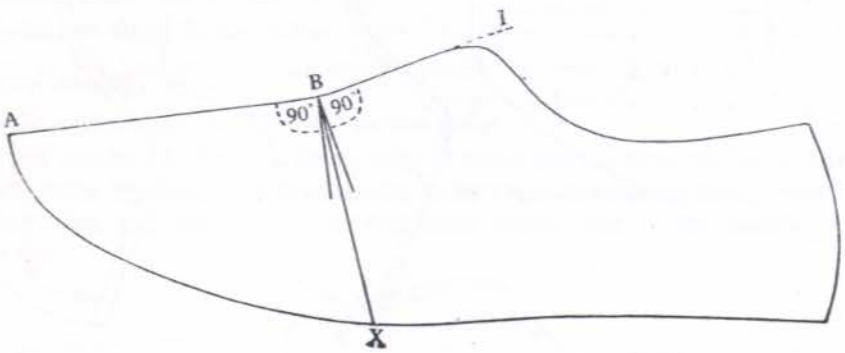

DIAGRAM No. 11

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Quarters Diagram No. 12.

Make point V $\frac{2}{5}$ of B-X measured from B. (B-X being the width of standard).

For average style the tab is $\frac{1}{8}''$ in front of the line V-B at B.

Design the side curve from V to X^1. You will note that this line for the first $\frac{3}{4}''$ from V is parallel to the line A-B.

Vamp

Place A-B to folded edge of paper and cut round standard from toe to point X^1.

Prick points B-V-X^1. Now transfer the quarter line to vamp and add underlay giving allowance as indicated on diagram.

Cap

This is cut the same as for the Oxford except for the radius which is 12″.

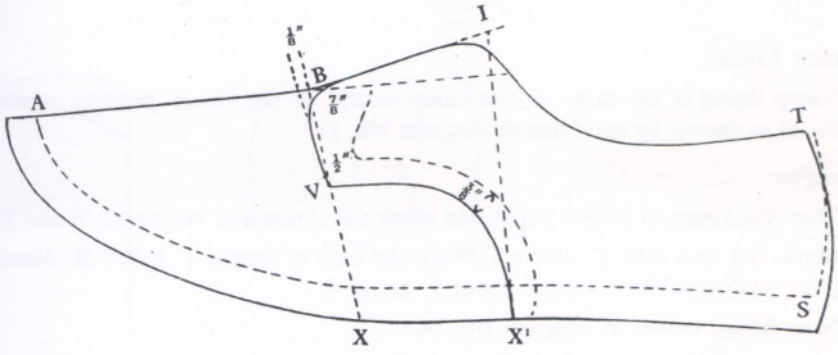

DIAGRAM NO. 12

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Quarter Lining Diagram No. 13.

Cut round the quarter from T to X¹. Add $\frac{1}{8}$" trimming allowance from V to T. Add $\frac{3}{16}$" trimming allowance from V to X¹. Prick through the throat of vamp for the slot position at the tab. Reduce pattern at S for the counter pocket.

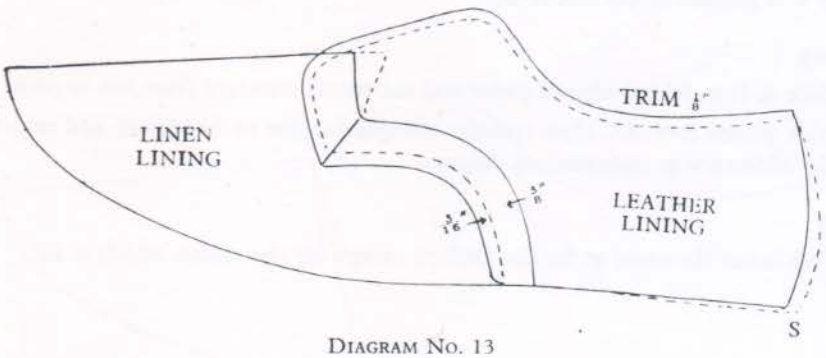

DIAGRAM NO. 13

Vamp Lining

Vamp lining is the same as the vamp except at the throat position which is reduced as shown by solid line in diagram No. 13.

Tongue

Place the vamp to folded paper and mark the throat and the points B and V.

Mark B-I and add $\frac{1}{4}$" above I. Mark the base of tongue $\frac{1}{4}$" below B. Measure $1\frac{5}{16}$" at widest point of tongue about $\frac{1}{4}$" below I.

Now design curves as diagram No. 14.

Back Strap

This pattern is cut as shown for the Oxford.

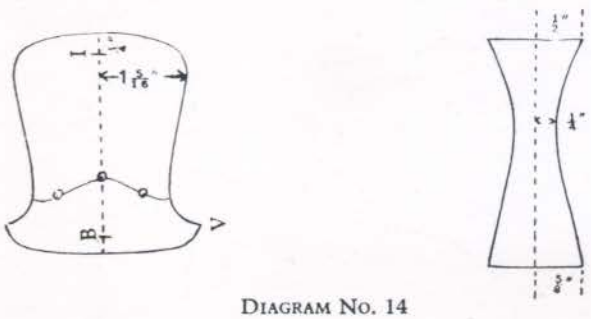

DIAGRAM NO. 14

DIAGRAM NO. 15 *(opposite) shows the complete upper and the number of sectional parts required for the Gibson Shoe.*

Allowances for seams, laps and edge treatment are also given.

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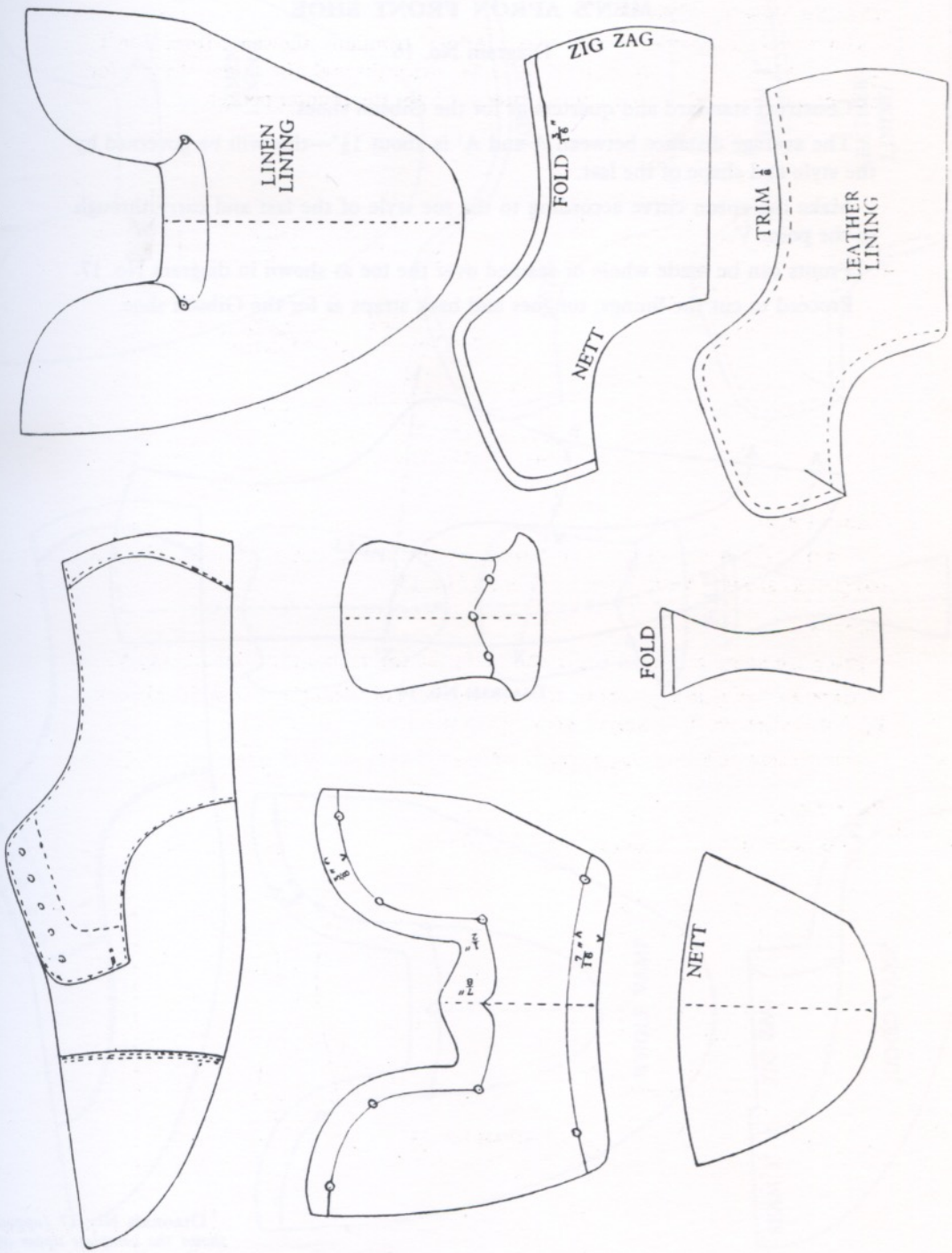

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MEN'S APRON FRONT SHOE

Diagram No. 16

Construct standard and quarters as for the Gibson shoes.

The average distance between A and A¹ is about $1\frac{1}{8}''$—this will be governed by the style and shape of the last.

Make the apron curve according to the toe style of the last and carry through to the point V.

Fronts can be made whole or seamed over the toe as shown in diagram No. 17.

Proceed to cut the linings, tongues and back straps as for the Gibson shoe.

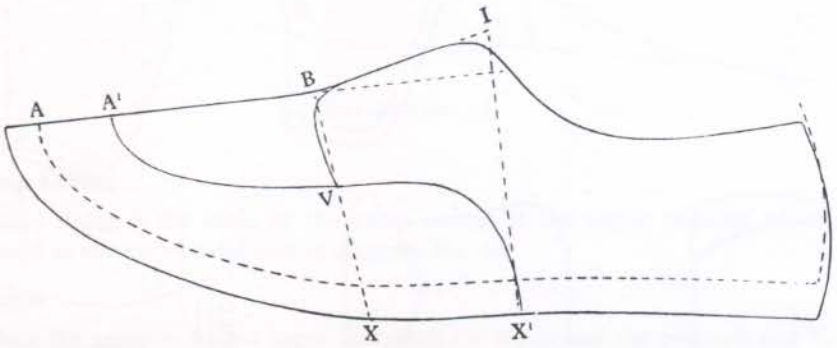

DIAGRAM NO. 16

DIAGRAM NO. 17 *(opposite) shows the complete upper and the number of sectional parts required for the Apron Front Shoe.*

Allowances for seams, laps and edge treatment are also given.

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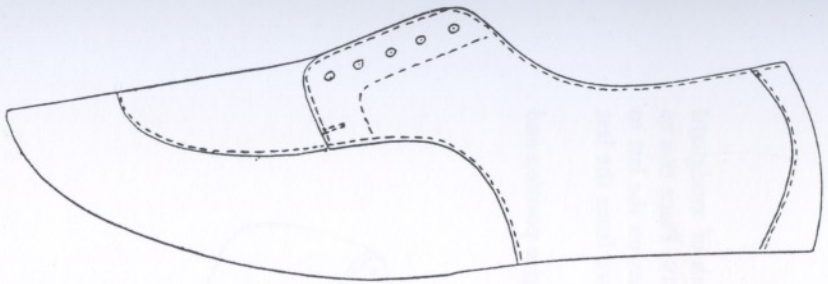

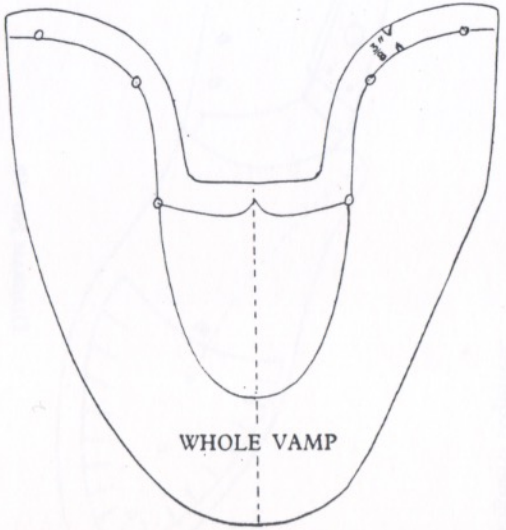

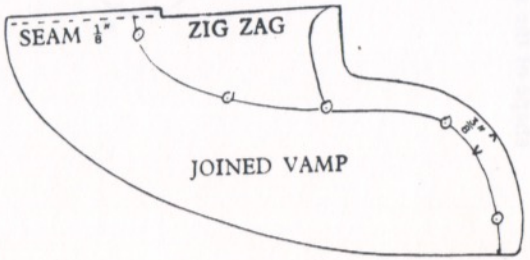

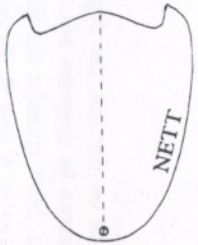

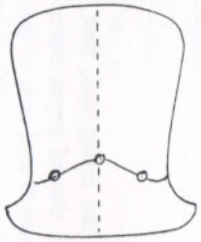

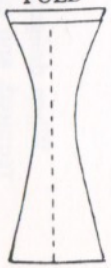

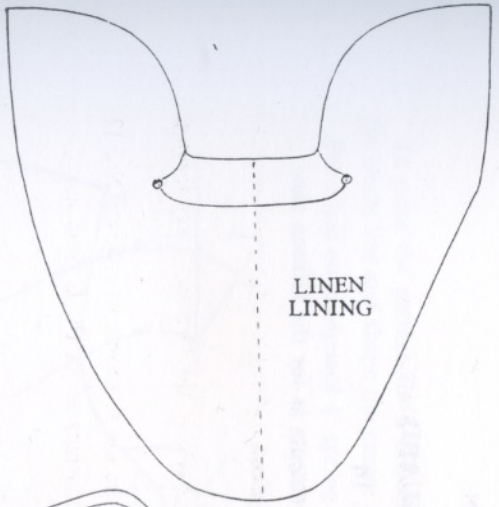

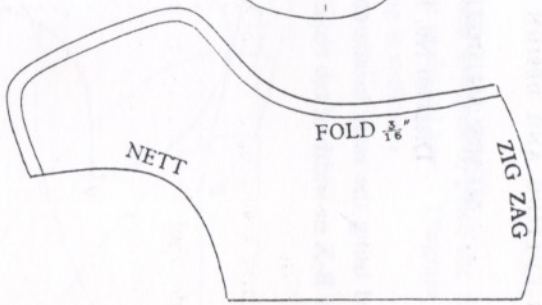

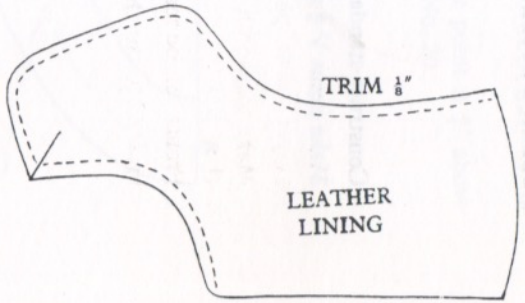

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MEN'S MUDGUARD

Diagram No. 18

Construct standard using the same measurements as for the Gibson shoe. Make point V $\frac{2}{5}$ of B-X or width of tab required.

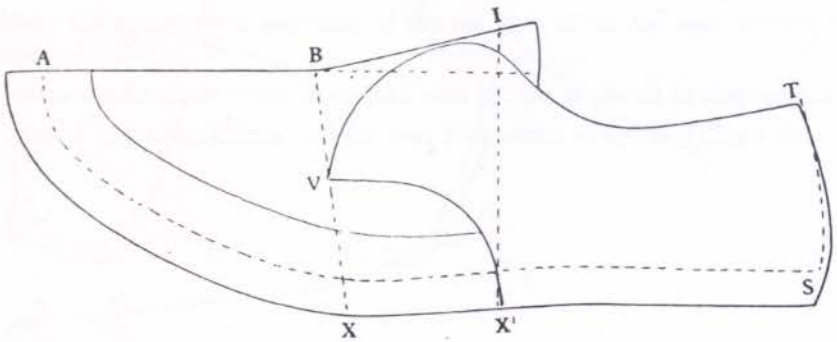

DIAGRAM NO. 18

When designing the mudguard, first mark on the last the depth of mudguard required, and cut a slotted paper caster pattern as diagram No. 19. Place this to the front height point B and tack to the last. Now transfer the lines on the last to the paper forme, also marking the centre line at A and B. Remove from the last and crease down the centre line A-B.

In placing this forme on the crease line of the standard, it will give position and shape of the mudguard required.

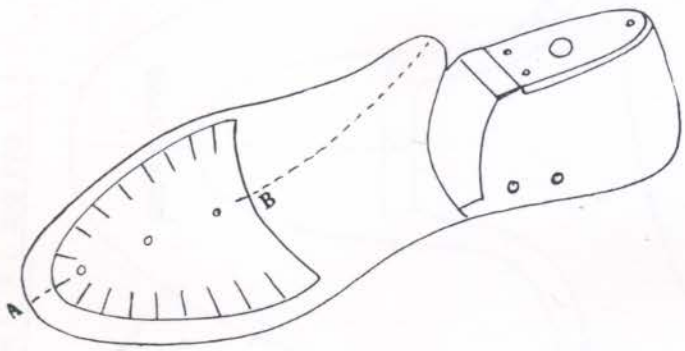

DIAGRAM NO. 19

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To pivot the pattern for a blinded mudguard, place the toe point A $\frac{3}{4}''$ above the crease line and shape the centre as dotted line. Diagram No. 20.

For a laid on mudguard $\frac{1}{8}''$ spring is sufficient.

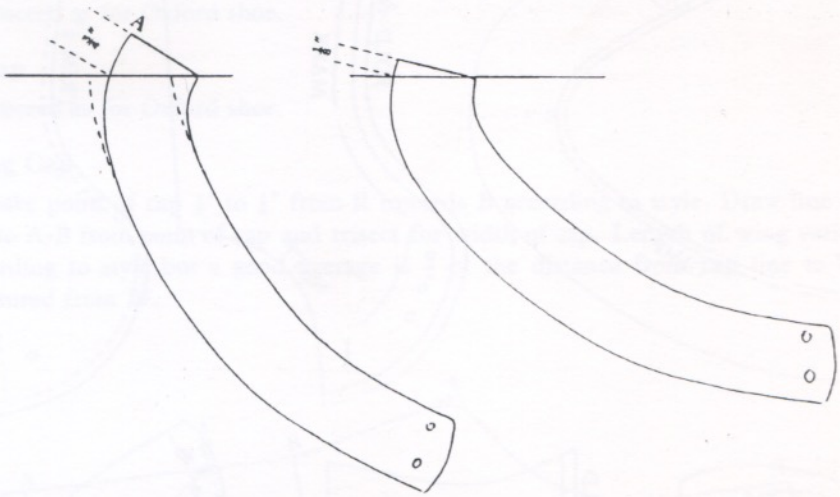
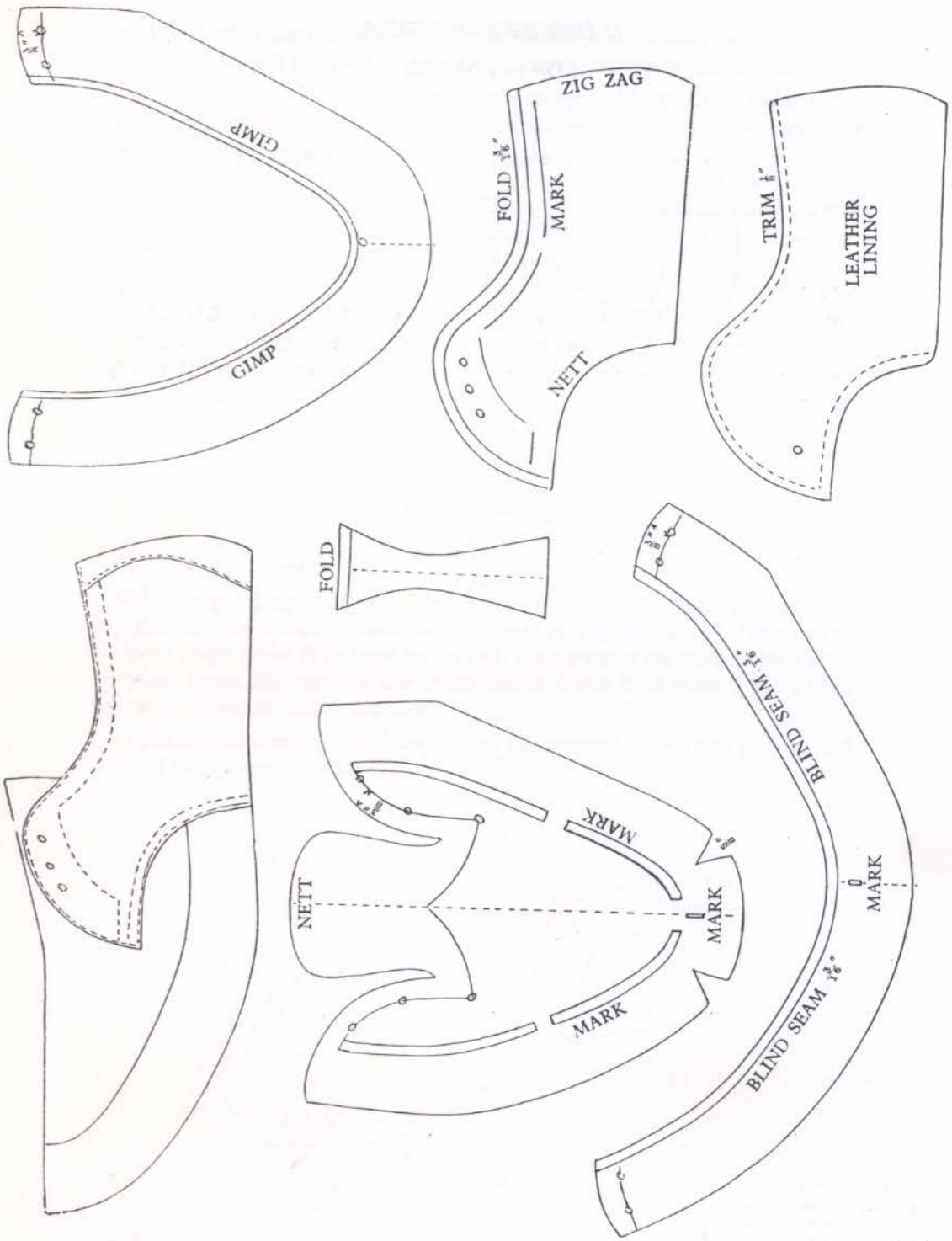


DIAGRAM NO. 20


GIMP
GIMP
ZIG ZAG
FOLD 3/16"
MARK
NETT
TRIM 1/8"
LEATHER LINING
FOLD
BLIND SEAM 1/16"
MARK
NETT
MARK
MARK
MARK
BLIND SEAM 1/16"

MEN'S BROGUE SHOE

Diagram No. 22

Standard

Proceed as for Oxford shoe.

Vamp

Proceed as for Oxford shoe.

Wing Cap

Make point of cap $\frac{1}{8}$" to $\frac{1}{4}$" from R towards B according to style. Draw line at 90° to A-B from point of cap and trisect for width of cap. Length of wing varies according to style but a good average is $\frac{1}{3}$ of the distance from cap line to W measured from W.

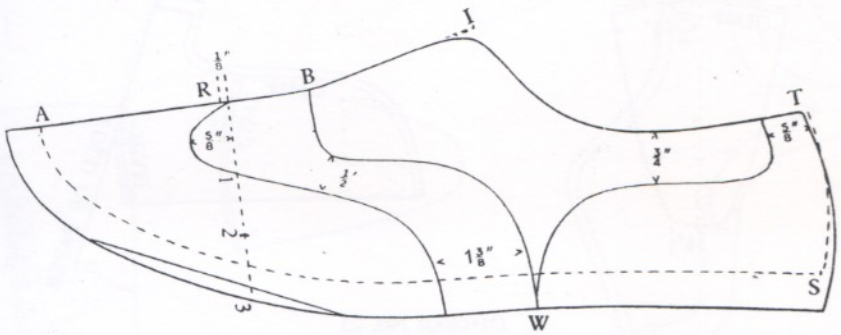


DIAGRAM NO. 22

DIAGRAM NO. 21 *(opposite) shows the complete upper and the number of sectional parts required for the Mudguard Shoe.*

Allowances for seams, laps and edge treatment are also given.

Counters

To cut a whole counter first mark a point on the centre of heel curve, then place this point and top of counter to the folded edge of paper adding seam and other allowances. Diagram No. 23.

Dotted line shows joined counter.

Solid line shows whole counter.

Linings

Will be made as for Oxford shoe.

Tongue

Cut as diagram for gimping along top.

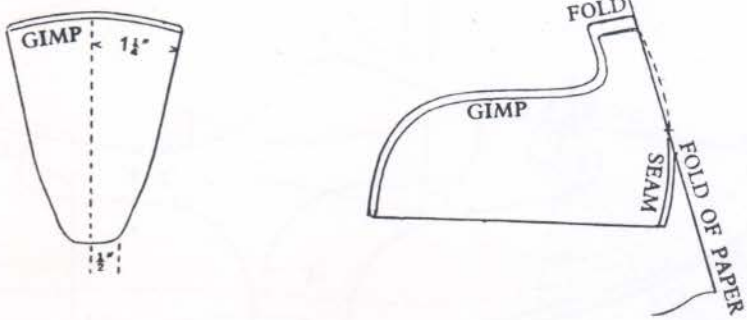
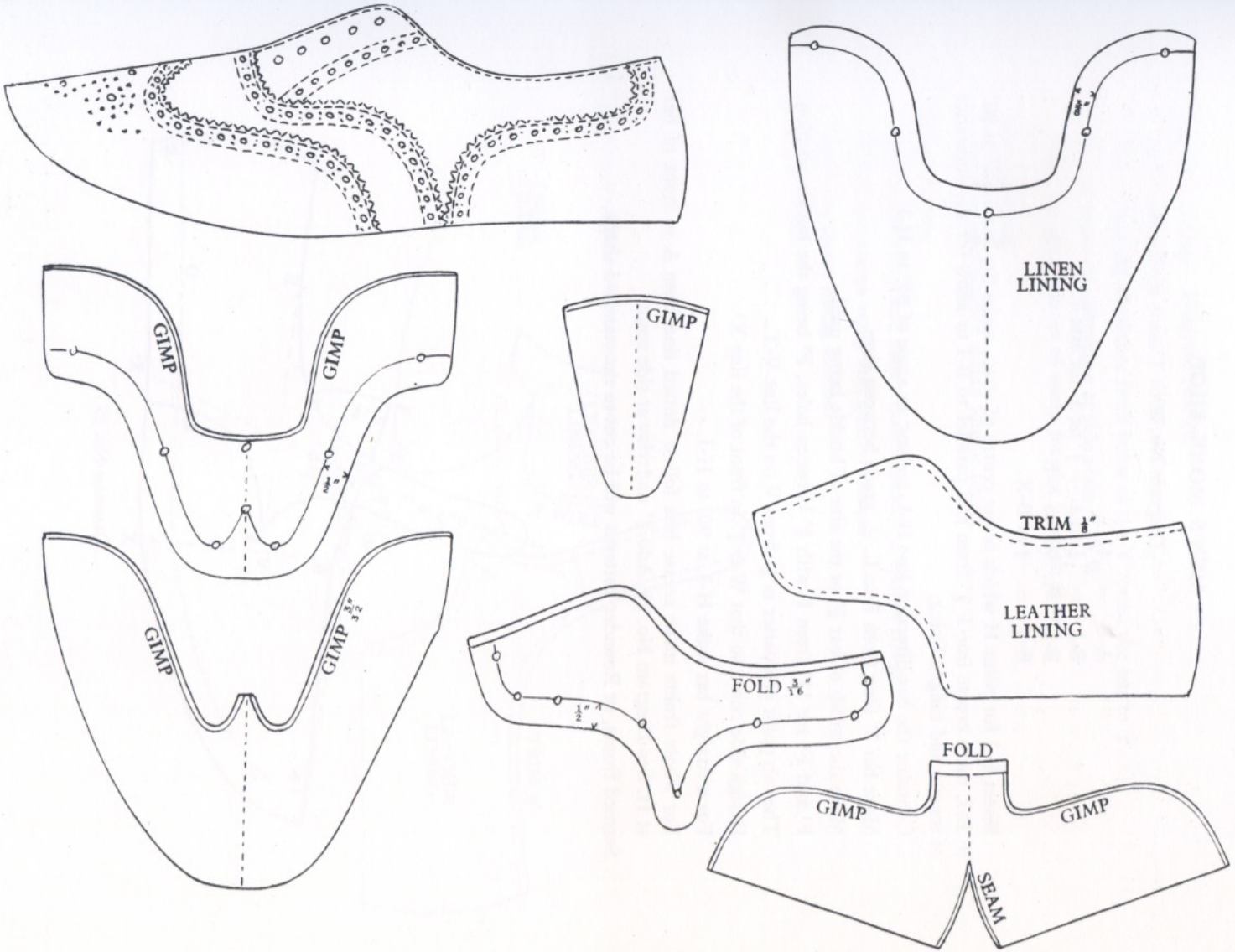


DIAGRAM NO. 23

DIAGRAM NO. 24 *(opposite) shows the complete upper and the number of sectional parts required for the Brogue Shoe.*

Allowances for seams, laps and edge treatment are also given.


GIMP
GIMP
GIMP
GIMP
GIMP
LINEN
LINING
TRIM 1/8"
LEATHER
LINING
FOLD 3/16"
1/2"
FOLD
GIMP
GIMP
SEAM

MEN'S MONK SHOE

Diagram No. 25

A-B = $4\frac{1}{8}$".
B-I = $\frac{1}{4}$ SLL + $\frac{3}{8}$" or 3" for size 7.
B-X = 90° to A-B.
B-V = $\frac{2}{5}$ of B-X.

Bisect B-I for point H which is the centre of strap, make the line H-X¹ at 90° to B-I, mark crease line F $\frac{1}{4}$" from and parallel to B-I to allow for the substance of tongue and tongue lining.

Continue the bar direction line H-L making an angle of 84° to H-I.

Make bar 3" long from F to L. $\frac{1}{16}$ grade between sizes.

Make the width of bar $\frac{7}{8}$" or the size of buckle being used.

F¹ and F² are $1\frac{1}{4}$" from F with $\frac{3}{8}$" between holes, F² being the buckle position.

The tab point of quarter is $\frac{3}{8}$" from V on the line V-T.

Design side curve so that W is $\frac{1}{4}$" in front of the line X¹.

For a straight bar make H-L at 90° to H-I.

For whole fronts make crease line follow dotted line from A to front of bar at H. See Diagram No. 25. Add $\frac{3}{8}$" underlay at side seam.

Seamed fronts, or Rounder patterns will be cut to the standard shape.

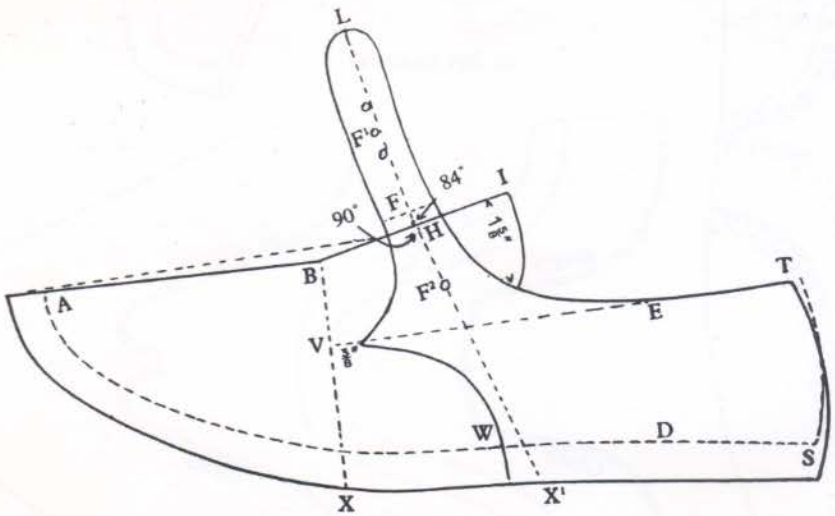


DIAGRAM NO. 25

Quarter Lining. Diagram No. 26.

Cut round quarter from T to W.

Add $\frac{1}{8}$ trimming allowance from point of tab V round the bar to T.

Add $\frac{3}{16}$ trimming allowance at side seam V to W.

Prick through at throat of vamp for slot position at tab.

Tongue lining

Add $\frac{1}{8}$" trim allowance round tongue lining.

Vamp Lining

First cut as vamp and then trim off under the tongue lining.

Dotted line shows vamp and quarter outline.

Solid line shows lining outline.

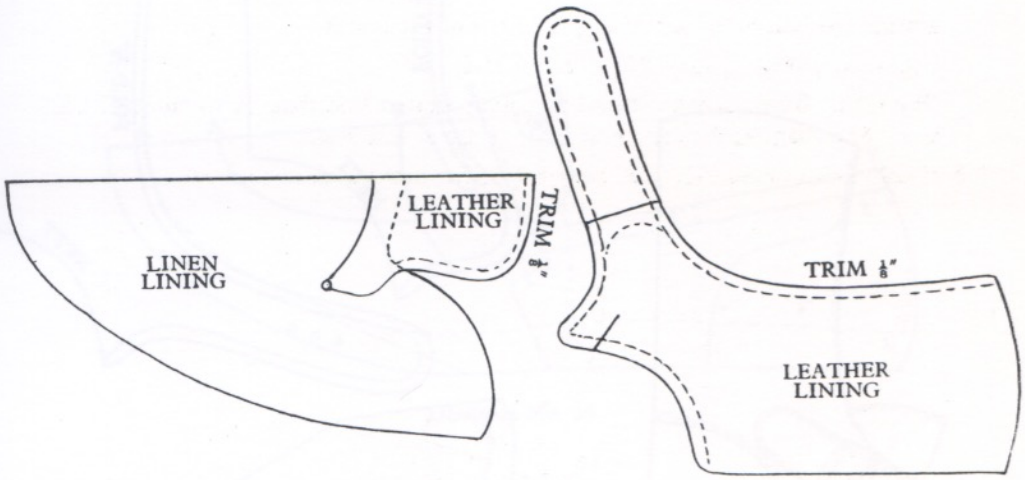
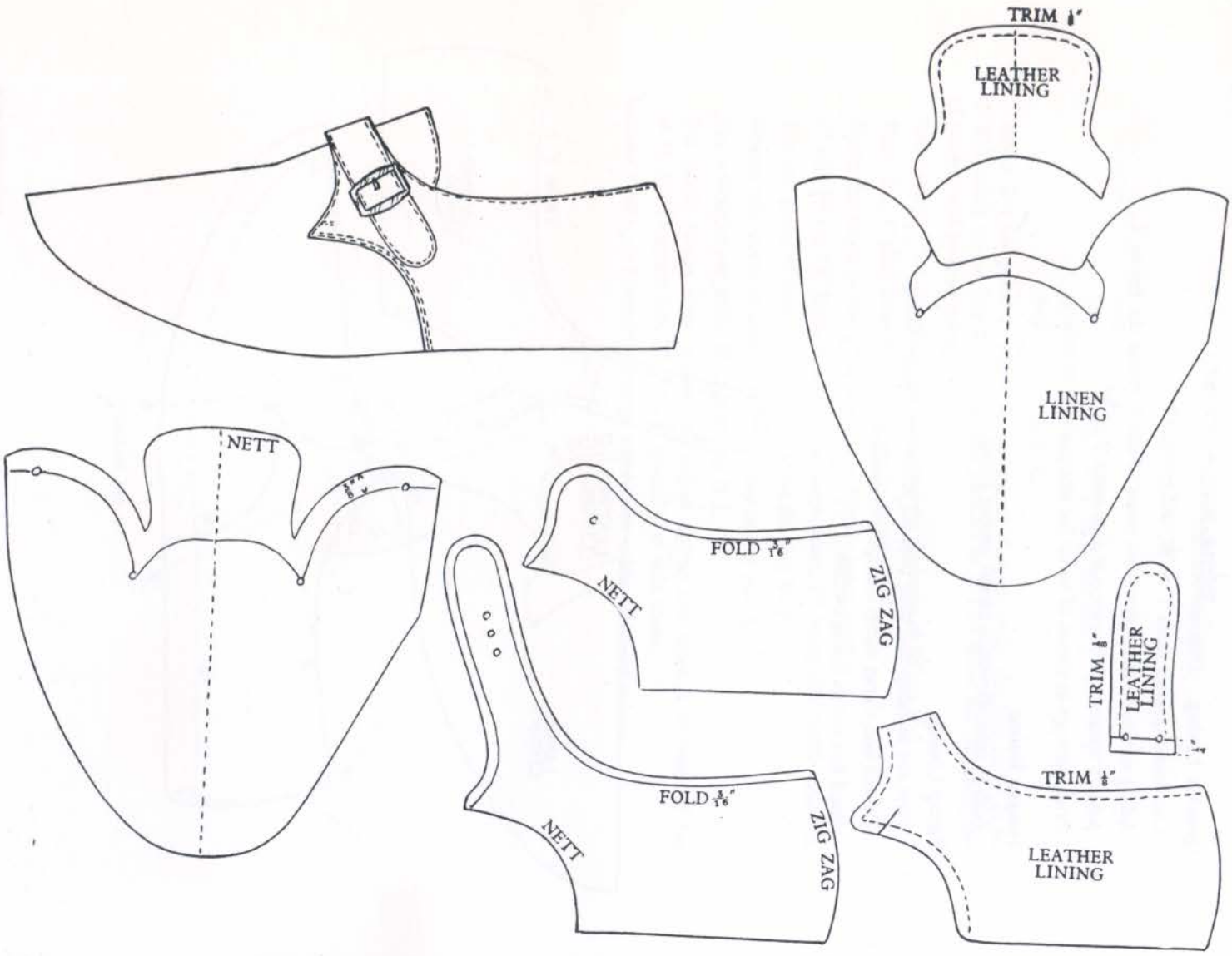


DIAGRAM NO. 26


TRIM 1/8"
LEATHER LINING
LINEN LINING
NETT
FOLD 3/16"
NETT
ZIG ZAG
FOLD 3/16"
NETT
ZIG ZAG
TRIM 1/8"
LEATHER LINING
TRIM 1/8"
LEATHER LINING

MEN'S CASUAL, HALF SADDLE

Diagram No. 28

A to B 4″ for size 7.

B to I $1\frac{1}{4}$″, making A to I, $5\frac{1}{4}$″.

Make tongue about $1\frac{1}{8}$″ above I according to style.

Make the line X^1 at 90° to A-B from top of tongue to forme edge.

Connect I to X^1 and on this line design the back of saddle, with slight curve as shown on diagram.

Mark the height of quarter $1\frac{1}{2}$″ above X^1.

The distance between A and A^1 will be governed by the wall and shape of last, but the average is about $1\frac{1}{8}$″.

Design the outside counter to the measurements given on diagram No. 28 following the instructions given for the brogue counter diagram No. 23.

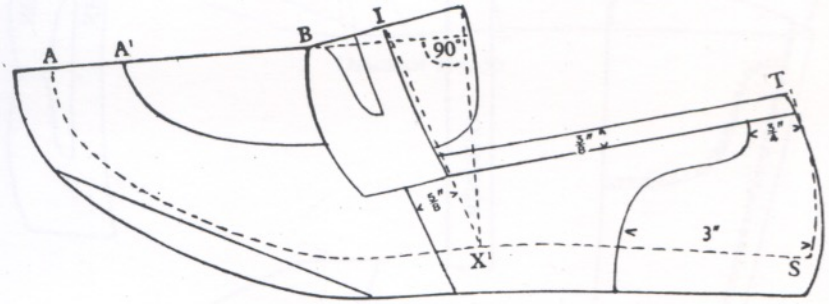
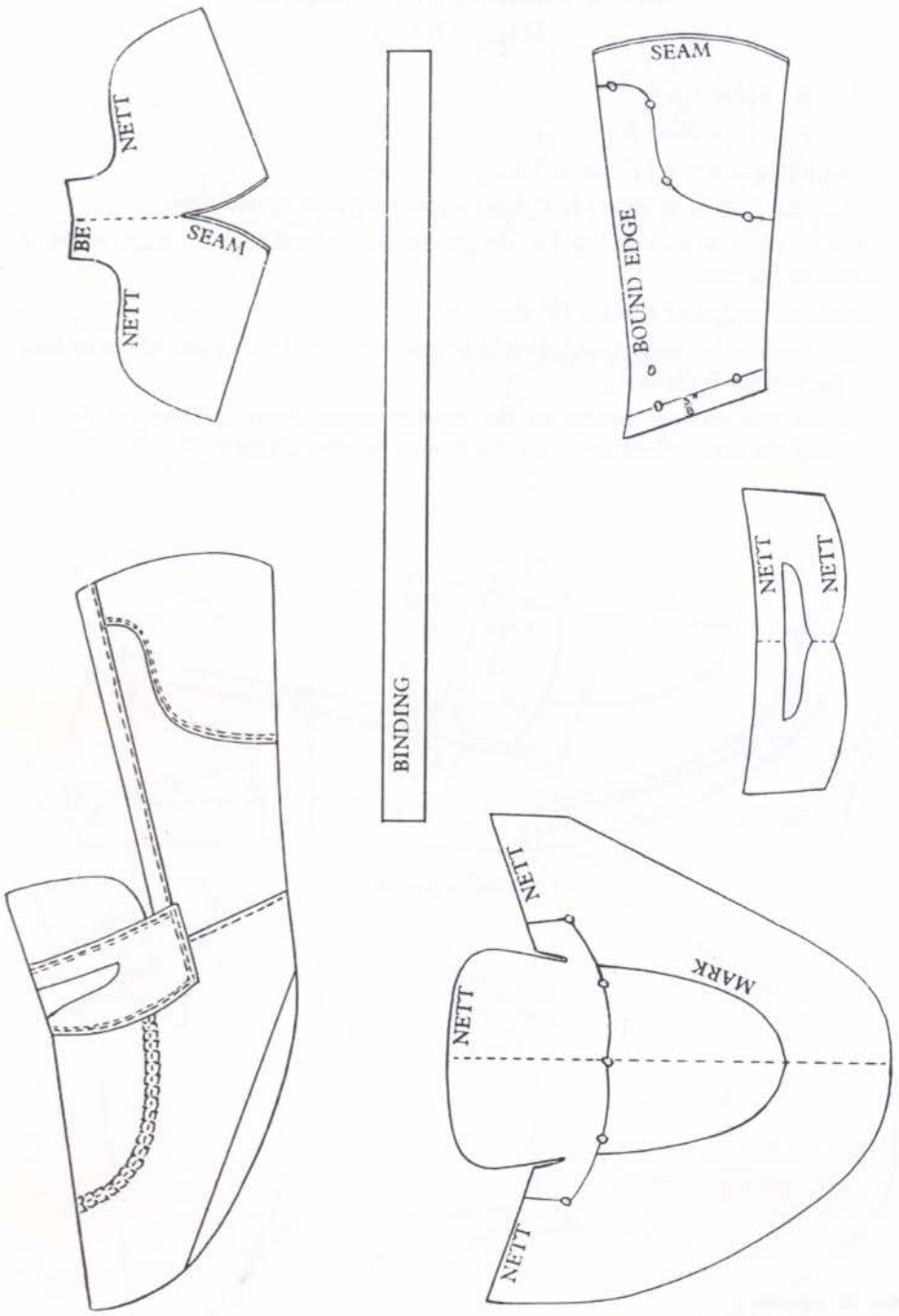


DIAGRAM NO. 28

DIAGRAM NO. 27 *(opposite) shows the complete upper and the number of sectional parts required for the Monk Shoe.*

Allowances for seams, laps and edge treatment are also given.


NETT
BE
SEAM
NETT
SEAM
BOUND EDGE
BINDING
NETT
NETT
NETT
MARK
NETT

MEN'S CASUAL, FULL SADDLE

Diagram No. 30

A to B $3\frac{5}{8}$″ for size 7.

B to I $1\frac{5}{8}$″ making A to I, $5\frac{1}{4}$″.

Style the back of saddle to pass through X^1.

For other sections proceed as for the Half Saddle Casual.

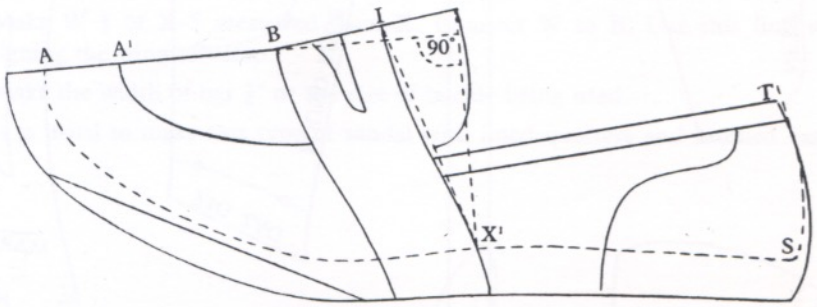
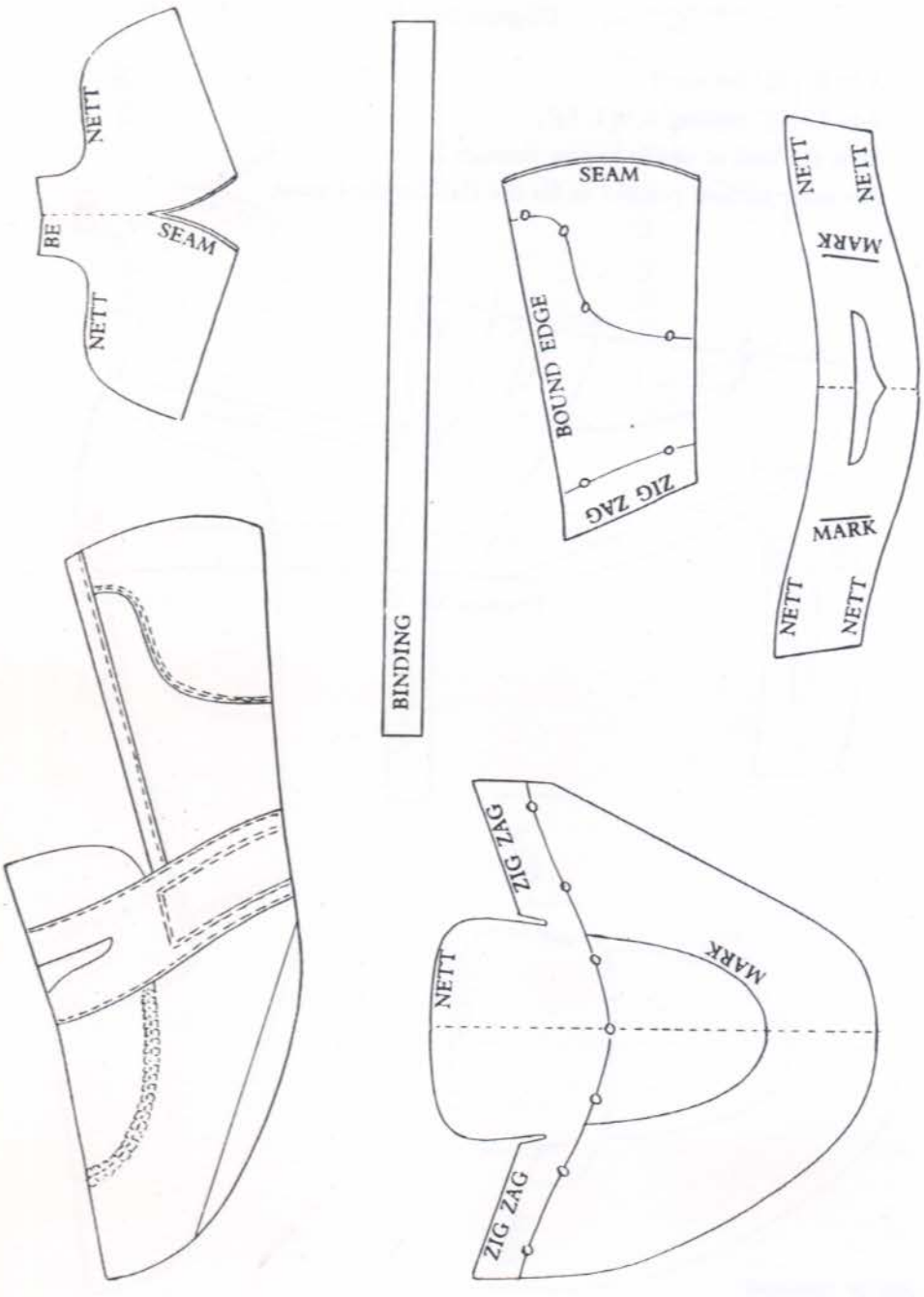


DIAGRAM NO. 30

DIAGRAM NO. 29 *(opposite) shows the complete upper and the number of sectional parts required for the Casual (Half Saddle).*

Allowances for seams, laps and edge treatment are also given.


NETT
BE
SEAM
NETT
BINDING
SEAM
BOUND EDGE
ZIG ZAG
NETT
NETT
MARK
MARK
NETT
NETT
ZIG ZAG
NETT
MARK
ZIG ZAG

MEN'S SANDAL

Diagram No. 32

A-B $4\frac{1}{8}''$ for size 7.
B-I $\frac{1}{4}$ SLL + $\frac{1}{8}''$ or $2\frac{3}{4}''$ for size 7.
B-X 90° to A-B.
F Centre of Bar $\frac{3}{8}''$ from I.
F-L $3\frac{3}{4}''$ at 70° to B-I.
F-F^1 $1\frac{3}{4}''$ for size 7.
F-F^2 Equal to F-F^1.

Make W $\frac{1}{3}$ of X-S measured from X. Connect W to B. Use this line when designing the wing of vamp.

Make the width of bar $\frac{3}{4}''$ or the size of buckle being used.

It is usual to make this type of sandal with lined quarters and unlined vamps.

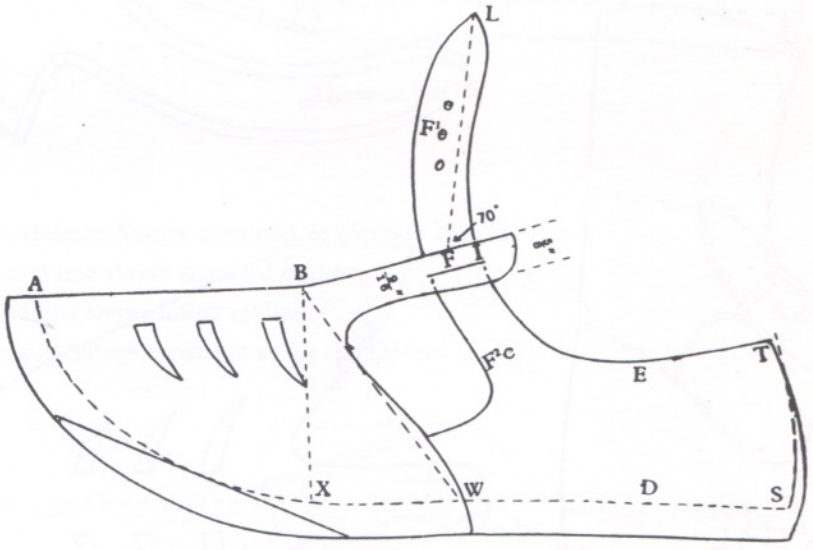
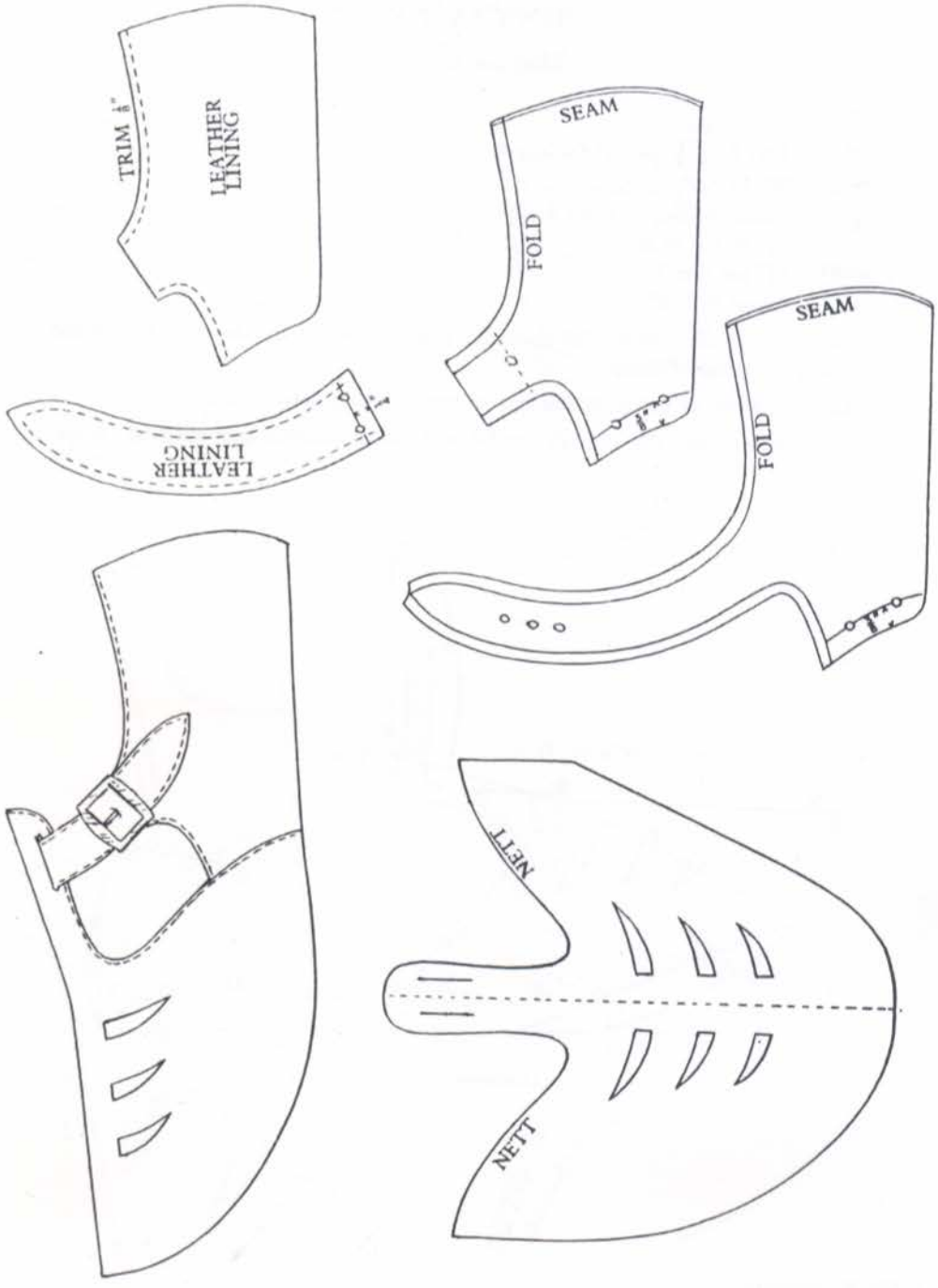


DIAGRAM NO. 32

DIAGRAM NO. 31 *(opposite) shows the complete upper and the number of sectional parts required for the Casual (Full Saddle).*

Allowances for seams, laps and edge treatment are also given.


TRIM ⅛"
LEATHER LINING
LEATHER LINING
SEAM
FOLD
SEAM
FOLD
NETT
NETT

MEN'S BOWLING SHOE

Diagram No. 34

Construct the standard outline as for the Oxford shoe.
Point V is $\frac{1}{3}$ of B-X ; X being the forme edge for this design.
Point F, Facing is $\frac{7}{8}''$ wide on the line I-X¹.
Bisect the line V-F for the centre of the facing curve.

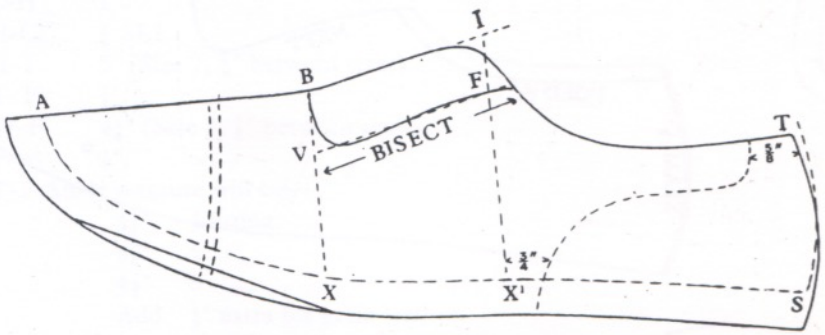


DIAGRAM NO. 34

For skeleton linings construct as diagram No. 35.
Dotted line shows standard outline.
Solid line shows lining outline.
For full linings construct as for the Oxford shoe.

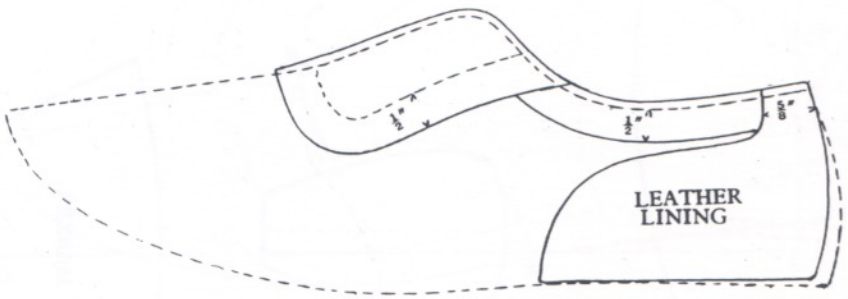
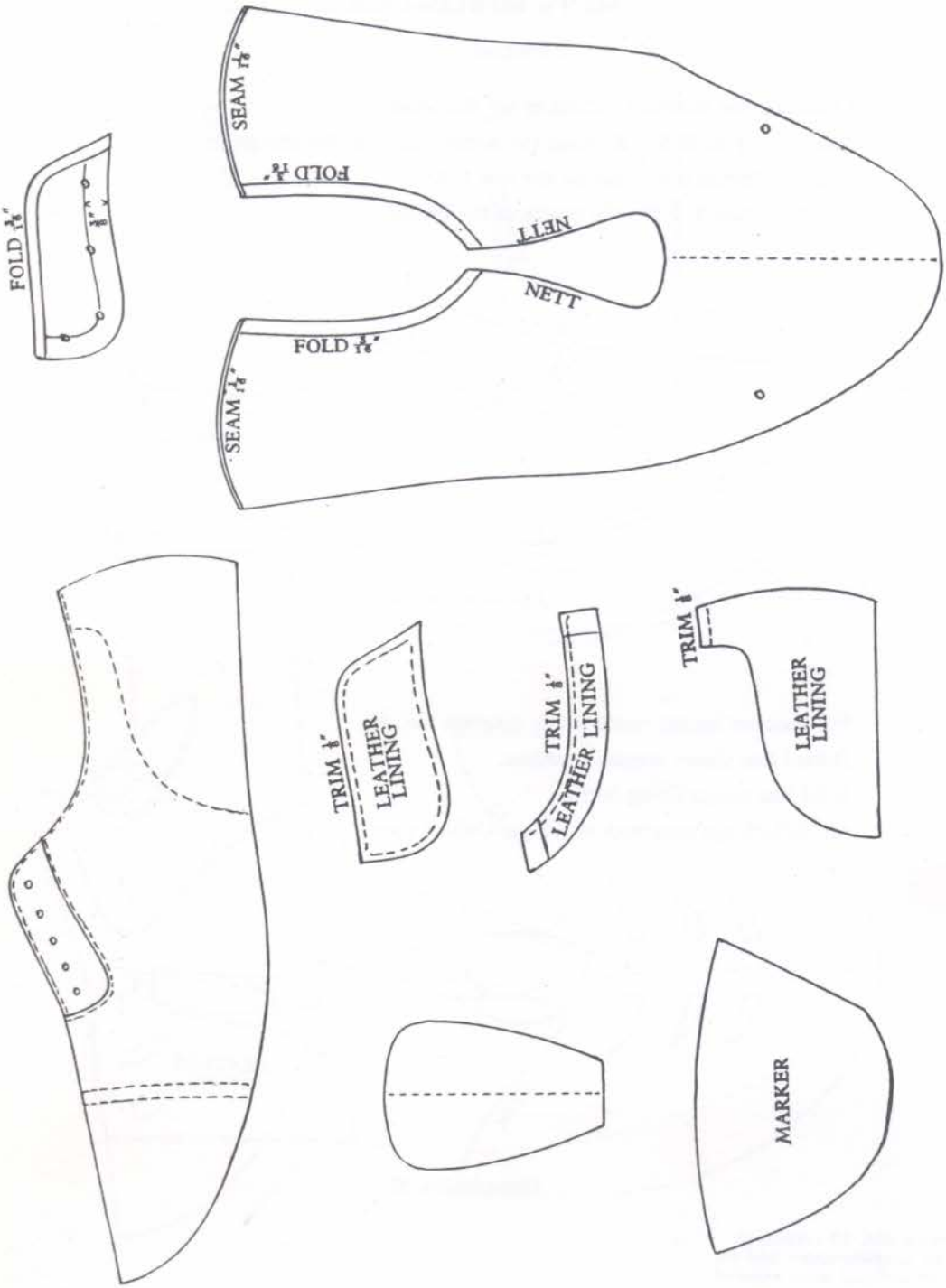


DIAGRAM NO. 35

DIAGRAM NO. 33 *(opposite) shows the complete upper and the number of sectional parts required for the Sandal.*
Allowances for seams, laps and edge treatment are also given.


SEAM ¼"
FOLD ¼"
NETT
NETT
FOLD ¼"
SEAM ¼"
FOLD ¼"
TRIM ¼"
LEATHER LINING
TRIM ¼"
LEATHER LINING
TRIM ¼"
LEATHER LINING
MARKER

MEN'S BOOT STANDARD

MEN'S DERBY.

Diagram No. 37

G-L Ground line.
G-L-T 90°.
L-H 1″.
H-CP $\frac{1}{5}$ SLL.
H-T 5″ (Size 7, $\frac{1}{8}$″ between sizes).
T-T^1 $\frac{1}{4}$″.
T^1-F $4\frac{1}{4}$″ (Size 7, $\frac{1}{8}$″ between sizes).
F-F^1 $\frac{1}{2}$″.
T-F Ankle measure will be—
$4\frac{1}{4}$″ 4 fitting.
$4\frac{3}{8}$″ 5 ,,
$4\frac{1}{2}$″ 6 ,,
Add $\frac{1}{8}$″ extra for grain leather.
Width of tabs according to style—
Light Boots $1\frac{1}{2}$ B to V.
Heavy Boots $1\frac{7}{8}$ B to V.

Place the forme on the construction lines so that it passes through C-P and H and rests on the base line at the joint.

When cutting the sections proceed as for the Gibson shoe as the only difference is the height of the backs.

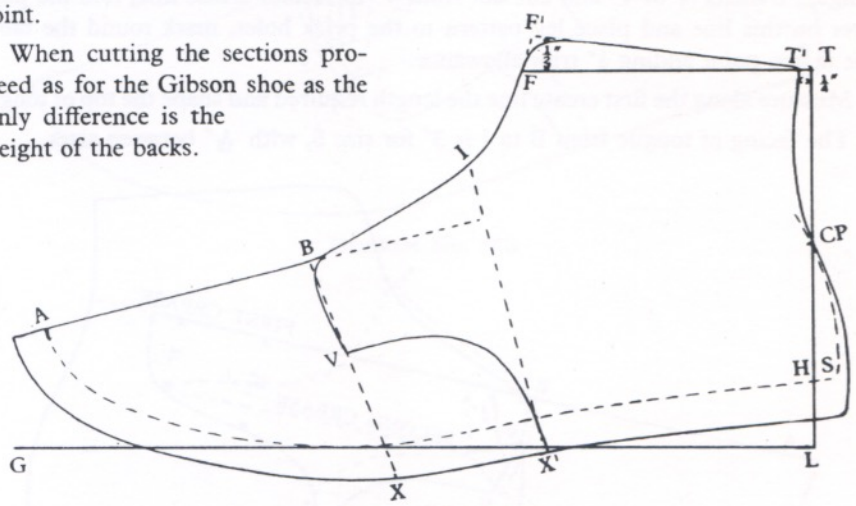


DIAGRAM No. 37

DIAGRAM No. 36 *(opposite) shows the complete upper and the number of sectional parts required for the Bowling Shoe.*
Allowances for seams, laps and edge treatment are also given.

Tongues and back straps are cut as shown in diagram No. 38.

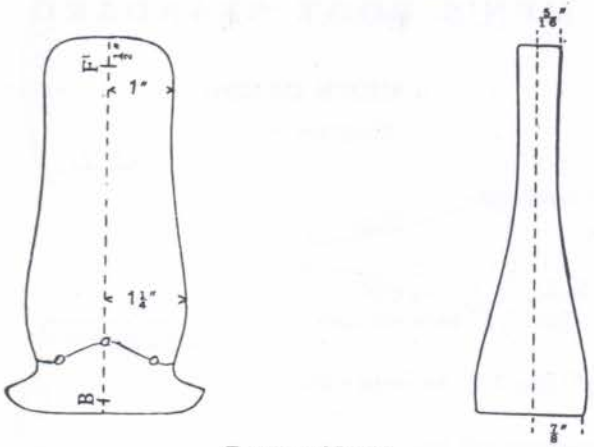


DIAGRAM NO. 38

HALF BELLOWS TONGUE

Diagram No. 38A

Draw line through A-B to the back of standard for the first crease line, place vamp to the line and mark throat and prick holes.

Make second crease line from the throat of vamp to about 1″ wide at the top of tongue, transfer V to V^1 and cut slot from V^1 to second crease line, fold the paper over on this line and place leg pattern to the prick holes, mark round the tab to the instep point adding $\frac{1}{8}$″ trim allowance.

Measure along the first crease line the length required and shape the top of tongue.

The facing of tongue from B to I is 3″ for size 8, with $\frac{1}{12}$″ between sizes.

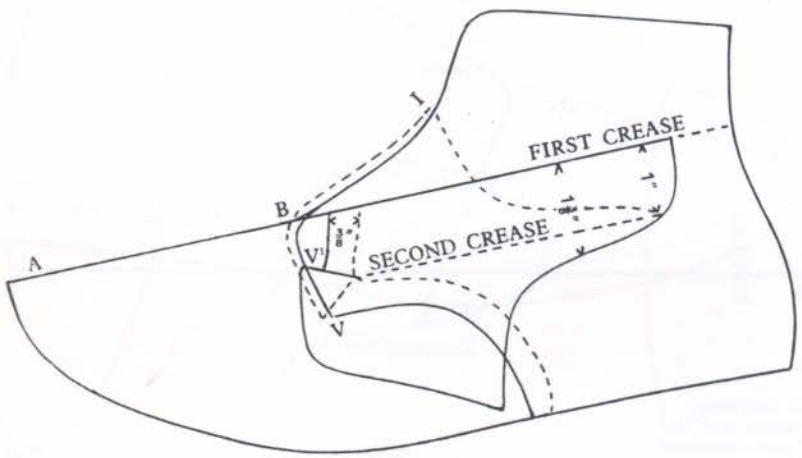


DIAGRAM NO. 38A

SEAMED HALF BELLOWS TONGUE

Diagram No. 38B

First draw on the standard line the I-S (See diagram No. 50) making the long heel line 10 degrees above as H-S.

Mark H^1 $\frac{2}{7}$ of H-S measured from H.

Cut the front of tongue from the centre of the throat of vamp to top of leg, crease the paper from H^1 to the throat of vamp as dotted line.

Transfer V to V^1 and cut slot from V^1 to crease line, add $\frac{1}{8}''$ trim allowance from V to H as diagram.

The front of tongue can be made zig-zag and covered with a thin strap about $\frac{3}{8}''$ wide, or it may be close seamed with $\frac{1}{16}''$ seam allowance.

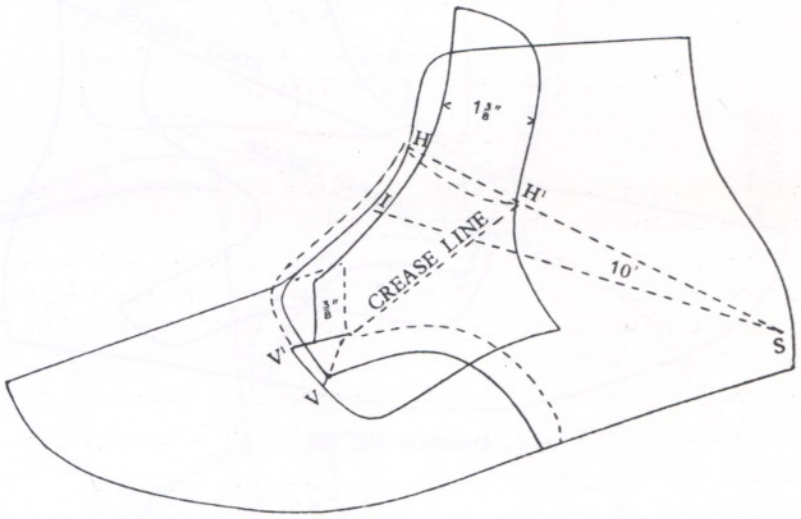


DIAGRAM NO. 38B

FULL BELLOWS TONGUE

Diagram No. 38C

Place vamp to the front line A-B and mark throat and prick holes.

Mark first crease line from B^1 to T^1 and make second crease line from throat of vamp and parallel to crease line B^1-T^1.

Transfer V to V^1 and cut the front of tongue from V^1 toward the second crease, now fold the paper over on this line and place leg to the prick holes, mark round tab and front of leg adding $\frac{1}{8}$" trim allowance.

Measure along first crease line the length required and shape the top of tongue.

It will be noted that this tongue overlays the vamp and must be drafted to the throat of vamp when closing.

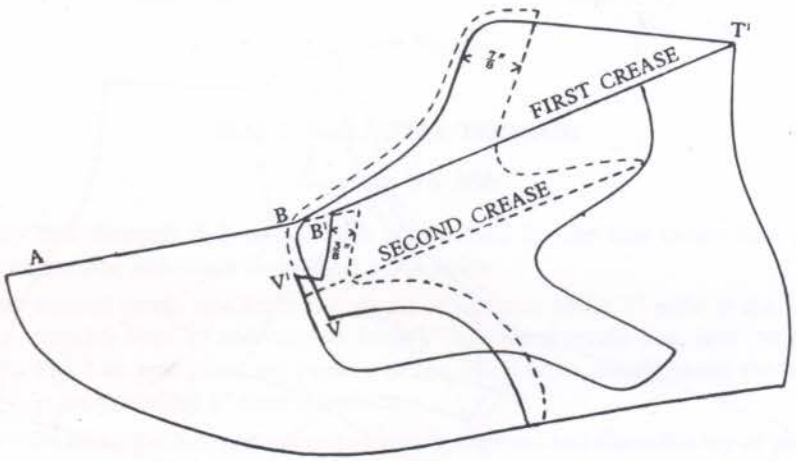
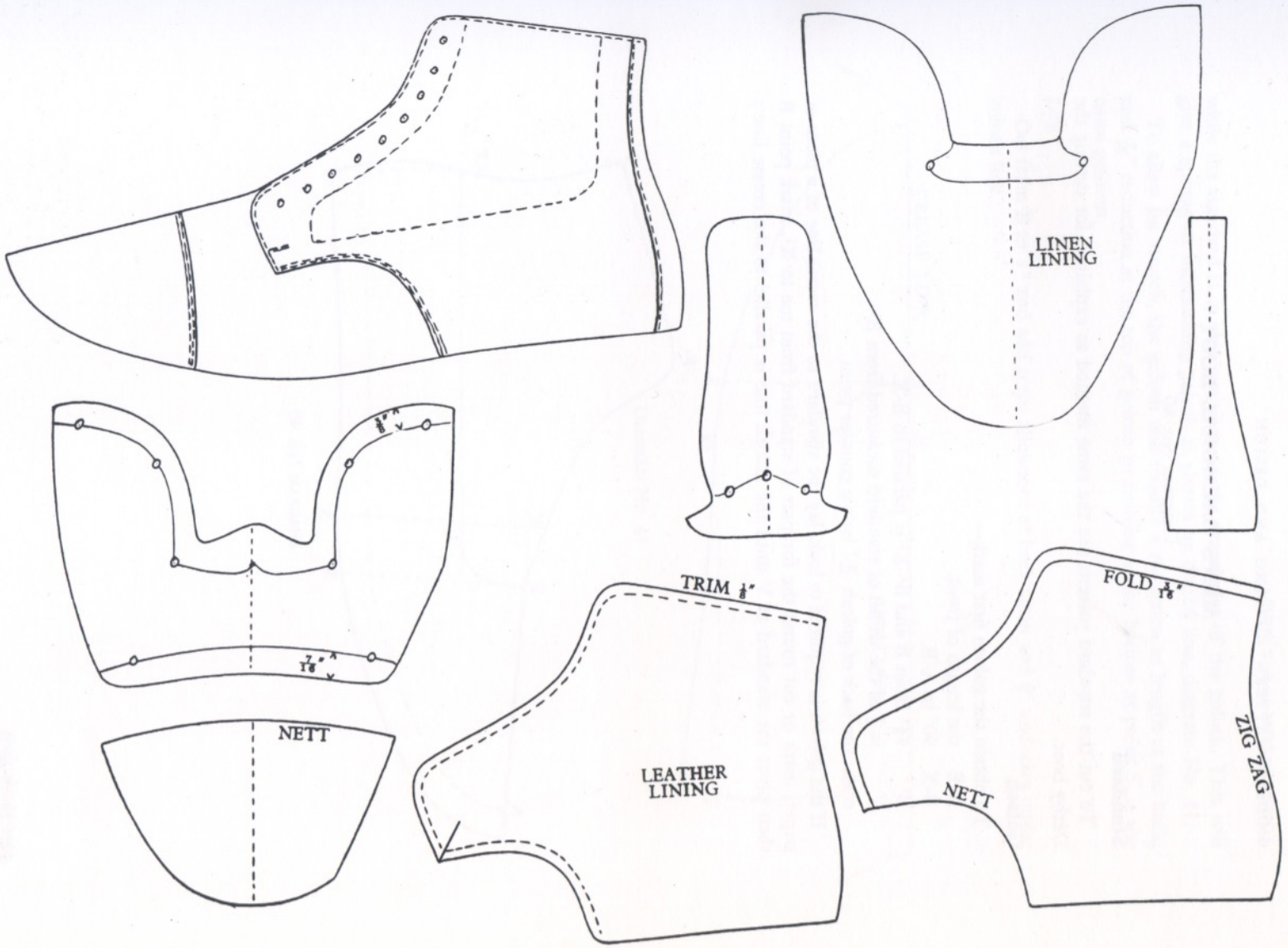


DIAGRAM No. 38C

DIAGRAM No. 39 *(opposite) shows the complete upper and the number of sectional parts required for the Derby Boot.*

Allowances for seams, laps and edge treatment are also given.


LINEN
LINING
TRIM ⅛"
FOLD ⅜"
NETT
LEATHER
LINING
NETT
ZIG ZAG

MEN'S BALMORAL BOOT

Diagram No. 40

Standard

To cut the standard pattern use the same method as explained for cutting the Derby boot.

Golosh

To obtain the golosh first mark—

A-B the length of front.
B-X 90° to A-B.
B^1 $1\frac{1}{8}$" from B and B^1-X^1 is parallel to B-X.
V is $\frac{1}{3}$ of the width of standard measured from B^1.
make the back of golosh $\frac{3}{16}$" below counter point.

If the golosh is required to lock, lay the standard to the crease line of a piece of paper, mark or cut round the forepart of standard from toe to X^1, mark point B then pivot the standard at V until the golosh line is parallel to the crease line ;

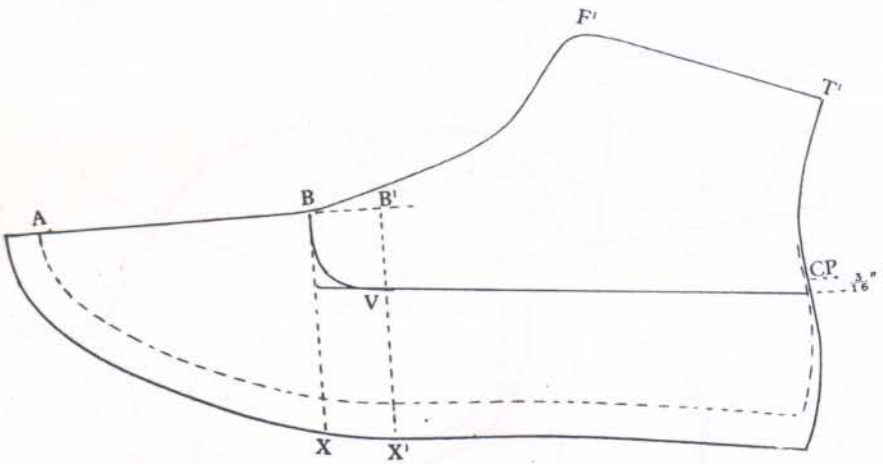


DIAGRAM No. 40

while the standard is in this position cut the remainder of the golosh. This will give a sprung or interlocking golosh as shown by dotted line, diagram No. 41.

To allow for stretch, the golosh will require a reduction in length at the back, and $\frac{3}{16}''$ reduction at the top of golosh to nothing at the bottom at point S, is the usual amount.

Leg

Cut from B to T^1 and add seam allowance at back seam and $\frac{3}{8}''$ underlay under golosh line.

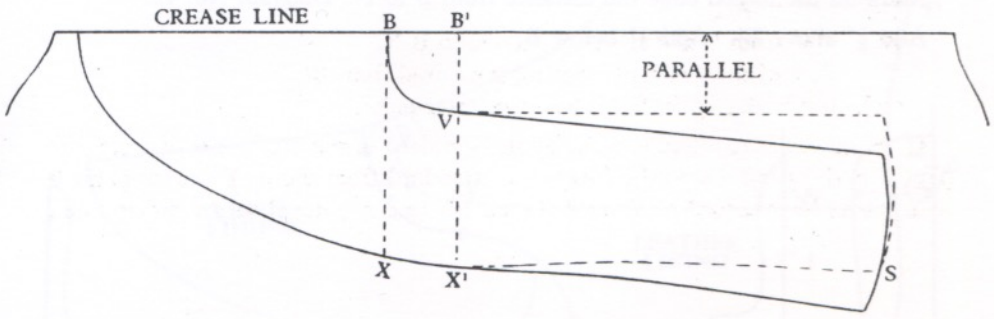


DIAGRAM NO. 41

Jockey Back Strap. Diagram No. 42.

When cutting the jockey back strap draw a line about 1″ parallel to the crease line and on this line mark the back curve of the golosh.

Cut the curve of the back strap half way between the golosh curve and the straight line—the reason for this is because the seam between the back strap and the golosh is a close seam and half of the back curve goes in the back strap and half in the golosh. This will compensate for the loss of curve at the folded edge of back strap.

Tongue

Mark on the folded edge the distance from B to F¹. Diagram No. 42.

Add ½″ above F¹. Add ½″ below B.

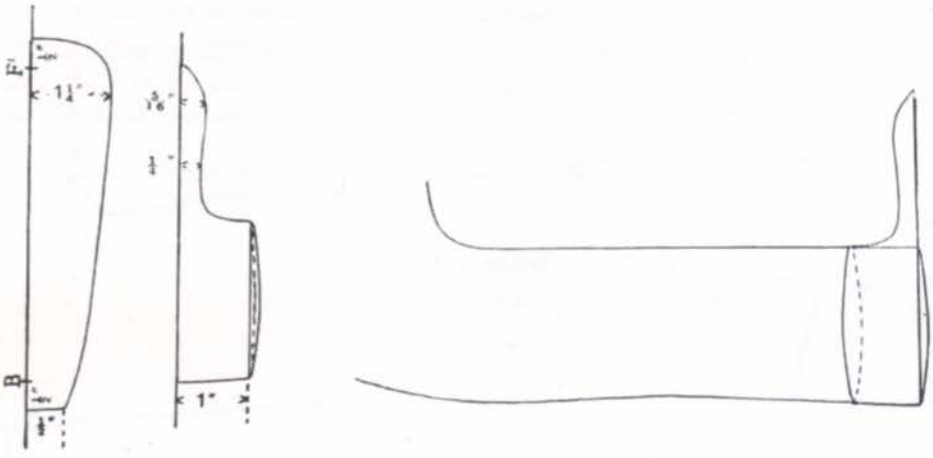


DIAGRAM NO. 42

Quarter Lining. Diagram No. 43.

Cut round standard from T^1 to X^1. Trace the golosh line as dotted line B-V-CP and add $\frac{1}{2}''$ to give the vamp lining seam. Add $\frac{1}{8}''$ trim from B to T^1. Reduce pattern for counter pocket and take off $\frac{1}{8}''$ along bottom line.

Vamp Lining

Cut as for the Oxford shoe.

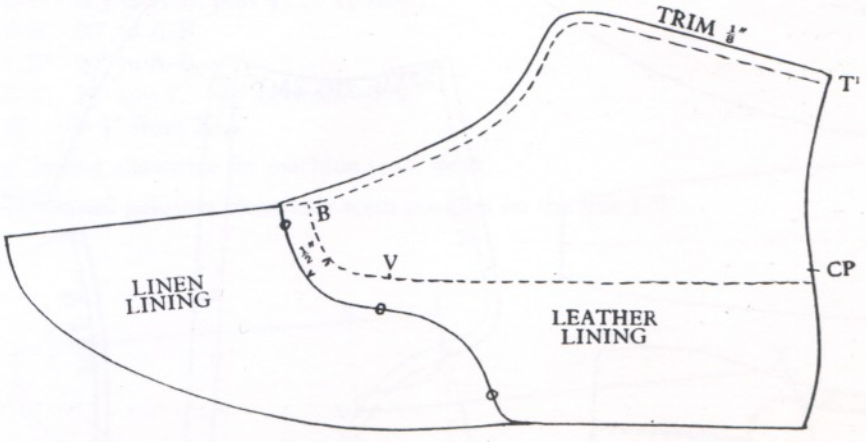
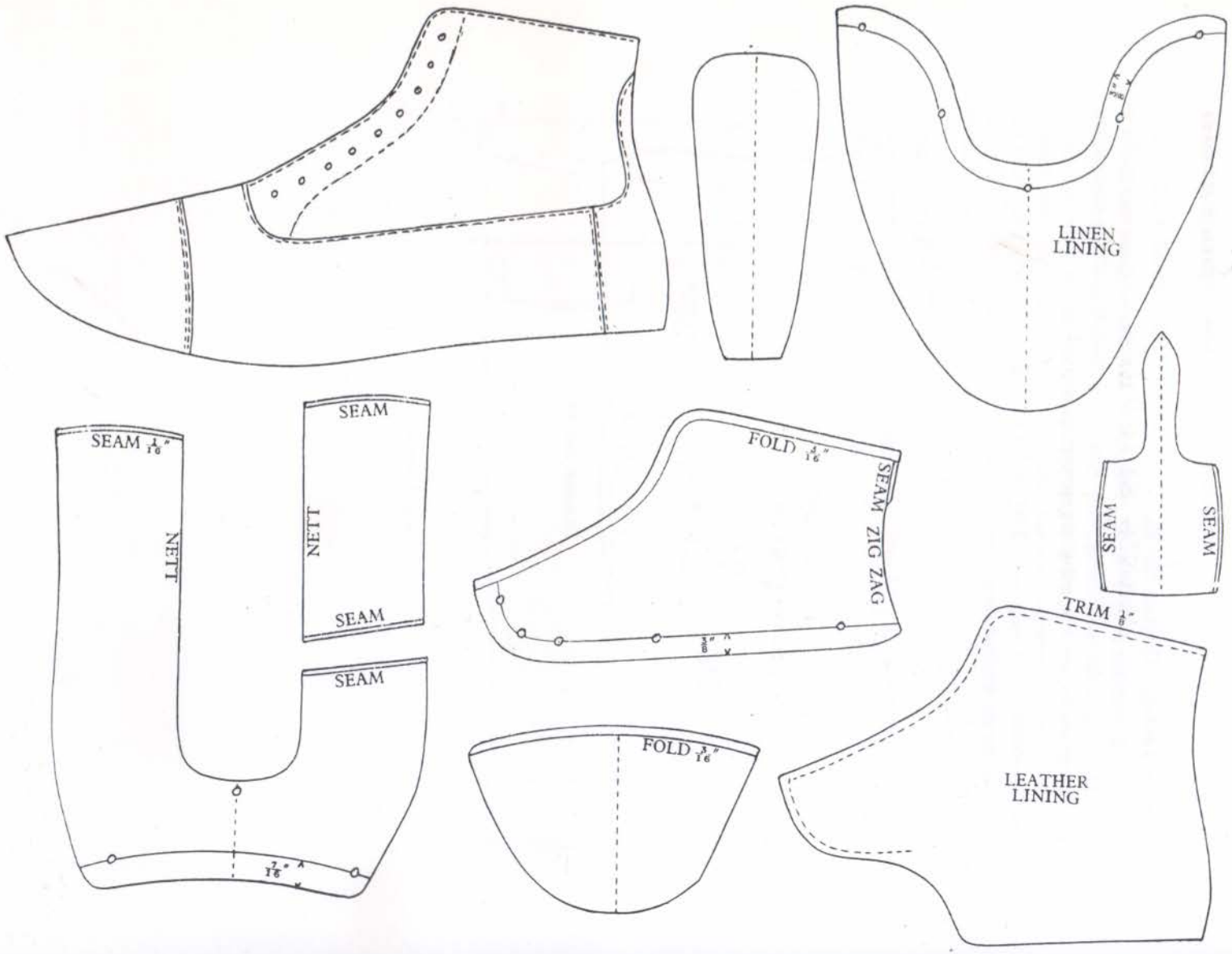


DIAGRAM NO. 43


LINEN
LINING
SEAM
SEAM
NETT
NETT
SEAM
SEAM
FOLD
SEAM ZIG ZAG
SEAM
SEAM
TRIM
FOLD
LEATHER
LINING

MEN'S SLIPPERS

MEN'S ALBERT SLIPPER

Diagram No. 45

A-B $4\frac{1}{2}''$ for size 7.
B-I is $\frac{1}{4}$ of A-B, plus $\frac{1}{4}'' = 1\frac{3}{8}$ size 7.
B-X 90° to A-B.
I-X^1 90° to A-B.
B-V $1\frac{1}{2}''$ size 7. $\frac{1}{32}''$ between sizes.
W is $\frac{1}{2}''$ from X^1.

$\frac{5}{8}''$ lasting allowance for machine sewn work.

For joined goloshes make side seam position on the line I-W.

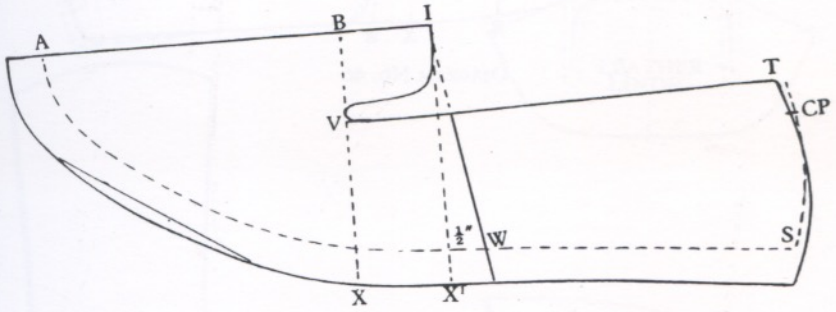


Diagram No. 45

Diagram No. 44 *(opposite) shows the complete upper and the number of sectional parts required for the Balmoral Boot.*

Allowances for seams, laps and edge treatment are also given.

Design leather lining $\frac{5}{8}$" in front of B and take curve through to W. Diagram No. 46.

To find the position of seam where the tab and quarter linings join, use the corners of the rectangle made on the golosh by the lines B-X and I-X¹.

Note—The position B can also be found by making T to B equal to the heel measure of forme I to S. See Diagram No. 50.

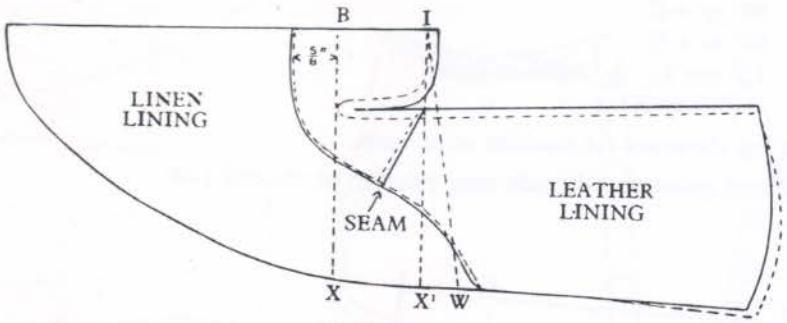
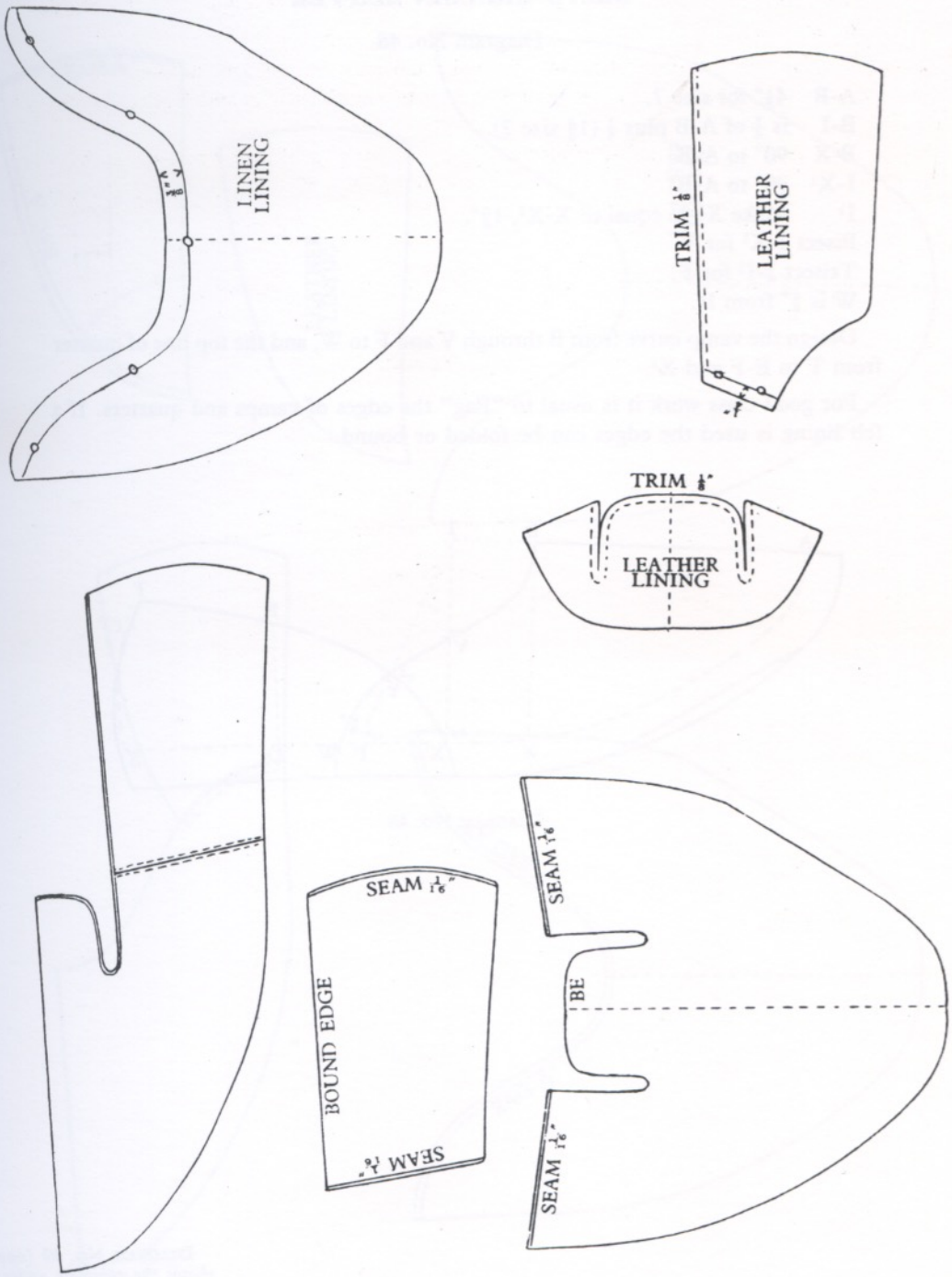


DIAGRAM NO. 46

DIAGRAM NO. 47 *(opposite) shows the complete upper and the number of sectional parts required for the Albert Slipper.*

Allowances for seams, laps and edge treatment are also given.


LINEN LINING
TRIM ⅛"
LEATHER LINING
TRIM ⅛"
LEATHER LINING
SEAM 1/16"
BOUND EDGE
SEAM 1/16"
SEAM 1/16"
BE
SEAM 1/16"

MEN'S GRECIAN SLIPPER

Diagram No. 48

A-B $4\frac{1}{2}''$ for size 7.
B-I is $\frac{1}{4}$ of A-B plus $\frac{1}{4}$ ($1\frac{3}{8}$ size 7).
B-X 90° to A-B.
I-X^1 90° to A-B.
I^1 Make X^1-I^1 equal to X-X^1, $1\frac{3}{8}''$.
Bisect I-X^1 for V.
Trisect I-I^1 for F.
W is $\frac{3}{8}''$ from I^1.

Design the vamp curve from B through V and F to W, and the top line of quarter from T to E-F and X^1.

For good class work it is usual to "Bag" the edges of vamps and quarters. If a felt lining is used the edges can be folded or bound.

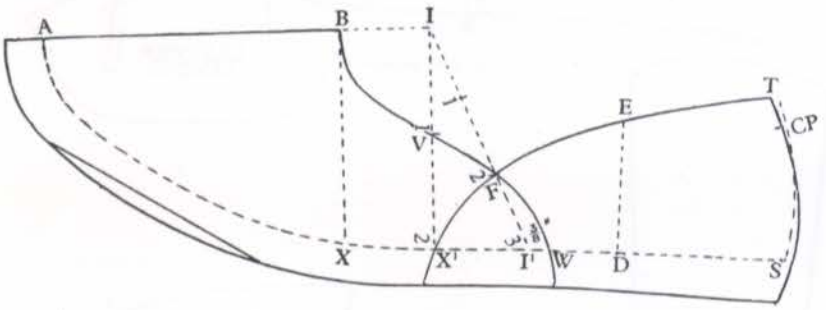
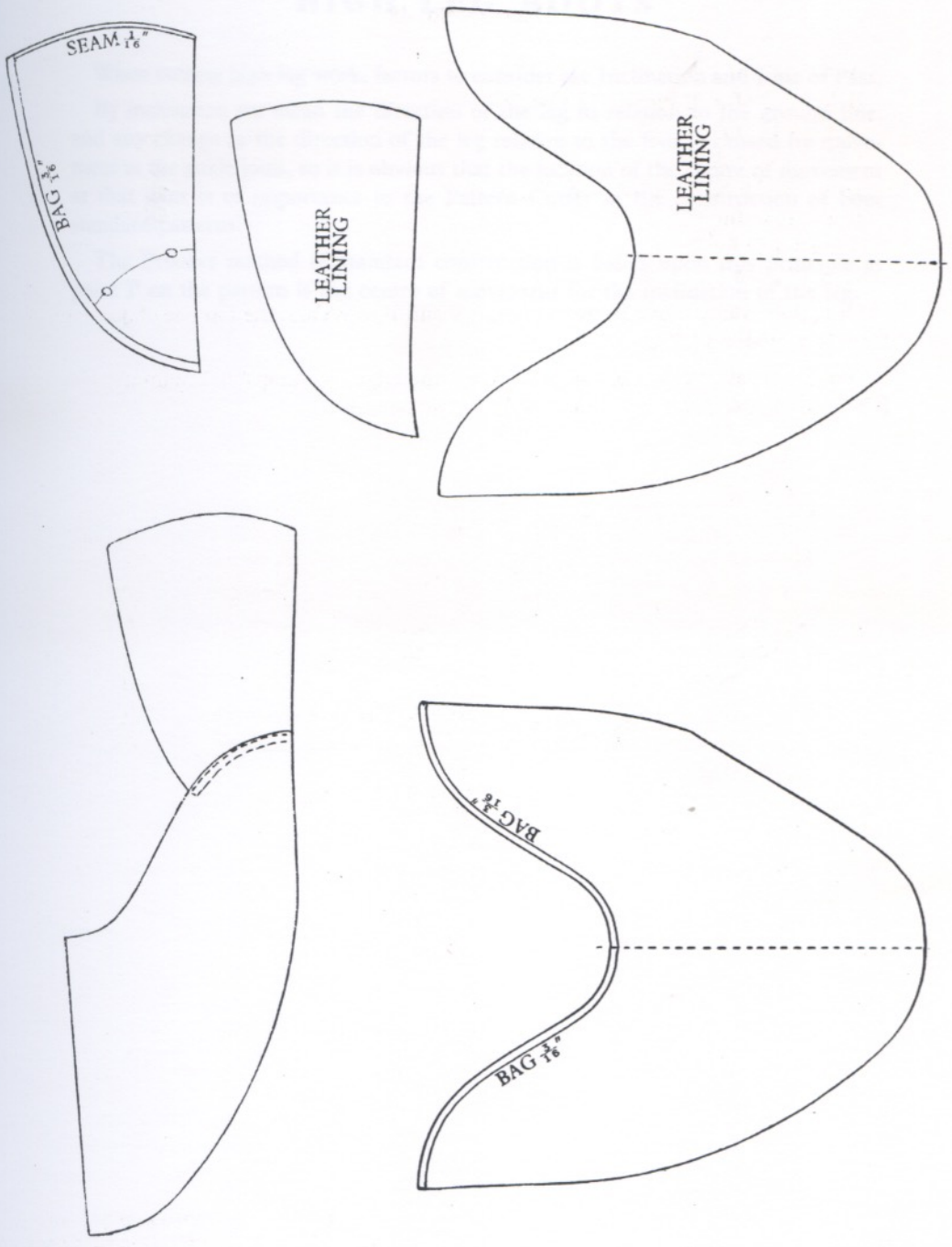


DIAGRAM NO. 48

DIAGRAM NO. 49 *(opposite) shows the complete upper and the number of sectional parts required for the Grecian Slipper.*

Allowances for seams, laps and edge treatment are also given.


SEAM 1/16"
BAG 3/16"
LEATHER LINING
LEATHER LINING
BAG 3/16"
BAG 3/16"

HIGH LEG BOOTS

When cutting high leg work, factors to consider are Inclination and Line of Pass.

By inclination we mean the direction of the leg in relation to the ground line, and any change in the direction of the leg relative to the foot is caused by movement at the ankle joint, so it is obvious that the location of the centre of movement at that joint is of importance to the Pattern Cutter in the construction of boot standard patterns.

The Brookes method of standard construction is based upon this principle as point P on the pattern is the centre of movement for the inclination of the leg.

RIDING BOOT

The Riding Boot, being a closed-in front design, needs a special last, and the chief characteristics of the last are:—

Flat forepart and toe.
High Instep.
Full heel measure.
Straighter back curve.

The following table is an example of the measures required for the complete range of sizes 5 - 12. You will note the difference in calf measure, the American calf being more developed than the English.

The grade between whole sizes for the calf is $\frac{1}{4}''$.

The grade between whole sizes for the height is $\frac{1}{4}''$.

Give all fittings the same calf and height measures.

Sizes		5	6	7	8	9	10	11	12
Joint		$8\frac{1}{2}$	$8\frac{3}{4}$	9	$9\frac{1}{4}$	$9\frac{1}{2}$	$9\frac{3}{4}$	10	$10\frac{1}{4}$
Instep		$9\frac{1}{4}$	$9\frac{1}{2}$	$9\frac{3}{4}$	10	$10\frac{1}{4}$	$10\frac{1}{2}$	$10\frac{3}{4}$	11
Calf	English Measure	$13\frac{1}{2}$	$13\frac{3}{4}$	14	$14\frac{1}{4}$	$14\frac{1}{2}$	$14\frac{3}{4}$	15	$15\frac{1}{4}$
Calf	American Measure	$14\frac{1}{4}$	$14\frac{1}{2}$	$14\frac{3}{4}$	15	$15\frac{1}{4}$	$15\frac{1}{2}$	$15\frac{3}{4}$	16
Height		17	$17\frac{1}{4}$	$17\frac{1}{2}$	$17\frac{3}{4}$	18	$18\frac{1}{4}$	$18\frac{1}{2}$	$18\frac{3}{4}$

D fitting.

MEN'S RIDING BOOT, STANDARD Brookes Method

Diagram No. 50

Mark on mean forme the following points:—

Counter Point (CP) $\frac{1}{5}$ of SLL from corner of seat, *i.e.*, 2″ for size 5, $\frac{1}{16}$″ diff. per size
Joint ,, (J) $\frac{3}{4}$,, ,, CP $7\frac{1}{2}$″ ,, $\frac{1}{4}$″ ,, ,,
Instep ,, (I) $\frac{1}{4}$,, ,, J $2\frac{1}{2}$″ ,, $\frac{1}{12}$″ ,, ,,
Contact ,, (X) by drawing line from J at an angle of 76° to J-CP.

Draw outline of forme transferring points CP, J, I, X ; add lasting allowance as required.

Join X-S and draw I-P parallel to X-S.

Make I-P equal in length to half of I-S.

Make S-B equal to the heel height of the last.

Join B-X.

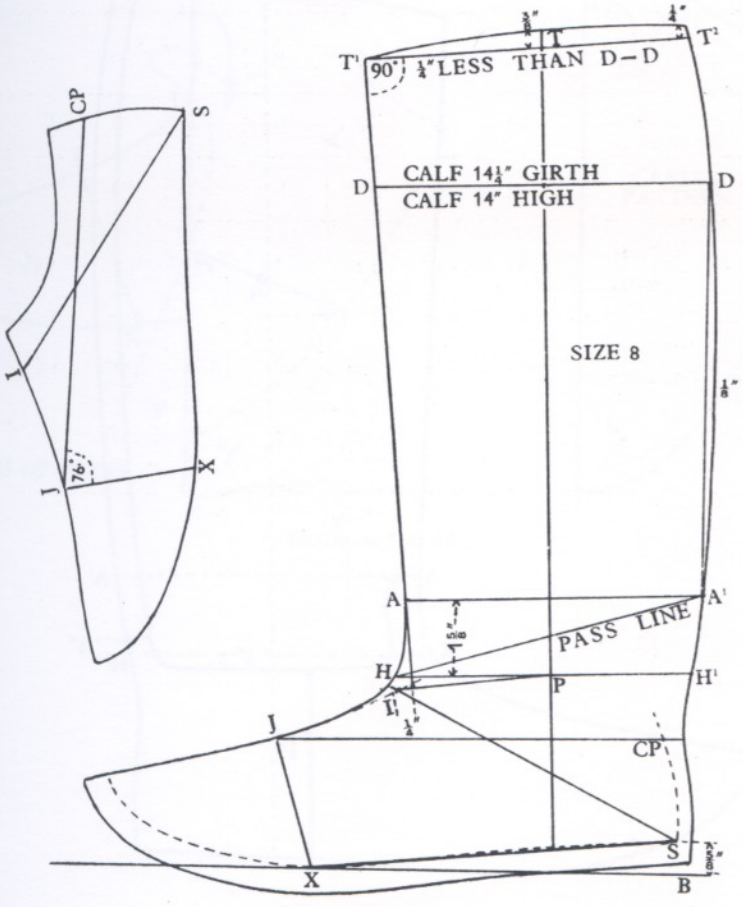


Diagram No. 50

Draw line through pitch point (P) at 90° to B-X for the line P-T. The calf D-D is 14″ high for size 8 and $14\frac{1}{4}$ girth.

To get the front of the leg, measure from I, $\frac{1}{4}$″ along the line I-P and connect to D. Make H-H¹ parallel to B-X and $\frac{3}{4}$″ less than I-S measured from H. Make line A-A¹ $1\frac{5}{8}$″ above and parallel to H-H¹.

The "Pass Line" from H to A¹ is $\frac{1}{4}$″ less than I-S.

Point T is $3\frac{3}{8}$ higher than D-D and at right angles to front line; make T¹-T² $\frac{1}{4}$″ less than D-D.

For curved top shape as diagram No. 50.

When cutting vamp and counter, start at A and shape tongue as Diagram No. 51 making golosh $\frac{1}{4}$″ below H-H¹ at side. Make counter $\frac{1}{2}$″ above H¹ to meet back strap which is $\frac{3}{4}$″ wide.

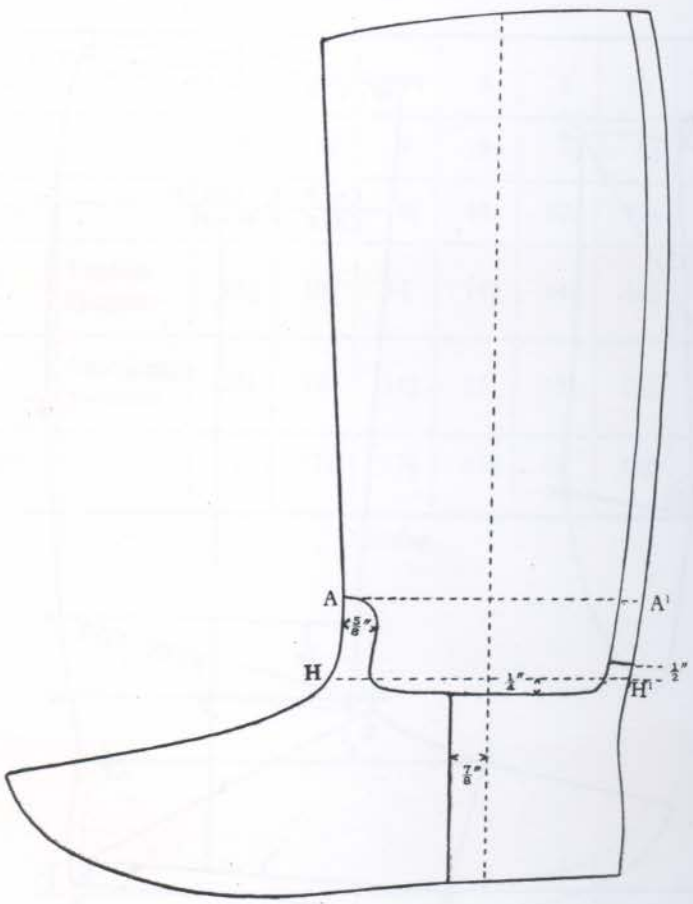


DIAGRAM NO. 51

Leg

Fold a piece of paper large enough for the leg.

Place the front of standard T^1 and A to the crease line and cut round the standard from T^1 to H^1.

Prick through for vamp and counter seam and add $\frac{3}{8}''$ underlay.

Note that the top line of outside leg has a concave curve and the inside leg a convex curve.

To produce the front Caster pattern from the rounder pattern, first place A-I to the folded edge of paper and mark round to P^1 (as No. 1 on sketch). Now pivot from P^1 until J touches the crease line as No. 2. Bisect J-X for P^2 and from this point pivot the toe down to the crease line as No. 3. Diagram No. 52.

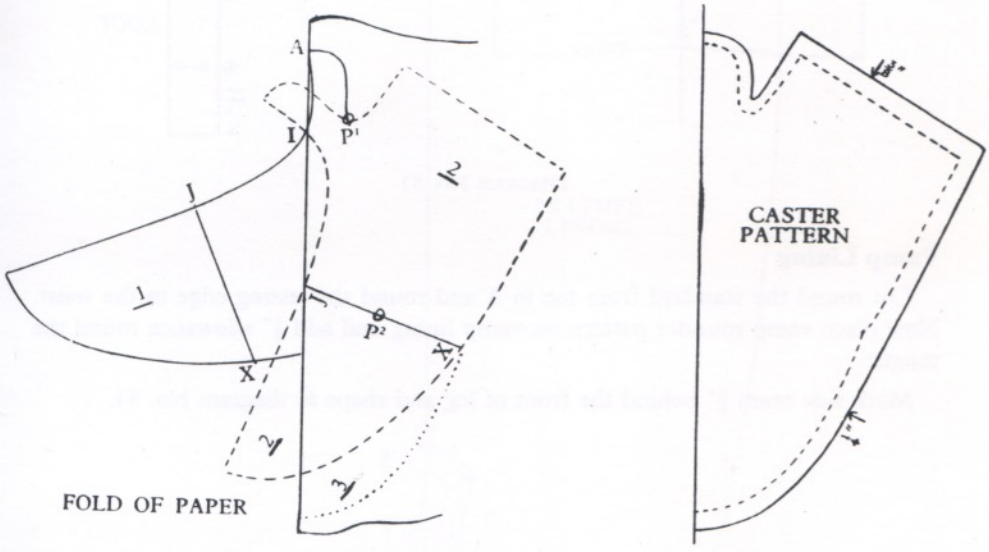


DIAGRAM NO. 52

To produce the whole counter pattern, lay the half counter pattern so that it touches the crease line at a point level with the golosh and at point S. Make one loop to fit all sizes. Diagram No. 53.

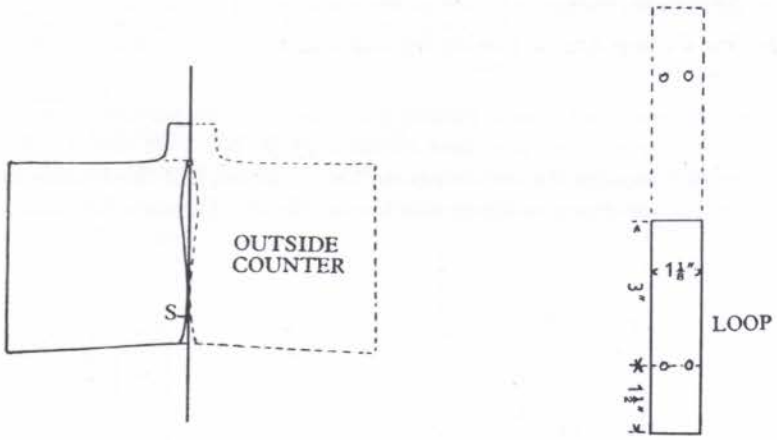


DIAGRAM NO. 53

Vamp Lining

Cut round the standard from toe to A and round the lasting edge to the waist. Now place vamp rounder pattern on vamp lining and add $\frac{1}{8}$" allowance round the tongue.

Mark side seam $\frac{3}{4}$" behind the front of leg and shape as diagram No. 54.

Quarter Lining

Place the front of standard T^1 and A to the crease line and cut round the standard from T^2 to the side seam.

Add $\frac{1}{8}$" trimming allowance along the top line from T^1 to T^2 and reduce at the seat for the counter pocket.

Make slot for loop constant in width on all sizes.

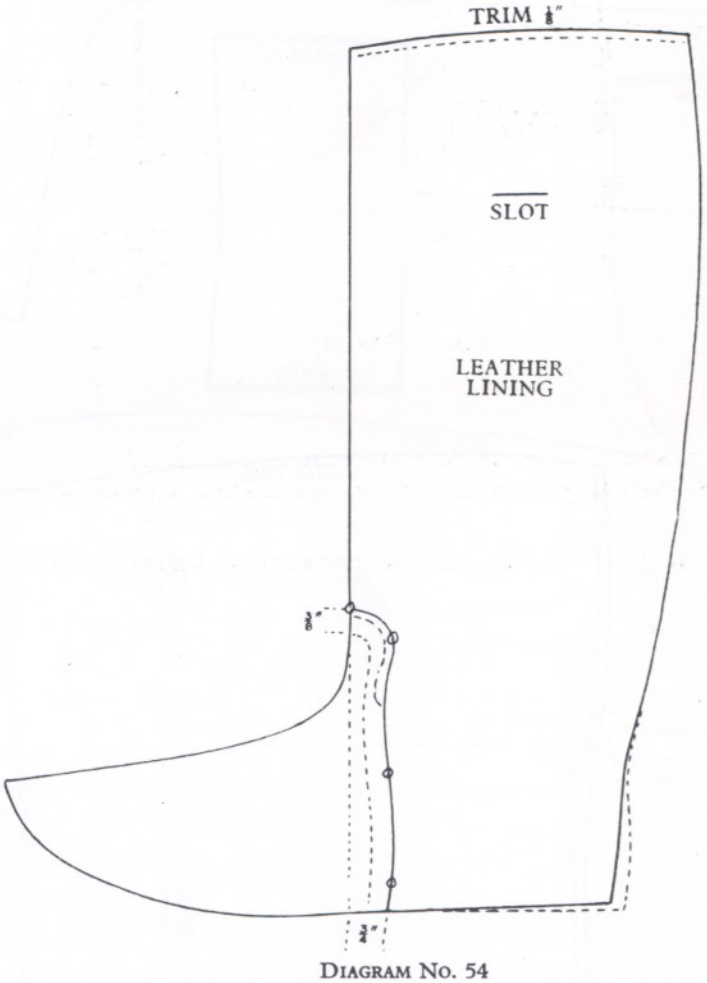
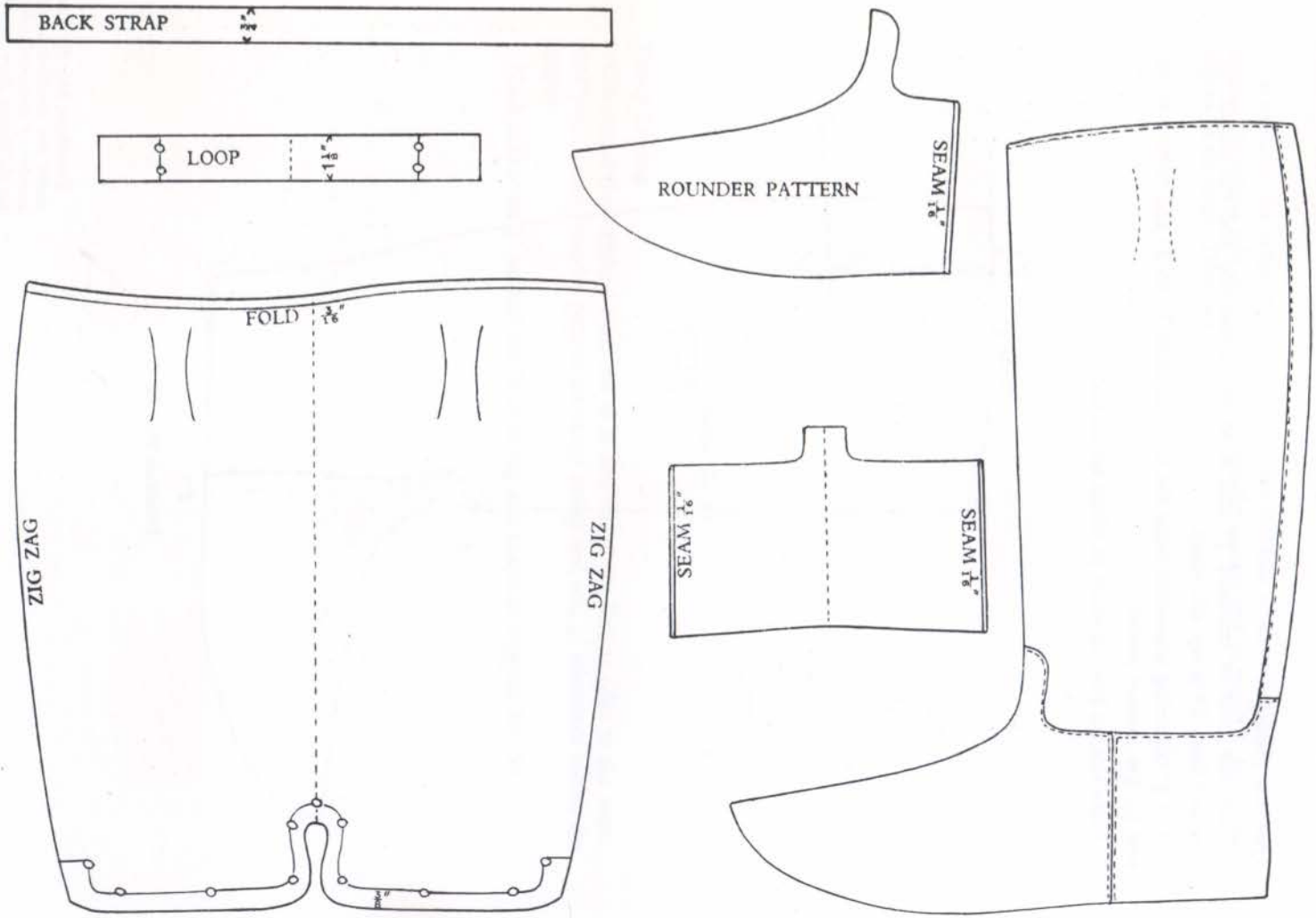


DIAGRAM NO. 54

DIAGRAM NO. 55 *(overleaf) shows the complete upper and the number of sectional parts required for the Riding Boot outside sections. Allowances for seams, laps and edge treatment are also given.*


BACK STRAP
LOOP
ROUNDER PATTERN
SEAM 1/16"
FOLD
ZIG ZAG
ZIG ZAG
SEAM 1/8"
SEAM 1/8"

CASTER PATTERN

ZIG ZAG
LEATHER LINING

ZIG ZAG
TRIM ¼"
SLOT
LEATHER LINING
SLOT
ZIG ZAG

MEN'S MOTOR-CYCLING BOOT

Diagram No. 57

When designing the standard, proceed as given for the Riding boot up to the pitch point (p).

$\frac{3}{4}''$ lasting allowance for grain leather.

Draw line through P at 90° to B-X for the line P-A. The distance from P to A is $\frac{3}{20}$ of SLL ; make angle P-A-A² at 84°.

Make the distance from A to A¹ and A to A² equal to $\frac{1}{3}$ of the heel line I-S plus $\frac{1}{4}'' = 5\frac{1}{4}$ from A¹ to A².

Draw the line A-T at 90° to A-A² and make T 14″ high.

The top of the leg is $7\frac{1}{2}''$ wide ; half of this measure each side of T for the points T¹ and T². Connect T¹ to A¹ for front of the leg.

Mark line from T² to A² and add about $\frac{3}{8}''$ for the curve at the calf.

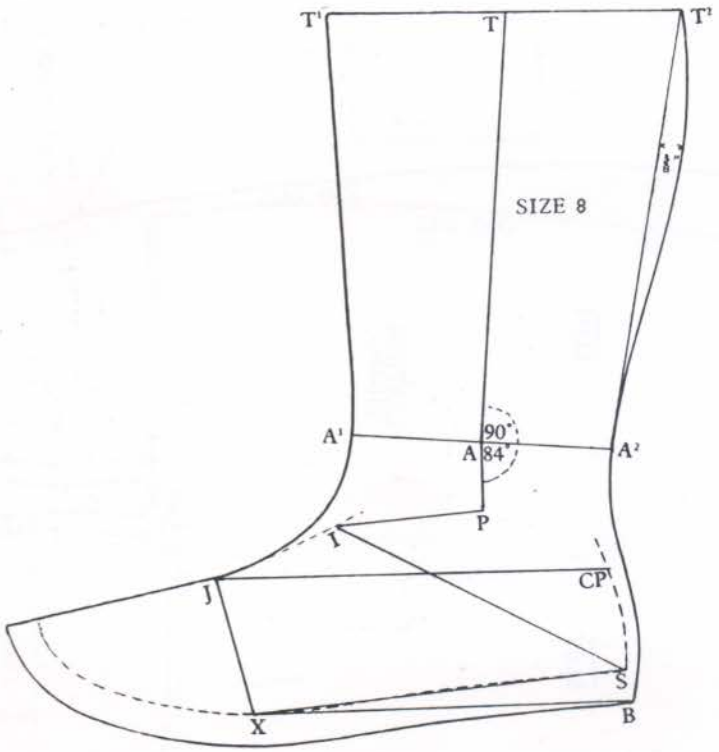


Diagram No. 57

Diagram No. 56 *(overleaf) shows the complete upper and the number of sectional parts required for the Riding Boot lining sections.*
Allowances for seams, laps and edge treatment are also given.

Leg

Proceed as for the ordinary Derby boot but make the point V $1\frac{7}{8}$ from B. Diagram No. 58.

Cut inside counter $\frac{1}{2}$" above C-P and shape as diagram No. 58.

Vamp

When cutting a whole vamp as shown in diagram No. 64, take $\frac{3}{16}$" off underneath the cap so as to reduce bulk when lasting.

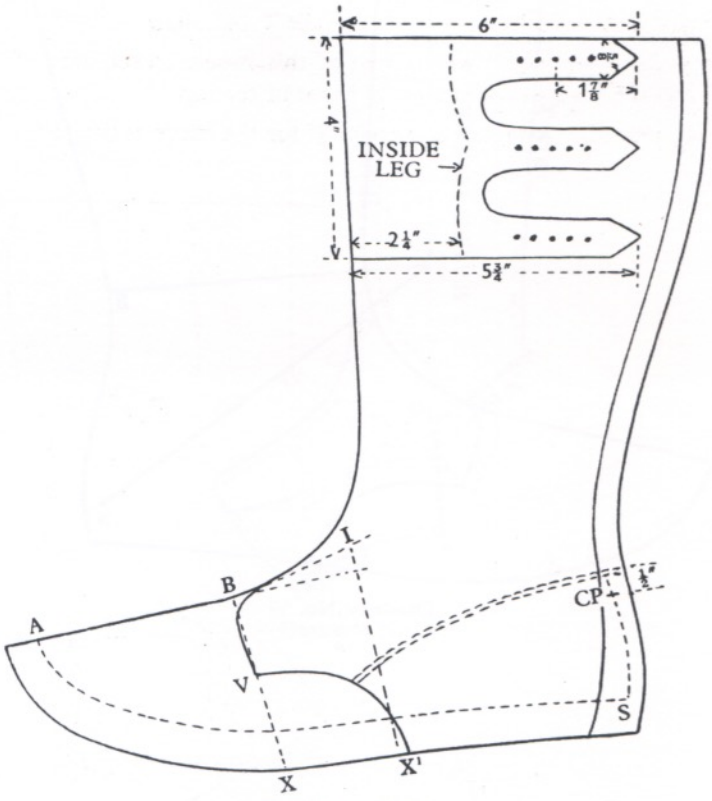


DIAGRAM NO. 58

Tongues

If cutting a seamed tongue as diagram No. 59 first draw the ankle line and make A-B equal to the heel measure I-S. Connect A to S and make C-D equal to A-C plus facing row $\frac{3}{4}$".

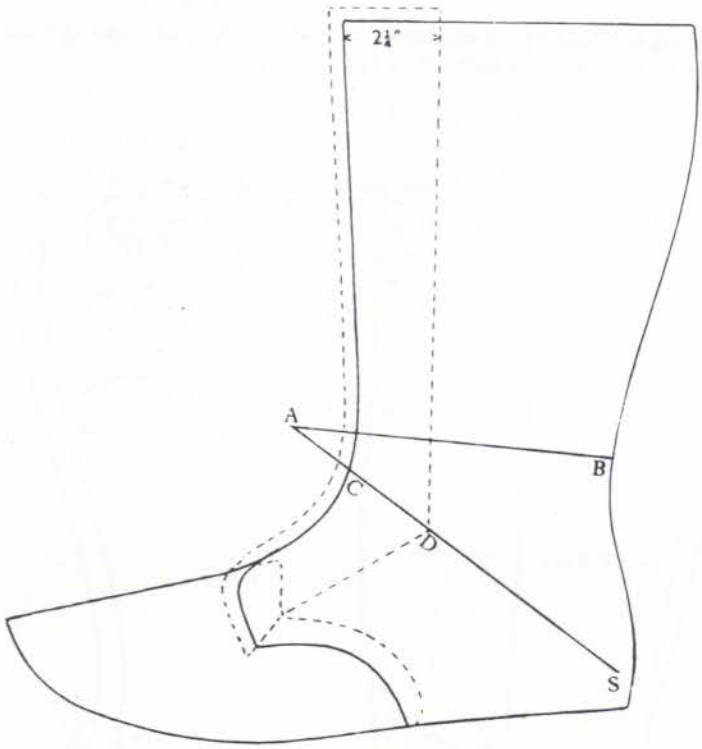


DIAGRAM NO. 59

Make the front of the tongue $\frac{1}{8}$ above the centre of the throat of the vamp to allow for the seam, crease the paper from D to the top of the leg and from D to the throat of the vamp as dotted lines ; add trimming allowance. When the tongue is creased the seam E-D-E¹ should equal the line C-D. The front of the tongue can also be made zigzag and covered with a thin strap about $\frac{3}{8}$" wide. Diagram No. 60.

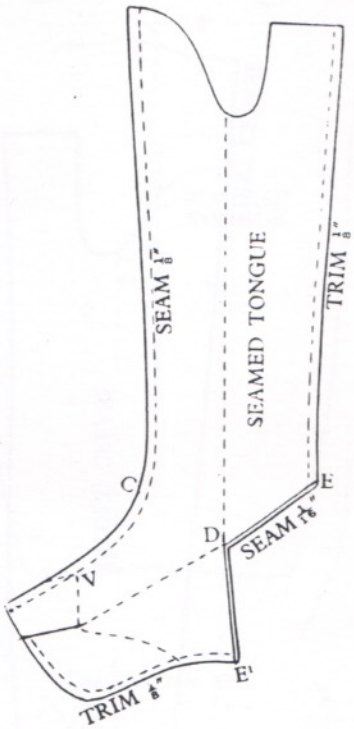


DIAGRAM NO. 60

For a blocked tongue first crease a piece of paper, place vamp to the crease line and mark throat and prick holes. Make second crease line from the throat of vamp to about 2″ wide at the top. Now fold the paper over on this line and place leg to the prick holes and mark round the tab to the instep point (I) for width at the base of tongue. Measure along crease line the length required and shape the top of the tongue as diagram No. 61.

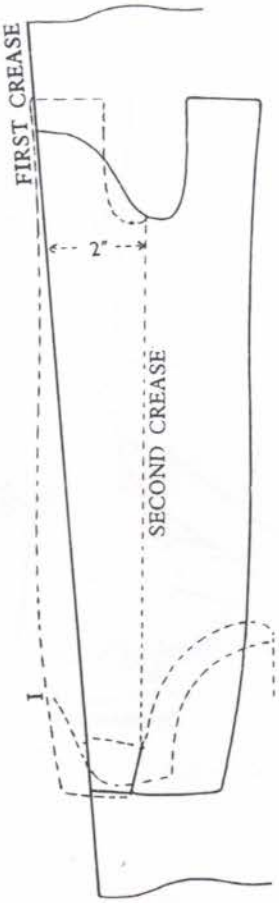


DIAGRAM NO. 61

Diagram No. 62 shows the blocked tongue opened out.

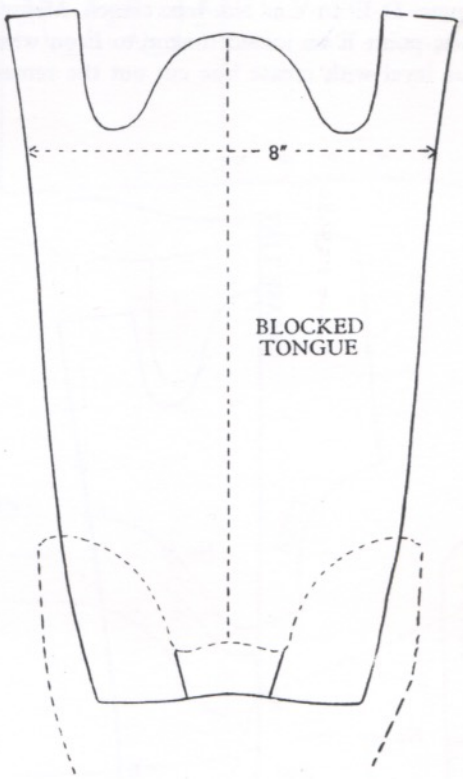


DIAGRAM NO. 62

Diagram No. 63 shows how to cut a whole cut tongue seamed at E-D-E¹ to eliminate blocking. First remove the seam allowance from the front of the seamed tongue, place the points V and E to the crease line of a piece of paper and mark round the base of tongue D-E¹ to V as No. 1 on sketch. Make the sides of triangle E-D-E¹ $\frac{7}{8}$". Now place point E on joined tongue to E on whole tongue and with the top of the tongue level with crease line cut out the remainder of the tongue as No. 2 on sketch.

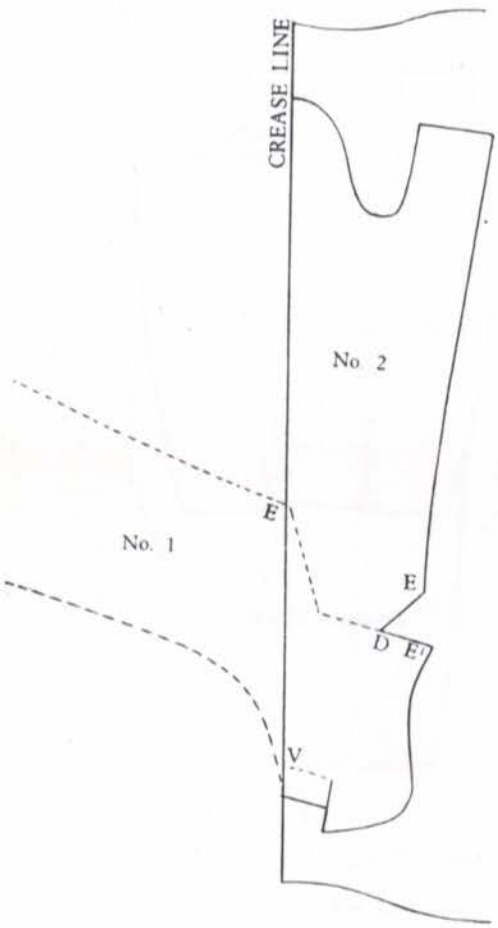
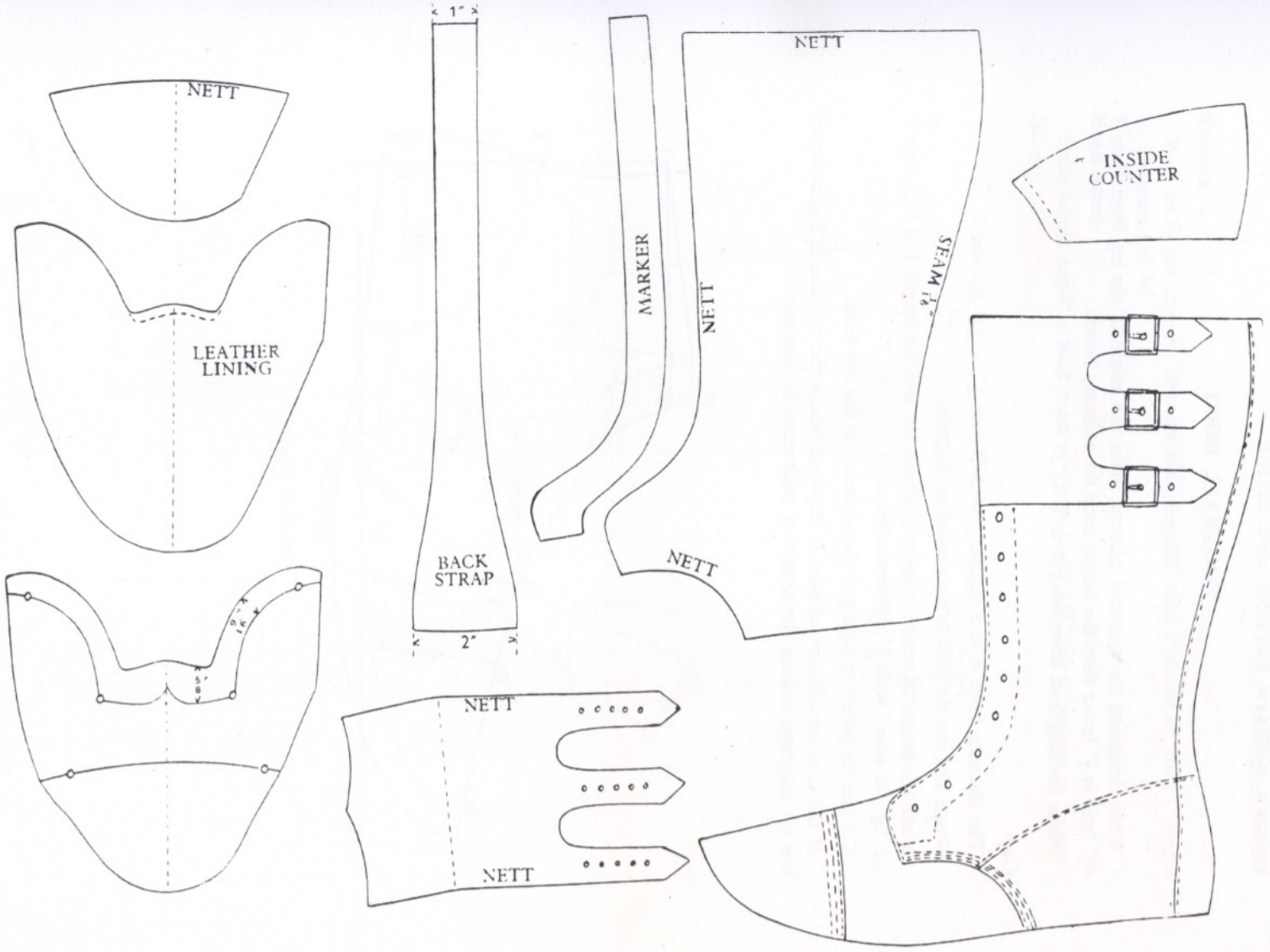


DIAGRAM NO. 63

DIAGRAM NO. 64 *(opposite) shows the complete upper and the number of sectional parts required for the Motor Cycling Boot.*

Allowances for seams, laps and edge treatment are also given.


NETT
LEATHER LINING
BACK STRAP
1"
2"
MARKER
NETT
NETT
SEAM 1/2"
INSIDE COUNTER
NETT
NETT

FOOTBALL BOOT

Diagram No. 65

When designing the standard pattern, make the height of the leg from H to T $4\frac{3}{4}''$ (this is $\frac{1}{4}''$ lower than the height used for ordinary boots).

Make the length of front from A to B $4\frac{1}{8}''$.

Cap

The distance from B to R equals $\frac{1}{3}$ of A-B plus $\frac{1}{8}'' = 1\frac{1}{2}''$ for size 7.

Shape and cut the joint strap similar to diagram.

Make the height of inside counter $\frac{1}{4}''$ above CP and the length $\frac{2}{5}$ of SLL less $\frac{1}{2}''$ (*i.e.* $3\frac{3}{4}''$ for size 7 with $\frac{1}{8}''$ difference per size).

Cut the toe joiner to zigzag to the underlay at the cap seam.

If the Continental type of boot is required, shape the top line of leg as dotted line on diagram, making the height of back seam $3\frac{1}{8}''$ for size 7s.

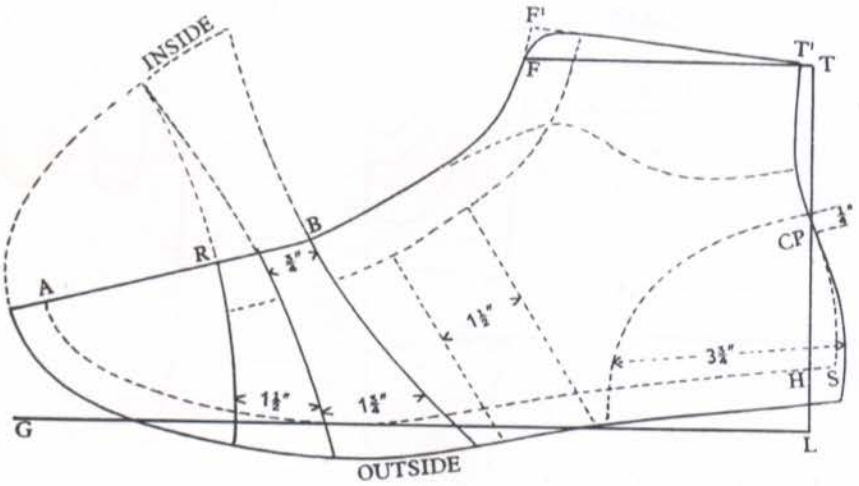


DIAGRAM NO. 65

Tongue

Mark on folded edge the distance from R to F¹. Add ½″ above F¹. Add ½″ below R. Diagram No. 66.

Back Strap

Make height equal to back seam of quarter and add loop allowance as diagram No. 66.

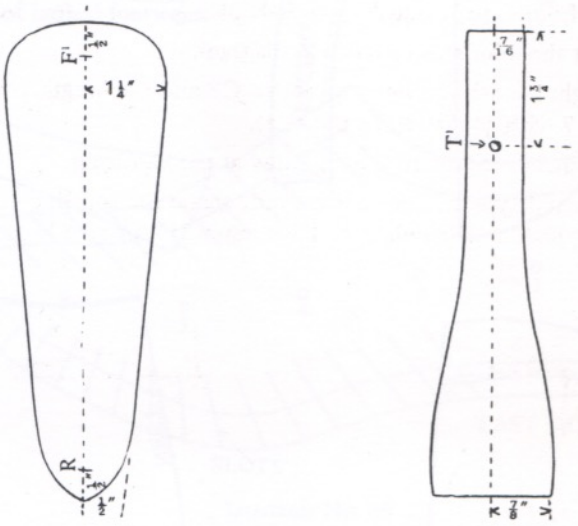
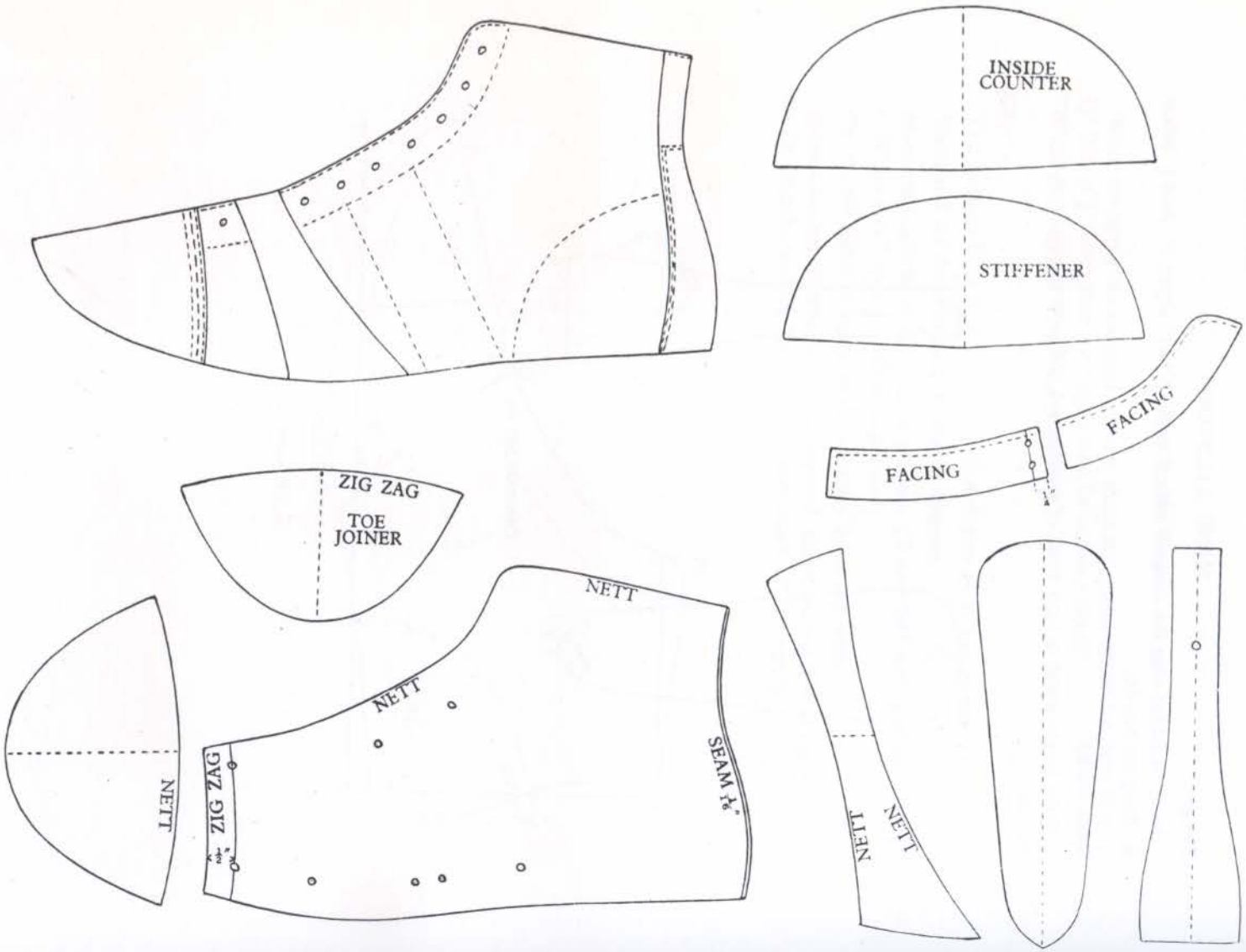


DIAGRAM NO. 66


INSIDE
COUNTER
STIFFENER
FACING
FACING
ZIG ZAG
TOE
JOINER
NETT
NETT
NETT
ZIG ZAG
SEAM 1/16"
NETT
NETT

LADIES' FORMES

Diagram No. 68

When cutting formes for ladies' lasts, proceed as for the men's formes. You will note that more slots are used in ladies' work ; this enables us to get a closer and tighter fit in keeping with the lighter substance of the materials used in the manufacture of ladies' footwear.

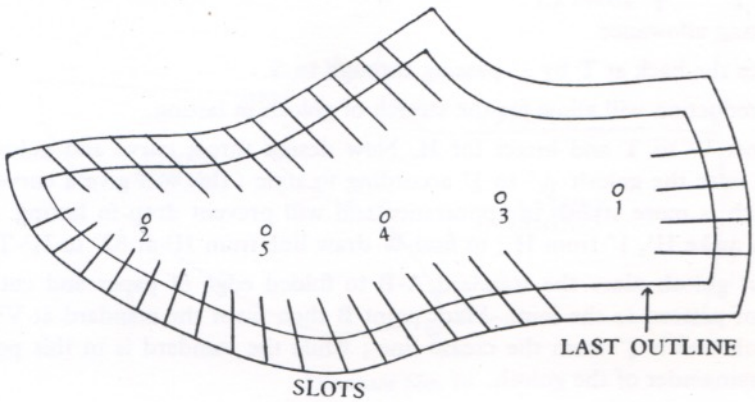


DIAGRAM NO. 68

DIAGRAM NO. 67 *(opposite) shows the complete upper and the number of sectional parts required for the Football Boot.*

Allowances for seams, laps and edge treatment are also given.

LADIES' COURT SHOE

Diagram No. 69

Point A Toe.
„ B Front height. $3\frac{3}{8}$″ for size 4 or length of front required.
„ X Contact point 90° to A-B, X being the edge of forme.
„ V $\frac{1}{3}$ of B-X from B.
„ V^1 $\frac{1}{8}$″ from point V.
„ S Seat.
„ S-CP $\frac{1}{5}$ of SLL.
„ T $\frac{1}{2}$″ above CP.

$\frac{1}{2}$″ lasting allowance.

Reduce the back at T by $\frac{1}{6}$″ passing through to S.

This reduction will allow for the stretch of golosh in lasting.

Connect V^1 to T and bisect for H. Now design throat curve and golosh. At point H raise the golosh $\frac{1}{16}$″ to $\frac{1}{8}$″ according to style ; this will give a curved top line which is more stylish in appearance and will prevent drop in lasting. For a $\frac{3}{4}$ golosh make H^1, 1″ from H ; to find W draw line from H^1 at 82° to H^1-T.

To cut golosh place the standard A-B to folded edge of paper and cut from the toe of pattern to the joint. Mark point B then pivot the standard at V^1 until the golosh line is $\frac{1}{6}$″ from the crease line ; while the standard is in this position cut the remainder of the golosh.

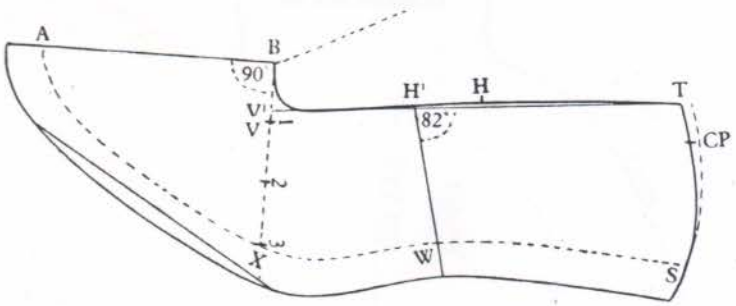


DIAGRAM NO. 69

Quarter Lining (Diagram No. 70).

Cut round standard from T to W^1 which is $\frac{1}{2}''$ from W. Trace the golosh line as dotted line B-T. Make point I about $1\frac{1}{4}''$ from B and add $\frac{1}{16}''$ seam allowance from B^1 to I. Now add $\frac{1}{8}$ trim allowance along the top line and curve into point I. Cut lining $\frac{5}{8}''$ in front of B as B^1 and design lining curve to W^1.

Linings filled in from B to I as diagram will prevent the throat of shoe from distorting in lasting.

Vamp lining will be cut as explained for previous patterns, adding $\frac{5}{16}''$ for underlay.

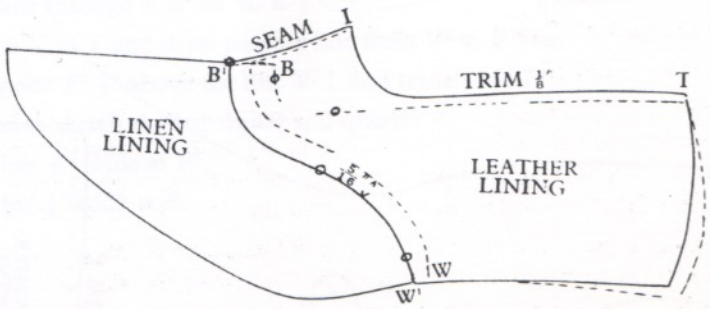
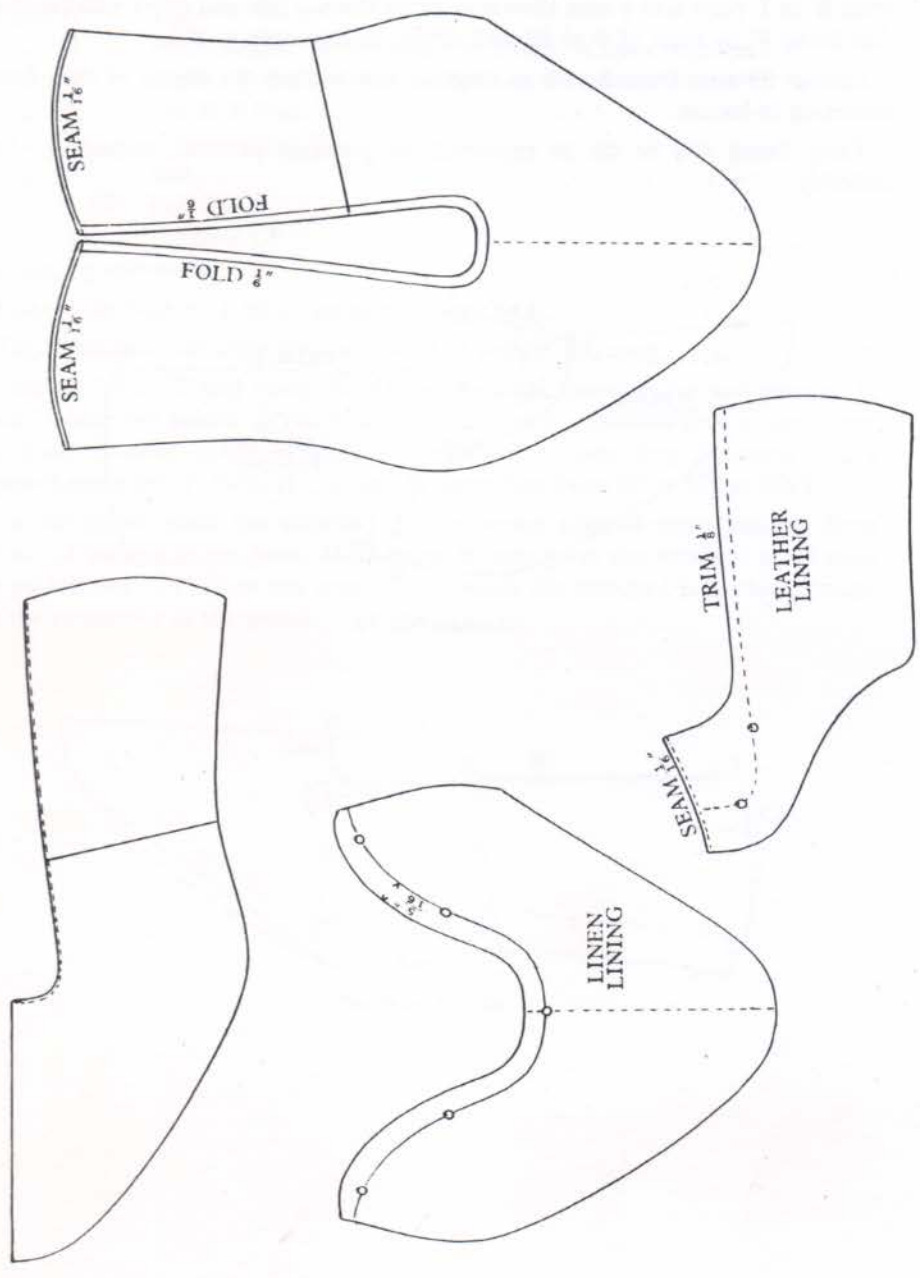


DIAGRAM NO. 70


SEAM 1/8"
FOLD 1/8"
FOLD 1/8"
SEAM 1/8"
TRIM 1/8"
LEATHER LINING
SEAM 1/8"
LINEN LINING

LADIES' 1 BAR SHOE

Diagram No. 72

Point A Toe.
„ B Front height.
„ X Contact point 90° to A-B.
„ V $\frac{1}{3}$ of B-X from B.
„ V^1 $\frac{1}{8}$″ from V.
„ I $\frac{1}{4}$ length of last from B.
„ F Centre of bar.
„ D-E $\frac{3}{8}$″ less than S-T.

Draw line through F at 90° to B-I.

Connect V to T and draw parallel line from V^1 to F line.

Make point F^1 $\frac{3}{8}$″ above the line V-T and transfer to F^2.

Proceed to sketch the bar throat and quarter.

Make bar $\frac{9}{16}$″ wide at F^2.

Make bar $\frac{3}{8}$″ wide at F.

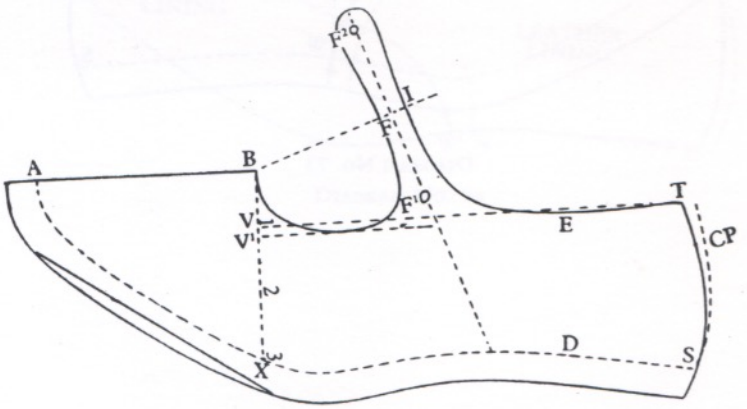


Diagram No. 72

Diagram No. 71 *(opposite) shows the complete upper and the number of sectional parts required for the Court Shoe.*
Allowances for seams, laps and edge treatment are also given.

Vamp Diagram No. 73.

Continue the line A B to the back of the bar as K and draw line at 90° for W. This gives the position for length of vamp.

Quarter

Cut round standard from B to T and W.

Prick holes for vamp position and draw vamp curve.

Add $\frac{5}{16}$ for underlay.

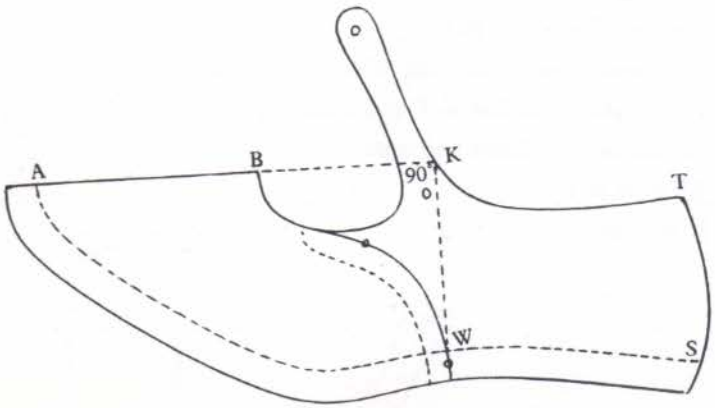


DIAGRAM NO. 73

Quarter Lining Diagram No. 74.

Cut round standard from T to W^1.

Add $\frac{1}{8}$ trim allowance along the top line and bar. When filling in the throat make the line at I, $\frac{1}{4}''$ above the outside quarter position.

Cut lining $\frac{5}{8}''$ in front of B as B^1 and design lining curve to W^1.

Bar Lining

Add $\frac{1}{4}''$ underlay where the bar lining meets the quarter lining at point I.

Cup vamp lining in the usual manner.

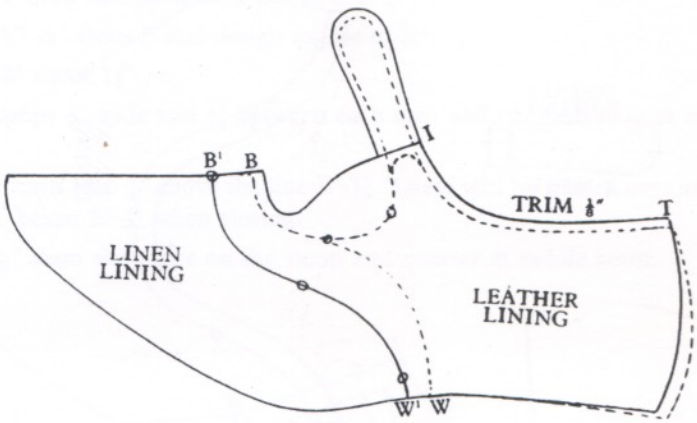


DIAGRAM NO. 74

TRIM 1/8"
LEATHER LINING
SEAM 1/16"
SEAM 1/16"
FOLD 1/8"
SEAM 1/16"
FOLD 1/8"
LEATHER LINING
TRIM 1/8"
LINEN LINING
FOLD 1/8"
FOLD 1/8"

LADIES' GHILLIE SHOE

Diagram No. 76

Point B Front height. $3\frac{3}{8}$″ size 4.
„ X Contact point 90° to A-B.
„ V $\frac{1}{3}$ of B-X from B.
„ I $\frac{1}{4}$ of SLL from B.

Make the line I-X¹ parallel to B-X.

B¹-I¹ $\frac{1}{4}$″ below B-I.

Connect V to T and mark F $\frac{3}{4}$″ from V.

From F draw line parallel to B-I as F-F¹.

Make V¹ $\frac{5}{16}$″ from F and design saddle to X¹.

X¹ to W about $1\frac{1}{4}$″.

Make loops $\frac{3}{8}$″ wide and $\frac{3}{8}$″ between each one, and cut each loop at right angles to B-I.

Extend each loop $\frac{3}{4}$″ above the line B¹-I¹. These will be turned over and stitched down $\frac{5}{16}$″ below B¹-I¹ when closing.

Add $\frac{5}{16}$″ seam allowance on the vamp and quarter at saddle seam.

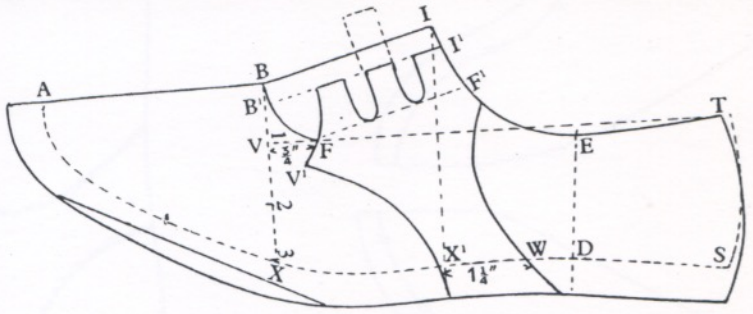


Diagram No. 76

Diagram No. 75 *(opposite) shows the complete upper and the number of sectional parts required for the Bar Shoe.*
Allowances for seams, laps and edge treatment are also given.

Quarter Lining Diagram No. 77.

Cut lining $\frac{5}{8}$ in front of B for B^1. Now design lining curve making W $\frac{1}{4}$" in front of X^1. Add $\frac{1}{8}$ seam allowance up the instep from B^1 to I, also $\frac{1}{8}$" from I to T for trim.

The lining will hold the loops in place during lasting and the surplus lining will be trimmed out when the shoe is finished.

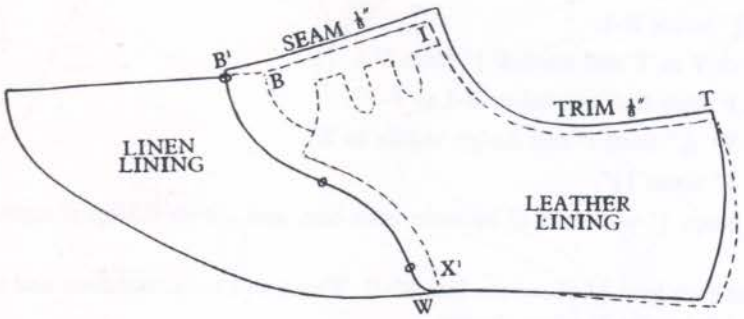
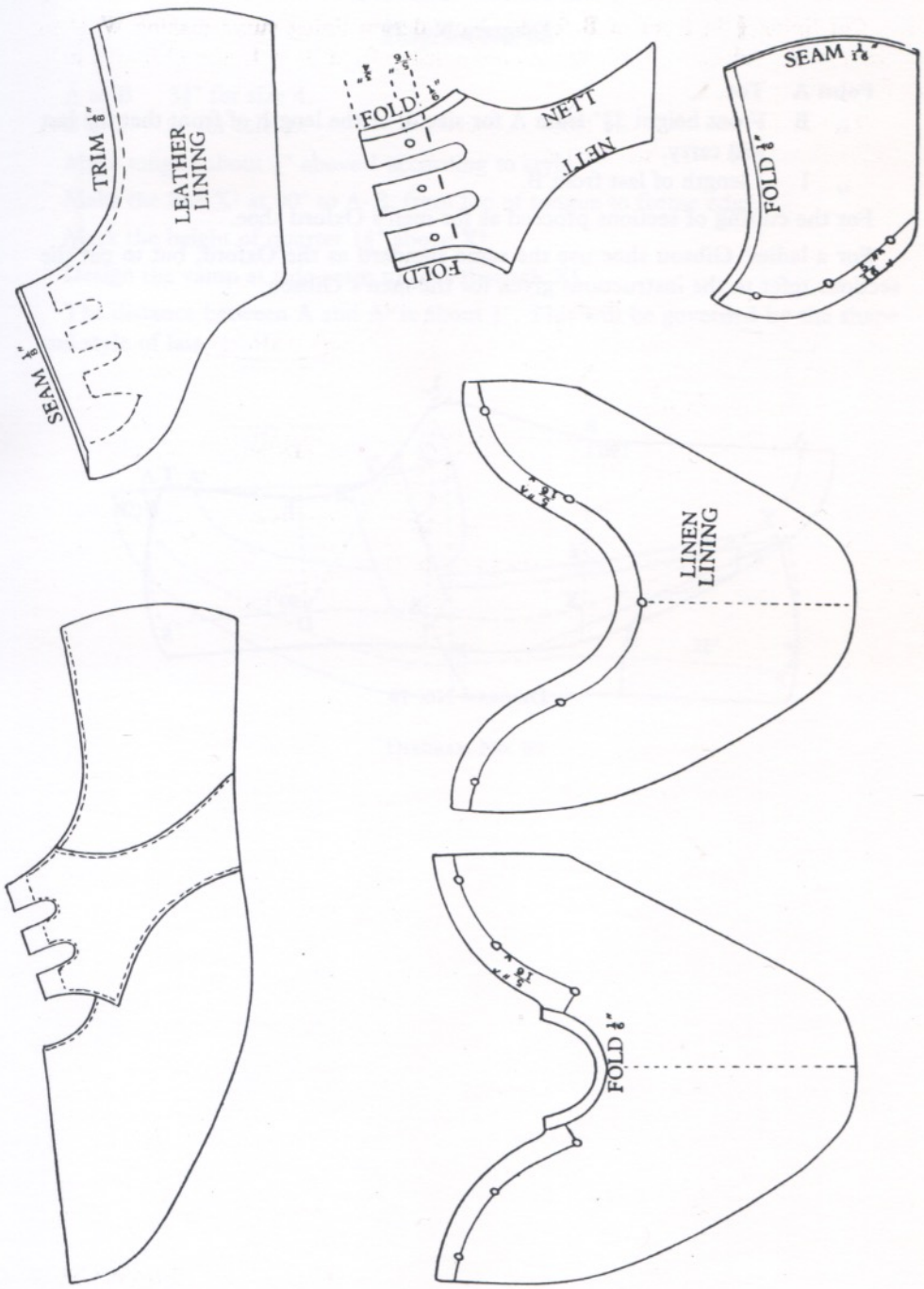


DIAGRAM NO. 77

DIAGRAM NO. 78 *(opposite) shows the complete upper and the number of sectional parts required for the Ghillie Shoe.*

Allowances for seams, laps and edge treatment are also given.


TRIM ⅛"
LEATHER LINING
SEAM ⅛"
FOLD
NETT
NETT
FOLD
SEAM 1/16"
FOLD ⅛"
LINEN LINING
FOLD ⅛"

LADIES' OXFORD SHOE

Diagram No. 79

Point A Toe.

„ B Front height $3\frac{3}{8}$" from A for size 4, or the length of front that the last will carry.

„ I $\frac{1}{4}$ length of last from B.

For the cutting of sections proceed as for men's Oxford shoe.

For a ladies' Gibson shoe use the same standard as the Oxford, but to cut the sections refer to the instructions given for the men's Gibson.

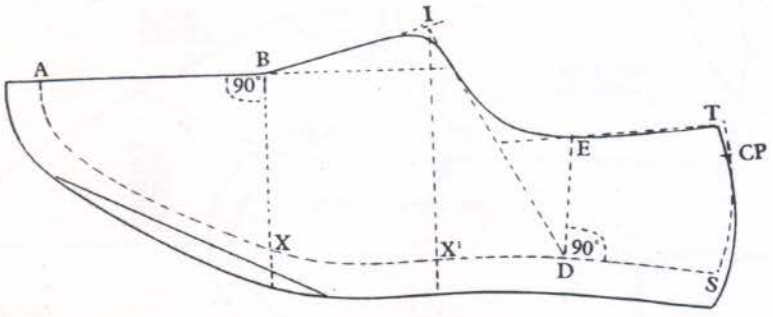


DIAGRAM NO. 79

LADIES' CASUAL

Diagram No. 80

A to B $3\frac{3}{8}''$ for size 4.
B to I $\frac{7}{8}''$ for size 4.

Make tongue about $\frac{7}{8}''$ above I according to style.

Make the line X^1 at 90° to A-B, from top of tongue to forme edge.

Mark the height of quarter $1\frac{3}{8}''$ above X^1.

Design the vamp at side seam to pass through X^1.

The distance between A and A^1 is about 1″. This will be governed by the shape and style of last.

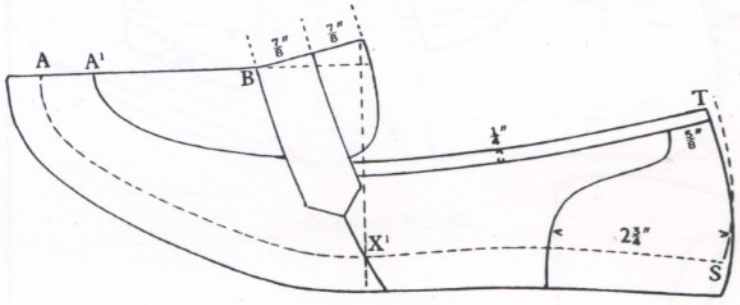
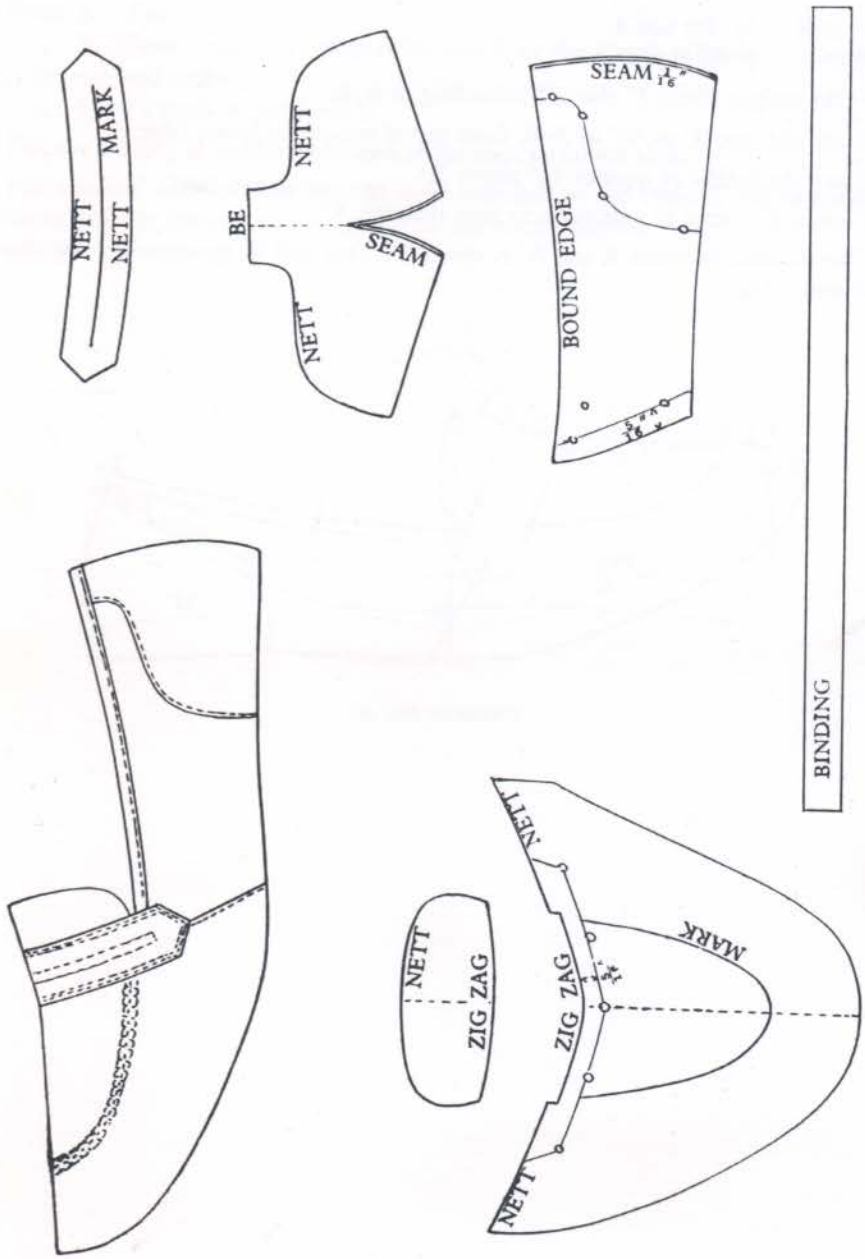


Diagram No. 80


NETT
MARK
NETT
NETT
BE
SEAM
NETT
SEAM 1/16"
BOUND EDGE
BINDING
NETT
ZIG ZAG
NETT
ZIG ZAG
MARK
NETT

LADIES' GUSSET CASUAL

Diagram No. 82

A to B $3\frac{1}{4}''$ for size 4.

B to I $2''$ for size 4.

Design the saddle as diagram with the front line $\frac{1}{4}''$ from X^1 and the back line $1''$ from X^1.

When cutting the sections, proceed as for the other casuals. The slots in the saddle can be designed as diagram or according to style and taste.

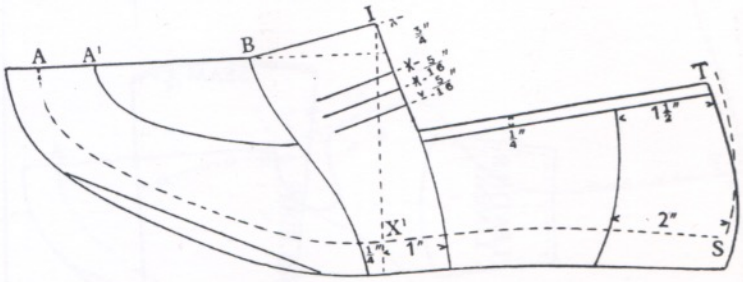
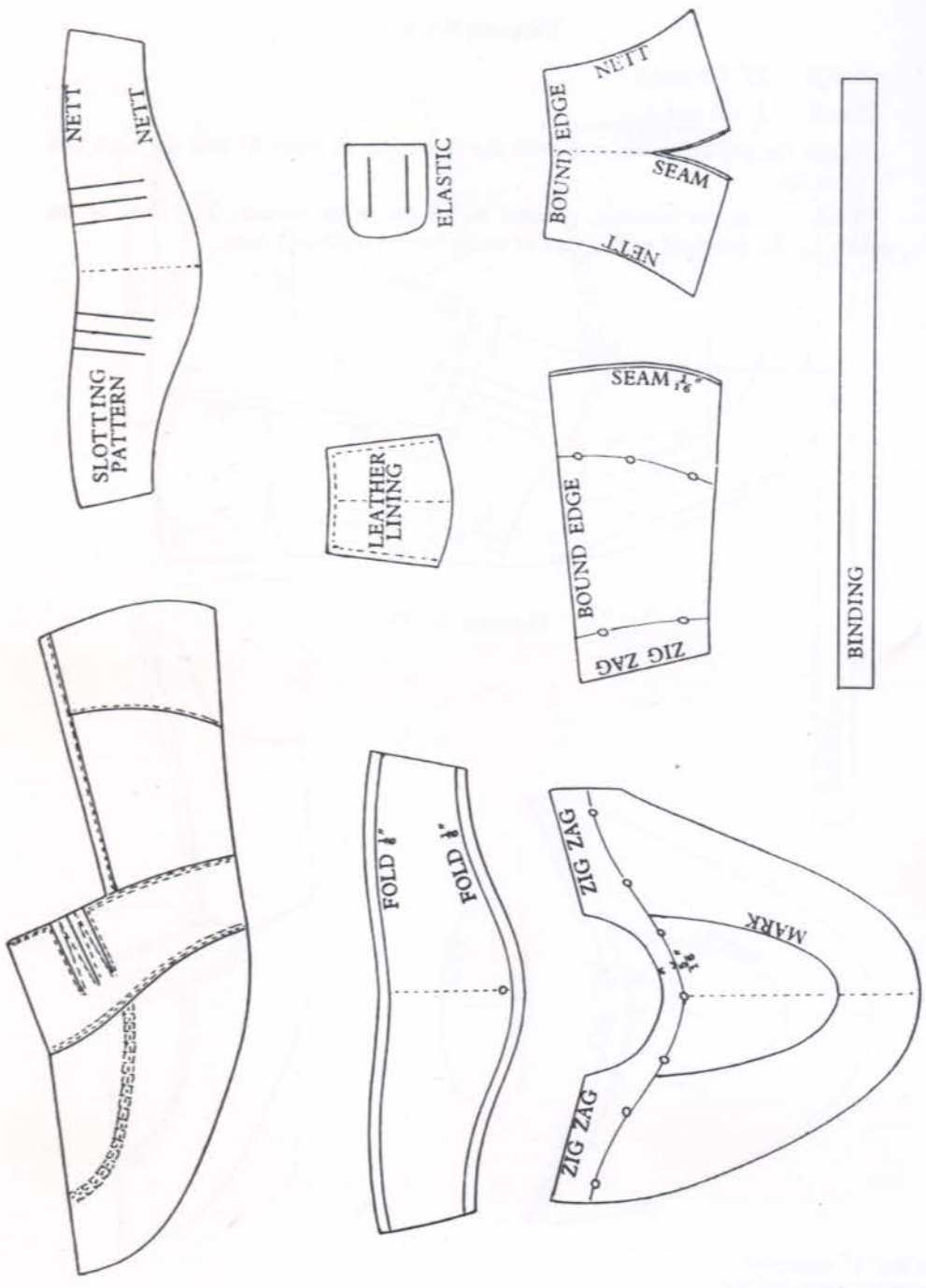


DIAGRAM NO. 82

DIAGRAM NO. 81 *(opposite) shows the complete upper and the number of sectional parts required for the Ladies' Casual.*

Allowances for seams, laps and edge treatment are also given.


NETT
NETT
SLOTTING PATTERN
ELASTIC
NETT
BOUND EDGE
SEAM
NETT
LEATHER LINING
SEAM 1/16"
BOUND EDGE
ZIG ZAG
BINDING
FOLD 1/4"
FOLD 1/4"
ZIG ZAG
MARK
ZIG ZAG

LADIES' INSTEP TIE

Diagram No. 84

A to B $3\frac{3}{8}$" for size 4.
V $\frac{1}{3}$ of B-X from B.

Connect V to T and design the throat and top line.

The wing of vamp, point W, is $\frac{1}{3}$ of X-S from X.

When cutting the quarter lining add $\frac{1}{8}$ trim round the top line from B to T. Now add the $\frac{5}{8}$" in front of B and design the curve as for the 1 Bar lining.

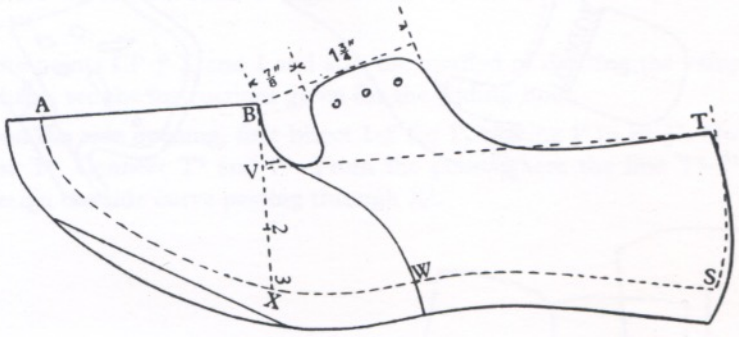
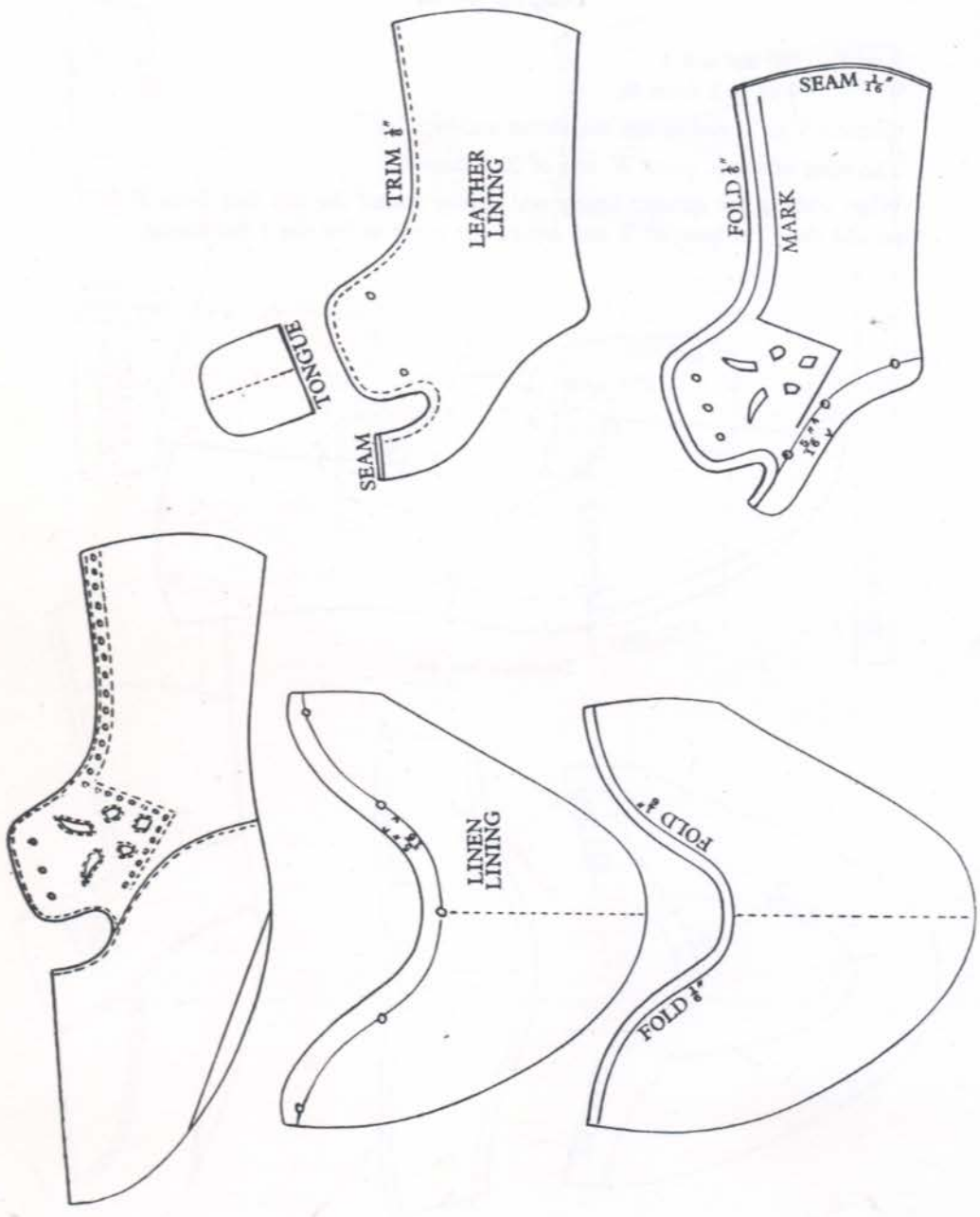


DIAGRAM NO. 84

DIAGRAM NO. 83 *(opposite) shows the complete upper and the number of sectional parts required for the Gusset Casual.*
Allowances for seams, laps and edge treatment are also given.


TONGUE
SEAM
TRIM ⅛"
LEATHER LINING
SEAM 1/16"
FOLD ⅛"
MARK
LINEN LINING
FOLD ⅛"
FOLD ⅛"

LADIES' JODHPUR

Diagram No. 86

G-L	Ground Line.
G-L-T	90°
L-H	$\frac{5}{8}$″.
H-T	5″ size 7, $\frac{1}{8}$ between sizes, $4\frac{5}{8}$″ size 4.
T-T¹	$\frac{3}{8}$″.
T¹-F	4″ ankle measure size 4, $\frac{1}{8}$ between sizes.
F-F¹	$\frac{1}{2}$″.

$\frac{9}{16}$″ lasting allowance.

Make the leg at back seam 6″ high for size 4, and the top of leg parallel to the line T¹-F¹.

For the points CP-J-X and I and also the method of drafting the vamp for the caster shape, see the instructions given for the Riding Boot.

To find the side opening, first bisect I-S for P, making P to P¹ $\frac{1}{4}$″. Now bisect T¹-F for T². Connect T² and P¹. From the point where the line T²-P¹ crosses CP-J design the side curve passing through X¹.

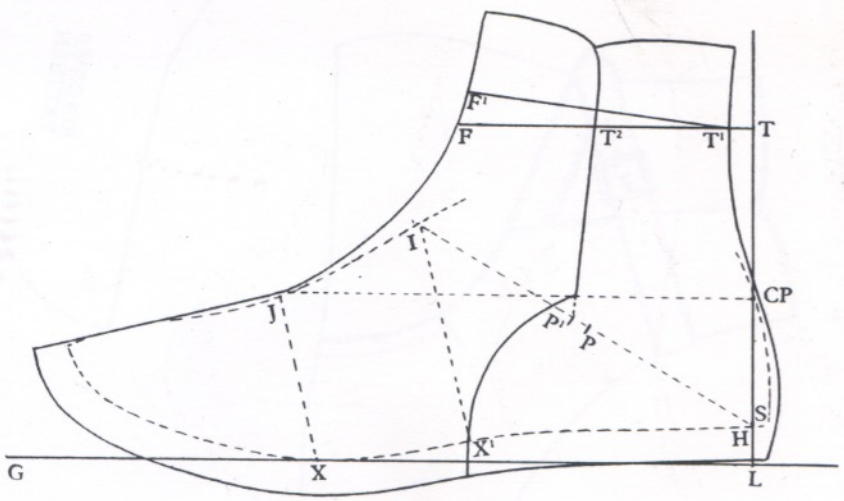
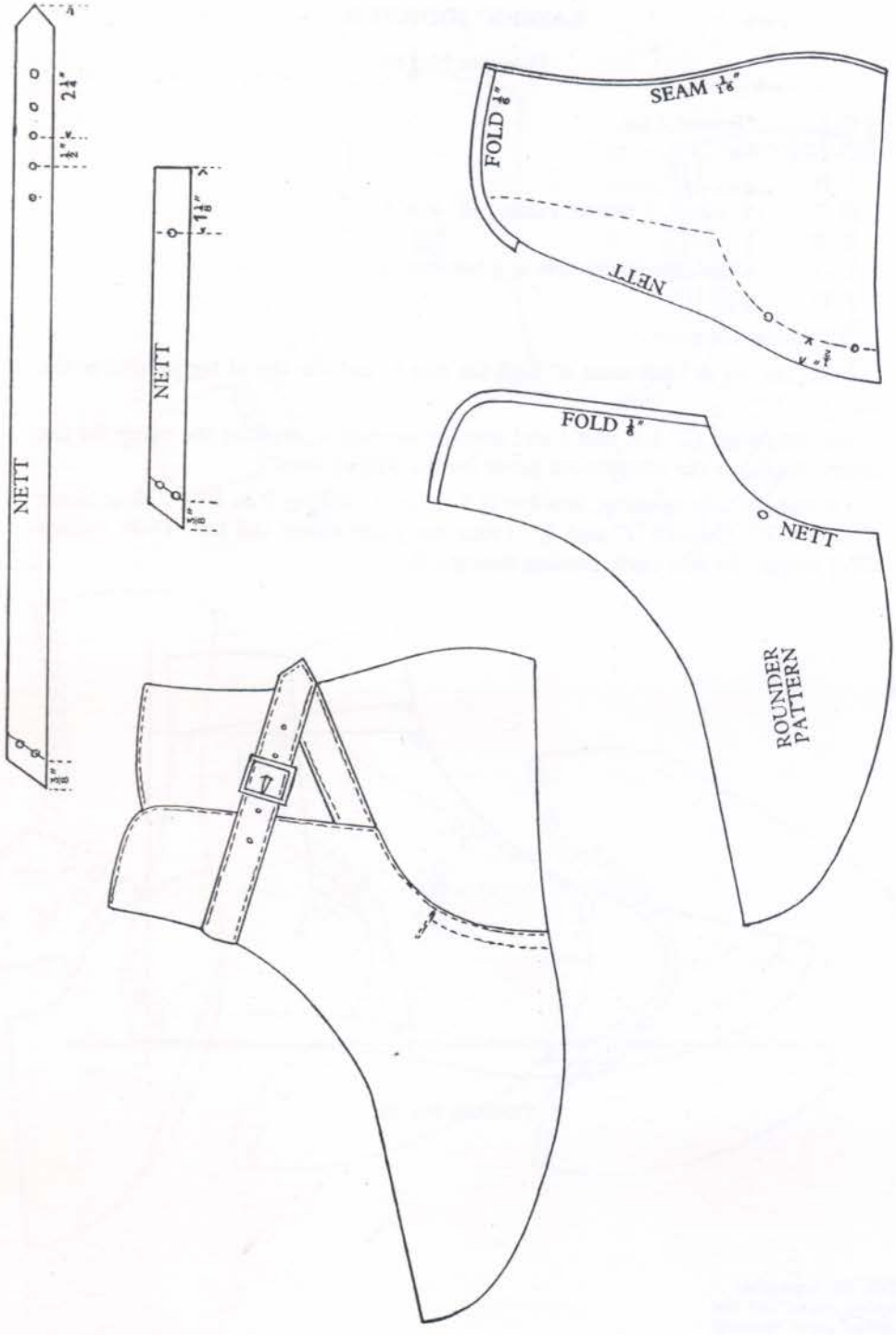


Diagram No. 86

Diagram No. 85 *(opposite) shows the complete upper and the number of sectional parts required for the Instep Tie.*

Allowances for seams, laps and edge treatment are also given.


NETT
NETT
SEAM
FOLD
NETT
FOLD
NETT
ROUNDER PATTERN

The amount of underlay required on the quarter pattern is shown by the dotted line. Diagram No. 87.

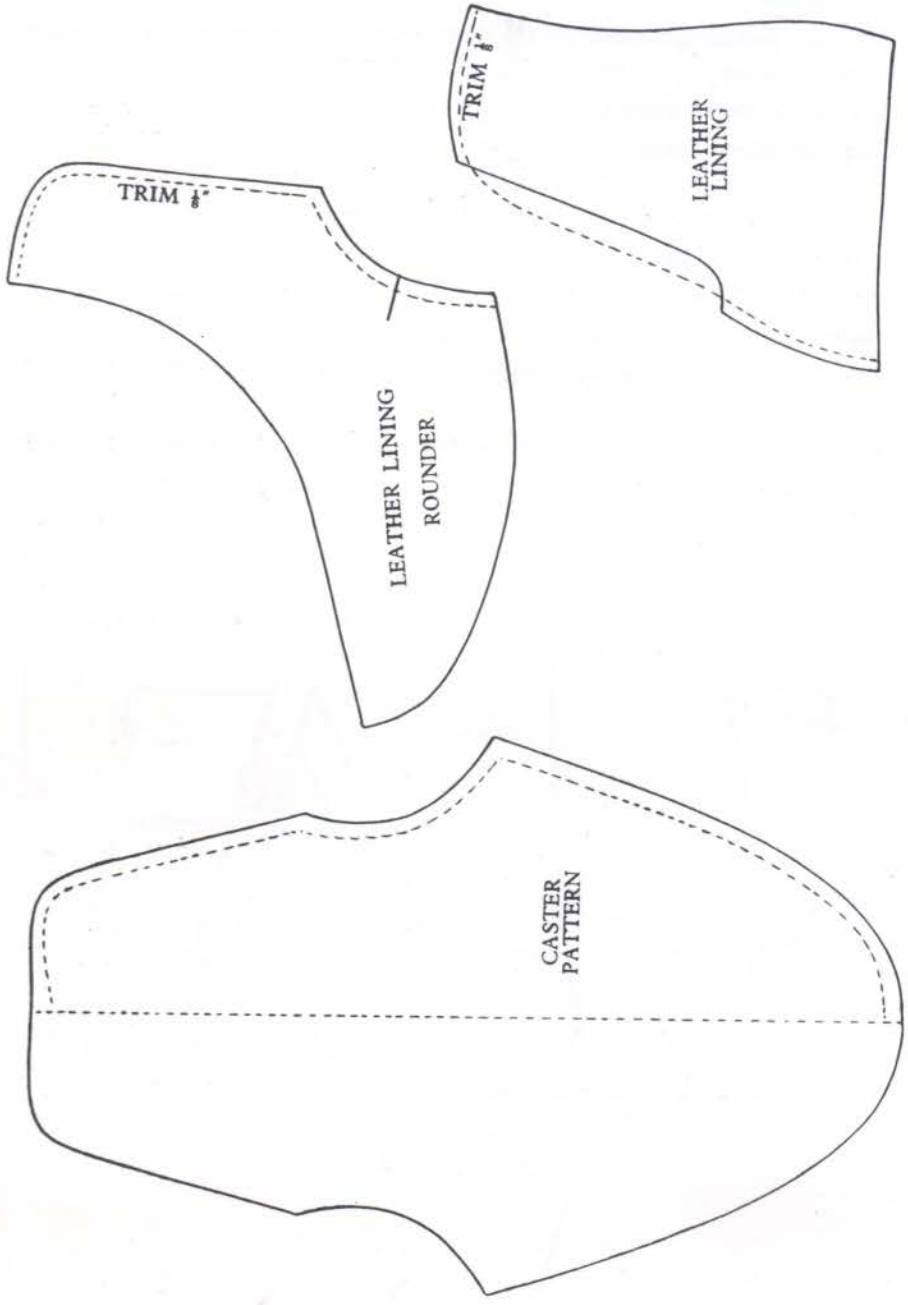
To avoid bulk at the ankle, cut the quarter lining $\frac{3}{8}$" under the edge of quarter as shown on diagram No. 88.

Dotted line shows quarter.

Solid line shows lining.

DIAGRAM NO. 87 *(opposite) shows the complete upper and the number of sectional parts required for the Ladies' Jodhpur outside sections.*

Allowances for seams, laps and edge treatment are also given.


TRIM ⅛"
LEATHER LINING
TRIM ⅛"
LEATHER LINING ROUNDER
CASTER PATTERN

LADIES' BOOTEE

Diagram No. 89

G-L Ground Line.
G-L-T 90°.
L-H is the heel height that the last will carry.
H-T $4\frac{5}{8}$″ for size 4, $\frac{1}{8}$″ between sizes.
T-F Ankle measure $5\frac{1}{4}$″ for size 4, $\frac{1}{8}$″ between sizes.

$\frac{5}{8}$″ lasting allowance.

Make point V $\frac{1}{3}$ of B-X.

Make point W $\frac{2}{5}$ of X-S, from X.

Make the height of back $6\frac{1}{2}$″ for size 4, and the top line, T^1-F^1 parallel to the line T-F.

The top of the leg can be cut straight or slightly curved as in diagram No. 89.

When cutting the leg pattern, take $\frac{3}{16}$″ off the front to allow for the zip.

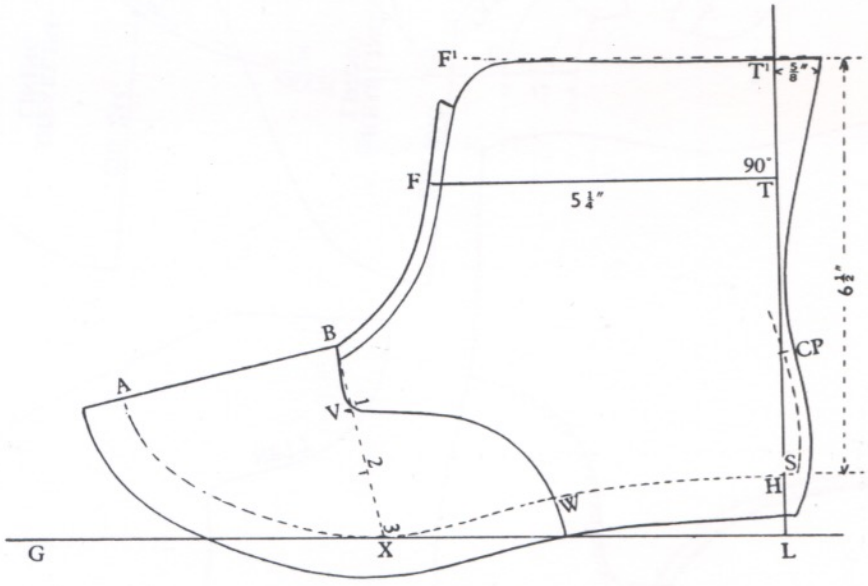
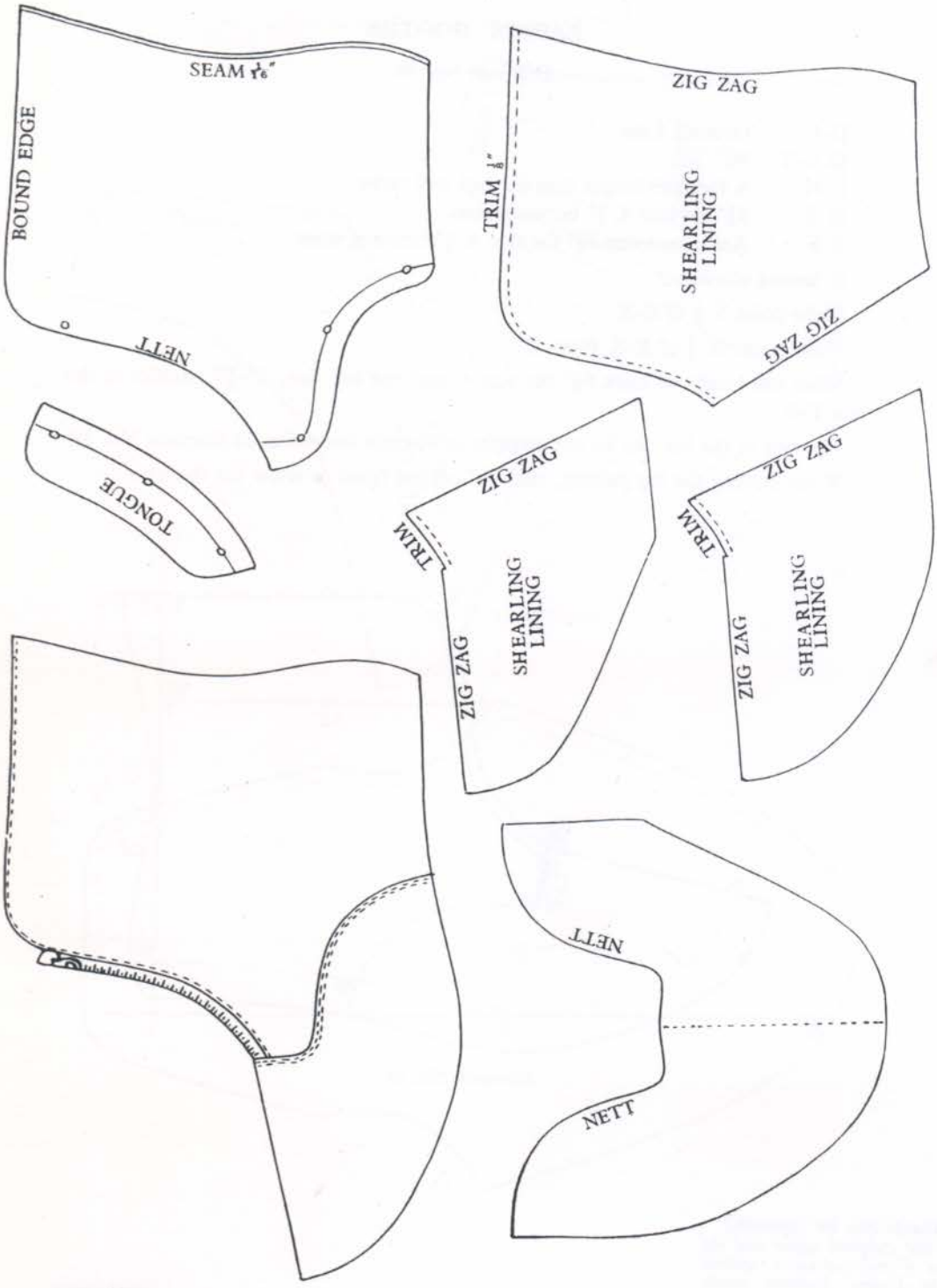


Diagram No. 89

Diagram No. 88 *(opposite) shows the complete upper and the number of sectional parts required for the Ladies' Jodhpur inside lining sections.*

Allowances for seams, laps and edge treatment are also given.


SEAM 1/16"
BOUND EDGE
NETT
TONGUE
ZIG ZAG
TRIM 1/8"
SHEARLING LINING
ZIG ZAG
ZIG ZAG
TRIM
SHEARLING LINING
ZIG ZAG
ZIG ZAG
TRIM
SHEARLING LINING
ZIG ZAG
NETT
NETT

LADIES' SLIP LASTED SANDAL

Diagram No. 91

A-B $3\frac{1}{4}$" for size 4, or the length of front required.
X 90° to A-B.
I $\frac{1}{4}$ SLL from B.
T $2\frac{3}{8}$ from S for size 4.

Make W $\frac{2}{7}$ of X-S from X or according to style and S-C $\frac{2}{5}$ of SLL less $\frac{1}{2}$".

The sections of the upper pattern to be cut should fit to the feather edge of the last and the seam allowance of $\frac{1}{8}$" is then added.

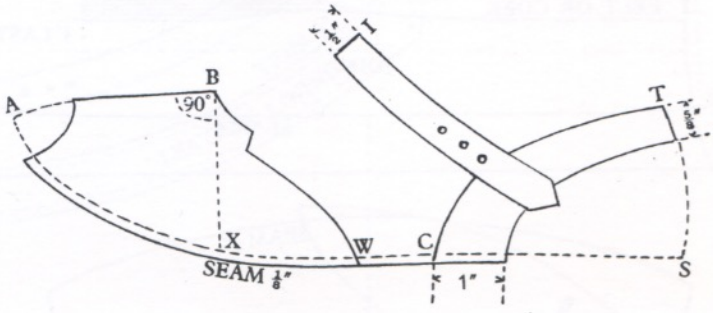


DIAGRAM NO. 91

DIAGRAM NO. 90 *(opposite) shows the complete upper and the number of sectional parts required for the Bootee.*

Allowances for seams, laps and edge treatment are also given.

Diagram No. 92 shows the platform unit drawn in solid line ; the dotted line denotes the seam and lasting allowance required for the platform covers which should be joined in the waist.

The sock pattern, Diagram No. 93 shows the outline of the last plus the seaming allowance, also the location slots are shown denoting the position of the various sections.

After the sections of the upper have been closed together, the upper is then stitched to the sole using the location points to position the upper. The platform cover is then sewn in.

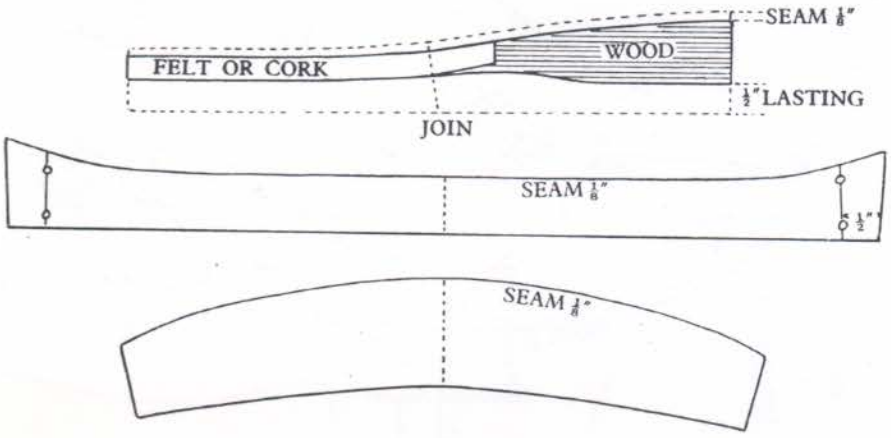
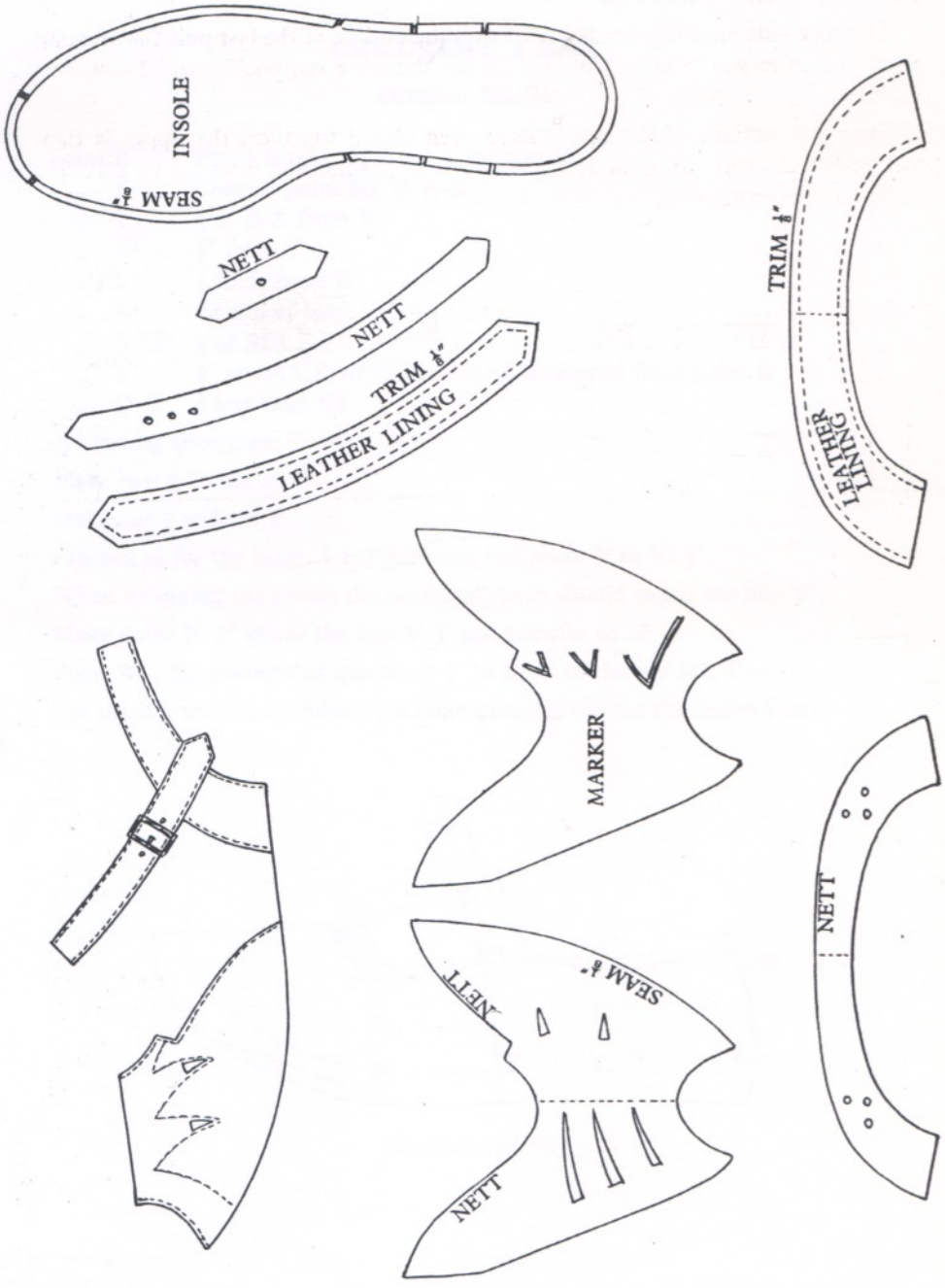


DIAGRAM NO. 92

DIAGRAM NO. 93 *(opposite) shows the complete upper and the number of sectional parts required for the Sandal.*

Allowances for seams, laps and edge treatment are also given.


INSOLE
SEAM ⅜"
NETT
NETT
TRIM ⅜"
LEATHER LINING
TRIM ⅜"
LEATHER LINING
MARKER
NETT
SEAM ⅜"
NETT
NETT

CHILDREN'S PATTERNS

CHILDREN'S 1 BAR

Diagram No. 94

Point B — Front height. $2\frac{7}{8}$ from A for size 12.
„ X — Contact point 90° to A-B.
„ V — $\frac{1}{3}$ of B-X from B.
„ V^1 — $\frac{1}{4}''$ from V.
„ I — $\frac{1}{4}$ SLL from B.
„ F — Centre of bar.
„ S-CP — $\frac{1}{5}$ of SLL.
„ T — $\frac{3}{8}''$ above CP, or 2″ for size 12 measured from point S.
„ D-E — $\frac{3}{8}$ less than ST.

$\frac{9}{16}''$ lasting allowance.

Make bar $\frac{9}{16}''$ wide at F^2.

Make bar $\frac{3}{8}$ wide at F.

Proceed as for the ladies 1 bar patterns, but make V to V^1 $\frac{1}{4}''$.

When designing the throat the centre of curve should touch the line V^1.

Make point F^1 $\frac{1}{8}''$ above the line V-T and transfer to F^2.

Point W : the position of quarter is $\frac{3}{4}''$ in front of the bar line F.

For cutting the linings follow the instructions given for the ladies 1 bar.

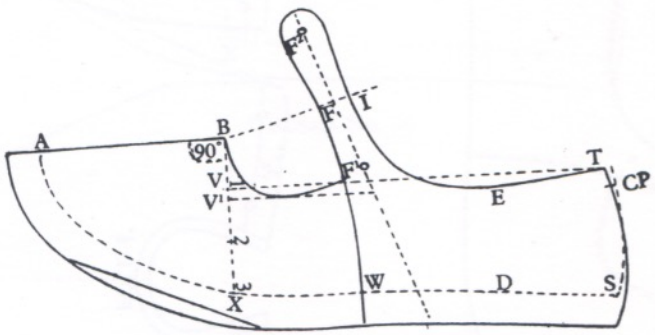
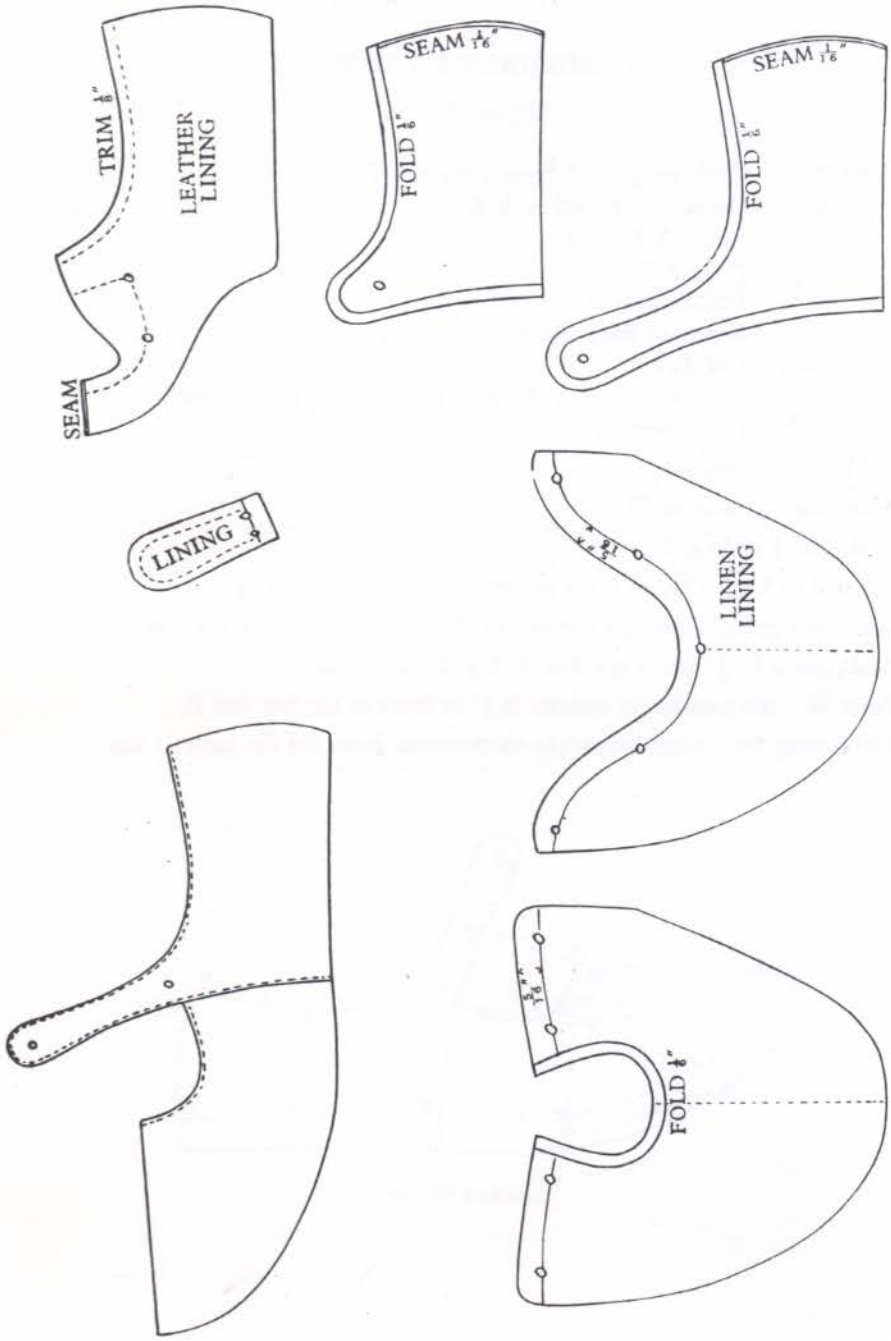


DIAGRAM NO. 94


TRIM ⅛"
LEATHER LINING
SEAM
SEAM 1/16"
FOLD ⅛"
SEAM 1/16"
FOLD ⅛"
LINING
LINEN LINING
FOLD ⅛"

CHILDREN'S ANKLE STRAP

Diagram No. 96

Point V $\frac{1}{3}$ of B-X from B.
,, V^1 is $\frac{3}{16}''$ from V.
Connect V^1 to CP.

Make slot between golosh and bar $\frac{1}{6}''$ wide and width of bar $\frac{3}{8}''$.

Make the length of bar from T to button hole equal to the distance of CP to I on the forme.

Outside Pattern

First cut from toe of the pattern to the joint, mark point B, then pivot the standard at V^1 until the golosh V^1 to CP is parallel to the crease line.

Quarter Lining. Diagram No. 97.

Trace the golosh line and bar adding seam allowance up the instep and $\frac{1}{8}''$ trim allowance along the top line.

The filled-in portion of the lining is trimmed out when the shoe is finished.

Cut vamp lining in the usual manner.

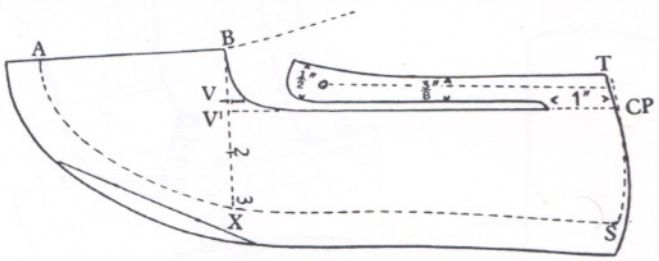
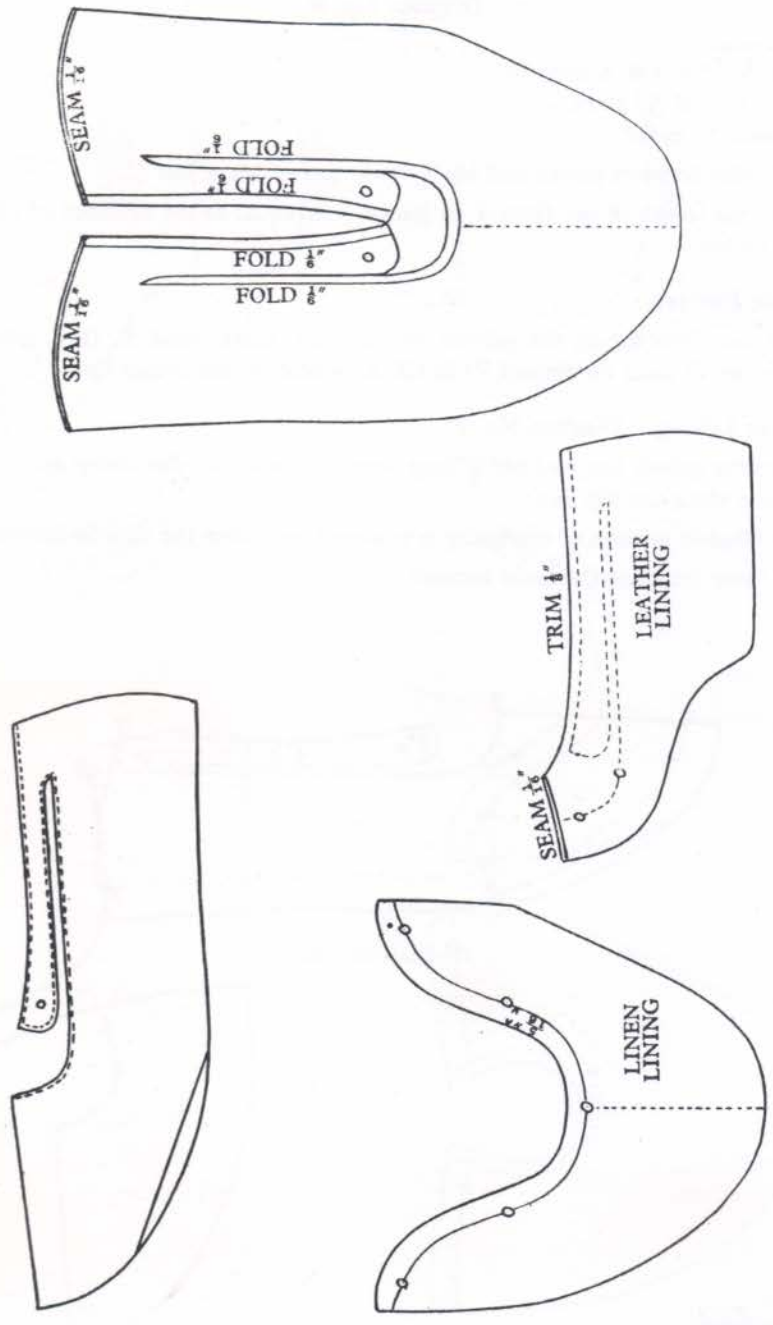


DIAGRAM NO. 96

DIAGRAM NO. 95 *(opposite) shows the complete upper and the number of sectional parts required for the Children's 1 Bar.*
Allowances for seams, laps and edge treatment are also given.


SEAM ⅛"
FOLD ⅛"
FOLD ⅛"
FOLD ⅛"
FOLD ⅛"
SEAM ⅛"
TRIM ⅛"
LEATHER LINING
SEAM ⅛"
LINEN LINING

CHILDREN'S VELDTSCHOEN SANDAL

Diagram No. 98

A-B $2\frac{3}{4}$″ for size 12.
X 90° to A-B.
V $\frac{1}{3}$ of B-X, from B.
V^1 $\frac{3}{8}$″ from V.
I $\frac{1}{4}$ SLL from B.
F Centre of Bar.
F-L 85° to F-I.
F^1 $1\frac{3}{4}$″ from F with $\frac{5}{16}$″ between holes.
T $1\frac{3}{4}$″ from S.

Make bar $\frac{1}{2}$″ wide or the width of buckle required.

Make "T Bar" $\frac{9}{16}$″ wide at I and $\frac{5}{16}$″ wide at B.

$\frac{7}{16}$″ lasting allowance.

To find W draw line from top of "T Bar" and parallel to the line B-X.

When designing the vamp pattern the centre of curve should touch the line V^1.

It is usual for the bar and the counter to be lined, but to leave the vamp unlined.

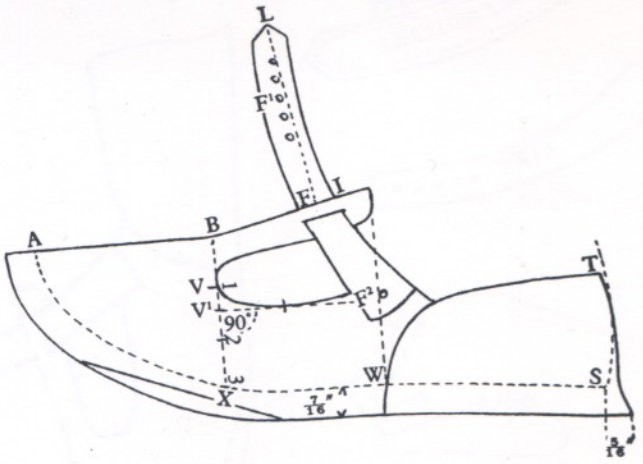


Diagram No. 98

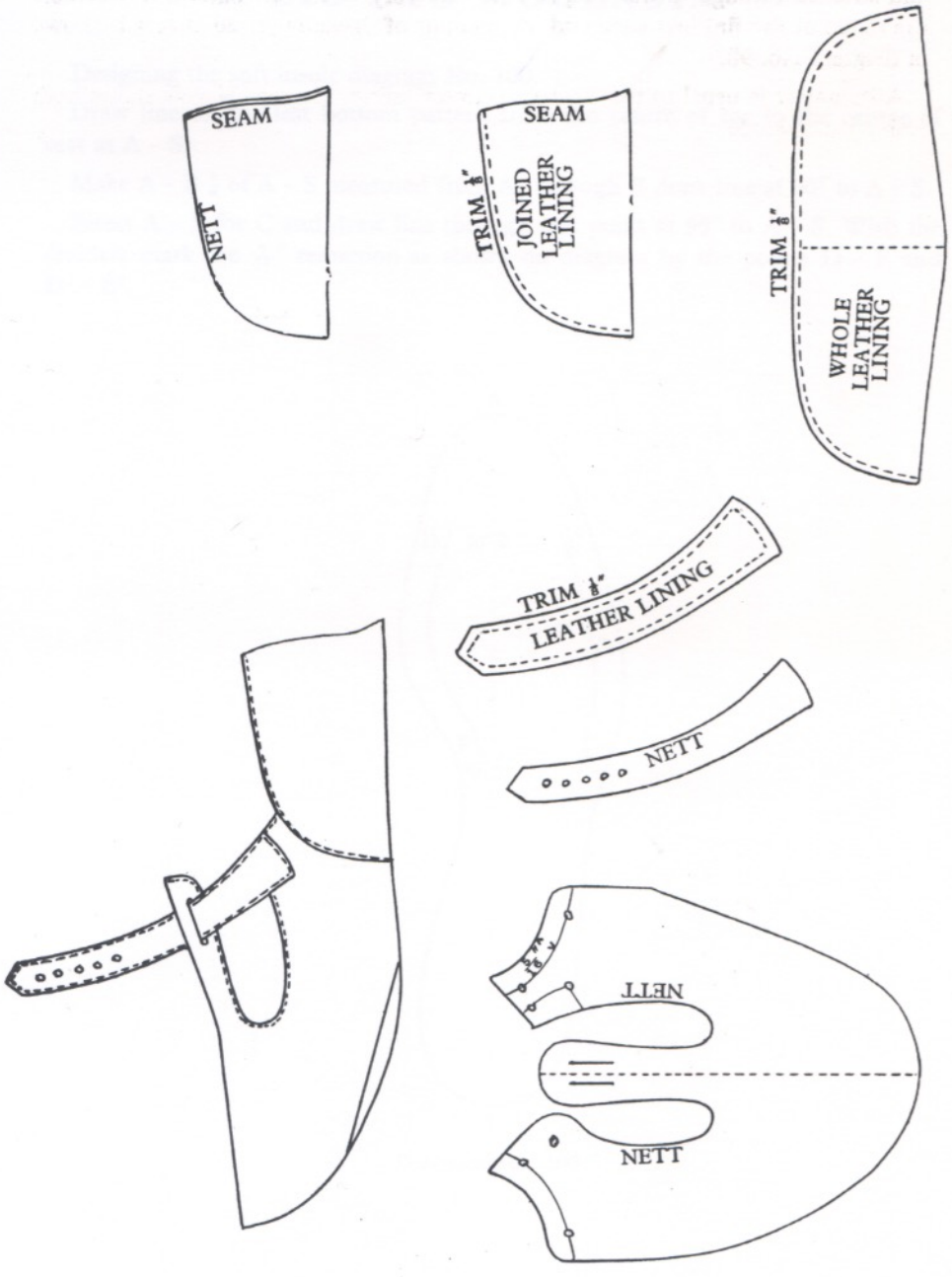
Diagram No. 97 *(opposite) shows the complete upper and the number of sectional parts required for the Ankle Strap.*
Allowances for seams, laps and edge treatment are also given.

In Veldtschoen work the lasting edge of the upper is turned out from the last and stitched through to the sole, so it is necessary to cut the pattern to resemble the shape of the finished shoe and the amount of flange required at seat is shown in diagram No. 98.

Although it is usual to use a whole counter lining, diagram No. 99 shows both seamed and whole.

DIAGRAM NO. 99 *(opposite) shows the complete upper and the number of sectional parts required for the Children's Sandal.*

Allowances for seams, laps and edge treatment are also given.


SEAM
NETT
SEAM
TRIM ⅛"
JOINED LEATHER LINING
TRIM ⅛"
WHOLE LEATHER LINING
TRIM ⅛"
LEATHER LINING
NETT
NETT
NETT

ZIG ZAG MOCCASIN

Designing the soft insole diagram No. 100.

Draw line on the last bottom pattern from the centre of toe to the centre of seat as A - S.

Make A - B $\frac{1}{6}$ of A - S measured from A; through B draw line at 90° to A - S.

Bisect A - S for C and draw line through this point at 95° to A - S. With the dividers mark the $\frac{7}{16}$" reduction as shown on diagram by the points D - E and D^1 - E^1.

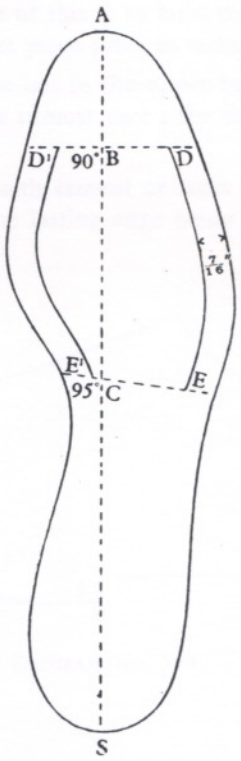


DIAGRAM NO. 100

Diagram No. 101 shows the completed insole ; this is now used to mark the bottom of the last (prior to forme cutting), as diagram No. 102.

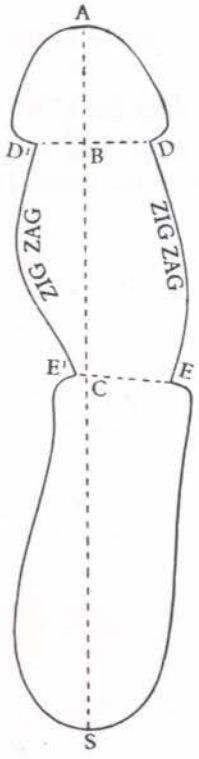


DIAGRAM NO. 101

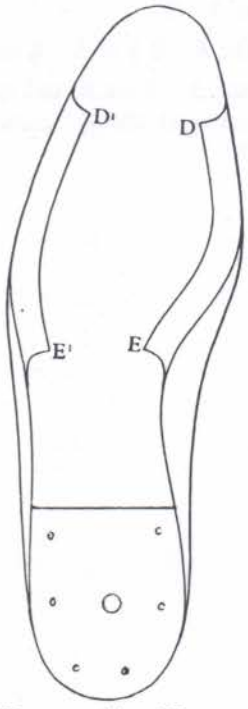


DIAGRAM NO. 102

Cut formes to overlap the edge of the last between the points D - E and D^1 - E^1 following the line drawn by the insole pattern. Diagram No. 103 shows this extension which is zig zagged to the insole.

The lasting edge between the points A - D and E - S will require the usual lasting allowance.

V cuts are made in the vamp section to shorten the line length so that the distance between D - E and D^1 - E^1 are identical on both the upper and insole ; when zig zagging the upper to the insole these V cuts are closed up, thereby shortening the length of this section. This also tends to shape the upper at the joint position, see diagram No. 104.

Lasting

A seat and waist piece extending from the heel to the joint line as E - S - E^1 is tacked to the last ; the function of this is to hold the heel nails. The shank may be fastened to the seat and waist piece prior to tacking on the last or afterwards.

The operation of inserting the last in the upper between the points D - E and D^1 - E^1 must be done with the utmost care ; the satisfactory appearance of the finished shoe depends on this.

The heel seat can be lasted with cement or tacks on the Automatic Heel Seat Lasting Machine, the rest of the lasting edge being cement lasted.

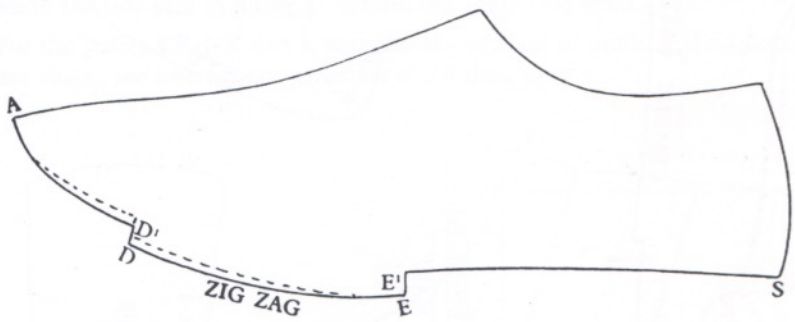
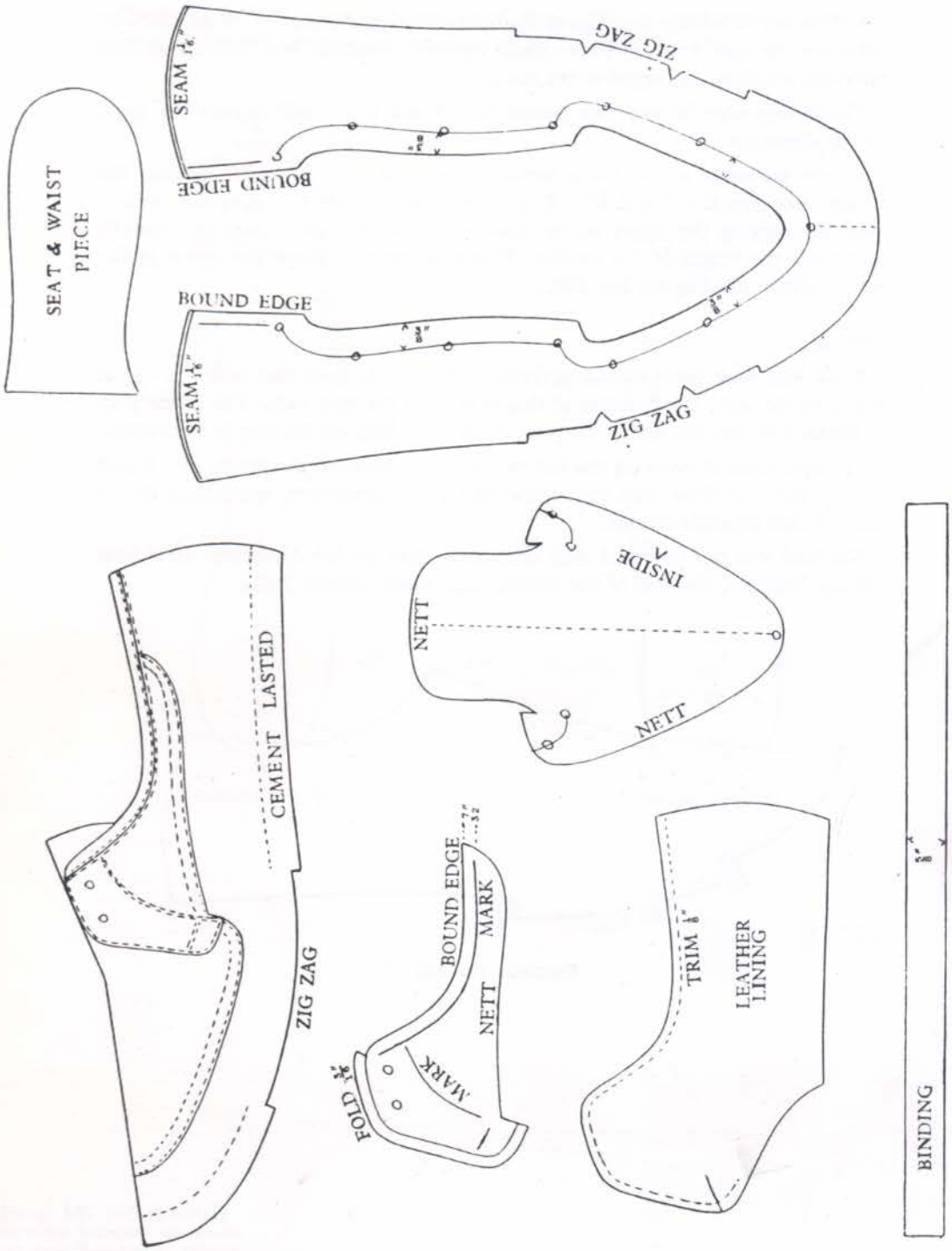


DIAGRAM NO. 103

DIAGRAM NO. 104 *(overleaf) shows the complete upper and the number of sectional parts required for the Moccasin.*

Allowances for seams, laps and edge treatment are also given.


SEAT & WAIST PIECE
SEAM
ZIG ZAG
BOUND EDGE
BOUND EDGE
SEAM
ZIG ZAG
INSIDE
NETT
NETT
CEMENT LASTED
ZIG ZAG
BOUND EDGE
MARK
NETT
MARK
FOLD
TRIM
LEATHER LINING
BINDING

CHELSEA BOOT

Diagram No. 105

G-L	Ground Line
G-L-T	90°
L-H	1″
H-CP	$\frac{1}{6}$ SLL.
H-T	5″ (size 7, $\frac{1}{8}$″ between sizes)
T-T¹	$\frac{1}{8}$″
T¹-F	5″ (size 7, $\frac{1}{8}$″ between sizes) and 90° to L-T
F-F¹	$\frac{1}{2}$″
F-X¹	90° to F-T and parallel to L-T

Place the forme on the construction lines so that it passes through CP and H and rests on the base line at the joint, draw outline of forme and add stiffener and lasting allowance.

Bisect T¹-F¹ for T² and draw line to base of standard $\frac{1}{2}$″ from X¹.

Cut elastic to shape and width required and mark on the standard.

Cut vamp rounder pattern adding $\frac{3}{16}$″ above F¹ as shown on diagram, also transfer from the standard the lines J-X and I-S.

The front of the quarter lining is shown by the dotted line from the front of leg to the base line at X¹.

Make the side join in lining $\frac{1}{4}$″ behind the vamp side seam.

For the points CP-J-X and I, and also the method of drafting the vamp for the castor shape, see instructions given for the Riding Boot.

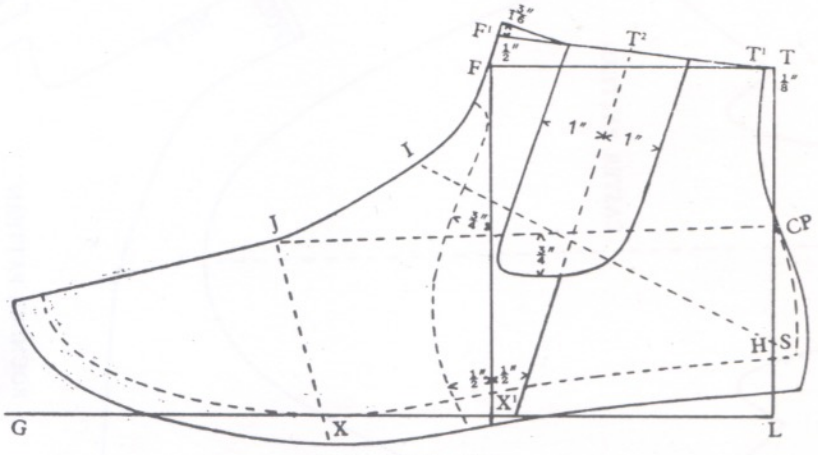
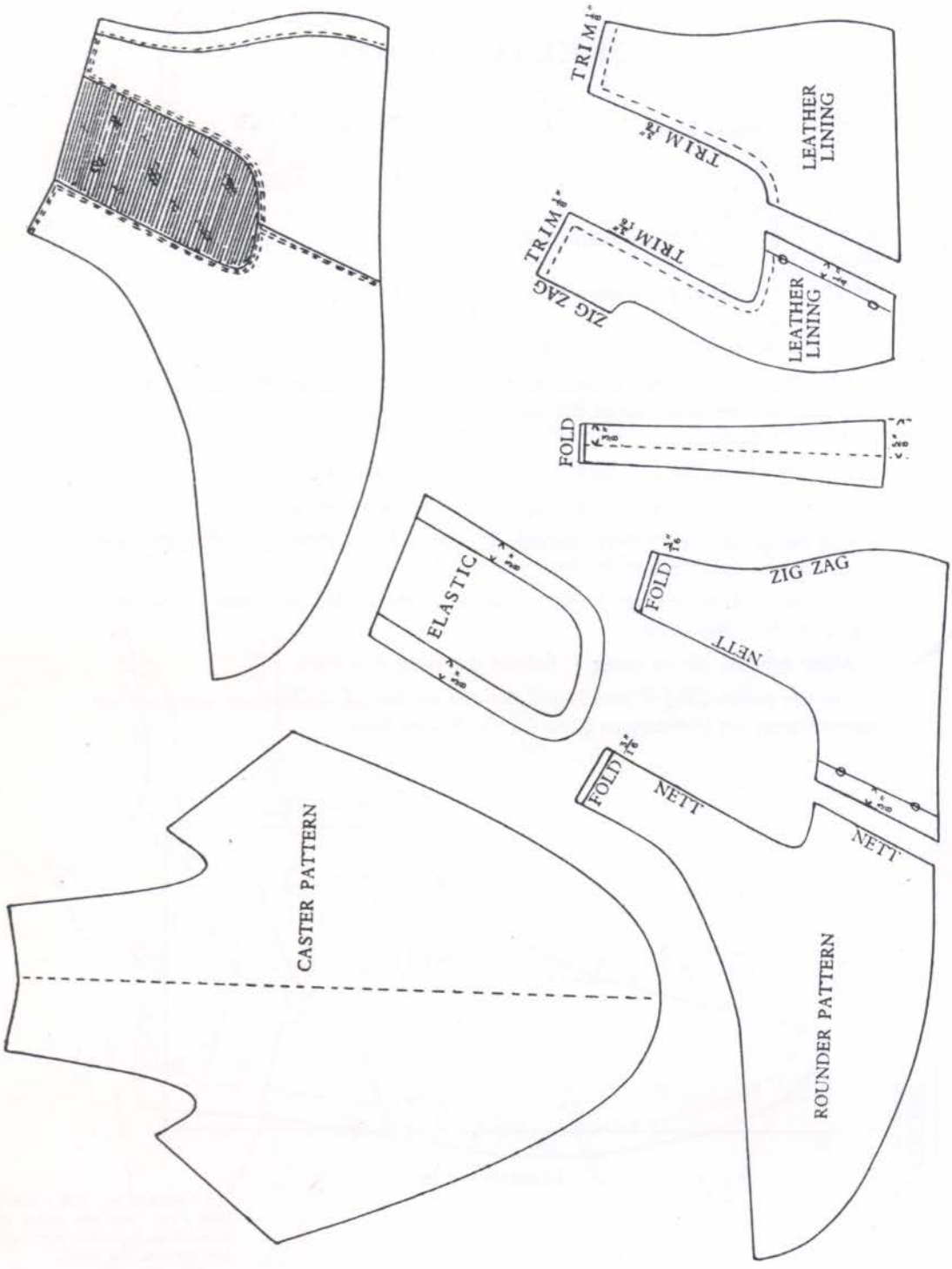


DIAGRAM No. 105.

DIAGRAM No. 106 *(overleaf) shows the complete upper and the number of sectional parts required for the Chelsea Boot.*

Allowances for seams, laps and edge treatment are also given.


TRIM
TRIM
LEATHER LINING
TRIM
TRIM
ZIG ZAG
LEATHER LINING
FOLD
ELASTIC
FOLD
ZIG ZAG
NETT
FOLD
NETT
NETT
CASTER PATTERN
ROUNDER PATTERN

A NEW APPROACH TO GRADING BY HAND

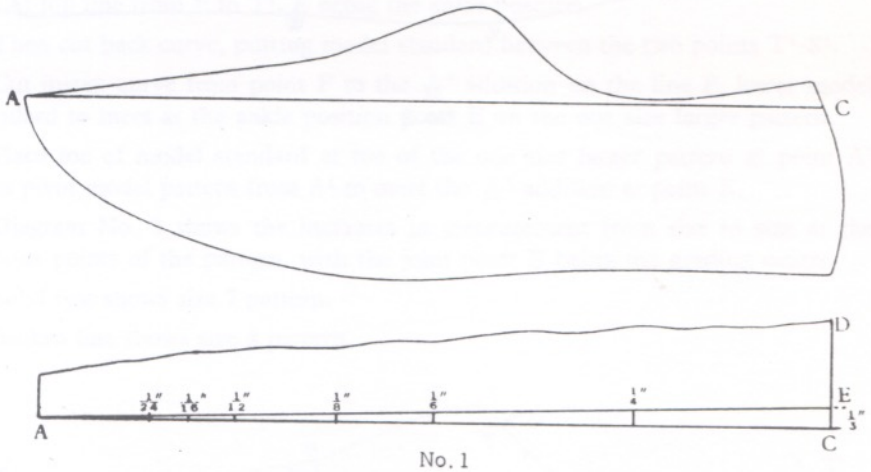
A NEW APPROACH TO GRADING BY HAND

In the grading of upper patterns the following method of grading by measurement will prove very useful in the factory, both for its speed and accuracy, as it is possible to grade a size 8 for sampling purposes from the size 7 model, without the use of a stencil. This alone is a great saving of time.

The expert who knows his measurements can grade direct at any given point on the pattern, but the student or the beginner needs some assistance to ascertain the amount of increase required from size to size.

The following paragraph dealing with the construction and the use of the grading tool covers this. By measuring any section of the pattern with this tool we can readily see the amount of increase required.

To find the grade of any section of the pattern, first construct a grading tool as shown in diagram 1.

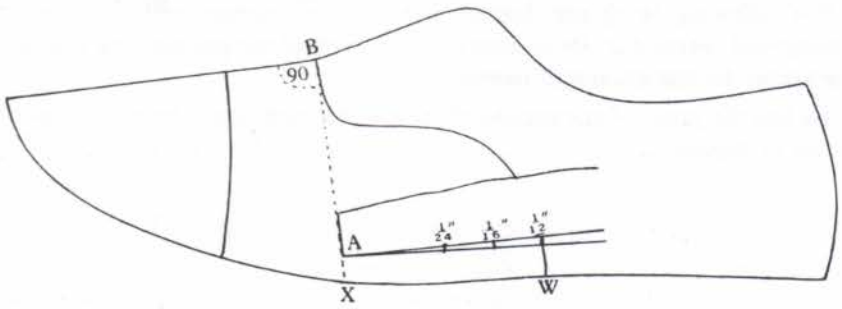


No. 1

Draw a line the same length as standard from A to C and at right angles to D. On the line C-D measure $\frac{1}{3}''$ from C for point E and connect to A. With this tool we can now measure any part of the pattern and get the grade required from size to size.

A good example of this is given in diagram No. 2. Place point A of the grading tool to the line B-X and measure the length of vamp ; the point where the wing of vamp passes through the grading tool is the amount of grade required for this section, being in this case $\frac{1}{12}''$ between sizes.

The following table gives the measurement required for a man's shoe standard.



No. 2

Grading for size—diagram No. 3

Point B	=	Front height.	
,, BA	=	$\frac{1}{8}$ grade between sizes.	
,, X	=	Contact point 90° to A-B.	
,, B-X	=	$\frac{1}{12}$ grade between sizes.	
,, B-X	=	$\frac{1}{16}$,, ,, ,,	(for children's grade).
,, B-I	=	$\frac{1}{12}$,, ,, ,,	
,, X-S	=	$\frac{5}{24}$,, ,, ,,	
,, S-T	=	$\frac{1}{16}$,, ,, ,,	
,, V	=	$\frac{1}{32}$,, ,, ,,	from crease line.
,, W	=	$\frac{1}{12}$,, ,, ,,	from joint line.

Let us examine step by step the process evolved in cutting a pattern one size up.

Draw line P parallel to and $\frac{1}{2}$″ away from B-I and mark on this line the $\frac{1}{12}$″ for the grade of the quarter at the instep.

Mark or cut from A-B-F add $\frac{1}{12}$″ at base of standard and parallel to X-S.

Drop perpendicular at S and add $\frac{5}{24}$″ for length grade. At this point mark curve for base of back seam S^1.

Add $\frac{1}{16}$″ for height grade and mark top of back seam at point T^1.

Cut top line from E to T^1, E being the ankle position.

Then cut back curve, putting model standard between the two points T^1-S^1.

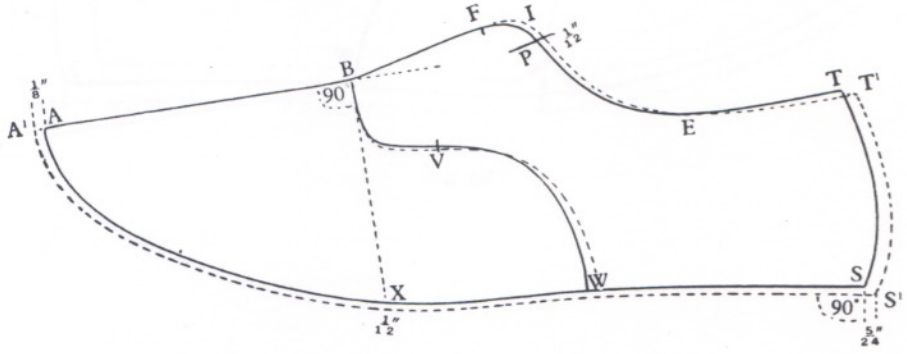
Cut instep curve from point F to the $\frac{1}{12}$″ addition on the line P, lower model standard to meet at the ankle position point E on the one size larger pattern.

Place toe of model standard at toe of the one size larger pattern at point A^1 then pivot model pattern from A^1 to meet the $\frac{1}{12}$″ addition at point X.

Diagram No. 3 shows the increases in measurement from size to size at the various points of the pattern, with the joint point B being the grading centre.

Solid line shows size 7 pattern.

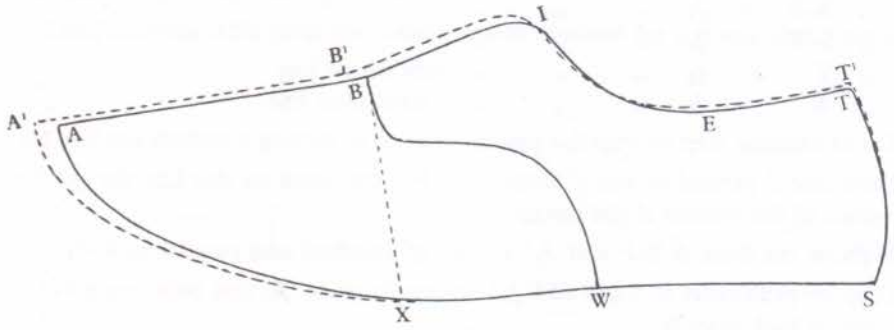
Broken line shows size 8 pattern.



No. 3

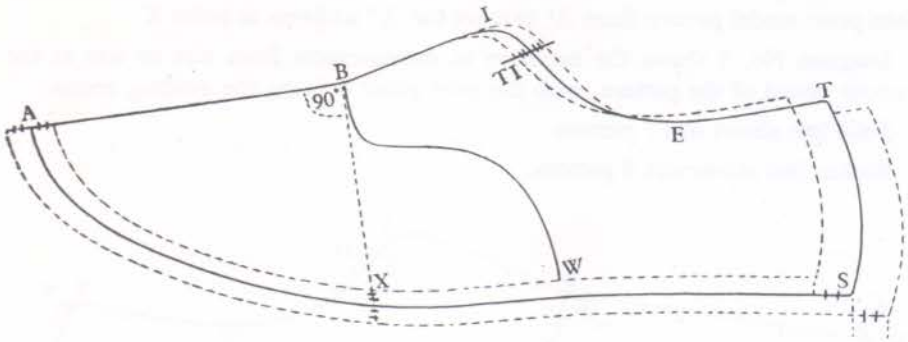
To test for accuracy of grade place the model size and the one size larger pattern together at the seat as diagram No. 4. The increase between sizes should measure as follows :

$A\text{-}A^1 = \frac{1}{3}''$.
$T\text{-}T^1 = \frac{1}{16}''$.
and $\frac{1}{12}''$ grade between the lines $AB\text{-}A^1B^1$.



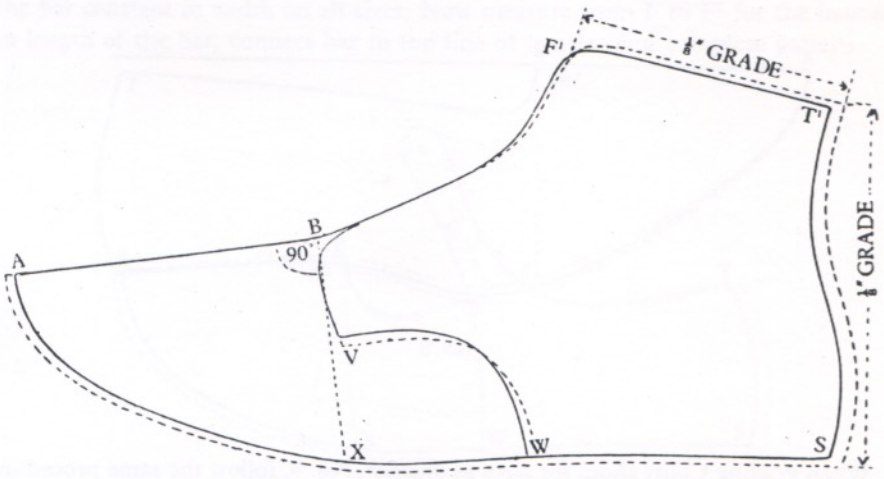
No. 4

Diagram No. 5 shows sizes 5, 8 and 11, with position of the intervening sizes marked.



No. 5

Diagram No. 6 shows the grading of a boot to standard—you will see that the grade increases $\frac{1}{8}$" in height and $\frac{1}{8}$" in width at the top of the leg, this being a fixed amount or a trade requirement, therefore the grading tool will not be used at these points.



No. 6

It is also possible to grade a range of fittings with this system, thereby ensuring the same balance in all fittings and making forme cutting unnecessary for each and every fitting.

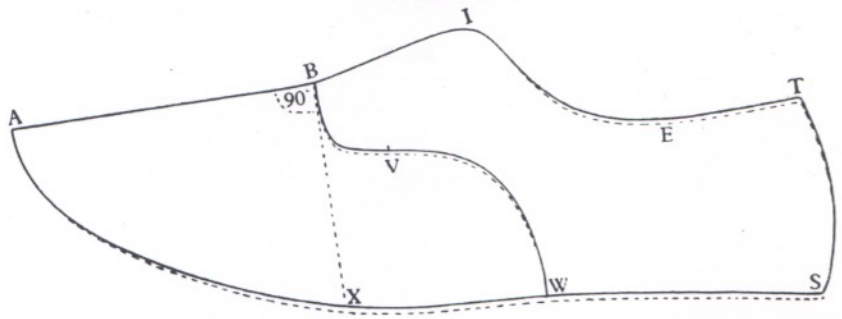
To cut a pattern one fitting larger as diagram No. 7, proceed as follows :

Cut A-B-I as model pattern. Add $\frac{1}{12}$" at base of standard and parallel to X-S.

Pivot standard from A to meet the $\frac{1}{12}$" addition at point X.

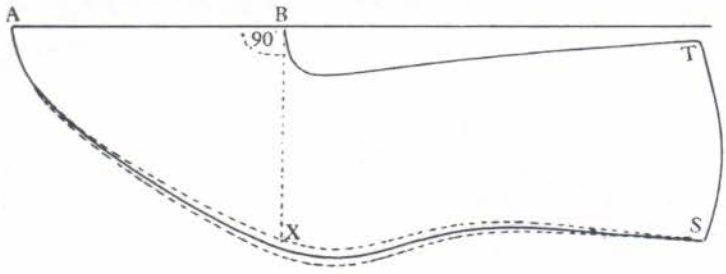
Cut quarters at T, the same height in all fittings or $\frac{1}{32}$" grade if so required.

To cut one fitting smaller, reverse the procedure, *i.e.* take off $\frac{1}{12}$" from X-S and pivot from A to meet the $\frac{1}{12}$" reduction at point X.



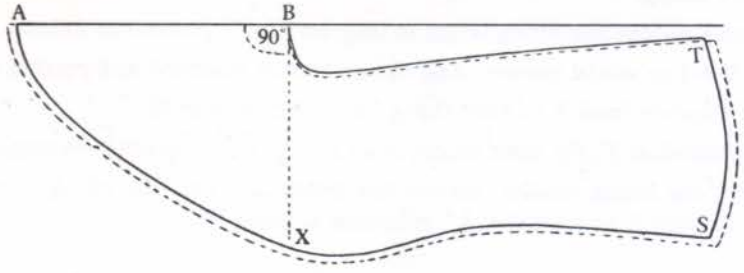
No. 7

In the grading of a Ladies court shoe for fittings, diagram No. 8, you will note that the golosh at point T is kept the same distance from the crease line on all fittings, also that the back heights are the same, therefore the only difference between fittings is the $\frac{1}{12}''$ grade at the joints.



No. 8

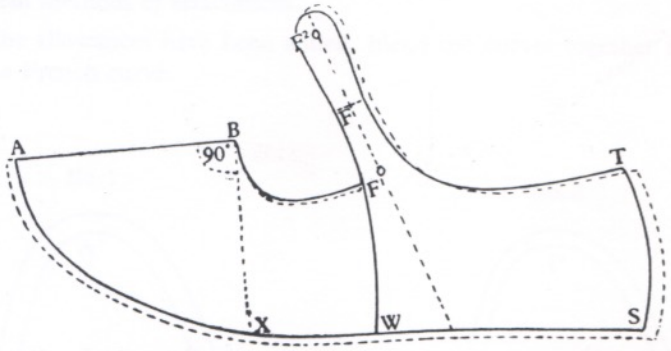
When grading Court shoes for sizes as diagram No. 9, follow the same procedure as for fittings regarding point T and the crease line, making the addition at the toe, joint and back seam. To find the grade at the throat of the golosh measure from crease line with grading tool.



No. 9

For the girls 1 bar pattern graded 1 size larger, diagram No. 10, proceed as previous patterns for the points B, A, X and S.

To find the increase between point B and the centre of the bar, point F, measure with the grading tool and transfer the required amount as dotted lines, keeping the bar constant in width on all sizes. Now measure from F to F^2 for the increase in length of the bar, connect bar to top line of quarter and complete pattern.



No. 10

CONCLUSION

In this text the more general types of patterns have been used to show the application of this method of grading ; however this method can be applied to all types of patterns, including the more intricate styles, with equally satisfactory results and standards so graded do not deviate from regular machine graded patterns.

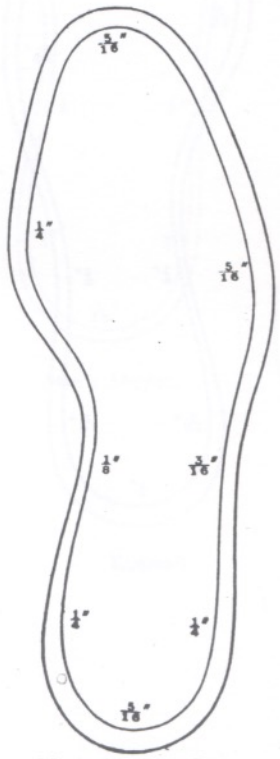
OUTSOLES

When designing the outsole pattern, allowance should be made for the following:

Substance of upper and lining, puffs, stiffeners, also the width of welt and trimming allowance must be considered. All these are provided for in the measurements given in the following diagrams, 1 to 9, which show the amount required for different methods of attachment.

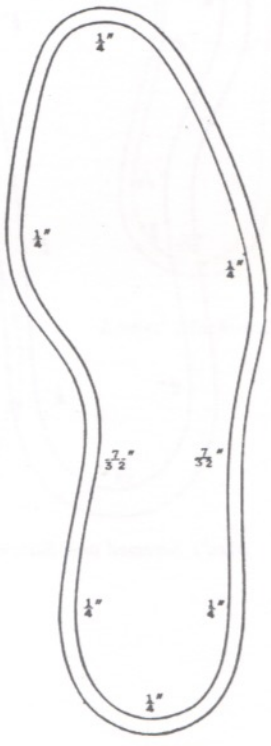
After the allowances have been added, blend the curves together by using the insole as a French curve.

No. 1



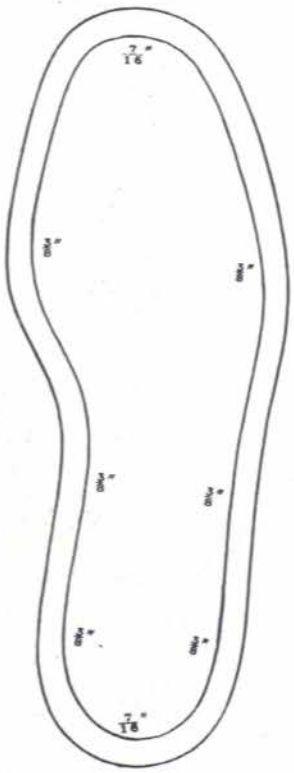
Men's Machine Sewn

No. 2



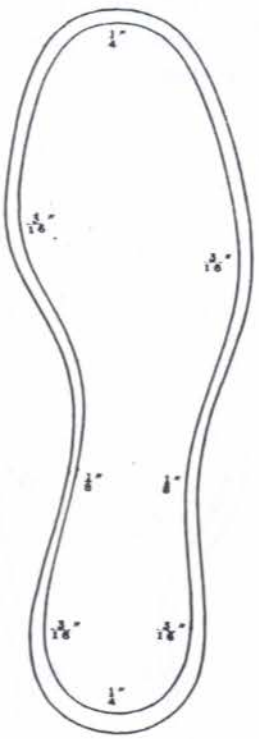
Men's Stuck on

No. 3



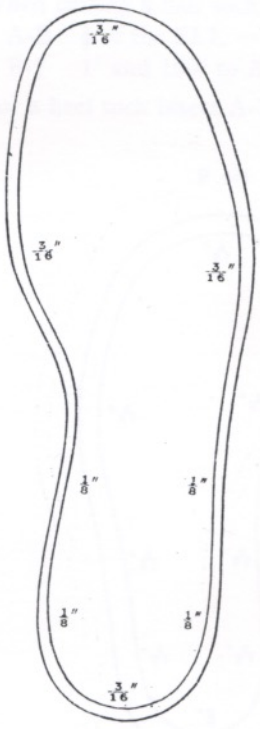
Men's Screwed and Stitched

No 4



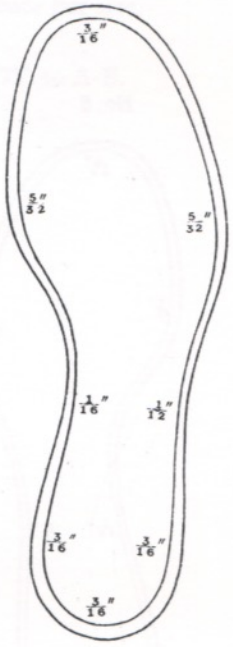
Football

No. 5



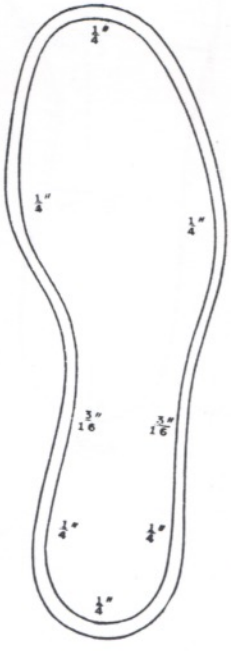
Men's Slippers

No. 6



Ladies' Machine Sewn

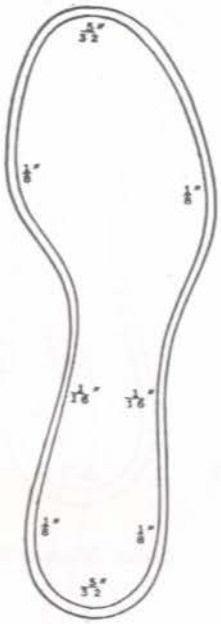
No. 7



Ladies' ¼ Welt

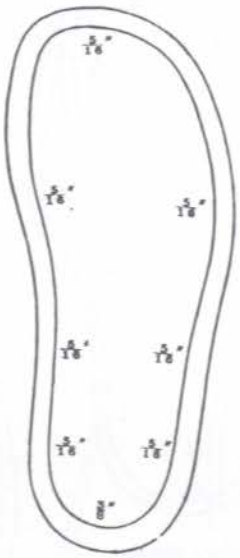
For a close welt outsole reduce the above measures 1/16".

No. 8



Ladies' Stuck on

No. 9



Children's Veldt

Diagram No. 10 shows the allowance for a full length sock pattern, *i.e.* $\frac{1}{16}''$ added in the waist and a $\frac{1}{16}''$ reduction at the toe.

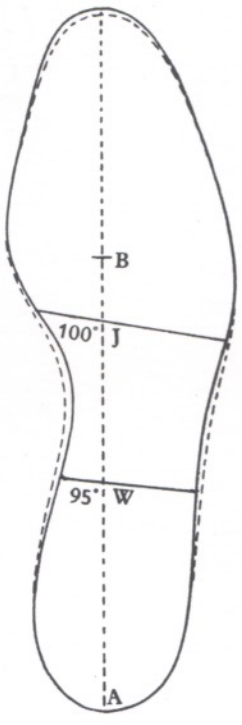
When cutting a half sock to the joint, point J, use the following measurements:

A-B $\frac{2}{3}$ of the SLL $= 7\frac{1}{3}''$ for size 8, with $\frac{2}{9}''$ difference per size.

B-J 1″ and 100° to A-B.

For a heel sock bisect A-B for W and make the angle 95° to A-B.

No. 10



Sock

MEASUREMENT AND COMPARISON TABLES

A STANDARD SCALE OF LAST MEASUREMENTS

LENGTH SCALE

The length scale for English sizes commences with size O which is 4 ins. long, and progresses 3 sizes to the inch until size 13 is reached, here the numbering re-commences, the next size being size 1 and continuing to include the largest sizes, thus the smaller scale size O to 1 measures from 4 ins. to $8\frac{2}{3}$ ins. and the larger scale sizes 2 to 12 measures from 9 ins. to $12\frac{1}{3}$ ins.

The comparison table gives English and French sizes, also inches and centimetres. It will be noticed that 3 French sizes equal 2 centimetres and that the nearest equivalent English and French sizes are :

English	Childs' -	10	French	28
,,	Girls' -	1	,,	33
,,	Women's	5	,,	38
,,	Men's -	8	,,	42

COMPARISON TABLE

ENGLISH SIZES	FRENCH SIZES	CENTI-METRES	INCHES
O	15	10	4
	16		
1	17	11	
2	18	12	5
3	19	13	
4	20		
5	21	14	
	22		
6	23	15	6
7	24	16	
8	25	17	
9	26		7
10	27	18	
	28		
11	29	19	
12	30	20	8
13	31		
	32	21	
1	33	22	
2	34		9
	35	23	
3	36		
4	37	24	
	38	25	10
5	39		
6	40	26	
7	41	27	
8	42	28	11
9	43		
10	44	29	
11	45	30	12
12	46	31	
13	47		
14	48	32	
	49	33	13

FITTING SCALES

By the use of fittings it is possible to fit a greater number of feet more efficiently.

The number of fittings used will be governed by the class of trade being catered for.

In the ladies' Multi-Fitting range the measurement between the centre fittings is $\frac{1}{4}''$, and between the extreme fittings $\frac{3}{16}''$; this prevents the large fittings becoming too large, and the smaller fittings too small, and is conducive to good foot fitting.

It is also the practice today to lengthen the lasts by $\frac{1}{24}''$ between each of the larger fittings and make a reduction of $\frac{1}{24}''$ between each of the smaller fittings.

The following tables are an accepted standard as used by Mobbs Miller Limited.

These measurements may be altered, for joint girths vary according to the type of shoe being made. For example, a heavy shoe with a stout upper and more rigid bottom construction will require a larger joint girth than a lightweight flexible shoe.

LENGTH AND GIRTH FOR LADIES' MULTI-FITTINGS

Model Size 5½/B

FITTING	STICK LENGTH	GIRTH	(IN)	
AAAA		7¼″		
AAA	1/24″	7 7/16″	3/16″	
AA	REDUCTION	7⅝″	GRADE	
A	NO	7 13/16″		It is usual to co-ordinate with constant heel and toe pitch.
B	ALTERATION	8 1/16″	¼″	
C		8 5/16″	GRADE	
D		8½″		
E		8 11/16″		
EE	1/24″	8⅞″	3/16″	
EEE	INCREASE	9 1/16″	GRADE	
EEEE		9¼″		

GIRLS' AND MAIDS' FITTING CHART

SIZES	7	8	9	10	11	12	13	1
C FITTING	5 13/16	6	6 3/16	6⅜	6 9/16	6¾	6 15/16	7⅛
D	6 1/16	6¼	6 7/16	6⅝	6 13/16	7	7 3/16	7⅜
E	6 5/16	6½	6 11/16	6⅞	7 1/16	7¼	7 7/16	7⅝

SIZES	2	3	4	5	
C FITTING	7 5/16	7 9/16	7 13/16	8 1/16	Grade between sizes 7-1 is 3/16″
D	7 9/16	7 13/16	8 1/16	8 5/16	Grade between sizes 2-5 is ¼″
E	7 13/16	8 1/16	8 5/16	8 9/16	

MEN'S STANDARD FITTING CHART

Sizes	5	6	7	8	9	10	11	12
4 Fitting	$8\frac{1}{2}$	$8\frac{3}{4}$	9	$9\frac{1}{4}$	$9\frac{1}{2}$	$9\frac{3}{4}$	10	$10\frac{1}{4}$
5	$8\frac{3}{4}$	9	$9\frac{1}{4}$	$9\frac{1}{2}$	$9\frac{3}{4}$	10	$10\frac{1}{4}$	$10\frac{1}{2}$
6	9	$9\frac{1}{4}$	$9\frac{1}{2}$	$9\frac{3}{4}$	10	$10\frac{1}{4}$	$10\frac{1}{2}$	$10\frac{3}{4}$
7	$9\frac{1}{4}$	$9\frac{1}{2}$	$9\frac{3}{4}$	10	$10\frac{1}{4}$	$10\frac{1}{2}$	$10\frac{3}{4}$	11

BOYS' AND YOUTHS' STANDARD FITTING CHART

Sizes	7	8	9	10	11	12	13	1
	$6\frac{1}{4}$	$7\frac{7}{16}$	$6\frac{5}{8}$	$6\frac{13}{16}$	7	$7\frac{1}{4}$	$7\frac{1}{2}$	$7\frac{3}{4}$

Sizes	2	3	4	5	Grade between sizes 7-10 is $\frac{3}{16}''$
	8	$8\frac{1}{4}$	$8\frac{1}{2}$	$8\frac{3}{4}$	Grade between sizes 11-5 is $\frac{1}{4}''$